



**AGENDA**  
**CITY COUNCIL OF THE CITY OF MORENO VALLEY**  
**MORENO VALLEY COMMUNITY SERVICES DISTRICT**  
**CITY AS SUCCESSOR AGENCY FOR THE**  
**COMMUNITY REDEVELOPMENT AGENCY OF**  
**THE CITY OF MORENO VALLEY**  
**MORENO VALLEY HOUSING AUTHORITY**  
**BOARD OF LIBRARY TRUSTEES**

**February 19, 2019**

**REGULAR MEETING – 6:00 PM**

**City Council Study Sessions**

Second Tuesday of each month – 6:00 p.m.

**City Council Meetings**

Special Presentations – 5:30 P.M.

First & Third Tuesday of each month – 6:00 p.m.

**City Council Closed Session**

*Will be scheduled as needed at 4:30 p.m.*

City Hall Council Chamber – 14177 Frederick Street

*Upon request, this agenda will be made available in appropriate alternative formats to persons with disabilities, in compliance with the Americans with Disabilities Act of 1990. Any person with a disability who requires a modification or accommodation in order to participate in a meeting should direct such request to Guy Pegan, ADA Coordinator, at 951.413.3120 at least 72 hours before the meeting. The 72-hour notification will enable the City to make reasonable arrangements to ensure accessibility to this meeting.*

Dr. Yxstian A. Gutierrez, Mayor

Victoria Baca, Mayor Pro Tem  
Ulises Cabrera, Council Member

David Marquez, Council Member  
Dr. Carla J. Thornton, Council Member

**AGENDA**  
**CITY COUNCIL OF THE CITY OF MORENO VALLEY**  
**February 19, 2019**

**CALL TO ORDER - 5:30 PM**

**SPECIAL PRESENTATIONS**

1. Officer of the 3rd Quarter
2. Employee of the 4th Quarter
3. Coast Soccer League

**AGENDA  
JOINT MEETING OF THE  
CITY COUNCIL OF THE CITY OF MORENO VALLEY  
MORENO VALLEY COMMUNITY SERVICES DISTRICT  
CITY AS SUCCESSOR AGENCY FOR THE  
COMMUNITY REDEVELOPMENT AGENCY OF THE  
CITY OF MORENO VALLEY  
MORENO VALLEY HOUSING AUTHORITY  
AND THE BOARD OF LIBRARY TRUSTEES**

**\*THE CITY COUNCIL RECEIVES A SEPARATE STIPEND FOR CSD  
MEETINGS\***

**REGULAR MEETING – 6:00 PM  
FEBRUARY 19, 2019**

**CALL TO ORDER**

Joint Meeting of the City Council, Community Services District, City as Successor Agency for the Community Redevelopment Agency, Housing Authority and the Board of Library Trustees - actions taken at the Joint Meeting are those of the Agency indicated on each Agenda item.

**PLEDGE OF ALLEGIANCE**

**INVOCATION**

Pastor Dan Clement, Lighthouse Baptist Church

**ROLL CALL**

**INTRODUCTIONS**

**PUBLIC COMMENTS ON MATTERS ON THE AGENDA WILL BE TAKEN UP AS THE ITEM IS CALLED FOR BUSINESS, BETWEEN STAFF'S REPORT AND CITY COUNCIL DELIBERATION (SPEAKER SLIPS MAY BE TURNED IN UNTIL THE ITEM IS CALLED FOR BUSINESS.)**

**PUBLIC COMMENTS ON ANY SUBJECT NOT ON THE AGENDA UNDER THE JURISDICTION OF THE CITY COUNCIL**

Those wishing to speak should complete and submit a BLUE speaker slip to the Sergeant-at-Arms. There is a three-minute time limit per person. All remarks and questions shall be addressed to the presiding officer or to the City Council.

## **JOINT CONSENT CALENDARS (SECTIONS A-D)**

All items listed under the Consent Calendars, Sections A, B, C, and D are considered to be routine and non-controversial, and may be enacted by one motion unless a member of the City Council, Community Services District, City as Successor Agency for the Community Redevelopment Agency, Housing Authority or the Board of Library Trustees requests that an item be removed for separate action. The motion to adopt the Consent Calendars is deemed to be a separate motion by each Agency and shall be so recorded by the City Clerk. Items withdrawn for report or discussion will be heard after public hearing items.

### **A. CONSENT CALENDAR-CITY COUNCIL**

- A.1. ORDINANCES - READING BY TITLE ONLY - THE MOTION TO ADOPT AN ORDINANCE LISTED ON THE CONSENT CALENDAR INCLUDES WAIVER OF FULL READING OF THE ORDINANCE.

**Recommendation:** Waive reading of all Ordinances.

- A.2. MINUTES - CITY COUNCIL - REGULAR MEETING - FEB 5, 2019 6:00 PM

**Recommendation:** Approve as submitted.

- A.3. Amended Joint Powers Agreement of the Western Riverside Council of Governments (Report of: City Clerk)

**That the City Council:**

Authorize the Mayor to execute the Amended Joint Powers Agreement for the Western Riverside Council of Governments.

- A.4. COUNCIL DISCRETIONARY EXPENDITURE REPORTS FOR FISCAL YEAR 2018/2019 AS OF JULY 1, 2018 THROUGH DECEMBER 31, 2018 (Report of: City Clerk)

**Recommendation:**

1. Receive and file the Fiscal Year 2018/2019 Council Discretionary Expenditure Report for July 1, 2018 through December 31, 2018.

- A.5. TRACT 24203 – REQUEST TO CONDUCT A FULL ROAD CLOSURE OF LAWLESS ROAD FROM PIGEON PASS ROAD TO SHADOW MOUNTAIN DRIVE FROM FEBRUARY 27, 2019 - MAY 21, 2019 DEVELOPER: KB HOME COASTAL, INC (Report of: Public Works)

**Recommendations:**

1. Approve a full Road Closure of Lawless Road from Pigeon Pass Road to Shadow Mountain Drive for the reconstruction of Lawless Road from February 27, 2019 – May 21, 2019.
2. Authorize the Public Works Director/City Engineer to approve a one-time extension, if needed, of the road closure for a period not to exceed 14 calendar days.

- A.6. PURSUANT TO A LANDOWNER PETITION, ANNEX THREE PARCELS INTO COMMUNITY FACILITIES DISTRICT NO. 2014-01 (MAINTENANCE SERVICES) - AMENDMENT NO. 33 (RESO. NO. 2019-\_\_) (Report of: Public Works)

**Recommendation:**

Acting as the legislative body of Community Facilities District No. 2014-01 (Maintenance Services), adopt Resolution No. 2019-\_\_, a Resolution of the City Council of the City of Moreno Valley, California, ordering the annexation of territory to City of Moreno Valley Community Facilities District No. 2014-01 (Maintenance Services) and approving the amended map for said District.

- A.7. AGREEMENT WITH SOUTHERN CALIFORNIA EDISON FOR LS-1 OPTION E AGREEMENT (Report of: Public Works)

**Recommendation:**

Approve and Authorize the City Manager to execute the Schedule LS-1 Option E, Energy Efficiency-Light Emitting Diode (LED) Fixture Replacement Rate Agreement with Southern California Edison (SCE) (the "Agreement"), in substantially the form as attached hereto, subject to the approval of the City Attorney.

- A.8. LIST OF PERSONNEL CHANGES (Report of: Human Resources)

**Recommendation:**

1. Ratify the list of personnel changes as described.

A.9. APPROVE FIRST AMENDMENT TO THE AGREEMENT FOR PROFESSIONAL SERVICES (Report of: Human Resources)

**Recommendation:**

1. Approve the First Amendment to the Agreement for Professional Services (2018-279) with Apple One Employment Services (Apple One), 16371 Beach Blvd., Suite 240 Huntington Beach, CA 92647 to provide additional professional temporary employment services.
2. Authorize the City Manager to execute the First Amendment to Agreement for Professional Consultant Services with Apple One in the form attached hereto.
3. Authorize the increase of the "Not to Exceed" limit to \$100,000.

A.10. PAYMENT REGISTER - DECEMBER 2018 (Report of: Financial & Management Services)

**Recommendation:**

1. Receive and file the Payment Register.

A.11. APPROVE FIRST AMENDMENT TO PROFESSIONAL SERVICES AGREEMENT WITH STEPHEN H BADGETT CONSULTING FOR STRATEGIC PLANNING SERVICES FOR MORENO VALLEY UTILITY (Report of: Financial & Management Services)

**Recommendation:**

1. Approve First Amendment to Agreement for Professional Services with Stephen H Badgett Consulting for strategic planning services for Moreno Valley Utility.

A.12. AWARD OF AGREEMENTS FOR COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) FUNDED AMERICANS WITH DISABILITIES ACT (ADA) IMPROVEMENTS AT CITY FACILITIES (Report of: Financial & Management Services)

**Recommendations:**

1. Award a construction contract to RS Construction & Development, 1042 N. Mountain Ave. Suite B # 552, Upland, CA 91786, for \$196,200, for the Interior ADA Improvements Project at Moreno Valley Animal Shelter and authorize the City Manager to execute a contract with RS Construction & Development in substantial conformance with the attached contract.

2. Award a construction contract to RS Construction & Development, 1042 N. Mountain Ave. Suite B # 552, Upland, CA 91786, for \$186,650, for the Interior ADA Improvements Project at Moreno Valley Conference & Recreation Center and authorize the City Manager to execute a contract with RS Construction & Development in substantial conformance with the attached contract.
3. Authorize the City Manager to execute any subsequent related change orders to the contracts, but not exceeding the approved budget and subject to the approval of the City Attorney.

## **B. CONSENT CALENDAR-COMMUNITY SERVICES DISTRICT**

- B.1. ORDINANCES - READING BY TITLE ONLY - THE MOTION TO ADOPT AN ORDINANCE LISTED ON THE CONSENT CALENDAR INCLUDES WAIVER OF FULL READING OF THE ORDINANCE.

**Recommendation:** Waive reading of all Ordinances.

- B.2. MINUTES - REGULAR MEETING OF FEB 5, 2019 6:00 PM (See A.2)

**Recommendation:** Approve as submitted.

## **C. CONSENT CALENDAR - HOUSING AUTHORITY**

- C.1. ORDINANCES - READING BY TITLE ONLY - THE MOTION TO ADOPT AN ORDINANCE LISTED ON THE CONSENT CALENDAR INCLUDES WAIVER OF FULL READING OF THE ORDINANCE.

**Recommendation:** Waive reading of all Ordinances.

- C.2. MINUTES - REGULAR MEETING OF FEB 5, 2019 6:00 PM (See A.2)

**Recommendation:** Approve as submitted.

## **D. CONSENT CALENDAR - BOARD OF LIBRARY TRUSTEES**

- D.1. ORDINANCES - READING BY TITLE ONLY - THE MOTION TO ADOPT AN ORDINANCE LISTED ON THE CONSENT CALENDAR INCLUDES WAIVER OF FULL READING OF THE ORDINANCE.

**Recommendation:** Waive reading of all Ordinances.

- D.2. MINUTES - REGULAR MEETING OF FEB 5, 2019 6:00 PM (See A.2)

**Recommendation:** Approve as submitted.

## E. PUBLIC HEARINGS

Questions or comments from the public on a Public Hearing matter are limited to five minutes per individual and must pertain to the subject under consideration.

Those wishing to speak should complete and submit a GOLDENROD speaker slip to the Sergeant-at-Arms.

### E.1. PUBLIC HEARING FOR ONE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM MAIL BALLOT PROCEEDING (Report of: Public Works)

#### **Recommend that the City Council:**

1. Conduct the Public Hearing and accept public testimony for the mail ballot proceeding(s) for the National Pollutant Discharge Elimination System (NPDES) Common Interest, Commercial, Industrial, and Quasi-Public Use maximum Regulatory Rate to be applied to three property tax bill(s);
2. Direct the City Clerk to open and count the returned NPDES ballot(s);
3. Verify and accept the results of the mail ballot proceeding(s) as maintained by the City Clerk on the Official Tally Sheet;
4. Receive and file the Official Tally Sheet with the City Clerk's office; and,
5. If approved, set the rate and impose the NPDES Common Interest, Commercial, Industrial, and Quasi-Public Use Regulatory Rate on the Assessor's Parcel Number(s) as mentioned.

### E.2. Conditional Use Permit to develop a automobile service station, and convenience store including alcohol sales, and a car wash on 1.31 acres, located on the northwest corner of Iris Avenue and Oliver Street (Report of: Community Development)

#### **Recommendation: That the City Council:**

1. **ADOPT** Resolution No. 2019-XX; A Resolution of the City Council of the City of Moreno Valley **CERTIFYING** that the Initial Study/Mitigation Negative Declaration PEN18-0016 for the ARCO AM/PM gas station project on file with the Community Development Department, incorporated herein by this reference, has been completed in compliance with the California Environmental Quality Act, that the City Council reviewed and considered the information contained in the Initial Study/Mitigated Negative Declaration and that the Initial



Study/Mitigated Negative Declaration reflects the City's independent judgment and analysis; and **ADOPTING** the Mitigation Monitoring and Reporting Program for the Initial Study/Mitigated Negative Declaration for the proposed project; and

2. **APPROVE** Resolution No. 2019-XX: A Resolution of the City Council of the City of Moreno Valley **APPROVING** Conditional Use Permit, PEN18-0016, for the development of a new 3,180 square foot ARCO AM/PM gas station with convenience store including Type-20 alcohol sales for beer and wine, and a car wash, located on the northwest corner of Iris Avenue and Oliver Street.

## **F. ITEMS REMOVED FROM CONSENT CALENDARS FOR DISCUSSION OR SEPARATE ACTION**

### **G. GENERAL BUSINESS**

- G.1. Streamlining the Transportation Uniform Mitigation Fee (TUMF) Calculation and Collection Process (Report of: Community Development)

#### **Recommendations: That the City Council:**

1. Introduce and conduct the first reading of Ordinance \_\_\_ amending Chapter 3.44 of Title 3 of the City of Moreno Valley Municipal Code to include a process for Western Riverside County Council of Governments to perform calculations for and collection of fees under the Western Riverside County Transportation Uniform Mitigation Fee (TUMF) Program.
2. Schedule the second reading and adoption of Ordinance \_\_\_ for the next regular Council meeting.

## **H. REPORTS**

### **H.1. CITY COUNCIL REPORTS**

(Informational Oral Presentation - not for Council action)

March Joint Powers Commission (JPC)

Riverside County Habitat Conservation Agency (RCHCA)

Riverside County Transportation Commission (RCTC)

Riverside Transit Agency (RTA)

Western Riverside Council of Governments (WRCOG)

Western Riverside County Regional Conservation Authority (RCA)

School District/City Joint Task Force

H.2. CITY MANAGER'S REPORT

(Informational Oral Presentation - not for Council action)

H.3. CITY ATTORNEY'S REPORT

(Informational Oral Presentation - not for Council action)

**CLOSING COMMENTS AND/OR REPORTS OF THE CITY COUNCIL, COMMUNITY SERVICES DISTRICT, CITY AS SUCCESSOR AGENCY FOR THE COMMUNITY REDEVELOPMENT AGENCY, HOUSING AUTHORITY AND THE BOARD OF LIBRARY TRUSTEES.**

**ADJOURNMENT**

**PUBLIC INSPECTION**

The contents of the agenda packet are available for public inspection on the City's website at [www.moval.org](http://www.moval.org) and in the City Clerk's office at 14177 Frederick Street during normal business hours.

Any written information related to an open session agenda item that is known by the City to have been distributed to all or a majority of the City Council less than 72 hours prior to this meeting will be made available for public inspection on the City's website at [www.moval.org](http://www.moval.org) and in the City Clerk's office at 14177 Frederick Street during normal business hours.

**CERTIFICATION**

I, Pat Jacquez-Nares, City Clerk of the City of Moreno Valley, California, certify that 72 hours prior to this Regular Meeting, the City Council Agenda was posted on the City's website at: [www.moval.org](http://www.moval.org) and in the following three public places pursuant to City of Moreno Valley Resolution No. 2007-40:

City Hall, City of Moreno Valley  
14177 Frederick Street

Moreno Valley Library  
25480 Alessandro Boulevard

Moreno Valley Senior/Community Center  
25075 Fir Avenue

Pat Jacquez-Nares, CMC & CERA  
City Clerk

Date Posted: February 14, 2018

**TO:**  
**FROM:** Pat Jacquez-Nares, City Clerk  
**AGENDA DATE:** February 19, 2019  
**TITLE:** OFFICER OF THE 3RD QUARTER

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**RECOMMENDED ACTION**

**CITY COUNCIL GOALS**

None

**CITY COUNCIL STRATEGIC PRIORITIES**

1. Economic Development
2. Public Safety
3. Library
4. Infrastructure
5. Beautification, Community Engagement, and Quality of Life
6. Youth Programs

**ATTACHMENTS**

None

**APPROVALS**

**TO:**  
**FROM:** Pat Jacquez-Nares, City Clerk  
**AGENDA DATE:** February 19, 2019  
**TITLE:** EMPLOYEE OF THE 4TH QUARTER

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**RECOMMENDED ACTION**

**CITY COUNCIL GOALS**

None

**CITY COUNCIL STRATEGIC PRIORITIES**

1. Economic Development
2. Public Safety
3. Library
4. Infrastructure
5. Beautification, Community Engagement, and Quality of Life
6. Youth Programs

**ATTACHMENTS**

None

**APPROVALS**

**TO:**

**FROM:** Pat Jacquez-Nares, City Clerk

**AGENDA DATE:** February 19, 2019

**TITLE:** COAST SOCCER LEAGUE

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**RECOMMENDED ACTION**

**CITY COUNCIL GOALS**

None

**CITY COUNCIL STRATEGIC PRIORITIES**

1. Economic Development
2. Public Safety
3. Library
4. Infrastructure
5. Beautification, Community Engagement, and Quality of Life
6. Youth Programs

**ATTACHMENTS**

None

**APPROVALS**

**MINUTES**  
**CITY COUNCIL REGULAR MEETING OF THE CITY OF MORENO VALLEY**  
**February 5, 2019**

**CALL TO ORDER - 5:30 PM**

**SPECIAL PRESENTATIONS**

1. Business Spotlights
  - a) Amaya Group Real Estate
2. Classified Employee of the 3rd Quarter
3. Family Is All That Matters Organization
4. Community Day of Service Sponsors

**MINUTES  
JOINT MEETING OF THE  
CITY COUNCIL OF THE CITY OF MORENO VALLEY  
MORENO VALLEY COMMUNITY SERVICES DISTRICT  
CITY AS SUCCESSOR AGENCY FOR THE  
COMMUNITY REDEVELOPMENT AGENCY OF THE  
CITY OF MORENO VALLEY  
MORENO VALLEY HOUSING AUTHORITY  
BOARD OF LIBRARY TRUSTEES**

**REGULAR MEETING – 6:00 PM  
February 5, 2019**

**CALL TO ORDER**

The Joint Meeting of the City Council, Community Services District, City as Successor Agency for the Community Redevelopment Agency of the City of Moreno Valley, Moreno Valley Housing Authority and the Board of Library Trustees was called to order at 6:04 p.m. by Mayor Gutierrez in the Council Chamber located at 14177 Frederick Street.

**PLEDGE OF ALLEGIANCE**

The Pledge of Allegiance was led by Frank Wright.

**INVOCATION**

Pastor Melvin Thomas, Praise & Worship Center

**ROLL CALL**

Council:	Dr. Yxstian A. Gutierrez	Mayor
	Victoria Baca	Mayor Pro Tem
	David Marquez	Council Member
	Dr. Carla J. Thornton	Council Member
	Ulises Cabrera	Council Member

**INTRODUCTIONS**

Staff:	Pat Jacquez-Nares	City Clerk
	Marshall Eyerman	Chief Financial Officer/City Treasurer
	Martin Koczanowicz	City Attorney
	Tom DeSantis	City Manager
	Allen Brock	Assistant City Manager
	Mike Lee	Economic Development Director

Minutes Acceptance: Minutes of Feb 5, 2019 6:00 PM (CONSENT CALENDAR-CITY COUNCIL)

Rick Sandzimier	Community Development Director
Dave Lelevier	Acting Police Chief
Abdul Ahmad	Fire Chief
Kathleen Sanchez	Human Resources Director
Patti Solano	Parks and Community Services Director
Michael Wolfe	Public Works Director/City Engineer

Mayor Gutierrez announced that, per staff's request, Item No. G.1. was removed from the agenda.

**PUBLIC COMMENTS ON ANY SUBJECT NOT ON THE AGENDA UNDER THE JURISDICTION OF THE CITY COUNCIL**

Robert Visconti

1. Raised awareness about a proposal by the California Legislature requiring electrification of appliances and utilities.

Jessica Munoz

1. Thanked the City of Moreno Valley for the financial support provided to Voices for Children.

Rafael Brugueras

1. Reminded residents to review the Soaring magazine to inform themselves of the activities provided by the City.
2. Announced various events taking place in the City in the coming months.

Adolf Kruger

1. Condemned the people, City Council, and Police Department of the City of Moreno Valley.

**JOINT CONSENT CALENDARS (SECTIONS A-D)**

Mayor Gutierrez opened the Consent Agenda items for public comments, which was received from Rafael Brugueras (Supports Item Nos. A.5., A.6., A.7. A.8., A.10. and C.4.).

<b>RESULT:</b>	<b>APPROVED [UNANIMOUS]</b>
<b>MOVER:</b>	Victoria Baca, Mayor Pro Tem
<b>SECONDER:</b>	David Marquez, Council Member
<b>AYES:</b>	Gutierrez, Baca, Marquez, Cabrera, Thornton

**A. CONSENT CALENDAR-CITY COUNCIL**

- A.1. ORDINANCES - READING BY TITLE ONLY - THE MOTION TO ADOPT AN ORDINANCE LISTED ON THE CONSENT CALENDAR INCLUDES WAIVER OF FULL READING OF THE ORDINANCE.

**Recommendation:** Waive reading of all Ordinances.

Minutes Acceptance: Minutes of Feb 5, 2019 6:00 PM (CONSENT CALENDAR-CITY COUNCIL)



A.2. City Council - Closed Session - Jan 15, 2019 4:30 PM

**Recommendation:** Approve as submitted.

A.3. City Council - Regular Meeting - Jan 15, 2019 6:00 PM

**Recommendation:** Approve as submitted.

A.4. MAYORAL APPOINTMENTS TO THE TRAFFIC SAFETY COMMISSION  
(Report of: City Clerk)

**Recommendation:**

- 1. Receive and confirm the Mayoral appointments as follows:

**Traffic Safety Commission**

<u>Name</u>	<u>Position</u>	<u>Term</u>
Stella Corbalain	VVUSD PTO Representative	Ending 06/30/2021

A.5. REPEALING AND REPLACING RESOLUTION NO. 2015-31, MODIFYING  
THE EMERGING LEADERS COUNCIL'S QUORUM REQUIREMENTS  
(RESOLUTION NO. 2019-02) (Report of: City Clerk)

**Recommendation:**

- 1. Adopt **Resolution No. 2019-02**, A Resolution Of The City Council Of The City Of Moreno Valley, California, Repealing Resolution 2015-31 And Adopting Provisions Governing The Emerging Leaders Council

A.6. LIST OF PERSONNEL CHANGES (Report of: Human Resources)

**Recommendation:**

- 1. Ratify the list of personnel changes as described.

A.7. PAYMENT REGISTER - NOVEMBER 2018 (Report of: Financial &  
Management Services)

**Recommendation:**

- 1. Receive and file the Payment Register.

Minutes Acceptance: Minutes of Feb 5, 2019 6:00 PM (CONSENT CALENDAR-CITY COUNCIL)

- A.8. ACCEPTANCE OF THE FY 2018/2019 EMERGENCY MANAGEMENT PERFORMANCE GRANT PROGRAM (EMPG) GRANT AWARD (Report of: Fire Department)

**Recommendations:**

1. Accept the FY 2018/2019 Emergency Management Performance Grant Program (EMPG) grant award of \$42,644 from the Riverside County Emergency Management Department.
2. Approve the amended budget as set forth in the Fiscal Impact Section of this report.

- A.9. AUTHORIZATION TO INCREASE PURCHASE ORDER WITH MCCAIN, INC. (Report of: Public Works)

**Recommendation:**

1. Authorize a \$28,798 increase to Purchase Order No. 2019-00000640 with McCain, Inc., for a total not to exceed \$377,855.

- A.10. THIRD AMENDMENT TO EXISTING AGREEMENT FOR SHARING COST OF STATE HIGHWAY ELECTRICAL FACILITIES (Report of: Public Works)

**Recommendation:**

1. Authorize the Public Works Director to execute Amendment No. 3, and any subsequent amendments, to the existing agreement with the California Department of Transportation (Caltrans) for sharing the cost of electrical facilities on state highways, subject to available budget and City Attorney review and approval.

**B. CONSENT CALENDAR-COMMUNITY SERVICES DISTRICT**

- B.1. ORDINANCES - READING BY TITLE ONLY - THE MOTION TO ADOPT AN ORDINANCE LISTED ON THE CONSENT CALENDAR INCLUDES WAIVER OF FULL READING OF THE ORDINANCE.

**Recommendation:** Waive reading of all Ordinances.

- B.2. MINUTES - CLOSED SESSION OF JAN 15, 2019 4:30 PM (See A.2)

**Recommendation:** Approve as submitted.

- B.3. MINUTES - REGULAR MEETING OF JAN 15, 2019 6:00 PM (See A.3)

**Recommendation:** Approve as submitted.

### C. CONSENT CALENDAR - HOUSING AUTHORITY

- C.1. ORDINANCES - READING BY TITLE ONLY - THE MOTION TO ADOPT AN ORDINANCE LISTED ON THE CONSENT CALENDAR INCLUDES WAIVER OF FULL READING OF THE ORDINANCE.

**Recommendation:** Waive reading of all Ordinances.

- C.2. MINUTES - CLOSED SESSION OF JAN 15, 2009 4:30 PM (See A.2)

**Recommendation:** Approve as submitted.

- C.3. MINUTES - REGULAR MEETING OF JAN 15, 2019 6:00 PM (See A.3)

**Recommendation:** Approve as submitted.

- C.4. EXCLUSIVE NEGOTIATION AGREEMENT NO. 2019-74 BY AND BETWEEN THE MORENO VALLEY HOUSING AUTHORITY AND RANCHO BELAGO DEVELOPERS, INC. (Report of: Financial & Management Services)

Council Member Marquez requested clarification on the proposed agreement.

Chief Financial Officer/City Treasurer Eyerman provided an explanation regarding the agreement, which involves an eight acre undeveloped parcel owned by the City.

**Recommendations:**

1. Approve the Exclusive Negotiation Agreement No. 2019-74 by and between the Moreno Valley Housing Authority and Rancho Belago Developers, Inc.
2. Authorize the Executive Director to execute the Exclusive Negotiation Agreement, subject to the approval of the City Attorney.

### D. CONSENT CALENDAR - BOARD OF LIBRARY TRUSTEES

- D.1. ORDINANCES - READING BY TITLE ONLY - THE MOTION TO ADOPT AN ORDINANCE LISTED ON THE CONSENT CALENDAR INCLUDES WAIVER OF FULL READING OF THE ORDINANCE.

**Recommendation:** Waive reading of all Ordinances.

- D.2. MINUTES - CLOSED SESSION OF JAN 15, 2019 4:30 PM (See A.2)

**Recommendation:** Approve as submitted.

D.3. MINUTES - REGULAR MEETING OF JAN 15, 2019 6:00 PM (See A.3)

**Recommendation:** Approve as submitted.

**E. PUBLIC HEARINGS - NONE**

**F. ITEMS REMOVED FROM CONSENT CALENDARS FOR DISCUSSION OR SEPARATE ACTION - NONE**

**G. GENERAL BUSINESS**

G.1. ITEM NO. G.1. WAS REMOVED AT THE REQUEST OF STAFF (Report of: City Manager)

**Recommendations: That the City Council:**

1. Approve the City's participation in a Peer Review study to verify the feasibility of the Matrix study regarding potential creation of a Police Services Joint Powers Authority to serve several cities that currently contract with the Riverside County Sheriff's Department.
2. Authorize the City Manager to enter into a participation/cost sharing agreement with other participating cities.
3. Authorize a General Fund expenditure not to exceed \$15,000.

**RESULT: WITHDRAWN**

**H. REPORTS**

**H.1. CITY COUNCIL REPORTS**

(Informational Oral Presentation - not for Council action)

March Joint Powers Commission (JPC) - None

Riverside County Habitat Conservation Agency (RCHCA) - None

Riverside County Transportation Commission (RCTC)

Mayor Pro Tem Baca reported the following:

RCTC purchased CommuterLink Express Route 200 buses as part of the 91 Express Lanes project. Route 200 buses use the Express Lanes to provide highly reliable commute trips as well as connections to Metrolink, Disneyland, and other popular destinations. Passengers can ride for \$3 or less each way. Visit riversidetransit.com for more details.

Riverside Transit Agency (RTA)

Council Member Marquez reported the following:

Route 19 has experienced a marked increase in ridership.

Western Riverside Council of Governments (WRCOG)

Mayor Pro Tem Baca reported the following:

- The TUMF Program Activities report included the update on the TUMF calculation and collection process to allow an option for member agencies to shift the responsibility for TUMF calculation and collection to WRCOG that was approved last October 2018.

The option to delegate TUMF calculation and collection to WRCOG will only become effective for a member agency with action by the elected body of the agency to approve the TUMF Ordinance Amendment. The item is scheduled for the February 19<sup>th</sup> City Council Hearing.

- The League of California Cities provided summaries of Governor Newsom's housing related budget proposals. League staff noted a significant concern on the Governor's proposal to take away transportation funding from cities that fail to meet state housing goals.

Western Riverside County Regional Conservation Authority (RCA)

Council Member Marquez reported the following:

Items covered at the RCA Board of Directors meeting on February 4, 2019 include:

- Moreno Valley's MSHCP fee collection totaled \$27,352 (13 residential permits) in November 2018 and \$42,080 (20 residential permits) in December 2018.

School District/City Joint Task Force - None**H.2. CITY MANAGER'S REPORT**

(Informational Oral Presentation - not for Council action)

City Manager DeSantis announced that the City of Moreno Valley was named a Top Employer by Inland Empire magazine.

### H.3. CITY ATTORNEY'S REPORT

(Informational Oral Presentation - not for Council action)

City Attorney Koczanowicz reported that he as well as Mayor Pro Tem Baca, Council Member Thornton, and City Manager DeSantis attended the League of California Cities New Council Member Conference.

### **CLOSING COMMENTS AND/OR REPORTS OF THE CITY COUNCIL, COMMUNITY SERVICES DISTRICT, CITY AS SUCCESSOR AGENCY FOR THE COMMUNITY REDEVELOPMENT AGENCY, HOUSING AUTHORITY AND THE BOARD OF LIBRARY TRUSTEES.**

#### Council Member Thornton

1. Congratulated City staff on the Inland Empire magazine award.
2. Attended a Homeless Coordinating and Financial Council meeting.
3. Attended the Homeless Point in Time Count with Mayor Pro Tem Baca and Council Member Cabrera.
4. Appreciated the training offered at the League of California Cities.

#### Council Member Marquez

1. Mentioned his recent hospitalization stay.
2. Apologized to District 3 residents for not responding to meeting requests.
3. Praised staff.
4. Remarked on his presence at the Super Bowl.
5. Recognized members of Supervisor Jeff Hewitt's staff.

#### Council Member Cabrera

1. Recognized his mother and members of the Southwest Regional Carpenter's Union.
2. Attended the Homeless Point in Time Count.
3. Encouraged residents to give panhandlers water or to purchase them a meal in lieu of cash.
4. Attended the BIA Economic Outlook event.
5. Remarked on a focus to bring high wage jobs to the City.
6. The California's Mayor Cup will take place at Moreno Valley College.

#### Mayor Pro Tem Baca

1. Attended the League of California Cities Conference with City Clerk Jacquez-Nares, City Attorney Koczanowicz, City Manager DeSantis, and Council Member Thornton.
2. Applauded Council Member Thornton on the work she has done thus far.
3. Encouraged everyone to drive cautiously in the wet weather.

#### Mayor Gutierrez

1. Thanked the businesses participating in the Business Spotlight program.
2. Congratulated the classified employee of the 3rd quarter and the Family is All That Matters members.

3. Lauded the Community Day of Service sponsors.
4. Praised the members of Carpenters Union in the audience.
5. Applauded City staff for the Inland Empire magazine award.
6. Encouraged residents to apply to serve on the Boards or Commissions.
7. Attended a successful Inland Empire Commercial Real Estate Conference.
8. Honored to have recognized Black Bear Diner at their grand opening.
9. Recognized Boards and Commissions members at the inaugural Volunteer Appreciation Ceremony.
10. Reminded residents of the upcoming Telephone Town Hall.

## ADJOURNMENT

There being no further business to come before the City Council, Mayor Gutierrez adjourned the meeting at 6:46 p.m.

Submitted by:

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Pat Jacquez-Nares, CMC & CERA  
 City Clerk  
 Secretary, Moreno Valley Community Services District  
 Secretary, City as Successor Agency for the Community  
 Redevelopment Agency of the City of Moreno Valley  
 Secretary, Moreno Valley Housing Authority  
 Secretary, Board of Library Trustees

Approved by:

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Dr. Yxstian A. Gutierrez  
 Mayor  
 City of Moreno Valley  
 President, Moreno Valley Community Services District  
 Chairperson, City as Successor Agency for the Community  
 Redevelopment Agency of the City of Moreno Valley  
 Chairperson, Moreno Valley Housing Authority  
 Chairperson, Board of Library Trustees



## Report to City Council

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**TO:** Mayor and City Council

**FROM:** Pat Jacquez-Nares, City Clerk

**AGENDA DATE:** February 19, 2019

**TITLE:** AMENDED JOINT POWERS AGREEMENT OF THE WESTERN RIVERSIDE COUNCIL OF GOVERNMENTS

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### **RECOMMENDED ACTION**

#### **That the City Council:**

Authorize the Mayor to execute the Amended Joint Powers Agreement for the Western Riverside Council of Governments.

### **SUMMARY/DISCUSSION**

At its meeting of November 5, 2018, the Western Riverside Council of Governments (WRCOG) Executive Committee took action to amend its Joint Powers Agreement as follows:

#### **Joint Powers Agreement Changes**

1. Sections 2.12, 3.1 and 4.5 of the Agreement updates the JPA to formally recognize that the Treasurer / Auditor of WRCOG is a WRCOG employee appointed pursuant to Section 6505.6 of the Government Code.
2. Section 2.12 formally adds the position of a Second Vice-Chair to the JPA. Currently the Second Vice-Chair position is only listed in the Bylaws.
3. Section 2.4 of the Agreement rewords the language establishing the membership of the General Assembly and Executive Committee to more clearly set forth the voting membership of each Committee. The changes do not impact the current process used by WRCOG. Pursuant to the direction of WRCOG's Administration & Finance Committee, the process for appointing Executive Committee alternates for the Board of Supervisors has not been revised.



4. Section 2.15 clarifies the bond requirements for WRCOG Committee members.
5. Section 2.13 clarifies that the attendance of Executive Committee members at a standing meeting is subject to the Brown Act.

An amendment to the Joint Powers Agreement requires the approval and signatures from 2/3 of WRCOG's member jurisdictions to take effect. Once the 2/3 of the WRCOG Member Agencies have approved the above listed changes, the changes will become effective. Therefore, the WRCOG is asking that the City of Moreno Valley City Council approve these changes and authorize the Mayor to execute the amended agreement.

## **FISCAL IMPACT**

The proposed Amended JPA should not fiscally impact the City.

## **CITY COUNCIL GOALS**

### **Advocacy**

Develop cooperative intergovernmental relationships and be a forceful advocate of City policies, objectives, and goals to appropriate external governments, agencies and corporations.

### **Positive Environment**

Create a positive environment for the development of Moreno Valley's future.

## **NOTIFICATION**

NA

## **PREPARATION OF STAFF REPORT**

Prepared By:  
Name: Pat Jacquez-Nares  
Title: City Clerk

Department Head Approval:  
Name: Pat Jacquez-Nares  
Title: City Clerk

## **CITY COUNCIL GOALS**

**Advocacy.** Develop cooperative intergovernmental relationships and be a forceful advocate of City policies, objectives, and goals to appropriate external governments, agencies and corporations.

## **CITY COUNCIL STRATEGIC PRIORITIES**

### **1. Economic Development**

- 2. Public Safety
- 3. Library
- 4. Infrastructure
- 5. Beautification, Community Engagement, and Quality of Life
- 6. Youth Programs

**ATTACHMENTS**

- 1. Attachment A - Amended Agreement
- 2. Attachment B - WRCOG's Staff Report 11-05-18

**APPROVALS**

Budget Officer Approval	<u>✓ Approved</u>	2/13/19 1:13 PM
City Attorney Approval	<u>✓ Approved</u>	2/13/19 10:33 AM
City Manager Approval	<u>✓ Approved</u>	2/13/19 2:20 PM

Updated through ~~June 22XXXXXXXX~~, 20172018  
Revised

JOINT POWERS AGREEMENT OF  
THE WESTERN RIVERSIDE  
COUNCIL OF GOVERNMENTS

This Agreement is made and entered into on the 1st day of April, 1991, pursuant to Government Code Section 6500 et. seq. and other pertinent provisions of law, by and between six or more of the cities located within Western Riverside County and the County of Riverside.

RECITALS

A. Each member and party to this Agreement is a governmental entity established by law with full powers of government in legislative, administrative, financial, and other related fields.

B. The purpose of the formation is to provide an agency to conduct studies and projects designed to improve and coordinate the common governmental responsibilities and services on an area-wide and regional basis through the establishment of an association of governments. The Council will explore areas of inter-governmental cooperation and coordination of government programs and provide recommendations and solutions to problems of common and general concern.

C. When authorized pursuant to an Implementation Agreement, the Council shall manage and administer thereunder.

NOW, THEREFORE, in consideration of the mutual promises and covenants herein contained, the parties hereto agree as follows:

Attachment: Attachment A - Amended Agreement (3449 : WRCOG Amended Joint Powers Agreement)

I.

PURPOSE AND POWERS

1.1 Agency Created.

There is hereby created a public entity to be known as the "Western Riverside Council of Governments" ("WRCOG" or "the Council). WRCOG is formed by this Agreement pursuant to the provision of Government Code Section 6500 et. seq. and other pertinent provision of law. WRCOG shall be a public entity separate from the parties hereto.

1.2 Powers.

1.2.1. WRCOG established hereunder shall perform all necessary functions to fulfill the purposes of this Agreement. Among other functions, WRCOG shall:

- a. Serve as a forum for consideration, study and recommendation on area-wide and regional problems;
- b. Assemble information helpful in the consideration of problems peculiar to Western Riverside County;
- c. Explore practical avenues for intergovernmental cooperation, coordination and action in the interest of local public welfare and means of improvements in the administration of governmental services; and
- d. Serve as the clearinghouse review body for Federally-funded projects in accordance with Circular A-95 in conjunction with the Southern California Association of Governments.

Attachment: Attachment A - Amended Agreement (3449 : WRCOG Amended Joint Powers Agreement)

1.2.2. The Council shall have the power in its own name to do any of the following;

a. When necessary for the day to day operation of the Council, to make and enter into contracts;

b. To contract for the services of engineers, attorneys, planners, financial consultants and separate and apart therefrom to employ such other persons, as it deems necessary;

c. To apply for an appropriate grant or grants under any federal, state, or local programs.

d. To receive gifts, contributions and donations of property, funds, services and other forms of financial assistance from persons, firms, corporations and any governmental entity;

e. To lease, acquire, construct, manage, maintain, and operate any buildings, works, or improvements;

f. To delegate some or all of its powers to the Executive Committee and the Executive Director of the Council as hereinafter provided.

1.2.3 The association shall have the power in its own name, only with the approval of all affected member agencies to:

a. Acquire, hold and dispose of property by eminent domain, lease, lease purchase or sale.

b. To incur debts, liabilities, obligations, and issue bonds;

II.

ORGANIZATION OF COUNCIL

Attachment: Attachment A - Amended Agreement (3449 : WRCOG Amended Joint Powers Agreement)

2.1 Parties.

The parties to WRCOG shall be the County of Riverside and each city located within Western Riverside County which has executed or hereafter executes this Agreement, or any addenda, amendment, or supplement ~~thereto~~hereto and agrees to ~~such~~ become a member upon such terms and conditions as established by the General ~~council~~Assembly or Executive Committee, and which has not, pursuant to provisions hereof, withdrawn ~~therefrom~~herefrom (the “Member Agencies”). Only the parties identified in this section and Associate Members approved under section 8.2 of this Agreement, if any, shall be considered contracting parties to this Agreement under Government Code section 6502, provided that the rights of any Associate Member under this Agreement shall be limited solely those rights expressly set forth in a PACE Agreement authorized in section 8.2 of this Agreement.

2.2 Names.

The names, particular capacities and addresses of the parties ~~at any time~~ shall be shown on Exhibit "A" attached hereto, as amended or supplemented from time to time by the Executive Director. If the Executive Director amends or supplements Exhibit “A”, a copy of the revised Exhibit “A” shall be provided to the members.

2.3 Duties.

WRCOG shall do whatever is necessary and required to carry out the purposes of this Agreement and when authorized by an Implementation Agreement pursuant to section 1.2.3 as appropriate, to make and enter into such contracts, incur such debts and obligations, assess contributions from the members, and perform such other acts as are necessary to the accomplishment of the purposes of such agreement,

Attachment: Attachment A - Amended Agreement (3449 : WRCOG Amended Joint Powers Agreement)

within the provisions of Government Code Section 6500 et seq. and as prescribed by the laws of the State of California.

2.4 Governing Body.

2.4.1. WRCOG shall be governed by a General Assembly with membership consisting of ~~the appropriate~~ representatives from the County of Riverside, each city which is a signatory to this Agreement, the Western Municipal Water District, the Eastern Municipal Water District, and the Morongo Band of Mission Indians (“Morongo”), ~~the number of which shall be determined as hereinafter set forth. The~~ (collectively, the “General Assembly shall meet at least once annually, preferably scheduled in the evening. Each Member Agencies”). Each General Assembly Member Agency ~~of the General Assembly~~ shall have one vote for each mayor, council member, county supervisor, water district board member, and tribal council member present at the General Assembly. The General Assembly shall act only upon a majority of a quorum. A quorum shall consist of a majority of the total authorized representatives, provided that ~~members representing~~ voting representatives of a majority of the General Assembly Member Agencies are present. The General Assembly shall adopt and amend by-laws for the administration and management of this Agreement, which when adopted and approved shall be an integral part of this Agreement. Such by-laws may provide for the management and administration of this Agreement. The General Assembly shall meet at least once annually, preferably scheduled in the evening.

2.4.2. There shall be an Executive Committee which exercises the powers of this Agreement between sessions of the General Assembly. Members of the Executive Committee shall be the Mayor from each of the member cities, four members

Attachment: Attachment A - Amended Agreement (3449 : WRCOG Amended Joint Powers Agreement)

of the Riverside County Board of Supervisors, the President of each Water District, and the Tribal Chairman of Morongo; ~~(the remaining member of the Board of Supervisors shall serve as an alternate, except any~~ “Executive Committee Members”). Each City Council, at its discretion, can appoint ~~its~~ Mayor Pro Tem or other City Council member in place of the Mayor; Each water district board, at its discretion, can appoint another Board member in place of the President, ~~and.~~ The Tribal Council of Morongo, at its discretion, can appoint another Tribal Council member in place of the Tribal Chairman. The Executive Committee shall act only upon a majority of a quorum. A quorum shall consist of a majority of the ~~member agencies~~ Executive Committee Members. Membership of Morongo on the General Assembly and Executive Committee of WRCOG shall be conditioned on Morongo entering into a separate Memorandum of Understanding with WRCOG.

2.4.3. Each member of the General Assembly and the Executive Committee shall be a current member of the legislative body such member represents.

2.4.4. Each ~~participating member on the~~ Executive Committee Member shall also have an alternate, who must also be a current member of the legislative body of the party such alternate represents. The remaining member of the Board of Supervisors shall serve as an alternate for the Board of Supervisors. The name of the alternate members shall be on file with the Executive Committee. In the absence of the regular member from an agency, the alternate member from such agency shall assume all rights and duties of the absent regular member.

2.5 Executive Director.

Attachment: Attachment A - Amended Agreement (3449 : WRCOG Amended Joint Powers Agreement)



The Executive Director shall be the chief administrative officer of the Council. He shall receive such compensation as may be fixed by the Executive Committee. The powers and duties of the Executive Director shall be subject to the authority of the Executive Committee and include the following:

- a. To appoint, direct and remove employees of the Council.
- b. Annually to prepare and present a proposed budget to the Executive Committee and General Assembly.
- c. Serve as Secretary of the ~~Council~~ General Assembly and of the Executive Committee.
- d. To attend meetings of the General Assembly and Executive Committee.
- e. To perform such other and additional duties as the Executive Committee may require.

#### 2.6 Principal Office.

The principal office of WRCOG shall be established by the Executive Committee and shall be located within Western Riverside County. The Executive Committee is hereby granted full power and authority to change said principal office from one location to another within Western Riverside County. Any change shall be noted by the Secretary under this section but shall not be considered an amendment to this Agreement.

#### 2.7 Meetings.

The Executive Committee shall meet at the principal office of the agency or at such other place as may be designated by the Executive Committee. The time and place of regular meetings of the Executive Committee shall be determined by

resolution adopted by the Executive Committee; a copy of such resolution shall be furnished to each party hereto. Regular, adjourned and special meetings shall be called and conducted in accordance with the provisions of the Ralph M. Brown Act, Government Code Section 54950 et. seq., as it may be amended.

#### 2.8 Powers and Limitations of the Executive Committee.

Unless otherwise provided herein, each Member or participating alternate of the Executive Committee shall be entitled to one vote, and a vote of the majority of those present and qualified to vote constituting a quorum may adopt any motion, resolution, or order and take any other action they deem appropriate to carry forward the objectives of the Council.

#### 2.9 Minutes.

The secretary of the Council shall cause to be kept minutes of regular adjourned regular and special meetings of the General Assembly and Executive Committee, and shall cause a copy of the minutes to be forwarded to each member ~~and to each of the members hereto.~~

#### 2.10 Rules.

The Executive Committee may adopt from time to time such rules and regulations for the conduct of its affairs consistent with this Agreement or any Implementation Agreement.

#### 2.11 Vote or Assent of Members.

The vote, assent or approval of the members in any manner as may be required, hereunder shall be evidenced by a certified copy of the action of the governing

body of such party filed with the Council. It shall be the responsibility of the Executive Director to obtain certified copies of said actions.

2.12 Officers.

There shall be selected from the membership of the Executive Committee, a chairperson, a vice chairperson and a second vice chairperson. The Executive Director shall be the secretary. ~~The Treasurer of the County of Riverside shall be the Treasurer of the Council and the Controller or Auditor of the County of Riverside shall be the Auditor of the Council. Such persons and the Auditor shall be appointed by the Executive Director and must be officers or employees of WRCOG. The Executive Director may appoint a single officer or employee of WRCOG to serve in both the Treasurer and Auditor positions. Such person(s)~~ shall possess the powers of, and shall perform the treasurer and auditor functions respectively, for WRCOG and perform those functions required of them by Government Code Sections 6505, 6505.5 and 6505.6, and by all other applicable laws and regulations, including any subsequent amendments thereto.

The chairperson ~~and~~, vice chairperson, and second vice chairperson shall hold office for a period of one year commencing ~~July 1st of each and every fiscal year; provided, however, the first chairperson and vice chairperson appointed shall hold office from the date of appointment to June 30th of the ensuing fiscal year~~ at the close of the General Assembly meeting of their election, and ending one year thereafter, or until his or her successor is elected. Except for the Executive Director, any officer, employee, or agent of the Executive Committee may also be an officer, employee, or agent of any of

Attachment: Attachment A - Amended Agreement (3449 : WRCOG Amended Joint Powers Agreement)

the members. The appointment by the Executive Committee of such a person shall be evidence that the two positions are compatible.

2.13 Committees.

The Executive Committee may, as it deems appropriate, ~~appoint~~establish committees to accomplish the purposes set forth herein. All standing committee meetings of WRCOG, including those of the Executive Committee, shall be open to all Executive Committee Members- in accordance with the Brown Act

2.14 Additional Officers and Employees.

The Executive Committee shall have the power to authorize such additional officers and assistant~~employees~~ as may be appropriate. ~~Such officers and employees may also be, but are not required to be, officers and employees of the individual members.~~

2.15 Bonding Requirement.

The officers or persons who have charge of, handle, or have access to any property of WRCOG shall be the ~~members of the Executive Committee, the~~ Treasurer, the Executive Director, and any other officers or persons ~~to be~~ designated or empowered by the Executive Committee. Each such officer or person shall be required to file an official bond with the Executive Committee in an amount which shall be established by the Executive Committee. Should the existing bond or bonds of any such officer be extended to cover the obligations provided herein, said bond shall be the official bond required herein. The premiums on any such bonds attributable to the coverage required herein shall be appropriate expenses of WRCOG.

2.16 Status of Officers and Employees.

Attachment: Attachment A - Amended Agreement (3449 : WRCOG Amended Joint Powers Agreement)

All of the privileges and immunities from liability, exemption from laws, ordinances and rules, all pension, relief, disability, worker's compensation, and other benefits which apply to the activity of officers, agents, or employees of any of the members when performing their respective functions shall apply to them to the same degree and extent while engaged in the performance of any of the functions and other duties under this Agreement. None of the officers, agents, or employees appointed by the Executive Committee shall be deemed, by reason of their employment by the Executive Committee, to be employed by any of the members or, by reason of their employment by the Executive Committee, to be subject to any of the requirements of such members.

#### 2.17 Restrictions.

Pursuant to Government Code Section 6509, for the purposes of determining the restrictions to be imposed by the Council in its exercise of the above-described joint powers, reference shall be made to, and the Council shall observe, the restrictions imposed [by state law](#) upon the County of Riverside.

#### 2.18 TUMF Matters – Water Districts and Morongo.

Pursuant to this Joint Powers Agreement, WRCOG administers the Transportation Mitigation Fee (“TUMF”) for cities in Western Riverside County. The fee was established prior to the Water District’s and Morongo’s involvement with WRCOG and will fund transportation improvements for the benefit of the County of Riverside and the cities in Western Riverside County. As such, the Western Municipal Water District, the Eastern Municipal Water District, and Morongo General Assembly and Executive

Committee Members shall not vote on any matter related to the administration of the TUMF program or the expenditure of TUMF revenues.

### III

#### FUNDS AND PROPERTY

##### 3.1 Treasurer.

~~The Treasury of the member agency whose Treasurer is the Treasurer for WRCOG shall be the depository for WRCOG.~~ The Treasurer of the Council shall have custody of all funds and shall provide for strict accountability thereof in accordance with Government Code Section 6505.5 and other applicable laws of the State of California. He or she shall perform all of the duties required in Government Code Section 6505 et. seq., and ~~following,~~ such other duties as may be prescribed by the Executive Committee.

##### 3.2. Expenditure of Funds.

The funds under this Agreement shall be expended only in furtherance of the purposes hereof and in accordance with the laws of the State of California and standard accounting practices shall be used to account for all funds received and disbursed.

##### 3.3. Fiscal Year.

WRCOG shall be operated on a fiscal year basis, beginning on July 1 of each year and continuing until June 30 of the succeeding year. Prior to July 1 of each year, the General Assembly shall adopt a final budget for the expenditures of WRCOG during the following fiscal Year.

##### 3.4. Contributions/Public Funds.

In preparing the budget, the General Assembly by majority vote of a quorum shall determine the amount of funds which will be required from its members for the purposes of this Agreement. The funds required from its members after approval of the final budget shall be raised by contributions 50% of which will be assessed on a per capita basis and 50% on an assessed valuation basis, each city paying on the basis of its population and assessed valuation and the County paying on the basis of the population and assessed valuation within the unincorporated area of Western Riverside County as defined in the by-laws. The parties, when informed of their respective contributions, shall pay the same before August 1st of the fiscal year for which they are assessed or within sixty days of being informed of the assessment, whichever occurs later. In addition to the contributions provided, advances of public funds from the parties may be made for the purposes of this Agreement. When such advances are made, they shall be repaid from the first available funds of WRCOG.

The General Assembly shall have the power to determine that personnel, equipment or property of one or more of the parties to the Agreement may be used in lieu of fund contributions or advances.

All contributions and funds shall be paid to WRCOG and shall be disbursed by a majority vote of a quorum of the Executive Committee, as authorized by the approved budget.

### 3.5 Contributions from Water Districts and the Morongo Band of Mission Indians.

The provision of section 3.4 above shall be inapplicable to the Western Municipal Water District, the Eastern Municipal Water District, and Morongo. The amount of

contributions from these water districts and Morongo shall be through the WRCOG budget process.

#### IV

### BUDGETS AND DISBURSEMENTS

#### 4.1 Annual Budget.

The Executive Committee may at any time amend the budget to incorporate additional income and disbursements that might become available to WRCOG for its purposes during a fiscal year.

#### 4.2 Disbursements.

The Executive Director shall request warrants from the Auditor in accordance with budgets approved by the General Assembly or Executive Committee subject to quarterly review by the Executive Committee. The Treasurer shall pay such claims or disbursements and such requisitions for payment in accordance with rules, regulations, policies, procedures and bylaws adopted by the Executive Committee.

#### 4.3 Accounts.

All funds will be placed in appropriate accounts and the receipt, transfer, or disbursement of such funds during the term of this Agreement shall be accounted for in accordance with generally accepted accounting principles applicable to governmental entities and pursuant to Government Code Sections 6505 et seq. and any other applicable laws of the State of California. There shall be strict accountability of all funds. All revenues and expenditures shall be reported to the Executive Committee.

#### 4.4 Expenditures Within Approved Annual Budget.



All expenditures shall be made within the approved annual budget. No expenditures in excess of those budgeted shall be made without the approval of a majority of a quorum of the Executive Committee.

#### 4.5 Audit.

The ~~records and accounts of WRCOG shall be audited annually by Auditor~~ shall make or contract with an independent certified public accountant or public accountant to make an annual audit of WRCOG's accounts and records, and copies of such audit report shall be filed with the County Auditor, State Controller and each party to WRCOG no later than fifteen (15) days after receipt of said audit by the Executive Committee. The Auditor shall perform those functions required of him or her by Government Code Sections 6505, 6505.5 and 6505.6, and by all other applicable laws and regulations, including any subsequent amendments thereto.

#### 4.6 Reimbursement of Funds.

Grant funds received by WRCOG from any federal, state, or local agency to pay for budgeted expenditures for which WRCOG has received all or a portion of said funds from the parties hereto shall be used as determined by WRCOG's Executive Committee.

## V

### LIABILITIES

#### 5.1 Liabilities.

The debts, liabilities, and obligation of WRCOG shall be the debts, liabilities, or obligations of WRCOG alone and not of the parties to this Agreement.

#### 5.2 Hold Harmless and Indemnity.

Each party hereto agrees to indemnify and hold the other parties harmless from all liability for damage, actual or alleged, to persons or property arising out of or resulting from negligent acts or omissions of the indemnifying party or its employees. Where the General Assembly or Executive Committee itself or its agents or employees are held liable for injuries to persons or property, each party's liability for contribution or indemnity for such injuries shall be based proportionately upon the contributions (less voluntary contributions) of each member. In the event of liability imposed upon any of the parties to this Agreement, or upon the General Assembly or Executive Committee created by this Agreement, for injury which is caused by the negligent or wrongful act or omission of any of the parties in the performance of this Agreement, the contribution of the party or parties not directly responsible for the negligent or wrongful act or omission shall be limited to One Hundred Dollars (\$100.00). The party or parties directly responsible for the negligent or wrongful acts or omissions shall indemnify, defend, and hold all other parties harmless from any liability for personal injury or property damage arising out of the performance of this Agreement. The voting for or against a matter being considered by the General Assembly or executive or other committee or WRCOG, or abstention from voting on such matter, shall not be construed to constitute a wrongful act or omission within the meaning of this Subsection.

## VI

### ADMISSION AND WITHDRAWAL OF PARTIES

#### 6.1 Admission of New Parties.

It is recognized that additional cities other than the original parties, may wish to participate in WRCOG. Any Western Riverside County city may become a party

to WRCOG upon such terms and conditions as established by the General Assembly or Executive Committee. Any Western Riverside County city shall become a party to WRCOG by the adoption by the city council of this Agreement and the execution of a written addendum ~~thereto~~hereto agreeing to the terms of this Agreement and agreeing to any additional terms and conditions that may be established by the General Assembly or Executive Committee. Special districts which are significantly involved in regional problems and the boundaries of which include territory within the collective area of the membership shall be eligible for advisory membership in the Council by the execution of a separate MOU setting forth the terms of such participation. The representative of any such advisory member may participate in the work of committees of the Council.

#### 6.2 Withdrawal from WRCOG.

It is fully anticipated that each party hereto shall participate in WRCOG until the purposes set forth in this Agreement are accomplished. The withdrawal of any party, either voluntary or involuntary, unless otherwise provided by the General Assembly or Executive Committee, shall be conditioned as follows:

- a. In the case of a voluntary withdrawal following a properly noticed public hearing, written notice shall be given to WRCOG, six months prior to the effective date of withdrawal;
- b. Withdrawal shall not relieve the party of its proportionate share of any debts or other liabilities incurred by WRCOG prior to the effective date of the ~~parties'~~party's notice of withdrawal;

c. Unless otherwise provided by a unanimous vote of the Executive Committee, withdrawal shall result in the forfeiture of that party's rights and claims relating to distribution of property and funds upon termination of WRCOG as set forth in Section VII below;

d. Withdrawal from any Implementation Agreement shall not be deemed withdrawal from membership in WRCOG.

## VII

### TERMINATION AND DISPOSITION OF ASSETS

#### 7.1 Termination of this Agreement.

WRCOG shall continue to exercise the joint powers herein until the termination of this Agreement and any extension thereof or until the parties shall have mutually rescinded this Agreement; providing, however, that WRCOG and this Agreement shall continue to exist for the purposes of disposing of all claims, distribution of assets and all other functions necessary to conclude the affairs of WRCOG.

Termination shall be accomplished by written consent of all of the parties, or shall occur upon the withdrawal from WRCOG of a sufficient number of the agencies enumerated herein so as to leave less than five of the enumerated agencies remaining in WRCOG.

#### 7.2 Distribution of Property and Funds.

In the event of the termination of this Agreement, any property interest remaining in WRCOG following the discharge of all obligations shall be disposed of as the Executive Committee shall determine with the objective of distributing to each

remaining party a proportionate return on the contributions made to such properties by such parties, less previous returns, if any.

## VIII

### PACE IMPLEMENTATION AND PARTICIPATION AGREEMENTS:

#### ASSOCIATE MEMBERSHIP

##### 8.1 Execution of Agreement.

When authorized by the Executive Committee, any affected member agency or agencies enumerated herein, may execute an Implementation Agreement for the purpose of authorizing WRCOG to implement, manage and administer area-wide and regional programs in the interest of the local public welfare. The costs incurred by WRCOG in implementing a program including indirect costs, shall be assessed only to those public agencies who are parties to that Implementation Agreement.

##### 8.2 PACE Agreements; Associate Membership.

WRCOG shall be empowered to establish and operate one or more Property Assessed Clean Energy (“PACE”) programs pursuant to Chapter 29 of the Improvement Bond Act of 1911, being Division 7 of the California Streets and Highways Code, and to enter into one or more agreements, including without limitation, participation agreements, implementation agreements and joint powers agreements and amendments thereto to fulfill such programs both within and outside the jurisdictional boundaries of WRCOG.

WRCOG, acting through its Executive Committee, shall be empowered to establish an “Associate Member” status that provides membership in WRCOG to local jurisdictions that are outside WRCOG’s jurisdictional boundaries but within whose

boundaries a PACE program will be established and implemented by WRCOG. Said local jurisdictions shall become Associate Members of WRCOG by adopting one or more agreements (the "PACE Agreement") on the terms and conditions established by the Executive Committee and consistent with the requirements of the Joint Exercise of Powers Act, being 5 of Division 7, Title 1 of the California Government Code (Sections 6500 et seq.). The rights of Associate Members shall be limited solely to those terms and conditions expressly set forth in the PACE Agreement for the purposes of implementing the PACE program within their jurisdictional boundaries. Except as expressly provided for by the PACE Agreement, Associate Members shall not have any rights otherwise granted to WRCOG's members by this Agreement, including but not limited to the right to vote, right to amend this Agreement, and right to sit on committees or boards established under this Agreement or by action of the Executive Committee or the General Assembly, including, without limitation, the General Assembly and the Executive Committee.

## IX

### MISCELLANEOUS

#### 9.1 Amendments.

This Agreement may be amended with the approval of not less than two-thirds (2/3) of all member agencies.

## 9.2 Notice.

Any notice or instrument required to be given or delivered by depositing the same in any United States Post Office, registered or certified, postage prepaid, addressed to the addresses of the parties as shown on Exhibit "A", shall be deemed to have been received by the party to whom the same is addressed at the expiration of seventy-two (72) hours after deposit of the same in the United States Post Office for transmission by registered or certified mail as aforesaid.

## 9.3 Effective Date.

This Agreement shall be effective and WRCOG shall exist from and after such date as this Agreement has been executed by any seven or more of the public agencies, including the County of Riverside, as listed on page 1 hereof.

#### 9.4 Arbitration.

Any controversy or claim between any two or more parties to this Agreement, or between any such party or parties and WRCOG, with respect to disputes, demands, differences, controversies, or misunderstandings arising in relation to interpretation of this Agreement, or any breach thereof, shall be submitted to and determined by arbitration. The party desiring to initiate arbitration shall give notice of its intention to arbitrate to every other party to this Agreement and to the Executive Director of the Council. Such notice shall designate as "respondents" such other parties as the initiating party intends to have bound by any award made therein. Any party not so designated but which desires to join in the arbitration may, within ten (10) days of service upon it of such notice, file with all other parties and with the Executive Director of the Council a response indicating its intention to join in and to be bound by the results of the arbitration, and further designating any other parties it wishes to name as a respondent. Within twenty (20) days of the service of the initial demand for arbitration, the initiating party and the respondent or respondents shall each designate a person to act as an arbitrator. The designated arbitrators shall mutually designate the minimal number of additional persons as arbitrators as may be necessary to create an odd total number of arbitrators but not less than three to serve as arbitrator(s).

The arbitrators shall proceed to arbitrate the matter in accordance with the provisions of Title 9 of Part 3 of the Code of Civil Procedure, Section 1280 et. seq. The parties to this Agreement agree that the decision of the arbitrators will be binding and will not be subject to judicial review except on the ground that the arbitrators have exceeded the scope of their authority.



9.5 Partial Invalidity.

If any one or more of the terms, provisions, sections, promises, covenants or conditions of this Agreement shall to any extent be adjudged invalid, unenforceable, void or voidable for any reason whatsoever by a court of competent jurisdiction, each and all of the remaining terms, provisions, sections, promises, covenants and conditions of this Agreement shall not be affected thereby and shall be valid and enforceable to the fullest extent permitted by law.

9.6 Successors.

This Agreement shall be binding upon and shall inure to the benefit of the successors of the parties hereto.

9.7 Assignment.

The parties hereto shall not assign any rights or obligations under this Agreement without written consent of all other parties.

9.8 Execution.

The Board of Supervisors of the County of Riverside and the city councils of the cities enumerated herein have each authorized execution of this Agreement as evidenced by the authorized signatures below, respectively.

**EXHIBIT "A"**Original Members Agencies

1. City of Banning
2. City of Beaumont (rejoined June 22, 2017)
3. City of Calimesa
4. City of Canyon Lake
5. City of Corona
6. City of Hemet
7. City of Lake Elsinore
8. City of Moreno Valley
9. City of Murrieta
10. City of Norco
11. City of Perris
12. City of Riverside
13. City of San Jacinto
14. City of Temecula
15. County of Riverside

Additional City Members

1. City of Eastvale (added on 08/02/2010, Resolution 01-11)
2. City of Jurupa Valley (added on 07/29/2011, Resolution 02-12)
3. City of Menifee (added on 10/06/2008, Resolution 03-09)
4. City of Wildomar (added on 08/04/2008, Resolution 01-09)

**For Reference Only**  
**THE WESTERN RIVERSIDE**  
**COUNCIL OF GOVERNMENTS**

**Participating Agencies**

1. Eastern Municipal Water District (membership on the Governing Board of WRCOG, 05/11/2009)
2. Western Municipal Water District (membership on the Governing Board of WRCOG, 05/11/2009)
3. Riverside County Superintendent of Schools (membership as an ex-officio, advisory member of WRCOG, 11/07/2011)
4. Morongo Band of Mission Indians (membership on the Governing Board of WRCOG, 7/6/2015)

ATTEST:

Clerk of the Board of Supervisors

By: \_\_\_\_\_

Dated: \_\_\_\_\_

**COUNTY OF RIVERSIDE**

By: \_\_\_\_\_

Chairman, Board of Supervisors

ATTEST:

City Clerk  
City of Banning

By: \_\_\_\_\_

Dated: \_\_\_\_\_

**CITY OF BANNING**

By: \_\_\_\_\_

Mayor

ATTEST:

City Clerk  
City of Beaumont

By: \_\_\_\_\_

Dated: \_\_\_\_\_

**CITY OF BEAUMONT**

By: \_\_\_\_\_

Mayor

ATTEST:

City Clerk  
City of Calimesa

By: \_\_\_\_\_

Dated: \_\_\_\_\_

**CITY OF CALIMESA**

By: \_\_\_\_\_

Mayor

Attachment: Attachment A - Amended Agreement (3449 : WRCOG Amended Joint Powers Agreement)

ATTEST:

City Clerk  
City of Canyon Lake

By: \_\_\_\_\_

Dated: \_\_\_\_\_

**CITY OF CANYON LAKE**

By: \_\_\_\_\_  
Mayor

ATTEST:

City Clerk  
City of Corona

By: \_\_\_\_\_

Dated: \_\_\_\_\_

**CITY OF CORONA**

By: \_\_\_\_\_  
Mayor

ATTEST:

City Clerk  
City of Eastvale

By: \_\_\_\_\_

Dated: \_\_\_\_\_

**CITY OF EASTVALE**

By: \_\_\_\_\_  
Mayor

ATTEST:

City Clerk  
City of Hemet

By: \_\_\_\_\_

Dated: \_\_\_\_\_

**CITY OF HEMET**

By: \_\_\_\_\_  
Mayor

Attachment: Attachment A - Amended Agreement (3449 : WRCOG Amended Joint Powers Agreement)

ATTEST:

City Clerk  
City of Jurupa Valley

By: \_\_\_\_\_

Dated: \_\_\_\_\_

**CITY OF JURUPA VALLEY**

By: \_\_\_\_\_  
Mayor

ATTEST:

City Clerk  
City of Lake Elsinore

By: \_\_\_\_\_

Dated: \_\_\_\_\_

**CITY OF LAKE ELSINORE**

By: \_\_\_\_\_  
Mayor

ATTEST:

City Clerk  
City of Menifee

By: \_\_\_\_\_

Dated: \_\_\_\_\_

**CITY OF MENIFEE**

By: \_\_\_\_\_  
Mayor

ATTEST:

City Clerk  
City of Moreno Valley

By: \_\_\_\_\_

Dated: \_\_\_\_\_

**CITY OF MORENO VALLEY**

By: \_\_\_\_\_  
Mayor

Attachment: Attachment A - Amended Agreement (3449 : WRCOG Amended Joint Powers Agreement)

ATTEST:

City Clerk  
City of Murrieta

By: \_\_\_\_\_

Dated: \_\_\_\_\_

**CITY OF MURRIETA**

By: \_\_\_\_\_  
Mayor

ATTEST:

City Clerk  
City of Norco

By: \_\_\_\_\_

Dated: \_\_\_\_\_

**CITY OF NORCO**

By: \_\_\_\_\_  
Mayor

ATTEST:

City Clerk  
City of Perris

By: \_\_\_\_\_

Dated: \_\_\_\_\_

**CITY OF PERRIS**

By: \_\_\_\_\_  
Mayor

ATTEST:

City Clerk  
City of Riverside

By: \_\_\_\_\_

Dated: \_\_\_\_\_

**CITY OF RIVERSIDE**

By: \_\_\_\_\_  
Mayor

ATTEST:

City Clerk  
City of San Jacinto

By: \_\_\_\_\_

Dated: \_\_\_\_\_

**CITY OF SAN JACINTO**

By: \_\_\_\_\_  
Mayor

ATTEST:

City Clerk  
City of Temecula

By: \_\_\_\_\_

Dated: \_\_\_\_\_

**CITY OF TEMECULA**

By: \_\_\_\_\_  
Mayor

ATTEST:

City Clerk  
City of Wildomar

By: \_\_\_\_\_

Dated: \_\_\_\_\_

**CITY OF WILDOMAR**

By: \_\_\_\_\_  
Mayor

ATTEST:

Council Recording Secretary  
Morongo Band of Mission Indians

By: \_\_\_\_\_

Dated: \_\_\_\_\_

**MORONGO BAND OF MISSION INDIANS**

By: \_\_\_\_\_  
Tribal Chairman

Attachment: Attachment A - Amended Agreement (3449 : WRCOG Amended Joint Powers Agreement)





# Western Riverside Council of Governments Executive Committee

## Staff Report

**Subject:** Update to WRCOG JPA and Bylaws

**Contact:** Christopher Gray, Director of Transportation, [cgray@wrcoq.us](mailto:cgray@wrcoq.us), (951) 405-6710

**Date:** November 5, 2018

*The purpose of this item is to present an updated version of the WRCOG Joint Powers Agreement (JPA) and Bylaws. These updates were made based on direction at a previous Administration & Finance Committee meeting to prepare this comprehensive update, and incorporates a variety of changes, mostly minor in nature, based on staff and legal counsel review.*

### Requested Actions:

1. Adopt WRCOG Resolution Number 43-18; A Resolution of the Executive Committee of the Western Riverside Council of Governments Amending its Bylaws Making a Series of Technical Changes.
2. Direct WRCOG to forward the JPA Amendment to WRCOG member agencies for their approval.

Earlier in 2018, WRCOG was asked by several members of the Executive Committee to research and recommend potential options related to the appointment of alternates for the Board of Supervisors. This topic was discussed at the April 11th and June 13th Administration & Finance Committee meetings. During the course of these discussions, the issue of a larger update to the WRCOG JPA and Bylaws was also discussed. It was determined that it would be appropriate to conduct a comprehensive review of both documents as a significant period of time had lapsed (over five years) since the last comprehensive update of these documents.

The items for consideration today are the result of a comprehensive review of both documents by staff and legal counsel. While numerous changes are recommended, many of these changes reflect minor word changes and/or corrections, or address other minor issues. Red-line versions of both documents are attached to this staff report as a reference.

To facilitate review, staff has identified noteworthy changes to the JPA and Bylaws which are discussed below.

### Joint Powers Agreement Changes

1. Sections 2.12, 3.1 and 4.5 of the Agreement updates the JPA to formally recognize that the Treasurer / Auditor of WRCOG is a WRCOG employee appointed pursuant to Section 6505.6 of the Government Code. The language in the current agreement includes outdated language referencing the County Treasurer.
2. Section 2.12 formally adds the position of a Second Vice-Chair to the JPA. Currently the Second Vice-Chair is only listed in the Bylaws.
3. Section 2.4 of the Agreement rewords the language establishing the membership of the General Assembly and Executive Committee to more clearly set forth the voting membership of each Committee. The changes do not impact the current process used by WRCOG. Pursuant to the direction of the Administration & Finance Committee, the process for appointing Executive Committee alternates for the Board of Supervisors has not been revised.

4. Section 2.15 clarifies the bond requirements for WRCOG Committee members.
5. Section 2.13 clarifies that the attendance of Executive Committee members at a standing meeting is subject to the Brown Act.

### **Bylaws Changes**

1. Article I expressly clarifies the relationship between the JPA and Bylaws.
2. Article II, Section 2.F specifically empowers the Chair to create and appoint ad hoc committees and members in accordance with WRCOG's standard practices.
3. Article III, Section 5, Article IV, Section 1.D, and Article IV, Section 2.D, adds language making the Bylaws consistent with the JPA in respect to which agencies can vote on TUMF matters.

Staff also wants to highlight areas where changes were not made to either documents. At previous meetings of the Administration & Finance Committee, there have been extended discussions regarding member representation of the Executive Committee.

The first issue concerns the topic of alternates for the Riverside County Board of Supervisors. Staff previously presented several options for consideration and discussion. Specific direction was provided at the June 13, 2018, meeting to not implement any changes and to maintain the current process for alternates for the Board of Supervisors.

The second issue relates to appointments by member cities to the Executive Committee. Staff and legal counsel also reviewed the overall language in the Bylaws related to the appointment of members to the Executive Committee, which currently states:

“The Executive Committee will be composed of the Mayor from each of the member cities, four members of the Riverside County Board of Supervisors, the President of each water district, and the Tribal Chairman of the Morongo Band of Mission Indians. Any City Council, at its discretion, can appoint a Mayor Pro Tem or other City Council member in place of the Mayor. Each water district Board, at its discretion, can appoint another Board member in place of the President. The Tribal Council of the Morongo Band of Mission Indians, at its discretion, can appoint another Tribal Council member in place of the Tribal Chairman.”

The Administration & Finance Committee centered discussions on whether this section created a potential conflict by noting that the Mayor from any member City was the member of the Executive Committee and then noting that the City Council could appoint a representative in place of the Mayor. Staff and legal counsel reviewed this section and determined that the language seems to clearly note that each City shall have the discretion to establish a process to appoint its own representatives to the Executive Committee. Therefore, no changes were made to the Bylaws related to this item.

### **Implementation**

Approval of the Bylaws requires action by the Executive Committee. Once approved, the Bylaws changes take effect immediately. The updated Bylaws will also be brought forward for approval by the WRCOG General Assembly in 2019; however, this approval is a formality as the changes become effective once the Executive Committee acts on them.

The process to approve the updated JPA is more involved. As with the Bylaws, formal action of the Executive Committee is first required. The updated JPA must then be approved by 2/3 of WRCOG member agencies to take effect. Once 2/3 of WRCOG member agencies have approved these changes, the changes become effective. If directed to do so by the Executive Committee, staff will work with each member agency to secure their approval of the updated JPA.

**Prior Actions:**

October 10, 2018: The Administration & Finance Committee recommended that the Executive Committee 1) approve the updated Bylaws; 2) approve the updated JPA; and 3) direct WRCOG to forward the updated JPA to WRCOG member agencies for their approval.

June 13, 2018: The Administration & Finance Committee directed staff to prepare a comprehensive review of the JPA and Bylaws.

April 11, 2018: The Administration & Finance Committee directed staff to return with options for future consideration and discussion regarding an alternate policy.

**Fiscal Impact:**

This item is for informational purposes only; therefore, there is no fiscal impact.

**Attachments:**

1. Redlined Joint Powers Agreement of the Western Riverside Council of Governments.
2. Bylaws for the Western Riverside Council of Governments.
3. WRCOG Resolution Number 43-18; A Resolution of the Executive Committee of the Western Riverside Council of Governments Amending the WRCOG Bylaws.



## Report to City Council

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**TO:**

**FROM:** Pat Jacquez-Nares, City Clerk

**AGENDA DATE:** February 19, 2019

**TITLE:** COUNCIL DISCRETIONARY EXPENDITURE REPORTS  
FOR FISCAL YEAR 2018/2019 AS OF JULY 1, 2018  
THROUGH DECEMBER 31, 2018

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### **RECOMMENDED ACTION**

**Recommendation:**

1. Receive and file the Fiscal Year 2018/2019 Council Discretionary Expenditure Report for July 1, 2018 through December 31, 2018.

### **SUMMARY**

This staff report is prepared at the request of the City Council to provide transparency with respect to the expenditure of City funds from City Council Discretionary Expenditure Accounts. These reports are for each Council Member's year to date expenditures for Fiscal Year 2018/2019, for July 1, 2018 through December 31, 2018. Each Council District receives an annual budget allocation of \$3,000 and the Mayor receives an annual budget allocation of \$6,000.

Unused monies from Fiscal Year 2017/2018 have been carried over to the current Fiscal Year as approved by City Council in Resolution 2018-78. The Discretionary Expenditure Reports now reflect amended budget amounts as approved in the aforementioned Resolution.

The expenditure reports are included routinely in the City Council agenda as an additional means of distributing reports on activities to the Council and public. The reports are to be posted to the City's website following Council approval. The monthly reports provide unaudited information and are reconciled to the City's general ledger. Following the end of the Fiscal Year, the financial information shall be reviewed as part of the City's independent financial audit.

**NOTIFICATION**

Posting of the agenda as required by the Brown Act.

**PREPARATION OF STAFF REPORT**

Prepared By:  
Renee Bryant  
Management Aide

Department Head Approval:  
Pat Jacquez-Nares  
City Clerk

**CITY COUNCIL GOALS**

None

**CITY COUNCIL STRATEGIC PRIORITIES**

- 1. Economic Development
- 2. Public Safety
- 3. Library
- 4. Infrastructure
- 5. Beautification, Community Engagement, and Quality of Life
- 6. Youth Programs

**ATTACHMENTS**

- 1. July - December Discretionary Reports

**APPROVALS**

Budget Officer Approval	<u>✓ Approved</u>	2/12/19 5:10 PM
City Attorney Approval	<u>✓ Approved</u>	2/13/19 10:34 AM
City Manager Approval	<u>✓ Approved</u>	2/13/19 10:39 AM



**MAYOR**

Fiscal Year 2018/2019 Council Discretionary Expenditures  
 Accounts: 1010-10-01-10015-620130 Mayor Discretionary  
 1010-10-01-10015-620131 Mayor Discretionary - Carryover  
 July 1, 2018 - December 31, 2018

<b>Date</b>	<b>Amount</b>	<b>Description</b>
7/23/2018	\$ 20.00	LOCC Riverside County Division General Meeting
7/25/2018	\$ 20.00	MVCC Wake-Up Moreno Valley
		No expenditures to report for August 2018
		No expenditures to report for September 2018
10/29/2018	\$ 247.02	Per Diem and Mileage - NLC Summit
11/10/2018	\$ 921.20	Hotel Indigo Los Angeles Downtown: NLC Summit
11/30/2018	\$ 30.00	RCCD Fourth Annual Veterans Scholarship Breakfast
12/5/2018	\$ 221.88	Per Diem: Cities for Tomorrow
12/5/2018	\$ 950.00	Registration: Cities for Tomorrow
12/5/2018	\$ 185.64	Southwest Airlines: Cities for Tomorrow
12/5/2018	\$ 731.07	Renaissance New Orleans Arts Warehouse District: Cities for Tomorrow
	\$ 3,326.81	TOTAL Council Discretionary Expenditures for FY 18/19
	\$ 6,000.00	FY 18/19 Adopted Budget Amount
	\$ 5,589.00	Carryover Budget Amount FY 2017/2018
	\$ 11,589.00	FY 18/19 Amended Budget Amount
	\$ 8,262.19	FY 18/19 Budget Amount Remaining

Source: Unaudited financial data from the City's accounting records.  
 Updated as of: 02/07/2019



**COUNCIL DISTRICT 1**

Fiscal Year 2018/2019 Council Discretionary Expenditures  
 Accounts: 1010-10-01-10011-620111 Council District 1 Discretionary  
 1010-10-01-10011-620116 Council District 1 Discretionary - Carryover  
 July 1, 2018 - December 31, 2018

<b>Date</b>	<b>Amount</b>	<b>Description</b>
		No Expenditures to report for July 2018
		No Expenditures to report for August 2018
9/14/2018	\$ 125.00	Rotary Club of Moreno Valley 36th Annual Truck Party
10/2/2018	\$ 150.00	UNIDO Riverside Art Museum Cheech Marin
		No Expenditures to report for November 2018
		No Expenditures to report for December 2018
	<u>\$ 275.00</u>	TOTAL Council Discretionary Expenditures for FY 18/19
	\$ 3,000.00	FY 18/19 Adopted Budget Amount
	<u>\$ 1,704.00</u>	Carryover Budget Amount FY 2017/2018
	<u>\$ 4,704.00</u>	FY 18/19 Amended Budget Amount
	\$ 4,429.00	FY 18/19 Budget Amount Remaining

Source: Unaudited financial data from the City's accounting records.  
 Updated as of: 02/07/2019

Attachment: July - December Discretionary Reports (3439 : COUNCIL DISCRETIONARY EXPENDITURE REPORTS FOR FISCAL YEAR



### COUNCIL DISTRICT 2

Fiscal Year 2018/2019 Council Discretionary Expenditures  
 Accounts: 1010-10-01-10012-620112 Council District 2 Discretionary  
 1010-10-01-10012-620117 Council District 2 Discretionary - Carryover  
 July 1, 2018 - December 31, 2018

Date	Amount	Description
7/23/2018	\$ 1,000.00	Community Now's Annual Back 2 School Event No expenditures to report for August 2018
9/13/2018	\$ 147.00	2018 Inland Empire Economic Forecast
10/16/2018	\$ 853.00	Sponsorship Donation for Palm Middle School Autism Awareness
10/29/2018	\$ 500.00	Sponsorship Donation for Friends of the Moreno Valley Senior Center
11/14/2018	\$ 50.00	Greater Riverside Chamber of Commerce 19th Annual Raicross Trophy No Expenditures to report for December 2018
	\$ 2,550.00	TOTAL Council Discretionary Expenditures for FY 18/19
	\$ 3,000.00	FY 18/19 Adopted Budget Amount
	\$ 666.00	Carryover Budget Amount FY 2017/2018
	\$ 3,666.00	FY 18/19 Amended Budget Amount
	\$ 1,116.00	FY 18/19 Budget Amount Remaining

Source: Unaudited financial data from the City's accounting records.  
 Updated as of: 02/07/2019





### COUNCIL DISTRICT 3

Fiscal Year 2018/2019 Council Discretionary Expenditures  
 Accounts: 1010-10-01-10013-620113 Council District 3 Discretionary  
 1010-10-01-10013-620118 Council District 3 Discretionary - Carryover  
 July 1, 2018 - December 31, 2018

Date	Amount	Description
7/19/2018	\$ 85.00	BIA Meet the Builder
7/23/2018	\$ 20.00	LOCC Riverside County Division General Meeting
7/24/2018	\$ 500.00	Community Now's Annual Back 2 School Event
8/23/2018	\$ 50.00	2018 State of Riverside County
9/17/2018	\$ 55.00	BIA Affordable Housing and Homelessness
9/19/2018	\$ 45.00	Economic and Workforce Development Summit
10/9/2018	\$ 350.00	Sponsorship Donation for Moreno Valley Community Band
10/9/2018	\$ 350.00	Sponsorship Donation for Moreno Valley Master Chorale
11/30/2018	\$ 30.00	RCCD Veterans Scholarship Breakfast
12/17/2018	\$ 20.00	Moreno Valley Chamber of Commerce Wake Up MoVal Meeting 10/24/2018
	\$ 1,505.00	TOTAL Council Discretionary Expenditures for FY 18/19
	\$ 3,000.00	FY 18/19 Adopted Budget Amount
	\$ 1,024.00	Carryover Budget Amount FY 2017/2018
	\$ 4,024.00	FY 18/19 Amended Budget Amount
	\$ 2,519.00	FY 18/19 Budget Amount Remaining

Source: Unaudited financial data from the City's accounting records.  
 Updated as of: 02/07/2019



#### COUNCIL DISTRICT 4

Fiscal Year 2018/2019 Council Discretionary Expenditures  
 Accounts: 1010-10-01-10014-620114 Council District 4 Discretionary  
 1010-10-01-10014-650119 Council District 4 Discretionary - Carryover  
 July 1, 2018 - December 31, 2018

Date	Amount	Description
7/19/2018	\$ 85.00	BIA Meet the Builder
7/26/2018	\$ (350.00)	Refund for cancellation - YEO Conference (originally charged in FY 17/18) No Expenditures to report for August 2018
9/12/2018	\$ 150.00	12th Annual San Bernardino County Water Conference
9/12/2018	\$ 40.00	Let's Do Lunch-Annual Conference Lunch Meeting No Expenditures to report for October 2018 No Expenditures to report for November 2018
12/17/2019	\$ 20.00	Moreno Valley Chamber of Commerce Wake Up MoVal Meeting 9/26/18
	\$ (55.00)	TOTAL Council Discretionary Expenditures for FY 18/19
	\$ 3,000.00	FY 18/19 Adopted Budget Amount
	\$ 244.00	Carryover Budget Amount FY 2017/2018
	\$ 3,244.00	FY 18/19 Amended Budget Amount
	\$ 3,299.00	FY 18/19 Budget Amount Remaining

Source: Unaudited financial data from the City's accounting records.  
 Updated as of: 02/07/2019



## Report to City Council

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**TO:** Mayor and City Council

**FROM:** Michael L. Wolfe, P.E., Public Works Director/City Engineer

**AGENDA DATE:** February 19, 2019

**TITLE:** TRACT 24203 – REQUEST TO CONDUCT A FULL ROAD CLOSURE OF LAWLESS ROAD FROM PIGEON PASS ROAD TO SHADOW MOUNTAIN DRIVE FROM FEBRUARY 27, 2019 - MAY 21, 2019 DEVELOPER: KB HOME COASTAL, INC

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### **RECOMMENDED ACTION**

#### **Recommendations:**

1. Approve a full Road Closure of Lawless Road from Pigeon Pass Road to Shadow Mountain Drive for the reconstruction of Lawless Road from February 27, 2019 – May 21, 2019.
2. Authorize the Public Works Director/City Engineer to approve a one-time extension, if needed, of the road closure for a period not to exceed 14 calendar days.

### **SUMMARY**

On November 22, 1994, the City of Moreno Valley approved Tentative Tract Map 24203. The project is for the development of 97 single-family residential lots over several parcels on approximately 40.8 acres located on the north and south sides of Lawless Road between Pigeon Pass Road and Shadow Mountain Drive.

The developer, KB Home Coastal, Inc., has submitted the Agreement for Public Improvements and Security. The developer is required to reconstruct Lawless Road between Pigeon Pass Road and Shadow Mountain Drive, which requires the removal of the existing two-lane road.

### **DISCUSSION**

KB Home Coastal, Inc. is requesting a full road closure of Lawless Road between Pigeon Pass Road and Shadow Mountain Drive for the reconstruction of Lawless Road. The requested 84-day road closure will be conducted in such a manner that local and emergency vehicle access is maintained. The request for the road closure is due to major improvement work including, but not limited to, excavation of road and raising the street grade by approximately four (4) feet, removal of existing asphalt concrete, the installation of main storm drain lines, laterals, catch basins, sewer line, water line, street lights, asphalt base, asphalt concrete, sidewalk, curb & gutter, and striping. All of the work will be reviewed by inspectors from the City of Moreno Valley. Absent any unforeseen conditions or weather delays, it is anticipated that the road will be open to traffic on or before May 21, 2019.

Allowing the road to be closed to through traffic will help expedite the significant work that is required for Lawless Road, decreasing the overall timeline of the impact to the surrounding vehicular and pedestrian circulation. The road closure will not adversely affect the ingress or egress of any of the neighboring properties although it does require some detouring as shown in Attachment 2. The developer will be required to contact/notify all potentially affected property owners of the closure dates. The developer held a community meeting with residents on February 12<sup>th</sup> at Vista Heights Middle School. The road closure/detour plan has been approved by the both the Public Works Director/City Engineer and City Traffic Engineer.

In case the developer encounters any unforeseen issues during the construction of the improvements, staff is requesting the City Council authorize the City Engineer approval authority for an extension of the road closure end date, up to 14 calendar days.

### **ALTERNATIVES**

1. Approve and authorize the recommended actions as presented in this staff report. *Staff recommends this alternative as this alternative will allow the demolishing of Lawless Road for major improvement work required and expedite the re-opening of Lawless Road for public use.*
2. Do not approve and do not authorize the recommended actions as presented in this staff report. *Staff does not recommend this alternative as this alternative would result in no road closure, would prolong the construction schedule, and result in a less safe work environment.*

### **FISCAL IMPACT**

The contractor will be responsible for all costs associated with this proposal.

### **NOTIFICATION**

The approved traffic control/detour plan will require the contractor to give notification to the Post Office, Police, Fire Department, Ambulance Services, Riverside Transit

Agency, Waste Management, and affected businesses and residents. The public will be notified by special roadside signage showing the dates of closure and detour signs.

Approval of the recommended actions will support Objective 4.2 of the Momentum MoVal Strategic Plan, “Develop and maintain a comprehensive Infrastructure Plan to invest in and deliver City infrastructure.”

### **PREPARATION OF STAFF REPORT**

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Prepared By:  
Vince Girón  
Associate Engineer

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Department Head Approval:  
Michael L. Wolfe, P.E.  
Public Works Director/City Engineer

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Concurred By:  
Michael D. Lloyd, P.E.  
Engineering Division Manager/Assistant City Engineer

---

Concurred By:  
Eric Lewis  
Transportation Division Manager/  
City Traffic Engineer

### **CITY COUNCIL GOALS**

**Public Facilities and Capital Projects.** Ensure that needed public facilities, roadway improvements, and other infrastructure improvements are constructed and maintained.

### **CITY COUNCIL STRATEGIC PRIORITIES**

1. Economic Development
2. Public Safety
3. Library
4. Infrastructure
5. Beautification, Community Engagement, and Quality of Life
6. Youth Programs

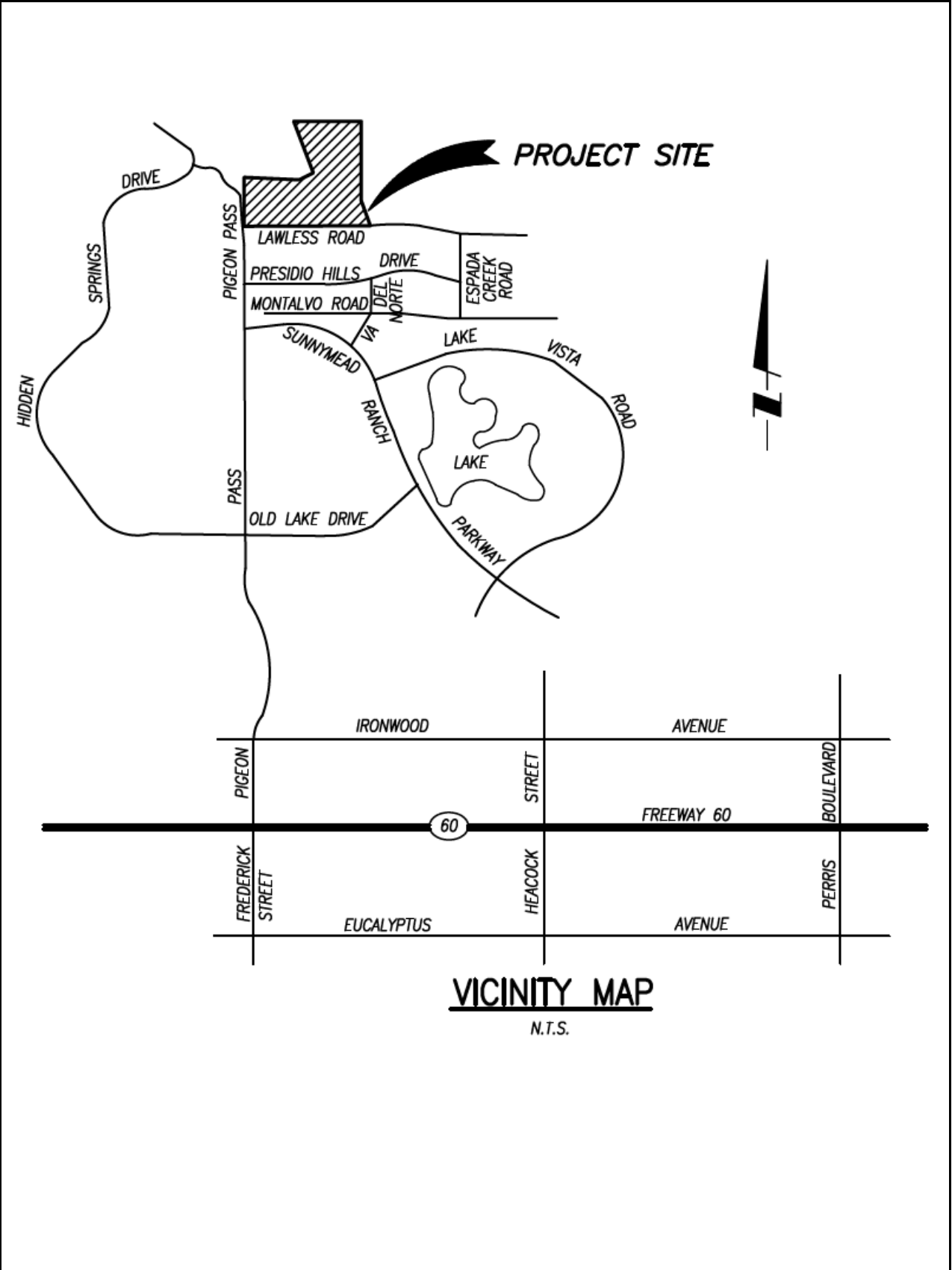
Objective 4.2: Develop and maintain a comprehensive Infrastructure Plan to invest in and deliver City infrastructure.

### **ATTACHMENTS**

1. Vicinity Map - TR 24203 Road Closure
2. Detour Map - TR 24203 Road Closure
3. GIS Ortho Map - TR 24203 Road Closure

### **APPROVALS**

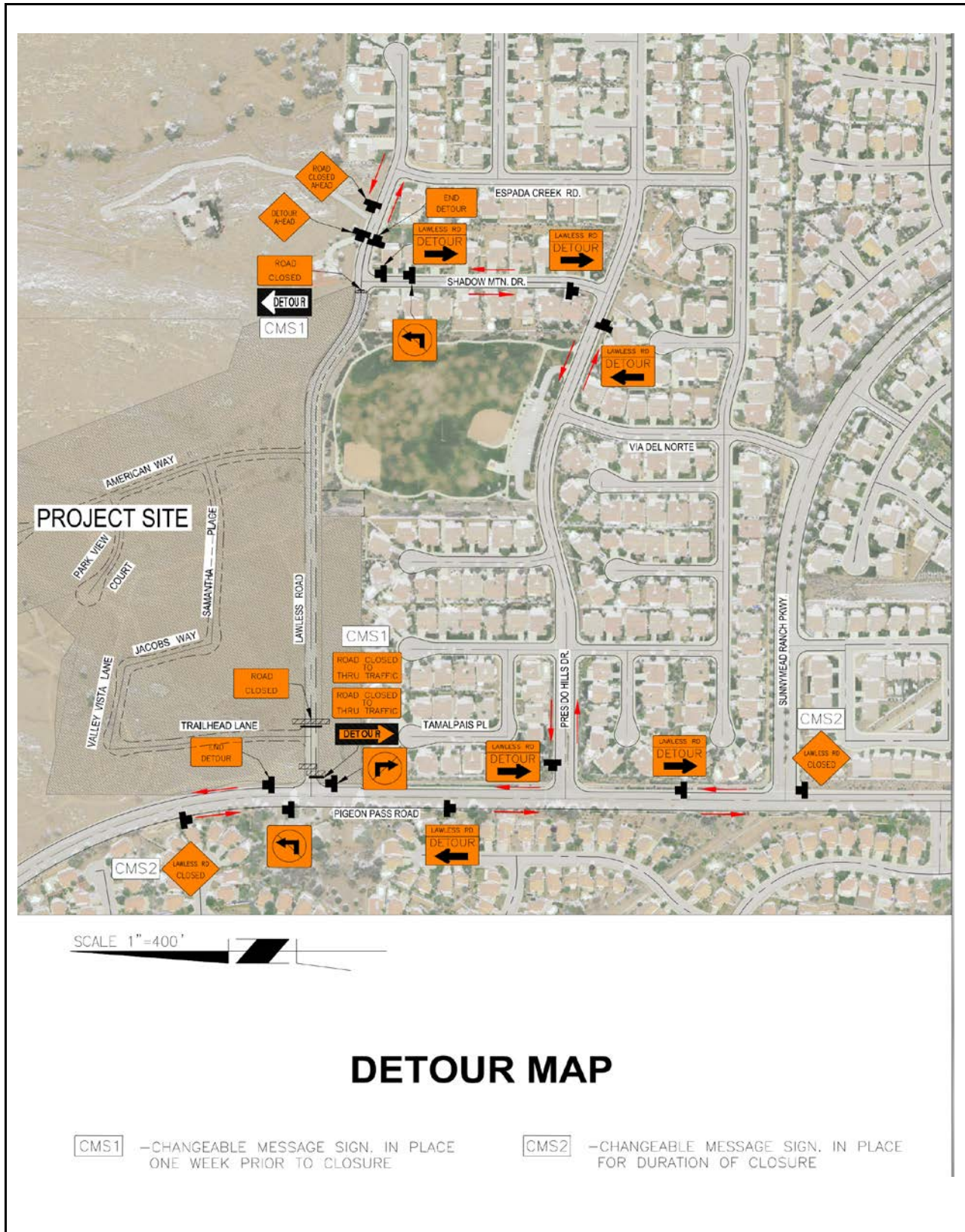
Budget Officer Approval	<u>✓ Approved</u>	2/11/19 7:59 AM
City Attorney Approval	<u>✓ Approved</u>	2/07/19 2:21 PM
City Manager Approval	<u>✓ Approved</u>	2/12/19 2:52 PM



Attachment: Vicinity Map - TR 24203 Road Closure (3433 : TRACT 24203 - REQUEST TO CONDUCT A FULL ROAD CLOSURE)

CITY OF MORENO VALLEY  
PUBLIC WORKS DEPARTMENT - LAND DEVELOPMENT

TR 24203



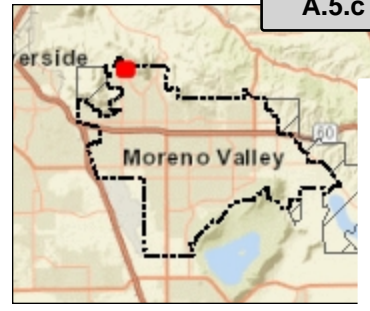
CITY OF MORENO VALLEY  
PUBLIC WORKS DEPARTMENT - LAND DEVELOPMENT

TR 24203

Attachment: Detour Map - TR 24203 Road Closure (3433 : TRACT 24203 – REQUEST TO CONDUCT A FULL ROAD CLOSURE)

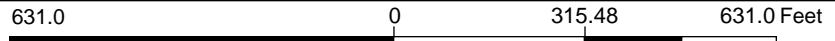


# TR 24203 - LAWLESS ROAD CLOSURE



### Legend

- Public Facilities
  - Public Facilities
  - ★ Fire Stations
- Road Labels
- Parcels
- ⊞ City Boundary
- ⊞ Sphere of Influence



WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere

Print Date: 2/6/2019

*DISCLAIMER: The information shown on this map was compiled from the City of Moreno Valley GIS and Riverside County GIS. The land base and facility information on this map is for display purposes only and should not be relied upon without independent verification as to its accuracy. Riverside County and City of Moreno Valley will not be held responsible for any claims, losses or damages resulting from the use of this map.*

### Notes



## Report to City Council

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**TO:** Mayor and City Council

**FROM:** Michael L. Wolfe, P.E., Public Works Director/City Engineer

**AGENDA DATE:** February 19, 2019

**TITLE:** PURSUANT TO A LANDOWNER PETITION, ANNEX THREE PARCELS INTO COMMUNITY FACILITIES DISTRICT NO. 2014-01 (MAINTENANCE SERVICES) - AMENDMENT NO. 33 (RESO. NO. 2019-\_\_)

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### **RECOMMENDED ACTION**

#### **Recommendation:**

Acting as the legislative body of Community Facilities District No. 2014-01 (Maintenance Services), adopt Resolution No. 2019-\_\_, a Resolution of the City Council of the City of Moreno Valley, California, ordering the annexation of territory to City of Moreno Valley Community Facilities District No. 2014-01 (Maintenance Services) and approving the amended map for said District.

### **SUMMARY**

Approval of the proposed resolution(s) will certify annexation of three parcel(s) into Community Facilities District (CFD) No. 2014-01 (Maintenance Services) ("District"). This action impacts one property owner(s), not the general citizens or taxpayers of the City.

The City requires property owners of new development projects to mitigate the cost of certain impacts created by the proposed development (i.e., the cost of operation and maintenance of street lights and/or public landscaping). The City created CFD No. 2014-01 to provide the development community with a funding mechanism to assist in satisfying the requirement. After a property owner elects to annex their property into the District and the City Council approves the annexation, a special tax can be levied on the annual property tax bill(s) of the annexed parcel(s) to fund the costs.

As a condition of approval for development of their project(s), Prologis, L.P. (the "Property Owner") is required to provide a funding source for the maintenance and

operation of certain public improvements (i.e., street lighting) and has elected to annex the parcel(s) of their project(s) into the District to satisfy the condition(s). The Property Owner has submitted a Landowner Petition approving the annexation and the City Clerk has confirmed the petition is valid.

## **DISCUSSION**

### *District Formation*

The District was formed by adoption of Resolution No. 2014-25 to provide an alternative funding tool for the development community. It provides a mechanism to fund the operation and maintenance of street lighting services and maintenance of public landscaping. After a landowner approves annexation of their property into the District and the City Council approves the annexation, the City is authorized to levy a special tax onto the annual property tax bill(s). Residential Tract 31618 (southwest corner of Moreno Beach Dr. and Bay Ave.) formed the original boundaries of the District. Since formation of the District, 31 additional landowners have authorized annexation of their property into the District.

The Rate and Method of Apportionment of Special Tax (“RMA”) for the District describes the different special tax rate areas, services provided, and the formula to calculate the special tax rate for each of the tax rate areas. Several special tax rate layers were created to accommodate a variety of scenarios to ensure costs are fairly shared between property owners. For example, there is a tax rate layer for “single-family residential street lighting” and one for “street lighting for property other than single-family residential” (e.g., commercial, industrial, or multi-family projects). Different tax rate layers are needed for street lighting because the spacing and size/type of lights differ based on the type of development. Likewise, there are several tax rate areas for maintenance of public landscaping. A property owner’s proportionate share of landscape maintenance costs will vary depending upon the total square footage of landscaping to be maintained for that development and the number of properties sharing in the cost.

### *Annexation to the District*

On February 10, 2015, the City Council adopted Ordinance No. 889, which designated the entire territory of the City as a future annexation area for the District. With the future annexation area designated, annexations can occur without an additional public hearing as long as the annexing landowner provides unanimous consent. Once annexed, parcels are subject to the annual special tax to fund the service(s) they are receiving.

The Property Owner is approved to construct two industrial warehouse/logistics buildings on the southwest corner of the intersection of Krameria Ave. and Indian St. As a condition of approval of their project(s), the Property Owner is required to provide an ongoing funding source for maintenance services of street lights installed on public streets as part of the development project. Information for the parcel(s) under development (or the “Subject Property”) is shown in the table below:

Property Owner/Project	Assessor's Parcel Number(s)	Location	Amendment No.
Prologis, L.P. Moreno Valley Logistics PEN16-0003/SCP18-0015	316-100-055, 316-100-057, and 316-100-058	Southwest corner of the intersection of Krameria Ave. and Indian St.	33

A property owner has two options to satisfy the condition of approval:

1. Submit a Landowner Petition unanimously approving annexation of their property into the District. Approval of the petition and special tax rate allows the City to annually levy the special tax on the property tax bill(s) of their property. This option is only available if there are fewer than 12 registered voters living within the proposed annexation area; or
2. Establish a homeowner or property owner association to provide the ongoing maintenance and operation of the improvements.

The Property Owner elected to annex the Subject Property into CFD No. 2014-01 and have the special tax applied to the annual property tax bill(s). The Office of the Riverside County Registrar of Voters confirmed there were no registered voters residing at the Subject Property allowing for the special election of the landowner to be conducted. Adoption of the attached resolution (Attachment 1) adds the Subject Property to the tax rate area(s) identified in the table in the Fiscal Impact section of this report and directs the recordation of the boundary map(s) (Attachment 2) and amended notice of special tax lien for Amendment No. 33. The City Clerk received and reviewed the Landowner Petition(s) and confirmed the Property Owner unanimously approved the annexation of the Subject Property into the District (Attachment 3).

Successful completion of the annexation process satisfies the project's condition of approval to provide a funding source for the operation and maintenance of street lighting on public streets.

### **ALTERNATIVES**

1. Adopt the proposed resolution(s). *Staff recommends this alternative as it will annex the Subject Property into CFD No. 2014-01 at the request of the Property Owner and satisfy the condition of approval for the proposed development(s).*
2. Do not adopt the proposed resolution(s). *Staff does not recommend this alternative as it is contrary to the request of the Property Owner, will not satisfy the condition of approval, and may delay development of the project(s).*
3. Do not adopt the proposed resolution(s) but rather continue the item to a future regularly scheduled City Council meeting. *Staff does not recommend this alternative as it will delay the Property Owner from*

*satisfying the condition of approval and may delay development of the project(s).*

## **FISCAL IMPACT**

Revenue received from the special tax is restricted and can only be used to fund the services for each tax rate area within the District. If the projected revenue received from the maximum special tax exceeds what is necessary to fund the services within each tax rate area, a lower amount will be applied to the property tax bills for all properties within the affected tax rate area. The special tax can only be applied to a property tax bill of a parcel wherein the qualified electors (i.e., landowners or registered voters, depending upon the number of registered voters) have previously provided approval. The estimated maximum special tax revenue which can be generated from this project(s) is detailed below:

Property Owner	Service Tax Rate Area	Front Linear Footage adjacent to improvements <sup>1</sup>	FY 2018/19 Maximum Special Tax Rate per Front Linear Foot <sup>2</sup>	FY 2018/19 Maximum Special Tax
Prologis, L.P.	Street Lighting for Property Other than Single-Family Residential, SL-02	4,814	\$3.93	\$18,919.02

<sup>1</sup>Estimated based on proposed parcel configuration. The special tax calculation will be based on final development of the project. The street lights will be located on Cosmos St., Krameria Ave., and Indian St.

<sup>2</sup>The special tax applied to the property tax bill will be based on the needs of the District; it can be lower than but cannot exceed the maximum special tax. The FY 2018/19 applied rate is \$1.24 per front linear foot for SL-02.

The maximum special tax rates are subject to an annual inflation adjustment based on the change in the Consumer Price Index (CPI) or five percent (5%), whichever is greater. Each year, the City Council must authorize any proposed adjustment prior to the levy of the special tax onto the property tax bills. The increase to the maximum special tax rate cannot exceed the annual inflationary adjustment without a two-thirds approval of the qualified electors within the affected tax rate area.

## **NOTIFICATION**

Annexation materials were mailed to the Property Owner on December 31, 2018. A cover letter, Landowner Petition, RMA, and an envelope to return the completed petition were included.

## **PREPARATION OF STAFF REPORT**

Prepared by:  
Isa Rojas  
Management Analyst

Department Head Approval:  
Michael L. Wolfe, P.E.  
Public Works Director/City Engineer

Concurred by:

Candace E. Cassel  
Special Districts Division Manager

## **CITY COUNCIL GOALS**

**Revenue Diversification and Preservation.** Develop a variety of City revenue sources and policies to create a stable revenue base and fiscal policies to support essential City services, regardless of economic climate.

**Community Image, Neighborhood Pride and Cleanliness.** Promote a sense of community pride and foster an excellent image about our City by developing and executing programs which will result in quality development, enhanced neighborhood preservation efforts, including home rehabilitation and neighborhood restoration.

## **CITY COUNCIL STRATEGIC PRIORITIES**

1. Economic Development
2. Public Safety
3. Library
4. Infrastructure
5. Beautification, Community Engagement, and Quality of Life
6. Youth Programs

Objective 4.2: Develop and maintain a comprehensive Infrastructure Plan to invest in and deliver City infrastructure.

## **ATTACHMENTS**

1. Resolution Ordering Annexation - Amendment No. 33
2. Boundary Map CFD 2014-01 - Amendment No. 33
3. Certificate of Election Official - Amendment No. 33

## **APPROVALS**

Budget Officer Approval	<u>✓ Approved</u>	2/11/19 7:58 AM
City Attorney Approval	<u>✓ Approved</u>	2/12/19 2:13 PM
City Manager Approval	<u>✓ Approved</u>	2/12/19 2:20 PM

## RESOLUTION NO. 2019-\_\_\_

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MORENO VALLEY, CALIFORNIA, ORDERING THE ANNEXATION OF TERRITORY TO CITY OF MORENO VALLEY COMMUNITY FACILITIES DISTRICT NO. 2014-01 (MAINTENANCE SERVICES) AND APPROVING THE AMENDED MAP FOR SAID DISTRICT

WHEREAS, by its Resolution No. 2014-25, the City Council established the City of Moreno Valley Community Facilities District No. 2014-01 (Maintenance Services) (the "CFD") pursuant to the Mello-Roos Community Facilities Act of 1982 (Government Code Section 53311 *et seq.*) (the "Act"); and

WHEREAS, by its Ordinance No. 874, the City Council authorized an annual special tax to be levied against all non-exempt parcels of real property within the CFD (the "Special Tax") to fund street lighting services and landscape maintenance services; and

WHEREAS, in order to permit landowners to efficiently annex developing parcels to the CFD, the City Council, by its Ordinance No. 889 designated the entire territory of the City as a future annexation area for the CFD and approved the second amended and restated rate and method of apportionment for the Special Tax; and

WHEREAS, the landowner of the parcel(s) listed on Exhibit A to this Resolution, which is attached hereto and incorporated herein by reference, has submitted to the City a petition requesting and approving annexation of the listed parcel(s) (the "Annexation Parcel(s)") to the CFD; and

WHEREAS, the Annexation Parcel(s) are comprised of the territory shown on the boundary map (the "Boundary Map") "Amendment No. 33 to Boundaries of City of Moreno Valley Community Facilities District No. 2014-01 (Maintenance Services), City of Moreno Valley, County of Riverside, State of California" which is included as Exhibit B to this Resolution, and incorporated herein by this reference; and

WHEREAS, the City Council desires to annex the Annexation Parcel(s) to the CFD.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF MORENO VALLEY, CALIFORNIA, DOES HEREBY RESOLVE AS FOLLOWS:

1. Recitals. The above recitals are all true and correct and are herein incorporated.

2. Annexation Approved. The Annexation Parcel(s) are hereby added to and part of the CFD with full legal effect. The Annexation Parcel(s) are subject to the

1

Resolution No. 2019-\_\_\_  
Date Adopted: February 19, 2019

Special Tax associated with the Tax Rate Area(s) indicated on Exhibit A to this Resolution.

3. Description of Services. The following is a general description of all services (the “Services”) provided in the CFD:

A. Landscape Maintenance Services: Maintaining, servicing, and operating landscape improvements and associated appurtenances located within the public right-of-way and within dedicated landscape easements for the CFD. These improvements may include but are not limited to parkways, medians, open space landscaping, fencing, monuments, ornamental lighting, drainage, turf, ground cover, shrubs, vines and trees, irrigation systems, and appurtenant facilities and structures. Fundable costs may include, but are not limited to: (i) contracting costs for landscape maintenance services, including litter removal, (ii) salaries and benefits of City staff, (iii) expenses related to equipment, apparatus, and supplies related to these services, (iv) City administrative and overhead costs associated with providing such services within the CFD, and (v) lifecycle costs associated with the repair and replacement of facilities.

B. Street Lighting Services: Maintaining, servicing, and operating street lights and appurtenant improvements. Fundable costs may include, but are not limited to: (i) contracting costs for street light maintenance, (ii) salaries and benefits of City staff, if the City directly provides street light maintenance services, (iii) utility expenses and the expense related to equipment, apparatus, and supplies related to these services and authorized by the Act, (iv) City administrative and overhead costs associated with providing such services for the CFD, and (v) lifecycle costs associated with the repair and replacement of facilities.

The Annexation Parcel(s) will only be provided with the services indicated on Exhibit A.

4. Amended Boundary Map. The Boundary Map attached hereto as Exhibit B is hereby approved. This map amends, and does not supersede, the existing maps of the CFD. The City Council directs that said map be filed with the Riverside County Recorder pursuant to Section 3113 of the Streets and Highways Code.

5. Notice of Special Tax Lien. The City Council directs that an amended notice of special tax lien be recorded pursuant to Section 3117.5 of the Streets and Highways Code with respect to the Annexation Parcel(s) associated with the Boundary Map.

6. This Resolution shall be effective immediately upon adoption.

7. The City Clerk shall certify to the adoption of this Resolution, and shall maintain on file as a public record this Resolution.

8. Severability. That the City Council declares that, should any provision,

2

Resolution No. 2019-\_\_\_\_  
Date Adopted: February 19, 2019



section, paragraph, sentence or word of this Resolution be rendered or declared invalid by any final court action in a court of competent jurisdiction or by reason of any preemptive legislation, the remaining provisions, sections, paragraphs, sentences or words of this Resolution as hereby adopted shall remain in full force and effect.

9. Repeal of Conflicting Provisions. That all the provisions heretofore adopted by the City Council that are in conflict with the provisions of this Resolution are hereby repealed.

APPROVED AND ADOPTED this 19<sup>th</sup> day of February, 2019.

\_\_\_\_\_  
Mayor of the City of Moreno Valley

ATTEST:

\_\_\_\_\_  
City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
City Attorney

Resolution No. 2019-  3    
Date Adopted: February 19, 2019

Attachment: Resolution Ordering Annexation - Amendment No. 33 (3386 : PURSUANT TO A LANDOWNER PETITION, ANNEX THREE PARCELS

**RESOLUTION JURAT**

STATE OF CALIFORNIA            )  
COUNTY OF RIVERSIDE        ) ss.  
CITY OF MORENO VALLEY        )

I, Pat Jacquez-Nares, City Clerk of the City of Moreno Valley, California, do hereby certify that Resolution No. 2019-\_\_\_ was duly and regularly adopted by the City Council of the City of Moreno Valley at a regular meeting thereof held on the 19<sup>th</sup> day of February, 2019 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

(Council Members, Mayor Pro Tem and Mayor)

\_\_\_\_\_  
CITY CLERK

(SEAL)

Resolution No. 2019-\_\_\_ 4  
Date Adopted: February 19, 2019

Attachment: Resolution Ordering Annexation - Amendment No. 33 (3386 : PURSUANT TO A LANDOWNER PETITION, ANNEX THREE PARCELS

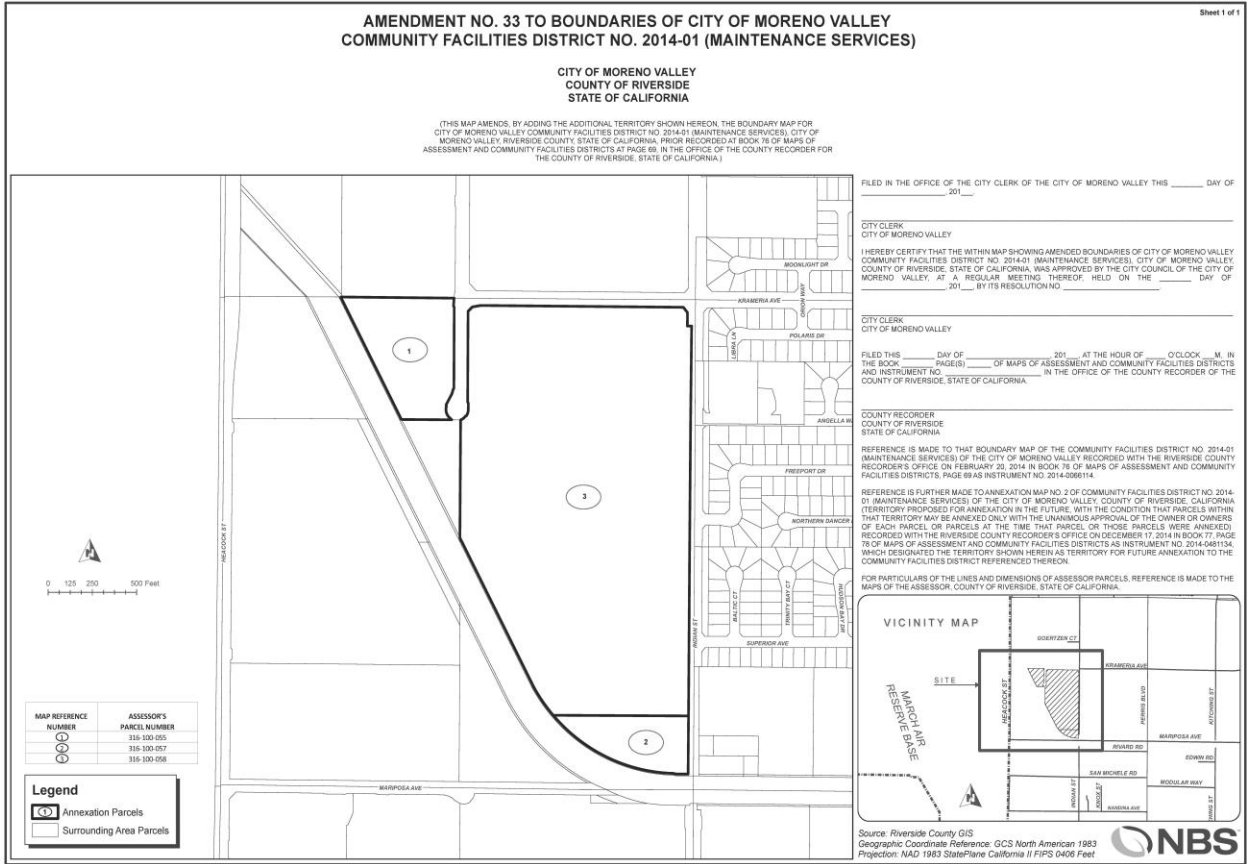
EXHIBIT A

List of Annexation Parcel(s)			
Boundary Map Amendment No.	Assessor's Parcel Numbers	Services	Tax Rate Area & Maintenance Category
Amendment No. 33	316-100-055 316-100-057 316-100-058	Street Lighting for Property Other than Single-Family Residential	SL-02
<p>Based on current development plans, it is anticipated that the Annexation Group will be in the Maintenance Category listed above; however all taxes will be calculated as set forth in the Rate and Method of Apportionment.</p> <p>The parcels associated with a given development constitute a separate Annexation Group for purpose of calculating the applicable Maintenance Category (where applicable) for each Tax Rate Area. The anticipated Maintenance Category (where applicable) is shown in parenthesis following the Tax Rate Area. All capitalized terms in this paragraph have the meanings set forth in the Rate and Method of Apportionment.</p>			

Attachment: Resolution Ordering Annexation - Amendment No. 33 (3386 : PURSUANT TO A LANDOWNER PETITION, ANNEX THREE PARCELS

Resolution No. 2019-5  
Date Adopted: February 19, 2019

# EXHIBIT B



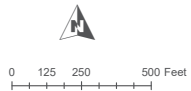
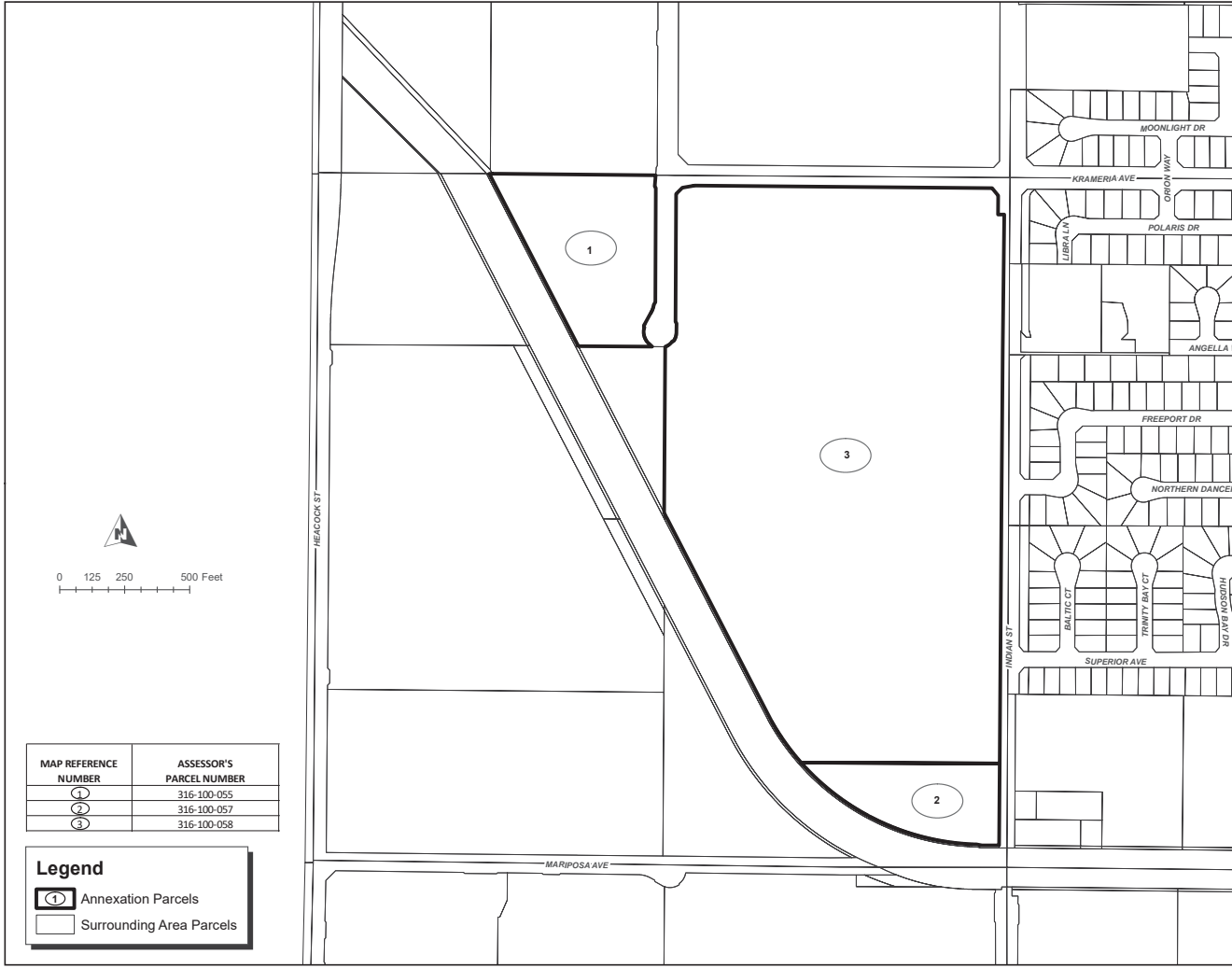
Attachment: Resolution Ordering Annexation - Amendment No. 33 (3386 : PURSUANT TO A LANDOWNER PETITION, ANNEX THREE PARCELS

6  
Resolution No. 2019-\_\_\_\_\_  
Date Adopted: February 19, 2019

## AMENDMENT NO. 33 TO BOUNDARIES OF CITY OF MORENO VALLEY COMMUNITY FACILITIES DISTRICT NO. 2014-01 (MAINTENANCE SERVICES)

**CITY OF MORENO VALLEY  
COUNTY OF RIVERSIDE  
STATE OF CALIFORNIA**

(THIS MAP AMENDS, BY ADDING THE ADDITIONAL TERRITORY SHOWN HEREON, THE BOUNDARY MAP FOR CITY OF MORENO VALLEY COMMUNITY FACILITIES DISTRICT NO. 2014-01 (MAINTENANCE SERVICES), CITY OF MORENO VALLEY, RIVERSIDE COUNTY, STATE OF CALIFORNIA, PRIOR RECORDED AT BOOK 76 OF MAPS OF ASSESSMENT AND COMMUNITY FACILITIES DISTRICTS AT PAGE 69, IN THE OFFICE OF THE COUNTY RECORDER FOR THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.)



MAP REFERENCE NUMBER	ASSESSOR'S PARCEL NUMBER
1	316-100-055
2	316-100-057
3	316-100-058

**Legend**

- 1 Annexation Parcels
- Surrounding Area Parcels

FILED IN THE OFFICE OF THE CITY CLERK OF THE CITY OF MORENO VALLEY THIS \_\_\_\_\_ OF \_\_\_\_\_, 201\_\_\_\_.

CITY CLERK  
CITY OF MORENO VALLEY

I HEREBY CERTIFY THAT THE WITHIN MAP SHOWING AMENDED BOUNDARIES OF CITY OF MORENO VALLEY COMMUNITY FACILITIES DISTRICT NO. 2014-01 (MAINTENANCE SERVICES), CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, WAS APPROVED BY THE CITY COUNCIL OF MORENO VALLEY, AT A REGULAR MEETING THEREOF, HELD ON THE \_\_\_\_\_ OF \_\_\_\_\_, 201\_\_\_\_, BY ITS RESOLUTION NO. \_\_\_\_\_.

CITY CLERK  
CITY OF MORENO VALLEY

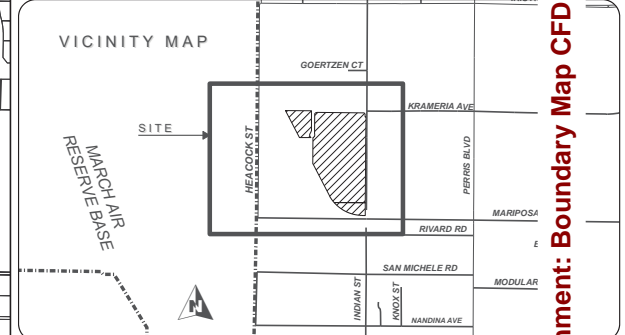
FILED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 201\_\_\_\_, AT THE HOUR OF \_\_\_\_\_ O'CLC  
THE BOOK \_\_\_\_\_ PAGE(S) \_\_\_\_\_ OF MAPS OF ASSESSMENT AND COMMUNITY FACILITIES DISTRICTS AND INSTRUMENT NO. \_\_\_\_\_ IN THE OFFICE OF THE COUNTY RECORDER FOR THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.

COUNTY RECORDER  
COUNTY OF RIVERSIDE  
STATE OF CALIFORNIA

REFERENCE IS MADE TO THAT BOUNDARY MAP OF THE COMMUNITY FACILITIES DISTRICT NO. 2014-01 (MAINTENANCE SERVICES) OF THE CITY OF MORENO VALLEY RECORDED WITH THE RIVERSIDE COUNTY RECORDER'S OFFICE ON FEBRUARY 20, 2014 IN BOOK 76 OF MAPS OF ASSESSMENT AND COMMUNITY FACILITIES DISTRICTS, PAGE 69 AS INSTRUMENT NO. 2014-0066114.

REFERENCE IS FURTHER MADE TO ANNEXATION MAP NO. 2 OF COMMUNITY FACILITIES DISTRICT NO. 2014-01 (MAINTENANCE SERVICES) OF THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, RECORDED WITH THE RIVERSIDE COUNTY RECORDER'S OFFICE ON FEBRUARY 20, 2014 IN BOOK 76 OF MAPS OF ASSESSMENT AND COMMUNITY FACILITIES DISTRICTS AS INSTRUMENT NO. 2014-0066114. THAT TERRITORY MAY BE ANNEXED ONLY WITH THE UNANIMOUS APPROVAL OF THE OWNER OF EACH PARCEL OR PARCELS AT THE TIME THAT PARCEL OR THOSE PARCELS WERE RECORDED WITH THE RIVERSIDE COUNTY RECORDER'S OFFICE ON DECEMBER 17, 2014 IN BOOK 76 OF MAPS OF ASSESSMENT AND COMMUNITY FACILITIES DISTRICTS AS INSTRUMENT NO. 2014-0066114 WHICH DESIGNATED THE TERRITORY SHOWN HEREIN AS TERRITORY FOR FUTURE ANNEXATION TO THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.

FOR PARTICULARS OF THE LINES AND DIMENSIONS OF ASSESSOR PARCELS, REFERENCE IS MADE TO THE MAPS OF THE ASSESSOR, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.



Source: Riverside County GIS  
Geographic Coordinate Reference: GCS North American 1983  
Projection: NAD 1983 StatePlane California II FIPS 0406 Feet

Attachment: Boundary Map CFD 2014-01 - Amendment No. 33 (3386) - PURSUANT TO A LANDOWNER

**CERTIFICATE OF ELECTION OFFICIAL  
AND CONFIRMATION OF LANDOWNER PETITION**

STATE OF CALIFORNIA            )  
COUNTY OF RIVERSIDE        ) ss.  
CITY OF MORENO VALLEY        )

The undersigned, Election Official of the City of Moreno Valley, County of Riverside, State of California, Does Hereby Certify that on January 22 2019, I did verify the completeness of the Landowner Petition for the annexation of property into

CITY OF MORENO VALLEY COMMUNITY FACILITIES DISTRICT NO. 2014-01  
(MAINTENANCE SERVICES) – AMENDMENT NO. 33

WITNESS my hand this 22<sup>nd</sup> day of January, 2019.

*jr* Regina Flores  
ELECTION OFFICIAL  
CITY OF MORENO VALLEY  
STATE OF CALIFORNIA

Attachment: Certificate of Election Official - Amendment No. 33 (3386 : PURSUANT TO A LANDOWNER PETITION, ANNEX THREE PARCELS



## Report to City Council

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**TO:** Mayor and City Council

**FROM:** Michael L. Wolfe, P.E., Public Works Director/City Engineer

**AGENDA DATE:** February 19, 2019

**TITLE:** AGREEMENT WITH SOUTHERN CALIFORNIA EDISON  
FOR LS-1 OPTION E AGREEMENT

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### **RECOMMENDED ACTION**

#### **Recommendation:**

Approve and Authorize the City Manager to execute the Schedule LS-1 Option E, Energy Efficiency-Light Emitting Diode (LED) Fixture Replacement Rate Agreement with Southern California Edison (SCE) (the "Agreement"), in substantially the form as attached hereto, subject to the approval of the City Attorney.

### **SUMMARY**

This report recommends approval of an Agreement (Attachment 1) with SCE to retrofit approximately 700 of its street lights from the existing high pressure sodium vapor (HPS) to LED lamps. These street lights are located on SCE's transmission and/or distribution wood poles and are separate from those street lights the City is currently acquiring from SCE and retrofitting to LED. Approval of the Agreement will allow for the implementation of technology to reduce energy use and provide consistency throughout the community by using similar street lighting types.

### **DISCUSSION**

After SCE announced a program to sell its street lights in March of 2012, the City began negotiating with SCE to purchase approximately 9,411 street lights as part of an effort to control the City's street lighting costs. The City approved the final Purchase and Sale Agreement with SCE on August 15, 2017. The California Public Utilities Commission (CPUC) approved the sale on March 31, 2018. The purchase includes those street lights within the City for which the City is financially responsible (i.e. pays the utility bill) and excludes non-sellable SCE street lights (i.e. attached to SCE's transmission/distribution poles). Further, it does not include those street lights within

Edgemont Community Services District (ECSD) (see Attachment 2) or those street lights which are on private streets.

On June 19, 2018, the City approved the financing program to acquire the SCE street lights eligible for purchase from SCE. The financing program also includes funding to retrofit the SCE-acquired street lights and Moreno Valley Utility (MVU)-owned street lights from HPS to LED lamps. In December 2018, the ownership transition for the first of four phases of the SCE street lights was completed. Retrofit of the SCE-acquired and MVU-owned street lights to LED lamps began in December 2018. Retrofit of all of the SCE-acquired and MVU-owned street light lamps is scheduled to be complete by end of 2019.

To provide options for local agencies to convert to high-efficiency LED technology, in 2016, SCE announced its LS-1 Option E program. The LS-1 Option E program allows customers to convert SCE-owned street lights from HPS to LED lamps without purchasing the poles. SCE funds the capital cost of the retrofit and recovers it through an energy efficiency premium added to its monthly LS-1 tariff for each street light. The premium will remain on the City's utility bill for 20 years, while other components of the LS-1 tariff fluctuate in accordance with the CPUC rate changes. Staff proposes to use this program to retrofit the approximate 700 street lights not eligible for purchase from SCE (i.e. non-sellable lights attached to SCE's transmission/distribution poles) to LED. The LED lamps used will be consistent with those currently being installed on the SCE-acquired and MVU-owned street lights.

Use of the LS-1 Option E program requires approval of the attached Agreement to initiate the retrofit process. After the City approves the Agreement, SCE will place it in a queue while SCE completes retrofits for those cities that have already executed the Agreement. SCE estimates it will begin retrofit of the approximate 700 street light lamps at the end of 2019.

Approval of the proposed Agreement will allow all of the street lights the City is financially responsible for (i.e. SCE-acquired, SCE-owned/non-sellable, and MVU-owned) to be retrofitted to LED. The conversion to LED lighting will aid in controlling the City's street lighting costs by reducing energy use and decreasing lamp maintenance and/or replacements. In addition, use of LED technology will assist the City in meeting local and statewide energy and greenhouse gas goals (AB32 and SB350).

The City of Moreno Valley Planning Official approved a Notice of Exemption, as categorically exempt (Class 1, Section 15301) from the California Environmental Quality Act, on August 9, 2017 (Attachment 3).

## **ALTERNATIVES**

1. Approve the recommended action as presented in this staff report. *Staff recommends this alternative to ensure consistency of street lighting types, for which the City is financially responsible, throughout the community.*



2. Do not approve the recommended action. *Staff does not recommend this alternative as it will create inconsistent lighting types for the street lights, for which the City is financially responsible, throughout the community.*

## **FISCAL IMPACT**

SCE will fund the capital costs of the retrofit and recover them through an energy efficiency premium added to its LS-1 tariff for each street light. The current lower LED energy charge will offset the premium, resulting in an overall monthly cost reduction (e.g. \$0.68/street light). The premium will remain on the City's utility bill for 20 years, while other components of the LS-1 tariff fluctuate in accordance with the CPUC rate changes.

## **NOTIFICATION**

Posting of the Agenda.

## **PREPARATION OF STAFF REPORT**

Prepared By:  
Candace Cassel  
Special Districts Division Manager

Department Head Approval:  
Michael Wolfe  
Public Works Director

## **CITY COUNCIL GOALS**

**Public Facilities and Capital Projects.** Ensure that needed public facilities, roadway improvements, and other infrastructure improvements are constructed and maintained.

**Positive Environment.** Create a positive environment for the development of Moreno Valley's future.

**Community Image, Neighborhood Pride and Cleanliness.** Promote a sense of community pride and foster an excellent image about our City by developing and executing programs which will result in quality development, enhanced neighborhood preservation efforts, including home rehabilitation and neighborhood restoration.

## **CITY COUNCIL STRATEGIC PRIORITIES**

1. Economic Development
2. Public Safety
3. Library
4. Infrastructure
5. Beautification, Community Engagement, and Quality of Life
6. Youth Programs

Objective 4.4: Control Street Lighting costs.

**ATTACHMENTS**

- 1. Agreement With SCE for LS-1 Option E
- 2. ECSD Letter and Boundary Map
- 3. Notice of Exemption

**APPROVALS**

Budget Officer Approval	<u>✓ Approved</u>	1/31/19 5:25 PM
City Attorney Approval	<u>✓ Approved</u>	2/12/19 9:27 AM
City Manager Approval	<u>✓ Approved</u>	2/12/19 2:16 PM



Southern California Edison  
Rosemead, California (U 338-E)

Original  
Cancelling

Cal. PUC Sheet No. 57074-E  
Cal. PUC Sheet No.

A.7.a

Sheet 1

SCHEDULE LS-1 OPTION E,  
ENERGY EFFICIENCY-LIGHT EMITTING DIODE (LED) FIXTURE REPLACEMENT  
RATE AGREEMENT

Form 14-965

Attachment: Agreement With SCE for LS-1 Option E (3334 : AGREEMENT WITH SOUTHERN CALIFORNIA EDISON FOR LS-1 OPTION E

(To be inserted by utility)

Issued by

(To be inserted by Cal. PUC)

Advice 3241-E  
Decision 14-10-046

R.O. Nichols  
Senior Vice President

Date Filed Jun 30, 2015  
Effective Jun 1, 2016  
Resolution \_\_\_\_\_

# SOUTHERN CALIFORNIA EDISON COMPANY SCHEDULE LS-1 OPTION E, ENERGY EFFICIENCY-LIGHT EMITTING DIODE (LED) FIXTURE REPLACEMENT RATE AGREEMENT

This Schedule LS-1 Option E, Energy Efficiency-Light Emitting Diode (LED) Fixture Replacement Rate Agreement (Agreement), effective this \_\_\_\_\_ day of \_\_\_\_\_,

\_\_\_\_\_ (Effective Date), is entered into between Southern California Edison Company (SCE) and \_\_\_\_\_, an SCE customer taking service on Schedule LS-1 (Applicant), referred to collectively as "Parties," and individually as "Party." This Agreement provides for SCE, at Applicant's request, to replace the existing street lighting fixtures serving Applicant's premises with Light Emitting Diode (LED) street lighting fixtures to achieve energy efficiency benefits for Applicant, as set forth in Special Condition 14, Option E, Energy Efficiency-Light Emitting Diode (LED) Fixture Replacement, of Schedule LS-1.

The Parties agree as follows:

## 1. LED FIXTURES

SCE shall install, own, operate, and maintain LED Fixtures for Applicant as set forth in Exhibit "A" attached hereto and incorporated herein by this reference. The LED Fixtures provided hereunder shall at all times remain the property of SCE.

## 2. LED FIXTURE REPLACEMENT COSTS

- 2.1 The replacement costs of the LED Fixtures provided hereunder shall be borne by Applicant.
- 2.2 Applicant shall pay the charge for the LED Fixtures Replacement rate, which includes an Energy Efficiency Premium Charge (EEPC) and a Base LED Charge, under Option E of Schedule LS-1. Applicant elects Option E in lieu of an upfront, one-time payment of the replacement costs.
- 2.3 SCE does not guarantee that any energy or bill savings will accrue to Applicant as a result of the LED Fixture replacements.

## 3. COMMENCEMENT OF SERVICE

The Parties agree that SCE has the right to charge Applicant, and Applicant has an obligation to pay SCE, for the charges set forth in Schedule LS-1, Option E, commencing on the date SCE begins serving the LED Fixtures installed pursuant to this Agreement.

## 4. TERM AND TERMINATION

- 4.1 This Agreement shall be effective as of the Effective Date and shall continue for a term of twenty (20) years from the commencement of service as specified in Section 3 above (Term).
- 4.2 Applicant may terminate this Agreement at any time during the Term upon a thirty (30) - day advance written notice, provided that Applicant, prior to or within the 30-day advance notice period, assigns the Agreement to any New Party In (NPI) that owns, rents or leases the premises served by the street lighting fixtures replaced under this Agreement and will take service under Option E of Schedule LS-1 effective as of the date of termination; *otherwise*, Applicant shall pay a one-time termination charge equal to the present value of the balance of the EEPC of Option E over the remaining Term. The present value is determined based on SCE's authorized rate of return on rate base, or discounted rate of 7.90%.

**SOUTHERN CALIFORNIA EDISON COMPANY  
SCHEDULE LS-1 OPTION E, ENERGY EFFICIENCY-LIGHT EMITTING DIODE (LED)  
FIXTURE REPLACEMENT RATE AGREEMENT**

**5. AMENDMENTS; ASSIGNMENTS**

- 5.1 Any changes or amendments to this Agreement must be in writing and must be executed by the Applicant and SCE and, if required, be approved by the California Public Utilities Commission (Commission).
- 5.2 Applicant shall not assign this Agreement without the prior written consent of SCE; provided, however, that Applicant may assign the Agreement pursuant to the terms and conditions of Section 4.2 above, and the NPI must assume all rights and obligations under this Agreement for the remaining Term. Any assignment and assumption shall be in a form acceptable to SCE.

**6. NOTICE**

Any notice either Applicant or SCE may wish to provide the other regarding this Agreement must be in writing. Such notice must be either hand-delivered or sent by U.S. certified or registered mail, postage prepaid, to the person designated to receive notice for the other Party below, or to such other address as either may designate by written notice. Notices delivered by hand shall be deemed effective when delivered. Notices delivered by mail shall be deemed effective when received, as acknowledged by the receipt of the certified or registered mailing.

Applicant:

SCE:

\_\_\_\_\_ (Name)

\_\_\_\_\_ (Title)

\_\_\_\_\_ (Address)

\_\_\_\_\_ (City, State, Zip)

Business Customer Division  
Southern California Edison Company  
2244 Walnut Grove Avenue  
Rosemead, CA 91770

**7. NONWAIVER**

The failure of either Party to enforce any of the terms and conditions or to exercise any right or privilege in this Agreement shall not be construed as a waiver of any such term and conditions or rights or privileges, and the same shall continue and remain enforce and effect as if no such failure to enforce or exercise had occurred.

**8. SEVERABILITY**

In the event that any of the provisions, or portions thereof, of this Agreement are held to be unenforceable or invalid by the Commission, or any court of competent jurisdiction, the validity and enforceability of the remaining provisions or any portion thereof shall not be affected.

**9. APPLICABLE LAWS, RULES, AND REGULATIONS**

This Agreement shall be subject to, and interpreted under the laws, rules, decisions and regulations of the State of California, without regard to its conflict of laws principles, the Commission, and SCE's Commission-approved tariffs.

Attachment: Agreement With SCE for LS-1 Option E (3334 : AGREEMENT WITH SOUTHERN CALIFORNIA EDISON FOR LS-1 OPTION E

**SOUTHERN CALIFORNIA EDISON COMPANY  
SCHEDULE LS-1 OPTION E, ENERGY EFFICIENCY-LIGHT EMITTING DIODE (LED)  
FIXTURE REPLACEMENT RATE AGREEMENT**

**10. CALIFORNIA PUBLIC UTILITIES COMMISSION JURISDICTION**

- 10.1 This is a filed form tariff agreement authorized by the Commission for use by SCE. No officer, inspector, solicitor, agent or employee of SCE has any authority to waive, alter, or amend any part of this Agreement except as provided herein or authorized by the Commission. This Agreement is to be used in conjunction with Schedule LS-1 and supplements the terms and conditions of the Applicant's electric service under Schedule LS-1.
- 10.2 This Agreement shall at all times be subject to such changes or modifications by the Commission as said Commission may, from time to time, direct in the exercise of its jurisdiction.
- 10.3 Notwithstanding any other provisions of this Agreement, SCE has the right to unilaterally file with the Commission, pursuant to the Commission's rules and regulations, an application for change in rates, charges, classification, service, or rule or any agreement relating thereto.

**11. ENTIRE AGREEMENT**

This Agreement, including SCE's Commission-approved tariffs, constitutes the complete agreement and understanding between the Applicant and SCE regarding the LED Fixtures replacement costs. Prior agreements, representations, understandings, whether expressed or implied, and communications, oral or written, between the Applicant and SCE shall not be construed to be a part of this Agreement.

**12. AUTHORIZATION SIGNATURE**

In witness whereof, the Parties hereto have caused this Agreement to be signed by their duly authorized representatives.

**APPLICANT**

**BY:** \_\_\_\_\_

**NAME:** \_\_\_\_\_

**TITLE:** \_\_\_\_\_

**DATE SIGNED:** \_\_\_\_\_

**SOUTHERN CALIFORNIA EDISON COMPANY**

**BY:** \_\_\_\_\_

**NAME:** \_\_\_\_\_

**TITLE:** \_\_\_\_\_

**DATE SIGNED:** \_\_\_\_\_

Attachment: Agreement With SCE for LS-1 Option E (3334 : AGREEMENT WITH SOUTHERN CALIFORNIA EDISON FOR LS-1 OPTION E

**SOUTHERN CALIFORNIA EDISON COMPANY  
EXHIBIT "A"  
SCHEDULE LS-1 OPTION E,  
ENERGY EFFICIENCY-LIGHT EMITTING DIODE (LED) FIXTURE REPLACEMENT**

APPLICANT

\_\_\_\_\_

CUSTOMER ACCOUNT NO.

\_\_\_\_\_

SERVICE ACCOUNT NO.

\_\_\_\_\_

(Additional account numbers/addresses may be attached hereto.)

SERVICE ADDRESS

\_\_\_\_\_

**APPLICANT REQUESTED READY TO SERVE DATE**

\_\_\_\_\_

SCE READY TO SERVE DATE \_\_\_\_\_

DESCRIPTION OF **LED** FIXTURES/SCOPE OF WORK: SPECIFY HOW MANY STREET LIGHTING  
FIXTURE REPLACEMENTS ARE BEING REQUESTED AND AGREED TO UNDER THIS  
AGREEMENT AND OTHER RELEVANT DETAILS.

W.O. No(s): \_\_\_\_\_

Attachment: Agreement With SCE for LS-1 Option E (3334 : AGREEMENT WITH SOUTHERN CALIFORNIA EDISON FOR LS-1 OPTION E

## EDGEMONT COMMUNITY SERVICES DISTRICT

P.O. Box 5436  
Riverside, CA 92517

August 29, 2016

Ms. Michelle Dawson  
City Manager  
City of Moreno Valley  
14177 Frederick Street  
Moreno Valley, CA 92552

SEP 01 2016  
CITY ATTORNEY'S OFFICE  
CITY OF MORENO VALLEY

Re: City of Moreno Valley's proposed purchase of street lights from Southern California Edison

Dear Ms. Dawson,

It has come to the attention of Edgemont Community Services District ("Edgemont") that the City of Moreno Valley is contemplating purchasing from Southern California Edison ("SCE") street light poles within the City. Edgemont has been unable to ascertain whether or not this proposed purchase would include poles which were requested and installed at the District's request. Edgemont has 248 street light poles which have been installed and are maintained by SCE.

The District does not want to change that arrangement. If the contemplated purchase of street light poles by the City includes poles requested by Edgemont, Edgemont objects to the inclusion in the purchase of such poles and requests that those poles be excluded from the purchase.

Sincerely,



Jessica Pfalmer

General Manager  
Edgemont Community Services District

cc: Southern California Edison  
California Public Utilities Commission



EDGEMONT COMMUNITY SERVICES DISTRICT  
P. O. BOX 5436  
RIVERSIDE, CALIFORNIA 92517

SAN BERNARDINO

CA 924



1000



92553

U.S. POSTAGE  
PAID  
RIVERSIDE, CA  
92507  
AUG 30, 16  
AMOUNT

**\$3.77**

R2304E104985-07

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT  
OF THE RETURN ADDRESS, FOLD AT DOTTED LINE  
**CERTIFIED MAIL**



7016 0910 0001 9802 6637

Ms. Michelle Dawson  
City Manager  
City of Moreno Valley  
14177 Frederick Street  
Moreno Valley, CA 92553

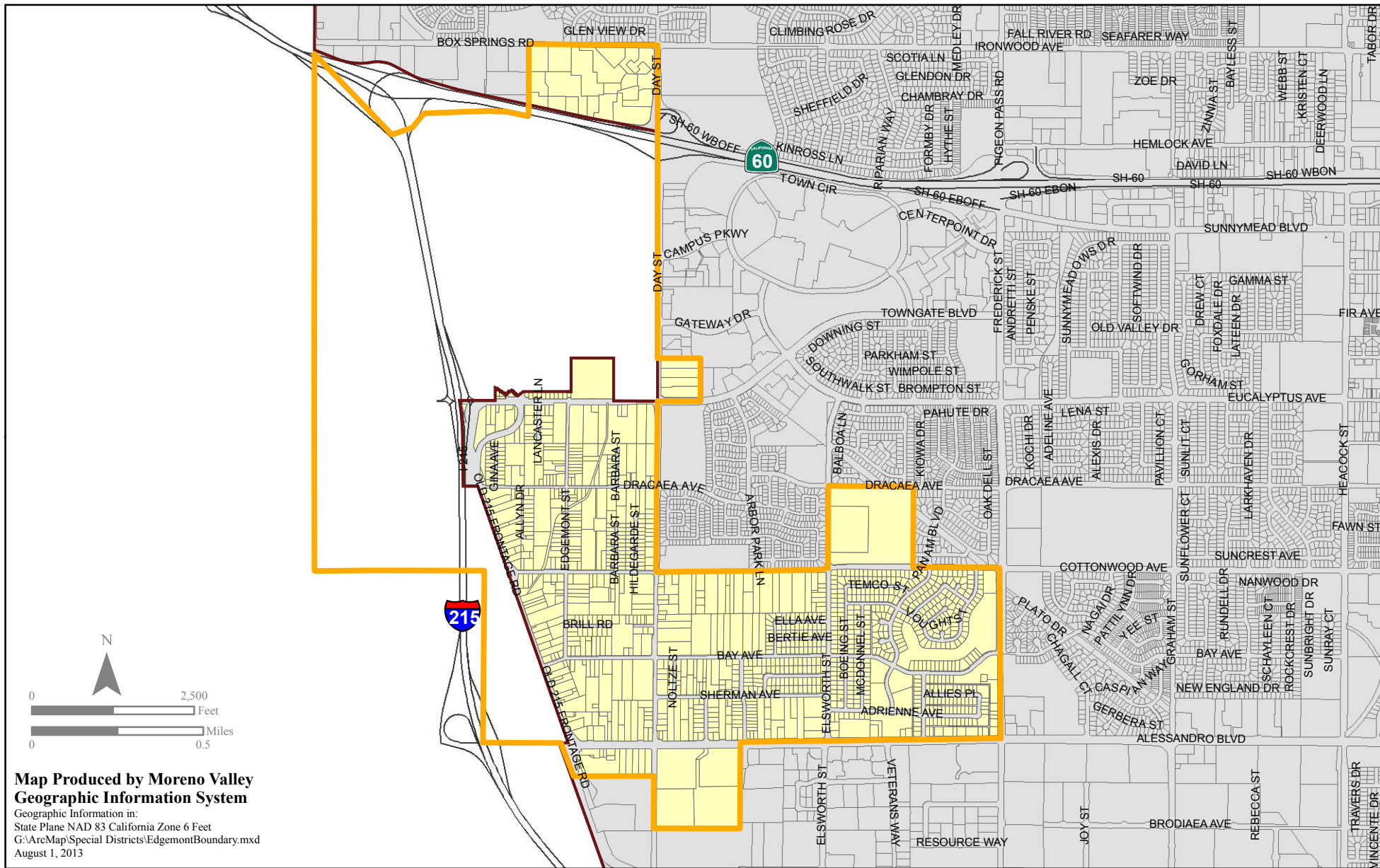
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92553-903699



Attachment: ECSD Letter and Boundary Map (3334 : AGREEMENT WITH SOUTHERN CALIFORNIA





# CITY OF MORENO VALLEY EDGEMONT COMMUNITY SERVICES DISTRICT



### Map Produced by Moreno Valley Geographic Information System

Geographic Information in:  
State Plane NAD 83 California Zone 6 Feet  
G:\ArcMap\Special Districts\EdgemontBoundary.mxd  
August 1, 2013

The information shown on this map was compiled from the Riverside County GIS and the City of Moreno Valley GIS. The land base and facility information on this map is for display purposes only and should not be relied upon without independent verification as to its accuracy. Riverside County and City of Moreno Valley will not be held responsible for any claims, losses or damages resulting from the use of this map.

-  Edgemont Community Services District Boundary
-  Edgemont Community Services District Parcels
-  Parcels
-  Moreno Valley



Notice of Exemption

Appendix E

To: Office of Planning and Research
P.O. Box 3044, Room 113
Sacramento, CA 95812-3044

County Clerk
County of: Riverside

From: (Public Agency): City of Moreno Valley - CDD
14177 Frederick St
Moreno Valley, CA 92552-0805
(Address)

Project Title: Citywide Street Light LED Retrofit

Project Applicant: City of Moreno Valley Public Works, Transportation Division (John Kerenyi)

Project Location - Specific:
Citywide

Project Location - City: Moreno Valley Project Location - County: Riverside

Description of Nature, Purpose and Beneficiaries of Project:
The project includes the retrofit of existing street lights from high-pressure sodium to more energy effective light-emitting diodes (LED) light fixtures. No changes to any of the existing requirement (pole, underground conduit, wiring and power source) are required.

Name of Public Agency Approving Project: City of Moreno Valley

Name of Person or Agency Carrying Out Project: Moreno Valley Public Works, Transportation Division

Exempt Status: (check one):

- Ministerial (Sec. 21080(b)(1); 15268);
Declared Emergency (Sec. 21080(b)(3); 15269(a));
Emergency Project (Sec. 21080(b)(4); 15269(b)(c));
[X] Categorical Exemption. State type and section number: Class 1, Section 15301
Statutory Exemptions. State code number:

Reasons why project is exempt:
The proposed Project is exempt per CEQA Guidelines Section 15301(c) (Existing Facilities). This exemption applies to the minor alteration of existing public or private facilities when the alteration involves negligible or no expansion of an existing use.

Lead Agency
Contact Person: Mark Gross, Senior Planner Area Code/Telephone/Extension: (951) 413-3215

If filed by applicant:

- 1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project? Yes No

Signature: [Signature] Date: 8/9/17 Title: PLANNING OFFICIAL

Signed by Lead Agency Signed by Applicant

Authority cited: Sections 21083 and 21110, Public Resources Code.
Reference: Sections 21108, 21152, and 21152.1, Public Resources Code.

Date Received for filing at OPR:

Attachment: Notice of Exemption (3334 : AGREEMENT WITH SOUTHERN CALIFORNIA EDISON FOR LS-1 OPTION E AGREEMENT)



## Report to City Council

---

**TO:** Mayor and City Council

**FROM:** Kathleen Sanchez, Human Resources Director

**AGENDA DATE:** February 19, 2019

**TITLE:** LIST OF PERSONNEL CHANGES

---

### **RECOMMENDED ACTION**

#### **Recommendation:**

1. Ratify the list of personnel changes as described.

### **DISCUSSION**

The attached list of personnel changes scheduled since the last City Council meeting is presented for City Council ratification.

Staffing of City positions ensures assignment of highly qualified and trained personnel to achieve Momentum MoVal priorities, objectives and initiatives.

### **FISCAL IMPACT**

All position changes are consistent with appropriations previously approved by the City Council.

### **PREPARATION OF STAFF REPORT**

Prepared By:  
Denise Hansen  
Executive Assistant

Department Head Approval:  
Kathleen M. Sanchez  
Human Resources Director

### **CITY COUNCIL GOALS**

None

### **CITY COUNCIL STRATEGIC PRIORITIES**

- 1. Economic Development
- 2. Public Safety
- 3. Library
- 4. Infrastructure
- 5. Beautification, Community Engagement, and Quality of Life
- 6. Youth Programs

**ATTACHMENTS**

- 1. Personnel Changes - 2.19.19

**APPROVALS**

Budget Officer Approval	<u>✓ Approved</u>	2/11/19 8:32 AM
City Attorney Approval	<u>✓ Approved</u>	2/12/19 1:44 PM
City Manager Approval	<u>✓ Approved</u>	2/12/19 2:57 PM

**City of Moreno Valley  
Personnel Changes  
February 19, 2019**

**New Hires**

Kathryn Vigil, Deputy City Clerk  
City Clerk's Office

**Promotions**

Andrew Murillo

From: Parks Maintenance Worker, Parks & Community Services Department/Parks Maintenance Division  
To: Maintenance Worker I, Public Works Department/Maintenance & Operations Division

**Transfers**

Angel Migao

From: Executive Assistant to Mayor & City Council, City Council Office  
To: Executive Assistant II, Community Development Department/Code & Neighborhood Services Division

Claudia Ortega

From: Administrative Assistant, City Council Office  
To: Administrative Assistant, Financial & Management Services Department/Treasury Operations Division

Vivette Cortez

From: Administrative Assistant, City Council Office  
To: Administrative Assistant, Financial & Management Services Department/Electric Utility Division

**Separations**

Amanda Ingraham, Park Ranger  
Parks & Community Services Department/Parks Maintenance Division



## Report to City Council

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**TO:** Mayor and City Council

**FROM:** Kathleen Sanchez, Human Resources Director

**AGENDA DATE:** February 19, 2019

**TITLE:** APPROVE FIRST AMENDMENT TO THE AGREEMENT FOR PROFESSIONAL SERVICES

---

### **RECOMMENDED ACTION**

#### **Recommendation:**

1. Approve the First Amendment to the Agreement for Professional Services (2018-279) with Apple One Employment Services (Apple One), 16371 Beach Blvd., Suite 240 Huntington Beach, CA 92647 to provide additional professional temporary employment services.
2. Authorize the City Manager to execute the First Amendment to Agreement for Professional Consultant Services with Apple One in the form attached hereto.
3. Authorize the increase of the "Not to Exceed" limit to \$100,000.

### **SUMMARY**

This report recommends approval of the First Amendment to Agreement for Professional Consultant Services with Apple One for additional professional temporary employment services for Fiscal Year 2018-2019. The additional temporary positions will be funded by the hiring department's current professional services/ temporary staffing budgets.

### **DISCUSSION**

On July 31, 2018, the City executed an Agreement for Professional Consultant Services (Agreement dated July 31, 2018) with Apple One for professional temporary employment services to provide staff on a temporary basis for various departments

within the City in the amount of \$50,000.

The need for temporary employment services has increased beyond the current scope of the Agreement dated July 31, 2018 due a recent retirement and other events impacting staffing levels. The additional temporary staffing needs will be met with an increase in the Agreement amount of \$50,000.

All fees for professional temporary employment services associated with the First Amendment to Agreement remain consistent with the Agreement dated July 31, 2018.

The RFP process will be re-conducted by end of Fiscal Year 2018-2019 to re-establish the lowest cost and highest quality of service.

### **ALTERNATIVES**

1. Approve the First Amendment to the Agreement for Professional Consultant Services (2018-279) with Apple One Employment Services, 16371 Beach Blvd., Suite 240 Huntington Beach, CA 92647 to provide additional professional temporary employment services; authorize the City Manager to execute the First Amendment to Agreement for Professional Consultant Services with Apple One Employment Services in the form attached hereto and authorize an increase in the Purchase Order to Proactive in the amount of \$50,000.00 once the First Amendment to Agreement has been signed by all parties. *This alternative will allow City Departments to function at adequate levels.*
2. Do not approve the First Amendment to the Agreement for Professional Consultant Services (2018-279) with Apple One Employment Services, 16371 Beach Blvd., Suite 240 Huntington Beach, CA 92647 to provide additional professional temporary employment services; do not authorize the City Manager to execute the First Amendment to Agreement for Professional Consultant Services with Apple One Employment Services in the form attached hereto and do not authorize an increase in the "Not to Exceed" amount. *This alternative will disrupt the function of departments with reduced staffing.*

### **FISCAL IMPACT**

There is no impact to the General Fund. Temporary staffing positions will be funded by the hiring Department's FY 2018-2019 professional services / temporary staffing budgets these positions are assigned to.

### **NOTIFICATION**

N/A

### **PREPARATION OF STAFF REPORT**



Prepared By:  
Shanna Palau  
Management Analyst

Department Head Approval:  
Kathleen Sanchez  
Human Resources Director

**CITY COUNCIL GOALS**

**Positive Environment.** Create a positive environment for the development of Moreno Valley's future.

**CITY COUNCIL STRATEGIC PRIORITIES**

- 1. Economic Development
- 2. Public Safety
- 3. Library
- 4. Infrastructure
- 5. Beautification, Community Engagement, and Quality of Life
- 6. Youth Programs

**ATTACHMENTS**

- 1. Apple One FIRST AMENDMENT TO AGREEMENT 2018doc

**APPROVALS**

Budget Officer Approval	<u>✓ Approved</u>	2/11/19 8:35 AM
City Attorney Approval	<u>✓ Approved</u>	2/12/19 1:32 PM
City Manager Approval	<u>✓ Approved</u>	2/12/19 2:33 PM

**FIRST AMENDMENT TO AGREEMENT  
FOR ON-SITE AND/ OR PROFESSIONAL SERVICES**

The First Amendment to Agreement is by and between the CITY OF MORENO VALLEY, a municipal corporation, hereinafter referred to as "City," and Apple One Employment Services, hereinafter referred to as "Consultant." This First Amendment to Agreement is made and entered into effective on the date the City signs this Amendment.

RECITALS:

Whereas, the City and Consultant entered into an Agreement entitled "AGREEMENT FOR ON-SITE AND/ OR PROFESSIONAL SERVICES," hereinafter referred to as "Agreement," dated July 31, 2018;

Whereas, the Consultant is providing Temporary Employment Placement Services;

Whereas, temporary staffing needs have increased;

Whereas, it is desirable to amend the Agreement to increase the "Not to Exceed" amount to \$100,000 for services to be performed by the Consultant as is more particularly described in the initial agreement.

AMENDMENT TO ORIGINAL AGREEMENT

SECTION 1

1.1 Exhibit C to the Agreement is hereby amended to state a not to exceed amount of \$100,000 in paragraph A.

SECTION 2

2.1 Except as otherwise specifically provided in this Amendment, all other terms and conditions of the Agreement shall remain in full force and effect.

**SIGNATURE PAGE TO FOLLOW**

Attachment: Apple One FIRST AMENDMENT TO AGREEMENT 2018doc [Revision 1] (3426 : APPROVE FIRST AMENDMENT TO THE

FIRST AMENDMENT TO AGREEMENT FOR \_\_\_\_\_  
PROJECT NO. \_\_\_\_\_

IN WITNESS HEREOF, the parties have each caused their authorized representative to execute this Agreement.

City of Moreno Valley

Apple One

By: \_\_\_\_\_

By: \_\_\_\_\_

Thomas M. DeSantis

City Manager

Title: \_\_\_\_\_

(President of Vice President)

Date: \_\_\_\_\_

Date: \_\_\_\_\_

INTERNAL USE ONLY

APPROVED AS TO FORM:

\_\_\_\_\_  
City Attorney

\_\_\_\_\_  
Date

By: \_\_\_\_\_

Title: \_\_\_\_\_

(Corporate Secretary)

Date: \_\_\_\_\_

RECOMMENDED FOR APPROVAL:

\_\_\_\_\_  
Department Head

\_\_\_\_\_  
Date

Attachment: Apple One FIRST AMENDMENT TO AGREEMENT 2018doc [Revision 1] (3426 : APPROVE FIRST AMENDMENT TO THE



## Report to City Council

---

**TO:** Mayor and City Council

**FROM:** Marshall Eyerman, Chief Financial Officer

**AGENDA DATE:** February 19, 2019

**TITLE:** PAYMENT REGISTER - DECEMBER 2018

---

### **RECOMMENDED ACTION**

#### **Recommendation:**

1. Receive and file the Payment Register.

### **SUMMARY**

The Payment Register is an important report providing transparency of financial transactions and payments for City activity for review by the City Council and the residents and businesses in Moreno Valley. The report is posted to the City's website as soon as it is available. The report is included in the City Council agenda as an additional means of distributing the report.

The payment register lists in alphabetical order all checks and wires in the amount of \$25,000 or greater, followed by a listing in alphabetical order of all checks and wires less than \$25,000. The payment register also includes the fiscal year-to-date (FYTD) amount paid to each vendor.

### **PREPARATION OF STAFF REPORT**

Prepared By:  
Dena Heald  
Financial Operations Division Manager

Department Head Approval:  
Marshall Eyerman  
Chief Financial Officer/City Treasurer

### **CITY COUNCIL GOALS**

None

**CITY COUNCIL STRATEGIC PRIORITIES**

- 1. Economic Development
- 2. Public Safety
- 3. Library
- 4. Infrastructure
- 5. Beautification, Community Engagement, and Quality of Life
- 6. Youth Programs

**ATTACHMENTS**

- 1. December 2018 Payment Register

**APPROVALS**

Budget Officer Approval	<u>✓ Approved</u>	1/31/19 5:24 PM
City Attorney Approval	<u>✓ Approved</u>	2/12/19 2:06 PM
City Manager Approval	<u>✓ Approved</u>	2/12/19 2:17 PM



**City of Moreno Valley**  
**Payment Register**  
 For Period 12/1/2018 through 12/31/2018

**CHECKS IN THE AMOUNT OF \$25,000 OR GREATER**

<u>Vendor Name</u>	<u>Check/EFT Number</u>	<u>Payment Date</u>	<u>Inv Number</u>	<u>Invoice Description</u>	<u>Payment Amount</u>
ALL AMERICAN ASPHALT, INC.	235590	12/10/2018	5R1	ALESSANDRO/CHAGALL/GRAHAM STREET IMPROVEMENTS, CONTRACTOR SVCS	\$153,736.44
	235773	12/31/2018	182976	CITYWIDE PAVEMENT REHAB PROGRAM, CONTRACTOR SVCS	\$904,274.18
Remit to: CORONA, CA					<u>FYTD:</u> \$2,870,026.61
CALSTRS	235571	12/03/2018	REFUND-11/9/18	REFUND-GRADING & EROSION CONTROL DEPOSIT-PROJ. PA15-0024-NANDINA	\$363,730.00
	235572	12/03/2018	REFUND 11/9/18b	REFUND-EROSION CONTROL DEP-PROJ PA07-0080-P & G DISTRIBUTION	\$178,893.60
Remit to: SAN DIEGO, CA					<u>FYTD:</u> \$547,175.64
CHARLES ABBOTT ASSOCIATES, INC	23863	12/10/2018	58936	CONSULTING SVCS-NPDES/SWMP-OCT 2018	\$41,505.00
		12/10/2018	58811	CONSULTING SVCS-NPDES/SWMP-SEPT 2018	
Remit to: MISSION VIEJO, CA					<u>FYTD:</u> \$130,625.50
CSG CONSULTANTS, INC.	24004	12/31/2018	B181209-REV. 1	PLAN CHECK SVCS-NOV 2018	\$28,720.25
		12/31/2018	B181077-REV. 1	PLAN CHECK SVCS-SEPT 2018	
		12/31/2018	B180950-REV. 1	PLAN CHECK SVCS-AUG 2018	
Remit to: FOSTER CITY, CA					<u>FYTD:</u> \$52,388.25
DIRECT ENERGY BUSINESS MARKETING LLC.	23869	12/10/2018	815226	RESOURCE ADEQUACY-NOV 2018/MV UTILITY	\$46,800.00
Remit to: HOUSTON, TX					<u>FYTD:</u> \$366,600.00

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CHECKS IN THE AMOUNT OF \$25,000 OR GREATER

<u>Vendor Name</u>	<u>Check/EFT Number</u>	<u>Payment Date</u>	<u>Inv Number</u>	<u>Invoice Description</u>	<u>Payment Amount</u>
EASTERN MUNICIPAL WATER DISTRICT	235550	12/03/2018	NOV-18 12/03/18	WATER CHARGES	\$148,436.68
		12/03/2018	OCT-18 12/03/18	WATER CHARGES	
	235736	12/26/2018	NOV-18 12/20/18	WATER CHARGES	\$36,735.91
Remit to: LOS ANGELES, CA					<u>FYTD:</u> \$1,456,763.26

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**CHECKS IN THE AMOUNT OF \$25,000 OR GREATER**

<u>Vendor Name</u>	<u>Check/EFT Number</u>	<u>Payment Date</u>	<u>Inv Number</u>	<u>Invoice Description</u>	<u>Payment Amount</u>
ENCO UTILITY SERVICES MORENO VALLEY LLC	23823	12/03/2018	0402-MF-02217	SOLAR SYSTEM INSPECTION	\$409,881.64
		12/03/2018	0405-1-239	DISTRIBUTION CHARGES 9/18-10/19/18	
		12/03/2018	40-406A-01	WA# 40-406A BAY AVENUE LINE EXTENSION	
		12/03/2018	40-407A-01	WA# 40-407A-INDIAN 12KV IC LINE EXTENSION	
	23921	12/17/2018	40-369B-13	WA# 40-369B-TRACT 36436	\$402,924.08
		12/17/2018	40-360B-09	WA# 40-360B MORENO VALLEY INDUSTRIAL	
		12/17/2018	0402-MF-02220	SOLAR SYSTEM INSPECTION	
		12/17/2018	0402-MF-02221	SOLAR SYSTEM INSPECTION	
		12/17/2018	40-381B-01	WA# 40-381B-EXCLUSIVE TOWING	
		12/17/2018	40-364B-01	WA# 40-364B-CROSSTOWN TIE ALESSANDRO BLVD	
		12/17/2018	0405-1-240	DISTRIBUTION CHARGES 10/19-11/19/18	
		12/17/2018	40-374B-01	WA# 40-374B CONTINENTAL VILLAGES APTS	
		12/17/2018	40-403B-01	WA# 40-403B-RRMC SKILLED NURSING FACILITY PHASE III	
		12/17/2018	40-373A-08	WA# 40-373A-CACTUS COMMERCE, LP	
		12/17/2018	0402-MF-02222	SOLAR SYSTEM INSPECTION	
		12/17/2018	40-411-01	WA# 40-411-FIELD VERIFICATION STREET LIGHTS ACQUIRED FROM SCE	
		12/17/2018	40-401A-06	WA# 401-401A DAY STREET LINE EXTENSION	
		12/17/2018	40-397A-03	WA# 40-397A-03 CORPORATE YARD SERVICE	
		12/17/2018	40-396B-06	WA# 40-396B EUCALYPTUS INDUSTRIAL PROLOGIS PARK	
		12/17/2018	40-394B-02	WA# 40-394B DUKE REALTY INDUSTRIAL FACILITY	
		12/17/2018	40-387B-08	WA# 40-387B FIRST NANDINA LOGISTICS CENTER	
		12/17/2018	40-377B-06	WA# 40-377B-BRODIAEA AVE WAREHOUSE	
		12/17/2018	40-409B-01	WA# 40-409B-MVU STREETLIGHT RE-NUMBERING	
		12/17/2018	40-415-01	WA# 40-415-DISTRIBUTION SUBSTATION PLANNING UPDATE	

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ENCO UTILITY SERVICES MORENO VALLEY LLC	23961	12/26/2018	40-407A-02	WA# 40-407A-INDIAN 12KV IC LINE EXTENSION	\$31,687.25
		12/26/2018	40-395B-01	WA# 40-395B-BUDDHIST TEMPLE STREET LIGHT	
		12/26/2018	40-406A-02	WA# 40-406A-BAY AVENUE LINE EXTENSION	
		12/26/2018	40-387B-07	WA# 40-387B-FIRST NANDINA LOGISTICS CENTER	
		12/26/2018	40-369B-12	WA# 40-369B-TRACT 36436	
		12/26/2018	40-373A-07	WA# 40-373A-CACTUS COMMERCE, LP	
		12/26/2018	40-377B-05	WA# 40-377B-BRODIAEA AVENUE WAREHOUSE	
		12/26/2018	40-394B-01	WA# 40-394B-DUKE REALTY INDUSTRIAL FACILITY	
		12/26/2018	40-396B-05	WA# 40-396B-EUCALYPTUS INDUSTRIAL PROLOGIS PARK	
		12/26/2018	40-397A-02	WA# 40-397A-CORPORATE YARD METHOD OF SVC FOR THE EXISTING BLDING	
		12/26/2018	0402-MF-02227	SOLAR SYSTEM INSPECTION	
		12/26/2018	40-360B-08	WA# 40-360B-MORENO VALLEY INDUSTRIAL	
		12/26/2018	0402-MF-02226	SOLAR SYSTEM INSPECTION	
		12/26/2018	40-401A-05	WA# 40-401A-DAY STREET LINE EXTENSION	
		12/26/2018	40-404A-03	WA# 40-404A-AMAZON PARKING LOT EXPANSION	

Remit to: ANAHEIM, CA FYTD: \$3,022,465.39

EXELON GENERATION COMPANY, LLC	23873	12/10/2018	MVEU-00069A	POWER PURCHASE 11/1-11/30/18	\$619,057.77
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Remit to: BALTIMORE, MD FYTD: \$4,413,465.13

GOLDEN STATE FC, LLC, (AMAZON)	235628	12/10/2018	MVU7013933-02	COMMERCIAL LIGHTING REBATE (LED)	\$50,000.00
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Remit to: SEATTLE, WA FYTD: \$50,000.00

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GRANICUS, LLC.	235769	12/26/2018	105923	ANNUAL SUBSCRIPTION-LEGISLATIVE MANAGEMENT-12/1/18-11/30/19	\$57,771.00
Remit to: SAINT PAUL, MN					<u>FYTD:</u> \$57,771.00
HABITAT FOR HUMANITY RIVERSIDE	23967	12/26/2018	CHR-08	HOME-CRITICAL HOME REPAIR PROGRAM-SEPTEMBER 2018	\$43,398.55
		12/26/2018	ABWK SFH-06	HOME-A BRUSH WITH KINDNESS PROGRAM-JULY 2018	
		12/26/2018	CHR-09	HOME-CRITICAL HOME REPAIR PROGRAM-OCTOBER 2018	
		12/26/2018	CHR-07	HOME-CRITICAL HOME REPAIR PROGRAM-AUGUST 2018	
		12/26/2018	CHR-06	HOME-CRITICAL HOME REPAIR PROGRAM-JULY 2018	
		12/26/2018	ABWK SFH-10	HOME-A BRUSH WITH KINDNESS PROGRAM-NOVEMBER 2018	
		12/26/2018	ABWK SFH-09	HOME-A BRUSH WITH KINDNESS PROGRAM-OCTOBER 2018	
		12/26/2018	ABWK SFH-07	HOME-A BRUSH WITH KINDNESS PROGRAM-AUGUST 2018	
		12/26/2018	ABWK SFH-08	HOME-A BRUSH WITH KINDNESS PROGRAM-SEPTEMBER 2018	
		12/26/2018	CHR-10	HOME-CRITICAL HOME REPAIR PROGRAM-NOVEMBER 2018	
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$200,823.31
KOMPAN INC.	23879	12/10/2018	INV94544	PLAY EQUIPMENT-MARCH ANNEX	\$74,914.37
Remit to: PFLUGERVILLE, TX					<u>FYTD:</u> \$74,914.37
LEONIDA BUILDERS, INC	23881	12/10/2018	2 - Stop Notice	STOP NOTICE - VULCAN MATERIALS COMPANY	\$409,386.94
		12/10/2018	2	CYCLE 1 CITYWIDE SRTS PEDESTRIAN IMPROVEMENTS, CONSTRUCTION SERVICES	
Remit to: SANTA CLARITA, CA					<u>FYTD:</u> \$573,694.66

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<u>Vendor Name</u>	<u>Check/EFT Number</u>	<u>Payment Date</u>	<u>Inv Number</u>	<u>Invoice Description</u>	<u>Payment Amount</u>
LIBRARY SYSTEMS & SERVICES, LLC	23882	12/10/2018	INV1275	LIBRARY CONTRACT SVCS & MATERIALS-MAIN & MALL-DEC 2018	\$151,933.41
Remit to: ROCKVILLE, MD					<u>FYTD:</u> \$1,066,867.75
MERCHANTS LANDSCAPE SERVICES INC	24014	12/31/2018	53114	LANDSCAPE MAINT.-ZONES E-8, LMD 03, 03A, 04, 05, 06, & 07-NOV18	\$28,882.22
Remit to: MONTEREY PARK, CA					<u>FYTD:</u> \$315,063.15
MICHAEL BAKER INTERNATIONAL, INC	23933	12/17/2018	1023117REVISED	CONSULTANT PLAN CHECK SVCS.-PEN17-0001/DUKE NANDINA INDUST. FAC.	\$26,190.00
		12/17/2018	1026639REVISED	CONSULTANT PLAN CHECK SVCS.-PEN17-0001/DUKE NANDINA INDUST. FAC.	
Remit to: LOS ANGELES, CA					<u>FYTD:</u> \$856,856.27
MORENO VALLEY UTILITY	235603	12/10/2018	DEC-18 12/10/18	ELECTRICITY CHARGES	\$72,414.35
Remit to: HEMET, CA					<u>FYTD:</u> \$570,155.74
NINYO & MOORE GEOTECHNICAL	24018	12/31/2018	223746	CYCLE 1 ATP CITYWIDE SAFE ROUTES TO SCHOOL, CONSULTANT SERVICES	\$38,361.45
		12/31/2018	223023	CYCLE 1 ATP CITYWIDE SAFE ROUTES TO SCHOOL, CONSULTANT SERVICES	
		12/31/2018	223018	CITYWIDE PAVEMENT REHAB PROGRAM, CONSULTANT SERVICES	
Remit to: SAN DIEGO, CA					<u>FYTD:</u> \$83,534.43

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ONESOURCE DISTRIBUTORS, INC.	23934	12/17/2018	S5905201.001	SMART METERS-MV UTILITY	\$85,577.21	
	23975	12/26/2018	S5782119.001	SMART METERS-MV UTILITY	\$107,245.56	
		12/26/2018	S5782097.002	SMART METERS-MV UTILITY		
Remit to: OCEANSIDE, CA					<u>FYTD:</u> \$457,521.42	
SOUTHERN CALIFORNIA EDISON	235612	12/10/2018	7500956090	WDAT CHARGES-MVU/17160 KITCHING ST. SUBSTATION-OCT18	\$49,912.54	
		12/10/2018	7500956112	WDAT CHARGES-MVU/SUBSTATION 115KV INTERCONNECTION-OCT18		
			12/10/2018	7500956108	WDAT CHARGES-MVU/GRAHAM ST.-OCT18	
			12/10/2018	7500956545	RELIABILITY SERVICE-DLAP_SCE_TS10-JUL18	
			12/10/2018	7500955346	RELIABILITY SERVICE-DLAP_SCE_TS10-AUG18	
			12/10/2018	7500956111	WDAT CHARGES-MVU/FREDERICK AVE.-OCT18	
			12/10/2018	7500956109	WDAT CHARGES-MVU/GLOBE ST.-OCT18	
			12/10/2018	7500956110	WDAT CHARGES-MVU/NANDINA AVE.-OCT18	
			12/10/2018	7500956107	WDAT CHARGES-MVU/IRIS AVE.-OCT18	
	235689	12/17/2018	721-3449/NOV-18	IFA CHARGES-SUBSTATION	\$180,964.99	
		12/17/2018	587-9520/NOV-18	ELECTRICITY-FERC CHARGES/MVU		
		12/17/2018	026-1608/NOV-18	IFA & DISTRIBUTION UPGRADE CHARGES-KITCHING SUBSTATION		
		12/17/2018	NOV-18 12/17/18	ELECTRICITY CHARGES		
		12/17/2018	707-6081/NOV-18	ELECTRICITY CHARGES		
Remit to: ROSEMEAD, CA					<u>FYTD:</u> \$1,644,652.03	
TENASKA ENERGY, INC	23898	12/10/2018	MOREN00005330003	RENEWABLE ENERGY-MV UTILITY	\$42,622.45	
Remit to: ARLINGTON, TX					<u>FYTD:</u> \$3,357,720.39	

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TGP ENERGY MANAGEMENT, LLC	23848	12/03/2018	WREGIS112018	RENEWABLE ENERGY-MV UTILITY	\$80,032.00
	23983	12/26/2018	WREGIS122018	RENEWABLE ENERGY-MV UTILITY	\$47,184.00
Remit to: NEW YORK, NY					<u>FYTD:</u> \$269,440.00
THE ADVANTAGE GROUP/ FLEX ADVANTAGE	23899	12/10/2018	201812	DECEMBER 2018 RETIREE MEDICAL BENEFIT BILLING	\$52,759.72
Remit to: TEMECULA, CA					<u>FYTD:</u> \$270,862.04
THE SOCO GROUP INC.	23849	12/03/2018	0591306-IN	FUEL FOR CITY VEHICLES & EQUIPMENT	\$27,056.16
		12/03/2018	0595416-IN	FUEL FOR CITY VEHICLES & EQUIPMENT	
		12/03/2018	0593903-IN	FUEL FOR CITY VEHICLES & EQUIPMENT	
		12/03/2018	0585341-IN	FUEL FOR CITY VEHICLES & EQUIPMENT	
		12/03/2018	0589517-IN	FUEL FOR CITY VEHICLES & EQUIPMENT	
		12/03/2018	0587983-IN	FUEL FOR CITY VEHICLES & EQUIPMENT	
		12/03/2018	0586925-IN	FUEL FOR CITY VEHICLES & EQUIPMENT	
		12/03/2018	0592511-IN	FUEL FOR CITY VEHICLES & EQUIPMENT	
		12/03/2018	0586967-IN	FUEL FOR CITY VEHICLES & EQUIPMENT	
Remit to: PERRIS, CA					<u>FYTD:</u> \$204,515.59
THINK TOGETHER, INC	23850	12/03/2018	111-18/19-5	ASES PROGRAM MANAGEMENT SERVICES-INSTALLMENT #5	\$551,610.00
Remit to: SANTA ANA, CA					<u>FYTD:</u> \$2,828,185.98
U.S. BANK/CALCARDS	23987	12/26/2018	11-27-18	NOV. 2018 CALCARD ACTIVITY	\$175,398.93
Remit to: ST. LOUIS, MO					<u>FYTD:</u> \$1,581,771.16

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WILLDAN ENGINEERING	23952	12/17/2018	002-20079	PLAN CHECK & INSPECTION SERVICES FOR BLDG. & SAFETY DEPT.-OCT18	\$80,274.75
		12/17/2018	002-19891	PLAN CHECK & INSPECTION SERVICES FOR BLDG. & SAFETY DEPT.-SEP18	
	24027	12/31/2018	002-0201	PLAN CHECK & INSPECTION SERVICES FOR BLDG. & SAFETY DEPT.-NOV18	\$25,356.75
Remit to: ANAHEIM, CA					<u>FYTD:</u> \$207,132.86
WILLDAN FINANCIAL SERVICES	24028	12/31/2018	010-40034	GRANT ADMINISTRATION SERVICES-NOV. 2018	\$34,229.00
		12/31/2018	010-40033	GRANT ADMINISTRATION SERVICES-OCT. 2018	
Remit to: TEMECULA, CA					<u>FYTD:</u> \$152,088.70
WRCOG - WESTERN RIVERSIDE COUNCIL OF GOVERNMENTS	23908	12/10/2018	NOV-2018 TUMF	TUMF FEES COLLECTED FOR 11/1-11/30/18-INDUSTRIAL & COMMERCIAL	\$1,767,560.69
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$6,067,651.76
WRCRA	235695	12/17/2018	NOV-2018 MSHCP	MSHCP FEES COLLECTED FOR NOV. 2018-RESIDENTIAL ACTIVITY	\$42,080.00
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$1,087,763.65
<b>TOTAL AMOUNTS OF \$25,000 OR GREATER</b>					<b>\$7,669,499.84</b>



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4IMPRINT	23912	12/17/2018	6888686	PROMOTIONAL ITEMS	\$959.26
Remit to: OSHKOSH, WI					<u>FYTD:</u> \$4,408.81
AARVIG AND ASSOCIATES, APC	235542	12/03/2018	33865	LEGAL SERVICES-CLAIM MV1819 (A. WHITE)	\$3,882.43
		12/03/2018	33863	LEGAL SERVICES-CLAIM MV1761 (K. PIEHL)	
Remit to: REDLANDS, CA					<u>FYTD:</u> \$16,340.46
ABILITY COUNTS, INC	23913	12/17/2018	ACI113962	LANDSCAPE MAINT-CFD #1-MAY 2018	\$4,130.00
		12/17/2018	ACI114341	LANDSCAPE MAINT-CFD #1-NOV 2018	
Remit to: CORONA, CA					<u>FYTD:</u> \$14,455.00
ACCU-TECH CORPORATION	235728	12/26/2018	692124828	MATERIALS- FIRE STATION 58	\$934.84
	235771	12/31/2018	692124894	MATERIALS- FIRE STATION 58	\$482.52
Remit to: DALLAS, TX					<u>FYTD:</u> \$11,283.53
ACTIVE NETWORK, LLC	23815	12/03/2018	1013436	ACTIVE NET-SYSTEM ADMIN TRAINING	\$3,000.00
	23858	12/10/2018	1013501	ACTIVE NET TECH SERVICES	\$1,400.00
Remit to: DALLAS, TX					<u>FYTD:</u> \$4,400.00
ADAMS, LASHA	235699	12/17/2018	MVA050007440	REFUND- PARKING CONTROL FEES OVERPAYMENT	\$41.00
Remit to: PERRIS, CA					<u>FYTD:</u> \$41.00
ADAMS INVESTIGATION SERVICES LLC	235729	12/26/2018	025	INVESTIGATION SERVICES	\$4,546.85
Remit to: UPLAND, CA					<u>FYTD:</u> \$4,546.85
ADAMS, CARRIE	235566	12/03/2018	R18-123535	ANIMAL SERVICES REFUND-SPAY/NEUTER AND RABIES DEPOSITS	\$95.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$95.00



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ADMINSURE	235730	12/26/2018	11637	WORKERS' COMP CLAIM ADMIN-JAN 2019	\$2,175.00
Remit to: ONTARIO, CA					<u>FYTD:</u> \$15,225.00
ADVANCE REFRIGERATION & ICE SYSTEMS, INC	23914	12/17/2018	45112	ICE MACHINE REPAIR-PUBLIC SAFETY BLDG	\$342.85
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$3,869.76
ADVANCED ELECTRIC	235543	12/03/2018	12988	ELECTRICAL REPAIRS-SENIOR CENTER	\$1,857.00
		12/03/2018	12989	ELECTRICAL REPAIRS-SENIOR CENTER	
	235638	12/17/2018	12961	ELECTRICAL REPAIRS-EMERGENCY OP'S CENTER	\$936.72
		12/17/2018	12963	ELECTRICAL REPAIRS-SENIOR CENTER	
		12/17/2018	12960	ELECTRICAL REPAIRS-FIRE STATION 6	
		12/17/2018	12962	ELECTRICAL REPAIRS-SENIOR CENTER	
	235731	12/26/2018	12977	ELECTRICAL REPAIRS-JFK PARK	\$19,977.00
	235772	12/31/2018	12964	ELECTRICAL WORK-SENIOR CENTER	\$14,520.00
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$72,945.20
ADVANTAGE GRAPHICS AND PROMOTIONS	23816	12/03/2018	13275	ADMINISTRATIVE CITATIONS-CODE	\$2,028.96
Remit to: DANA POINT, CA					<u>FYTD:</u> \$3,420.19
AEROTEK, INC.	23817	12/03/2018	CE05162246	TEMP-TS CAMERA PROJECT 9/17-9/21/18 (V. CORY)	\$1,361.60
Remit to: CHICAGO, IL					<u>FYTD:</u> \$34,942.06
AHRAM, SANAD	235639	12/17/2018	MAPPED 2018	MAYOR'S APPRENTICESHIP PROGRAM PROMOTING EMPLOYMENT DEVELOPMENT	\$500.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$500.00

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AKINBAYODE, BLESSING	235700	12/17/2018	2000619.047	COTTONWOOD GOLF CTR. RENTAL REFUND	\$200.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$200.00
AKM CONSULTING ENGINEERS, INC	235544	12/03/2018	9764	SAN TIMOTEO FOOTHILL STORM DRAIN, CONSULTANT SERVICES	\$17,160.00
Remit to: IRVINE, CA					<u>FYTD:</u> \$31,412.00
ALDI, INC.	235621	12/10/2018	MVU 7014047-01	SOLAR PBI REBATE INCENTIVE	\$13,519.02
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$102,276.30
ALL AMERICAN ASPHALT, INC.	23955	12/20/2018	W181201	RETENTION PAYABLE DEP-ESCROW DEP NO. 2513-PROGRESS BILL #4 &5R1	\$10,373.32
Remit to: CORONA, CA					<u>FYTD:</u> \$2,870,026.61
ALTERNATIVE ENERGY SYSTEMS CONSULTING, INC	235727	12/17/2018	21810-02	MVU ENGINEERING SRVS & SUPPORT-KARMA AUDIT	\$17,310.00
		12/17/2018	21810-01	MVU ENGINEERING SRVS & SUPPORT-TRANSPORTATION ELECTRIFICATION	
Remit to: CARLSBAD, CA					<u>FYTD:</u> \$17,310.00
AMERICAN FENCE COMPANY, INC.	24000	12/31/2018	2113980	INSTALL GATE-PARKS	\$2,000.00
Remit to: PERRIS, CA					<u>FYTD:</u> \$7,536.44
AMERICAN FORENSIC NURSES	23859	12/10/2018	71477	PHLEBOTOMY SVCS	\$690.00
		12/10/2018	71499	PHLEBOTOMY SVCS	
		12/10/2018	71523	PHLEBOTOMY SVCS	
	23956	12/26/2018	71565	PHLEBOTOMY SVCS	\$715.00
Remit to: LA QUINTA, CA					<u>FYTD:</u> \$7,080.00

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<u>Vendor Name</u>	<u>Check/EFT Number</u>	<u>Payment Date</u>	<u>Inv Number</u>	<u>Invoice Description</u>	<u>Payment Amount</u>
AMTECH ELEVATOR SERVICES	23818	12/03/2018	DVB05044C18	ELEVATOR ROUTINE MAINT-CITY HALL-DEC 2018	\$295.00
		12/03/2018	DVB05046C18	ELEVATOR ROUTINE MAINT-EOC-DEC 2018	
Remit to: PASADENA, CA					<u>FYTD:</u> \$1,915.00
ANIMAL EMERGENCY CLINIC, INC.	23819	12/03/2018	OCT2018	AFTER HOURS EMERGENCY VET SVCS-MV ANIMAL SHELTER	\$1,013.00
		12/03/2018	SEPT2018	AFTER HOURS EMERGENCY VET SVCS-MV ANIMAL SHELTER	
	23915	12/17/2018	NOV 2018	AFTER HOURS EMERGENCY VET SVCS-MV ANIMAL SHELTER	\$848.00
Remit to: GRAND TERRACE, CA					<u>FYTD:</u> \$3,419.00
ANIMAL HEALTH AND SANITARY SUPPLY	235732	12/26/2018	INV12986	MISC KENNEL SUPPLIES	\$521.37
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$2,804.37
APPLE ONE EMPLOYMENT SERVICES	24001	12/31/2018	S7497144	TEMP ANALYST 1 10/22-11/07/18 (R. GALIT)	\$3,426.67
Remit to: GLENDALE, CA					<u>FYTD:</u> \$27,580.75
APWA-AMERICAN PUBLIC WORKS ASSOCIATION	235545	12/03/2018	613352 FY18/19	PAVER V7 ANNUAL MAINTENANCE	\$550.00
Remit to: KANSAS CITY, MO					<u>FYTD:</u> \$1,100.00
ARIAS, TINA	235567	12/03/2018	R18-129371	ANIMAL SERVICES REFUND-TRAP RENTAL DEPOSIT	\$50.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$50.00
ARRIAGA, ADAN	235753	12/26/2018	R18-130244	ANIMAL SERVICES REFUND-SPAY/NEUTER DEPOSIT	\$75.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$75.00
ATTA, MUHAMMAD	235622	12/10/2018	REFUND 12/3/18	REFUND BACKGROUND CHECK FEE	\$10,001.00
Remit to: CLAREMONT, CA					<u>FYTD:</u> \$10,001.00



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AUGUSTENBORG, MELISSA N	235701	12/17/2018	MVA020007281	REFUND- PARKING CONTROL FEES OVERPAYMENT	\$115.00
Remit to: MORENO VALLEY, CA					<b>FYTD:</b> \$115.00
AUTOMATIC STOREFRONT SERVICE/E-Z AUTOMATED SYSTEMS	235774	12/31/2018	0030345	SLIDING GLASS DOOR REPAIR-CITY HALL	\$2,793.75
		12/31/2018	0030344	SLIDING GLASS DOOR BATTERY REPLACEMENT-SENIOR CTR.	
		12/31/2018	0030334	SLIDING GLASS DOOR PREV MAINT-PUBLIC SAFETY BUILDING	
		12/31/2018	0030353	SLIDING GLASS DOOR REPLACEMENT-TOWNGATE	
Remit to: CHINO, CA					<b>FYTD:</b> \$2,793.75
AVANT GARDE	24002	12/31/2018	5219	HOME HABITAT FOR HUMANITY-OCT & NOV 2018	\$6,143.25
		12/31/2018	5217	ESG PROGRAM MONITORING SVCS-NOV 2018	
		12/31/2018	5196-HOME	HOME FUNDING COMPLIANCE SVCS-NOV 2018	
		12/31/2018	5218_REVISED	ANALYSIS OF IMPEDIMENTS TO FAIR HOUSING CHOICE 2018-2023	
Remit to: POMONA, CA					<b>FYTD:</b> \$18,425.75
BARRANCO-MONTES, ISMAEL	235641	12/17/2018	MAPPED 2018	MAYOR'S APPRENTICESHIP PROGRAM PROMOTING EMPLOYMENT DEVELOPMENT	\$500.00
Remit to: MORENO VALLEY, CA					<b>FYTD:</b> \$500.00
BARTHA, BRIGITTA	235786	12/31/2018	1/9 - 1/11/19	TRAVEL PER DIEM & MILEAGE-CSMFO ANNUAL CONFERENCE	\$217.43
Remit to: SUN CITY, CA					<b>FYTD:</b> \$217.43
BELKASSAOUI, LAILA	235754	12/26/2018	R18-129180	ANIMAL SERVICES REFUND-SPAY/NEUTER DEPOSIT	\$75.00
Remit to: PERRIS, CA					<b>FYTD:</b> \$75.00

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BIO-TOX LABORATORIES	235591	12/10/2018	36761	FORENSIC TOXICOLOGY TESTING SVCS FOR PD	\$3,620.00
		12/10/2018	36693	FORENSIC TOXICOLOGY TESTING SVCS FOR PD	
		12/10/2018	36692	FORENSIC TOXICOLOGY TESTING SVCS FOR PD	
	235642	12/17/2018	36333	FORENSIC TOXICOLOGY TESTING SVCS FOR PD	\$268.00
	235733	12/26/2018	36192	FORENSIC TOXICOLOGY TESTING SVCS FOR PD	\$198.00
Remit to: RIVERSIDE, CA					<b>FYTD:</b> \$23,895.88
BISHOP, YAHNEL	235617	12/10/2018	12/17 - 12/18/18	TRAVEL PER DIEM-2018 CALBO TRAINING SEMINARS	\$99.00
Remit to: MURRIETA, CA					<b>FYTD:</b> \$99.00
BLANQUET, CARMEN	235702	12/17/2018	2000614.047	REFUND - CONFERENCE & REC CTR.- RENTAL REFUND	\$750.00
	235703	12/17/2018	2000613.047	REFUND - CONFERENCE & CTR - RENTAL REFUND	\$207.00
Remit to: MORENO VALLEY, CA					<b>FYTD:</b> \$957.00
BMW MOTORCYCLES OF RIVERSIDE	23860	12/10/2018	6020587	MAINT & REPAIRS-TRAFFIC MOTORCYCLE	\$4,699.52
		12/10/2018	6020496	MAINT & REPAIRS-TRAFFIC MOTORCYCLE	
		12/10/2018	6020586	MAINT & REPAIRS-TRAFFIC MOTORCYCLE	
		12/10/2018	6020599	MAINT & REPAIRS-TRAFFIC MOTORCYCLE	
	23957	12/26/2018	6020749	MAINT & REPAIRS-TRAFFIC MOTORCYCLE	\$504.93
		12/26/2018	5026282	MAINT & REPAIRS-TRAFFIC MOTORCYCLE	
Remit to: RIVERSIDE, CA					<b>FYTD:</b> \$44,742.29
BONZOMET, CHRISTOPHER	235568	12/03/2018	R18-128819	ANIMAL SERVICES REFUND-SPAY/NEUTER DEPOSIT	\$75.00
Remit to: MORENO VALLEY, CA					<b>FYTD:</b> \$75.00

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BOX SPRINGS MUTUAL WATER COMPANY	235592	12/10/2018	36-1 11/27/18	WATER ASSESSMENT ON VACANT LOTS OWNED BY THE HOUSING AUTHORITY	\$529.64
		12/10/2018	1088-1 11/27/18	WATER ASSESSMENT ON VACANT LOTS OWNED BY THE HOUSING AUTHORITY	
		12/10/2018	80-4 11/27/18	WATER ASSESSMENT ON VACANT LOTS OWNED BY THE HOUSING AUTHORITY	
		12/10/2018	1084-1 11/27/18	WATER ASSESSMENT ON VACANT LOTS OWNED BY THE HOUSING AUTHORITY	
		12/10/2018	1085-1 11/27/18	WATER ASSESSMENT ON VACANT LOTS OWNED BY THE HOUSING AUTHORITY	
		12/10/2018	1086-1 11/27/18	WATER ASSESSMENT ON VACANT LOTS OWNED BY THE HOUSING AUTHORITY	
		12/10/2018	1087-1 11/27/18	WATER ASSESSMENT ON VACANT LOTS OWNED BY THE HOUSING AUTHORITY	
		12/10/2018	189-13 11/27/18	WATER ASSESSMENT ON VACANT LOTS OWNED BY THE HOUSING AUTHORITY	
		12/10/2018	195-5 11/27/18	WATER ASSESSMENT ON VACANT LOTS OWNED BY THE HOUSING AUTHORITY	
		12/10/2018	331-1 11/27/18	WATER ASSESSMENT ON VACANT LOTS OWNED BY THE HOUSING AUTHORITY	
		12/10/2018	45-4 11/27/18	WATER ASSESSMENT ON VACANT LOTS OWNED BY THE HOUSING AUTHORITY	
		12/10/2018	721-1 11/27/18	WATER USAGE-TOWNGATE-NOV 2018	
	12/10/2018	204-9 11/27/18	WATER ASSESSMENT ON VACANT LOTS OWNED BY THE HOUSING AUTHORITY		
Remit to: MORENO VALLEY, CA					FYTD: \$5,644.84
BRAUN BLAISING SMITH WYNNE, P.C.	235546	12/03/2018	17648	LEGAL SERVICES-MV UTILITY-OCT 2018	\$99.30
Remit to: SACRAMENTO, CA					FYTD: \$1,215.30

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BREWAH, LLOYDETTE A	235704	12/17/2018	MVA020008755	REFUND- PARKING CONTROL FEES OVERPAYMENT	\$173.00
Remit to: APPLE VALLEY, CA					<u>FYTD:</u> \$173.00
BRIDGEPAY NETWORK SOLUTIONS	23861	12/10/2018	3274	CREDIT CARD GATEWAY SVCS-DEC 2018	\$32.00
Remit to: ALTAMONTE SPRINGS, FL					<u>FYTD:</u> \$248.40
BRIGHTVIEW LANDSCAPE SERVICES, INC.	23820	12/03/2018	5905230-1	LANDSCAPE MAINT-ZONES D, M & S	\$5,888.24
		12/03/2018	5948030-3	LANDSCAPE MAINT-ZONE D	
		12/03/2018	5981202-2	LANDSCAPE MAINT-ZONES D, M & S	
	23916	12/17/2018	6052786	LANDSCAPE MAINT-VARIOUS LOCATIONS	\$18,146.90
	24003	12/31/2018	6046029-2	LANDSCAPE MAINT-ZONES D, M & S	\$2,860.93
Remit to: PASADENA, CA					<u>FYTD:</u> \$342,271.97
BRIXTON-ALTO SHOPPING CENTER, LLC	235547	12/03/2018	DEC 2018 RENT	DEC 2018 RENT (INCLUDING CAM) FOR EMPLOYMENT RESOURCE CTR	\$7,652.70
	235734	12/26/2018	JAN 2019 RENT	JAN 2019 RENT (INCLUDING CAM) FOR EMPLOYMENT RESOURCE CTR	\$7,652.70
Remit to: SAN DIEGO, CA					<u>FYTD:</u> \$45,916.20
BUICE, ASHLY	235569	12/03/2018	R18-127641	ANIMAL SERVICES REFUND-SPAY/NEUTER DEPOSIT	\$75.00
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$75.00
BUSH, DUNCAN	235570	12/03/2018	UUT REFUND	REFUND FOR UUT	\$11.89
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$11.89

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CALIFORNIA VETERINARY SPECIALISTS	235643	12/17/2018	157021	VETERINARY CARE FOR K-9 HERBIE	\$128.32
Remit to: MURRIETA, CA					<u>FYTD:</u> \$128.32
CALLISTER, KEVIN	235644	12/17/2018	FALL 2018	TUITION/EMPLOYEE EDUCATION REIMBURSEMENT	\$1,994.54
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$3,674.25
CANETT, ALENA RENEE	235645	12/17/2018	MAPPED 2018	MAYOR'S APPRENTICESHIP PROGRAM PROMOTING EMPLOYMENT DEVELOPMENT	\$500.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$500.00
CDW GOVERNMENT, INC.	235548	12/03/2018	QCG7946	SOLAR CARPORT CAMERAS	\$10,664.86
		12/03/2018	QBX5111	SOLAR CARPORT CAMERAS	
		12/03/2018	QBX1115	SOLAR CARPORT CAMERAS	
235646	12/17/2018	QFX6657	SOLAR CARPORT CAMERAS	\$3,759.43	
	12/17/2018	QCV5220	SOLAR CARPORT CAMERAS		
235775	12/31/2018	QLT1495	SOLAR CARPORT CAMERAS	\$4,699.31	
Remit to: CHICAGO, IL					<u>FYTD:</u> \$19,123.60
CHANCY, CHIZURU	235647	12/17/2018	NOV-2018	INSTRUCTOR SERVICES-HULA & TAHITIAN DANCE CLASSES	\$114.00
		12/17/2018	OCT-2018	INSTRUCTOR SERVICES-HULA & TAHITIAN DANCE CLASSES	
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$552.00
CHANDLER ASSET MANAGEMENT, INC	23862	12/10/2018	1811MORENOVA	INVESTMENT MGMT SVCS-NOV 2018	\$4,365.48
Remit to: SAN DIEGO, CA					<u>FYTD:</u> \$30,266.92
CHINAS, RODRIGO	235573	12/03/2018	R18-126247	ANIMAL SERVICES REFUND-SPAY/NEUTER AND RABIES DEPOSITS	\$95.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$95.00

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CITY OF RIVERSIDE	235648	12/17/2018	00246076	SEMI-ANNUAL SHARED TRAFFIC SIGNALS & EQUIP COSTS 4/1/18-9/30/18	\$5,377.88
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$13,337.78
CIVIC SOLUTIONS, INC	23821	12/03/2018	83587	PLANNING ENTITLEMENT AND PLAN CHECK SVCS-OCT 2018	\$6,937.50
Remit to: MISSION VIEJO, CA					<u>FYTD:</u> \$79,625.00
COGENT COMMUNICATIONS, INC	23917	12/17/2018	1012018	SECONDARY INTERNET CONNECTION 10/1-10/31/18	\$5,178.00
		12/17/2018	1212018	SECONDARY INTERNET CONNECTION 12/1-12/31/18	
		12/17/2018	912018	SECONDARY INTERNET CONNECTION 9/1-9/30/18	
Remit to: BALTIMORE, MD					<u>FYTD:</u> \$10,356.00
COLONIAL SUPPLEMENTAL INSURANCE	235593	12/10/2018	7133069-1201368	EMPLOYEE SUPPLEMENTAL INSURANCE	\$6,318.51
	235776	12/31/2018	7133069-0101314	EMPLOYEE SUPPLEMENTAL INSURANCE	\$6,365.80
Remit to: COLUMBIA, SC					<u>FYTD:</u> \$44,549.90
CONSORTIUM FOR EARLY LEARNING SERVICES	235705	12/17/2018	2000611.047	REFUND - CONFERENCE & REC CTR.- RENTAL REFUND	\$100.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$200.00
CONTRERAS, ARMANDO	235706	12/17/2018	2000620.047	COTTONWOOD GOLF CTR. RENTAL REFUND	\$200.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$200.00
CORODATA MEDIA STORAGE INC.	235649	12/17/2018	DS1286369	OFF-SITE MEDIA STORAGE-NOV 2018	\$327.35
Remit to: LOS ANGELES, CA					<u>FYTD:</u> \$2,055.30
CORTES, MELISSA	235787	12/31/2018	1/9 - 1/11/19	TRAVEL PER DIEM & MILEAGE-CSMFO ANNUAL CONFERENCE	\$211.54
Remit to: HEMET, CA					<u>FYTD:</u> \$211.54

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COSTAR REALTY INFORMATION, INC	235549	12/03/2018	108215756-1	COMMERCIAL REAL ESTATE DATABASE SVC-DEC 2018	\$1,436.00
Remit to: BALTIMORE, MD					<u>FYTD:</u> \$8,616.00
COUNSELING TEAM, THE	235650	12/17/2018	71059	EMPLOYEE ASSISTANCE PROGRAM-NOV 2018	\$1,250.00
Remit to: SAN BERNARDINO, CA					<u>FYTD:</u> \$11,040.00
COUNTRY SQUIRE ESTATES	235594	12/10/2018	OCT-NOV 2018	UUT REFUND	\$64.21
		12/10/2018	SEPT-OCT 2018	UUT REFUND	
Remit to: ONTARIO, CA					<u>FYTD:</u> \$250.12
COUNTY OF RIVERSIDE	23864	12/10/2018	IT0000002472	APX 7500 DUAL BAND, HPD MODEM MAINT	\$2,945.35
	235595	12/10/2018	2623	REGISTERED VOTERS CONFIRMATION-CFD NO. 2014-01/AMEND #32	\$35.00
	235735	12/26/2018	8218	FUEL FOR CITY VEHICLE 13001	\$185.78
	235777	12/31/2018	2627	REGISTERED VOTERS CONFIRMATION-CFD NO. 2014-01/ANNEX NO. 33	\$35.00
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$41,641.92
COUNTY OF RIVERSIDE 1	235596	12/10/2018	PU0000004568	JANITORIAL SUPPLIES-POLICE STATION-OCT 2018	\$954.25
	235651	12/17/2018	PU0000004572	JANITORIAL SUPPLIES-POLICE STATION-NOV 2018	\$1,485.72
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$9,441.77
CREATIVE SOLUTIONS FOR KIDS AND FAMILIES INC	235755	12/26/2018	2000622.047	TOWNGATE COMM. CTR. RENTAL REFUND	\$200.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$200.00

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CRIME SCENE STERI-CLEAN, LLC	23865	12/10/2018	38943	BIO HAZARD REMOVAL SERVICE	\$750.00
	23958	12/26/2018	39002	BIO HAZARD REMOVAL SERVICE	\$750.00
Remit to: RANCHO CUCAMONGA, CA					<u>FYTD:</u> \$10,302.00
D&D SERVICES DBA D&D DISPOSAL, INC.	235652	12/17/2018	1270	DECEASED ANIMAL REMOVAL SVC-NOV 2018	\$745.00
Remit to: VALENCIA, CA					<u>FYTD:</u> \$4,470.00
DANE CONSTRUCTION	24005	12/31/2018	07022018-04	FOUNTAIN INSTALLATION-MORRISON PARK	\$9,200.00
		12/31/2018	07022018-03	FOUNTAIN INSTALLATION-COMMUNITY PARK	
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$85,116.00
DATA TICKET, INC.	23866	12/10/2018	94759	ADMIN CITATION PROCESSING-PD-OCT 2018	\$114.00
	23918	12/17/2018	94756TPC	THIRD PARTY COLLECTIONS-ANIMAL SVCS-OCT 2018	\$7,300.59
		12/17/2018	94758	ADMIN CITATION PROCESSING-CODE- OCT 18	
		12/17/2018	94756	ADMIN CITATION PROCESSING-ANIMAL SVCS-OCT 2018	
		12/17/2018	94758TPC	THIRD PARTY COLLECTIONS-CODE-OCT 2018	
	24006	12/31/2018	94757	ADMIN CITATION PROCESSING-BLDG & SAFETY-OCT 2018	\$601.33
		12/31/2018	95504	ADMIN CITATION PROCESSING-ANIMAL SVCS-NOV 2018	
		12/31/2018	95505	ADMIN CITATION PROCESSING-BLDG & SAFETY-NOV 18	
		12/31/2018	95504TPC	THIRD PARTY COLLECTIONS-ANIMAL SVCS-NOV 2018	
Remit to: IRVINE, CA					<u>FYTD:</u> \$121,263.93
DEHOOG, LAURA	235756	12/26/2018	R18-129947	ANIMAL SERVICES REFUND-RABIES DEPOSIT	\$20.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$20.00
DELTA DENTAL OF CALIFORNIA	23867	12/10/2018	BE003114114	EMPLOYEE DENTAL INSURANCE-PPO	\$13,149.14
Remit to: SAN FRANCISCO, CA					<u>FYTD:</u> \$76,168.23

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DELTACARE USA	23868	12/10/2018	BE003114922	EMPLOYEE DENTAL INSURANCE-HMO	\$4,883.12
Remit to: DALLAS, TX					<u>FYTD:</u> \$28,900.82
DEPARTMENT OF INDUSTRIAL RELATIONS	235778	12/31/2018	OSIP 65708	SELF INSURED PLAN 7/1/18-6/30/19	\$11,682.49
Remit to: RANCHO CORDOVA, CA					<u>FYTD:</u> \$11,682.49
DISH DBS CORPORATION	235653	12/17/2018	86557282/DEC18	SATELLITE TV-FIRE STATION 99-12/1-12/30/18	\$94.04
Remit to: PALATINE, IL					<u>FYTD:</u> \$465.20

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DMS FACILITY SERVICES	23919	12/17/2018	RC-L114188	JANITORIAL SVCS-SUNNYMEAD MIDDLE/THINK-DEC 2018	\$9,197.56		
		12/17/2018	L46917	SPECIAL CLEANINGS FOR NOV 2018 EVENT RENTALS-SENIOR CTR			
		12/17/2018	L46919	SPECIAL CLEANINGS FOR NOV 2018 EVENT RENTALS-COTTONWOOD GOLF CTR			
		12/17/2018	L46915	SPECIAL CLEANINGS FOR NOV 2018 EVENT RENTALS-CONF & REC CTR			
		12/17/2018	RC-L114180	JANITORIAL SVCS-EMERGENCY OP'S CTR-DEC 2018			
		12/17/2018	RC-L114189	JANITORIAL SVCS-SUNNYMEAD ELEM-DEC 2018			
		12/17/2018	L46918	SPECIAL CLEANINGS FOR NOV 2018 EVENT RENTALS-TOWNGATE COMM CTR.			
		12/17/2018	RC-L114190	JANITORIAL SVCS-TOWNGATE-DEC 2018			
		12/17/2018	RC-L114186	JANITORIAL SVCS-RED MAPLE PORTABLE-DEC 2018			
		12/17/2018	RC-L114185	JANITORIAL SVCS-RAINBOW RIDGE PORTABLE-DEC 2018			
		12/17/2018	RC-L114176	JANITORIAL SVCS-ANNEX-DEC 2018			
		12/17/2018	RC-L114192	JANITORIAL SVCS-COTTONWOOD GOLF CTR-DEC 2018			
		12/17/2018	RC-L114183	JANITORIAL SVCS-MARCH FIELD COMM. CTR-DEC 2018			
		12/17/2018	RC-L114181	JANITORIAL SVCS-EMPLOYMENT RESOURCE CTR-DEC 2018			
		12/17/2018	RC-L114175	JANITORIAL SVCS-ANIMAL SHELTER-DEC 2018			
		12/17/2018	RC-L114178/4194	JANITORIAL SVCS-CITY YARD-DEC 2018			
		23959	12/26/2018	RC-L114202		JANITORIAL SVCS-IRIS PD SUBSTATION-DEC 2018	\$1,488.79
			12/26/2018	L45313		SPECIAL CLEANINGS FOR 1/7/18-CONF & REC CTR	
12/26/2018	RC-L114201		JANITORIAL SVCS-PERRIS PD SUBSTATION-DEC 2018				
12/26/2018	L45492		SPECIAL CLEANINGS FOR MAR 2018-SENIOR CTR				
Remit to: SOUTH PASADENA, CA					<u>FYTD:</u> \$92,152.30		
DRAYTON, TAMI JANOHNE	23960	12/26/2018	DEC-2018	INSTRUCTOR SERVICES-SOUL LINE DANCING CLASS	\$32.40		
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$226.80		

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DULANEY, BARBARA	235623	12/10/2018	R18-129407	ANIMAL SERVICES REFUND-TRAP RENTAL DEPOSIT	\$50.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$50.00
DYOGI, DAMIANITA	235624	12/10/2018	R18-128804	ANIMAL SERVICES REFUND-SPAY/NEUTER AND RABIES DEPOSITS	\$95.00
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$95.00
E.R. BLOCK PLUMBING & HEATING, INC.	23822	12/03/2018	127763	BACKFLOW DEVICE TEST-ZONE D	\$1,563.41
		12/03/2018	127765	BACKFLOW DEVICE TEST-ZONES D, E-7, S, 01, 06, NPDES & M	
	23920	12/17/2018	127849	BACKFLOW DEVICE TEST-ZONES D & 02	\$200.00
		12/17/2018	127850	BACKFLOW DEVICE TEST-FIRE STATION 2	
		12/17/2018	127851	BACKFLOW DEVICE TEST-CONF & REC. CENTER	
		12/17/2018	127852	BACKFLOW DEVICE TEST-CITY YARD & SANTIAGO OFFICE	
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$30,560.14
EASTERN MUNICIPAL WATER DISTRICT	235597	12/10/2018	NOV-18 11/29/18	WATER CHARGES	\$1,093.30
	235654	12/17/2018	NOV-18 12/13/18	WATER CHARGES	\$1,103.79
	235737	12/26/2018	DEC-18 12/20/18	WATER CHARGES	\$4,091.84
	235779	12/31/2018	NOV-18 12/28/18	WATER CHARGES	\$9,854.49
	235780	12/31/2018	DEC-18 12/28/18	WATER CHARGES	\$14,383.10
Remit to: PERRIS, CA					<u>FYTD:</u> \$1,456,763.26
ECORP CONSULTING, INC.	23870	12/10/2018	85593	STORM DRAIN LINE H-2 (DISCOVERY CHURCH), CONSULTANT SERVICES	\$1,890.00
Remit to: ROCKLIN, CA					<u>FYTD:</u> \$12,436.21
EDERAINE, PATIENCE	235707	12/17/2018	2000621.047	COTTONWOOD GOLF CTR. RENTAL REFUND	\$200.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$200.00

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EMPIRE MOWER	235655	12/17/2018	189843	TREE TRIMMING EQUIPMENT PARTS	\$866.74
		12/17/2018	189842	TREE TRIMMING EQUIPMENT PARTS	
		12/17/2018	189790	TREE TRIMMING EQUIPMENT PARTS	
		12/17/2018	189506	TREE TRIMMING EQUIPMENT PARTS	
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$2,486.24
ENCO UTILITY SERVICES MORENO VALLEY LLC	23871	12/10/2018	0402-MF-02218	SOLAR SYSTEM INSPECTION	\$470.00
		12/10/2018	0402-MF-02219	SOLAR SYSTEM INSPECTION	
	24007	12/31/2018	0402-MF-02229	SOLAR SYSTEM INSPECTION	\$17,844.00
		12/31/2018	0402-MF-02228	SOLAR SYSTEM INSPECTION	
		12/31/2018	0405-MTS1-SP156	METER FEES-REGULAR	
Remit to: ANAHEIM, CA					<u>FYTD:</u> \$3,022,465.39
ENCORE PROPERTY MANAGEMENT	235757	12/26/2018	2000630.047	CONFERENCE & REC. CTR. RENTAL REFUND	\$100.00
Remit to: CORONA, CA					<u>FYTD:</u> \$100.00
ENGAGED PUBLIC	23962	12/26/2018	18-6483	SUBSCRIPTION TO BALANCE ACT WEBSITE (11/8/18 TO 11/7/19)	\$4,776.00
Remit to: DENVER, CO					<u>FYTD:</u> \$4,776.00
ESI ACQUISITION, INC.	23872	12/10/2018	INVESi1455	WEBEOC SERVICE CREDITS 12/1/18-11/30/19	\$6,250.00
Remit to: ATLANTA, GA					<u>FYTD:</u> \$6,250.00
EVANS ENGRAVING & AWARDS	23824	12/03/2018	11718-15	PLAQUE FOR IAN MCPHERSON	\$37.71
	23922	12/17/2018	111918-14	NAMEPLATE-P. NEVINS	\$19.40
Remit to: BANNING, CA					<u>FYTD:</u> \$399.00

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EYERMAN, MARSHALL	235562	12/03/2018	12/12 - 12/13/18	TRAVEL PER DIEM-2018 MUNICIPAL FINANCE INSTITUTE	\$114.00
	235788	12/31/2018	1/9 - 1/11/19	TRAVEL PER DIEM & MILEAGE-CSMFO ANNUAL CONFERENCE	\$165.00
Remit to: CORONADO, CA					<u>FYTD:</u> \$469.00
FAHIE, JERRY	235656	12/17/2018	111818	SPORTS OFFICIATING SERVICES-SOFTBALL	\$252.00
		12/17/2018	102118	SPORTS OFFICIATING SERVICES-SOFTBALL	
		12/17/2018	120218	SPORTS OFFICIATING SERVICES-SOFTBALL	
		12/17/2018	111118	SPORTS OFFICIATING SERVICES-SOFTBALL	
		12/17/2018	102818	SPORTS OFFICIATING SERVICES-SOFTBALL	
		12/17/2018	110418	SPORTS OFFICIATING SERVICES-SOFTBALL	
	235738	12/26/2018	121618	SPORTS OFFICIATING SERVICES-SOFTBALL	\$42.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$294.00
FARO TECHNOLOGIES	235598	12/10/2018	90491674	FOCUS ONSITE TRAINING	\$7,880.00
Remit to: LAKE MARY, FL					<u>FYTD:</u> \$7,880.00
FEHR & PEERS	23963	12/26/2018	126485	SSARP CITYWIDE PED SAFETY STUDY, CONSULTANT SERVICES	\$4,655.16
Remit to: WALNUT CREEK, CA					<u>FYTD:</u> \$52,976.75
FERNANDEZ, FRIDA	235574	12/03/2018	2000601.047	REFUND-BEGINNING YOUTH TENNIS CLASS	\$144.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$144.00
FIRST AMERICAN DATA TREE, LLC	235599	12/10/2018	20027761118	ONLINE SOFTWARE SUBSCRIPTION-NOV 2018	\$99.00
Remit to: PASADENA, CA					<u>FYTD:</u> \$594.00
FIX, BRIAN	235625	12/10/2018	R18-125570	ANIMAL SERVICES REFUND-SERVICE DOG LICENSE	\$34.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$34.00

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FLORES, CLEMENTINA	235626	12/10/2018	R18-127245	ANIMAL SERVICES REFUND-ADJUSTMENT TO LICENSE FEES	\$37.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$37.00
FLORES-ALVAREZ, MAGDALENA	235708	12/17/2018	C16182	REFUND-ADMIN CITATION-VIOLATION DISMISSED	\$1,000.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$1,000.00
FORM PRINT COMPANY FPC GRAPHICS	235781	12/31/2018	93060	ANIMAL SHELTER FORMS (6,875)	\$1,240.36
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$2,958.86
FRANCE PUBLICATIONS, INC.	23964	12/26/2018 12/26/2018	IR94160 IR94161	BOOTH SPONSOR-FEB 2019 HOST SPONSORSHIP-JAN 2019	\$7,200.00
Remit to: ATLANTA, GA					<u>FYTD:</u> \$13,000.00
FRANCO, KRISTEN	235627	12/10/2018	R18-129638	ANIMAL SERVICES REFUND-TRAP RENTAL DEPOSIT	\$50.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$50.00
FRANKLIN, L. C.	23923	12/17/2018	NOV-2018	MILEAGE REIMBURSEMENT	\$191.30
Remit to: PERRIS, CA					<u>FYTD:</u> \$910.71
FRED'S GLASS & MIRROR, INC.	235657	12/17/2018	13803	WINDOW BOARD UP-WINDEMERE WAY	\$195.00
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$2,938.71
FRONTIER COMMUNICATIONS/FORMERLY VERIZON	23965	12/26/2018	7002Z183-S-18339	BACKBONE COMMUNICATIONS SERVICE 12/5/18-01/4/19	\$2,164.78
Remit to: ROCHESTER, NY					<u>FYTD:</u> \$12,836.93

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FRONTIER COMMUNICATIONS/FORMERLY VERIZON CALIF.	235658	12/17/2018	082109-5/DEC18	PHONE SVC FOR ERC 12/04-1/3/19	\$614.29
	235739	12/26/2018	081095-5/DEC18	FOREIGN EXCHANGE BUS LISTING-MV UTILITY	\$2.04
Remit to: CINCINNATI, OH					<u>FYTD:</u> \$4,349.55
G/M BUSINESS INTERIORS, INC.	23825	12/03/2018	0246737-IN	TASK CHAIR-CITY HALL	\$770.25
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$11,065.52
GALLS INC., INLAND UNIFORM	23826	12/03/2018	010891848	ANIMAL CONTROL OFFICER UNIFORMS	\$517.16
		12/03/2018	010831009	ANIMAL CONTROL OFFICER UNIFORMS	
		12/03/2018	011085761	ANIMAL CONTROL OFFICER UNIFORMS	
Remit to: CHICAGO, IL					<u>FYTD:</u> \$65,381.41
GARCIA , JOSE	235709	12/17/2018	R18-128829	ANIMAL SERVICES REFUND-SPAY/NEUTER DEPOSIT	\$75.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$75.00
GARCIA, CHANTEL	23966	12/26/2018	DEC-2018	INSTRUCTOR SERVICES-ART EXPRESSION CLASS	\$189.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$1,128.60
GFOA-GOVERNMENT FINANCE OFFICERS ASSOC.	235618	12/10/2018	FY 17/18 CAFR	CAFR AWARD APPLICATION-JUNE 30,2018	\$580.00
	235619	12/10/2018	FY 17/18 PAFR	PAFR AWARD APPLICATION-JUNE 30, 2018	\$225.00
Remit to: CHICAGO, IL					<u>FYTD:</u> \$805.00
GOURDINE, SHIRLEY	235575	12/03/2018	R18-127823	ANIMAL SERVICES REFUND-SPAY/NEUTER DEPOSIT	\$75.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$75.00

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GOVERNMENTJOBS.COM, INC. / NEOGOV	23874	12/10/2018	INV26111	INSIGHT ENTERPRISE SOFTWARE LICENSE RENEWAL 12/21/18- 12/20/19	\$6,825.00
Remit to: EL SEGUNDO, CA					<u>FYTD:</u> \$8,325.00
GREENROCK MATERIALS, LLC	235551	12/03/2018	4110	ASPHALT DUMP FEES	\$206.00
Remit to: PERRIS, CA					<u>FYTD:</u> \$927.00
GRESHAM, VICTORIA M	235758	12/26/2018	12-14-2018	REISSUE UNCLAIMED PAYROLL CHECK -257768	\$40.84
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$40.84
GUTIERREZ, YXSTIAN	235563	12/03/2018	12/5 - 12/8/18	TRAVEL PER DIEM-CITIES FOR TOMORROW CONFERENCE	\$221.88
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$1,135.84
HADDAD, HIKMAT	235710	12/17/2018	C16186	REFUND-ADMIN CITATION-VIOLATION DISMISSED	\$200.00
	235711	12/17/2018	C16190	REFUND-ADMIN CITATION-VIOLATION DISMISSED	\$400.00
Remit to: TEMECULA, CA					<u>FYTD:</u> \$600.00
HAJIRNIA, AMIR	235712	12/17/2018	C16665	REFUND-ADMIN CITATION-VIOLATION DISMISSED	\$100.00
Remit to: DIAMOND BAR, CA					<u>FYTD:</u> \$100.00
HAMLIN, JOSEPH	235576	12/03/2018	R18-128599	ANIMAL SERVICES REFUND-SPAY/NEUTER DEPOSIT	\$75.00
Remit to: OCEANSIDE, CA					<u>FYTD:</u> \$75.00



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HASCO HEATING AIR CONDITIONING SERVICE COMPANY	23875	12/10/2018	89297	HVAC REPAIR-LIBRARY	\$2,447.45
	23924	12/17/2018	88677	HVAC REPAIR-RECREATION CTR	\$2,308.20
		12/17/2018	88061	HVAC REPAIR-MVU	
		12/17/2018	87820	HVAC REPAIR-MVU	
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$24,023.14
HDL COREN & CONE	235659	12/17/2018	0025973-INA	CONTRACT SVCS-PROPERTY TAX SOFTWARE MAINT (OCT-DEC 2018)	\$5,362.50
Remit to: BREAA, CA					<u>FYTD:</u> \$11,370.00
HDL SOFTWARE LLC	235740	12/26/2018	0013529-IN	BUSINESS LICENSE SOFTWARE QUARTERLY HOST CHARGES 1/1-3/31/19	\$495.00
Remit to: BREAA, CA					<u>FYTD:</u> \$16,353.40
HEALD, DENA	24029	12/31/2018	1/8 - 1/11/19	TRAVEL PER DIEM-CSMFO ANNUAL CONFERENCE	\$231.00
Remit to: CORONA, CA					<u>FYTD:</u> \$1,064.16
HERC RENTALS INC/ HERTZ EQUIPMENT RENTAL	23925	12/17/2018	30426778-001	HEAVY EQUIPMENT RENTAL-STORM PREP	\$1,020.40
		12/17/2018	79076339-001	REPLACE FUEL CAP EXCAVATOR	
	23968	12/26/2018	30363064-001	HEAVY EQUIPMENT RENTAL-STORM PREP	\$756.15
Remit to: DALLAS, TX					<u>FYTD:</u> \$2,121.35
HERNANDEZ, ADRIAN	235660	12/17/2018	MAPPED 2018	MAYOR'S APPRENTICESHIP PROGRAM PROMOTING EMPLOYMENT DEVELOPMENT	\$409.12
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$409.12

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HINDERLITER DE LLAMAS & ASSOCIATES	235661	12/17/2018	0030289-IN	SALES TAX AUDIT SVCS-SALES QTR 2 2018	\$5,139.74
	235782	12/31/2018	0029910-IN	CANNABIS CONSULTING SERVICES RE: COMPLIANCE	\$1,800.00
Remit to: BREA, CA					<u>FYTD:</u> \$151,695.42
HLP, INC.	23827	12/03/2018	15497	WEB LICENSE MONTHLY SVC FEE	\$48.65
	23969	12/26/2018	15633	WEB LICENSE MONTHLY SVC FEE	\$49.70
Remit to: LITTLETON, CO					<u>FYTD:</u> \$32,159.40
HOMESTEAD ESCROW, INC.	235629	12/10/2018	HAZARD ABATE RFD	REFUND-HAZARD ABATEMENT 1ST INSTALLMENT	\$683.25
Remit to: IRVINE, CA					<u>FYTD:</u> \$683.25
HOWARD, PATRICIA	235759	12/26/2018	R18-128359	ANIMAL SERVICES REFUND-SPAY/NEUTER DEPOSIT	\$75.00
Remit to: PERRIS, CA					<u>FYTD:</u> \$75.00
HR GREEN PACIFIC INC.	23876	12/10/2018	122622	PLAN CHECK SVCS- ENCROACHMENT PERMITS	\$4,125.00
	23926	12/17/2018	122325	PLAN CHECK SVCS-SEPT 2018	\$5,593.75
Remit to: DES MOINES, IA					<u>FYTD:</u> \$64,227.56
HUGHES, STEPHANIE	235577	12/03/2018	R18-128295	ANIMAL SERVICES REFUND-SPAY/NEUTER DEPOSITS FOR 2 KITTENS	\$150.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$150.00
ICE ENERGY HOLDINGS	23877	12/10/2018	INV486	ICEBEAR 20 THERMAL ENERGY STORAGE UNIT	\$15,392.75
Remit to: SANTA BARBARA, CA					<u>FYTD:</u> \$16,014.56
INLAND EMPIRE BIKING ALLIANCE	235662	12/17/2018	1098	RIDE MOVAL 10-28-18 BIKE EVENT-PLANNING /COORDINATION	\$1,106.20
Remit to: REDLANDS, CA					<u>FYTD:</u> \$1,106.20

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INLAND EMPIRE PROPERTY SERVICE, INC	23828	12/03/2018	180189	WEED ABATEMENT-MARCH FIELD	\$2,660.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$76,623.48
INSIDE PLANTS, INC.	23829	12/03/2018	72664	INSIDE PLANT MAINT SVC-DEC 2018	\$130.00
Remit to: CORONA, CA					<u>FYTD:</u> \$780.00
INTERWEST CONSULTING GROUP	23878	12/10/2018	44807	CONSTRUCTION INSPECTION SVCS-OCT 2018	\$10,152.00
Remit to: BOULDER, CO					<u>FYTD:</u> \$83,160.00
IRIBE, MELITON	235713	12/17/2018	R18-128908	ANIMAL SERVICES REFUND-SPAY/NEUTER AND RABIES DEPOSITS	\$95.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$95.00
ITE - INSTITUTE OF TRANSPORTATION ENGINEERS	235663	12/17/2018	2019 RENEWAL	PUBLIC AGENCY MEMBERSHIP DUES	\$1,675.00
Remit to: BALTIMORE, MD					<u>FYTD:</u> \$1,675.00
ITECH SOLUTION	235783	12/31/2018	621_2	CISCO IE3000 FIELD-HARDENED SWITCHED & EQUIPMENT, MISC SERVICES	\$4,730.00
Remit to: SAN JOSE, CA					<u>FYTD:</u> \$112,750.00
JACQUEZ-NARES, PAT	235620	12/10/2018	12/12 - 12/14/18	TRAVEL PER DIEM-CITY CLERKS NEW LAW & ELECTIONS SEMINAR	\$190.00
Remit to: ANAHEIM, CA					<u>FYTD:</u> \$4,190.00
JIMENEZ, CLEMENT	235564	12/03/2018	12/10 - 12/11/18	TRAVEL PER DIEM, MILEAGE & TRANSP. COST-EUCI ELECTRIC VEH. CONF.	\$109.18
Remit to: HEMET, CA					<u>FYTD:</u> \$109.18

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JOE A. GONSALVES & SON	23830	12/03/2018	157034	STATE LOBBYIST-DECEMBER 2018	\$3,045.00
	24008	12/31/2018	157104	STATE LOBBYIST-JANUARY 2019	\$3,000.00
Remit to: SACRAMENTO, CA					<u>FYTD:</u> \$21,090.00
JOHNSON , TRACY	23970	12/26/2018	DEC-2018	INSTRUCTOR SERVICES - SHITO-RYU KARATE CLASSES	\$256.10
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$1,949.90
JONES, DIAMOND	235664	12/17/2018	MAPPED 2018	MAYOR'S APPRENTICESHIP PROGRAM PROMOTING EMPLOYMENT DEVELOPMENT	\$369.36
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$369.36
JTB SUPPLY CO., INC.	23971	12/26/2018	105150	TRAFFIC SIGNAL MAINT SUPPLIES	\$751.15
Remit to: ORANGE, CA					<u>FYTD:</u> \$30,110.46
KCS WEST, INC.	235578	12/03/2018	REFUND-11/9/18	REFUND-GRADING DEPOSIT FOR PROJECT PA16-0075-BRODIAEA IND CTR	\$11,080.00
Remit to: LOS ANGELES, CA					<u>FYTD:</u> \$11,080.00
KENT, JACOB	235760	12/26/2018	R18-127448	ANIMAL SERVICES REFUND-SPAY/NEUTER AND RABIES DEPOSITS	\$95.00
Remit to: ALTA LOMA, CA					<u>FYTD:</u> \$95.00
KEYSER MARSTON ASSOCIATES, INC.	23927	12/17/2018	0032918	HOME LAYERING ANALYSIS PROGRAM-DAY/ALESSANDRO	\$1,437.50
Remit to: SAN RAFAEL, CA					<u>FYTD:</u> \$1,437.50
KOA CORPORATION	235553	12/03/2018	JB8314x1	JUAN BAUTISTA DE ANZA TRAIL ATP 3, CONSULTANT SERVICES	\$5,840.80
	235600	12/10/2018	JB44056x8	AQUEDUCT MULTI-USE TRAIL (TOWNGATE TO LAKE PERRIS), CONSULTANT	\$6,578.71
Remit to: MONTEREY PARK, CA					<u>FYTD:</u> \$24,978.40



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LAGUNAS, GUADALUPE	235579	12/03/2018	R18-127451	ANIMAL SERVICES REFUND-SPAY/NEUTER AND RABIES DEPOSITS	\$95.00
Remit to: PERRIS, CA					<b>FYTD:</b> \$95.00
LANDCARE USA, LLC	23880	12/10/2018	187124	LANDSCAPE MAINT-ZONES 01, 01A, 8 & E7	\$11,974.56
	24009	12/31/2018	173669	LANDSCAPE MAINT-CFD #1-SEPT 2018	\$12,623.96
		12/31/2018	173647	LANDSCAPE MAINT-ZONE A-SEPT 2018	
		12/31/2018	188257	LANDSCAPE MAINT-ZONES 01, 01A, 08 & E-7-NOV 2018	
Remit to: RIVERSIDE, CA					<b>FYTD:</b> \$153,540.50
LATESTTE, JACKIE	235630	12/10/2018	R18-129175	ANIMAL SERVICES REFUND-SPAY/NEUTER DEPOSIT	\$75.00
Remit to: WESTMINSTER, CA					<b>FYTD:</b> \$75.00
LATITUDE GEOGRAPHICS	235554	12/03/2018	INV0010006	HOSTING ARCGIS SERVER 7/1/18-6/30/19	\$8,340.00
	235665	12/17/2018	INV0009814	GEOCORTEX TECHNICAL SUPPORT HOURS 8/14-9/30/18	\$703.80
Remit to: VICTORIA, BC					<b>FYTD:</b> \$22,732.90
LEE-MCDUFFIE, PRECIOUS	23928	12/17/2018	DEC-2018	INSTRUCTOR SERVICES-ACTING & SPEECH CLASSES FOR KIDS/LITTLE ONES	\$522.00
Remit to: MORENO VALLEY, CA					<b>FYTD:</b> \$3,317.49
LEGASSE, GEORGE	235714	12/17/2018	R18-128906	ANIMAL SERVICES REFUND-SPAY/NEUTER AND RABIES DEPOSITS	\$95.00
Remit to: MORENO VALLEY, CA					<b>FYTD:</b> \$95.00
LEIVAS, INC. DBA. LEIVAS LIGHTING	23831	12/03/2018	238144	LANDSCAPE LIGHTING MAINTENANCE-NOV 2018	\$571.33
Remit to: RIVERSIDE, CA					<b>FYTD:</b> \$12,200.29

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LEVEL 3 COMMUNICATIONS/FORMERLY TW TELCOM	23832	12/03/2018	75271958a	INTERNET & DATA SVCS 11/17-12/16/18	\$5,014.49
		12/03/2018	75271958	TELEPHONE SVCS-LOCAL/LONG DISTANCE CALLS 11/17-12/16/18	
	24010	12/31/2018	76189862a	INTERNET & DATA SVCS 12/17/18-01/16/19	\$4,943.76
		12/31/2018	76189862	TELEPHONE SVCS-LOCAL/LONG DISTANCE CALLS 12/17/18-01/16/19	
Remit to: BROOMFIELD, CO					<b>FYTD: \$35,197.17</b>
LIEBERT, CASSIDY, WHITMORE	235601	12/10/2018	1468768	LEGAL SERVICES-MO140-00017	\$5,550.00
	235741	12/26/2018	1/10/18 TRAINING	TRAINING FOR 3 ATTENDEES	\$105.00
Remit to: LOS ANGELES, CA					<b>FYTD: \$35,489.17</b>
LILLY, ANA	23833	12/03/2018	00036	GRAPHIC/WEB DESIGN SVCS 11/4-11/17/18	\$1,196.37
	23972	12/26/2018	00037	GRAPHIC/WEB DESIGN 11/18-12/01/18	\$1,130.06
	24011	12/31/2018	00038	GRAPHIC/WEB DESIGN 12/02-12/15/18	\$1,178.89
Remit to: RIVERSIDE, CA					<b>FYTD: \$15,560.75</b>
LOPEZ, JESSE	235715	12/17/2018	MVA030007746	REFUND- PARKING CONTROL FEES OVERPAYMENT	\$115.00
Remit to: FONTANA, CA					<b>FYTD: \$115.00</b>
LOPEZ, YVONNE	235580	12/03/2018	R18-128678	ANIMAL SERVICES REFUND-LICENSE TYPE CHANGE	\$25.00
Remit to: MORENO VALLEY, CA					<b>FYTD: \$25.00</b>

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LSA ASSOCIATES, INC.	235742	12/26/2018	162069	SUNNMEAD MDP LINE M-11 EXTENSION, CONSULTANT SERVICES	\$16,232.43	
		12/26/2018	162935	SUNNYMEAD MDP LINE M-11 EXTENSION, CONSULTANT SERVICES		
		12/26/2018	162491	SUNNYMEAD MDP LINE M-11 EXTENSION, CONSULTANT SERVICES		
Remit to: IRVINE, CA					<u>FYTD:</u> \$18,524.93	
LYONS SECURITY SERVICE, INC	23883	12/10/2018	25353	SECURITY GUARD SVCS-COTTONWOOD GOLF CTR SPECIAL EVENTS-NOV 2018	\$7,261.87	
		12/10/2018	25351	SECURITY GUARD SVCS-CONF & REC CTR SPECIAL EVENTS-NOV 2018		
		12/10/2018	25362	SECURITY GUARD SVCS-LIBRARY-NOV 2018		
		12/10/2018	25356	SECURITY GUARD SVCS-CITY HALL-NOV 2018		
		12/10/2018	25360	SECURITY GUARD SVCS-TOWNGATE COMM CTR-NOV 2018		
		12/17/2018	25292	SECURITY GUARD SVCS-MV UTILITY-OCT 2018		\$274.82
		12/17/2018	25355	SECURITY GUARD SVCS-CITY YARD-NOV 2018		
Remit to: ANAHEIM, CA					<u>FYTD:</u> \$95,109.56	
MALCOLM SMITH MOTORCYCLES, INC.	23930	12/17/2018	5142838	MAINT./REPAIRS-PD TRAFFIC MOTORCYCLE	\$1,576.81	
		12/26/2018	5138330	MAINT./REPAIRS-PD TRAFFIC MOTORCYCLE		
		12/26/2018	5137542	MAINT./REPAIRS-PD TRAFFIC MOTORCYCLE		
		12/26/2018	5143059	MAINT./REPAIRS-PD TRAFFIC MOTORCYCLE		
		12/26/2018	5138317	MAINT./REPAIRS-PD TRAFFIC MOTORCYCLE		
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$13,994.53	
MANAGO, LOURDES	235631	12/10/2018	2000609.047	TOWNGATE COMM. CTR. RENTAL REFUND	\$200.00	
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$200.00	

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MANDELL MUNICIPAL COUNSELING	235666	12/17/2018	NOV 2018	LEGAL SERVICES-CSD TRANSITIONS PROJECT	\$225.00
Remit to: LOS ANGELES, CA					<u>FYTD:</u> \$1,300.00
MARIPOSA LANDSCAPES, INC.	23834	12/03/2018	82612	INSTALLATION OF GROUND COVER & MULCH AT CITY HALL	\$1,008.00
	23884	12/10/2018	82762	LANDSCAPE MAINT.-SD LMD ZONE 02-NOV 2018	\$9,428.00
	23974	12/26/2018	82777	LANDSCAPE MAINT.-ELECTRIC SUBSTATION MORENO BEACH-NOV18	\$1,336.00
		12/26/2018	82461	LANDSCAPE MAINT.-UTILITY FIELD OFFICE-OCT18	
		12/26/2018	82467	LANDSCAPE MAINT.-KITCHING ELECTRIC SUBSTATION-OCT18	
		12/26/2018	82457	LANDSCAPE MAINT.-ELECTRIC SUBSTATION MORENO BEACH-OCT18	
		12/26/2018	82781	LANDSCAPE MAINT.-UTILITY FIELD OFFICE-NOV18	
		12/26/2018	82787	LANDSCAPE MAINT.-KITCHING ELECTRIC SUBSTATION-NOV18	
	24012	12/31/2018	82906	LANDSCAPE EXTRA WORK-NOV18-SD LMD ZN 02/IRRIGATION WORK	\$695.39
		12/31/2018	82881	LANDSCAPE EXTRA WORK-NOV18-SD LMD ZN 02/REPAIR BROKEN SPRINKLERS	
Remit to: IRWINDALE, CA					<u>FYTD:</u> \$207,646.09
MARQUEZ, DAVID	23835	12/03/2018	12/5 - 12/6/18	TRAVEL PER DIEM-BUILDING HIGH-PERFORMANCE GOVT. LEADERSHIP FORUM	\$74.25
	24013	12/31/2018	1/6 - 1/9/19	TRAVEL PER DIEM-2019 SACRAMENTO LEGISLATIVE TOUR	\$206.25
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$392.96
MARSHALL, DAVID	235716	12/17/2018	MV102204	REFUND- PARKING CONTROL VIOLATION DISMISSED	\$41.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$41.00

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MARTINEZ, RICHARD	235761	12/26/2018	R18-128669	ANIMAL SERVICES REFUND-SPAY/NEUTER AND RABIES DEPOSITS	\$95.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$95.00
MARTINEZ, VERONICA	235581	12/03/2018	R18-129109	ANIMAL SERVICES REFUND-SPAY/NEUTER DEPOSIT	\$75.00
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$75.00
MCCAIN TRAFFIC SUPPLY	235555	12/03/2018	INV0235415	TRAFFIC SIGNAL EQUIPMENT	\$2,069.45
	235743	12/26/2018	INV0235994	TRAFFIC SIGNAL EQUIPMENT	\$714.39
		12/26/2018	INV0235995	TRAFFIC SIGNAL EQUIPMENT	
Remit to: VISTA, CA					<u>FYTD:</u> \$37,997.65
MCCANN, BRYAN	235582	12/03/2018	R18-129574	ANIMAL SERVICES REFUND-SPAY/NEUTER DEPOSIT	\$75.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$75.00
MCKINNEY, BROOKE	24030	12/31/2018	1/8 - 1/11/19	TRAVEL PER DIEM-CSMFO ANNUAL CONFERENCE	\$231.00
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$231.00
MELENDREZ-MORALES JR., SALVADOR	235667	12/17/2018	MAPPED 2018	MAYOR'S APPRENTICESHIP PROGRAM PROMOTING EMPLOYMENT DEVELOPMENT	\$500.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$500.00
MENDOZA, MARIA	235632	12/10/2018	2000608.047	TOWNGATE COMM. CTR. RENTAL REFUND	\$200.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$200.00
MENENDEZ, MIGUEL	235583	12/03/2018	R18-129221	ANIMAL SERVICES REFUND-RABIES DEPOSIT	\$20.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$20.00
MENGISTU, YESHIALEM	23931	12/17/2018	NOV-2018	MILEAGE REIMBURSEMENT	\$173.31
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$687.80

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MERCHANTS LANDSCAPE SERVICES INC	23836	12/03/2018	53079	LANDSCAPE EXTRA WORK-OCT18-SD LMD ZONE 04/INSTALL SYCAMORE TREE	\$1,675.00
		12/03/2018	53077	LANDSCAPE EXTRA WORK-OCT18-SD LMD ZONE 03/DAMAGED BOLLARDS WORK	
		12/03/2018	53078	LANDSCAPE EXTRA WORK-OCT18-SD LMD ZONE 04/REMOVE TREE STUMP	
	23885	12/10/2018	53003	IRRIGATION REPAIRS-SD LMD ZONE 03-OCT 2018	\$17,558.22
		12/10/2018	53006	IRRIGATION REPAIRS-SD LMD ZONE 03A-OCT 2018	
	12/10/2018	53004	IRRIGATION REPAIRS-SD LMD ZONE 04-OCT 2018		
	23932	12/17/2018	52689	LANDSCAPE EXTRA WORK-AUG18-SD LMD ZONE 03/REMOVE TREE STUMP	\$390.00
Remit to: MONTEREY PARK, CA					<u>FYTD:</u> \$315,063.15
MESA FENCE CO, INC.	235668	12/17/2018	6541	BARB-WIRE REPLACEMENT AT CITY YARD EMPLOYEE ENTRANCE GATE	\$400.00
Remit to: PERRIS, CA					<u>FYTD:</u> \$400.00
MFI RECOVERY CENTER	235717	12/17/2018	2000612.047	REFUND - CONFERENCE & REC CTR - RENTAL REFUND	\$347.00
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$347.00
MILLER SPATIAL SERVICES, LLC	235556	12/03/2018	1542	GIS SERVER UPGRADE SERVICES	\$3,420.00
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$3,420.00
MMVR HOMEOWNERS ASSOCIATION	235762	12/26/2018	2000629.047	CONFERENCE & REC. CTR. RENTAL REFUND	\$100.00
Remit to: RANCHO CUCAMONGA, CA					<u>FYTD:</u> \$100.00

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MOEMAI, GAVIN	235669	12/17/2018	MAPPED 2018	MAYOR'S APPRENTICESHIP PROGRAM PROMOTING EMPLOYMENT DEVELOPMENT	\$494.32
Remit to: MENIFEE, CA					<u>FYTD:</u> \$494.32
MOHAN, BRIAN	235789	12/31/2018	1/9 - 1/11/19	TRAVEL PER DIEM-CSMFO ANNUAL CONFERENCE	\$165.00
Remit to: REDLANDS, CA					<u>FYTD:</u> \$355.00
MONTGOMERY PLUMBING INC	235557	12/03/2018	110418	INSTALLATION OF WATER SUPPLY/AIR DRYERS IN PSB EVIDENCE AREA	\$3,400.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$25,566.40
MORENO VALLEY CHAMBER OF COMMERCE	235670	12/17/2018	6375	WAKE-UP MV MEETING ATTENDANCE-9/26/18 & 10/24/18	\$520.00
		12/17/2018	6413	WAKE-UP MV MEETING ATTENDANCE-11/28/18	
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$2,130.00
MORENO VALLEY COMMUNITY BAND	235671	12/17/2018	071518 INV	SPONSORSHIP FOR FY 18-19 TO PERFORM FOUR FREE COMMUNITY CONCERTS	\$5,000.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$5,350.00
MORENO VALLEY MALL HOLDING, LLC	24015	12/31/2018	JAN. 2019 RENT	JANUARY 2019 RENT PAYMENT FOR SP. 2078-M.V. MALL LIBRARY BRANCH	\$6,874.54
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$41,247.24
MORENO VALLEY UNIFIED SCHOOL DISTRICT	235602	12/10/2018	FOR JULY 2018	OVERPAYMENT FROM MVUSD	\$64.00
	235672	12/17/2018	INV18-00470	BUS TRANSPORTATION CHARGES-JUN 2018/KIDS CAMP	\$6,465.00
		12/17/2018	INV19-00036	BUS TRANSPORTATION CHARGES-JUL 2018/KIDS CAMP	
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$16,366.00

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MULLEN, TROY	235673	12/17/2018	120218	SPORTS OFFICIATING SERVICES-SOFTBALL	\$42.00
	235744	12/26/2018	121618	SPORTS OFFICIATING SERVICES-SOFTBALL	\$42.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$252.00
MUNOZ, MARGARITA	235718	12/17/2018	MVA020020374	REFUND- PARKING CONTROL FEES OVERPAYMENT	\$57.50
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$57.50
NAMEKATA, DOUGLAS	24016	12/31/2018	DEC-2018	INSTRUCTOR SERVICES - SHITO-RYU KARATE CLASSES	\$256.10
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$1,949.90
NAMEKATA, JAMES	24017	12/31/2018	DEC-2018	INSTRUCTOR SERVICES - SHITO-RYU KARATE CLASSES	\$256.10
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$1,949.90
NATURES IMAGE, INC.	23886	12/10/2018	18-04-518	WATER QUALITY BASIN LANDSCAPE/IRRIGATION MAINT.-NOV. 2018	\$7,332.00
Remit to: LAKE FOREST, CA					<u>FYTD:</u> \$36,660.00
NAVA, ALONDRA	235674	12/17/2018	MAPPED 2018	MAYOR'S APPRENTICESHIP PROGRAM PROMOTING EMPLOYMENT DEVELOPMENT	\$500.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$500.00
NAVIA-SANCHEZ, ALEX JULIAN	235675	12/17/2018	MAPPED 2018	MAYOR'S APPRENTICESHIP PROGRAM PROMOTING EMPLOYMENT DEVELOPMENT	\$500.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$500.00
NBS GOVERNMENT FINANCE GROUP	23837	12/03/2018	1018000060	CONSULTANT SERVICES-COST ALLOCATION PLAN UPDATE	\$1,760.00
Remit to: TEMECULA, CA					<u>FYTD:</u> \$5,110.00



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NEW HORIZON MOBILE HOME PARK	23838	12/03/2018	OCT-NOV 2018	UUT REFUND	\$6.53
Remit to: LOS ANGELES, CA					<u>FYTD:</u> \$37.94
NICHOLS CONSULTING ENGINEERS, CHTD (NCE)	23839	12/03/2018	318023013	PAVEMENT MANAGEMENT SYSTEM, CONSULTANT SERVICES	\$904.00
Remit to: RENO, NV					<u>FYTD:</u> \$15,300.22
NIEVES, JONATHAN	235676	12/17/2018	MAPPED 2018	MAYOR'S APPRENTICESHIP PROGRAM PROMOTING EMPLOYMENT DEVELOPMENT	\$500.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$500.00
O'REILLY AUTOMOTIVE STORES, INC.	235719	12/17/2018	MVU 7014157-01	COMMERCIAL LED LIGHTING REBATE	\$2,126.74
Remit to: SPRINGFIELD, MO					<u>FYTD:</u> \$2,126.74
OROZCO, CARLOS	235677	12/17/2018	MAPPED 2018	MAYOR'S APPRENTICESHIP PROGRAM PROMOTING EMPLOYMENT DEVELOPMENT	\$500.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$500.00
OVERLAND PACIFIC & CUTLER,	23840	12/03/2018	1810156	RIGHT OF WAY CONSULTING SERVICES	\$1,233.75
	23976	12/26/2018	1811060	RIGHT OF WAY CONSULTING SERVICES	\$1,522.50
Remit to: LONG BEACH, CA					<u>FYTD:</u> \$7,402.50
PACIFIC TELEMAGEMENT SERVICES	23887	12/10/2018	2004855	PAY PHONE SERVICES-DEC18	\$187.92
Remit to: SAN RAMON, CA					<u>FYTD:</u> \$1,127.52

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PAINTING BY ZEB BODE	23888	12/10/2018	12042018	REPAINTING OF EOC FIRE LANE CURBING	\$125.00
Remit to: NORCO, CA					<u>FYTD:</u> \$52,359.00
PALACIO DE ORO NORTH HOMEOWNERS ASSOC	235763	12/26/2018	200627.047	CONFERENCE & REC. CTR. RENTAL REFUND	\$100.00
Remit to: RANCHO CUCAMONGA, CA					<u>FYTD:</u> \$100.00
PAREDES, KEVIN STANLEY	235678	12/17/2018	MAPPED 2018	MAYOR'S APPRENTICESHIP PROGRAM PROMOTING EMPLOYMENT DEVELOPMENT	\$477.28
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$477.28
PAW PERFECTION PET GROOMING	23889	12/10/2018	407205	GROOMING SERVICES FOR MV ANIMAL SHELTER	\$110.00
	23977	12/26/2018	407206	GROOMING SERVICES FOR MV ANIMAL SHELTER	\$135.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$1,215.00
PEDLEY SQUARE VETERINARY CLINIC	23841	12/03/2018	OCT-2018	VETERINARY SERVICES-MV ANIMAL SHELTER	\$10,462.11
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$81,878.42
PEPE'S TOWING	235604	12/10/2018	83753	EVIDENCE TOWING FOR PD	\$100.00
	235679	12/17/2018	83613	EVIDENCE TOWING FOR PD	\$212.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$2,160.00
PERCEPTIVE ENTERPRISES, INC.	23890	12/10/2018	3447	PROFESSIONAL DBE CONSULTING SERVICES	\$1,890.00
Remit to: LOS ANGELES, CA					<u>FYTD:</u> \$10,710.00
PEREZ, ANAMARTINA	235720	12/17/2018	R18-129428	ANIMAL SERVICES REFUND-SPAY/NEUTER DEPOSIT	\$75.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$75.00

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<u>Vendor Name</u>	<u>Check/EFT Number</u>	<u>Payment Date</u>	<u>Inv Number</u>	<u>Invoice Description</u>	<u>Payment Amount</u>
PETTY CASH - FINANCE	235565	12/03/2018	OCT 2018	PETTY CASH FUND REPLENISHMENT	\$873.41
	235698	12/17/2018	NOV 2018	PETTY CASH FUND REPLENISHMENT	\$243.46
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$3,520.53
PETTY CASH -PARKS & RECREATION	235558	12/03/2018	DEC 8, 2018	START UP CHANGE FOR SNOW DAY & TREE LIGHTING	\$1,000.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$1,000.00
PINEDA, SANDRA	235680	12/17/2018	MAPPED 2018	MAYOR'S APPRENTICESHIP PROGRAM PROMOTING EMPLOYMENT DEVELOPMENT	\$500.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$500.00
PIP PRINTING RIVERSIDE	235605	12/10/2018	373440	FOLDING & INSERTING SERVICES FOR BUSINESS LICENSE RENEWAL ITEMS	\$4,555.08
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$4,555.08
PIVOT INTERIORS, INC.	235770	12/26/2018	PJIN-000003862	CHAIR FOR PARKS & COMM. SVCS. DIRECTOR	\$22,445.50
		12/26/2018	PJIN-000005554	LOBBY CHAIRS & TABLES-SENIOR CENTER BEAUTIFICATION PROJECT	
		12/26/2018	PJIN-000007922	CHAIR FOR PARKS & COMM. SVCS. DEPUTY DIRECTOR	
		12/26/2018	PJIN-000004711	ARIOSO & AVIERA SEATING-SENIOR CENTER BEAUTIFICATION PROJECT	
Remit to: SANTA CLARA, CA					<u>FYTD:</u> \$22,445.50
PROFESSIONAL COMMUNICATIONS NETWORK PCN	235681	12/17/2018	155100297	LIVE ANSWERING SERVICE FOR ROTATIONAL TOW PROGRAM	\$501.31
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$3,211.11

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City of Moreno Valley  
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PRUDENTIAL OVERALL SUPPLY	23842	12/03/2018	22701757	UNIFORM RENTAL & LAUNDERING SVC.-SIGNS & STRIPING STAFF	\$859.55
		12/03/2018	22697830	UNIFORM RENTAL & LAUNDERING SVC.-STREET MAINT. STAFF	
		12/03/2018	22694273	UNIFORM RENTAL & LAUNDERING SVC.-TREE MAINT. STAFF	
		12/03/2018	22690700	UNIFORM RENTAL & LAUNDERING SVC.-TRAFFIC SIGNAL MAINT. STAFF	
		12/03/2018	22690699	UNIFORM RENTAL & LAUNDERING SVC.-SIGNS & STRIPING STAFF	
		12/03/2018	22687228	UNIFORM RENTAL & LAUNDERING SVC.-GRAFFITI REMOVAL STAFF	
		12/03/2018	22687230	UNIFORM RENTAL & LAUNDERING SVC.-TREE MAINT. STAFF	
		12/03/2018	22690697	UNIFORM RENTAL & LAUNDERING SVC.-VEHICLE/EQUIPMENT MAINT. STAFF	
		12/03/2018	22690698	UNIFORM RENTAL & LAUNDERING SVC.-STREET MAINT. STAFF	
		12/03/2018	22690704	UNIFORM RENTAL & LAUNDERING SVC.-GRAFFITI REMOVAL STAFF	
		12/03/2018	22687227	UNIFORM RENTAL & LAUNDERING SVC.-CONCRETE MAINT. STAFF	
		12/03/2018	22697829	UNIFORM RENTAL & LAUNDERING SVC.-VEHICLE/EQUIPMENT MAINT. STAFF	
		12/03/2018	22687226	UNIFORM RENTAL & LAUNDERING SVC.-STREET SWEEPING STAFF	
		12/03/2018	22694270	UNIFORM RENTAL & LAUNDERING SVC.-CONCRETE MAINT. STAFF	
		12/03/2018	22694267	UNIFORM RENTAL & LAUNDERING SVC.-TRAFFIC SIGNAL MAINT. STAFF	
		12/03/2018	22694266	UNIFORM RENTAL & LAUNDERING SVC.-SIGNS & STRIPING STAFF	
		12/03/2018	22694265	UNIFORM RENTAL & LAUNDERING SVC.-STREET MAINT. STAFF	
		12/03/2018	22687221	UNIFORM RENTAL & LAUNDERING SVC.-VEHICLE/EQUIPMENT MAINT. STAFF	
		12/03/2018	22687222	UNIFORM RENTAL & LAUNDERING SVC.-STREET MAINT. STAFF	
		12/03/2018	22697836	UNIFORM RENTAL & LAUNDERING SVC.-GRAFFITI REMOVAL STAFF	
		12/03/2018	22694271	UNIFORM RENTAL & LAUNDERING SVC.-GRAFFITI REMOVAL STAFF	

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<u>Vendor Name</u>	<u>Check/EFT Number</u>	<u>Payment Date</u>	<u>Inv Number</u>	<u>Invoice Description</u>	<u>Payment Amount</u>
PRUDENTIAL OVERALL SUPPLY		12/03/2018	22694269	UNIFORM RENTAL & LAUNDERING SVC.-STREET SWEEPING STAFF	
		12/03/2018	22705388	UNIFORM RENTAL & LAUNDERING SVC.-SIGNS & STRIPING STAFF	
		12/03/2018	22690703	UNIFORM RENTAL & LAUNDERING SVC.-CONCRETE MAINT. STAFF	
		12/03/2018	22701758	UNIFORM RENTAL & LAUNDERING SVC.-TRAFFIC SIGNAL MAINT. STAFF	
		12/03/2018	22705389	UNIFORM RENTAL & LAUNDERING SVC.-TRAFFIC SIGNAL MAINT. STAFF	
		12/03/2018	22709153	UNIFORM RENTAL & LAUNDERING SVC.-SIGNS & STRIPING STAFF	
		12/03/2018	22709154	UNIFORM RENTAL & LAUNDERING SVC.-TRAFFIC SIGNAL MAINT. STAFF	
		12/03/2018	22712790	UNIFORM RENTAL & LAUNDERING SVC.-SIGNS & STRIPING STAFF	
		12/03/2018	22697838	UNIFORM RENTAL & LAUNDERING SVC.-TREE MAINT. STAFF	
		12/03/2018	22697835	UNIFORM RENTAL & LAUNDERING SVC.-CONCRETE MAINT. STAFF	
		12/03/2018	22697834	UNIFORM RENTAL & LAUNDERING SVC.-STREET SWEEPING STAFF	
		12/03/2018	22694264	UNIFORM RENTAL & LAUNDERING SVC.-VEHICLE/EQUIPMENT MAINT. STAFF	
		12/03/2018	22690706	UNIFORM RENTAL & LAUNDERING SVC.-TREE MAINT. STAFF	
		12/03/2018	22697831	UNIFORM RENTAL & LAUNDERING SVC.-SIGNS & STRIPING STAFF	
		12/03/2018	22712791	UNIFORM RENTAL & LAUNDERING SVC.-TRAFFIC SIGNAL MAINT. STAFF	
		12/03/2018	22690702	UNIFORM RENTAL & LAUNDERING SVC.-STREET SWEEPING STAFF	
		12/03/2018	22697832	UNIFORM RENTAL & LAUNDERING SVC.-TRAFFIC SIGNAL MAINT. STAFF	



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PRUDENTIAL OVERALL SUPPLY	23891	12/10/2018	22697827	UNIFORM RENTAL & LAUNDERING SVC.-CITY YARD SECURITY GUARD STAFF	\$24.60
		12/10/2018	22697828	UNIFORM RENTAL & LAUNDERING SVC.-PURCHASING STAFF	
		12/10/2018	22694263	UNIFORM RENTAL & LAUNDERING SVC.-PURCHASING STAFF	
		12/10/2018	22694262	UNIFORM RENTAL & LAUNDERING SVC.-CITY YARD SECURITY GUARD STAFF	
		12/10/2018	22690696	UNIFORM RENTAL & LAUNDERING SVC.-PURCHASING STAFF	
		12/10/2018	22690695	UNIFORM RENTAL & LAUNDERING SVC.-CITY YARD SECURITY GUARD STAFF	

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<u>Vendor Name</u>	<u>Check/EFT Number</u>	<u>Payment Date</u>	<u>Inv Number</u>	<u>Invoice Description</u>	<u>Payment Amount</u>
PRUDENTIAL OVERALL SUPPLY	23935	12/17/2018	22712789	UNIFORM RENTAL & LAUNDERING SVC.-STREET MAINT. STAFF	\$1,179.08
		12/17/2018	22712793	UNIFORM RENTAL & LAUNDERING SVC.-STREET SWEEPING STAFF	
		12/17/2018	22712794	UNIFORM RENTAL & LAUNDERING SVC.-CONCRETE MAINT. STAFF	
		12/17/2018	22712795	UNIFORM RENTAL & LAUNDERING SVC.-GRAFFITI REMOVAL STAFF	
		12/17/2018	22709156	UNIFORM RENTAL & LAUNDERING SVC.-STREET SWEEPING STAFF	
		12/17/2018	22712788	UNIFORM RENTAL & LAUNDERING SVC.-VEHICLE/EQUIPMENT MAINT. STAFF	
		12/17/2018	22690705	UNIFORM RENTAL & LAUNDERING SVC.-PARKS MAINT. STAFF	
		12/17/2018	22709152	UNIFORM RENTAL & LAUNDERING SVC.-STREET MAINT. STAFF	
		12/17/2018	22691505	UNIFORM RENTAL/LAUNDERING-FACILITIES-CREDIT INV 21028931 APPLIED	
		12/17/2018	22701755	UNIFORM RENTAL & LAUNDERING SVC.-VEHICLE/EQUIPMENT MAINT. STAFF	
		12/17/2018	22709160	UNIFORM RENTAL & LAUNDERING SVC.-TREE MAINT. STAFF	
		12/17/2018	22709158	UNIFORM RENTAL & LAUNDERING SVC.-GRAFFITI REMOVAL STAFF	
		12/17/2018	22709157	UNIFORM RENTAL & LAUNDERING SVC.-CONCRETE MAINT. STAFF	
		12/17/2018	22701760	UNIFORM RENTAL & LAUNDERING SVC.-STREET SWEEPING STAFF	
		12/17/2018	22709151	UNIFORM RENTAL & LAUNDERING SVC.-VEHICLE/EQUIPMENT MAINT. STAFF	
		12/17/2018	22705395	UNIFORM RENTAL & LAUNDERING SVC.-TREE MAINT. STAFF	
		12/17/2018	22691506	UNIFORM RENTAL & LAUNDERING SVC.-LIBRARY SECURITY GUARD STAFF	
		12/17/2018	22687225	UNIFORM RENTAL & LAUNDERING SVC.-CFD #1 STAFF	
		12/17/2018	22705393	UNIFORM RENTAL & LAUNDERING SVC.-GRAFFITI REMOVAL STAFF	
		12/17/2018	22705387	UNIFORM RENTAL & LAUNDERING SVC.-STREET MAINT. STAFF	
		12/17/2018	22698324	UNIFORM RENTAL & LAUNDERING SVC.-FACILITIES MAINT. STAFF	
		12/17/2018	22712797	UNIFORM RENTAL & LAUNDERING SVC.-TREE MAINT. STAFF	

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PRUDENTIAL OVERALL SUPPLY		12/17/2018	22690701	UNIFORM RENTAL & LAUNDERING SVC.-CFD #1 STAFF	
		12/17/2018	22705386	UNIFORM RENTAL & LAUNDERING SVC.-VEHICLE/EQUIPMENT MAINT. STAFF	
		12/17/2018	22701764	UNIFORM RENTAL & LAUNDERING SVC.-TREE MAINT. STAFF	
		12/17/2018	22701762	UNIFORM RENTAL & LAUNDERING SVC.-GRAFFITI REMOVAL STAFF	
		12/17/2018	22701761	UNIFORM RENTAL & LAUNDERING SVC.-CONCRETE MAINT. STAFF	
		12/17/2018	22683621	UNIFORM RENTAL & LAUNDERING SVC.-CFD #1 STAFF	
		12/17/2018	22705391	UNIFORM RENTAL & LAUNDERING SVC.-STREET SWEEPING STAFF	
		12/17/2018	22701756	UNIFORM RENTAL & LAUNDERING SVC.-STREET MAINT. STAFF	
		12/17/2018	22694268	UNIFORM RENTAL & LAUNDERING SVC.-CFD #1 STAFF	
		12/17/2018	22698325	UNIFORM RENTAL & LAUNDERING SVC.-LIBRARY SECURITY GUARD STAFF	
		12/17/2018	22705392	UNIFORM RENTAL & LAUNDERING SVC.-CONCRETE MAINT. STAFF	
		12/17/2018	22697837	UNIFORM RENTAL & LAUNDERING SVC.-PARKS MAINT. STAFF	
		12/17/2018	22687229	UNIFORM RENTAL & LAUNDERING SVC.-PARKS MAINT. STAFF	
		12/17/2018	22697833	UNIFORM RENTAL & LAUNDERING SVC.-CFD #1 STAFF	
		12/17/2018	22694827	UNIFORM RENTAL & LAUNDERING SVC.-LIBRARY SECURITY GUARD STAFF	
		12/17/2018	22694826	UNIFORM RENTAL & LAUNDERING SVC.-FACILITIES MAINT. STAFF	
		12/17/2018	22694272	UNIFORM RENTAL & LAUNDERING SVC.-PARKS MAINT. STAFF	
		12/17/2018	22683625	UNIFORM RENTAL & LAUNDERING SVC.-PARKS MAINT. STAFF	



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PRUDENTIAL OVERALL SUPPLY	23978	12/26/2018	22702382	UNIFORM RENTAL & LAUNDERING SVC.-LIBRARY SECURITY GUARD STAFF	\$312.98
		12/26/2018	22710244	UNIFORM RENTAL & LAUNDERING SVC.-FACILITIES MAINT. STAFF	
		12/26/2018	22713416	UNIFORM RENTAL & LAUNDERING SVC.-FACILITIES MAINT. STAFF	
		12/26/2018	22712796	UNIFORM RENTAL & LAUNDERING SVC.-PARKS MAINT. STAFF	
		12/26/2018	22712787	UNIFORM RENTAL & LAUNDERING SVC.-PURCHASING STAFF	
		12/26/2018	22701763	UNIFORM RENTAL & LAUNDERING SVC.-PARKS MAINT. STAFF	
		12/26/2018	21029291	CREDIT FOR DELIVERY CHARGES-LIBRARY SECURITY GUARD 7/11-12/10/18	
		12/26/2018	22701754	UNIFORM RENTAL & LAUNDERING SVC.-PURCHASING STAFF	
		12/26/2018	22701759	UNIFORM RENTAL & LAUNDERING SVC.-CFD #1 STAFF	
		12/26/2018	22705385	UNIFORM RENTAL & LAUNDERING SVC.-PURCHASING STAFF	
		12/26/2018	22702381	UNIFORM RENTAL & LAUNDERING SVC.-FACILITIES MAINT. STAFF	
		12/26/2018	22712786	UNIFORM RENTAL & LAUNDERING SVC.-CITY YARD SECURITY GUARD STAFF	
		12/26/2018	22709155	UNIFORM RENTAL & LAUNDERING SVC.-CFD #1 STAFF	
		12/26/2018	22709159	UNIFORM RENTAL & LAUNDERING SVC.-PARKS MAINT. STAFF	
		12/26/2018	22709149	UNIFORM RENTAL & LAUNDERING SVC.-CITY YARD SECURITY GUARD STAFF	
		12/26/2018	22706135	UNIFORM RENTAL & LAUNDERING SVC.-LIBRARY SECURITY GUARD STAFF	
		12/26/2018	22706134	UNIFORM RENTAL & LAUNDERING SVC.-FACILITIES MAINT. STAFF	
		12/26/2018	22705390	UNIFORM RENTAL & LAUNDERING SVC.-CFD #1 STAFF	
		12/26/2018	22705384	UNIFORM RENTAL & LAUNDERING SVC.-CITY YARD SECURITY GUARD STAFF	
		12/26/2018	22712792	UNIFORM RENTAL & LAUNDERING SVC.-CFD #1 STAFF	
		12/26/2018	22705394	UNIFORM RENTAL & LAUNDERING SVC.-PARKS MAINT. STAFF	
		12/26/2018	22709150	UNIFORM RENTAL & LAUNDERING SVC.-PURCHASING STAFF	
		12/26/2018	22701753	UNIFORM RENTAL & LAUNDERING SVC.-CITY YARD SECURITY GUARD STAFF	

Remit to: RIVERSIDE, CA

FYTD:

\$8,684.80

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PSOMAS	23892	12/10/2018	145693	JUAN BAUTISTA DE ANZA TRAIL/EL POTRERO PARK TO IRIS AVENUE-CONSULTANT SVCS	\$9,899.23
	23979	12/26/2018	147319	JUAN BAUTISTA DE ANZA TRAIL/EL PORTRERO PARK TO IRIS AVENUE-CONSULTANT SVCS	\$5,433.87
Remit to: LOS ANGELES, CA					<u>FYTD:</u> \$33,427.62
PVP COMMUNICATIONS, INC.	23936	12/17/2018	124927	RADIO GEAR REPAIR FOR PD	\$419.29
Remit to: TORRANCE, CA					<u>FYTD:</u> \$3,492.63
RAMOS, MARIA	235633	12/10/2018	R18-128667	ANIMAL SERVICES REFUND-SPAY/NEUTER AND RABIES DEPOSITS	\$95.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$95.00
RAMOS, ROBERTO	24019	12/31/2018	DEC-2018	INSTRUCTOR SERVICES-TAE KWON DO & KINDER KARATE CLASSES	\$627.32
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$7,543.80
RCCD FOUNDATION	235606	12/10/2018	11.30.18 EVENT	4TH ANNUAL VETERANS BREAKFAST-MAYOR GUTIERREZ	\$30.00
	235607	12/10/2018	11-30-18 EVENT	4TH ANNUAL VETERANS BREAKFAST-COUNCIL MEMBER MARQUEZ	\$30.00
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$51,060.00
RE ASTORIA 2 LLC	23937	12/17/2018	00027	RENEWABLE ENERGY-MV UTILITY-NOV18	\$21,525.70
Remit to: SAN FRANCISCO, CA					<u>FYTD:</u> \$163,832.18

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REGALADO, BLANCA E	23843	12/03/2018	NOV-2018	INSTRUCTOR SERVICES-FOLKLORIC DANCE ADULT & YOUTH CLASSES	\$355.20
	23980	12/26/2018	DEC-2018	INSTRUCTOR SERVICES-FOLKLORIC DANCE ADULT & YOUTH CLASSES	\$349.80
Remit to: MORENO VALLEY, CA					FYTD: \$2,142.00
REMNANT OF LIFE WORSHIP CENTER	235634	12/10/2018	2000607.047	REFUND-LASSELLE SPORTS PARK - DEPOSIT REFUND	\$125.00
Remit to: MORENO VALLEY, CA					FYTD: \$125.00
RENZ, ASHLEIGH	235682	12/17/2018	AUG-SEP 2018	TUITION/EMPLOYEE EDUCATION REIMBURSEMENT	\$279.00
Remit to: HEMET, CA					FYTD: \$1,136.00
REPUBLIC MASTER CHEFS TEXTILE RENTAL SERVICE	23938	12/17/2018	S740225	LINENS RENTAL FOR CRC SPECIAL EVENTS	\$356.03
		12/17/2018	12516481	LINENS RENTAL FOR CRC BALLROOM	
		12/17/2018	S742916	LINENS RENTAL FOR CRC SPECIAL EVENTS	
		12/17/2018	S744022	LINENS RENTAL FOR CRC SPECIAL EVENTS	
		12/17/2018	12520898	LINENS RENTAL FOR CRC BALLROOM	
		12/17/2018	12526576	LINENS RENTAL FOR CRC BALLROOM	
		12/17/2018	S739628	LINENS RENTAL FOR CRC SPECIAL EVENTS	
	23981	12/26/2018	12531008	LINENS RENTAL FOR CRC BALLROOM	\$38.93
		12/26/2018	S744995	LINENS RENTAL FOR CRC SPECIAL EVENTS	
	24020	12/31/2018	12536037	LINENS RENTAL FOR CRC BALLROOM	\$23.00
Remit to: LOS ANGELES, CA					FYTD: \$2,509.23
RESOURCE ACTION PROGRAMS	235608	12/10/2018	11301830987-2153	EDUCATIONAL SERVICES-LIVINGWISE SCHOOL KIT PROGRAM (MV UTILITY)	\$4,535.98
Remit to: SPARKS, NV					FYTD: \$4,535.98

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REYES, PATRICIA	235764	12/26/2018	R18-129932	ANIMAL SERVICES REFUND-RABIES DEPOSIT	\$20.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$20.00
RHA LANDSCAPE ARCHITECTS-PLANNERS	235683	12/17/2018	1118017	SKATE PARK DESIGN PROJECT SERVICES	\$310.53
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$36,479.27
RIGHTWAY SITE SERVICES, INC.	235609	12/10/2018	239703	PORTABLE RESTROOMS RENTAL-MAINT. & OPS. DIVISION	\$435.40
		12/10/2018	240587	PORTABLE RESTROOM RENTAL-PSB CAR WASH AREA	
		12/10/2018	239365	PORTABLE RESTROOM RENTAL-PSB CAR WASH AREA	
	235684	12/17/2018	240408	PORTABLE RESTROOMS RENTAL-MARCH MIDDLE SCHOOL	\$806.78
		12/17/2018	240752	PORTABLE RESTROOM RENTAL-COTTONWOOD GOLF COURSE	
		12/17/2018	240753	PORTABLE RESTROOMS RENTAL-EQUESTRIAN CENTER	
		12/17/2018	240811	PORTABLE RESTROOMS RENTAL-MAINT. & OPS. DIVISION	
	235745	12/26/2018	242048	PORTABLE RESTROOMS RENTAL-MARCH MIDDLE SCHOOL	\$153.55
Remit to: LAKE ELSINORE, CA					<u>FYTD:</u> \$6,449.31
RIVERSIDE UNIVERSITY HEALTH SYSTEMS - MEDICAL CTR	23893	12/10/2018	1136	SART EXAMS BILLING FOR PD-OCT18	\$800.00
	23939	12/17/2018	1137	SART EXAMS BILLING FOR PD-NOV. 2018	\$2,400.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$19,600.00
ROBLES, EDSEL	235685	12/17/2018	MAPPED 2018	MAYOR'S APPRENTICESHIP PROGRAM PROMOTING EMPLOYMENT DEVELOPMENT	\$352.32
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$352.32
ROBLES, NELIDA	235721	12/17/2018	R18-128210	ANIMAL SERVICES REFUND-SPAY/NEUTER AND RABIES DEPOSITS	\$95.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$95.00

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ROBLES, ROGELIO	235765	12/26/2018	R18-127995	ANIMAL SERVICES REFUND-SPAY/NEUTER AND RABIES DEPOSITS	\$95.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$95.00
ROGERS, WESLEY	235766	12/26/2018	2000626.047	CONFERENCE & REC. CTR. RENTAL REFUND	\$500.00
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$500.00
ROTO-ROOTER PLUMBERS	23982	12/26/2018	IE287224	PLUMBING REPAIR-MAIN LINE CLEARED/WOODLAND PARK	\$260.00
Remit to: RANCHO CUCAMONGA, CA					<u>FYTD:</u> \$510.00
RSG, INC	24021	12/31/2018	I004118	AFFORDABLE HOUSING COMPLIANCE MONITORING SERVICES-NOV18	\$2,032.50
Remit to: IRVINE, CA					<u>FYTD:</u> \$17,182.50
SAAD, CRISTIAN	235686	12/17/2018	MAPPED 2018	MAYOR'S APPRENTICESHIP PROGRAM PROMOTING EMPLOYMENT DEVELOPMENT	\$500.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$500.00
SAFEWAY SIGN CO.	23940	12/17/2018	14067	TRAFFIC SIGNS/HARDWARE	\$15,726.35
		12/17/2018	14146	TRAFFIC SIGNS/HARDWARE	
		12/17/2018	14147	TRAFFIC SIGNS/HARDWARE	
		12/17/2018	14066	ADOPT-A-STREET PROGRAM SIGNS	
Remit to: ADELANTO, CA					<u>FYTD:</u> \$45,337.98
SALAZAR JR, RAUL S	235722	12/17/2018	MVA050007281	REFUND- PARKING CONTROL VIOLATION DISMISSED	\$57.50
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$57.50

Attachment: December 2018 Payment Register (3367 : PAYMENT REGISTER - DECEMBER 2018)



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<u>Vendor Name</u>	<u>Check/EFT Number</u>	<u>Payment Date</u>	<u>Inv Number</u>	<u>Invoice Description</u>	<u>Payment Amount</u>
SALVATION ARMY	235610	12/10/2018	8	SUBGRANTEE PAYMENT-ESG /HOMELESS TO WORK-STREET OUTREACH PROGRAM	\$17,000.67
		12/10/2018	7	SUBGRANTEE PAYMENT-ESG /HOMELESS TO WORK-STREET OUTREACH PROGRAM	
		12/10/2018	6	SUBGRANTEE PAYMENT-ESG /HOMELESS TO WORK-STREET OUTREACH PROGRAM	
	235723	12/17/2018	2000610.047	REFUND-CONFERENCE & REC CTR. - RENTAL REFUND	\$500.00
	235746	12/26/2018	9 / NOV-18	CDBG SUBGRANTEE PAYMENT-HOMELESS TO WORK PROGRAM-INTERIM ASSIST.	\$11,700.12
		12/26/2018	8 / OCT-18	CDBG SUBGRANTEE PAYMENT-HOMELESS TO WORK PROGRAM-INTERIM ASSIST.	
		12/26/2018	7 / SEP-18	CDBG SUBGRANTEE PAYMENT-HOMELESS TO WORK PROGRAM-INTERIM ASSIST.	
		12/26/2018	6 / AUG-18	CDBG SUBGRANTEE PAYMENT-HOMELESS TO WORK PROGRAM-INTERIM ASSIST.	
		12/26/2018	5 / JUL-18	CDBG SUBGRANTEE PAYMENT-HOMELESS TO WORK PROGRAM-INTERIM ASSIST.	
	Remit to: MORENO VALLEY, CA				
SAN BERNARDINO & RIVERSIDE CO FIRE EQUIP	23844	12/03/2018	99595	FIRE INSPECTION SPRINKLER HEAD REPAIRS-CITY HALL	\$2,430.00
		12/03/2018	99818	5 YEAR CERTIFICATION & SPRINKLER HEAD REPAIR-FIRE STATION 48	
		12/03/2018	99816	ANNUAL SPRINKLERS TEST/RECERTIFICATION-EOC	
Remit to: SAN BERNARDINO, CA					<u>FYTD:</u> \$6,098.44
SANDOVAL, GUADALUPE	235635	12/10/2018	R18-127376	ANIMAL SERVICES REFUND-SPAY/NEUTER DEPOSIT	\$75.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$75.00

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SANDOVAL, MARIO GILBERTO	235687	12/17/2018	MAPPED 2018	MAYOR'S APPRENTICESHIP PROGRAM PROMOTING EMPLOYMENT DEVELOPMENT	\$454.56
Remit to: MORENO VALLEY, CA					FYTD: \$454.56
SANTAMARIA, LILIANA	235688	12/17/2018	MAPPED 2018	MAYOR'S APPRENTICESHIP PROGRAM PROMOTING EMPLOYMENT DEVELOPMENT	\$454.56
Remit to: MORENO VALLEY, CA					FYTD: \$454.56
SCHIEFELBEIN, LORI C.	23941	12/17/2018	112018	CONSULTANT SERVICES-ROTATIONAL TOW SERVICE PROGRAM-NOV18	\$1,155.00
		12/17/2018	111718SP	CONSULTANT SPECIAL ASSIGNMENT-MUNICIPAL CODE FOR TOW SVC PROGRAM	
Remit to: BULLHEAD CITY, AZ					FYTD: \$6,130.00
SECTAN SECURITY, INC	235747	12/26/2018	18120925	ARMORED CAR DEPOSIT TRANSPORTATION SERVICES-DEC18	\$510.75
Remit to: LOS ANGELES, CA					FYTD: \$3,543.75
SECURITY LOCK & KEY	23894	12/10/2018	29453	LOCK SERVICES FOR PD-CYLINDER COMB. CHANGE AT IRIS SUBSTATION	\$293.98
		12/10/2018	29451	LOCK SERVICES FOR PD-CAM LOCKS FOR EVIDENCE LOCKERS	
Remit to: RIVERSIDE, CA					FYTD: \$2,503.03
SIEREN, JOHN	235724	12/17/2018	R18-126905	ANIMAL SERVICES REFUND-RABIES DEPOSIT	\$20.00
Remit to: MORENO VALLEY, CA					FYTD: \$20.00

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SIGNS BY TOMORROW	23942	12/17/2018	22555	UPDATE & INSTALLATION OF PUBLIC HEARING SIGN	\$1,599.95
		12/17/2018	22536	UPDATE OF PUBLIC HEARING SIGN (HEARING/INSTALLATION CANCELLED)	
		12/17/2018	22553	UPDATE & INSTALLATION OF PUBLIC HEARING SIGN	
		12/17/2018	22564	UPDATE & INSTALLATION OF PUBLIC HEARING SIGN	
		12/17/2018	22552	UPDATE & INSTALLATION OF PUBLIC HEARING SIGN	
		12/17/2018	22560	UPDATE & INSTALLATION OF PUBLIC HEARING SIGN	
		12/17/2018	22537	UPDATE OF PUBLIC HEARING SIGN (HEARING/INSTALLATION CANCELLED)	
Remit to: MURRIETA, CA					<u>FYTD:</u> \$4,992.95
SKIPPER, JAMIE	235636	12/10/2018	R18-129213	ANIMAL SERVICES REFUND-SPAY/NEUTER DEPOSIT	\$75.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$75.00
SKY PUBLISHING	23845	12/03/2018	18-6_106	FULL PAGE ADVERTISEMENT-FLOOD PLAIN MGMT PUBLIC SERVICE MESSAGE	\$3,750.00
		12/03/2018	18-5_357	1/2 PAGE ADVERTISEMENT-YOUR VILLA MAGAZINE/2018 ISSUE 5	
		12/03/2018	18-6_147	1/2 PAGE ADVERTISEMENT-YOUR VILLA MAGAZINE/2018 ISSUE 6	
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$25,250.00
SKY TRAILS MOBILE VILLAGE	23846	12/03/2018	OCT-NOV 2018	UUT REFUND OCT-NOV 2018	\$14.60
Remit to: LOS ANGELES, CA					<u>FYTD:</u> \$91.11
SOBERANES, BRENDA	235767	12/26/2018	2000623.047	CONFERENCE AND REC CTR. RENTAL REFUND	\$200.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$200.00
SOCAL OFFICE TECHNOLOGIES, INC.	23895	12/10/2018	IN635994	QUARTERLY MAINT BILLING-PD BUSINESS OFFICE COPIER 11/6/18-2/5/19	\$320.02
Remit to: CYPRESS, CA					<u>FYTD:</u> \$18,154.23

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SOFTWARE ONE, INC / FORMERLY COMPUCOM	23847	12/03/2018	US-PSI-722581	MISAC ADOBE PRO-22 SUBSCRIPTIONS FOR P&CS	\$414.04
Remit to: WAUKESHA, WI					<u>FYTD:</u> \$10,617.39
SOUTHERN CALIFORNIA EDISON	235559	12/03/2018	OCT-18 12/3/18	ELECTRICITY CHARGES	\$4,034.82
		12/03/2018	NOV-18 12/3/18	ELECTRICITY CHARGES	
	235611	12/10/2018	NOV-18 12/10/18	ELECTRICITY CHARGES	\$9,056.56
	235748	12/26/2018	NOV-18 12/26/18	ELECTRICITY CHARGES	\$23,507.23
	235784	12/31/2018	DEC-18 12/31/18	ELECTRICITY CHARGES	\$2,011.63
		12/31/2018	NOV-18 12/31/18	ELECTRICITY CHARGES	
Remit to: ROSEMEAD, CA					<u>FYTD:</u> \$1,644,652.03
SOUTHERN CALIFORNIA GAS CO.	235690	12/17/2018	NOV-2018	GAS CHARGES	\$5,831.03
Remit to: MONTEREY PARK, CA					<u>FYTD:</u> \$18,986.75
SOUTHWEST INSPECTION AND TESTING	23896	12/10/2018	29105	ALESSANDRO/CHAGALL STREET IMPROVEMENTS, CONSULTANT SERVICES	\$2,331.25
Remit to: LA HABRA, CA					<u>FYTD:</u> \$7,085.00
STANDARD INSURANCE CO	24022	12/31/2018	190101	EMPLOYEE SUPPLEMENTAL INSURANCE	\$1,232.76
	235613	12/10/2018	181201	EMPLOYEE SUPPLEMENTAL INSURANCE	\$1,170.92
Remit to: PORTLAND, OR					<u>FYTD:</u> \$8,371.33



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STANLEY CONVERGENT SECURITY SOLUTIONS, INC	24023	12/31/2018	15913595	ALARM SYSTEM MONITORING-MORRISON PARK SNACK BAR/NOV2018-JAN2019	\$4,234.06
		12/31/2018	15761545	ALARM SYSTEM MONITORING-SENIOR CENTER/SEP-NOV 2018	
		12/31/2018	15933071	ALARM SYSTEM MONITORING-EMPL. RESOURCE CENTER/NOV18	
		12/31/2018	15843465	ALARM SYSTEM MONITORING-ANNEX 1 BURGLAR ALARM/OCT-DEC 2018	
		12/31/2018	15758150	ALARM SYSTEM MONITORING-ANIMAL SHELTER/SEP-NOV 2018	
		12/31/2018	15770997	ALARM SYSTEM MONITORING-FIRE STATION 58/SEP-NOV 2018	
		12/31/2018	15853961	ALARM SYSTEM MONITORING-CONFERENCE & REC. CENTER/OCT-DEC 2018	
		12/31/2018	15746503	ALARM SYSTEM MONITORING-SUNNYMEAD/BETHUNE PARKS SNACK BARS-SEP18	
		12/31/2018	15675416	ALARM SYSTEM MONITORING-MORRISON PARK SNACK BAR/AUG-OCT 2018	
		12/31/2018	15770561	ALARM SYSTEM MONITORING-EMPL. RESOURCE CENTER/SEP18	
		12/31/2018	15927439	ALARM SYSTEM MONITORING-CITY HALL/NOV 2018-JAN 2019	
		12/31/2018	15829287	ALARM SYSTEM MONITORING-EOC/OCT18	
		12/31/2018	15849080	ALARM SYSTEM MONITORING-TOWNGATE COMMUNITY CENTER/OCT-DEC 2018	
		12/31/2018	15854563	ALARM SYSTEM MONITORING-EMPL. RESOURCE CENTER/OCT18	
		12/31/2018	15927385	ALARM SYSTEM MONITORING-COTTONWOOD GOLF CTR./NOV 2018-JAN 2019	
		12/31/2018	15913994	ALARM SYSTEM MONITORING-EOC/NOV18	
		12/31/2018	15930114	ALARM SYSTEM MONITORING-LASSELLE SPORTS PARK/NOV2018-JAN2019	
		12/31/2018	15831600	ALARM SYSTEM MONITORING-SUNNYMEAD/BETHUNE PARKS SNACK BARS-OCT18	
		12/31/2018	15746786	ALARM SYSTEM MONITORING-EOC/SEP18	
		12/31/2018	15848168	ALARM SYSTEM MONITORING-MARCH FIELD PARK COMMUNITY CTR/OCT-DEC18	

Remit to: PALATINE, IL

FYTD: \$50,193.36





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STATE BOARD OF EQUALIZATION 1	24031	12/24/2018	113018	SALES & USE TAX REPORT FOR 11/1-11/30/18	\$50,193.36 \$4,077.00
Remit to: SACRAMENTO, CA					<u>FYTD:</u> \$73,254.00
STATE OF CALIFORNIA DEPT. OF JUSTICE	235560	12/03/2018	340363	BLOOD ALCOHOL ANALYSIS SERVICES FOR PD-OCT 2018	\$3,208.00
		12/03/2018	336072	LIVE SCAN FINGERPRINTING APPS FOR PD-OCT18	
	235691	12/17/2018	346068	LIVE SCAN FINGERPRINTING FOR PD-OCT. 2018 RE-BILL	\$2,371.00
		12/17/2018	341944	LIVE SCAN FINGERPRINTING APPS FOR PD-NOV. 2018	
	235749	12/26/2018	346733	BLOOD ALCOHOL ANALYSIS SERVICES FOR PD-NOV 2018	\$455.00
Remit to: SACRAMENTO, CA					<u>FYTD:</u> \$26,973.00
STEIN, LISA	235768	12/26/2018	R18-128879	ANIMAL SERVICES REFUND-SPAY/NEUTER AND RABIES DEPOSITS	\$95.00
Remit to: SUN CITY, CA					<u>FYTD:</u> \$95.00
STENO SOLUTIONS TRANSCRIPTION SVCS., IN	23897	12/10/2018	43162	TRANSCRIPTION SERVICES FOR PD-NOV18	\$1,980.09
Remit to: CORONA, CA					<u>FYTD:</u> \$8,802.73
STEPHEN H BADGETT CONSULTING LLC	235637	12/10/2018	MVU-001	CONSULTING SERVICES FOR MVU-REVIEW SCOPE OF WORK ON RFI'S	\$2,625.00
Remit to: MURRIETA, CA					<u>FYTD:</u> \$2,625.00
STEVE JULIUS CONSTRUCTION, INC	235584	12/03/2018	BL#07797-YR2018	REFUND OF OVERPAYMENT FOR BL#07797	\$868.69
Remit to: SAN CLEMENTE, CA					<u>FYTD:</u> \$868.69

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STEWART, JOHN	235725	12/17/2018	R18-129704	ANIMAL SERVICES REFUND-TRAP RENTAL AND DEPOSIT	\$62.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$62.00
STEWART, DIANE	235585	12/03/2018	R18-129373	ANIMAL SERVICES REFUND-TRAP RENTAL DEPOSIT	\$50.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$50.00
STILES ANIMAL REMOVAL, INC.	235692	12/17/2018	108632	DECEASED LARGE ANIMAL REMOVAL SERVICES-NOV18	\$450.00
Remit to: GUAISTI, CA					<u>FYTD:</u> \$2,100.00
STRADLING, YOCCA, CARLSON & RAUTH	24024	12/31/2018	349344-0032	LEGAL SERVICES-NSP/HOUSING AUTHORITY AGREEMENTS-NOV18	\$772.20
Remit to: NEWPORT BEACH, CA					<u>FYTD:</u> \$27,476.50
SUMMERAL, ALYSHIA	235693	12/17/2018	MAPPED 2018	MAYOR'S APPRENTICESHIP PROGRAM PROMOTING EMPLOYMENT DEVELOPMENT	\$500.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$500.00
TEAMCALIFORNIA ECONOMIC DEVELOPMENT CORPORATION	24025	12/31/2018	2558	TRADESHOW SPONSORSHIPS-IAMC SPRING FORUM	\$5,000.00
Remit to: FAIR OAKS, CA					<u>FYTD:</u> \$5,000.00
THE ADVANTAGE GROUP/ FLEX ADVANTAGE	23943	12/17/2018	107464	FLEX AND COBRA ADMIN FEES-NOV 2018	\$1,403.75
Remit to: TEMECULA, CA					<u>FYTD:</u> \$270,862.04
THE ALTUM GROUP	23984	12/26/2018	4725-R	SOUTH LASSELLE STREET SAFETY CORRIDOR, CONSULTANT SERVICES	\$7,561.19
Remit to: PALM DESERT, CA					<u>FYTD:</u> \$7,561.19

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THE SOCO GROUP INC.	235589	12/03/2018	0596726-IN	FUEL FOR CITY VEHICLES & EQUIPMENT	\$6,285.27
		12/03/2018	0598404-IN	FUEL FOR CITY VEHICLES & EQUIPMENT	
Remit to: ORANGE, CA					<u>FYTD:</u> \$204,515.59
THERMAL-COOL INC.	23985	12/26/2018	WO-0013854	AC UNIT MAINTENANCE-SUNNYMEAD PARK	\$86.00
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$86.00
THOMAS, AMBER	235586	12/03/2018	R18-127586	ANIMAL SERVICES REFUND-SPAY/NEUTER DEPOSIT	\$75.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$75.00
THOMPSON COBURN LLP	23900	12/10/2018	3327335	LEGAL SERVICES-MVU/RELIABILITY STANDARD COMPLIANCE-OCT18	\$25.86
Remit to: WASHINGTON, DC					<u>FYTD:</u> \$268.14
THOMSON REUTERS-WEST PUBLISHING CORP.	23944	12/17/2018	839372832	AUTO TRACK SERVICES FOR PD INVESTIGATIONS-NOV18	\$1,107.70
Remit to: CAROL STREAM, IL					<u>FYTD:</u> \$8,616.56
TKE ENGINEERING INC	235615	12/10/2018	2018-680	ENGINEERING SERVICES FOR CIVIC CENTER PARK & AMPHITHEATER PROJ.	\$2,202.50
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$17,207.60
T-MOBILE USA	235614	12/10/2018	963145786 11/21	MOBILE INTERNET/DATA CHARGES-LIBRARY	\$833.00
	235694	12/17/2018	9339734145	CELLULAR TECHNOLOGY EXTRACTION/LOCATOR SERVICES FOR PD	\$102.00
Remit to: ST. LOUIS, MO					<u>FYTD:</u> \$5,886.11

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TOWNSEND PUBLIC AFFAIRS, INC.	23901	12/10/2018	14151	CONSULTING SERVICES-GRANT WRITING & FUNDING ADVOCACY-OCT 2018	\$15,000.00
		12/10/2018	14051	CONSULTING SERVICES-GRANT WRITING & FUNDING ADVOCACY-SEP 2018	
		12/10/2018	14240	CONSULTING SERVICES-GRANT WRITING & FUNDING ADVOCACY-NOV 2018	
Remit to: NEWPORT BEACH, CA					<u>FYTD:</u> \$30,000.00
TRICHE, TARA	23945	12/17/2018	DEC-2018	INSTRUCTOR SERVICES-DANCE CLASSES	\$2,386.20
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$11,758.80
TRINITY TECHNOLOGY GROUP, INC.	235616	12/10/2018	126501	MS DYNAMICS CRM UPGRADE PROJECT/NOV. 2018 SERVICES MS	\$3,135.00
	235785	12/31/2018	126400	DYNAMICS CRM UPGRADE PROJECT/MAY-AUG 2018 SERVICES	\$1,687.50
Remit to: SACRAMENTO, CA					<u>FYTD:</u> \$24,210.00
TRUEPOINT SOLUTIONS, LLC	23946	12/17/2018	18-774	BUSINESS ANALYST SUPPORT SERVICES-OCT. & NOV. 2018	\$3,412.50
Remit to: LOOMIS, CA					<u>FYTD:</u> \$12,412.50
TUKES, JOSHUA	23986	12/26/2018	DEC-2018	INSTRUCTOR SERVICES-WATERCOLOR TECHNIQUE CLASSES	\$57.60
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$777.60
UCR FORECAST LLC	235561	12/03/2018	1787	REGIONAL ECONOMIC TRENDS REPORT	\$5,500.00
Remit to: MILL VALLEY, CA					<u>FYTD:</u> \$5,500.00



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ULTRASERV AUTOMATED SERVICES, LLC	23851	12/03/2018	034502	COFFEE SERVICE SUPPLIES-CITY HALL/PUBLIC WORKS LOCATION	\$1,455.57
		12/03/2018	035890	COFFEE SERVICE SUPPLIES-CITY HALL/PUBLIC WORKS LOCATION	
		12/03/2018	033029	COFFEE SERVICE SUPPLIES-CITY HALL/BREAK ROOM LOCATION	
		12/03/2018	034509	COFFEE SERVICE SUPPLIES-CITY HALL/BREAK ROOM LOCATION	
		12/03/2018	036691	COFFEE SERVICE SUPPLIES-CONFERENCE & REC. CENTER	
		12/03/2018	036685	COFFEE SERVICE SUPPLIES-CITY HALL/BREAK ROOM LOCATION	
		12/03/2018	036697	COFFEE SERVICE SUPPLIES-CITY HALL/PUBLIC WORKS LOCATION	
		12/03/2018	036692	COFFEE SERVICE SUPPLIES-ANIMAL SHELTER	
		12/03/2018	035217	COFFEE SERVICE SUPPLIES-CITY YARD	
		23988	12/26/2018	037891	
	12/26/2018		039445	COFFEE SERVICE SUPPLIES-ANNEX 1	
	12/26/2018		039443	COFFEE SERVICE SUPPLIES-CITY HALL/PUBLIC WORKS LOCATION	
	12/26/2018		039439	COFFEE SERVICE SUPPLIES-CITY HALL/BREAK ROOM LOCATION	
	12/26/2018		040076	COFFEE SERVICE SUPPLIES-CITY HALL/PUBLIC WORKS LOCATION	
	12/26/2018		040085	COFFEE SERVICE SUPPLIES-CITY HALL/BREAK ROOM LOCATION	
	12/26/2018		037887	COFFEE SERVICE SUPPLIES-CITY HALL/BREAK ROOM LOCATION	
	12/26/2018		040118	COFFEE SERVICE SUPPLIES-CITY HALL/CITY CLERK LOCATION	
	12/26/2018		039447	COFFEE SERVICE SUPPLIES-CITY YARD	
	12/26/2018		038642	COFFEE SERVICE SUPPLIES-CITY HALL/PUBLIC WORKS LOCATION	
	12/26/2018	037896	COFFEE SERVICE SUPPLIES-CITY YARD		
12/26/2018	037890	COFFEE SERVICE SUPPLIES-ANIMAL SHELTER			

Remit to: COSTA MESA, CA

FYTD: \$8,954.13

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**CHECKS UNDER \$25,000**

<u>Vendor Name</u>	<u>Check/EFT Number</u>	<u>Payment Date</u>	<u>Inv Number</u>	<u>Invoice Description</u>	<u>Payment Amount</u>
UNDERGROUND SERVICE ALERT	23852	12/03/2018	1020180464 (b)	DIGALERT TICKETS SUBSCRIPTION SERVICE-OCT18	\$407.65
		12/03/2018	1020180464 (c)	DIGALERT TICKETS SUBSCRIPTION SERVICE-OCT18	
		12/03/2018	1020180464 (d)	DIGALERT TICKETS SUBSCRIPTION SERVICE-OCT18	
		12/03/2018	1020180464 (a)	DIGALERT TICKETS SUBSCRIPTION SERVICE-OCT18	
	23989	12/26/2018	1120180452 (d)	DIGALERT TICKETS SUBSCRIPTION SERVICE-NOV18	\$343.30
		12/26/2018	1120180452 (b)	DIGALERT TICKETS SUBSCRIPTION SERVICE-NOV18	
		12/26/2018	1120180452 (c)	DIGALERT TICKETS SUBSCRIPTION SERVICE-NOV18	
		12/26/2018	1120180452 (a)	DIGALERT TICKETS SUBSCRIPTION SERVICE-NOV18	
Remit to: CORONA, CA					<u>FYTD:</u> \$2,988.85
UNION BANK OF CALIFORNIA 1	235750	12/26/2018	1127462	INVESTMENT CUSTODIAL SERVICES-NOV18	\$395.67
Remit to: LOS ANGELES, CA					<u>FYTD:</u> \$2,210.02
UNITED POWER GENERATION, INC.	23853	12/03/2018	4733	GENERATOR REPAIRS PER PM FINDINGS-CONFERENCE & REC. CENTER	\$189.04
		23902	12/10/2018	4750	GENERATOR REPAIRS PER PM FINDINGS-ANIMAL SHELTER
	12/10/2018	4751	GENERATOR REPAIRS PER PM FINDINGS-FIRE STATION 65		
	12/10/2018	4747	GENERATOR REPAIRS PER PM FINDINGS-FIRE STATION 6		
	12/10/2018	4749	GENERATOR REPAIRS PER PM FINDINGS-FIRE STATION 2		
	12/10/2018	4748	GENERATOR REPAIRS PER PM FINDINGS-FIRE STATION 58		
Remit to: RIVERSIDE, CA					<u>FYTD:</u> \$15,715.32
UNITED ROTARY BRUSH CORP	23947	12/17/2018	307112	STREET SWEEPER BRUSHES & ACCESSORIES (2 1/2% DISCOUNT APPLIED)	\$2,019.08
		12/17/2018	307018	STREET SWEEPER BRUSHES & ACCESSORIES	
		12/17/2018	306930	STREET SWEEPER BRUSHES & ACCESSORIES	
	23990	12/26/2018	307214	STREET SWEEPER BRUSHES & ACCESSORIES (2 1/2% DISCOUNT APPLIED)	\$1,251.98
Remit to: KANSAS CITY, MO					<u>FYTD:</u> \$22,745.09

Attachment: December 2018 Payment Register (3367 : PAYMENT REGISTER - DECEMBER 2018)



City of Moreno Valley  
Payment Register  
For Period 12/1/2018 through 12/31/2018

CHECKS UNDER \$25,000

<u>Vendor Name</u>	<u>Check/EFT Number</u>	<u>Payment Date</u>	<u>Inv Number</u>	<u>Invoice Description</u>	<u>Payment Amount</u>
UNITED SITE SERVICES OF CA, INC.	23903	12/10/2018	114-7567527	FENCE RENTAL AT ANIMAL SHELTER 10/25-11/21/18	\$212.80
		12/10/2018	114-7686881	FENCE RENTAL AT ANIMAL SHELTER 11/22-12/19/18	
Remit to: PHOENIX, AZ					<u>FYTD:</u> \$744.80
US FLEET TRACKING LLC	23991	12/26/2018	273315	GPS TRACKERS/SERVICE 12/1/18-11/30/19	\$1,438.20
Remit to: EDMOND, OK					<u>FYTD:</u> \$1,438.20

Attachment: December 2018 Payment Register (3367 : PAYMENT REGISTER - DECEMBER 2018)



City of Moreno Valley  
**Payment Register**

For Period 12/1/2018 through 12/31/2018

**CHECKS UNDER \$25,000**

<u>Vendor Name</u>	<u>Check/EFT Number</u>	<u>Payment Date</u>	<u>Inv Number</u>	<u>Invoice Description</u>	<u>Payment Amount</u>
VACATE TERMITES & PEST ELIMINATION COMPANY	23854	12/03/2018	83813	REMOVAL OF BEES FROM PROPERTY-APN 474-040-033	\$200.00
	23904	12/10/2018	85002	RODENT CONTROL SERVICES-OCT18-ELECTRIC UTILITY MOVAL SUBSTATION	\$97.50
	23948	12/17/2018	85491	PEST CONTROL SERVICE-MORRISON PRK RESTROOM/SNACK BAR	\$1,290.00
		12/17/2018	84991	RODENT CONTROL SERVICES-OCT18-SHADOW MTN. PARK	
		12/17/2018	84992	RODENT CONTROL SERVICES-OCT18-MARCH FIELD/SKATE PARK	
		12/17/2018	84993	RODENT CONTROL SERVICES-OCT18-SUNNYMEAD PARK	
		12/17/2018	84994	RODENT CONTROL SERVICES-OCT18-EDISON EASEMENT	
		12/17/2018	84995	RODENT CONTROL SERVICES-OCT18-FAIRWAY PARK	
		12/17/2018	84997	RODENT CONTROL SERVICES-OCT18-EL POTRERO PARK	
		12/17/2018	85493	PEST CONTROL SERVICE-CELEBRATION PARK RESTROOM	
		12/17/2018	84987	RODENT CONTROL SERVICES-OCT18-CONFERENCE & REC. CENTER	
		12/17/2018	85492	PEST CONTROL SERVICE-SKATE PARK RESTROOM/SNACK BAR	
		12/17/2018	85966	PEST CONTROL SERVICE-SUNNYMEAD PARK RESTROOM/SNACK BAR	
		12/17/2018	84990	RODENT CONTROL SERVICES-OCT18-MORRISON PARK	
		12/17/2018	84996	RODENT CONTROL SERVICES-OCT18-CELEBRATION PARK	
		12/17/2018	84988	RODENT CONTROL SERVICES-OCT18-EQUESTRIAN CENTER	
		12/17/2018	84986	RODENT CONTROL SERVICES-OCT18-COTTONWOOD GOLF COURSE	
		12/17/2018	84989	RODENT CONTROL SERVICES-OCT18-JFK PARK	

Attachment: December 2018 Payment Register (3367 : PAYMENT REGISTER - DECEMBER 2018)





City of Moreno Valley  
**Payment Register**

For Period 12/1/2018 through 12/31/2018

**CHECKS UNDER \$25,000**

<u>Vendor Name</u>	<u>Check/EFT Number</u>	<u>Payment Date</u>	<u>Inv Number</u>	<u>Invoice Description</u>	<u>Payment Amount</u>
VACATE TERMITES & PEST ELIMINATION COMPANY	23992	12/26/2018	84452	PEST CONTROL SERVICE-FIRE STATION 99	\$3,435.00
		12/26/2018	84704	PEST CONTROL SERVICE-COTTONWOOD GOLF CENTER	
		12/26/2018	84450	PEST CONTROL SERVICE-FIRE STATION 48	
		12/26/2018	85964	PEST CONTROL SERVICE-MARCH FIELD PARK COMMUNITY CENTER	
		12/26/2018	85965	PEST CONTROL SERVICE-TRANSPORTATION TRAILER	
		12/26/2018	85944	PEST CONTROL SERVICE-CITY HALL	
		12/26/2018	85961	PEST CONTROL SERVICE-ANNEX 1	
		12/26/2018	85945	PEST CONTROL SERVICE-CITY YARD	
		12/26/2018	85646	PEST CONTROL SERVICE-FIRE STATION 91	
		12/26/2018	84463	PEST CONTROL SERVICE-FIRE STATION 6	
		12/26/2018	84453	PEST CONTROL SERVICE-TOWNGATE COMMUNITY CENTER	
		12/26/2018	85947	PEST CONTROL SERVICE-COTTONWOOD GOLF CENTER	
		12/26/2018	85962	PEST CONTROL SERVICE-ANIMAL SHELTER	
		12/26/2018	84721	PEST CONTROL SERVICE-MARCH FIELD PARK COMMUNITY CENTER	
		12/26/2018	85639	PEST CONTROL SERVICE-FIRE STATION 6	
		12/26/2018	85949	PEST CONTROL SERVICE-EOC	
		12/26/2018	84467	PEST CONTROL SERVICE-FIRE STATION 58	
		12/26/2018	85629	PEST CONTROL SERVICE-TOWNGATE COMMUNITY CENTER	
		12/26/2018	85946	PEST CONTROL SERVICE-CITY YARD SANTIAGO OFFICE	
		12/26/2018	85640	PEST CONTROL SERVICE-LIBRARY	
		12/26/2018	85948	PEST CONTROL SERVICE-CONFERENCE & REC. CENTER	
		12/26/2018	85643	PEST CONTROL SERVICE-FIRE STATION 58	
		12/26/2018	85644	PEST CONTROL SERVICE-SENIOR CENTER	
		12/26/2018	84451	PEST CONTROL SERVICE-FIRE STATION 65	
		12/26/2018	85645	PEST CONTROL SERVICE-FIRE STATION 2	
		12/26/2018	85046	PEST CONTROL SERVICE-FIRE STATION 91	

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City of Moreno Valley  
**Payment Register**

For Period 12/1/2018 through 12/31/2018

**CHECKS UNDER \$25,000**

<u>Vendor Name</u>	<u>Check/EFT Number</u>	<u>Payment Date</u>	<u>Inv Number</u>	<u>Invoice Description</u>	<u>Payment Amount</u>
VACATE TERMITES & PEST ELIMINATION COMPANY		12/26/2018	85626	PEST CONTROL SERVICE-FIRE STATION 48	
		12/26/2018	84464	PEST CONTROL SERVICE-LIBRARY	
		12/26/2018	85641	PEST CONTROL SERVICE-UTILITY FIELD OFFICE	
		12/26/2018	85954	PEST CONTROL SERVICE-PUBLIC SAFETY BUILDING	
		12/26/2018	84469	PEST CONTROL SERVICE-FIRE STATION 2	
		12/26/2018	85628	PEST CONTROL SERVICE-FIRE STATION 99	
		12/26/2018	85627	PEST CONTROL SERVICE-FIRE STATION 65	
		12/26/2018	85490	PEST CONTROL SERVICE-CITY YARD SANTIAGO OFFICE	
		12/26/2018	84701	PEST CONTROL SERVICE-CITY HALL	
		12/26/2018	84470	PEST CONTROL SERVICE-FIRE STATION 91	
		12/26/2018	85026	PEST CONTROL SERVICE-FIRE STATION 48	
		12/26/2018	84465	PEST CONTROL SERVICE-UTILITY FIELD OFFICE	
		12/26/2018	85337	PEST CONTROL SERVICE-COTTONWOOD GOLF CENTER	
		12/26/2018	85501	PEST CONTROL SERVICE-TRANSPORTATION TRAILER	
		12/26/2018	84702	PEST CONTROL SERVICE-CITY YARD	
		12/26/2018	85498	PEST CONTROL SERVICE-ANIMAL SHELTER	
		12/26/2018	85350	PEST CONTROL SERVICE-FIRE STATION 58 (SECOND SERVICE)	
		12/26/2018	85489	PEST CONTROL SERVICE-CITY YARD	
		12/26/2018	85488	PEST CONTROL SERVICE-CITY HALL	
		12/26/2018	85351	PEST CONTROL SERVICE-ANNEX 1	
		12/26/2018	85045	PEST CONTROL SERVICE-FIRE STATION 2	
		12/26/2018	85344	PEST CONTROL SERVICE-PUBLIC SAFETY BUILDING	
		12/26/2018	84706	PEST CONTROL SERVICE-EOC	
		12/26/2018	85500	PEST CONTROL SERVICE-MARCH FIELD PARK COMMUNITY CENTER	
		12/26/2018	85029	PEST CONTROL SERVICE-TOWNGATE COMMUNITY CENTER	
		12/26/2018	84468	PEST CONTROL SERVICE-SENIOR CENTER	
		12/26/2018	85044	PEST CONTROL SERVICE-SENIOR CENTER	



**City of Moreno Valley**  
**Payment Register**  
 For Period 12/1/2018 through 12/31/2018

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VACATE TERMITES & PEST ELIMINATION COMPANY		12/26/2018	85043	PEST CONTROL SERVICE-FIRE STATION 58	
		12/26/2018	85041	PEST CONTROL SERVICE-UTILITY FIELD OFFICE	
		12/26/2018	84703	PEST CONTROL SERVICE-CITY YARD SANTIAGO OFFICE	
		12/26/2018	85039	PEST CONTROL SERVICE-FIRE STATION 6	
		12/26/2018	85028	PEST CONTROL SERVICE-FIRE STATION 99	
		12/26/2018	85027	PEST CONTROL SERVICE-FIRE STATION 65	
		12/26/2018	85338	PEST CONTROL SERVICE-CONFERENCE & REC. CENTER	
		12/26/2018	84722	PEST CONTROL SERVICE-TRANSPORTATION TRAILER	
		12/26/2018	85339	PEST CONTROL SERVICE-EOC	
		12/26/2018	84719	PEST CONTROL SERVICE-ANIMAL SHELTER	
		12/26/2018	84718	PEST CONTROL SERVICE-ANNEX 1	
		12/26/2018	84717	PEST CONTROL SERVICE-FIRE STATION 58 (SECOND SERVICE)	
		12/26/2018	84711	PEST CONTROL SERVICE-PUBLIC SAFETY BUILDING	
		12/26/2018	84705	PEST CONTROL SERVICE-CONFERENCE & REC. CENTER	
		12/26/2018	85040	PEST CONTROL SERVICE-LIBRARY	
Remit to: MORENO VALLEY, CA					FYTD: \$12,872.50
VALLEY WIDE TOWING, LLC	23949	12/17/2018	6713	EVIDENCE TOWING FOR PD	\$212.00
Remit to: MORENO VALLEY, CA					FYTD: \$2,173.00
VASQUEZ & COMPANY LLP	23905	12/10/2018	2180971-IN	AUDIT SERVICES-FINANCIAL STMTS. FOR FY ENDING 6/30/18-BILLING #6	\$5,000.00
Remit to: GLENDALE, CA					FYTD: \$72,000.00
VICTOR MEDICAL CO	23950	12/17/2018	4629571	ANIMAL MEDICAL SUPPLIES/VACCINES	\$260.22
	23993	12/26/2018	4701010	ANIMAL MEDICAL SUPPLIES/VACCINES	\$898.64
Remit to: LAKE FOREST, CA					FYTD: \$8,721.07

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 For Period 12/1/2018 through 12/31/2018

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VILLA, CRYSTAL	235587	12/03/2018	R18-128036	ANIMAL SERVICES REFUND-SPAY/NEUTER AND RABIES DEPOSITS	\$95.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$95.00
VISION SERVICE PLAN	23906	12/10/2018	181201	EMPLOYEE VISION INSURANCE	\$4,295.78
	24026	12/31/2018	190101	EMPLOYEE VISION INSURANCE	\$3,887.49
Remit to: SAN FRANCISCO, CA					<u>FYTD:</u> \$29,234.40
VOLOGY, INC.	23994	12/26/2018	SIN005204	NETWORK SWITCHES/EQUIPMENT FOR PD CAMERA PROJECT-QUOTE Q-748012	\$9,422.73
Remit to: OLDSMAR, FL					<u>FYTD:</u> \$9,422.73
VOYAGER FLEET SYSTEM, INC.	23951	12/17/2018	869336602847-CM	FUEL CARD CHARGES-CITY VEHICLE 13001	\$1,583.58
		12/17/2018	869336602847-PD	FUEL CARD CHARGES-PD TRAFFIC MOTORS	
Remit to: HOUSTON, TX					<u>FYTD:</u> \$42,047.78
WELLS FARGO CORPORATE TRUST	23907	12/10/2018	1639144	TRUSTEE SERVICES FEE-2013 REF OF 05 LRB	\$6,000.00
		12/10/2018	1639299	TRUSTEE SERVICES FEE-2016 REFUNDING LRB	
Remit to: MINNEAPOLIS, MN					<u>FYTD:</u> \$4,734,090.85
WESTERN MUNICIPAL WATER DISTRICT	235751	12/26/2018	24753-018620/NV8	WATER CHARGES-M.A.R.B. BALLFIELDS	\$2,682.33
		12/26/2018	23866-018292/NV8	WATER CHARGES-SKATE PARK	
		12/26/2018	23821-018257/NV8	WATER CHARGES-MARCH FIELD PARK COMMUNITY CTR. LANDSCAPE	
		12/26/2018	23821-018258/NV8	WATER CHARGES-MARCH FIELD PARK COMMUNITY CTR.-BLDG. 938	
Remit to: ARTESIA, CA					<u>FYTD:</u> \$26,122.49

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**City of Moreno Valley**  
**Payment Register**  
 For Period 12/1/2018 through 12/31/2018

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<u>Vendor Name</u>	<u>Check/EFT Number</u>	<u>Payment Date</u>	<u>Inv Number</u>	<u>Invoice Description</u>	<u>Payment Amount</u>
WHITNEY POINT SOLAR, LLC	23995	12/26/2018	465827	RENEWABLE ENERGY-MV UTILITY-NOV18	\$14,028.95
Remit to: JUNO BEACH, FL					<u>FYTD:</u> \$215,035.27
WILLIAMS, EMILY	235588	12/03/2018	2000239.047	REFUND-MUSIC STAR GUITAR CLASS	\$49.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$49.00
WINCHESTER ASSOCIATES, INC.	235752	12/26/2018	6326	DAY & ALESSANDRO PROJECT SURVEYING SERVICES	\$5,916.17
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$30,238.17
WOLTERS KLUWER	23996	12/26/2018	5410370610	PDFLYER STANDALONE ADOBE ADD-IN	\$210.00
Remit to: TORRANCE, CA					<u>FYTD:</u> \$1,365.00
WOOD, MIKE	235726	12/17/2018	MVA030004756	REFUND- PARKING CONTROL FEES OVERPAYMENT	\$115.00
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$115.00
WSP USA, INC.	23855	12/03/2018	AR 821356	SUNNYMEAD MASTER DRAINAGE PLAN STORM DRAIN, CONSULTANT SERVICES	\$4,009.55
	23909	12/10/2018	AR 828224	SUNNYMEAD MASTER DRAINAGE PLAN STORM DRAIN LINE F & F-7, CONSULTANT SERVICES	\$9,740.32
Remit to: SAN BERNARDINO, CA					<u>FYTD:</u> \$120,960.66
WURTZ, KATELYN HANNAH	235696	12/17/2018	MAPPED 2018	MAYOR'S APPRENTICESHIP PROGRAM PROMOTING EMPLOYMENT DEVELOPMENT	\$477.28
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$477.28

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XEROX CAPITAL SERVICES, LLC	23953	12/17/2018	095336272	COLOR COPIER EQUIPMENT LEASE-NOV18-PARKS DEPT.	\$1,511.05
		12/17/2018	095336271	COLOR COPIER LEASE/BILLABLE PRINTS-NOV18-PARKS DEPT.	
	23997	12/26/2018	095336269	COPIER LEASE/BILLABLE PRINTS-NOV18-GRAPHICS DEPT.	\$985.32
		12/26/2018	095336270	COLOR COPIER EQUIPMENT LEASE-NOV18-GRAPHICS DEPT.	
Remit to: PASADENA, CA					<u>FYTD:</u> \$19,162.28
XEROX FINANCIAL SERVICES LLC	23910	12/10/2018	1399063	EDD COLOR COPIER LEASE 11/15-12/14/18	\$855.45
Remit to: DALLAS, TX					<u>FYTD:</u> \$5,060.05
ZARAGOZA, JESSICA	235697	12/17/2018	MAPPED 2018	MAYOR'S APPRENTICESHIP PROGRAM PROMOTING EMPLOYMENT DEVELOPMENT	\$477.28
Remit to: MORENO VALLEY, CA					<u>FYTD:</u> \$477.28
<b>TOTAL CHECKS UNDER \$25,000</b>					<b>\$1,069,454.55</b>
<b>GRAND TOTAL</b>					<b>\$8,738,954.39</b>

Attachment: December 2018 Payment Register (3367 : PAYMENT REGISTER - DECEMBER 2018)



## Report to City Council

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**TO:** Mayor and City Council

**FROM:** Marshall Eyerman, Chief Financial Officer

**AGENDA DATE:** February 19, 2019

**TITLE:** APPROVE FIRST AMENDMENT TO PROFESSIONAL SERVICES AGREEMENT WITH STEPHEN H BADGETT CONSULTING FOR STRATEGIC PLANNING SERVICES FOR MORENO VALLEY UTILITY

---

### **RECOMMENDED ACTION**

#### **Recommendation:**

1. Approve First Amendment to Agreement for Professional Services with Stephen H Badgett Consulting for strategic planning services for Moreno Valley Utility.

### **SUMMARY**

This report recommends approval of the First Amendment to the Agreement with Stephen H. Badgett Consulting for strategic planning services for Moreno Valley Utility (MVU). The services are funded through the utility's operating budget, and there will be no impact to the General Fund.

### **DISCUSSION**

Objective 4.1 of the City's strategic plan, Momentum MoVal, directs the utility to develop a strategic plan to address many opportunities facing MVU. These opportunities include the following:

- Consideration of an organizational restructuring given the growth of the utility and the 2020 expiration of MVU's service agreement with the current maintenance and operations provider
- Meeting a 50% Renewable Portfolio Standard by 2030
- Meeting State-mandated energy efficiency targets
- Ensuring the financial health of the utility by building financial reserves
- Continued investment in infrastructure to accommodate growth and maintain a

- Meeting challenges adequately with minimal rate impacts

On February 7, 2017, the City Council approved an agreement with Hometown Connections to facilitate the preparation of a Road Map for the utility. The City Council subsequently approved an agreement with Leidos Engineering, LLC on October 17, 2017 for the purpose of identifying and analyzing options regarding the organizational structure of MVU.

In November 2018, MVU entered into an agreement with Stephen H. Badgett Consulting for \$5,000 for the purpose of assisting with the review of Request for Information for operations and maintenance, engineering, and customer account services. Mr. Badgett has been working in the public sector for over 44 years. He has a vast range of experience with California electric utilities including the City of Riverside Public Utilities, the 5<sup>th</sup> largest publicly owned utility in California, where he served as Interim General Manager, Chief Operating Officer, and Deputy General Manager. In those roles, Mr. Badgett managed over 600 employees in all aspects of a publicly owned, full-service water and electric utility, including Finance, Engineering, Service Delivery, Customer Relations, Human Resources, and Legislative Affairs.

The recommended approach in the organizational assessment report includes further analyzing contracting strategies in the areas of operations and maintenance, engineering, and customer account services. The proposed Scope of Work and Services under the First Amendment to the agreement with Mr. Badgett includes support to utility management in these efforts. The First Amendment will extend the term of the existing agreement from June 30, 2019 to June 30, 2020, and increase the total contract amount to \$100,000.

### **ALTERNATIVES**

1. Approve the First Amendment to the Agreement with Stephen H. Badgett Consulting for strategic planning services. *Staff recommends this alternative. Approval of the agreement will help Moreno Valley Utility to achieve organizational effectiveness and operational efficiency.*
2. Do not approve the First Amendment to the Agreement with Stephen H. Badgett Consulting for strategic planning services. *Staff does not recommend this alternative, as it will not help the utility to achieve organizational effectiveness or efficiency.*

### **FISCAL IMPACT**

Funds are available in account number 6010-30-80-45510-625099, Contractual Services – Other. The amount of the First Amendment is \$95,000, for a contract total of \$100,000.

### **NOTIFICATION**



Publication of the Agenda.

**PREPARATION OF STAFF REPORT**

Prepared By:  
Jeannette Olko  
Electric Utility Division Manager

Department Head Approval:  
Marshall Eyerman  
Chief Financial Officer/City Treasurer

**CITY COUNCIL GOALS**

**Revenue Diversification and Preservation.** Develop a variety of City revenue sources and policies to create a stable revenue base and fiscal policies to support essential City services, regardless of economic climate.

**CITY COUNCIL STRATEGIC PRIORITIES**

- 1. Economic Development
- 2. Public Safety
- 3. Library
- 4. Infrastructure
- 5. Beautification, Community Engagement, and Quality of Life
- 6. Youth Programs

Objective 4.1: Develop a Moreno Valley Utility Strategic Plan to prepare for the 2020 expiration of the ENCO Utility Systems agreement.

**ATTACHMENTS**

- 1. Badgett PSA Executed 11012018 v1
- 2. First Amendment SBadgett 01282019

**APPROVALS**

Budget Officer Approval	<u>✓ Approved</u>	2/06/19 4:12 PM
City Attorney Approval	<u>✓ Approved</u>	2/12/19 1:29 PM
City Manager Approval	<u>✓ Approved</u>	2/12/19 2:24 PM

City of Moreno Valley

**AGREEMENT FOR ON-SITE AND/OR PROFESSIONAL SERVICES**

This Agreement is made by and between the City of Moreno Valley, California, a municipal corporation, with its principal place of business at 14177 Frederick Street, Moreno Valley, CA 92552, hereinafter referred to as the "City", and **Stephen H Badgett Consulting**, with its principal place of business at **24957 Tyler Place Murrieta, CA 92562**, hereinafter referred to as the "Contractor," based upon City policies and the following legal citations:

**RECITALS**

- A. Government Code Section 53060 authorizes the engagement of persons to perform special services as independent contractors;
- B. Contractor desires to perform and assume responsibility for the provision of professional consulting services required by the City on the terms and conditions set forth in this Agreement. Contractor represents that it is experienced in providing professional consulting services, is licensed in the State of California, if applicable;
- C. City desires to engage Contractor to render such services for the review of scope of work for three (3) Requests for Information as set forth in this Agreement;
- D. The public interest, convenience, necessity and general welfare will be served by this Agreement; and
- E. This Agreement is made and entered into effective the date the City signs this Agreement.

**TERMS**

**1. CONTRACTOR INFORMATION:**

Contractor's Name: Stephen H Badgett Consulting  
 Address: 24957 Tyler Place  
 City: Murrieta State: CA Zip: 92562  
 Business Phone: 951-231-4487 Fax No. N-A  
 Other Contact Information: stephenhbadgett@gmail.com  
 Business License Number: 35274  
 Federal Tax I.D. Number: 81-1877205

**2. CONTRACTOR SERVICES, FEES, AND RELEVANT DATES:**

- A. The Contractor's scope of service is described in Exhibit "A" attached hereto and incorporated herein by this reference.
- B. The City's responsibilities, other than payment, are described in Exhibit "B" attached hereto and incorporated herein by this reference.

Attachment: Badgett PSA Executed 11012018 v1 (3388 : APPROVE FIRST AMENDMENT TO PROFESSIONAL SERVICES AGREEMENT WITH S

- D. The term of this Agreement shall be from October 1, 2018 to June 30, 2019 unless terminated earlier as provided herein. The City acknowledges that it will not unreasonably withhold approval of the Contractor's requests for extensions of time in which to complete the work required. The Contractor shall not be responsible for performance delays caused by others or delays beyond the Contractor's reasonable control (excluding delays caused by non-performance or unjustified delay by Contractor, his/her/its employees, or subcontractors), and such delays shall extend the time for performance of the work by the Contractor.

3. **STANDARD TERMS AND CONDITIONS:**

- A. Control of Work. Contractor is solely responsible for the content and sequence of the work, and will not be subject to control and direction as to the details and means for accomplishing the anticipated results of services. The City will not provide any training to Contractor or his/her/its employees.
- B. Intent of Parties. Contractor is, and at all times shall be, an independent contractor and nothing contained herein shall be construed as making the Contractor or any individual whose compensation for services is paid by the Contractor, an agent or employee of the City, or authorizing the Contractor to create or assume any obligation or liability for or on behalf of the City, or entitling the Contractor to any right, benefit, or privilege applicable to any officer or employee of the City.
- C. Subcontracting. Contractor may retain or subcontract for the services of other necessary contractors with the prior written approval of the City. Payment for such services shall be the responsibility of the Contractor. Any and all subcontractors shall be subject to the terms and conditions of this Agreement, with the exception that the City shall have no obligation to pay for any subcontractor services rendered. Contractor shall be responsible for paying prevailing wages where required by law [See California Labor Code Sections 1770 through 1777.7].
- D. Conformance to Applicable Requirements. All work prepared by Contractor shall be subject to the approval of City.
- E. Substitution of Key Personnel. Contractor has represented to City that certain key personnel will perform and coordinate the services under this Agreement. Should one or more of such personnel become unavailable, Contractor may substitute other personnel of at least equal competence upon written approval of City. In the event that City and Contractor cannot agree as to the substitution of key personnel, City shall be entitled to terminate this Agreement for cause. As discussed below, any personnel who fail or refuse to perform the services in a manner acceptable to the City, or who are determined by the City to be uncooperative, incompetent, a threat to the adequate or timely completion of the project or a threat to the safety of persons or property, shall be promptly removed from the project by the Contractor at the request of the City. The key personnel for performance of this Agreement are as follows: **Stephen H Badgett.**

- F. City's Representative. The City hereby designates the City Manager, or his or her designee, to act as its representative for the performance of this Agreement ("City's Representative"). Contractor shall not accept direction or orders from any person other than the City's Representative or his or her designee.
- G. Contractor's Representative. Contractor hereby designates **Stephen H Badgett**, or his or her designee, to act as its representative for the performance of this Agreement ("Contractor's Representative"). Contractor's Representative shall have full authority to represent and act on behalf of the Contractor for all purposes under this Agreement. The Contractor's Representative shall supervise and direct the services, using his or her best skill and attention, and shall be responsible for all means, methods, techniques, sequences and procedures and for the satisfactory coordination of all portions of the services under this Agreement.
- H. Legal Considerations. The Contractor shall comply with applicable federal, state, and local laws in the performance of this Agreement. Contractor shall be liable for all violations of such laws and regulations in connection with services. If the Contractor performs any work knowing it to be contrary to such laws, rules and regulations and without giving written notice to the City, Contractor shall be solely responsible for all costs arising therefrom. Contractor shall defend, indemnify and hold City, its officials, directors, officers, employees and agents free and harmless, pursuant to the indemnification provisions of this Agreement, from any claim or liability arising out of any failure or alleged failure to comply with such laws, rules or regulations.
- I. Standard of Care; Performance of Employees. Contractor shall perform all services under this Agreement in a skillful and competent manner, consistent with the standards generally recognized as being employed by professionals in the same discipline in the State of California. Contractor represents and maintains that it is skilled in the profession necessary to perform the services. Contractor warrants that all employees and subcontractor shall have sufficient skill and experience to perform the services assigned to them. Finally, Contractor represents that it, its employees and subcontractors have all licenses, permits, qualifications and approvals of whatever nature that are legally required to perform the services and that such licenses and approvals shall be maintained throughout the term of this Agreement. Any employee of the Contractor or its subcontractors who is determined by the City to be uncooperative, incompetent, a threat to the adequate or timely completion of the project, a threat to the safety of persons or property, or any employee who fails or refuses to perform the services in a manner acceptable to the City, shall be promptly removed from the project by the Contractor and shall not be re-employed to perform any of the services or to work on the project.
- J. Contractor Indemnification. Contractor shall indemnify, defend and hold the City, the Moreno Valley Housing Authority, and the Moreno Valley Community Services District (CSD), their officers, agents and employees harmless from any and all claims, damages, losses, causes of action and demands, including, without limitation, the payment of all consequential damages, expert witness fees, reasonable attorney's fees and other related costs

and expenses, incurred in connection with or in any manner arising out of Contractor's performance of the work contemplated by this Agreement and this Agreement. Acceptance of this Agreement signifies that the Contractor is not covered under the City's general liability insurance, employee benefits, or worker's compensation. It further establishes that the Contractor shall be fully responsible for such coverage. Contractor's obligation to indemnify shall survive expiration or termination of this Agreement, and shall not be restricted to insurance proceeds, if any, received by the City, the Moreno Valley Housing Authority, and the CSD, and their officers, agents and employees.

- K. Additional Indemnity Obligations. Contractor shall defend, with counsel of City's choosing and at Contractor's own cost, expense and risk, any and all claims, suits, actions or other proceedings of every kind covered by Section "J" that may be brought or instituted against City, the Moreno Valley Housing Authority, and the CSD, and their officers, agents and employees. Contractor shall pay and satisfy any judgment, award or decree that may be rendered against City, the Moreno Valley Housing Authority, and the CSD, and their officers, agents and employees as part of any such claim, suit, action or other proceeding. Contractor shall also reimburse City for the cost of any settlement paid by City, the Moreno Valley Housing Authority, and the CSD, and their officers, agents and employees as part of any such claim, suit, action or other proceeding. Such reimbursement shall include payment for City's attorney's fees and costs, including expert witness fees. Contractor shall reimburse City, the Moreno Valley Housing Authority, and the CSD, and their officers, agents and employees for any and all legal expenses and costs incurred by each of them in connection therewith or in enforcing the indemnity herein provided.
- L. Insurance Requirements. The Contractor will comply with the following insurance requirements at its sole expense. Insurance companies shall be rated (A Minus: VII—Admitted) or better in Best's Insurance Rating Guide and shall be legally licensed and qualified to conduct business in the State of California:

The Contractor shall procure and maintain, at its sole expense, Workers' Compensation Insurance in such amounts as will fully comply with the laws of the State of California and which shall indemnify, insure and provide legal defense for the Contractor and the City, the Housing Authority and CSD against any loss, claim, or damage arising from any injuries or occupational diseases happening to any worker employed by the Contractor in the course of carrying out the Agreement. This coverage may be waived if the Contractor is determined to be functioning as a sole proprietor and the city provided form "Exception to Worker's Compensation Coverage" is signed, notarized and attached to this Agreement

x General Liability Insurance—to protect against loss from liability imposed by law for damages on account of bodily injury, including death, and/or property damage suffered or alleged to be suffered by any person or persons whomever, resulting directly or indirectly from any act or activities of the Contractor, sub-Contractor, or any person acting for the Contractor or under its

control or direction. Such insurance shall be maintained in full force and effect throughout the terms of the Agreement and any extension thereof in the minimum amounts provided below:

Bodily Injury	\$1,000,000 per occurrence/ \$2,000,000 aggregate
Property Damage	\$500,000 per occurrence/ \$500,000 aggregate

x Professional Errors and Omission Insurance—such coverage shall not be less than \$1,000,000 per claim and aggregate.

ii Liability and Property Damage Insurance coverage for owned and non-owned automotive equipment operated on City/CSD/Housing Authority premises. Such coverage limits shall not be less than \$1,000,000 combined single limit.

x A Certificate of Insurance and appropriate additional insured endorsement evidencing the above applicable insurance coverage shall be submitted to the City prior to the execution of this Agreement. The Certificate of Insurance or an appropriate binder shall bear an endorsement containing the following provisions:

Solely as respect to services done by or on behalf of the named insured for the City of Moreno Valley, it is agreed that the City of Moreno Valley, the Moreno Valley Housing Authority, and the Moreno Valley Community Services District, their officers, employees and agents are included as additional insured under this policy and the coverage(s) provided shall be primary insurance and not contributing with any other insurance available to the City of Moreno Valley, the Moreno Valley Housing Authority, and the Moreno Valley Community Services District, its officers, employees and agents, under any third party liability policy

The terms of the insurance policy or policies issued to provide the above coverage shall neither be amended to reduce the required insurance limits and coverages nor shall such policies be canceled by the carrier without thirty (30) days prior written notice by certified or registered mail of amendment or cancellation to the City, except that cancellation for non-payment of premium shall require ten (10) days prior written notice by certified or registered mail. In the event the insurance is canceled, the Contractor shall, prior to the cancellation date, submit new evidence of insurance in the amounts established.

M. Intellectual Property. Any system or documents developed, produced or provided under this Agreement, including any intellectual property discovered or developed by Contractor in the course of performing or otherwise as a result of its work, shall become the sole property of the City unless explicitly stated otherwise in this Agreement. The Contractor may retain copies of any and all material, including drawings, documents, and specifications, produced by the Contractor in performance of this Agreement. The City and the Contractor

- agree that to the extent permitted by law, until final approval by the City, all data shall be treated as confidential and will not be released to third parties without the prior written consent of both parties.
- N. Entire Agreement. This Agreement constitutes the entire agreement between the parties. There are no understandings, agreements, or representations of warranties, expressed or implied, not specified in this Agreement. This Agreement applies only to the current proposal as attached. This Agreement may be modified or amended only by a subsequent written Agreement signed by both parties. Assignment of this Agreement is prohibited without prior written consent.
- O. (a) The City may terminate the whole or any part of this Agreement at any time without cause by giving at least ten (10) days written notice to the Contractor. The written notice shall specify the date of termination. Upon receipt of such notice, the Contractor may continue work through the date of termination, provided that no work or service(s) shall be commenced or continued after receipt of the notice which is not intended to protect the interest of the City. The City shall pay the Contractor within thirty (30) days after receiving any invoice after the date of termination for all non-objected to services performed by the Contractor in accordance herewith through the date of termination.
- (b) Either party may terminate this Agreement for cause. In the event the City terminates this Agreement for cause, the Contractor shall perform no further work or service(s) under the Agreement unless the notice of termination authorizes such further work.
- (c) If this Agreement is terminated as provided herein, City may require Contractor to provide all finished or unfinished documents and data and other information of any kind prepared by Contractor in connection with the performance of services under this Agreement. Contractor shall be required to provide such documents and other information within fifteen (15) days of the request.
- (d) In the event this Agreement is terminated in whole or in part as provided herein, City may procure, upon such terms and in such manner as it may determine appropriate, similar to those terminated.
- P. Payment. Payments to the Contractor pursuant to this Agreement will be reported to Federal and State taxing authorities as required. The City will not withhold any sums from compensation payable to Contractor. Contractor is independently responsible for the payment of all applicable taxes. Where the payment terms provide for compensation on a time and materials basis, the Contractor shall maintain adequate records to permit inspection and audit of the Contractor's time and materials charges under the Agreement. Such records shall be retained by the Contractor for three (3) years following completion of the services under the Agreement.
- Q. Restrictions on City Employees. The Contractor shall not employ any City employee or official in the work performed pursuant to this Agreement. No officer or employee of the City shall have any financial interest in this Agreement in violation of federal, state, or local law.

- R. Choice of Law and Venue. The laws of the State of California shall govern the rights, obligations, duties, and liabilities of the parties to this Agreement, and shall govern the interpretation of this Agreement. Any legal proceeding arising from this Agreement shall be brought in the appropriate court located in Riverside County, State of California.
- S. Delivery of Notices. All notices permitted or required under this Agreement shall be given to the respective parties at the following address, or at such other address as the respective parties may provide in writing for this purpose:

**Contractor:**

Stephen H Badgett  
24957 Tyler Place  
Murrieta, CA 92562

**City:**

City of Moreno Valley  
14177 Frederick Street  
P.O. Box 88005  
Moreno Valley, CA 92552  
Attn: Electric Utility Division Manager

Such notice shall be deemed made when personally delivered or when mailed, forty-eight (48) hours after deposit in the U.S. Mail, first class postage prepaid and addressed to the party at its applicable address. Actual notice shall be deemed adequate notice on the date actual notice occurred, regardless of the method of service.

- T. Time of Essence. Time is of the essence for each and every provision of this Agreement.
- U. City's Right to Employ Other Contractors. City reserves right to employ other contractors in connection with this project.
- V. Amendment; Modification. No supplement, modification, or amendment of this Agreement shall be binding unless executed in writing and signed by both parties.
- W. Waiver. No waiver of any default shall constitute a waiver of any other default or breach, whether of the same or other covenant or condition. No waiver, benefit, privilege, or service voluntarily given or performed by a party shall give the other party any contractual rights by custom, estoppel, or otherwise.
- X. No Third Party Beneficiaries. There are no intended third party beneficiaries of any right or obligation assumed by the parties.
- Y. Counterparts. This Agreement may be signed in counterparts, each of which shall constitute an original.



- Z. Invalidity; Severability. If any portion of this Agreement is declared invalid, illegal, or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions shall continue in full force and effect.
- AA. Assignment or Transfer. Contractor shall not assign, hypothecate, or transfer, either directly or by operation of law, this Agreement or any interest herein without the prior written consent of the City. Any attempt to do so shall be null and void, and any assignees, hypothecates or transferees shall acquire no right or interest by reason of such attempted assignment, hypothecation or transfer.
- BB Supplementary General Conditions (for projects that are funded by Federal programs). The following provisions, pursuant to 44 Code of Federal Regulations, Part 13, Subpart C, Section 13.36, as it may be amended from time to time, are included in the Agreement and are required to be included in all subcontracts entered into by CONTRACTOR for work pursuant to the Agreement, unless otherwise expressly provided herein. These provisions supersede any conflicting provisions in the General Conditions and shall take precedence over the General Conditions for purposes of interpretation of the General Conditions. These provisions do not otherwise modify or replace General Conditions not in direct conflict with these provisions. Definitions used in these provisions are as contained in the General Conditions.
1. CONTRACTOR shall be subject to the administrative, contractual, and legal remedies provided in the General Conditions in the event CONTRACTOR violates or breaches terms of the Agreement.
  2. CITY may terminate the Agreement for cause or for convenience, and CONTRACTOR may terminate the Agreement, as provided the General Conditions.
  3. CONTRACTOR shall comply with Executive Order 11246 of September 24, 1965, entitled Equal Employment Opportunity, as amended by Executive Order 11375 of October 13, 1967, and as supplemented in Department of Labor regulations (41 CFR chapter 60). (All construction contracts awarded in excess of \$10,000 by CITY and/or subcontracts in excess of \$10,000 entered into by CONTRACTOR.)
  4. CONTRACTOR shall comply with the Copeland Anti-Kickback Act (18 U.S.C. 874) as supplemented in Department of Labor regulations (29 CFR Part 3) (All contracts and subcontracts for construction or repair.)
  5. CONTRACTOR shall comply with the Davis-Bacon Act (40 U.S.C. 276a to 276a7) as supplemented by Department of Labor regulations (29 CFR Part 5).
  6. CONTRACTOR shall comply with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327330) as supplemented by Department of Labor regulations (29 CFR Part 5).
  7. CONTRACTOR shall observe CITY requirements and regulations pertaining to reporting included in the General Conditions.

8. Patent rights with respect to any discovery or invention which arises or is developed in the course of or under the Agreement shall be retained by the CITY.

9. Copyrights and rights in data developed in the course of or under the Agreement shall be the property of the CITY. FEMA/CalOES reserve a royalty-free, nonexclusive, irrevocable license to reproduce, publish or otherwise use or authorize to others to use for federal purposes a copyright in any work developed under the Agreement and/or subcontracts for work pursuant to the Agreement.

10. CONTRACTOR shall provide access by the City, the Federal grantor agency, the Comptroller General of the United States, or any of their duly authorized representatives to any books, documents, papers, and records of the contractor which are directly pertinent to that specific contract for the purpose of making audit, examination, excerpts, and transcriptions.

11. CONTRACTOR shall retain all required records for three years after CITY makes final payments and all other pending matters relating to the Agreement are closed.

12. CONTRACTOR shall comply with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 1857(h)), section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR part 15). (This provision applies to contracts exceeding \$100,000 and to subcontracts entered into pursuant to such contracts.)

13. CONTRACTOR shall comply with mandatory standards and policies relating to energy efficiency which are contained in the State energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94163, 89 Stat. 871).

**SIGNATURE PAGE TO FOLLOW**

IN WITNESS HEREOF, the parties have each caused their authorized representative to execute this Agreement.

City of Moreno Valley

Stephen H Badgett Consulting

BY: [Signature]  
For Chief Financial Officer

BY: [Signature]

TITLE: Owner / President  
President

11-1-18  
Date

Oct 18, 2018  
Date

APPROVED AS TO FORM  
DATE 10-25-18  
BY [Signature]  
CITY ATTORNEY  
CITY OF MORENO VALLEY

Attachment: Badgett PSA Executed 11012018 v1 (3388 : APPROVE FIRST AMENDMENT TO PROFESSIONAL SERVICES AGREEMENT WITH S

**INTERNAL USE ONLY**

ATTEST:

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City Clerk  
*(only needed if Mayor signs)*

APPROVED AS TO LEGAL FORM:

---

City Attorney

---

Date

RECOMMENDED FOR APPROVAL:

---

Department Head  
*(if contract exceeds 15,000)*

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Date

Exhibit A

## Stephen H Badgett Consulting

September 12, 2018

Jeannette Olko, Electric Utility Division Manager  
Financial & Management Services  
City of Moreno Valley  
14331 Frederick St., Moreno Valley, CA 92553

Re: Proposal for Providing Consulting Services

Dear Jeannette,

Enclosed please find a proposal for me to provide assistance in reviewing the scope of work for three Requests For Information (RFI). I understand these RFIs are for O&M, Engineering, and Customer Billing for Moreno Valley Utility (MVU). The goal of my proposal is to help MVU assess its business relationship with ENCO who is the present provider of these services.

I welcome any comments or suggestions and feel free to contact me as needed.

Respectfully Submitted,

*Steve*

Stephen H Badgett

enclosure

24957 Tyler Place Murrieta, CA 92562 [stephenhbadgett@gmail.com](mailto:stephenhbadgett@gmail.com) 951.231.4487

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## Stephen H Badgett Consulting

### **BACKGROUND**

In 2001, MVU was created as a result of the City's vision of operating a municipal utility to (i) provide local control over energy issues, (ii) ensure that net revenues from the utility operations would be reinvested in the Moreno Valley Community and (iii) support opportunities for economic development in the area. Economic growth in the City has been significant and MVU has experienced significant load growth, which has enabled the utility to set the foundation for a strong financial platform.

Since 2003 MVU's organizational structure has been based on contracting the utility operating functions such as engineering, service planning, customer billing, remittance processing, and operations and maintenance to ENCO Utility Services (ENCO).

In 2017, MVU developed its Strategic Plan and Roadmap (the 2017 Roadmap) to the Future, which defines the utility's mission, vision, and strategic areas of focus for the next five years. MVU's Mission is:

*"To provide safe, reliable, and economical public electric service with a focus on innovative customer solutions, infrastructure enhancement, community development, and environmentally responsible resource management."*

MVU's Vision is:

*"A trusted customer-owned community utility partner and a driving force for local economic development that is progressive, innovative, committed to environmental stewardship, and provides highly valued electric services that enhance the quality of life for Moreno Valley."*

In its 2017 Roadmap, MVU also defined its Strategic Areas of Focus, which include:

- Finance: MVU will operate in a manner that ensures long-term financial stability, affordable energy, and customer value.
- Workforce: MVU will attract and retain knowledgeable people who reflect the core values of MVU, work safety, and work well in the community.
- Customers: MVU's programs and services will meet the needs of our customers and the larger community.
- Reliability and Infrastructure: MVU's infrastructure is robust, safe, and reliable, meets customer's expectations, and is cost-effective.
- Community and Economic Development: MVU is an active participant on the economic development team to help attract businesses that bring jobs and value to the community.
- Power Supply: MVU fully supports a diversified, sustainable power supply that includes renewables, energy efficiency, demand response, energy storage, electric vehicles, and cost-effective and clean distributed generation.

In May of 2018, Leidos, Inc prepared a Strategic Planning Services Report listing several recommendations and approaches. Specifically it was recommended that MVU:

- Complete issuance and evaluation of RFIs for all functions— Operational & Management (O&M) services, Engineer, Procure and Construct (EPC) management services, and customer account management services; and

## Stephen H Badgett Consulting

- Determine contracting strategies for the functional areas that are under consideration in order to refine service levels and contractual terms and requirements for the actual contracting process and to prequalify vendors that would help MVU achieve its 2017 Roadmap.
- Define standards of performance and request tracking and reporting of specified performance metrics on a monthly basis for all services to obtain more detailed information as to the level of work and the quality of work conducted by the contractors.

### **QUALIFICATIONS**

Stephen H. Badgett has been working in the public sector for over 44 years. Mr. Badgett has a vast range of experience with California electric utilities including the City of Riverside Public Utilities, the 5<sup>th</sup> largest Publicly Owned Utility in California and the 25<sup>th</sup> largest in the nation serving as the Interim General Manager, Chief Operating Officer and Deputy General Manager. In those roles Badgett managed over 600 employees in all aspects of a publicly owned full service water and electric utility, including: Finance, Engineering, Service Delivery, Customer Relations, Human Resources, and Legislative Affairs with an annual budget of nearly \$1 billion. Within the past year Mr. Badgett served as Special Assistant to the General Manager of Pasadena Water & Power (Interim Assistant General Manager – Power Delivery) assisting the organization in its day to day activities; and served as the City of Banning Interim Electric Utility Director assisting that utility in its electric operations and the national recruitment for a permanent Director.

During Mr. Badgett's career he has developed programs for workforce development and to attract, develop and retain quality employees; created and presented community outreach programs including water and electric rate adjustments and controversial projects resulting in strong community support and approval; provided testimony and participated significantly with regional, state and federal legislative officials, regulatory agencies and joint powers agencies to ensure best outcomes from proposed legislation or regulation; developed and presented fiscal positions to credit rating agencies with successful up-rates; and successful negotiations of multi-year contracts with labor organizations representing trades/crafts and clerical employees.

Badgett is a graduate of the Tennessee State Technical Institute and the University of Memphis with degrees in architectural and electrical engineering respectively. He also completed the Executive Management Program from the A. Gary Anderson Graduate School of Management at the University of California, Riverside; and is a graduate of Leadership Riverside.

### **PROPOSED SCOPE OF WORK & DELIVERABLES**

Stephen H Badgett Consulting will review and provide and an overall assessment of RFIs for Operational & Management (O&M) services, Engineer, Procure and Construct (EPC) management services, and customer account management services. The assessment will:

- Identify any gaps, restraints or obstacles;
- Make recommendations as needed to remedy any identified issues including industry best practices; and
- Facilitate any discussions to mutually agree on issues and remedies.

The three assessments will be presented in written report form and can be expected within 10 working days from issuance of Notice to Proceed.

## Stephen H Badgett Consulting

### COSTS

Billing rate = \$175.00/hour; all hours are estimated.

- Evaluate O&M Management Services RFI ~ 4.0 hours @ \$175.00/hour = \$700.00
- Evaluate EPC Management Services RFI ~ 4.0 hours @ \$175.00/hour = \$700.00
- Evaluate Customer Account Management Services ~ 6.0 hours @ \$175.00/hour = \$1050.00
- Prepare Report w/ discussion ~ 4.0 hours @ \$175.00/hour = \$700.00

Total = \$3150.00



**EXHIBIT B****CITY RESPONSIBILITIES**

1. Furnish the Contractor all data which is pertinent to services to be performed by the Contractor and which is within the custody or control of the City, including, but not limited to, copies of MVU Organizational Assessment and copies of the three (3) Request for Information to be reviewed.
2. Provide timely review, processing, and reasonably expeditious approval of all submittals by the Contractor.
3. Provide timely City staff liaison with the Contractor when requested and when reasonably needed.

**EXHIBIT C**

TERMS OF PAYMENT

1. The Contractor's compensation shall not exceed \$5,000. *SAB 11/23/13*
2. The Contractor will obtain, and keep current during the term of this Agreement, the required City of Moreno Valley business license. Proof of a current City of Moreno Valley business license will be required prior to any payments by the City. Any invoice not paid because the proof of a current City of Moreno Valley business license has not been provided will not incur any fees, late charges, or other penalties. Complete instructions for obtaining a City of Moreno Valley business license are located at: [http://www.moval.org/do\\_biz/biz-license.shtml](http://www.moval.org/do_biz/biz-license.shtml)
3. The Contractor will electronically submit an invoice to the City on a monthly basis for progress payments along with documentation evidencing services completed to date. The progress payment is based on actual time and materials expended in furnishing authorized professional services since the last invoice. At no time will the City pay for more services than have been satisfactorily completed and the City's determination of the amount due for any progress payment shall be final. The Contractor will submit all original invoices to Accounts Payable staff at [AccountsPayable@moval.org](mailto:AccountsPayable@moval.org) Accounts Payable questions can be directed to (951) 413-3073. Copies of invoices may be submitted to Moreno Valley Utility at [mvuadmin@moval.org](mailto:mvuadmin@moval.org) or calls directed to (951) 413-3500.
3. The Contractor agrees that City payments will be received via Automated Clearing House (ACH) Direct Deposit and that the required ACH Authorization form will be completed prior to any payments by the City. Any invoice not paid because the completed ACH Authorization Form has not been provided will not incur any fees, late charges, or other penalties. The ACH Authorization Form is located at: [http://www.moval.org/city\\_hall/forms.shtml#bf](http://www.moval.org/city_hall/forms.shtml#bf)
4. The minimum information required on all invoices is:
  - A. Vendor Name, Mailing Address, and Phone Number
  - B. Invoice Date
  - C. Vendor Invoice Number
  - D. City-provided Reference Number (e.g. Project, Activity)
  - E. Detailed work hours by class title (e.g. Manager, Technician, or

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Specialist), services performed and rates, explicit portion of a contract amount, or detailed billing information that is sufficient to justify the invoice amount; single, lump amounts without detail are not acceptable.

6. The City shall pay the Contractor for all invoiced, authorized professional services within thirty (30) days of receipt of the invoice for same.
7. Reimbursement for Expenses. Contractor shall not be reimbursed for any expenses unless authorized in writing by City.
8. Maintenance and Inspection. Contractor shall maintain complete and accurate records with respect to all costs and expenses incurred under this Agreement. All such records shall be clearly identifiable. Contractor shall allow a representative of City during normal business hours to examine, audit, and make transcripts or copies of such records and any other documents created pursuant to this Agreement. Contractor shall allow inspection of all work, data, documents, proceedings, and activities related to the Agreement for a period of three (3) years from the date of final payment under this Agreement.

**Jeannette Olko**

---

**From:** Marshall Eyerman  
**Sent:** Thursday, November 1, 2018 3:24 PM  
**To:** Jeannette Olko  
**Cc:** Mayra Gonzalez; Dena Heald  
**Subject:** Re: Agreement

Ok. Dena can sign this agreement on my behalf.

-Marshall

Sent from my iPhone

**Marshall Eyerman**  
**Chief Financial Officer/City Treasurer**  
**Financial & Management Services**  
**City of Moreno Valley**

p: 951.413.3024 | e: [marshalle@moval.org](mailto:marshalle@moval.org) W: [www.moval.org](http://www.moval.org)

14177 Frederick St., Moreno Valley, CA 92553

On Nov 1, 2018, at 4:21 PM, Jeannette Olko <[jeannetteo@moval.org](mailto:jeannetteo@moval.org)> wrote:

Hi Marshall,  
FYI, the agreement is with Steve Badgett for review of RFIs that we want to issue. The agreement is for \$10,000.

Jeannette

**Jeannette Olko**  
**Electric Utility Division Manager**  
**Financial & Management Services**  
**City of Moreno Valley**

p: 951.413.3502 | e: [jeannetteo@moval.org](mailto:jeannetteo@moval.org) W: [www.moval.org](http://www.moval.org)

14331 Frederick St., Moreno Valley, CA 92553

----- Forwarded message -----

**From:** "Jeannette Olko" <[jeannetteo@moval.org](mailto:jeannetteo@moval.org)>  
**Date:** Thu, Nov 1, 2018 at 3:09 PM -0700  
**Subject:** Agreement  
**To:** "Marshall Eyerman" <[marshalle@moval.org](mailto:marshalle@moval.org)>  
**Cc:** "Mayra Gonzalez" <[mayrag@moval.org](mailto:mayrag@moval.org)>, "Dena Heald" <[denah@moval.org](mailto:denah@moval.org)>

Hi Marshall,  
I need an agreement signed today. Can you please provide Dena signature authority for this item?

Thank you.

Attachment: Badgett PSA Executed 11012018 v1 (3388 : APPROVE FIRST AMENDMENT TO PROFESSIONAL SERVICES AGREEMENT WITH S

Jeannette

Attachment: Badgett PSA Executed 11012018 v1 (3388 : APPROVE FIRST AMENDMENT TO PROFESSIONAL SERVICES AGREEMENT WITH S

**FIRST AMENDMENT TO AGREEMENT  
FOR PROFESSIONAL SERVICES**

The First Amendment to Agreement is by and between the CITY OF MORENO VALLEY, a municipal corporation, hereinafter referred to as “City,” and Stephen H. Badgett Consulting, hereinafter referred to as “Consultant.” This First Amendment to Agreement is made and entered into effective on the date the City signs this Amendment.

RECITALS:

Whereas, the City and Consultant entered into an Agreement entitled “AGREEMENT FOR PROFESSIONAL SERVICES” hereinafter referred to as “Agreement,” dated November 1, 2018.

Whereas, the Consultant is providing consulting services related to strategic planning for Moreno Valley Utility.

Whereas, it is desirable to amend the Agreement to expand the scope of the work to be performed by the Consultant as is more particularly described in Section 1 of this First Amendment.

Whereas, the Consultant has submitted a Proposal dated December 14, 2018 for expansion of the scope of work to be performed. A copy of said Proposal is attached as “Exhibit A-First Amendment” and is incorporated herein by this reference.

SECTION 1 AMENDMENT TO ORIGINAL AGREEMENT:

1.1 The Agreement termination date of June 30, 2019 is further extended by this Amendment to June 30, 2020.

1.2 Exhibit “B” to the Agreement is hereby amended by adding to the scope of work section described in “Exhibit A – First Amendment,” entitled “Proposed Scopes of Work & Services”.

**FIRST AMENDMENT TO AGREEMENT FOR PROFESSIONAL SERVICES**

1.3 Exhibit “D” to the Agreement is hereby further amended by adding to the cost proposal section thereof described in “Exhibit A – First Amendment,” entitled “PROPOSED SCOPES OF WORK & SERVICES”.

1.4 The City agrees to pay the Consultant and the Consultant agrees to receive a “Not-to-Exceed” fee of \$95,000, as set forth in the above-referenced Cost Summary, in consideration of the Consultant's performance of the work set forth in “Exhibit A – First Amendment.”

1.5 The total “Not-to-Exceed” fee for this contract is \$100,000 (\$5,000 for the original Agreement plus \$95,000 for the First Amendment to Agreement).

**SECTION 2**

2.1 Except as otherwise specifically provided in this Amendment, all other terms and conditions of the Agreement shall remain in full force and effect.

**SIGNATURE PAGE TO FOLLOW**

FIRST AMENDMENT TO AGREEMENT FOR PROFESSIONAL SERVICES

IN WITNESS HEREOF, the parties have each caused their authorized representative to execute this Agreement.

City of Moreno Valley

Insert Consultant Name

By: \_\_\_\_\_

By: \_\_\_\_\_

Thomas M. DeSantis, City Manager

Title: \_\_\_\_\_

(President of Vice President)

Date: \_\_\_\_\_

Date: \_\_\_\_\_

INTERNAL USE ONLY

APPROVED AS TO FORM:

\_\_\_\_\_

City Attorney

\_\_\_\_\_

Date

By: \_\_\_\_\_

Title: \_\_\_\_\_

(Corporate Secretary)

Date: \_\_\_\_\_

RECOMMENDED FOR APPROVAL:

\_\_\_\_\_

Department Head

\_\_\_\_\_

Date

Attachments: Exhibit A – First Amendment

Attachment: First Amendment SBadgett 01282019 (3388 : APPROVE FIRST AMENDMENT TO PROFESSIONAL SERVICES AGREEMENT WITH S



## Stephen H Badgett Consulting

December 14, 2018

Jeannette Olko, Electric Utility Division Manager  
Financial & Management Services  
City of Moreno Valley  
14331 Frederick St., Moreno Valley, CA 92553

Re: Proposal for Providing Management Consulting Services

Dear Jeannette,

Enclosed please find a proposal for me to provide executive management consulting services to the Moreno Valley Utility (MVU) on an as needed basis. The goal of my proposal is to support MVU as it navigates forward to determine the best business model to best serve its customers and support MVU's Mission, Vision and Core Values.

As we discussed, if MVU needs my services to address future needs, I could develop the Scope of Work and submit it to you for discussion and approval.

I welcome any comments or suggestions and feel free to contact me as needed.

Respectfully Submitted,

*Steve*

Stephen H Badgett

enclosure

Stephen H Badgett Consulting

# PROPOSAL TO PROVIDE EXECUTIVE MANAGEMENT CONSULTING SERVICES

## To the City of Moreno Valley Utility



December 14, 2018

## Stephen H Badgett Consulting

### **BACKGROUND**

In 2001, MVU was created as a result of the City's vision of operating a municipal utility to (i) provide local control over energy issues, (ii) ensure that net revenues from the utility operations would be reinvested in the Moreno Valley Community and (iii) support opportunities for economic development in the area. Economic growth in the City has been significant and MVU has experienced significant load growth, which has enabled the utility to set the foundation for a strong financial platform.

Since 2003 MVU's organizational structure has been based on contracting the utility operating functions such as engineering, service planning, customer billing, remittance processing, and operations and maintenance to ENCO Utility Services (ENCO).

In 2017, MVU developed its Strategic Plan and Roadmap (the 2017 Roadmap) to the Future, which defines the utility's mission, vision, and strategic areas of focus for the next five years. MVU's Mission is:

*"To provide safe, reliable, and economical public electric service with a focus on innovative customer solutions, infrastructure enhancement, community development, and environmentally responsible resource management."*

MVU's Vision is:

*"A trusted customer-owned community utility partner and a driving force for local economic development that is progressive, innovative, committed to environmental stewardship, and provides highly valued electric services that enhance the quality of life for Moreno Valley."*

In its 2017 Roadmap, MVU also defined its Strategic Areas of Focus, which include:

- Finance: MVU will operate in a manner that ensures long-term financial stability, affordable energy, and customer value.
- Workforce: MVU will attract and retain knowledgeable people who reflect the core values of MVU, work safety, and work well in the community.
- Customers: MVU's programs and services will meet the needs of our customers and the larger community.
- Reliability and Infrastructure: MVU's infrastructure is robust, safe, and reliable, meets customer's expectations, and is cost-effective.
- Community and Economic Development: MVU is an active participant on the economic development team to help attract businesses that bring jobs and value to the community.
- Power Supply: MVU fully supports a diversified, sustainable power supply that includes renewables, energy efficiency, demand response, energy storage, electric vehicles, and cost-effective and clean distributed generation.

In May of 2018, Leidos, Inc prepared a Strategic Planning Services Report listing several recommendations and approaches. The report presented five options for MVU to consider. They were:

24957 Tyler Place Murrieta, CA 92562 [stephenbadgett@gmail.com](mailto:stephenbadgett@gmail.com) 951.231.4487

## Stephen H Badgett Consulting

OPTION 1 - RENEGOTIATION OF ENCO AGREEMENT

OPTION 2 - CONTRACT WITH PRIVATE ENTITIES

OPTION 3 - CONTRACT WITH PUBLICLY OWNED UTILITY (Removed from further consideration)

OPTION 4 - PROVIDE ENGINEERING FUNCTION IN- HOUSE

OPTION 5 - PHASE IN ALL FUNCTIONS IN-HOUSE

In addition, it was recommended MVU particularly address:

- Issuance of Request For Information (RFI) for all functions - Operational & Management (O&M) services, Engineer, Procure and Construct (EPC) management services, and Customer Account management services
- Determine contracting strategies for the functional areas that are under consideration in order to refine service levels and contractual terms and requirements for the actual contracting process and to prequalify vendors that would help MVU achieve its 2017 Roadmap
- Define standards of performance and request tracking and reporting of specified performance metrics on a monthly basis for all services to obtain more detailed information as to the level of work and the quality of work conducted by the contractors.

## Stephen H Badgett Consulting

### **QUALIFICATIONS**

Stephen H. Badgett has been working in the public sector for over 44 years. Mr. Badgett has a vast range of experience with California electric utilities including the City of Riverside Public Utilities, the 5<sup>th</sup> largest Publicly Owned Utility in California and the 25<sup>th</sup> largest in the nation serving as the Interim General Manager, Chief Operating Officer and Deputy General Manager. In those roles Badgett managed over 600 employees in all aspects of a publicly owned full service water and electric utility, including: Finance, Engineering, Service Delivery, Customer Relations, Human Resources, and Legislative Affairs with an annual budget of nearly \$1 billion. Within the past year Mr. Badgett served as Special Assistant to the General Manager of Pasadena Water & Power (Interim Assistant General Manager – Power Delivery) assisting the organization in its day to day activities; and served as the City of Banning Interim Electric Utility Director assisting that utility in its electric operations and the national recruitment for a permanent Director.

During Mr. Badgett's career he has developed programs for workforce development and to attract, develop and retain quality employees; created and presented community outreach programs including water and electric rate adjustments and controversial projects resulting in strong community support and approval; provided testimony and participated significantly with regional, state and federal legislative officials, regulatory agencies and joint powers agencies to ensure best outcomes from proposed legislation or regulation; developed and presented fiscal positions to credit rating agencies with successful up-rates; and successful negotiations of multi-year contracts with labor organizations representing trades/crafts and clerical employees.

Badgett is a graduate of the Tennessee State Technical Institute and the University of Memphis with degrees in architectural and electrical engineering respectively. He also completed the Executive Management Program from the A. Gary Anderson Graduate School of Management at the University of California, Riverside; and is a graduate of Leadership Riverside.

## Stephen H Badgett Consulting

### **PROPOSED SCOPES OF WORK & SERVICES**

In addition to providing recommendations for organizational effectiveness, operational efficiency, business communications, process improvement, strategic planning, and public outreach services Stephen H Badgett Consulting can provide the following specifically to assist MVU as it progresses toward a final resolution of its business model for the future.

- Request For Information – continue assistance with the process including refining the documents, issuance, interviewing and evaluation of candidate responses.
- Assist MVU in the Option(s) it may choose.
  1. Renegotiation of ENCO contract
  2. Negotiation of new contracts with private entities
  3. Providing in-house engineering (organizational)
  4. Phase in of all functions in-house (organizational)
- Assess Customer Billing function (presently ENCO)
- Provide Utility Executive Management support (engineering, O&M, financial business units)
- Provide Management Leadership Training and Mentoring
- Assist in Workforce Development
- Assist in Key Professional Personnel Recruitment



## Report to City Council

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**TO:** Mayor and City Council

**FROM:** Marshall Eyerman, Chief Financial Officer

**AGENDA DATE:** February 19, 2019

**TITLE:** AWARD OF AGREEMENTS FOR COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) FUNDED AMERICANS WITH DISABILITIES ACT (ADA) IMPROVEMENTS AT CITY FACILITIES

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### **RECOMMENDED ACTION**

#### **Recommendations:**

1. Award a construction contract to RS Construction & Development, 1042 N. Mountain Ave. Suite B # 552, Upland, CA 91786, for \$196,200, for the Interior ADA Improvements Project at Moreno Valley Animal Shelter and authorize the City Manager to execute a contract with RS Construction & Development in substantial conformance with the attached contract.
2. Award a construction contract to RS Construction & Development, 1042 N. Mountain Ave. Suite B # 552, Upland, CA 91786, for \$186,650, for the Interior ADA Improvements Project at Moreno Valley Conference & Recreation Center and authorize the City Manager to execute a contract with RS Construction & Development in substantial conformance with the attached contract.
3. Authorize the City Manager to execute any subsequent related change orders to the contracts, but not exceeding the approved budget and subject to the approval of the City Attorney.

### **SUMMARY**

This report recommends approval of a contract with RS Construction & Development, for the construction of the Interior ADA Improvements Project at the Moreno Valley Animal Shelter, and a contract with RS Construction & Development, for the construction of the Interior ADA Improvements Project at the Moreno Valley Conference and Recreation Center. These projects are funded by the Community Development

Block Grant (CDBG) Fund (2512). These projects are consistent with the City Council’s Momentum MoVal Strategic Plan as addressing deferred maintenance of City infrastructure assets remains a top priority for the Council.

**DISCUSSION**

In 2018, the City’s Facilities Division was awarded \$400,000 of CDBG funding to complete improvements at the Animal Shelter and the Moreno Valley Conference and Recreation Center. The City’s accessibility consultant, Disability Access Consultants, identified several opportunities to increase ADA accessibility throughout these facilities, which the funds may be used for.

The City requested informal bids, in accordance with City Purchasing Policy and the California Uniform Public Construction Cost Accounting Act. Bids were requested from 5 contractors, of which 2 contractors responded. Based on the responses received, staff is recommending awarding contracts to RS Construction & Development for the completion of these two separate projects.

The Americans with Disabilities Act (ADA) requires that local government shall responsibly ensure equal access to its public facilities for all people, especially those with disabilities. The City of Moreno Valley has developed an ADA Transition Plan demonstrating its commitment to ensuring equal access for all in accordance with the Americans with Disabilities Act Title II Regulations.

**ALTERNATIVES**

1. Approve and authorize the recommended actions as presented in this staff report. This alternative will provide for the timely construction of the ADA Improvements projects to meet the CDBG funding deadline.
2. Do not approve and authorize the recommended actions as presented in this staff report. Staff does not recommend this alternative as it will delay the construction of needed improvements and prevent the project from meeting the CDBG funding deadline.

**FISCAL IMPACT**

These projects are funded by the Community Development Block Grant (CDBG) Fund (2512).

Description	Fund	GL Account No.	Type (Rev/Exp)	FY 18/19 Budget	Proposed Adjustments	FY 18/19 Amended Budget
CIP	Comm Block Grant (2512)	2512-30-40-80010-720199	EXP	\$400,000	\$0	\$400,000



AVAILABLE BUDGET – FISCAL YEAR 2018/2019:

Community Development Block Grants (CDBG) (Account 2512-30-40-80010) .....	\$400,000
Total .....	<b>\$400,000</b>

ESTIMATED PROJECT COSTS:

Construction .....	\$382,850
Project Administration/Inspection* .....	\$17,150
Total .....	<b>\$400,000</b>

*\*Project administration and inspection will be provided by City staff*

ANTICIPATED PROJECT SCHEDULE:

Construction ..... February to March 2019

**NOTIFICATION**

Prior to construction, all utilities, adjacent property owners, business owners, law enforcement, fire department, and other emergency services responders in the area will be notified in a timely manner of the proposed construction.

**PREPARATION OF STAFF REPORT**

Prepared By:  
Angelic Davis  
Purchasing & Facilities Division Manager

Department Head Approval:  
Marshall Eyerman  
Chief Financial Officer/City Treasurer

**CITY COUNCIL GOALS**

**Advocacy.** Develop cooperative intergovernmental relationships and be a forceful advocate of City policies, objectives, and goals to appropriate external governments, agencies and corporations.

**Public Facilities and Capital Projects.** Ensure that needed public facilities, roadway improvements, and other infrastructure improvements are constructed and maintained.

**Positive Environment.** Create a positive environment for the development of Moreno Valley's future.

**Community Image, Neighborhood Pride and Cleanliness.** Promote a sense of community pride and foster an excellent image about our City by developing and executing programs which will result in quality development, enhanced neighborhood preservation efforts, including home rehabilitation and neighborhood restoration.

**CITY COUNCIL STRATEGIC PRIORITIES**

- 1. Economic Development
- 2. Public Safety
- 3. Library
- 4. Infrastructure
- 5. Beautification, Community Engagement, and Quality of Life
- 6. Youth Programs

Objective 4.3: Address deferred maintenance of City infrastructure assets.

**ATTACHMENTS**

- 1. RS Construction \_ADA Improvements Animal Shelter\_docx
- 2. RS Construction \_ADA Improvements CRC\_docx

**APPROVALS**

Budget Officer Approval	<u>✓ Approved</u>	2/13/19 2:03 PM
City Attorney Approval	<u>✓ Approved</u>	2/13/19 12:45 PM
City Manager Approval	<u>✓ Approved</u>	2/13/19 4:02 PM

City of Moreno Valley  
Public Works Agreement

Interior ADA Improvements Project at Moreno Valley Animal Shelter

This Agreement is made by and between the City of Moreno Valley, with its principal place of business at 14177 Frederick Street, Moreno Valley, California 92552, (hereinafter referred to as "Agency") and the contractor set forth below, (hereinafter referred to as "Contractor").

WHEREAS, Agency has determined it is necessary and desirable to secure certain services for the above-referenced Project; and,

WHEREAS, Agency staff does not have the expertise and/or capacity to perform this work in-house; and,

WHEREAS, the public interest, convenience, necessity and general welfare will be served by this Agreement; and,

WHEREAS, Contractor is specially trained, experienced and competent to perform the services required by this agreement; and,

WHEREAS, Contractor represents it is qualified and willing to provide such services pursuant to the terms and conditions of this Agreement.

NOW, THEREFORE, IT IS AGREED by and between Agency and Contractor as follows:

**A. CONTRACTOR INFORMATION -**

**B. CONTRACTOR INFORMATION -**

Contractor's Name: RS Construction & Development

Address: 1042 N. Mountain Ave. Suite B #552

City: Upland

State: CA Zip: 91786

Business Phone: (909) 920-1144 Fax No. N/A

Other Contact Number: (909)455-3713

Email: [info@rscdinc.com](mailto:info@rscdinc.com)

Business License Number: 33398

Federal Tax I.D. Number: 82-1963599

Contractor's License No.:1005429

DIR PWC Registration No.: 1000053445

**C. COMPLETION PERIOD – March 31, 2019**

**D. KEY PERSONNEL – Ric Serna**

**E. CONTRATOR REPRESENTATIVE - Ric Serna**

**F. CONTRACT PRICE - \$196,200.00**

**G. NOT TO EXCEED - The Contractors total compensation under this Agreement shall not exceed ONE HUNDRED NINETY SIX THOUSAND, TWO HUNDRED and 00/100 DOLLARS \$196,200.00).**

**H. CONTRACT TIMES -**

Base Bid: 45 Working Days

**CITY CONTRACT** – All of the terms, conditions, and exhibits attached hereto and designated as FORM CA100, are hereby incorporated herein and made a part of this Agreement as if set forth herein in full.

IN WITNESS HEREOF, the parties have each caused their authorized representative to execute this Agreement.

City of Moreno Valley  
Public Works Agreement

City of Moreno Valley  
 Print Name: Thomas M. DeSantis  
 Signature: \_\_\_\_\_  
 Title: City Manager  
 Date: \_\_\_\_\_

**Attest:** \_\_\_\_\_  
 City Clerk (only if Mayor signs)

**Approved as to Legal Form**  
 By: \_\_\_\_\_  
 Dep. / Asst. / City Attorney  
 Date: \_\_\_\_\_

**Recommended For Approval**  
 By: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Date: \_\_\_\_\_

Contractor Name: RS Construction & Development  
 Print Name: Ric Serna  
 Signature: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Date: \_\_\_\_\_

Print Name: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Date: \_\_\_\_\_

Signature(s) must be accompanied by a completed notary certificate of acknowledgement attached hereto. A general partner must sign on behalf of a partnership. Two (2) corporate officers must sign on behalf of a corporation unless the corporation has a corporate resolution that allows one person to sign on behalf of the corporation; if applicable, said resolution must be attached hereto. The corporate seal may be affixed hereto.

Attachment: RS Construction \_ADA Improvements Animal Shelter\_ docx (3413 : AWARD OF AGREEMENTS FOR COMMUNITY DEVELOPMENT

Agreement For  
Public Works Projects Over \$25,000  
Utilizing Federal Funds

1. **SCOPE OF SERVICE** - The Contractor's scope of services for the Project is described in Exhibit "A", attached hereto and incorporated herein by this reference (hereinafter the "Project" or the "Work").
2. **INSURANCE** - The Contractor and each of its subcontractors shall comply with all insurance requirements set forth in Exhibit "B", attached hereto and incorporated herein by this reference. The Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor.
3. **AGENCY RESPONSIBILITIES** – The Agency's responsibilities under this Agreement, other than terms of payment, are described in Exhibit "C", attached hereto and incorporated herein by this reference.
4. **FEDERAL FUNDING** – This Agreement is funded in whole or in part using federal grants or other funding sources and is subject to the terms and conditions set forth in Exhibit "D", attached hereto and incorporated herein.
5. **ADDITIONAL CONTRACT DOCUMENTS** - The Contract Documents consist of the following, which are incorporated herein by this reference:
  - a. Governmental approvals, including, but not limited to, permits required for the Work;
  - b. Any and all Contract Change Orders issued after execution of this Agreement;
  - c. Any addenda issued prior to the opening of the Bids;
  - d. The City Special Provisions, including the General Provisions and Technical Provisions thereof, which amend, modify, and or supplement the Standard Specifications for Public Works Construction ("Greenbook");
  - e. The specifications, standards, and procedures set forth in the latest Greenbook and the California Building Standards Code ("CBSC"), as each may be amended from time to time (together, "Public Works Authority");
  - f. Project Plans;
  - g. City Standard Plans;
  - h. Caltrans Standard Plans;
  - i. Other Agency Standard Plans specified by the City Engineer;
  - j. The Bidding Documents;
  - k. Contractor's Certificates of Insurance and Endorsements;
  - l. Contractor's Bidder's Proposal and Subcontractor Listing.
6. **CONFLICTS** - In the event of conflict between any of the Contract Documents, the provisions placing a more stringent requirement on the Contractor shall prevail. The Contractor shall provide the better quality or greater quantity of Work and/or materials unless otherwise directed by Agency in writing. In the event none of the Contract Documents place a more stringent requirement or greater burden on the Contractor, the controlling provision shall be that which is found in the Agreement, followed by the Exhibits to the Agreement, followed by the documents listed in Section 6, above, in order of precedence.
7. **PAYMENT TERMS** - In consideration for the Contractor's full, complete, timely, and faithful performance of the Work required by the Contract Documents, the City shall pay Contractor for the actual quantity of Work required under the Bid Items awarded by the City performed in accordance with

the lump sum prices and unit prices for Bid Items and Alternate Bid Items, if any, set forth the Bidder's Proposal submitted with the Bid. The sum of the unit prices and lump sum prices for the Base Bid Items and Alternate Bid Items, if any, awarded by the City is set forth on in Section "E" of this Agreement ("Contract Price"). The Alternate Bid Items selected by the City and included in the Contract are set forth in Section "G" of this Agreement. It is understood and agreed that the quantities set forth in the Bidder's Proposal for which unit prices are fixed are estimates only and that City will pay and Contractor will accept, as full payment for these items of work, the unit prices set forth in the Bidder's Proposal multiplied by the actual number of units performed, constructed, or completed as directed by the City Engineer.

The Contractor's total compensation shall not exceed the amount set forth in Section "F" of this Agreement.

Based upon applications for payment submitted by the Contractor to the Agency, the Agency shall make payments to the Contractor in accordance with Section 9 of the Standard Specifications, as modified by Section 9 of the City Special Provisions.

The Contractor will obtain, and keep current during the term of this Agreement, the required City of Moreno Valley business license. Proof of a current City of Moreno Valley business license will be required prior to any payments by the Agency. Any invoice not paid because the proof of a current City of Moreno Valley business license has not been provided will not incur any fees, late charges, or other penalties. Complete instructions for obtaining a City of Moreno Valley business license are located at: [http://www.moval.org/do\\_biz/biz-license.shtml](http://www.moval.org/do_biz/biz-license.shtml)

The Contractor will electronically submit an invoice to the Agency as provided in this Agreement for progress payments along with documentation evidencing services completed to date. The progress payment is based on actual time and materials expended in furnishing authorized professional services since the last invoice. At no time will the Agency pay for more services than have been satisfactorily completed and the Agency determination of the amount due for any progress payment shall be final. The Contractor will submit all original invoices to Accounts Payable staff at [AccountsPayable@moval.org](mailto:AccountsPayable@moval.org). Accounts Payable questions can be directed to (951) 413-3087.

The Contractor agrees that Agency payments will be received via Automated Clearing House (ACH) Direct Deposit and that the required ACH Authorization form will be completed prior to any payments by the Agency. Any invoice not paid because the completed ACH Authorization Form has not been provided will not incur any fees, late charges, or other penalties. The ACH Authorization Form is located at [http://www.moval.org/city\\_hall/forms.shtml#bf](http://www.moval.org/city_hall/forms.shtml#bf).

The minimum information required on all invoices is:

- a. Vendor Name, Mailing Address, and Phone Number
- b. Invoice Date
- c. Vendor Invoice Number
- d. City-provided Reference Number (e.g. Project, Activity, Purchase Order No.)
- e. Detailed work hours by class title (e.g. Manager, Technician, or Specialist), services performed and rates, explicit portion of a contract amount, or detailed billing information that is sufficient to justify the invoice amount; single, lump amounts without detail are not acceptable.

The Agency shall pay the Contractor for all invoiced, authorized professional services within thirty (30) days of receipt of the invoice for same, provided the services reflected in the invoice were performed to the reasonable satisfaction of the Agency in accordance with the terms of this Agreement.

Pursuant to Public Contract Code section 9203, the Agency shall retain no less than five (5) percent of the compensation to be paid to Contractor which shall be released to the Contractor no later than sixty (60) days from the date of the Agency's acceptance of the work pursuant to this Agreement.

Payments to the Contractor pursuant to this Agreement will be reported to federal and state taxing authorities as required. Contractor is independently responsible for the payment of all applicable taxes. Where the payment terms provide for compensation on a time and materials basis, the Contractor shall maintain adequate records to permit inspection and audit of the Contractor's time and materials charges under the Agreement. Upon reasonable notice, such records must be made available to the Agency's agent; however, nothing herein shall convert such records into public records, unless otherwise required by law. Such records shall be retained by the Contractor for three (3) years following completion of the services under the Agreement.

The Agency may withhold payments to cover claims filed under Civil Code § 9350 et seq.

Pursuant to Labor Code Section 1773.3, the Agency shall withhold final payment due to Contractor until at least thirty (30) days following submission of all information required to be submitted by Contractor under that Section and as required for a Notice of Award to be provided to the Department of Industrial Relations. This Section shall not apply to Projects of \$25,000 or less for construction, alteration, demolition, installation or repair work or to projects of \$15,000 or less for maintenance work.

- 8. **TERM** – The term of this Agreement shall commence upon execution by Agency, and terminate two (2) years after acceptance of the work, pursuant to this Agreement, or release of the Performance Bond, whichever occurs first.
- 9. **CONTRACT TIME** – After the Agreement has been fully executed by the Contractor and the Agency, the Agency shall issue the “Notice to Proceed to Fulfill Preconstruction Requirements and Notice to Proceed with Order of Materials.” The date specified in the Notice to Proceed to Fulfill Preconstruction Requirements and Notice to Proceed with Order of Materials constitutes the date of commencement of the Contract Times set forth in Section “H” of this Agreement. The Contract Time is therefore dependent on the number of alternative Bids selected, if any, and will be based on the table in Section “H” of this Agreement. The Contract Time includes the time necessary to fulfill preconstruction requirements, place the order of materials, and to complete construction of the Project (except as adjusted by subsequent Change Orders).

The Notice to Proceed to Fulfill Preconstruction Requirements and Notice to Proceed with Order of Materials shall further specify that Contractor must complete the preconstruction requirements and order materials within the Preconstruction Contract Time period set in Section “H” of this Agreement, after the date of commencement of the Contract Time. This duration is part of the Contract Time.

Critical preconstruction requirements include, but are not limited to, the following:

- a. Submitting and obtaining approval of Traffic Control Plans
- b. Submitting and obtaining approval of the Stormwater Pollution Prevention Plan (SWPPP)/Water Pollution Control Plan (WPCP)
- c. Submitting and obtaining approval of critical required submittals
- d. Installation of the approved Project Identification Signs
- e. Obtaining an approved no fee Encroachment Permit
- f. Obtaining a Temporary Use Permit for a construction yard
- g. Notifying all agencies, utilities, residents, etc., as outlined in the Bidding Documents
- h. Completion of all pre-construction activities under Environmental Mitigations

If the Agency's issuance of a Notice to Proceed to Fulfill Preconstruction Requirements and Notice to Proceed with Order of Materials is delayed due to Contractor's failure to return the fully

executed Agreement and insurance and bond documents within ten (10) Working Days after Contract award, then Contractor agrees to the deduction of one (1) Working Day from the number of days to complete the Project for every Working Day of delay in the Agency's receipt of said documents. This right is in addition to and does not affect the Agency's right to demand forfeiture of Contractor's Bid Security if Contractor persistently delays in providing the required documentation.

After all preconstruction requirements are met and materials have been ordered in accordance with the Notice to Proceed to Fulfill Preconstruction Requirements and Notice to Proceed with Order of Materials, the Agency shall issue the "Notice to Proceed with Construction," at which time the Contractor shall diligently prosecute the Work, including corrective items of Work, day to day thereafter, within the remaining Contract Time.

10. **LIQUIDATED DAMAGES** - The Contractor and Agency (collectively, the "Parties") agree to liquidate damages with respect to Contractor's failure to order all materials in accordance with the Notice to Proceed with Order of Materials and/or, failure to fulfill the preconstruction requirements, and/or failure to complete the Work within the Contract Time. The Parties intend for the liquidated damages set forth herein to apply to this Contract as set forth in Government Code Section 53069.85. Contractor acknowledges and agrees that the liquidated damages are intended to compensate the Agency solely for Contractor's failure to meet the deadline for completion of the Work and will not excuse Contractor from liability from any other breach, including any failure of the Work to conform to the requirements of the Contract Documents.

In the event that Contractor fails to order all materials in accordance with the Notice to Proceed with Order of Materials and/or, fails to fulfill the preconstruction requirements, and/or fails to complete the Work within the Contract Time, Contractor agrees to pay the Agency \$2,500.00 per Calendar day that completion of the Work is delayed beyond the Contract Time, as adjusted by Contract Change Orders. The Contractor will not be assessed liquidated damages for delays occasioned by the failure of the Agency or of the owner of a utility to provide for the removal or relocation of utility facilities.

The Parties acknowledge and agree that the foregoing liquidated damages have been set based on an evaluation of damages that the Agency will incur in the event of late completion of the Work. The Parties acknowledge and agree that the amount of such damages are impossible to ascertain as of the date of execution hereof and have agreed to such liquidated damages to fix the Agency's damages and to avoid later disputes. It is understood and agreed by Contractor that liquidated damages payable pursuant to this Agreement are not a penalty and that such amounts are not manifestly unreasonable under the circumstances existing as of the date of execution of this Agreement.

It is further mutually agreed that the Agency will have the right to deduct liquidated damages against progress payments or retainage and that the Agency will issue a Change Order or Construction Change Directive and reduce the Contract Price accordingly. In the event the remaining unpaid Contract Price is insufficient to cover the full amount of liquidated damages, Contractor shall pay the difference to the Agency.

11. **STOP WORK** - Any work completed by the Contractor after the issuance of a Stop Work Notice by the City shall be rejected and/or removed and replaced as specified in Section 2-11 of the Special Provisions.

12. **EARLY COMPLETION** - While the Contractor may schedule completion of all of the Work, or portions thereof, earlier than the Contract Time, the Agency is exempt from liability for and the Contractor will not be entitled to an adjustment of the Contract Sum or to any additional costs, damages, including, but not limited to, claims for extended general conditions costs, home office overhead, jobsite overhead, and management or administrative costs, or compensation whatsoever, for use of float time or for



Contractor's inability to complete the Work earlier than the Contract Time for any reason whatsoever, including but not limited to, delay cause by Owner or other Excusable Compensable Delay. See Section 6-6 of the Standard Specifications and City Special Provisions regarding compensation for delays.

13. **WORK DAYS** - The work performed in this Agreement shall be performed Monday through Friday, 7 a.m. to 5 p.m. Agency observed holidays shall be observed by the Contractor and no work shall be performed on these dates, unless prior written permission is granted.
14. **SUBSTANTIAL COMPLETION** - Substantial completion of work shall be evidenced by inspection and approval by Agency staff in writing.
15. **LABOR LAWS** - All work or services performed within the State of California pursuant to this Agreement by Contractor, Contractor's employees and independent contractors, or Contractor's subcontractors and its subcontractors' employees and independent contractors shall be performed by individuals lawfully permitted to perform such work or services in the State of California and/or the United States of America pursuant to all applicable State and/or Federal labor laws, rules and regulations including, but not limited to, any State or Federal law, rule or regulation prohibiting the employment of undocumented workers or any other person not lawfully permitted to perform said work or services in the State of California or the United States of America.
16. **DISCRIMINATION** - Contractor represents that it is an equal opportunity employer and shall not discriminate against any subcontractor, employee, or applicant ("person") for employment because of denial of family and medical care leave; race; religious creed (including religious dress and grooming practices); color; national origin (including language use restrictions); ancestry; physical disability or mental disability (including HIV and Aids); medical condition (cancer and genetic characteristics); genetic information; military or veteran status; marital status; gender, gender identity, and gender expression; sex (which includes pregnancy, childbirth, breastfeeding and medical conditions related to pregnancy, childbirth or breastfeeding); age or sexual orientation. Unless otherwise permitted under the law, Contractor shall not refuse to hire or employ any such person or refuse to select any such person for a training program leading to employment, or bar or discharge any such person from employment or from a training program leading to employment, or otherwise discriminate against any such person in compensation or in terms, conditions, or privileges of employment.
17. **PREVAILING WAGES** - Contractor and all of Contractor's subcontractors, if any, shall pay each employee engaged in all applicable trades or occupation not less than the prevailing hourly wage rate for work of a similar character in the locality in which the public work is performed, and not less than the general prevailing rate of per diem wages for holiday and overtime work. In accordance with the provisions of Section 1770 of the California Labor Code ("Labor Code"), the Director of Department of Industrial Relations of the State of California ("DIR") has determined the general prevailing rates of wages and employer payments for health and welfare, pension, vacation, travel time, and subsistence pay as provided for in Labor Code Section 1773.8, apprenticeship or other training programs authorized by Labor Code Section 3093 and similar purposes applicable to the work to be done. Said wages are available through the DIR Internet website at <http://www.dir.ca.gov/dlsr/PWD/index.htm> and are on file at Agency Hall, as provided in Section 1773.2 of the Labor Code. Said rates shall be posted at the Project site where work is to be performed, in accordance with Labor Code Section 1773.2. Contractor shall access a copy of the wage rate determination and shall make all subcontractors, if any, aware of the determination. As the wage determination for each craft reflects an expiration date, it shall be the Contractor's responsibility to ensure that the prevailing wage rates of concern are current and paid. Subject to the safe harbor provisions of Labor Code Section 1775, Contractor shall forfeit to the Agency an amount not to exceed two hundred dollars (\$200) for each calendar day or portion thereof, as set by

the Labor Commissioner in accordance with the terms of Labor Code section 1775, for each laborer, workmen or mechanics employed that is paid less than the general prevailing rate of wages herein referred to and stipulated for any work done under the proposed contract, by him, or by any subcontractor under him, in violation of the provisions of the Labor Code, and in particular, Sections 1770 to 1781 inclusive. Contractor and any and all or its subcontractors shall forfeit to the Agency twenty-five dollars (\$25) for each worker employed in the performance of this Agreement for each calendar day during which the worker is required or permitted to work more than eight (8) hours in any one calendar day and forty (40) hours in any one calendar week in violation of the provisions of Section 1813 of the Labor Code. In the event the total cost of the Project is thirty thousand dollars (\$30,000.00) or more, Contractor shall further comply with provisions set forth in Labor Code Section 1777.5 pertaining to employment of properly registered apprentices, including without limitation the obligation to (i) pay employed apprentices the prevailing rate of per diem wages for apprentices in the trade to which he or she is registered and shall be employed only at the work of craft or trade to which he or she is registered; (ii) employ apprentices in at least the ratio as set forth in said section; (iii) submit contract award information to an applicable apprenticeship program; and (iv) contribute to California Apprenticeship Council.

Contractor and all subcontractors hired to perform any work under the Project shall keep accurate payroll records, including the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each worker, in accordance with Section 1776 of the Labor Code. Payroll records shall be on forms provided by the Division of Labor Standards Enforcement ("DLSE") or in a manner containing the same information as the forms provided by the DLSE. Failure to comply with the above may result in monetary penalties to the Contractor or affected subcontractor. Payroll records shall be verified by written declaration made under penalty of perjury, that the information contained in the records is true and correct. Contractor and any and all subcontractors shall make a certified copy of all payroll records available for inspection by DLSE, the Agency or any member of the public and otherwise provide certified copies of such records to any of the foregoing within ten (10) days of Contractor's and subcontractor's receipt of written request therefor. Failure to comply with the above may result in monetary penalties, in accordance with Labor Code Section 1776(d) and (h).

Notwithstanding anything else to the contrary, Contractor hereby acknowledges that all contractors must be registered with the DIR pursuant to Labor Code Section 1725.5 in order to be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any public work contract, including this Agreement, that is subject to the payment of prevailing wages. Contractor represents and warrants that Contractor is registered with the DIR in the manner prescribed by the DIR and has paid the requisite application fee, as required by Labor Code Section 1725.5. Moreover, prior to Contractor entering into any contracts with any subcontractor, Contractor shall obtain proof that all such subcontractors have also registered with the DIR in accordance with Section 1725.5.

18. **CONTROL OF WORK** - Contractor is solely responsible for the content and sequence of the work, and will not be subject to control and direction as to the details and means for accomplishing the anticipated results of services. The Agency will not provide any training to Contractor or his/her/its employees.
19. **INDEPENDENT CONTRACTOR** - Contractor is, and at all times shall be, an independent contractor and nothing contained herein shall be construed as making the Contractor or any individual whose compensation for services is paid by the Contractor, an agent or employee of the Agency, or authorizing the Contractor to create or assume any obligation or liability for or on behalf of the Agency,

or entitling the Contractor to any right, benefit, or privilege applicable to any officer or employee of the Agency.

- 20. **SUBCONTRACTORS** - Contractor may retain or subcontract for the services of other necessary contractors with the prior written approval of the Agency. Payment for such services shall be the responsibility of the Contractor. Any and all subcontractors shall be subject to the terms and conditions of this Agreement, with the exception that the Agency shall have no obligation to pay for any subcontractor services rendered.
- 21. **EXTRA WORK AND CHANGE ORDERS** - Extra work and change orders shall become a part of this Agreement once the extra work or change order is approved in writing and signed by the Agency and Contractor, prior to the commencement of any extra work or change in work covered by the change order. The Agency’s form change order shall be used for both extra work and a change in work. The change order must describe the scope of the extra work or change in work, and the cost to be added or subtracted from this Agreement. The Agency shall not require Contractor to perform any extra work or a change in work without written authorization. A change order shall not be enforceable against the Agency unless the change order complies with this provision.
- 22. **AGENCY APPROVAL** - All work prepared by Contractor shall be subject to the approval of Agency.
- 23. **KEY PERSONNEL** - Contractor has represented to Agency that certain key personnel will perform and coordinate the services under this Agreement. Should one or more of such personnel become unavailable, Contractor may substitute other personnel of at least equal competence upon written approval of Agency. In the event that Agency and Contractor cannot agree as to the substitution of key personnel, Agency shall be entitled to terminate this Agreement for cause. As discussed below, any personnel who fail or refuse to perform the services in a manner acceptable to the Agency, or who are determined by the Agency to be uncooperative, incompetent, a threat to the adequate or timely completion of the project or a threat to the safety of persons or property, shall be promptly removed from the project by the Contractor at the request of the Agency. The key personnel for performance of this Agreement are as set forth in Section “C” of this Agreement.
- 24. **REPRESENTATIVES** - The Agency hereby designates the City Manager, or his or her designee, to act as its representative for the performance of this Agreement (“Agency’s Representative”). Contractor shall not accept direction or orders from any person other than the Agency’s Representative or his or her designee.

Contractor hereby designates person set forth in Section “D” of this Agreement, or his or her designee, to act as its representative for the performance of this Agreement (“Contractor’s Representative”). Contractor’s Representative shall have full authority to represent and act on behalf of the Contractor for all purposes under this Agreement. The Contractor’s Representative shall supervise and direct the services, using his or her best skill and attention, and shall be responsible for all means, methods, techniques, sequences and procedures and for the satisfactory coordination of all portions of the services under this Agreement.

- 25. **LEGAL COMPLIANCE** - The Contractor shall comply with applicable federal, state, and local laws in the performance of this Agreement. Contractor shall be liable for all violations of such laws and regulations in connection with services. If the Contractor performs any work knowing it to be contrary to such laws, rules and regulations and without giving written notice to the Agency, Contractor shall be solely responsible for all costs arising therefrom. Contractor shall defend, indemnify and hold Agency, its officials, directors, officers, employees and agents free and harmless, pursuant to the indemnification provisions of this Agreement, from any claim or liability arising out of any failure or alleged failure to comply with such laws, rules or regulations.

26. **STANDARD OF CARE** - Contractor shall perform all services under this Agreement in a skillful and competent manner, consistent with the standards generally recognized as being employed by professionals in the same discipline in the State of California. Contractor represents and maintains that it is skilled in the profession necessary to perform the services. Contractor warrants that all employees and subcontractors shall have sufficient skill and experience to perform the services assigned to them. Finally, Contractor represents that it, its employees and subcontractors have all licenses, permits, qualifications and approvals of whatever nature that are legally required to perform the services and that such licenses and approvals shall be maintained throughout the term of this Agreement. Any employee of the Contractor or its subcontractors who is determined by the Agency to be uncooperative, incompetent, a threat to the adequate or timely completion of the project, a threat to the safety of persons or property, or any employee who fails or refuses to perform the services in a manner acceptable to the Agency, shall be promptly removed from the project by the Contractor and shall not be re-employed to perform any of the services or to work on the project.
27. **INDEMNIFICATION** - To the fullest extent permitted by law, the Contractor assumes liability for and agrees, at the Contractor's sole cost and expense, to promptly and fully indemnify, protect, hold harmless and defend (even if the allegations are false, fraudulent, or groundless), the City of Moreno Valley (sometimes "City"), the Moreno Valley Community Services District (sometimes "CSD"), the City Council and Board of Directors and each member thereof, the Moreno Valley Housing Authority, and, if TUMF funding utilized, the Western Riverside Council of Governments ("WRCOG") and all of their respective officials, officers, directors, employees, commission members, representatives and agents (collectively "Indemnitees" and singularly "Indemnitee"), from and against any and all claims, allegations, actions, suits, arbitrations, administrative proceedings, regulatory proceedings, or other legal proceeds, causes of action, demands, costs, judgments, liens, stop notices, penalties, liabilities, damages, losses, anticipated losses of revenues, and expenses (including, but not limited to, any fees of accountants, attorneys, experts or other professionals, or investigation expenses), or losses of any kind or nature whatsoever, whether actual, threatened or alleged, arising out of, resulting from, or in any way (either directly or indirectly), related to the work or the Project or any breach of this Agreement by Contractor or any of its officers, agents, employees, subcontractors, sub-subcontractors, or any person performing any of the work, pursuant to a direct or indirect contract with the Contractor ("Indemnity Claims"). Such Indemnity Claims include, but are not limited to, claims for:
- a. Any activity on or use of the CSD's and/or City's premises or facilities;
  - b. Any liability incurred due to Contractor acting outside the scope of its authority pursuant to this Agreement, whether or not caused in part by an Indemnitee;
  - c. The failure of Contractor or the work to comply with any applicable law, permit or orders;
  - d. Any misrepresentation, misstatement or omission with respect to any statement made in this Agreement or any document furnished by the Contractor in connection therewith;
  - e. Any breach of any duty, obligation or requirement under this Agreement or any document furnished by Contractor in connection therewith, including, but not limited to any breach of Contractor's warranties, representations or agreements;
  - f. Any failure to coordinate the work with Agency's separate contractors;
  - g. Any failure to provide notice to any party as required by this Agreement or any document furnished in connection therewith;
  - h. Any failure to act in such a manner as to protect the Project from loss, cost, expense or liability;
  - i. Damage or injury to real property or personal property, equipment and materials (including, but without limitation, property under the care and custody of the Contractor

- or the City and/or CSD), and injury or death sustained by any person or persons (including, but not limited to, Contractor's employees or agents, and members of the general public);
- j. Any liability imposed by applicable law including, but not limited to criminal or civil fines or penalties;
- k. Any dangerous, hazardous, unsafe or defective condition of, in or on the Project site, of any nature whatsoever, which may exist by reason of any act, omission, neglect, or any use or occupation of the site by Contractor, its officers, agents, employees, or subcontractors;
- l. Any operation conducted upon or any use or occupation of the Project site by Contractor, its officers, agents, employees, or subcontractors under or pursuant to the provisions of this Agreement or otherwise;
- m. Any acts, errors, omission or negligence of Contractor, its officers, agents, employees, or subcontractors;
- n. Infringement of any patent rights, licenses, copyrights or intellectual property which may be brought against the Contractor or Agency arising out of Contractor's work, for which the Contractor is responsible; and
- o. Any and all claims against the Agency seeking compensation for labor performed or materials used or furnished to be used in the work or alleged to have been furnished on the Project, including all incidental or consequential damages resulting to the Agency from such claims.

Contractor's obligations to indemnify and hold the Indemnitees harmless exclude only such portion of any Indemnity Claim which is attributable to the active negligence or willful misconduct of the Indemnitees, provided such active negligence or willful misconduct is determined by agreement of the parties or by findings of a court of competent jurisdiction. In instances where an Indemnitee's active negligence accounts for only a percentage of the liability for the Indemnity Claim involved, the obligation of Contractor will be for that entire percentage of liability for the Indemnity Claim not attributable to the active negligence or willful misconduct of the Indemnitee(s). Such obligation shall not be construed to negate, abridge or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this section. Subject to the limits set forth herein, the Contractor, at its own expense, shall satisfy any resulting judgment that may be rendered against any Indemnitee resulting from an Indemnity Claim. The Indemnitees shall be consulted with regard to any proposed settlement.

The duty of the Contractor to indemnify and hold harmless the Indemnitees includes the separate and independent duty to defend the Indemnitees, which duty arises immediately upon receipt by Contractor of the tender of any Indemnity Claim from an Indemnitee. The Contractor's obligation to defend the Indemnitee(s) shall be at Contractor's sole expense, and not be excused because of the Contractor's inability to evaluate liability or because the Contractor evaluates liability and determines that the Contractor is not liable. This duty to defend shall apply whether or not an Indemnity Claim has merit or is meritless, or which involves claims or allegations that any or all of the Indemnitees were actively, passively, or concurrently negligent, or which otherwise asserts that the Indemnitees are responsible, in whole or in part, for any Indemnity Claim. The Contractor shall respond within thirty (30) calendar days to the tender of any Indemnity Claim for defense and/or indemnity by an Indemnitee, unless the Indemnitee agrees in writing to an extension of this time. The defense provided to the Indemnitees by Contractor shall be by well qualified, adequately insured and experienced legal counsel acceptable to the Agency.

It is the intent of the parties that the Contractor and its subcontractors of all tiers shall provide the Indemnitees with the broadest defense and indemnity permitted by applicable law. In the event that any of the defense, indemnity or hold harmless provisions in the Agreement are found to be ambiguous, or in conflict with one another, it is the parties' intent that the broadest and most expansive interpretation in favor of providing defense and/or indemnity to the Indemnitees be given effect.

With respect to third party claims against the Contractor, to the fullest extent permitted by law, the Contractor waives any and all rights to any type of express or implied indemnity against the Indemnitees.

In addition to the requirements set forth above, Contractor shall ensure, by written subcontract agreement, that each of Contractor's subcontractors of every tier shall protect, defend, indemnify and hold harmless the Indemnitees with respect to Indemnity Claims arising out of, in connection with, or in any way related to each such subcontractors' work on the Project in the same manner in which Contractor is required to protect, defend, indemnify and hold the Indemnitees harmless. In the event Contractor fails to obtain such defense and indemnity obligations from others as required herein, Contractor agrees to be fully responsible to the Indemnitees according to the terms of this section.

Contractor's obligations under this section are in addition to any other rights or remedies which the Indemnitees may have under the law or under the Agreement. Contractor's indemnification and defense obligations set forth in this section are separate and independent from the insurance provisions set forth in the Agreement, and do not limit, in any way, the applicability, scope, or obligations set forth in such insurance provisions. The purchase of insurance by the Contractor with respect to the obligations required herein shall in no event be construed as fulfillment or discharge of such obligations. In any and all claims against the Indemnitees by any employee of the Contractor; any subcontractor; any supplier of the Contractor or subcontractors; anyone directly or indirectly employed by any of them; or anyone for whose acts any of them may be liable, the obligations under this Agreement shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any subcontractor or any supplier of either of them, under workers' compensation acts, disability benefit acts or other employee benefit acts. Failure of the Agency to monitor compliance with these requirements imposes no additional obligations on the Agency and will in no way act as a waiver of any rights hereunder.

Subject to applicable law, in the event a claim arises prior to final payment to Contractor, the Agency may, in its sole discretion, reserve, retain or apply any monies due Contractor for the purpose of resolving such claims; provided, however, the Agency may release such funds if the Contractor provides the Agency with reasonable assurances of protection of the Indemnitees' interests. The Agency shall, in its sole discretion, determine whether such assurances are reasonable.

Contractor's obligations under this section are binding on Contractor's and its subcontractors' successors, heirs and assigns and shall survive the completion of the work or termination of the Contractor's performance of the work.

28. **SECURITY / BONDS** - The Contractor shall furnish a satisfactory Performance Bond meeting all statutory requirements of the State of California on the form provided by the Agency. The bond shall be furnished as a guarantee of the faithful performance of the requirements of this Agreement as may be amended from time to time, including, but not limited to, for protection against liability for delays and damages (both direct and consequential) to the Agency and the Agency's consultants and other contractors, and to ensure all warranties, guarantees, and indemnity obligations, in an amount that shall remain equal to one hundred percent (100%) of the compensation to be paid Contractor under this Agreement. The Performance Bond shall remain in force until at least two (2) years after the date of

final acceptance of the Project, unless the City determines, in its sole and absolute discretion, to release the Performance Bond earlier and notifies Contractor in writing.

The Contractor shall furnish a satisfactory Labor and Materials Payment Bond meeting all statutory requirements of the State of California on the form provided by the Agency in an amount that shall remain equal to one hundred percent (100%) of the compensation to be paid Contractor under this Agreement to secure payment of all claims, demands, stop notices, or charges of material suppliers, mechanics, or laborers employed by the Contractor or by any subcontractor, or any person, firm, or entity eligible to file a stop payment notice with respect to the Project. The Labor and Materials Payment Bond shall remain in force and shall not be released until at least seven (7) months after the date of recordation of the Notice of Completion or Notice of Acceptance, whichever occurs first.

All bonds shall be executed by a California-admitted surety insurer. Bonds issued by a California-admitted surety insurer listed on the latest version of the U.S Department of Treasury Circular 570 shall be deemed accepted unless specifically rejected by the Agency. Bonds issued by sureties not listed in Treasury Circular 570 must be accompanied by all documents enumerated in California Code of Civil Procedure Section 995.660(a). The bonds shall bear the same date as the Agreement. The attorney-in-fact who executes the required bonds on behalf of the surety shall affix thereto a certified and current copy of the power of attorney. In the event of changes that increase the Agreement compensation, the amount of each bond shall be deemed to increase and at all times remain equal to the Agreement amount. The signatures shall be acknowledged by a notary public. Every bond must display the surety's bond number and incorporate by reference the Agreement and the obligations to complete the Project in accordance with the Agreement. The terms of the bonds shall provide that the surety agrees that no change, extension of time, alteration, or modification of the Agreement or the work to be performed thereunder shall in any way affect its obligations and shall waive notice of any such change, extension of time, alteration, or modification of the Agreement. The surety further agrees that it is obligated under the bonds to any successor, grantee, or assignee of the Agency.

Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Agreement, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

Should any bond become insufficient, or should any of the sureties, in the opinion of the Agency, become non-responsible or unacceptable, the Contractor shall, within ten (10) calendar days after receiving notice from the Agency, provide written documentation to the satisfaction of the Agency that Contractor has secured new or additional sureties for the bonds; otherwise the Contractor shall be in default of the Agreement. No further payments shall be deemed due or will be made under the Agreement until a new surety(ies) qualifies and is accepted by the Agency.

Contractor agrees that said bonds are separate obligations of the Contractor and its surety, and that any attorney's fee provision contained in any payment bond or performance bond shall not apply to this Agreement. In the event there is any litigation between the parties arising from the breach of this Agreement, each party will bear its own attorneys' fees in the litigation.

29. **WARRANTY** - The Contractor, the Contractor's heirs, executors, administrators, successors, and/or assigns guarantee that all work performed under this Agreement fully meets the requirements thereof as to quality of workmanship and materials furnished, including without limitation materials to be of good quality and fit for their purpose and intended use. If any defects in materials or workmanship become evident prior to expiration of the term of this Agreement or release of the Performance Bond, whichever occurs first, the Contractor shall, at his or her own expense, make any repair(s) or replacement(s) necessary to restore the work to full compliance with the plans and specifications.

Contractor shall also repair, replace and restore any other work which is displaced in correcting defective work which the Agency by reason of such defects reasonably suspects may also be defective. In the event of a failure to commence with the compliance of above-mentioned requirements within seven (7) calendar days after being notified in writing of failure to diligently pursue such compliance to completion, the Agency is hereby authorized to proceed to have the defects repaired and made good at the expense of Contractor who hereby agrees to pay the cost and charges therefor immediately on demand.

If, in the opinion of the Agency, nonconforming work creates a dangerous condition or requires immediate correction or repair to prevent further loss to the Agency or to prevent interruption of operations, the Agency shall attempt to give the Contractor notice of the same. If Contractor cannot be contacted or does not comply with the Agency's request for correction within a reasonable time as determined by the Agency, the Agency may proceed to make such correction or provide such repair. The costs of such correction or repair shall be charged against Contractor, who agrees to make payment for said costs upon demand. Corrective action by the Agency will not relieve Contractor or Contractor's sureties or insurers of the guarantees and indemnities of this Agreement.

This section does not in any way limit the Agency's remedies available under the law, or the guarantee on any items for which a longer guarantee is specified or on any items for which a manufacturer or supplier gives a longer guarantee period. Contractor agrees to act as a co-guarantor with such manufacturer or supplier and shall furnish the Agency all appropriate guarantees or warranty certificates upon completion of the Project. No manufacturer's guarantee period shall in any way limit the liability of Contractor or Contractor's sureties and insurers under the indemnity or insurance provisions of this Agreement.

30. **INTELLECTUAL PROPERTY** - Any system or documents developed, produced or provided under this Agreement, including any intellectual property discovered or developed by Contractor in the course of performing or otherwise as a result of its work, shall become the sole property of the Agency unless explicitly stated otherwise in this Agreement. The Contractor may retain copies of any and all material, including drawings, documents, and specifications, produced by the Contractor in performance of this Agreement. The Agency and the Contractor agree that to the extent permitted by law, until final approval by the Agency, all data shall be treated as confidential and will not be released to third parties without the prior written consent of both parties.
31. **TERMINATION** - The Agency may terminate the whole or any part of this Agreement at any time without cause by giving at least ten (10) days written notice to the Contractor. The written notice shall specify the date of termination. Upon receipt of such notice, the Contractor may continue work through the date of termination, provided that no work or service(s) shall be commenced or continued after receipt of the notice which is not intended to protect the interest of the Agency. The Agency shall pay the Contractor within thirty (30) days after receiving any invoice after the date of termination for all non-objected to services performed by the Contractor in accordance herewith through the date of termination.

Either party may terminate this Agreement for cause. In the event the Agency terminates this Agreement for cause, the Contractor shall perform no further work or service(s) under the Agreement unless the notice of termination authorizes such further work.

If this Agreement is terminated as provided herein, Agency may require Contractor to provide all finished or unfinished documents and data and other information of any kind prepared by Contractor in connection with the performance of services under this Agreement. Contractor shall be required to provide such documents and other information within fifteen (15) days of the request.



32. **AGENCY EMPLOYEES** - The Contractor shall not employ any employee or official of the City or CSD in the work performed pursuant to this Agreement. No officer or employee of the City or CSD shall have any financial interest in this Agreement in violation of federal, state, or local law.
33. **NONLIABILITY OF AGENCY EMPLOYEES** - No officer or employee of the City or CSD shall be personally liable to Contractor, or any successor in interest, in the event of any default or breach by the Agency or for any amount which may become due to Contractor or to its successor, or for any breach of any obligation of the terms of this Agreement.
34. **ENTIRE AGREEMENT** - This Agreement constitutes the entire agreement between the parties. There are no understandings, agreements, or representations of warranties, expressed or implied, not specified in this Agreement. This Agreement applies only to the current proposal as attached. This Agreement may be modified or amended only by a subsequent written Agreement signed by both parties. Assignment of this Agreement is prohibited without prior written consent.
35. **CHOICE OF LAW** - The laws of the State of California shall govern the rights, obligations, duties, and liabilities of the parties to this Agreement, and shall govern the interpretation of this Agreement. Any legal proceeding arising from this Agreement shall be brought in the appropriate court located in Riverside County, State of California.
36. **ATTORNEYS' FEES** - Should either party bring any legal or equitable action for the purpose of protecting or enforcing its rights under this Agreement, the prevailing party in such action shall recover in addition to all other relief, its reasonable attorney's fees and court costs, fixed by the court. In addition to the foregoing award of attorney's fees, the prevailing party shall be entitled to its attorneys' fees incurred in any post judgment proceedings to enforce any judgments in connection with this Agreement. The provision is separate and several and shall survive the merger of this provision into any judgment.
37. **NOTICES** - All notices permitted or required under this Agreement shall be given to the respective parties at the addresses set forth above, or at such other address as the respective parties may provide in writing for this purpose. Such notice shall be deemed made when personally delivered or when mailed, forty-eight (48) hours after deposit in the U.S. Mail, first class postage prepaid and addressed to the party at its applicable address. Actual notice shall be deemed adequate notice on the date actual notice occurred, regardless of the method of service.
38. **RECORDS** - The Contractor agrees that he or she and its subcontractors shall maintain and keep books, payrolls, invoices of materials, and records current, and recordings of all transactions pertaining to this Agreement in a form in accordance with generally acceptable accounting principles. Said books and records shall be made available to the City, the CSD, County of Riverside, the State of California, the federal government and to any authorized representative thereof for purposes of audit and inspection at all reasonable times and places. All such books, payrolls, invoices of materials, and records shall be retained for such periods of time as required by law, provided, however, notwithstanding any shorter period of retention, all books, records, and supporting detail shall be retained for a period of at least three (3) years after acceptance of the Project by the Agency.
39. **PERFORMANCE** - The parties do for themselves, their heirs, executors, administrators, successors and assigns agree to the full performance of all of the provisions herein contained. The Contractor may not, either voluntarily or by action of law, assign any obligation assumed by the Contractor hereunder without prior written consent of the Agency
40. **WORKERS COMPENSATION** - By my signature hereunder, as Contractor, I certify that I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for Workers' Compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of

this Agreement. Contractor agrees to waive its statutory immunity under any workers' compensation or similar statute, as respecting the Agency, and to require any and all subcontractors and any other person or entity involved in the Project to do the same.

41. **WAIVERS AND RELEASES** - Contractor expressly waives any claims for any compensation or benefits afforded to Agency employees and not to independent contractors, and waives any and all rights and benefits conferred upon it by the provisions of section 1542 of the California Civil Code which reads as follows:

“A general release does not extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor.”

This waiver shall be effective as a bar to any and all actions, fees, damages, losses, claims, liabilities and demands of whatsoever character, nature and kind that are known or unknown, or suspected or unsuspected, including, without limitation, claims of entitlements under the California Public Employees' Retirement System (CalPERS) that are only afforded to employees and not independent contractors. Contractor further represents and warrants that it understands this waiver and that if it does not understand this waiver, it shall seek the advice of a qualified attorney before executing this Agreement.

42. **ACCEPTANCE OF WORK** - Acceptance of the work shall be by action of the Agency's Board or its designee. Neither the acceptance nor prior inspections or failure to inspect shall constitute a waiver by the Agency of any defects in the work. From and after acceptance, the work shall be owned and operated by the Agency. As a condition to acceptance, Contractor shall certify to the Agency in writing that all of the work has been performed in strict conformity with this Agreement and that all costs have been paid, satisfactorily to the Agency, guaranteeing such performance.
43. **LICENSES** - The Contractor and all subcontractors shall obtain and keep current a valid City of Moreno Valley Business License and all professional licenses, certifications and/or permits necessary for performing the services describe in this Agreement prior to commencement and throughout the term of this Agreement.
44. **DEFAULT** - Failure or delay by any party to this Agreement to perform any material term or provision of this Agreement shall constitute a default under this Agreement; provided however, that if the party who is otherwise claimed to be in default by the other party commences to cure, correct or remedy the alleged default within fifteen (15) days after receipt of written notice specifying such default and diligently completes such cure, correction or remedy, such party shall not be deemed to be in default hereunder.

The party which may claim that a default has occurred shall give written notice of default to the party in default, specifying the alleged default. Delay in giving such notice shall not constitute a waiver of any default nor shall it change the time of default; provided, however, the injured party shall have no right to exercise any remedy for a default hereunder without delivering the written default notice, as specified herein.

Any failure or delay by a party in asserting any of its rights or remedies as to any default shall not operate as a waiver of any default or of any rights or remedies associated with a default.

In the event that a default of any party to this Agreement may remain uncured for more than fifteen (15) days following written notice, as provided above, a "breach" shall be deemed to have occurred. In the event of a breach, the injured party shall be entitled to seek any appropriate remedy or damages by initiating legal proceedings.

45. **CUMULATIVE REMEDIES** - Except with respect to rights and remedies expressly declared to be exclusive in this Agreement, the rights and remedies of the parties are cumulative and the exercise by either party of one or more of such rights or remedies shall not preclude the exercise by it, at the same or different times, of any other rights or remedies for the same default of any other default by the other party.
46. **CONFLICTS OF INTEREST** - Contractor covenants that it does not have any interest, nor shall it acquire an interest, directly or indirectly, which would conflict in any manner with the performance of Contractor's services under this Agreement. In the event the Agency officially determines that Contractor must disclose its financial interests by completing and filing a Fair Political Practices Commission Form 700, Statement of Economic Interests, Contractor shall file the subject Form 700 with City Hall, as specified under the Notice provisions of this Agreement, pursuant to the written instructions provided by the Agency.
47. **TIME OF ESSENCE** - Time is of the essence for each and every provision of this Agreement
48. **NON-EXCLUSIVITY** - The Agency reserves the right to employ other contractors in connection with work ancillary to the Project. The Contractor shall be responsible for ascertaining the nature and extent of any simultaneous, collateral, and essential work by others and coordinating with the work by others. The Agency, other contractors and utilities shall have the right to operate within or adjacent to the Project site during the performance of such work.
- Should construction be under way by other forces or by other contractors within or adjacent to the limits of the work specified or should work of any other nature be under way by other forces within or adjacent to those limits, the Contractor shall cooperate with all the other contractors or other forces to the end that any delay or hindrance to their work will be avoided. The right is reserved to perform other or additional work at or near the site (including material sources) at any time, by the use of other forces.
49. **AMENDMENT** - No supplement, modification, or amendment of this Agreement shall be binding unless executed in writing and signed by both parties.
50. **WAIVER** - No waiver of any default shall constitute a waiver of any other default or breach, whether of the same or other covenant or condition. No waiver, benefit, privilege, or service voluntarily given or performed by a party shall give the other party any contractual rights by custom, estoppel, or otherwise.
51. **THIRD PARTIES** - There are no intended third party beneficiaries of any right or obligation assumed by the parties.
52. **COUNTERPARTS** - This Agreement may be signed in counterparts, each of which shall constitute an original.
53. **INVALIDITY/SEVERABILITY** - If any portion of this Agreement is declared invalid, illegal, or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions shall continue in full force and effect; and, to the extent permitted and possible, the invalid or unenforceable term shall be deemed replaced by a term that comes closest to expressing the intention of such invalid or unenforceable term.
54. **ASSIGNMENT/TRANSFER** - Contractor shall not assign, hypothecate, or transfer, either directly or by operation of law, this Agreement or any interest herein without the prior written consent of the Agency. Any attempt to do so shall be null and void, and any assignees, hypothecates or transferees shall acquire no right or interest by reason of such attempted assignment, hypothecation or transfer.

EXHIBIT A  
SCOPE OF SERVICES

Attachment: RS Construction \_ADA Improvements Animal Shelter\_docx (3413 : AWARD OF AGREEMENTS FOR COMMUNITY DEVELOPMENT

## EXHIBIT B

## INSURANCE REQUIREMENTS

Throughout the life of this Contract, Contractor shall pay for and maintain in full force and effect all policies of insurance required hereunder with an insurance company(ies) either (i) admitted by the California Insurance Commissioner to do business in the State of California and rated not less than "A- VII" in Best's Insurance Rating Guide, or (ii) as may be authorized in writing by City Attorney or his/her designee at any time and in his/her sole discretion. For purposes of these requirements, "City" shall include the City of Moreno Valley, Moreno Valley Community Services District and the Moreno Valley Housing Authority.

**SCOPE OF INSURANCE**

The following policies of insurance are required:

1. COMMERCIAL GENERAL LIABILITY insurance which shall be at least as broad as the most current version of Insurance Services Office (ISO) Commercial General Liability Coverage Form CG 00 01 and include insurance for "bodily injury," "property damage" and "personal and advertising injury" with coverage for premises and operations (including the use of owned and non-owned equipment), products and completed operations, and contractual liability (including, without limitation, indemnity obligations under the Contract) with limits of liability of not less than the following:

\$2,000,000 per occurrence for bodily injury and property damage

\$1,000,000 per occurrence for personal and advertising injury

\$2,000,000 aggregate for products and completed operations

\$4,000,000 general aggregate applying separately to the work performed under the Contract

2. COMMERCIAL AUTOMOBILE LIABILITY insurance which shall be at least as broad as the most current version of Insurance Service Office (ISO) Business Auto Coverage Form CA 00 01, and include coverage for all owned, hired, and non-owned automobiles or other licensed vehicles (Code 1 - Any Auto) with limits of liability of not less than \$1,000,000 per accident for bodily injury and property damage.

3. WORKERS' COMPENSATION insurance as required under the California Labor Code.

4. EMPLOYERS' LIABILITY insurance with limits of liability of not less than \$1,000,000 each accident, \$1,000,000 disease policy limit and \$1,000,000 disease each employee.

5. BUILDERS RISK (Course of Construction) insurance in an amount equal to the completed value of the project with no coinsurance penalty provisions. This coverage is only required if the project includes new construction of a building; or renovation of, or addition to, an existing building.

6. CONTRACTORS POLLUTION LIABILITY insurance is required for all environmental and water remediation work, for all work transporting fuel, for demolition, renovation, HVAC, plumbing or electrical (including, without limitation, lighting) work on any structure built prior to the year 1990, limits of liability of not less than the following:

\$1,000,000 per occurrence or claim

\$2,000,000 general or policy aggregate

7. PROFESSIONAL LIABILITY (ERROR AND OMISSIONS), insurance appropriate to Contractor's profession, if applicable, with limits not less than:

\$1,000,000 per occurrence or claim

\$2,000,000 general or policy aggregate

In the event Contractor purchases an Umbrella or Excess insurance policy(ies) to meet the minimum limits of insurance set forth above, this insurance policy(ies) shall "follow form" and afford no less coverage than the primary insurance policy(ies).

Contractor shall be responsible for payment of any deductibles contained in any insurance policies required hereunder and Contractor shall also be responsible for payment of any self-insured retentions. Any deductibles or self-insured retentions in excess of \$10,000.00 must be declared to, and approved by, the City Attorney or his/her designee in his/her sole discretion. At the option of the City Attorney or his/her designee, either (i) the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects City, its officers, officials, employees and agents; or (ii) Contractor shall provide a financial guarantee, satisfactory to the City Attorney or his/her designee in his/her sole discretion, guaranteeing payment of losses and related investigations, claim administration and defense expenses. At no time shall City be responsible for the payment of any deductibles or self-insured retentions.

The coverage(s) shall contain no special limitations on the scope of protection afforded to City, its officers, officials, employees and agents. Should Contractor maintain insurance with broader coverage and/or limits of liability greater than those shown above, City requires and shall be entitled to the broader coverage and/or the higher limits of liability maintained by Contractor. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to City.

## ENDORSEMENTS

**Cancellation Notice** - All policies of insurance required hereunder shall be endorsed to provide that the coverage shall not be cancelled, non-renewed, reduced in coverage or in limits except after 30 calendar day written notice has been given to City. Upon issuance by the insurer, broker, or agent of a notice of cancellation, non-renewal, or reduction in coverage or in limits, Contractor shall furnish City with a new certificate and applicable endorsements for such policies. In the event any policy is due to expire during the work to be performed for City, Contractor shall provide a new certificate, and applicable endorsements, evidencing renewal of such policy not less than 15 calendar days prior to the expiration date of the expiring policy.

**Additional Insured** - The General Liability (including ongoing operations and completed operations), Automobile Liability and Contractors Pollution Liability insurance policies shall name City of Moreno Valley, Moreno Valley Community Services District ("CSD") and Moreno Valley Housing Authority ("Authority"), Western Riverside Council of Governments ("WRCOG", only if Project is utilizing TUMF funding) their officers, officials, employees and agents as an additional insured.

**Primary / Non-Contributory** - The General Liability (including ongoing operations and completed operations), Automobile Liability and Contractors Pollution Liability insurance policies shall be endorsed so Contractor's

insurance shall be primary and no contribution shall be required of City, CSD, Authority, WRCOG (if TUMF funded) their officers, officials, employees and agents.

Waiver of Subrogation - The General Liability and Workers' Compensation insurance policies shall contain a waiver of subrogation as to City, CSD, Authority, WRCOG (if TUMF funded) their officers, officials, employees and agents.

## OTHER PROVISIONS

Claims-Made Policies - If any coverage required is written on a claims-made coverage form:

1. The retroactive date must be shown, and must be before the effective date of the Agreement or the commencement of work by Contractor.
2. Insurance must be maintained and evidence of insurance must be provided for at least 3 years after any expiration or termination of the Agreement or, in the alternative, the policy shall be endorsed to provide not less than a 3-year discovery period.
3. If coverage is canceled or non-renewed, and not replaced with another claims made policy form with a retroactive date prior to the effective date of the Agreement or the commencement of work by Contractor, Contractor must purchase extended reporting coverage for a minimum of 3 years following the expiration or termination of the Agreement.
4. A copy of the claims reporting requirements must be submitted to City for review.
5. These requirements shall survive expiration or termination of the Agreement.

Contractor shall furnish City with all certificate(s) and applicable endorsements effecting coverage required hereunder. All certificates and applicable endorsements are to be received and approved by the City Attorney or his/her designee in his/her sole discretion prior to City's execution of the Contract and before work commences. Upon request of City, Contractor shall immediately furnish City with a complete copy of any insurance policy required under this Contract, including all endorsements, with said copy certified by the underwriter to be a true and correct copy of the original policy. This requirement shall survive expiration or termination of this Contract.

If at any time during the life of the Contract or any extension, Contractor or any of its subcontractors fail to maintain any required insurance in full force and effect, all work under this Contract shall be discontinued immediately, and all payments due or that become due to Contractor shall be withheld until notice is received by City that the required insurance has been restored to full force and effect and that the premiums therefore have been paid for a period satisfactory to City. Any failure to maintain the required insurance shall be sufficient cause for City to terminate this Contract. No action taken by City hereunder shall in any way relieve Contractor of its responsibilities under this Contract.

The fact that insurance is obtained by Contractor shall not be deemed to release or diminish the liability of Contractor, including, without limitation, liability under the indemnity provisions of this Contract. The duty to indemnify City shall apply to all claims and liability regardless of whether any insurance policies are applicable. The policy limits do not act as a limitation upon the amount of indemnification to be provided by Contractor. Approval or purchase of any insurance contracts or policies shall in no way relieve from liability nor limit the liability of Contractor, its principals, officers, agents, employees, persons under the supervision of Contractor,

vendors, suppliers, invitees, consultants, sub-consultants, subcontractors, or anyone employed directly or indirectly by any of them.

In the event of a partial or total destruction by the perils insured against of any or all of the work and/or materials herein provided for at any time prior to the final completion of the Contract and the final acceptance by the City of the work or materials to be performed or supplied thereunder, the Contractor shall promptly reconstruct, repair, replace, or restore all work or materials so destroyed or injured at his/her sole cost and expense. Nothing herein provided for shall in any way excuse the Contractor or his/her insurance company from the obligation of furnishing all the required materials and completing the work in full compliance with the terms of the Contract.

If Contractor should subcontract all or any portion of the services to be performed under this Contract, Contractor shall require each subcontractor to provide insurance protection in favor of City, its officers, officials, employees and agents in accordance with the terms of each of the preceding paragraphs, except that the subcontractors' certificates and endorsements shall be on file with Contractor and City prior to the commencement of any work by the subcontractor.

Attachment: RS Construction \_ADA Improvements Animal Shelter\_ docx (3413 : AWARD OF AGREEMENTS FOR COMMUNITY DEVELOPMENT



Insurance Checklist  
For Public Works Contracts  
(For Internal Use Only)

General Liability

- \$2,000,000 per occurrence for bodily injury and property damage
- \$1,000,000 per occurrence for personal and advertising injury
- \$2,000,000 aggregate for products and completed operations
- \$4,000,000 general aggregate applying separately to contract work
- Additional Insured Endorsement – Ongoing Operations
- Additional Insured Endorsement – Completed Operations
- Primary Endorsement – Ongoing Operations
- Primary Endorsement – Completed Operations
- Notice of Cancellation

Auto

- \$1,000,000 per occurrence for bodily injury and property damage
- Additional Insured Endorsement
- Primary Endorsement
- Notice of Cancellation

Worker's Compensation

- Evidence of Coverage
- Waiver of Subrogation
- Notice of Cancellation

Employer's Liability

- \$1,000,000 for each (accident, disease policy, disease employee)
- Notice of Cancellation

Builder's Risk

- Equal to completed value of project
- Notice of Cancellation

Contractor's Pollution Liability

- \$1,000,000 per occurrence or claim
- \$2,000,000 aggregate
- Additional Insured Endorsement
- Primary Endorsement
- Notice of Cancellation

Professional Liability

- \$1,000,000 per occurrence or claim
- \$2,000,000 aggregate
- Notice of Cancellation

EXHIBIT C  
AGENCIES RESPONSIBILITIES

Attachment: RS Construction \_ADA Improvements Animal Shelter\_docx (3413 : AWARD OF AGREEMENTS FOR COMMUNITY DEVELOPMENT

## EXHIBIT D

## FEDERAL REQUIREMENTS

The following provisions, pursuant to 44 Code of Federal Regulations, Part 13, Subpart C, Section 13.36, as it may be amended from time to time, are included in the Agreement and are required to be included in all subcontracts entered into by CONTRACTOR for work pursuant to the Agreement, unless otherwise expressly provided herein.

1. CONTRACTOR shall comply with Executive Order 11246 of September 24, 1965, entitled Equal Employment Opportunity, as amended by Executive Order 11375 of October 13, 1967, and as supplemented in Department of Labor regulations (41 CFR chapter 60). (All construction contracts awarded in excess of \$10,000 by CITY and/or subcontracts in excess of \$10,000 entered into by CONTRACTOR.)
2. CONTRACTOR shall comply with the Copeland Anti-Kickback Act (18 U.S.C. 874) as supplemented in Department of Labor regulations (29 CFR Part 3) (All contracts and subcontracts for construction or repair.)
3. CONTRACTOR shall comply with the Davis-Bacon Act (40 U.S.C. 276a to 276a7) as supplemented by Department of Labor regulations (29 CFR Part 5).
4. CONTRACTOR shall comply with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327330) as supplemented by Department of Labor regulations (29 CFR Part 5).
5. Patent rights with respect to any discovery or invention which arises or is developed in the course of or under the Agreement shall be retained by the CITY.
6. Copyrights and rights in data developed in the course of or under the Agreement shall be the property of the CITY. FEMA/CalOES reserve a royalty-free, nonexclusive, irrevocable license to reproduce, publish or otherwise use or authorize to others to use for federal purposes a copyright in any work developed under the Agreement and/or subcontracts for work pursuant to the Agreement.
7. CONTRACTOR shall provide access by the City, the Federal grantor agency, the Comptroller General of the United States, or any of their duly authorized representatives to any books, documents, papers, and records of the contractor which are directly pertinent to that specific contract for the purpose of making audit, examination, excerpts, and transcriptions.
8. CONTRACTOR shall retain all required records for three years after CITY makes final payments and all other pending matters relating to the Agreement are closed.
9. CONTRACTOR shall comply with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 1857(h)), section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR part 15). (This provision applies to contracts exceeding \$100,000 and to subcontracts entered into pursuant to such contracts.)
10. CONTRACTOR shall comply with mandatory standards and policies relating to energy efficiency which are contained in the State energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94163, 89 Stat. 871).

City of Moreno Valley  
Public Works Agreement

Interior ADA Improvements Project at Moreno Valley Conference and Recreation Center

This Agreement is made by and between the City of Moreno Valley, with its principal place of business at 14177 Frederick Street, Moreno Valley, California 92552, (hereinafter referred to as "Agency") and the contractor set forth below, (hereinafter referred to as "Contractor").

WHEREAS, Agency has determined it is necessary and desirable to secure certain services for the above-referenced Project; and,

WHEREAS, Agency staff does not have the expertise and/or capacity to perform this work in-house; and,

WHEREAS, the public interest, convenience, necessity and general welfare will be served by this Agreement; and,

WHEREAS, Contractor is specially trained, experienced and competent to perform the services required by this agreement; and,

WHEREAS, Contractor represents it is qualified and willing to provide such services pursuant to the terms and conditions of this Agreement.

NOW, THEREFORE, IT IS AGREED by and between Agency and Contractor as follows:

**A. CONTRACTOR INFORMATION -**

**B. CONTRACTOR INFORMATION -**

Contractor's Name: RS Construction & Development

Address: 1042 N. Mountain Ave. Suite B #552

City: Upland

State: CA Zip: 91786

Business Phone: (909) 920-1144 Fax No. N/A

Other Contact Number: (909)455-3713

Email: [info@rscdinc.com](mailto:info@rscdinc.com)

Business License Number: 33398

Federal Tax I.D. Number: 82-1963599 Contractor's

License No.:1005429

DIR PWC Registration No.: 1000053445

**C. COMPLETION PERIOD – March 31, 2019**

**D. KEY PERSONNEL – Ric Serna**

**E. CONTRATOR REPRESENTATIVE - Ric Serna**

**F. CONTRACT PRICE - \$186,650.00**

**G. NOT TO EXCEED - The Contractors total compensation under this Agreement shall not exceed ONE HUNDRED EIGHTY SIX THOUSAND, SIX HUNDRED and FIFTY 00/100 DOLLARS (\$186,650.00).**

**H. CONTRACT TIMES -**

Base Bid: 45 Working Days

**CITY CONTRACT** – All of the terms, conditions, and exhibits attached hereto and designated as FORM CA100, are hereby incorporated herein and made a part of this Agreement as if set forth herein in full.

IN WITNESS HEREOF, the parties have each caused their authorized representative to execute this Agreement.

City of Moreno Valley  
Public Works Agreement

City of Moreno Valley  
 Print Name: Thomas M. DeSantis  
 Signature: \_\_\_\_\_  
 Title: City Manager  
 Date: \_\_\_\_\_

**Attest:** \_\_\_\_\_  
 City Clerk (only if Mayor signs)

**Approved as to Legal Form**  
 By: \_\_\_\_\_  
 Dep. / Asst. / City Attorney  
 Date: \_\_\_\_\_

**Recommended For Approval**  
 By: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Date: \_\_\_\_\_

Contractor Name: RS Construction & Development  
 Print Name: Ric Serna  
 Signature: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Date: \_\_\_\_\_

Print Name: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Date: \_\_\_\_\_

Attachment: RS Construction \_ADA Improvements CRC\_docx [Revision 1] (3413 : AWARD OF AGREEMENTS FOR COMMUNITY

Signature(s) must be accompanied by a completed notary certificate of acknowledgement attached hereto. A general partner must sign on behalf of a partnership. Two (2) corporate officers must sign on behalf of a corporation unless the corporation has a corporate resolution that allows one person to sign on behalf of the corporation; if applicable, said resolution must be attached hereto. The corporate seal may be affixed hereto.

Agreement For  
Public Works Projects Over \$25,000  
Utilizing Federal Funds

1. **SCOPE OF SERVICE** - The Contractor's scope of services for the Project is described in Exhibit "A", attached hereto and incorporated herein by this reference (hereinafter the "Project" or the "Work").
2. **INSURANCE** - The Contractor and each of its subcontractors shall comply with all insurance requirements set forth in Exhibit "B", attached hereto and incorporated herein by this reference. The Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor.
3. **AGENCY RESPONSIBILITIES** – The Agency's responsibilities under this Agreement, other than terms of payment, are described in Exhibit "C", attached hereto and incorporated herein by this reference.
4. **FEDERAL FUNDING** – This Agreement is funded in whole or in part using federal grants or other funding sources and is subject to the terms and conditions set forth in Exhibit "D", attached hereto and incorporated herein.
5. **ADDITIONAL CONTRACT DOCUMENTS** - The Contract Documents consist of the following, which are incorporated herein by this reference:
  - a. Governmental approvals, including, but not limited to, permits required for the Work;
  - b. Any and all Contract Change Orders issued after execution of this Agreement;
  - c. Any addenda issued prior to the opening of the Bids;
  - d. The City Special Provisions, including the General Provisions and Technical Provisions thereof, which amend, modify, and or supplement the Standard Specifications for Public Works Construction ("Greenbook");
  - e. The specifications, standards, and procedures set forth in the latest Greenbook and the California Building Standards Code ("CBSC"), as each may be amended from time to time (together, "Public Works Authority");
  - f. Project Plans;
  - g. City Standard Plans;
  - h. Caltrans Standard Plans;
  - i. Other Agency Standard Plans specified by the City Engineer;
  - j. The Bidding Documents;
  - k. Contractor's Certificates of Insurance and Endorsements;
  - l. Contractor's Bidder's Proposal and Subcontractor Listing.
6. **CONFLICTS** - In the event of conflict between any of the Contract Documents, the provisions placing a more stringent requirement on the Contractor shall prevail. The Contractor shall provide the better quality or greater quantity of Work and/or materials unless otherwise directed by Agency in writing. In the event none of the Contract Documents place a more stringent requirement or greater burden on the Contractor, the controlling provision shall be that which is found in the Agreement, followed by the Exhibits to the Agreement, followed by the documents listed in Section 6, above, in order of precedence.
7. **PAYMENT TERMS** - In consideration for the Contractor's full, complete, timely, and faithful performance of the Work required by the Contract Documents, the City shall pay Contractor for the actual quantity of Work required under the Bid Items awarded by the City performed in accordance with

the lump sum prices and unit prices for Bid Items and Alternate Bid Items, if any, set forth the Bidder's Proposal submitted with the Bid. The sum of the unit prices and lump sum prices for the Base Bid Items and Alternate Bid Items, if any, awarded by the City is set forth on in Section "E" of this Agreement ("Contract Price"). The Alternate Bid Items selected by the City and included in the Contract are set forth in Section "G" of this Agreement. It is understood and agreed that the quantities set forth in the Bidder's Proposal for which unit prices are fixed are estimates only and that City will pay and Contractor will accept, as full payment for these items of work, the unit prices set forth in the Bidder's Proposal multiplied by the actual number of units performed, constructed, or completed as directed by the City Engineer.

The Contractor's total compensation shall not exceed the amount set forth in Section "F" of this Agreement.

Based upon applications for payment submitted by the Contractor to the Agency, the Agency shall make payments to the Contractor in accordance with Section 9 of the Standard Specifications, as modified by Section 9 of the City Special Provisions.

The Contractor will obtain, and keep current during the term of this Agreement, the required City of Moreno Valley business license. Proof of a current City of Moreno Valley business license will be required prior to any payments by the Agency. Any invoice not paid because the proof of a current City of Moreno Valley business license has not been provided will not incur any fees, late charges, or other penalties. Complete instructions for obtaining a City of Moreno Valley business license are located at: [http://www.moval.org/do\\_biz/biz-license.shtml](http://www.moval.org/do_biz/biz-license.shtml)

The Contractor will electronically submit an invoice to the Agency as provided in this Agreement for progress payments along with documentation evidencing services completed to date. The progress payment is based on actual time and materials expended in furnishing authorized professional services since the last invoice. At no time will the Agency pay for more services than have been satisfactorily completed and the Agency determination of the amount due for any progress payment shall be final. The Contractor will submit all original invoices to Accounts Payable staff at [AccountsPayable@moval.org](mailto:AccountsPayable@moval.org). Accounts Payable questions can be directed to (951) 413-3087.

The Contractor agrees that Agency payments will be received via Automated Clearing House (ACH) Direct Deposit and that the required ACH Authorization form will be completed prior to any payments by the Agency. Any invoice not paid because the completed ACH Authorization Form has not been provided will not incur any fees, late charges, or other penalties. The ACH Authorization Form is located at [http://www.moval.org/city\\_hall/forms.shtml#bf](http://www.moval.org/city_hall/forms.shtml#bf).

The minimum information required on all invoices is:

- a. Vendor Name, Mailing Address, and Phone Number
- b. Invoice Date
- c. Vendor Invoice Number
- d. City-provided Reference Number (e.g. Project, Activity, Purchase Order No.)
- e. Detailed work hours by class title (e.g. Manager, Technician, or Specialist), services performed and rates, explicit portion of a contract amount, or detailed billing information that is sufficient to justify the invoice amount; single, lump amounts without detail are not acceptable.

The Agency shall pay the Contractor for all invoiced, authorized professional services within thirty (30) days of receipt of the invoice for same, provided the services reflected in the invoice were performed to the reasonable satisfaction of the Agency in accordance with the terms of this Agreement.

Attachment: RS Construction \_ADA Improvements CRC \_docx [Revision 1] (3413 : AWARD OF AGREEMENTS FOR COMMUNITY

Pursuant to Public Contract Code section 9203, the Agency shall retain no less than five (5) percent of the compensation to be paid to Contractor which shall be released to the Contractor no later than sixty (60) days from the date of the Agency’s acceptance of the work pursuant to this Agreement.

Payments to the Contractor pursuant to this Agreement will be reported to federal and state taxing authorities as required. Contractor is independently responsible for the payment of all applicable taxes. Where the payment terms provide for compensation on a time and materials basis, the Contractor shall maintain adequate records to permit inspection and audit of the Contractor’s time and materials charges under the Agreement. Upon reasonable notice, such records must be made available to the Agency’s agent; however, nothing herein shall convert such records into public records, unless otherwise required by law. Such records shall be retained by the Contractor for three (3) years following completion of the services under the Agreement.

The Agency may withhold payments to cover claims filed under Civil Code § 9350 et seq.

Pursuant to Labor Code Section 1773.3, the Agency shall withhold final payment due to Contractor until at least thirty (30) days following submission of all information required to be submitted by Contractor under that Section and as required for a Notice of Award to be provided to the Department of Industrial Relations. This Section shall not apply to Projects of \$25,000 or less for construction, alteration, demolition, installation or repair work or to projects of \$15,000 or less for maintenance work.

- 8. **TERM** – The term of this Agreement shall commence upon execution by Agency, and terminate two (2) years after acceptance of the work, pursuant to this Agreement, or release of the Performance Bond, whichever occurs first.
- 9. **CONTRACT TIME** – After the Agreement has been fully executed by the Contractor and the Agency, the Agency shall issue the “Notice to Proceed to Fulfill Preconstruction Requirements and Notice to Proceed with Order of Materials.” The date specified in the Notice to Proceed to Fulfill Preconstruction Requirements and Notice to Proceed with Order of Materials constitutes the date of commencement of the Contract Times set forth in Section “H” of this Agreement. The Contract Time is therefore dependent on the number of alternative Bids selected, if any, and will be based on the table in Section “H” of this Agreement. The Contract Time includes the time necessary to fulfill preconstruction requirements, place the order of materials, and to complete construction of the Project (except as adjusted by subsequent Change Orders).

The Notice to Proceed to Fulfill Preconstruction Requirements and Notice to Proceed with Order of Materials shall further specify that Contractor must complete the preconstruction requirements and order materials within the Preconstruction Contract Time period set in Section “H” of this Agreement, after the date of commencement of the Contract Time. This duration is part of the Contract Time.

Critical preconstruction requirements include, but are not limited to, the following:

- a. Submitting and obtaining approval of Traffic Control Plans
- b. Submitting and obtaining approval of the Stormwater Pollution Prevention Plan (SWPPP)/Water Pollution Control Plan (WPCP)
- c. Submitting and obtaining approval of critical required submittals
- d. Installation of the approved Project Identification Signs
- e. Obtaining an approved no fee Encroachment Permit
- f. Obtaining a Temporary Use Permit for a construction yard
- g. Notifying all agencies, utilities, residents, etc., as outlined in the Bidding Documents
- h. Completion of all pre-construction activities under Environmental Mitigations

If the Agency’s issuance of a Notice to Proceed to Fulfill Preconstruction Requirements and Notice to Proceed with Order of Materials is delayed due to Contractor’s failure to return the fully

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executed Agreement and insurance and bond documents within ten (10) Working Days after Contract award, then Contractor agrees to the deduction of one (1) Working Day from the number of days to complete the Project for every Working Day of delay in the Agency's receipt of said documents. This right is in addition to and does not affect the Agency's right to demand forfeiture of Contractor's Bid Security if Contractor persistently delays in providing the required documentation.

After all preconstruction requirements are met and materials have been ordered in accordance with the Notice to Proceed to Fulfill Preconstruction Requirements and Notice to Proceed with Order of Materials, the Agency shall issue the "Notice to Proceed with Construction," at which time the Contractor shall diligently prosecute the Work, including corrective items of Work, day to day thereafter, within the remaining Contract Time.

10. **LIQUIDATED DAMAGES** - The Contractor and Agency (collectively, the "Parties") agree to liquidate damages with respect to Contractor's failure to order all materials in accordance with the Notice to Proceed with Order of Materials and/or, failure to fulfill the preconstruction requirements, and/or failure to complete the Work within the Contract Time. The Parties intend for the liquidated damages set forth herein to apply to this Contract as set forth in Government Code Section 53069.85. Contractor acknowledges and agrees that the liquidated damages are intended to compensate the Agency solely for Contractor's failure to meet the deadline for completion of the Work and will not excuse Contractor from liability from any other breach, including any failure of the Work to conform to the requirements of the Contract Documents.

In the event that Contractor fails to order all materials in accordance with the Notice to Proceed with Order of Materials and/or, fails to fulfill the preconstruction requirements, and/or fails to complete the Work within the Contract Time, Contractor agrees to pay the Agency \$2,500.00 per Calendar day that completion of the Work is delayed beyond the Contract Time, as adjusted by Contract Change Orders. The Contractor will not be assessed liquidated damages for delays occasioned by the failure of the Agency or of the owner of a utility to provide for the removal or relocation of utility facilities.

The Parties acknowledge and agree that the foregoing liquidated damages have been set based on an evaluation of damages that the Agency will incur in the event of late completion of the Work. The Parties acknowledge and agree that the amount of such damages are impossible to ascertain as of the date of execution hereof and have agreed to such liquidated damages to fix the Agency's damages and to avoid later disputes. It is understood and agreed by Contractor that liquidated damages payable pursuant to this Agreement are not a penalty and that such amounts are not manifestly unreasonable under the circumstances existing as of the date of execution of this Agreement.

It is further mutually agreed that the Agency will have the right to deduct liquidated damages against progress payments or retainage and that the Agency will issue a Change Order or Construction Change Directive and reduce the Contract Price accordingly. In the event the remaining unpaid Contract Price is insufficient to cover the full amount of liquidated damages, Contractor shall pay the difference to the Agency.

11. **STOP WORK** - Any work completed by the Contractor after the issuance of a Stop Work Notice by the City shall be rejected and/or removed and replaced as specified in Section 2-11 of the Special Provisions.

12. **EARLY COMPLETION** - While the Contractor may schedule completion of all of the Work, or portions thereof, earlier than the Contract Time, the Agency is exempt from liability for and the Contractor will not be entitled to an adjustment of the Contract Sum or to any additional costs, damages, including, but not limited to, claims for extended general conditions costs, home office overhead, jobsite overhead, and management or administrative costs, or compensation whatsoever, for use of float time or for

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Contractor's inability to complete the Work earlier than the Contract Time for any reason whatsoever, including but not limited to, delay cause by Owner or other Excusable Compensable Delay. See Section 6-6 of the Standard Specifications and City Special Provisions regarding compensation for delays.

13. **WORK DAYS** - The work performed in this Agreement shall be performed Monday through Friday, 7 a.m. to 5 p.m. Agency observed holidays shall be observed by the Contractor and no work shall be performed on these dates, unless prior written permission is granted.
14. **SUBSTANTIAL COMPLETION** - Substantial completion of work shall be evidenced by inspection and approval by Agency staff in writing.
15. **LABOR LAWS** - All work or services performed within the State of California pursuant to this Agreement by Contractor, Contractor's employees and independent contractors, or Contractor's subcontractors and its subcontractors' employees and independent contractors shall be performed by individuals lawfully permitted to perform such work or services in the State of California and/or the United States of America pursuant to all applicable State and/or Federal labor laws, rules and regulations including, but not limited to, any State or Federal law, rule or regulation prohibiting the employment of undocumented workers or any other person not lawfully permitted to perform said work or services in the State of California or the United States of America.
16. **DISCRIMINATION** - Contractor represents that it is an equal opportunity employer and shall not discriminate against any subcontractor, employee, or applicant ("person") for employment because of denial of family and medical care leave; race; religious creed (including religious dress and grooming practices); color; national origin (including language use restrictions); ancestry; physical disability or mental disability (including HIV and Aids); medical condition (cancer and genetic characteristics); genetic information; military or veteran status; marital status; gender, gender identity, and gender expression; sex (which includes pregnancy, childbirth, breastfeeding and medical conditions related to pregnancy, childbirth or breastfeeding); age or sexual orientation. Unless otherwise permitted under the law, Contractor shall not refuse to hire or employ any such person or refuse to select any such person for a training program leading to employment, or bar or discharge any such person from employment or from a training program leading to employment, or otherwise discriminate against any such person in compensation or in terms, conditions, or privileges of employment.
17. **PREVAILING WAGES** - Contractor and all of Contractor's subcontractors, if any, shall pay each employee engaged in all applicable trades or occupation not less than the prevailing hourly wage rate for work of a similar character in the locality in which the public work is performed, and not less than the general prevailing rate of per diem wages for holiday and overtime work. In accordance with the provisions of Section 1770 of the California Labor Code ("Labor Code"), the Director of Department of Industrial Relations of the State of California ("DIR") has determined the general prevailing rates of wages and employer payments for health and welfare, pension, vacation, travel time, and subsistence pay as provided for in Labor Code Section 1773.8, apprenticeship or other training programs authorized by Labor Code Section 3093 and similar purposes applicable to the work to be done. Said wages are available through the DIR Internet website at <http://www.dir.ca.gov/dlsr/PWD/index.htm> and are on file at Agency Hall, as provided in Section 1773.2 of the Labor Code. Said rates shall be posted at the Project site where work is to be performed, in accordance with Labor Code Section 1773.2. Contractor shall access a copy of the wage rate determination and shall make all subcontractors, if any, aware of the determination. As the wage determination for each craft reflects an expiration date, it shall be the Contractor's responsibility to ensure that the prevailing wage rates of concern are current and paid. Subject to the safe harbor provisions of Labor Code Section 1775, Contractor shall forfeit to the Agency an amount not to exceed two hundred dollars (\$200) for each calendar day or portion thereof, as set by

the Labor Commissioner in accordance with the terms of Labor Code section 1775, for each laborer, workmen or mechanics employed that is paid less than the general prevailing rate of wages herein referred to and stipulated for any work done under the proposed contract, by him, or by any subcontractor under him, in violation of the provisions of the Labor Code, and in particular, Sections 1770 to 1781 inclusive. Contractor and any and all or its subcontractors shall forfeit to the Agency twenty-five dollars (\$25) for each worker employed in the performance of this Agreement for each calendar day during which the worker is required or permitted to work more than eight (8) hours in any one calendar day and forty (40) hours in any one calendar week in violation of the provisions of Section 1813 of the Labor Code. In the event the total cost of the Project is thirty thousand dollars (\$30,000.00) or more, Contractor shall further comply with provisions set forth in Labor Code Section 1777.5 pertaining to employment of properly registered apprentices, including without limitation the obligation to (i) pay employed apprentices the prevailing rate of per diem wages for apprentices in the trade to which he or she is registered and shall be employed only at the work of craft or trade to which he or she is registered; (ii) employ apprentices in at least the ratio as set forth in said section; (iii) submit contract award information to an applicable apprenticeship program; and (iv) contribute to California Apprenticeship Council.

Contractor and all subcontractors hired to perform any work under the Project shall keep accurate payroll records, including the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each worker, in accordance with Section 1776 of the Labor Code. Payroll records shall be on forms provided by the Division of Labor Standards Enforcement ("DLSE") or in a manner containing the same information as the forms provided by the DLSE. Failure to comply with the above may result in monetary penalties to the Contractor or affected subcontractor. Payroll records shall be verified by written declaration made under penalty of perjury, that the information contained in the records is true and correct. Contractor and any and all subcontractors shall make a certified copy of all payroll records available for inspection by DLSE, the Agency or any member of the public and otherwise provide certified copies of such records to any of the foregoing within ten (10) days of Contractor's and subcontractor's receipt of written request therefor. Failure to comply with the above may result in monetary penalties, in accordance with Labor Code Section 1776(d) and (h).

Notwithstanding anything else to the contrary, Contractor hereby acknowledges that all contractors must be registered with the DIR pursuant to Labor Code Section 1725.5 in order to be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any public work contract, including this Agreement, that is subject to the payment of prevailing wages. Contractor represents and warrants that Contractor is registered with the DIR in the manner prescribed by the DIR and has paid the requisite application fee, as required by Labor Code Section 1725.5. Moreover, prior to Contractor entering into any contracts with any subcontractor, Contractor shall obtain proof that all such subcontractors have also registered with the DIR in accordance with Section 1725.5.

- 18. **CONTROL OF WORK** - Contractor is solely responsible for the content and sequence of the work, and will not be subject to control and direction as to the details and means for accomplishing the anticipated results of services. The Agency will not provide any training to Contractor or his/her/its employees.
- 19. **INDEPENDENT CONTRACTOR** - Contractor is, and at all times shall be, an independent contractor and nothing contained herein shall be construed as making the Contractor or any individual whose compensation for services is paid by the Contractor, an agent or employee of the Agency, or authorizing the Contractor to create or assume any obligation or liability for or on behalf of the Agency,

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or entitling the Contractor to any right, benefit, or privilege applicable to any officer or employee of the Agency.

- 20. **SUBCONTRACTORS** - Contractor may retain or subcontract for the services of other necessary contractors with the prior written approval of the Agency. Payment for such services shall be the responsibility of the Contractor. Any and all subcontractors shall be subject to the terms and conditions of this Agreement, with the exception that the Agency shall have no obligation to pay for any subcontractor services rendered.
- 21. **EXTRA WORK AND CHANGE ORDERS** - Extra work and change orders shall become a part of this Agreement once the extra work or change order is approved in writing and signed by the Agency and Contractor, prior to the commencement of any extra work or change in work covered by the change order. The Agency’s form change order shall be used for both extra work and a change in work. The change order must describe the scope of the extra work or change in work, and the cost to be added or subtracted from this Agreement. The Agency shall not require Contractor to perform any extra work or a change in work without written authorization. A change order shall not be enforceable against the Agency unless the change order complies with this provision.
- 22. **AGENCY APPROVAL** - All work prepared by Contractor shall be subject to the approval of Agency.
- 23. **KEY PERSONNEL** - Contractor has represented to Agency that certain key personnel will perform and coordinate the services under this Agreement. Should one or more of such personnel become unavailable, Contractor may substitute other personnel of at least equal competence upon written approval of Agency. In the event that Agency and Contractor cannot agree as to the substitution of key personnel, Agency shall be entitled to terminate this Agreement for cause. As discussed below, any personnel who fail or refuse to perform the services in a manner acceptable to the Agency, or who are determined by the Agency to be uncooperative, incompetent, a threat to the adequate or timely completion of the project or a threat to the safety of persons or property, shall be promptly removed from the project by the Contractor at the request of the Agency. The key personnel for performance of this Agreement are as set forth in Section “C” of this Agreement.
- 24. **REPRESENTATIVES** - The Agency hereby designates the City Manager, or his or her designee, to act as its representative for the performance of this Agreement (“Agency’s Representative”). Contractor shall not accept direction or orders from any person other than the Agency’s Representative or his or her designee.

Contractor hereby designates person set forth in Section “D” of this Agreement, or his or her designee, to act as its representative for the performance of this Agreement (“Contractor’s Representative”). Contractor’s Representative shall have full authority to represent and act on behalf of the Contractor for all purposes under this Agreement. The Contractor’s Representative shall supervise and direct the services, using his or her best skill and attention, and shall be responsible for all means, methods, techniques, sequences and procedures and for the satisfactory coordination of all portions of the services under this Agreement.

- 25. **LEGAL COMPLIANCE** - The Contractor shall comply with applicable federal, state, and local laws in the performance of this Agreement. Contractor shall be liable for all violations of such laws and regulations in connection with services. If the Contractor performs any work knowing it to be contrary to such laws, rules and regulations and without giving written notice to the Agency, Contractor shall be solely responsible for all costs arising therefrom. Contractor shall defend, indemnify and hold Agency, its officials, directors, officers, employees and agents free and harmless, pursuant to the indemnification provisions of this Agreement, from any claim or liability arising out of any failure or alleged failure to comply with such laws, rules or regulations.

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26. **STANDARD OF CARE** - Contractor shall perform all services under this Agreement in a skillful and competent manner, consistent with the standards generally recognized as being employed by professionals in the same discipline in the State of California. Contractor represents and maintains that it is skilled in the profession necessary to perform the services. Contractor warrants that all employees and subcontractors shall have sufficient skill and experience to perform the services assigned to them. Finally, Contractor represents that it, its employees and subcontractors have all licenses, permits, qualifications and approvals of whatever nature that are legally required to perform the services and that such licenses and approvals shall be maintained throughout the term of this Agreement. Any employee of the Contractor or its subcontractors who is determined by the Agency to be uncooperative, incompetent, a threat to the adequate or timely completion of the project, a threat to the safety of persons or property, or any employee who fails or refuses to perform the services in a manner acceptable to the Agency, shall be promptly removed from the project by the Contractor and shall not be re-employed to perform any of the services or to work on the project.
27. **INDEMNIFICATION** - To the fullest extent permitted by law, the Contractor assumes liability for and agrees, at the Contractor's sole cost and expense, to promptly and fully indemnify, protect, hold harmless and defend (even if the allegations are false, fraudulent, or groundless), the City of Moreno Valley (sometimes "City"), the Moreno Valley Community Services District (sometimes "CSD"), the City Council and Board of Directors and each member thereof, the Moreno Valley Housing Authority, and, if TUMF funding utilized, the Western Riverside Council of Governments ("WRCOG") and all of their respective officials, officers, directors, employees, commission members, representatives and agents (collectively "Indemnitees" and singularly "Indemnitee"), from and against any and all claims, allegations, actions, suits, arbitrations, administrative proceedings, regulatory proceedings, or other legal proceeds, causes of action, demands, costs, judgments, liens, stop notices, penalties, liabilities, damages, losses, anticipated losses of revenues, and expenses (including, but not limited to, any fees of accountants, attorneys, experts or other professionals, or investigation expenses), or losses of any kind or nature whatsoever, whether actual, threatened or alleged, arising out of, resulting from, or in any way (either directly or indirectly), related to the work or the Project or any breach of this Agreement by Contractor or any of its officers, agents, employees, subcontractors, sub-subcontractors, or any person performing any of the work, pursuant to a direct or indirect contract with the Contractor ("Indemnity Claims"). Such Indemnity Claims include, but are not limited to, claims for:
- a. Any activity on or use of the CSD's and/or City's premises or facilities;
  - b. Any liability incurred due to Contractor acting outside the scope of its authority pursuant to this Agreement, whether or not caused in part by an Indemnitee;
  - c. The failure of Contractor or the work to comply with any applicable law, permit or orders;
  - d. Any misrepresentation, misstatement or omission with respect to any statement made in this Agreement or any document furnished by the Contractor in connection therewith;
  - e. Any breach of any duty, obligation or requirement under this Agreement or any document furnished by Contractor in connection therewith, including, but not limited to any breach of Contractor's warranties, representations or agreements;
  - f. Any failure to coordinate the work with Agency's separate contractors;
  - g. Any failure to provide notice to any party as required by this Agreement or any document furnished in connection therewith;
  - h. Any failure to act in such a manner as to protect the Project from loss, cost, expense or liability;
  - i. Damage or injury to real property or personal property, equipment and materials (including, but without limitation, property under the care and custody of the Contractor

- or the City and/or CSD), and injury or death sustained by any person or persons (including, but not limited to, Contractor's employees or agents, and members of the general public);
- j. Any liability imposed by applicable law including, but not limited to criminal or civil fines or penalties;
- k. Any dangerous, hazardous, unsafe or defective condition of, in or on the Project site, of any nature whatsoever, which may exist by reason of any act, omission, neglect, or any use or occupation of the site by Contractor, its officers, agents, employees, or subcontractors;
- l. Any operation conducted upon or any use or occupation of the Project site by Contractor, its officers, agents, employees, or subcontractors under or pursuant to the provisions of this Agreement or otherwise;
- m. Any acts, errors, omission or negligence of Contractor, its officers, agents, employees, or subcontractors;
- n. Infringement of any patent rights, licenses, copyrights or intellectual property which may be brought against the Contractor or Agency arising out of Contractor's work, for which the Contractor is responsible; and
- o. Any and all claims against the Agency seeking compensation for labor performed or materials used or furnished to be used in the work or alleged to have been furnished on the Project, including all incidental or consequential damages resulting to the Agency from such claims.

Contractor's obligations to indemnify and hold the Indemnitees harmless exclude only such portion of any Indemnity Claim which is attributable to the active negligence or willful misconduct of the Indemnitees, provided such active negligence or willful misconduct is determined by agreement of the parties or by findings of a court of competent jurisdiction. In instances where an Indemnitee's active negligence accounts for only a percentage of the liability for the Indemnity Claim involved, the obligation of Contractor will be for that entire percentage of liability for the Indemnity Claim not attributable to the active negligence or willful misconduct of the Indemnitee(s). Such obligation shall not be construed to negate, abridge or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this section. Subject to the limits set forth herein, the Contractor, at its own expense, shall satisfy any resulting judgment that may be rendered against any Indemnitee resulting from an Indemnity Claim. The Indemnitees shall be consulted with regard to any proposed settlement.

The duty of the Contractor to indemnify and hold harmless the Indemnitees includes the separate and independent duty to defend the Indemnitees, which duty arises immediately upon receipt by Contractor of the tender of any Indemnity Claim from an Indemnitee. The Contractor's obligation to defend the Indemnitee(s) shall be at Contractor's sole expense, and not be excused because of the Contractor's inability to evaluate liability or because the Contractor evaluates liability and determines that the Contractor is not liable. This duty to defend shall apply whether or not an Indemnity Claim has merit or is meritless, or which involves claims or allegations that any or all of the Indemnitees were actively, passively, or concurrently negligent, or which otherwise asserts that the Indemnitees are responsible, in whole or in part, for any Indemnity Claim. The Contractor shall respond within thirty (30) calendar days to the tender of any Indemnity Claim for defense and/or indemnity by an Indemnitee, unless the Indemnitee agrees in writing to an extension of this time. The defense provided to the Indemnitees by Contractor shall be by well qualified, adequately insured and experienced legal counsel acceptable to the Agency.

It is the intent of the parties that the Contractor and its subcontractors of all tiers shall provide the Indemnitees with the broadest defense and indemnity permitted by applicable law. In the event that any of the defense, indemnity or hold harmless provisions in the Agreement are found to be ambiguous, or in conflict with one another, it is the parties' intent that the broadest and most expansive interpretation in favor of providing defense and/or indemnity to the Indemnitees be given effect.

With respect to third party claims against the Contractor, to the fullest extent permitted by law, the Contractor waives any and all rights to any type of express or implied indemnity against the Indemnitees.

In addition to the requirements set forth above, Contractor shall ensure, by written subcontract agreement, that each of Contractor's subcontractors of every tier shall protect, defend, indemnify and hold harmless the Indemnitees with respect to Indemnity Claims arising out of, in connection with, or in any way related to each such subcontractors' work on the Project in the same manner in which Contractor is required to protect, defend, indemnify and hold the Indemnitees harmless. In the event Contractor fails to obtain such defense and indemnity obligations from others as required herein, Contractor agrees to be fully responsible to the Indemnitees according to the terms of this section.

Contractor's obligations under this section are in addition to any other rights or remedies which the Indemnitees may have under the law or under the Agreement. Contractor's indemnification and defense obligations set forth in this section are separate and independent from the insurance provisions set forth in the Agreement, and do not limit, in any way, the applicability, scope, or obligations set forth in such insurance provisions. The purchase of insurance by the Contractor with respect to the obligations required herein shall in no event be construed as fulfillment or discharge of such obligations. In any and all claims against the Indemnitees by any employee of the Contractor; any subcontractor; any supplier of the Contractor or subcontractors; anyone directly or indirectly employed by any of them; or anyone for whose acts any of them may be liable, the obligations under this Agreement shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any subcontractor or any supplier of either of them, under workers' compensation acts, disability benefit acts or other employee benefit acts. Failure of the Agency to monitor compliance with these requirements imposes no additional obligations on the Agency and will in no way act as a waiver of any rights hereunder.

Subject to applicable law, in the event a claim arises prior to final payment to Contractor, the Agency may, in its sole discretion, reserve, retain or apply any monies due Contractor for the purpose of resolving such claims; provided, however, the Agency may release such funds if the Contractor provides the Agency with reasonable assurances of protection of the Indemnitees' interests. The Agency shall, in its sole discretion, determine whether such assurances are reasonable.

Contractor's obligations under this section are binding on Contractor's and its subcontractors' successors, heirs and assigns and shall survive the completion of the work or termination of the Contractor's performance of the work.

- 28. **SECURITY / BONDS** - The Contractor shall furnish a satisfactory Performance Bond meeting all statutory requirements of the State of California on the form provided by the Agency. The bond shall be furnished as a guarantee of the faithful performance of the requirements of this Agreement as may be amended from time to time, including, but not limited to, for protection against liability for delays and damages (both direct and consequential) to the Agency and the Agency's consultants and other contractors, and to ensure all warranties, guarantees, and indemnity obligations, in an amount that shall remain equal to one hundred percent (100%) of the compensation to be paid Contractor under this Agreement. The Performance Bond shall remain in force until at least two (2) years after the date of

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final acceptance of the Project, unless the City determines, in its sole and absolute discretion, to release the Performance Bond earlier and notifies Contractor in writing.

The Contractor shall furnish a satisfactory Labor and Materials Payment Bond meeting all statutory requirements of the State of California on the form provided by the Agency in an amount that shall remain equal to one hundred percent (100%) of the compensation to be paid Contractor under this Agreement to secure payment of all claims, demands, stop notices, or charges of material suppliers, mechanics, or laborers employed by the Contractor or by any subcontractor, or any person, firm, or entity eligible to file a stop payment notice with respect to the Project. The Labor and Materials Payment Bond shall remain in force and shall not be released until at least seven (7) months after the date of recordation of the Notice of Completion or Notice of Acceptance, whichever occurs first.

All bonds shall be executed by a California-admitted surety insurer. Bonds issued by a California-admitted surety insurer listed on the latest version of the U.S Department of Treasury Circular 570 shall be deemed accepted unless specifically rejected by the Agency. Bonds issued by sureties not listed in Treasury Circular 570 must be accompanied by all documents enumerated in California Code of Civil Procedure Section 995.660(a). The bonds shall bear the same date as the Agreement. The attorney-in-fact who executes the required bonds on behalf of the surety shall affix thereto a certified and current copy of the power of attorney. In the event of changes that increase the Agreement compensation, the amount of each bond shall be deemed to increase and at all times remain equal to the Agreement amount. The signatures shall be acknowledged by a notary public. Every bond must display the surety's bond number and incorporate by reference the Agreement and the obligations to complete the Project in accordance with the Agreement. The terms of the bonds shall provide that the surety agrees that no change, extension of time, alteration, or modification of the Agreement or the work to be performed thereunder shall in any way affect its obligations and shall waive notice of any such change, extension of time, alteration, or modification of the Agreement. The surety further agrees that it is obligated under the bonds to any successor, grantee, or assignee of the Agency.

Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Agreement, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

Should any bond become insufficient, or should any of the sureties, in the opinion of the Agency, become non-responsible or unacceptable, the Contractor shall, within ten (10) calendar days after receiving notice from the Agency, provide written documentation to the satisfaction of the Agency that Contractor has secured new or additional sureties for the bonds; otherwise the Contractor shall be in default of the Agreement. No further payments shall be deemed due or will be made under the Agreement until a new surety(ies) qualifies and is accepted by the Agency.

Contractor agrees that said bonds are separate obligations of the Contractor and its surety, and that any attorney's fee provision contained in any payment bond or performance bond shall not apply to this Agreement. In the event there is any litigation between the parties arising from the breach of this Agreement, each party will bear its own attorneys' fees in the litigation.

29. **WARRANTY** - The Contractor, the Contractor's heirs, executors, administrators, successors, and/or assigns guarantee that all work performed under this Agreement fully meets the requirements thereof as to quality of workmanship and materials furnished, including without limitation materials to be of good quality and fit for their purpose and intended use. If any defects in materials or workmanship become evident prior to expiration of the term of this Agreement or release of the Performance Bond, whichever occurs first, the Contractor shall, at his or her own expense, make any repair(s) or replacement(s) necessary to restore the work to full compliance with the plans and specifications.



Contractor shall also repair, replace and restore any other work which is displaced in correcting defective work which the Agency by reason of such defects reasonably suspects may also be defective. In the event of a failure to commence with the compliance of above-mentioned requirements within seven (7) calendar days after being notified in writing of failure to diligently pursue such compliance to completion, the Agency is hereby authorized to proceed to have the defects repaired and made good at the expense of Contractor who hereby agrees to pay the cost and charges therefor immediately on demand.

If, in the opinion of the Agency, nonconforming work creates a dangerous condition or requires immediate correction or repair to prevent further loss to the Agency or to prevent interruption of operations, the Agency shall attempt to give the Contractor notice of the same. If Contractor cannot be contacted or does not comply with the Agency's request for correction within a reasonable time as determined by the Agency, the Agency may proceed to make such correction or provide such repair. The costs of such correction or repair shall be charged against Contractor, who agrees to make payment for said costs upon demand. Corrective action by the Agency will not relieve Contractor or Contractor's sureties or insurers of the guarantees and indemnities of this Agreement.

This section does not in any way limit the Agency's remedies available under the law, or the guarantee on any items for which a longer guarantee is specified or on any items for which a manufacturer or supplier gives a longer guarantee period. Contractor agrees to act as a co-guarantor with such manufacturer or supplier and shall furnish the Agency all appropriate guarantees or warranty certificates upon completion of the Project. No manufacturer's guarantee period shall in any way limit the liability of Contractor or Contractor's sureties and insurers under the indemnity or insurance provisions of this Agreement.

30. **INTELLECTUAL PROPERTY** - Any system or documents developed, produced or provided under this Agreement, including any intellectual property discovered or developed by Contractor in the course of performing or otherwise as a result of its work, shall become the sole property of the Agency unless explicitly stated otherwise in this Agreement. The Contractor may retain copies of any and all material, including drawings, documents, and specifications, produced by the Contractor in performance of this Agreement. The Agency and the Contractor agree that to the extent permitted by law, until final approval by the Agency, all data shall be treated as confidential and will not be released to third parties without the prior written consent of both parties.
31. **TERMINATION** - The Agency may terminate the whole or any part of this Agreement at any time without cause by giving at least ten (10) days written notice to the Contractor. The written notice shall specify the date of termination. Upon receipt of such notice, the Contractor may continue work through the date of termination, provided that no work or service(s) shall be commenced or continued after receipt of the notice which is not intended to protect the interest of the Agency. The Agency shall pay the Contractor within thirty (30) days after receiving any invoice after the date of termination for all non-objected to services performed by the Contractor in accordance herewith through the date of termination.

Either party may terminate this Agreement for cause. In the event the Agency terminates this Agreement for cause, the Contractor shall perform no further work or service(s) under the Agreement unless the notice of termination authorizes such further work.

If this Agreement is terminated as provided herein, Agency may require Contractor to provide all finished or unfinished documents and data and other information of any kind prepared by Contractor in connection with the performance of services under this Agreement. Contractor shall be required to provide such documents and other information within fifteen (15) days of the request.

32. **AGENCY EMPLOYEES** - The Contractor shall not employ any employee or official of the City or CSD in the work performed pursuant to this Agreement. No officer or employee of the City or CSD shall have any financial interest in this Agreement in violation of federal, state, or local law.
33. **NONLIABILITY OF AGENCY EMPLOYEES** - No officer or employee of the City or CSD shall be personally liable to Contractor, or any successor in interest, in the event of any default or breach by the Agency or for any amount which may become due to Contractor or to its successor, or for any breach of any obligation of the terms of this Agreement.
34. **ENTIRE AGREEMENT** - This Agreement constitutes the entire agreement between the parties. There are no understandings, agreements, or representations of warranties, expressed or implied, not specified in this Agreement. This Agreement applies only to the current proposal as attached. This Agreement may be modified or amended only by a subsequent written Agreement signed by both parties. Assignment of this Agreement is prohibited without prior written consent.
35. **CHOICE OF LAW** - The laws of the State of California shall govern the rights, obligations, duties, and liabilities of the parties to this Agreement, and shall govern the interpretation of this Agreement. Any legal proceeding arising from this Agreement shall be brought in the appropriate court located in Riverside County, State of California.
36. **ATTORNEYS' FEES** - Should either party bring any legal or equitable action for the purpose of protecting or enforcing its rights under this Agreement, the prevailing party in such action shall recover in addition to all other relief, its reasonable attorney's fees and court costs, fixed by the court. In addition to the foregoing award of attorney's fees, the prevailing party shall be entitled to its attorneys' fees incurred in any post judgment proceedings to enforce any judgments in connection with this Agreement. The provision is separate and several and shall survive the merger of this provision into any judgment.
37. **NOTICES** - All notices permitted or required under this Agreement shall be given to the respective parties at the addresses set forth above, or at such other address as the respective parties may provide in writing for this purpose. Such notice shall be deemed made when personally delivered or when mailed, forty-eight (48) hours after deposit in the U.S. Mail, first class postage prepaid and addressed to the party at its applicable address. Actual notice shall be deemed adequate notice on the date actual notice occurred, regardless of the method of service.
38. **RECORDS** - The Contractor agrees that he or she and its subcontractors shall maintain and keep books, payrolls, invoices of materials, and records current, and recordings of all transactions pertaining to this Agreement in a form in accordance with generally acceptable accounting principles. Said books and records shall be made available to the City, the CSD, County of Riverside, the State of California, the federal government and to any authorized representative thereof for purposes of audit and inspection at all reasonable times and places. All such books, payrolls, invoices of materials, and records shall be retained for such periods of time as required by law, provided, however, notwithstanding any shorter period of retention, all books, records, and supporting detail shall be retained for a period of at least three (3) years after acceptance of the Project by the Agency.
39. **PERFORMANCE** - The parties do for themselves, their heirs, executors, administrators, successors and assigns agree to the full performance of all of the provisions herein contained. The Contractor may not, either voluntarily or by action of law, assign any obligation assumed by the Contractor hereunder without prior written consent of the Agency
40. **WORKERS COMPENSATION** - By my signature hereunder, as Contractor, I certify that I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for Workers' Compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of

this Agreement. Contractor agrees to waive its statutory immunity under any workers' compensation or similar statute, as respecting the Agency, and to require any and all subcontractors and any other person or entity involved in the Project to do the same.

- 41. **WAIVERS AND RELEASES** - Contractor expressly waives any claims for any compensation or benefits afforded to Agency employees and not to independent contractors, and waives any and all rights and benefits conferred upon it by the provisions of section 1542 of the California Civil Code which reads as follows:

“A general release does not extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor.”

This waiver shall be effective as a bar to any and all actions, fees, damages, losses, claims, liabilities and demands of whatsoever character, nature and kind that are known or unknown, or suspected or unsuspected, including, without limitation, claims of entitlements under the California Public Employees' Retirement System (CalPERS) that are only afforded to employees and not independent contractors. Contractor further represents and warrants that it understands this waiver and that if it does not understand this waiver, it shall seek the advice of a qualified attorney before executing this Agreement.

- 42. **ACCEPTANCE OF WORK** - Acceptance of the work shall be by action of the Agency's Board or its designee. Neither the acceptance nor prior inspections or failure to inspect shall constitute a waiver by the Agency of any defects in the work. From and after acceptance, the work shall be owned and operated by the Agency. As a condition to acceptance, Contractor shall certify to the Agency in writing that all of the work has been performed in strict conformity with this Agreement and that all costs have been paid, satisfactorily to the Agency, guaranteeing such performance.

- 43. **LICENSES** - The Contractor and all subcontractors shall obtain and keep current a valid City of Moreno Valley Business License and all professional licenses, certifications and/or permits necessary for performing the services describe in this Agreement prior to commencement and throughout the term of this Agreement.

- 44. **DEFAULT** - Failure or delay by any party to this Agreement to perform any material term or provision of this Agreement shall constitute a default under this Agreement; provided however, that if the party who is otherwise claimed to be in default by the other party commences to cure, correct or remedy the alleged default within fifteen (15) days after receipt of written notice specifying such default and diligently completes such cure, correction or remedy, such party shall not be deemed to be in default hereunder.

The party which may claim that a default has occurred shall give written notice of default to the party in default, specifying the alleged default. Delay in giving such notice shall not constitute a waiver of any default nor shall it change the time of default; provided, however, the injured party shall have no right to exercise any remedy for a default hereunder without delivering the written default notice, as specified herein.

Any failure or delay by a party in asserting any of its rights or remedies as to any default shall not operate as a waiver of any default or of any rights or remedies associated with a default.

In the event that a default of any party to this Agreement may remain uncured for more than fifteen (15) days following written notice, as provided above, a "breach" shall be deemed to have occurred. In the event of a breach, the injured party shall be entitled to seek any appropriate remedy or damages by initiating legal proceedings.

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45. **CUMULATIVE REMEDIES** - Except with respect to rights and remedies expressly declared to be exclusive in this Agreement, the rights and remedies of the parties are cumulative and the exercise by either party of one or more of such rights or remedies shall not preclude the exercise by it, at the same or different times, of any other rights or remedies for the same default of any other default by the other party.
46. **CONFLICTS OF INTEREST** - Contractor covenants that it does not have any interest, nor shall it acquire an interest, directly or indirectly, which would conflict in any manner with the performance of Contractor's services under this Agreement. In the event the Agency officially determines that Contractor must disclose its financial interests by completing and filing a Fair Political Practices Commission Form 700, Statement of Economic Interests, Contractor shall file the subject Form 700 with City Hall, as specified under the Notice provisions of this Agreement, pursuant to the written instructions provided by the Agency.
47. **TIME OF ESSENCE** - Time is of the essence for each and every provision of this Agreement
48. **NON-EXCLUSIVITY** - The Agency reserves the right to employ other contractors in connection with work ancillary to the Project. The Contractor shall be responsible for ascertaining the nature and extent of any simultaneous, collateral, and essential work by others and coordinating with the work by others. The Agency, other contractors and utilities shall have the right to operate within or adjacent to the Project site during the performance of such work.
- Should construction be under way by other forces or by other contractors within or adjacent to the limits of the work specified or should work of any other nature be under way by other forces within or adjacent to those limits, the Contractor shall cooperate with all the other contractors or other forces to the end that any delay or hindrance to their work will be avoided. The right is reserved to perform other or additional work at or near the site (including material sources) at any time, by the use of other forces.
49. **AMENDMENT** - No supplement, modification, or amendment of this Agreement shall be binding unless executed in writing and signed by both parties.
50. **WAIVER** - No waiver of any default shall constitute a waiver of any other default or breach, whether of the same or other covenant or condition. No waiver, benefit, privilege, or service voluntarily given or performed by a party shall give the other party any contractual rights by custom, estoppel, or otherwise.
51. **THIRD PARTIES** - There are no intended third party beneficiaries of any right or obligation assumed by the parties.
52. **COUNTERPARTS** - This Agreement may be signed in counterparts, each of which shall constitute an original.
53. **INVALIDITY/SEVERABILITY** - If any portion of this Agreement is declared invalid, illegal, or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions shall continue in full force and effect; and, to the extent permitted and possible, the invalid or unenforceable term shall be deemed replaced by a term that comes closest to expressing the intention of such invalid or unenforceable term.
54. **ASSIGNMENT/TRANSFER** - Contractor shall not assign, hypothecate, or transfer, either directly or by operation of law, this Agreement or any interest herein without the prior written consent of the Agency. Any attempt to do so shall be null and void, and any assignees, hypothecates or transferees shall acquire no right or interest by reason of such attempted assignment, hypothecation or transfer.

EXHIBIT A  
SCOPE OF SERVICES

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## EXHIBIT B

## INSURANCE REQUIREMENTS

Throughout the life of this Contract, Contractor shall pay for and maintain in full force and effect all policies of insurance required hereunder with an insurance company(ies) either (i) admitted by the California Insurance Commissioner to do business in the State of California and rated not less than "A- VII" in Best's Insurance Rating Guide, or (ii) as may be authorized in writing by City Attorney or his/her designee at any time and in his/her sole discretion. For purposes of these requirements, "City" shall include the City of Moreno Valley, Moreno Valley Community Services District and the Moreno Valley Housing Authority.

**SCOPE OF INSURANCE**

The following policies of insurance are required:

1. COMMERCIAL GENERAL LIABILITY insurance which shall be at least as broad as the most current version of Insurance Services Office (ISO) Commercial General Liability Coverage Form CG 00 01 and include insurance for "bodily injury," "property damage" and "personal and advertising injury" with coverage for premises and operations (including the use of owned and non-owned equipment), products and completed operations, and contractual liability (including, without limitation, indemnity obligations under the Contract) with limits of liability of not less than the following:

\$2,000,000 per occurrence for bodily injury and property damage

\$1,000,000 per occurrence for personal and advertising injury

\$2,000,000 aggregate for products and completed operations

\$4,000,000 general aggregate applying separately to the work performed under the Contract

2. COMMERCIAL AUTOMOBILE LIABILITY insurance which shall be at least as broad as the most current version of Insurance Service Office (ISO) Business Auto Coverage Form CA 00 01, and include coverage for all owned, hired, and non-owned automobiles or other licensed vehicles (Code 1 - Any Auto) with limits of liability of not less than \$1,000,000 per accident for bodily injury and property damage.

3. WORKERS' COMPENSATION insurance as required under the California Labor Code.

4. EMPLOYERS' LIABILITY insurance with limits of liability of not less than \$1,000,000 each accident, \$1,000,000 disease policy limit and \$1,000,000 disease each employee.

5. BUILDERS RISK (Course of Construction) insurance in an amount equal to the completed value of the project with no coinsurance penalty provisions. This coverage is only required if the project includes new construction of a building; or renovation of, or addition to, an existing building.

6. CONTRACTORS POLLUTION LIABILITY insurance is required for all environmental and water remediation work, for all work transporting fuel, for demolition, renovation, HVAC, plumbing or electrical (including, without limitation, lighting) work on any structure built prior to the year 1990, limits of liability of not less than the following:

\$1,000,000 per occurrence or claim

\$2,000,000 general or policy aggregate

7. PROFESSIONAL LIABILITY (ERROR AND OMISSIONS), insurance appropriate to Contractor's profession, if applicable, with limits not less than:

\$1,000,000 per occurrence or claim

\$2,000,000 general or policy aggregate

In the event Contractor purchases an Umbrella or Excess insurance policy(ies) to meet the minimum limits of insurance set forth above, this insurance policy(ies) shall "follow form" and afford no less coverage than the primary insurance policy(ies).

Contractor shall be responsible for payment of any deductibles contained in any insurance policies required hereunder and Contractor shall also be responsible for payment of any self-insured retentions. Any deductibles or self-insured retentions in excess of \$10,000.00 must be declared to, and approved by, the City Attorney or his/her designee in his/her sole discretion. At the option of the City Attorney or his/her designee, either (i) the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects City, its officers, officials, employees and agents; or (ii) Contractor shall provide a financial guarantee, satisfactory to the City Attorney or his/her designee in his/her sole discretion, guaranteeing payment of losses and related investigations, claim administration and defense expenses. At no time shall City be responsible for the payment of any deductibles or self-insured retentions.

The coverage(s) shall contain no special limitations on the scope of protection afforded to City, its officers, officials, employees and agents. Should Contractor maintain insurance with broader coverage and/or limits of liability greater than those shown above, City requires and shall be entitled to the broader coverage and/or the higher limits of liability maintained by Contractor. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to City.

**ENDORSEMENTS**

Cancellation Notice - All policies of insurance required hereunder shall be endorsed to provide that the coverage shall not be cancelled, non-renewed, reduced in coverage or in limits except after 30 calendar day written notice has been given to City. Upon issuance by the insurer, broker, or agent of a notice of cancellation, non-renewal, or reduction in coverage or in limits, Contractor shall furnish City with a new certificate and applicable endorsements for such policies. In the event any policy is due to expire during the work to be performed for City, Contractor shall provide a new certificate, and applicable endorsements, evidencing renewal of such policy not less than 15 calendar days prior to the expiration date of the expiring policy.

Additional Insured - The General Liability (including ongoing operations and completed operations), Automobile Liability and Contractors Pollution Liability insurance policies shall name City of Moreno Valley, Moreno Valley Community Services District ("CSD") and Moreno Valley Housing Authority ("Authority"), Western Riverside Council of Governments ("WRCOG", only if Project is utilizing TUMF funding) their officers, officials, employees and agents as an additional insured.

Primary / Non-Contributory - The General Liability (including ongoing operations and completed operations), Automobile Liability and Contractors Pollution Liability insurance policies shall be endorsed so Contractor's

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insurance shall be primary and no contribution shall be required of City, CSD, Authority, WRCOG (if TUMF funded) their officers, officials, employees and agents.

Waiver of Subrogation - The General Liability and Workers' Compensation insurance policies shall contain a waiver of subrogation as to City, CSD, Authority, WRCOG (if TUMF funded) their officers, officials, employees and agents.

## OTHER PROVISIONS

Claims-Made Policies - If any coverage required is written on a claims-made coverage form:

1. The retroactive date must be shown, and must be before the effective date of the Agreement or the commencement of work by Contractor.
2. Insurance must be maintained and evidence of insurance must be provided for at least 3 years after any expiration or termination of the Agreement or, in the alternative, the policy shall be endorsed to provide not less than a 3-year discovery period.
3. If coverage is canceled or non-renewed, and not replaced with another claims made policy form with a retroactive date prior to the effective date of the Agreement or the commencement of work by Contractor, Contractor must purchase extended reporting coverage for a minimum of 3 years following the expiration or termination of the Agreement.
4. A copy of the claims reporting requirements must be submitted to City for review.
5. These requirements shall survive expiration or termination of the Agreement.

Contractor shall furnish City with all certificate(s) and applicable endorsements effecting coverage required hereunder. All certificates and applicable endorsements are to be received and approved by the City Attorney or his/her designee in his/her sole discretion prior to City's execution of the Contract and before work commences. Upon request of City, Contractor shall immediately furnish City with a complete copy of any insurance policy required under this Contract, including all endorsements, with said copy certified by the underwriter to be a true and correct copy of the original policy. This requirement shall survive expiration or termination of this Contract.

If at any time during the life of the Contract or any extension, Contractor or any of its subcontractors fail to maintain any required insurance in full force and effect, all work under this Contract shall be discontinued immediately, and all payments due or that become due to Contractor shall be withheld until notice is received by City that the required insurance has been restored to full force and effect and that the premiums therefore have been paid for a period satisfactory to City. Any failure to maintain the required insurance shall be sufficient cause for City to terminate this Contract. No action taken by City hereunder shall in any way relieve Contractor of its responsibilities under this Contract.

The fact that insurance is obtained by Contractor shall not be deemed to release or diminish the liability of Contractor, including, without limitation, liability under the indemnity provisions of this Contract. The duty to indemnify City shall apply to all claims and liability regardless of whether any insurance policies are applicable. The policy limits do not act as a limitation upon the amount of indemnification to be provided by Contractor. Approval or purchase of any insurance contracts or policies shall in no way relieve from liability nor limit the liability of Contractor, its principals, officers, agents, employees, persons under the supervision of Contractor,



vendors, suppliers, invitees, consultants, sub-consultants, subcontractors, or anyone employed directly or indirectly by any of them.

In the event of a partial or total destruction by the perils insured against of any or all of the work and/or materials herein provided for at any time prior to the final completion of the Contract and the final acceptance by the City of the work or materials to be performed or supplied thereunder, the Contractor shall promptly reconstruct, repair, replace, or restore all work or materials so destroyed or injured at his/her sole cost and expense. Nothing herein provided for shall in any way excuse the Contractor or his/her insurance company from the obligation of furnishing all the required materials and completing the work in full compliance with the terms of the Contract.

If Contractor should subcontract all or any portion of the services to be performed under this Contract, Contractor shall require each subcontractor to provide insurance protection in favor of City, its officers, officials, employees and agents in accordance with the terms of each of the preceding paragraphs, except that the subcontractors' certificates and endorsements shall be on file with Contractor and City prior to the commencement of any work by the subcontractor.

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Insurance Checklist  
For Public Works Contracts  
(For Internal Use Only)

General Liability

- \$2,000,000 per occurrence for bodily injury and property damage
- \$1,000,000 per occurrence for personal and advertising injury
- \$2,000,000 aggregate for products and completed operations
- \$4,000,000 general aggregate applying separately to contract work
- Additional Insured Endorsement – Ongoing Operations
- Additional Insured Endorsement – Completed Operations
- Primary Endorsement – Ongoing Operations
- Primary Endorsement – Completed Operations
- Notice of Cancellation

Auto

- \$1,000,000 per occurrence for bodily injury and property damage
- Additional Insured Endorsement
- Primary Endorsement
- Notice of Cancellation

Worker's Compensation

- Evidence of Coverage
- Waiver of Subrogation
- Notice of Cancellation

Employer's Liability

- \$1,000,000 for each (accident, disease policy, disease employee)
- Notice of Cancellation

Builder's Risk

- Equal to completed value of project
- Notice of Cancellation

Contractor's Pollution Liability

- \$1,000,000 per occurrence or claim
- \$2,000,000 aggregate
- Additional Insured Endorsement
- Primary Endorsement
- Notice of Cancellation

Professional Liability

- \$1,000,000 per occurrence or claim
- \$2,000,000 aggregate
- Notice of Cancellation

EXHIBIT C  
AGENCIES RESPONSIBILITIES

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## EXHIBIT D

## FEDERAL REQUIREMENTS

The following provisions, pursuant to 44 Code of Federal Regulations, Part 13, Subpart C, Section 13.36, as it may be amended from time to time, are included in the Agreement and are required to be included in all subcontracts entered into by CONTRACTOR for work pursuant to the Agreement, unless otherwise expressly provided herein.

1. CONTRACTOR shall comply with Executive Order 11246 of September 24, 1965, entitled Equal Employment Opportunity, as amended by Executive Order 11375 of October 13, 1967, and as supplemented in Department of Labor regulations (41 CFR chapter 60). (All construction contracts awarded in excess of \$10,000 by CITY and/or subcontracts in excess of \$10,000 entered into by CONTRACTOR.)
2. CONTRACTOR shall comply with the Copeland Anti-Kickback Act (18 U.S.C. 874) as supplemented in Department of Labor regulations (29 CFR Part 3) (All contracts and subcontracts for construction or repair.)
3. CONTRACTOR shall comply with the Davis-Bacon Act (40 U.S.C. 276a to 276a7) as supplemented by Department of Labor regulations (29 CFR Part 5).
4. CONTRACTOR shall comply with Sections 103 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327330) as supplemented by Department of Labor regulations (29 CFR Part 5).
5. Patent rights with respect to any discovery or invention which arises or is developed in the course of or under the Agreement shall be retained by the CITY.
6. Copyrights and rights in data developed in the course of or under the Agreement shall be the property of the CITY. FEMA/CalOES reserve a royalty-free, nonexclusive, irrevocable license to reproduce, publish or otherwise use or authorize to others to use for federal purposes a copyright in any work developed under the Agreement and/or subcontracts for work pursuant to the Agreement.
7. CONTRACTOR shall provide access by the City, the Federal grantor agency, the Comptroller General of the United States, or any of their duly authorized representatives to any books, documents, papers, and records of the contractor which are directly pertinent to that specific contract for the purpose of making audit, examination, excerpts, and transcriptions.
8. CONTRACTOR shall retain all required records for three years after CITY makes final payments and all other pending matters relating to the Agreement are closed.
9. CONTRACTOR shall comply with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 1857(h)), section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR part 15). (This provision applies to contracts exceeding \$100,000 and to subcontracts entered into pursuant to such contracts.)
10. CONTRACTOR shall comply with mandatory standards and policies relating to energy efficiency which are contained in the State energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94163, 89 Stat. 871).



## Report to City Council

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**TO:** Mayor and City Council

**FROM:** Michael L. Wolfe, P.E., Public Works Director/City Engineer

**AGENDA DATE:** February 19, 2019

**TITLE:** PUBLIC HEARING FOR ONE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM MAIL BALLOT PROCEEDING

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### **RECOMMENDED ACTION**

#### **Recommend that the City Council:**

1. Conduct the Public Hearing and accept public testimony for the mail ballot proceeding(s) for the National Pollutant Discharge Elimination System (NPDES) Common Interest, Commercial, Industrial, and Quasi-Public Use maximum Regulatory Rate to be applied to three property tax bill(s);
2. Direct the City Clerk to open and count the returned NPDES ballot(s);
3. Verify and accept the results of the mail ballot proceeding(s) as maintained by the City Clerk on the Official Tally Sheet;
4. Receive and file the Official Tally Sheet with the City Clerk's office; and,
5. If approved, set the rate and impose the NPDES Common Interest, Commercial, Industrial, and Quasi-Public Use Regulatory Rate on the Assessor's Parcel Number(s) as mentioned.

### **SUMMARY**

The action before the City Council is to conduct a Public Hearing for one NPDES mail ballot proceeding. The process to accept three parcel(s) into the City's NPDES funding program impacts one property owner, not the general citizens or taxpayers of the City.

The City requires property owners of development projects to mitigate the cost of certain impacts created by the proposed development, such as the cost of complying with state

and federal NPDES requirements. The City offers the NPDES funding program to assist property owners in satisfying the requirement. After a property owner approves the City's NPDES rate through a mail ballot proceeding, the City can levy the rate on the annual property tax bill(s) of the authorized parcel(s).

As a condition of approval for development of their project(s), Prologis, L.P. (the "Property Owner") is required to provide a funding source for the NPDES program and has requested the City conduct a mail ballot proceeding to satisfy the condition of approval. If the Property Owner approves the mail ballot and the City Council accepts the results, the condition of approval will be satisfied for their project. Tonight's Public Hearing is a required part of the process.

## **DISCUSSION**

The Clean Water Act of 1987 established requirements for the discharge of Urban Runoff from Municipal Separate Storm Sewer Systems under the NPDES program. The Santa Ana Regional Water Quality Control Board administers the NPDES program through the issuance of a Permit. The NPDES program requires public agencies to obtain coverage under the Permit to discharge urban stormwater runoff from municipally owned drainage facilities, including streets, highways, storm drains, and flood control channels. The City's current NPDES Permit requires all new development projects to comply with stormwater management requirements.

The City Council adopted the NPDES Residential Regulatory Rate on June 10, 2003, and the NPDES Common Interest, Commercial, Industrial, and Quasi-Public Use Regulatory Rate ("Commercial/Industrial Rate") on January 10, 2006. As a condition of approval from the Planning Commission, development projects are required to provide a funding source, consistent with the rates established by the City Council, to support activities for the NPDES program requirements. Revenue received from the rate supports the increased compliance activities related to the development. It also reduces the financial impact to the General Fund to maintain compliance with the unfunded requirements of the Permit.

The Property Owner is approved to construct two industrial warehouse/logistics buildings on the southwest corner of the intersection of Krameria Ave. and Indian St. As a condition of approval of their project(s), the Property Owner is required to provide a funding source for the NPDES program to mitigate costs of the program created by the development project. Information for the parcel(s) under development (or the "Subject Property") is shown in the table below:

<b>Property Owner Project</b>	<b>Assessor's Parcel Number(s)</b>	<b>Location</b>	<b>FY 2018/19 Maximum<sup>1</sup> NPDES Commercial/Industrial Rate(s) per Parcel</b>
Prologis L.P. Moreno Valley Logistics PEN16-0003/SBP18-0016	316-100-055, 316-100-057, and 316-100-058	Southwest corner of the intersection of Krameria Ave. and Indian St.	\$245.38

<sup>1</sup>The NPDES applied rate levied on the property tax bill will be based on the development status of the property at the time rates are evaluated each year, prior to levying them onto the property tax roll.

A property owner has two options to satisfy the condition of approval:

1. Approve the NPDES rate and authorize the City to collect the rate on the annual Riverside County property tax bill(s) through participation in a successful mail ballot proceeding; or
2. Fund an endowment.

The Property Owner elected to have the NPDES rate applied to the annual property tax bill(s) of the Subject Property. Before the City can levy the NPDES rate on the property tax bill(s) of the Subject Property, a property owner must first approve it and authorize the City to levy it on the annual property tax bill through a mail ballot proceeding. A mail ballot proceeding is a legally required process to approve new charges, or an increase to existing charges, on property tax bills (Proposition 218). The Property Owner was mailed a notice and a ballot to cast their vote (Attachment 1) for their property. Among other things, the notice provides the purpose and amount of the charge and the potential annual inflationary adjustment. The City is required to provide a property owner with 45 days to review the notice and an opportunity to address the City Council (i.e. public comment portion of the Public Hearing). The ballot(s) is due to the City Clerk prior to the close of the Public Hearing. At the close of the Public Hearing, the ballot(s) can be opened and counted, and results announced.

The condition of approval to provide a funding source for the NPDES program will be satisfied with the Property Owner's approval of the NPDES mail ballot (marked yes and signed) and City Council acceptance of the results. In the event a property owner does not return their ballot, does not approve the ballot, or returns an invalid ballot (unmarked or unsigned), this condition of approval will remain unsatisfied and may delay development of their project. In the event more than one mail ballot proceeding is being conducted tonight, each ballot will be counted separately to determine if a property owner approved inclusion of their respective property in the NPDES program.

This action meets the Strategic Plan Priorities to manage and maximize Moreno Valley's public infrastructure to ensure an excellent quality of life, develop and implement innovative, cost effective infrastructure maintenance programs, public facilities management strategies, and capital improvement programming and project delivery.

### **ALTERNATIVES**

1. Conduct the Public Hearing and upon its close, open, count, and verify the returned ballot(s) and accept the results. *Staff recommends this alternative as it will satisfy the project's condition of approval so long as the Property Owner approves their respective ballot.*
2. Open the Public Hearing and continue it to a future regularly scheduled City Council meeting. *Staff does not recommend this alternative as it will*

*delay announcement of the ballot results and may delay project development.*

3. Do not conduct the Public Hearing. *Staff does not recommend this alternative as it will delay the condition of approval from being satisfied and may delay project development. The City will incur additional costs to restart the 45-day noticing period.*
4. Do not conduct the Public Hearing at this time but reschedule it to a date certain during a regularly scheduled City Council meeting. *Staff does not recommend this alternative as it may delay project development and the City will incur additional costs to restart the 45-day noticing period.*

### **FISCAL IMPACT**

Revenue received from the NPDES rate is restricted and can only be used within the stormwater management program. This revenue offsets stormwater management program expenses, which reduces financial impacts to the General Fund and maintains compliance with the unfunded requirements of the Permit. The NPDES rate is only applied to the property tax bills of parcels where approval of the rate has been authorized through a successful mail ballot proceeding.

The fiscal year (FY) 2018/19 maximum NPDES Commercial/Industrial Rate is \$245.38 per parcel, and any division thereof. The maximum NPDES rate for FY 2019/20 and each subsequent FY is subject to an annual inflationary adjustment. The increase to the maximum rate cannot exceed the annual inflationary adjustment without approval of the property owners subject to the charge. The NPDES Commercial/Rate applied to the property tax bill will be based on the development status of the property at the time the rates are calculated for the upcoming FY. The applied rate can be lower than, but cannot exceed the maximum rate. Each year, the City Council must authorize the annual inflationary adjustment to the maximum rate and approve the applied rate prior to its levy on the property tax roll.

### **NOTIFICATION**

The ballot documents were mailed to the Property Owner at least 45 days in advance of the Public Hearing. The documents included a notice, map of the project area, NPDES Commercial/Industrial Rate schedule, NPDES ballot, instructions for marking and returning the ballot, and a postage paid return envelope addressed to the City Clerk.

Newspaper advertising for tonight's Public Hearing was published in The Press-Enterprise on January 31, 2019 and February 7, 2019.

### **PREPARATION OF STAFF REPORT**

Prepared by:  
Isa Rojas  
Management Analyst

Department Head Approval:  
Michael L. Wolfe, P.E.  
Public Works Director/City Engineer



Concurred by:  
Candace E. Cassel  
Special Districts Division Manager

Concurred by:  
Michael Lloyd, P.E.  
Engineering Division Manager/Assistant City Engineer

**CITY COUNCIL GOALS**

**Advocacy.** Develop cooperative intergovernmental relationships and be a forceful advocate of City policies, objectives, and goals to appropriate external governments, agencies and corporations.

**Revenue Diversification and Preservation.** Develop a variety of City revenue sources and policies to create a stable revenue base and fiscal policies to support essential City services, regardless of economic climate.

**CITY COUNCIL STRATEGIC PRIORITIES**

- 1. Economic Development
- 2. Public Safety
- 3. Library
- 4. Infrastructure
- 5. Beautification, Community Engagement, and Quality of Life
- 6. Youth Programs

See the Discussion section above for details of how this action supports the City Council’s Strategic Priorities.

**ATTACHMENTS**

- 1. Prologis, L.P. Ballot Documents

**APPROVALS**

Budget Officer Approval	<u>✓ Approved</u>	2/12/19 5:10 PM
City Attorney Approval	<u>✓ Approved</u>	2/12/19 2:11 PM
City Manager Approval	<u>✓ Approved</u>	2/13/19 11:17 AM

Tel: 951.413.3480  
 Fax: 951.413.3170  
 www.moval.org



14177 FREDERICK STREET  
 P. O. BOX 88005  
 MORENO VALLEY, CA 92552-0805

December 31, 2018

Prologis, L.P.  
 3546 Concours St., Suite 100  
 Ontario, CA 91764  
 ATTN: Scott Mulkey

**NOTICE TO PROPERTY OWNER - MAIL BALLOT PROCEEDING FOR THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) MAXIMUM COMMERCIAL/INDUSTRIAL REGULATORY RATE FOR APN(s) 316-100-055, 316-100-057, AND 316-100-058**

**\*\*\*\*\* OFFICIAL BALLOT ENCLOSED \*\*\*\*\***

### **Introduction**

In November of 1996, California voters passed Proposition 218 (“The Right to Vote on Taxes Act”). As a result, any new or proposed increase in a property-related charge requires approval by the property owner of record. In compliance with Proposition 218 legislation, the City of Moreno Valley Special Districts Division is conducting a mail ballot proceeding to provide the owner of Assessor’s Parcel Number APN(s) 316-100-055, 316-100-057, and 316-100-058 the opportunity to express support for or opposition to the approval of the NPDES Maximum Common Interest, Commercial, Industrial, and Quasi-Public Use Regulatory Rate and services. Approval of the NPDES Maximum Common Interest, Commercial, Industrial, and Quasi-Public Use Regulatory Rate through a mail ballot proceeding fulfills the Land Development Division’s Condition of Approval to provide a funding source for the NPDES financial program.

### **Background**

The Clean Water Act of 1987 established requirements for the discharge of Urban Runoff from Municipal Separate Storm Sewer Systems under the NPDES Program. The NPDES Program is administered by the Santa Ana Regional Water Quality Control Board through the issuance of a Permit. The City’s current NPDES Permit mandates all new development projects comply with storm water management activities. The NPDES Program requires public agencies to obtain coverage under the Permit to discharge urban storm water runoff from municipally owned drainage facilities, including streets, highways, storm drains, and flood control channels.

### **Services Provided**

In compliance with the Federal Clean Water Act, the City of Moreno Valley shall provide annual and periodic facility inspections for site design, NPDES permit compliance, and Best Management Practices implementation and maintenance for specified facilities.

### **How is the Amount of the Charge Determined?**

Each fiscal year (FY), the City of Moreno Valley determines the type of services necessary to comply with NPDES Permit requirements and levies the rate applicable for that service, not to

Notice of Mail Ballot Proceeding for Prologis, L.P.  
December 31, 2018

exceed the rate previously approved by the property owner.

### **Proposed Charge**

For FY 2018/19, the NPDES Maximum Common Interest, Commercial, Industrial, and Quasi-Public Use Regulatory Rate is \$245.38 per parcel. The total amount of the NPDES rates levied for FY 2018/19 was \$515,482.98 for the program as a whole.

### **Annual Adjustment**

Beginning in FY 2019/20, the NPDES Maximum Common Interest, Commercial, Industrial, and Quasi-Public Use Regulatory Rate will be subject to an annual adjustment based on the percentage change calculated for the previous year in the Los Angeles-Long Beach-Anaheim Consumer Price Index for All Urban Consumers, as published by the Department of Labor's Bureau of Labor Statistics.

### **Duration of the Charge**

Upon approval of the NPDES Maximum select rate Regulatory Rate, the annual levy amount will be assessed to APN(s) 316-100-055, 316-100-057, and 316-100-058 and any division thereof) and shall be placed on the Riverside County property tax bill or included as a monthly charge on a utility bill. The NPDES Maximum Common Interest, Commercial, Industrial, and Quasi-Public Use Regulatory Rate will be levied each following year at the proposed rate, which includes an annual inflation adjustment.

### **Public Hearing**

To provide information concerning this mail ballot proceeding, the City has scheduled a Public Hearing, which will be held at the **Moreno Valley City Hall Council Chamber located at 14177 Frederick Street, Moreno Valley.**

#### **Public Hearing**

**Tuesday, February 19, 2019**

6:00 p.m.

(Or As Soon Thereafter As The Matter May Be Called)

Tabulation of the returned ballot will commence after the close of the public testimony portion of the Public Hearing. Any ballot received shall be tabulated under the direction of the City Clerk in compliance with the City's Policy for Conducting Mail Ballot Proceedings Policy #1.12.

### **Effect if the Charge is Approved**

Approval of the NPDES Maximum Common Interest, Commercial, Industrial, and Quasi-Public Use Regulatory Rate will be confirmed if the ballot is marked in favor (marked Yes) of the NPDES rate. Approving the NPDES Maximum Common Interest, Commercial, Industrial, and Quasi-Public Use Regulatory Rate through a mail ballot proceeding will fulfill the Land Development Division's Condition of Approval to provide an ongoing funding source for the NPDES financial program.

Notice of Mail Ballot Proceeding for Prologis, L.P.  
December 31, 2018

### Effect if the Charge is Not Approved

Not approving the NPDES Maximum Common Interest, Commercial, Industrial, and Quasi-Public Use Regulatory Rate to meet state and federally mandated NPDES Permit requirements **will not** satisfy the Land Development Division's Condition of Approval to provide a funding source for the NPDES financial program. If the returned ballot is marked "No", the NPDES rate will not be levied on the property tax bill.

### Effect if the Ballot is Deemed Invalid or Incomplete

Not marking the corresponding box on the ballot in support of or opposition to the proposed program and annual rate and/or not signing the ballot will result in an invalid ballot. In order to satisfy the Land Development Division's Condition of Approval by placement of the NPDES rate on the annual property tax bill, the mail ballot proceeding and 45-day noticing period will need to start over. Reinitiating the process will require payment of the mail ballot proceeding fee.

### For More Information

If you have any questions about the mail ballot proceeding process, please contact Isa Rojas, Management Analyst, with the City's Special Districts Division at 951.413.3480 or via email at [IsaRo@moval.org](mailto:IsaRo@moval.org) or [SpecialDistricts@moval.org](mailto:SpecialDistricts@moval.org) during the City's business hours.

Questions regarding the NPDES financial program, the annual rate, or the Land Development Division's Conditions of Approval should be directed to the Land Development Division at 951.413.3120 or via email at [landdevelopment@moval.org](mailto:landdevelopment@moval.org) during the City's business hours.

The City's business hours are Monday through Thursday from 7:30 a.m. to 5:30 p.m. and Friday from 7:30 a.m. to 4:30 p.m.

### Completing Your Ballot








Please follow the instructions below to complete and return your ballot. Procedures for the completion, return, and tabulation of the ballot are also on file in the City Clerk's office.

1. Mark the enclosed ballot in support of or opposition to the proposed program and annual rate **by placing a mark in the corresponding box.** Ballots received without a designated vote will be considered invalid.
2. Sign your name on the ballot. Ballots received without signature(s) will be considered invalid *and will not be counted.*
3. Mail or personally deliver your completed ballot in a sealed envelope to the City Clerk's office, 14177 Frederick Street, Moreno Valley, California, 92553. For your convenience, a postage-paid envelope has been included for return of the ballot.
4. Ballot(s) must be **received** by the City Clerk prior to the close of the public testimony portion of the Public Hearing scheduled for **February 19, 2019**, at the Moreno Valley City Hall Council Chamber. The Public Hearing will be held at 6:00 p.m. or as soon thereafter as the matter may be called. Ballots received after the close of the Public Hearing cannot be legally counted.

Notice of Mail Ballot Proceeding for Prologis, L.P.  
December 31, 2018

### Ballot Marks

Appropriate ballot markings include any one of the following for either the YES/Approved or NO/Not Approved blank box:

-  A check mark substantially inside a box;
-  An X mark substantially inside a box;
-  A dot or oval mark substantially inside a box;
-  A completely shaded or filled mark substantially inside a box;
-  A line, single or dashed, or combination of lines, through the box area. Lines may be any one of the following marks: horizontal, vertical, or diagonal. The mark may either run from side to side or corner to corner. All valid lines must be substantially within the box area and not marking any part of another blank box on the ballot;
-  A circle around the box and/or associated clause; or
-  A square or rectangle around the box and/or associated clause.

Balloting marks shall not extend past one box area into any portion of another nor surround the perimeter or any portion of more than one box area. Markings that extend past one box area into any portion of another or surround the perimeter or any portion of more than one box area shall be considered invalid and not counted.

Ballot Mark Revisions (Changes): An error or desire to revise (change) a selection made on the ballot may be completed and returned any time **prior** to the conclusion of public testimony at the Public Hearing. **The revision must be initialed by the record owner(s) of property. Initials must be clearly printed and placed at the right top corner of the revised selection.**

**OFFICIAL MAIL BALLOT for Assessor's Parcel Numbers (APN)  
316-100-055, 316-100-057, and 316-100-058  
National Pollutant Discharge Elimination System (NPDES)  
Common Interest, Commercial, Industrial, and Quasi-Public Use Regulatory Rate**

**YES\*** — as property owner of APN(s) 316-100-055, 316-100-057, and 316-100-058, **I approve** the NPDES Maximum Common Interest, Commercial, Industrial, and Quasi-Public Use Regulatory Rate and services. For fiscal year (FY) 2018/19, the NPDES Maximum Common Interest, Commercial, Industrial, and Quasi-Public Use Regulatory Rate is \$245.38 per parcel. Upon approval of the maximum regulatory rate, the annual levy amount shall be placed on the annual Riverside County property tax bill or included as a monthly charge on a utility bill. Beginning FY 2019/20, the maximum regulatory rate will be subject to an annual adjustment based on the percentage change calculated for the previous year in the Los Angeles-Long Beach-Anaheim Consumer Price Index for All Urban Consumers, as published by the Department of Labor's Bureau of Labor Statistics. The City shall provide annual and periodic facility inspections for site design, NPDES permit compliance, and Best Management Practices implementation and maintenance for specified facilities.

**NO\*\*** — as property owner of APNs 316-100-055, 316-100-057, and 316-100-058, **I do not approve** the NPDES Maximum Common Interest, Commercial, Industrial, and Quasi-Public Use Regulatory Rate and services. I understand that not approving the NPDES Maximum Common Interest, Commercial, Industrial, and Quasi-Public Use Regulatory Rate to fund state and federally mandated NPDES Permit requirements will not satisfy the project's Conditions of Approval. The NPDES Maximum Common Interest, Commercial, Industrial, and Quasi-Public Use Regulatory Rate will not be levied on the annual Riverside County property tax bill.

YES*	NO**	Weighted Ballot Count*	Fiscal Year 2018/19 NPDES Maximum Common Interest, Commercial, Industrial, and Quasi-Public Use Regulatory Rate per Parcel
<input type="checkbox"/>	<input type="checkbox"/>	3	\$245.38

\*Each Assessor's Parcel Number equals 1 Weighted Ballot.

**This ballot must be received by the City Clerk of the City of Moreno Valley prior to the close of the public testimony portion of the Public Hearing to be held on February 19, 2019, at the Moreno Valley City Hall Council Chamber, 14177 Frederick Street, Moreno Valley, California. The Public Hearing will be held at 6:00 p.m. or as soon thereafter as the matter may be called.**

\_\_\_\_\_  
PROPERTY OWNER SIGNATURE

\_\_\_\_\_  
DATE

Please remember to mark the appropriate box, sign and date the ballot, and return to the City Clerk's office in the enclosed envelope prior to the close of the public testimony portion of the February 19, 2019 Public Hearing.

Ballot(s) deemed invalid or incomplete will be discarded and a new process must be initiated in order to place the charge on the annual Riverside County property tax bill, which includes payment of the mail ballot fee.

**COMMON INTEREST, COMMERCIAL, INDUSTRIAL AND QUASI-PUBLIC USE NPDES RATE SCHEDULE**  
 Adopted by the City Council on January 10, 2006

LEVEL 1			LEVEL II		
<b>NPDES Administration</b>			<b>Site Design, Source Control and Treatment Control BMPs Monitoring and Maintenance</b>		
<i>(Not covered by CSA 152)</i>					
<p>Costs associated with personnel, administration and management of the storm water management program. Administrative tasks include development and filing of various stormwater reports and data collection and management.</p> <p>Level I is levied on all parcels conditioned for the NPDES Rate Schedule.</p>			<p>Costs associated with stormwater and non-stormwater runoff monitoring, inspection of the project's site design, source control and treatment control BMPs; evaluation of site stormwater compliance activities, review of site-specific technical reports and treatment control BMP maintenance records.</p>		
<p><b>Fiscal Year (FY) 2005/2006 - Base Year Calculation, subject to an annual inflation factor based on the Los Angeles-Riverside-Orange County Regional Consumer Price Index for All Urban Consumers, as published by the Department of Labor's Bureau of Labor Statistics</b></p>					
<b>PARCEL RATE</b>	<b>Per Month</b>	<b>Per Year</b>	<b>PARCEL RATE</b>	<b>Per Month</b>	<b>Per Year</b>
	\$3.58	\$42.90		\$16.87	\$202.48

**Inflation Factor Adjustments**

- FY 2006/2007 - 4.5% = (\$33.00 & \$158.00)
- FY 2007/2008 - 3.1% = (\$34.00 & \$163.00)
- FY 2008/2009 - 4.2% = (\$35.00 & \$170.00)
- FY 2009/2010 - no change = (\$35.00 & \$170.00)
- FY 2010/2011 - no change = (\$35.00 & \$170.00)
- FY 2011/2012 - 3.8% = (\$36.00 & \$176.00)
- FY 2012/2013 - 2.7% = (\$37.00 & \$181.00)
- FY 2013/2014 - 2.0% = (\$38.00 & \$185.00) rounded to the nearest dollar
- FY 2014/2015 - 1.14% = (\$39.52 & \$186.49) Pursuant to City Council approval on June 10, 2014.
- FY 2015/2016 - 0.73% = (\$39.81 & \$187.85)
- FY 2016/2017 - 2.03% = (\$40.62 & \$191.66)
- FY 2017/2018 - 1.97% = (\$41.42 & \$195.44)
- FY 2018/2019 - 3.61% = (\$42.90 & \$202.48)

## BALLOT MARKS

Appropriate ballot markings include any one of the following for either the YES/Approved or NO/Not Approved blank box:



A check mark substantially inside a box;



An X mark substantially inside a box;



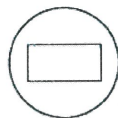
A dot or oval mark substantially inside a box;



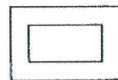
A completely shaded or filled mark substantially inside a box;



A line, single or dashed, or combination of lines, through the box area. Lines may be any **one of the following marks**: horizontal, vertical, or diagonal. The mark may either run from side to side or corner to corner. All valid lines must be substantially within the box area and not marking any part of another blank box on the ballot;



A circle around the box and/or associated clause; or



A square or rectangle around the box and/or associated clause.

*Balloting marks shall not extend past one box area into any portion of another nor surround the perimeter or any portion of more than one box area. Markings that extend past one box area into any portion of another or surround the perimeter or any portion of more than one box area shall be considered invalid and not counted.*

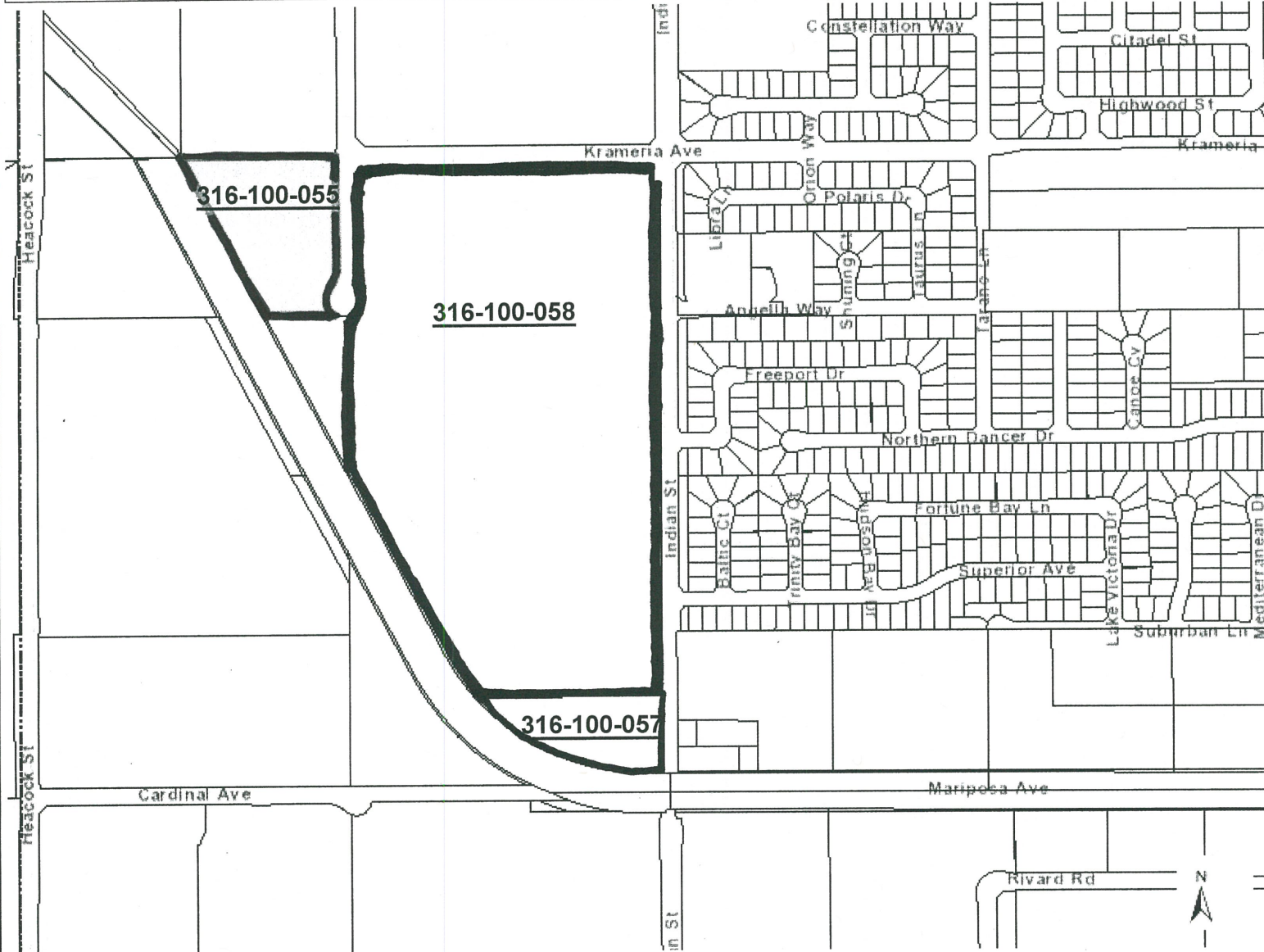
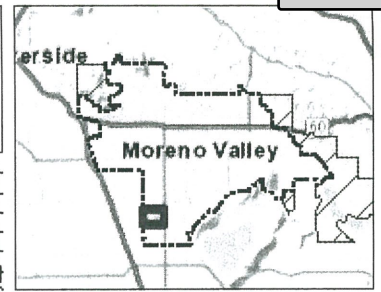
### Ballot Mark Revisions (Changes)

An error or desire to revise (change) a selection made on the ballot may be completed and returned any time prior to the conclusion of public testimony at the Public Hearing. **The revision must be initialed by the record owner(s) of property. Initials must be clearly printed and placed at the right top corner of the revised selection.**



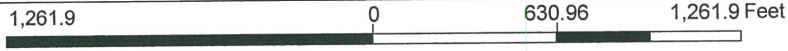


# Prologis, Moreno Valley Krameria PEN16-0003



**Legend**

- Public Facilities
  - Public Facilities
  - ★ Fire Stations
- Parcels
- ▭ City Boundary
- ◻ Sphere of Influence



*DISCLAIMER: The information shown on this map was compiled from the City of Moreno Valley GIS and Riverside County GIS. The land base and facility information on this map is for display purposes only and should not be relied upon without independent verification as to its accuracy. Riverside County and City of Moreno Valley will not be held responsible for any claims, losses or damages resulting from the use of this map.*

WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere

Print Date: 12/27/2018

Notes

Attachment: Prologis, L.P. Ballot Documents (3387 : PUBLIC HEARING FOR ONE NATIONAL POLLUTANT



## Report to City Council

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**TO:** Mayor and City Council

**FROM:** Richard J. Sandzimier, Community Development Director  
Richard J. Sandzimier, Community Development Director

**AGENDA DATE:** February 19, 2019

**TITLE:** CONDITIONAL USE PERMIT TO DEVELOP A  
AUTOMOBILE SERVICE STATION, AND CONVENIENCE  
STORE INCLUDING ALCOHOL SALES, AND A CAR  
WASH ON 1.31 ACRES, LOCATED ON THE NORTHWEST  
CORNER OF IRIS AVENUE AND OLIVER STREET

---

### RECOMMENDED ACTION

#### **Recommendation: That the City Council:**

1. **ADOPT** Resolution No. 2019-XX; A Resolution of the City Council of the City of Moreno Valley **CERTIFYING** that the Initial Study/Mitigation Negative Declaration PEN18-0016 for the ARCO AM/PM gas station project on file with the Community Development Department, incorporated herein by this reference, has been completed in compliance with the California Environmental Quality Act, that the City Council reviewed and considered the information contained in the Initial Study/Mitigated Negative Declaration and that the Initial Study/Mitigated Negative Declaration reflects the City's independent judgment and analysis; and **ADOPTING** the Mitigation Monitoring and Reporting Program for the Initial Study/Mitigated Negative Declaration for the proposed project; and
2. **APPROVE** Resolution No. 2019-XX: A Resolution of the City Council of the City of Moreno Valley **APPROVING** Conditional Use Permit, PEN18-0016, for the development of a new 3,180 square foot ARCO AM/PM gas station with convenience store including Type-20 alcohol sales for beer and wine, and a car wash, located on the northwest corner of Iris Avenue and Oliver Street.

### SUMMARY

Subsequent to the December 13 Planning Commission action to approve a 3,180

square foot ARCO AM/PM gas station with car wash and convenience store (including Type-20 alcohol sales for beer and wine), at the northwest corner of Iris Avenue and Oliver Street, City Council member Cabrera, as allowed in the Section 9.02.200(E) of the Municipal Code, requested an assumption of jurisdiction over the Conditional Use Permit application PEN18-0016. This request shifts the approval authority for the project to the City Council.

Notwithstanding the assumption of jurisdiction request, on December 20, 2018 the Multi-Cultural Assembly for Sustainable Development filed an appeal of the Planning Commission action. If the City Council takes definitive final action on the project under the assumption of jurisdiction process, the separately filed appeal will be closed and the application fees will be refunded to the appellant.

## **DISCUSSION**

### Project

The applicant, Sater Oil International, LLC, has submitted and is seeking approval of a Conditional Use Permit application for a new 3,180 square foot ARCO AM/PM gas station and convenience store, including Type-20 alcohol sales for beer and wine, and a car wash, to be located at the northwest corner of Iris Avenue and Oliver Street. The gas station is proposed to operate 24 hours per day. The car wash component includes an attached equipment structure and office space.

The project is located on an existing 1.31 acre parcel zoned Neighborhood Commercial (NC). Auto service stations, with accessory convenience store and car wash uses, when located 300 feet or less from a residential zone or use, may be approved by Conditional Use Permit in the NC zone. Additionally, alcohol sales in conjunction with the convenience store also requires approval of a Conditional Use Permit when the proposed use is located 300 feet or less from a residential zone or use. Residential land uses are located within 300 feet of the project site across both Oliver Street to the east and Iris Avenue to the south.

The Conditional Use Permit has been evaluated against General Plan Objective 2.4, which calls for commercial areas within the City to be conveniently located, efficient, attractive, and to have safe and easy pedestrian and vehicular circulation in order to serve the retail and service commercial needs of Moreno Valley residents and businesses. Staff has confirmed the proposed project meets this goal and does not conflict with other goals, objectives, policies, or programs set forth in the General Plan.

### Access/Parking

Primary direct access to the proposed development will be from driveways on Iris Avenue and Oliver Street. Both driveways will be restricted to right-in and right-out movements only.

As proposed, the project provides more parking than required by the Municipal Code.

17 parking spaces are required for the gas station and associated convenience store. The project as designed provides 19 total spaces including three Vanpool/Clean Air/Fuel Efficient spaces and one space for electric vehicle charging. The car wash component requires 11 parking spaces per Code and the design shows 14 parking spaces will be provided. The project as designed satisfies, or exceeds, all parking requirements of the City's Municipal Code including ADA accessible parking and parking considerations for fuel efficient vehicles.

The driveways and interior drive aisles within the site have been reviewed and found to be adequate for truck maneuvering and turnaround for delivery trucks and trash pick-up. In addition, the site has been found acceptable by the Fire Prevention Bureau for fire truck access.

### Design/Landscaping

The proposed service station building is rectangular in shape, single story, and has a contemporary modern style that includes a flat roof design with a more prominent tower element as the building's main entrance. The architectural design of the convenience store building strives to achieve an attractive and appealing structure that will be visible at a prominent street corner, Iris Avenue and Oliver Street. Exterior finishes proposed include brick veneer treatments, aluminum composite rustic wood finishes, aluminum awnings, and stucco wall finishes with a blend of pewter and white as the primary colors.

The service station canopy and car wash building are complementary to the main convenience store building, using flat roofs, and incorporating the same brick veneer and stucco colors of the main building.

Staff has found the proposed project would add economic vitality and architectural character along this portion of Iris Avenue, which is highly desirable given its proximity to the existing Kaiser Permanente Hospital and medical offices. The applicant has worked closely with staff in achieving an enhanced design of the project.

The current project site has a downward slope from south to north requiring a retaining wall on the north and west property lines to build the proposed service station project. The retaining wall ranges in height from 1.2 feet to 7.3 feet on the north property line, and from three feet to 7.3 feet on the west property line. The maximum retaining wall height of 7.3 feet is located on the northwest corner of the property.

Furthermore, the project has been designed to meet required landscaped standards and landscaping objectives as set forth in the City's Municipal Code. The landscape elements of the project include the landscape setback areas along Iris Avenue and Oliver Street, parking lot landscape, street trees and landscape treatments around the perimeter of the site.

### Environmental

An Initial Study was prepared for the Project. The Initial Study (IS) demonstrates that a Mitigated Negative Declaration (MND) would be the appropriate environmental clearance document for the Project. The MND incorporates mitigation measures, which ensure that any potential impacts can be reduced to a level of less than significant. A Notice of Availability for the IS/MND was prepared with the public comment period beginning on November 23, 2018 and ending on December 13, 2018.

LSA Associates, Inc. prepared the draft environmental documents, and submitted the documents to the City for review to ensure that the documents reflect the independent judgment and analysis of the City as the California Environmental Quality Act (CEQA) Lead Agency.

Mitigation measures are recommended for the proposed project in the following areas: biological resources; cultural resources; geology and soils; hazardous materials; hydrology and water quality; and noise. The measures for cultural resources have been included to address input from the tribal agencies. The measures will ensure that potential tribal resources that may be discovered are protected. However, these measures are not required to address a known significant impact.

#### Advisory Board/Commission Action

The Planning Commission hearing was held on December 13, 2018. In response to deliberation at the Planning Commission meeting, it was confirmed that a condition of approval that requires the coolers storing beer and wine be locked between the hours of 2:00 a.m. to 6:00 a.m. is included. This condition of approval is consistent with State law that prohibits sale of alcoholic beverages between those hours. A condition of approval is also included to limit the hours of operation of the car wash and vacuum stations to 8:00 a.m. through 10:00 p.m. to address community compatibility.

The Planning Commission approved Conditional Use Permit (CUP) PEN18-0016 and adopted the Mitigated Negative Declaration (MND) and Mitigation Monitoring and Reporting Program (MMRP) for the Project.

On December 13, 2018, prior to the start of the Planning Commission public hearing a letter from the Multi-Cultural Assembly for Sustainable Development was submitted to the Planning Commission. That letter is attached to this staff report. City staff has found the comment letter to be too broad and inadequate in detail to support the commenters request that an EIR be prepared. The environmental consultant for the project also responded to points made in the letter point by point prior to the Planning Commission taking action and concluded that the MND is appropriate and an EIR is not warranted.

### **ALTERNATIVES**

1. Conduct a public hearing and take action to approve the project. By this action, the City Council will certify the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program, and approve the Conditional Use Permit

application. Staff recommends this alternative.

2. Conduct a public hearing on this project, and do not approve the project. A Resolution describing the basis for not approving the project could be acted on by the City Council. Staff does not recommend this alternative.

## **NOTIFICATION**

As described in the Municipal Code, the public notice of the assumption of jurisdiction and requisite public hearing was completed as required by law. Public notice was sent to all property owners of record within 300' of the project on February 7. Public notice was published in the local newspaper and posted on the site on February 8.

## **PREPARATION OF STAFF REPORT**

Prepared By:  
Gabriel Diaz  
Associate Planner

Department Head Approval:  
Richard J. Sandzimier  
Community Development Director

Concurred By:  
Patricia Nevins  
Planning Official

## **CITY COUNCIL GOALS**

**Community Image, Neighborhood Pride and Cleanliness.** Promote a sense of community pride and foster an excellent image about our City by developing and executing programs which will result in quality development, enhanced neighborhood preservation efforts, including home rehabilitation and neighborhood restoration.

## **CITY COUNCIL STRATEGIC PRIORITIES**

1. **Economic Development**
2. **Public Safety**
3. **Library**
4. **Infrastructure**
5. **Beautification, Community Engagement, and Quality of Life**
6. **Youth Programs**

Objective 1.1: Proactively attract high-quality businesses.

Objective 1.3: Promote local hiring through the expansion of local, quality, high paying jobs, and workforce development efforts.

Objective 4.8: Promote transit as an essential mode of transportation.

**ATTACHMENTS**

1. Aerial Photograph
2. Location Map
3. Zoning Map
4. Resolution Mitigated Negative Declaration
5. Exhibit A - Initial Study / Mitigated Negative Declaration
6. Exhibit B - Mitigation Monitoring Program
7. Resolution Conditional Use Permit
8. Exhibit A - Conditions of Approval
9. Site Plan
10. Preliminary Grading Plans
11. Color Elevations
12. Material Color Board
13. Floor Plan
14. Architectural Plans
15. Preliminary Landscape Plans
16. Appendix A - Air Quality and Greenhouse Gas Analysis
17. Appendix B - Biological Resources Assessment
18. Appendix C - Cultural Resource Assessment
19. Appendix D - Geotechnical Engineering Investigation
20. Appendix E - Soils Report
21. Appendix F - Phase I Environmental Site Assessment
22. Appendix G - Water Quality Management Plan
23. Appendix H - Preliminary Drainage Report
24. Appendix I - Noise and Vibration Impact Analysis Study
25. Appendix J - Traffic Impact Analysis
26. Public Hearing Notice
27. Planning Commission Minutes 12.13.18
28. Multi-Cultural Assembly for Sustainable Development Letter 12.13.18
29. Applicant CEQA Responses to PC Letter Dec 13 2018 Multi-Cultural Assembly for Sustainable Development

**APPROVALS**

Budget Officer Approval	<u>✓ Approved</u>	2/06/19 2:03 PM
City Attorney Approval	<u>✓ Approved</u>	2/12/19 3:48 PM
City Manager Approval	<u>✓ Approved</u>	2/13/19 11:12 AM

# Aerial Photograph



## Legend

- Public Facilities
  - Public Facilities
  - ★ Fire Stations
- Parcels
- ⊞ City Boundary
- ⊞ Sphere of Influence

## Notes

PEN18-0016

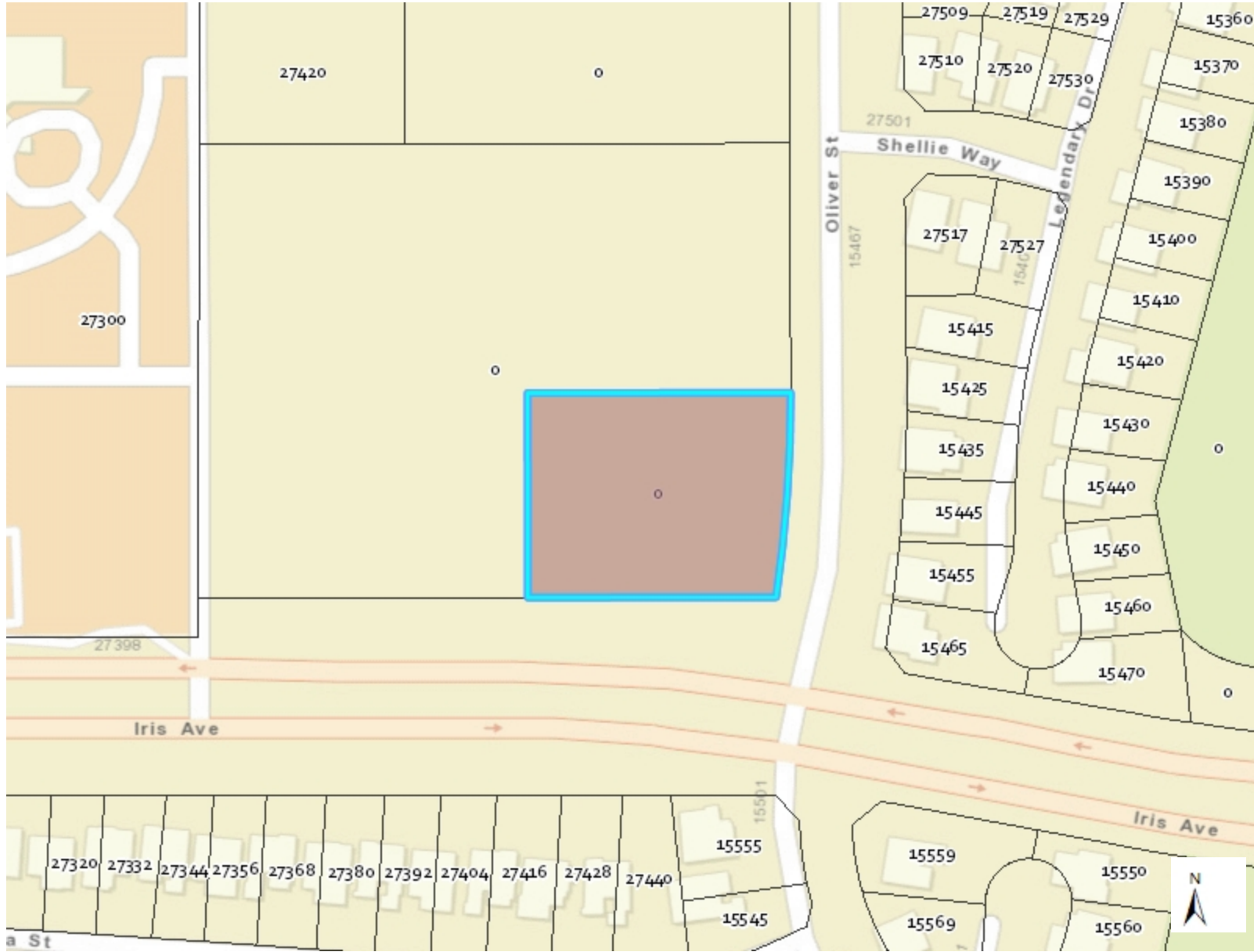
315.5 0 157.74 315.5 Feet

*DISCLAIMER: The information shown on this map was compiled from the City of Moreno Valley GIS and Riverside County GIS. The land base and facility information on this map is for display purposes only and should not be relied upon without independent verification as to its accuracy. Riverside County and City of Moreno Valley will not be held responsible for any claims, losses or damages resulting from the use of this map.*



# PEN18-0016

## APN: 486-310-038



### Legend

- Public Facilities
  - Public Facilities
  - ★ Fire Stations
- Parcels
- ⊞ City Boundary
- ⊞ Sphere of Influence

315.5 0 157.74 315.5 Feet

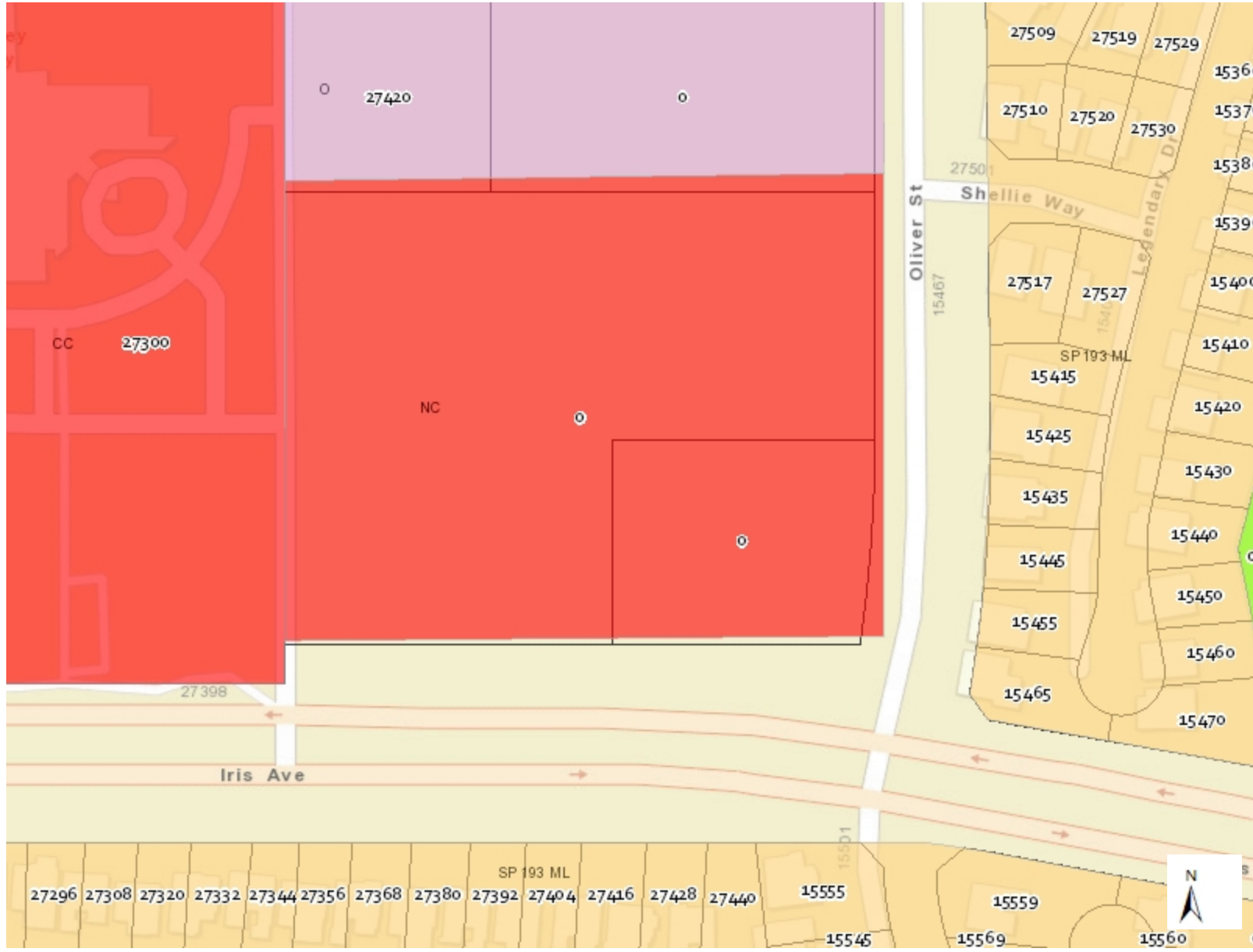
WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere

Print Date: 11/14/2018

*DISCLAIMER: The information shown on this map was compiled from the City of Moreno Valley GIS and Riverside County GIS. The land base and facility information on this map is for display purposes only and should not be relied upon without independent verification as to its accuracy. Riverside County and City of Moreno Valley will not be held responsible for any claims, losses or damages resulting from the use of this map.*

### Notes

# Zone: Neighborhood Commercial (NC)



### Legend

**Zoning**

- Commercial
- Industrial/Business Park
- Public Facilities
- Office
- Planned Development
- Large Lot Residential
- Residential Agriculture 2 DU/AC
- Residential 2 DU/AC
- Suburban Residential
- Multi-family
- Open Space/Park

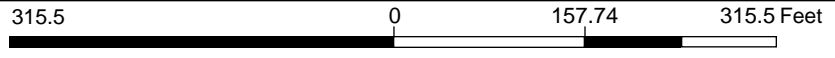
**Master Plan of Trails**

- Bridge
- Improved
- Multiuse
- Proposed
- Regional
- State

- Parcels
- City Boundary
- Sphere of Influence

Attachment: Zoning Map (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

**Notes**  
PEN18-0016



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## RESOLUTION NO. YYYY-\_\_\_\_

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MORENO VALLEY, CALIFORNIA, CERTIFYING THE MITIGATED NEGATIVE DECLARATION AND APPROVING THE MITIGATION MONITORING AND REPORTING PROGRAM FOR THE DEVELOPMENT OF A 3,180 SQUARE FOOT GAS STATION WITH CONVENIENCE STORE AND CAR WASH PROJECT, CONDITIONAL USE PERMIT APPLICATION (PEN18-0016)

WHEREAS, the applicant, Sater Oil International, LLC, has filed a Conditional Use Permit, PEN18-0016, for the development of a new 3,180 square foot ARCO AM/PM gas station, operating 24 hours, with 8 fuel islands, carwash, and a Type-20 alcohol sales license for beer and wine sales (“Project”). The Conditional Use Permit shall not be approved unless the Final Mitigated Negative Declaration is certified and approved; and

WHEREAS, the applications for the Project have been evaluated in accordance with established City of Moreno Valley (City) procedures, and with consideration of the General Plan and other applicable regulations; and

WHEREAS, an Initial Study, supporting technical studies, and Mitigated Negative Declaration for the Project were prepared by the applicant’s environmental consultant, LSA Associates, Inc., consistent with the California Environmental Quality Act (CEQA); and

WHEREAS, the City, in conducting its own independent analysis of the Final Mitigated Negative Declaration, determined that a Mitigated Negative Declaration is the appropriate environmental determination for the Project as there is substantial evidence that demonstrates the Project with mitigation would not result in any significant environmental impacts; and

WHEREAS, a Mitigation Monitoring and Reporting Program (MMRP) has been prepared in accordance with CEQA Guidelines, and is designed to ensure compliance with the identified mitigation measures outlined in the Final Mitigated Negative Declaration through Project implementation; and

WHEREAS, a 20-day public review period of the Initial Study and Mitigated Negative Declaration commenced on November 23, 2018 and concluded on December 13, 2018. The public notice for the Mitigated Negative Declaration was published in the local newspaper on November 23, 2018; and

WHEREAS, the Planning Commission approved Resolution No. 2018-54 adopting the Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program at a public hearing held on December 13, 2018; and

WHEREAS, on December 14, 2018 a City Council member made a request for the City Council to assume jurisdiction as identified in Section 9.02.200(E) Public hearing and notification procedures of the Municipal Code; and

WHEREAS, the project was duly noticed for a public hearing before the City Council on February 19, 2019; and

WHEREAS, the City Council of the City of Moreno Valley held a public hearing on February 19, 2019 to consider the adoption of a Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program along with the consideration of the Conditional Use Permit application; and

WHEREAS, the City of Moreno Valley, Community Development Department, located at 14177 Frederick Street, Moreno Valley, California 92552 is the custodian of documents and other materials that constitute the record of proceedings upon which the decision to adopt the Mitigated Negative Declaration is based; and

WHEREAS, all legal prerequisites to the adoption of this Resolution have occurred; and

WHEREAS, pursuant to Government Code Section 66020(d)(1), NOTICE IS HEREBY GIVEN that this project is subject to certain fees, dedications, reservations and other exactions as provided herein.

WHEREAS, all of the facts set forth in the Resolution are true and correct.

NOW, THEREFORE, THE CITY COUNCIL OF MORENO VALLEY, CALIFORNIA, DOES HEREBY RESOLVE AS FOLLOWS:

- A. This City Council hereby finds that all of the facts set forth above in this Resolution are true and correct.
- B. Based upon substantial evidence presented to this City Council during the meeting on February 19, 2019, including written and oral staff reports, and the record from the public hearing, this City Council hereby finds as follows:
  1. Independent Judgment and Analysis – An Initial Study/Mitigated Negative Declaration dated November 20, 2018 was prepared by the environmental consultant, LSA Associates, Inc. The documents were properly circulated for public review in accordance with the California Environmental Quality Act Guidelines. The Mitigated Negative Declaration/Initial Study has been completed along with the Mitigation Monitoring and Reporting Program (MMRP) to ensure compliance with all mitigation through project implementation. All environmental documents that comprise the Mitigated Negative Declaration, including all technical studies were independently reviewed by the City. On the basis of the whole record, there is no substantial evidence that the Project as designed, conditioned, and

mitigated, will have a significant effect on the environment. The Mitigated Negative Declaration prepared and completed, in accordance with the CEQA Guidelines, reflects the independent judgment and analysis of the City.

The City considered all input on the Mitigated Declaration received during the 20-day review period.

BE IT FURTHER RESOLVED, that the City Council HEREBY ADOPTS Resolution No. 2019-XX, and:

1. CERTIFIES that the Mitigated Negative Declaration prepared for Conditional Use Permit (PEN18-0016) on file with the Community Development Department, incorporated herein by this reference, has been completed in compliance with the California Environmental Quality Act, that the City Council reviewed and considered the information contained in the Mitigated Negative Declaration, and that the document reflects the City’s independent judgment and analysis; attached hereto as Exhibit A and
2. APPROVES the Mitigation Monitoring and Reporting Program for Conditional Use Permit (PEN18-0016), attached hereto as Exhibit B.

APPROVED AND ADOPTED this 19th day of February 2019.

\_\_\_\_\_  
Mayor of the City of Moreno Valley

ATTEST:

\_\_\_\_\_  
City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
City Attorney

**RESOLUTION JURAT**

STATE OF CALIFORNIA            )  
COUNTY OF RIVERSIDE        ) ss.  
CITY OF MORENO VALLEY        )

I, Patricia Jacquez-Nares, City Clerk of the City of Moreno Valley, California, do hereby certify that Resolution No. YYYY-\_\_ was duly and regularly adopted by the City Council of the City of Moreno Valley at a regular meeting thereof held on the \_\_\_\_ day of \_\_\_\_\_, YYYY by the following vote:

AYES:

NOES:

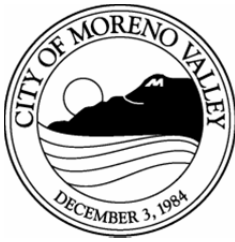
ABSENT:

ABSTAIN:

(Council Members, Mayor Pro Tem and Mayor)

\_\_\_\_\_  
CITY CLERK

(SEAL)



**INITIAL STUDY/  
ENVIRONMENTAL CHECKLIST FORM  
CITY OF MORENO VALLEY**

November 20, 2018

1. Project Title: Sater ARCO AM/PM Gas Station  
City Case No. PEN18-0016
2. Lead Agency Name and Address: City of Moreno Valley  
14177 Frederick Street  
Moreno Valley, CA 92552
3. Contact Person and Phone Number: Gabriel Diaz, Planning Division, 951-413-3206
4. Project Location: The project site is located on the northwest corner of Iris Avenue and Oliver Street in the City of Moreno Valley (City), Riverside County. The proposed project site is currently vacant. The project site consists of one parcel, Assessor's Parcel Number (APN) 486-310-038. The site is approximately 3 miles south of State Route 60 (SR-60) and Interstate 215 (I-215) is approximately 5.2 miles west of the project site (Figure 1 depicts the regional and project location). The March Air Reserve Base is located approximately 3.5 miles west of the project site, and the Upland Game Hunting Area is located approximately 0.4 mile south of the project site.
5. Project Sponsor's Name and Address: Sater Oil International  
683 Cliffside Drive  
San Dimas, CA 91773
6. General Plan Designation: Commercial
7. Zoning: Neighborhood Commercial (NC)
8. Description of the Project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary)

The Project proposes the construction of an ARCO AM/PM gas station comprising a 3,180 square-foot convenience store, a 42-foot by 116-foot canopy with 8 multiple product dispensers (MPD) for fueling 16 vehicles, two underground storage tanks located east of the canopy, and a 20-foot by 100-foot car wash facility plus an attached ancillary equipment building and office on a 1.58 acre site. Additionally, the proposed project includes 32 auto parking stalls two of which are handicap, a trash enclosure facility located on the south side of the convenience store, and thirteen (13) car vacuum stations located on the west side of the site (see Figure 4, site plan). The 3,180 square-foot convenience store will be located to the north of the site with the main entrance is facing south towards the canopy and 16 fueling stations. The car wash facility will be located to the north of the store with the entrance facing south. The project proposes permanent retaining walls with metal fences on the northern and western boundaries of the site, approximately 150 feet in length along each boundary, ranging from 3 to 6 feet in height. The existing ground gradually slopes down in the northwest direction. The project site ranges from an elevation of 1,570 feet above mean sea level (AMSL) to the southeast and an elevation of 1,556 feet AMSL to the northwest.

The City's General Plan Land Use Map designates the project site as Commercial (C) and the Zoning as Neighborhood Commercial (NC). Ornamental trees are located south of the project site along with an electrical power station located on the southeast corner of the site. Refer to Figure 3. Perris Reservoir is located approximately 2 miles south of the project site, just beyond the Upland Game Hunting Area. Grading activities include 200 cubic yards of cut and 2,800 cubic yards of fill.

Ingress/egress to the project site is provided from one (1) driveway on Oliver Street in the center of site and one (1) driveway from Iris Avenue at the southwest corner of site which will also be used for emergency access vehicles. The two entrances/exits will be right-turn-in and right-turn-out only access.

9. Surrounding Land Uses and Setting: (Briefly describe the project's surroundings)

Surrounding land uses include: one and two-story single-family residential housing to the east across Oliver Street, two-story single-family residential housing to the south across Iris Avenue, vacant land to the north and west. Just beyond the vacant land to the west is the Kaiser Permanente Hospital. Refer to Figure 1 and 2.

10. Other public agencies whose approval is required (e.g. permits, financing approval, or participation agreement).

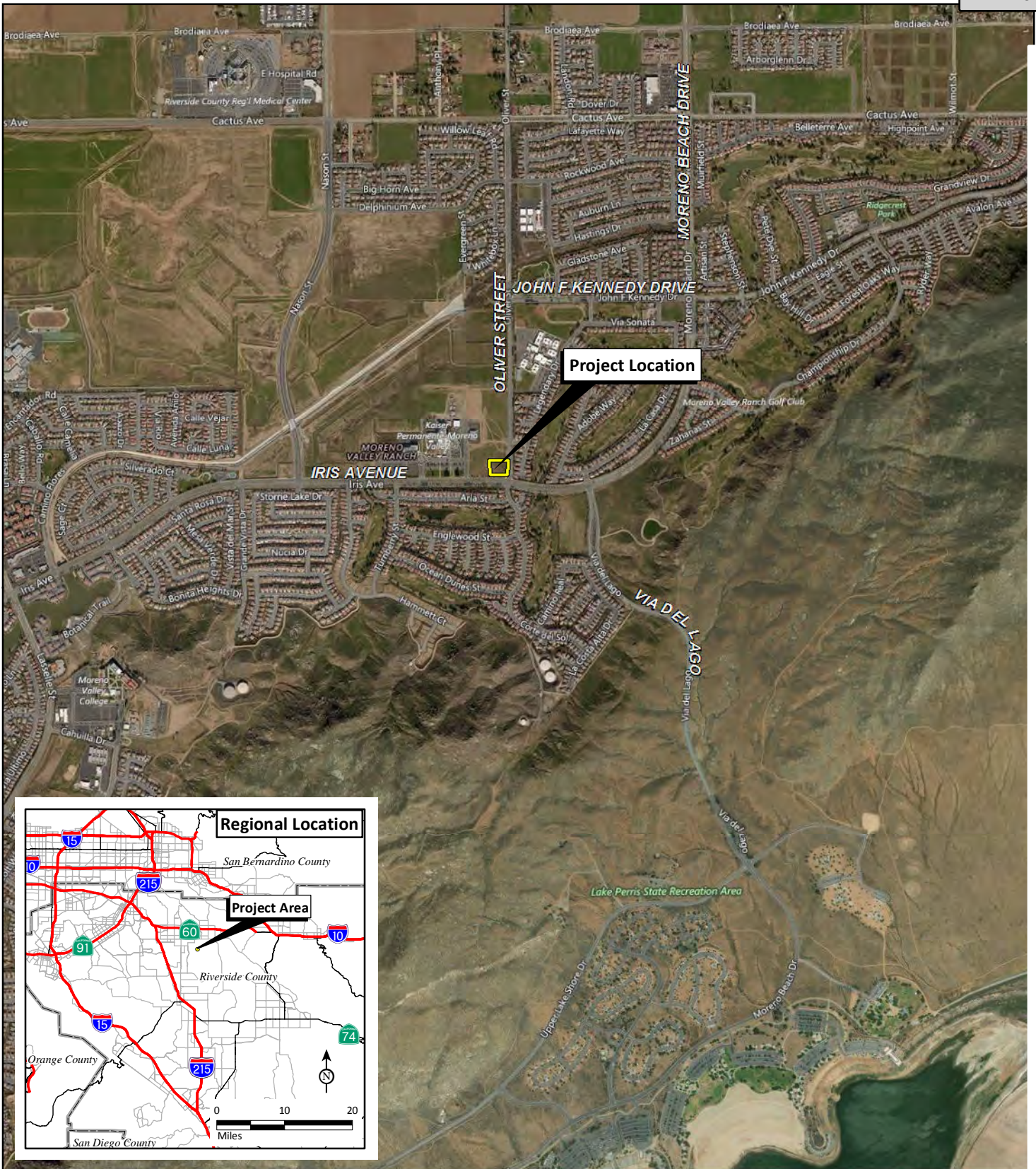
11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?

The City sent the required AB 52 notices to the relevant tribes as required. All of the notices were delivered appropriately with receipts returned to the City. Following delivery of the notices, three tribes responded. These tribes and the status of coordination with them are:

- Pechanga Band of Luiseno Indians. This Tribe did not identify any specific tribal cultural resources within the area affected by the project.
- Rincon Band of Luiseno Indians. This Tribe did not identify any specific tribal cultural resources within the area affected by the project.
- Soboba Band of Luiseno Indians. This Tribe did not identify any specific tribal cultural resources within the area affected by the project.

**NOTE:** Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3 (c) contains provisions specific to confidentiality.





LSA

LEGEND

 Project Boundary



0 1000 2000  
FEET

SOURCE: Bing Aerial, 2015; Riverside County, 2015.

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FIGURE :

ARCO Iris and Olive  
Moreno Valle,



Regional and Project Location

Attachment: Exhibit A - Initial Study / Mitigated Negative Declaration (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



LSA

LEGEND

-  Project Location
-  Photo Location



0 100 200  
FEET

SOURCE: Google Earth, 2016.

I:\SAT1701\Reports\IS\fig2\_ProjectSite.mxd (12/14/2017)

FIGURE :

ARCO Iris and Olive  
Moreno Valle,  
Project Site

Attachment: Exhibit A - Initial Study / Mitigated Negative Declaration (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



Photograph 1: View looking northwest from the southeast corner of the project site.



Photograph 2: View looking west toward Kaiser Hospital.

Attachment: Exhibit A - Initial Study / Mitigated Negative Declaration (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



Photograph 1: *View looking east along the southern boundary.*



Photograph 2: *View looking south along the eastern boundary.*

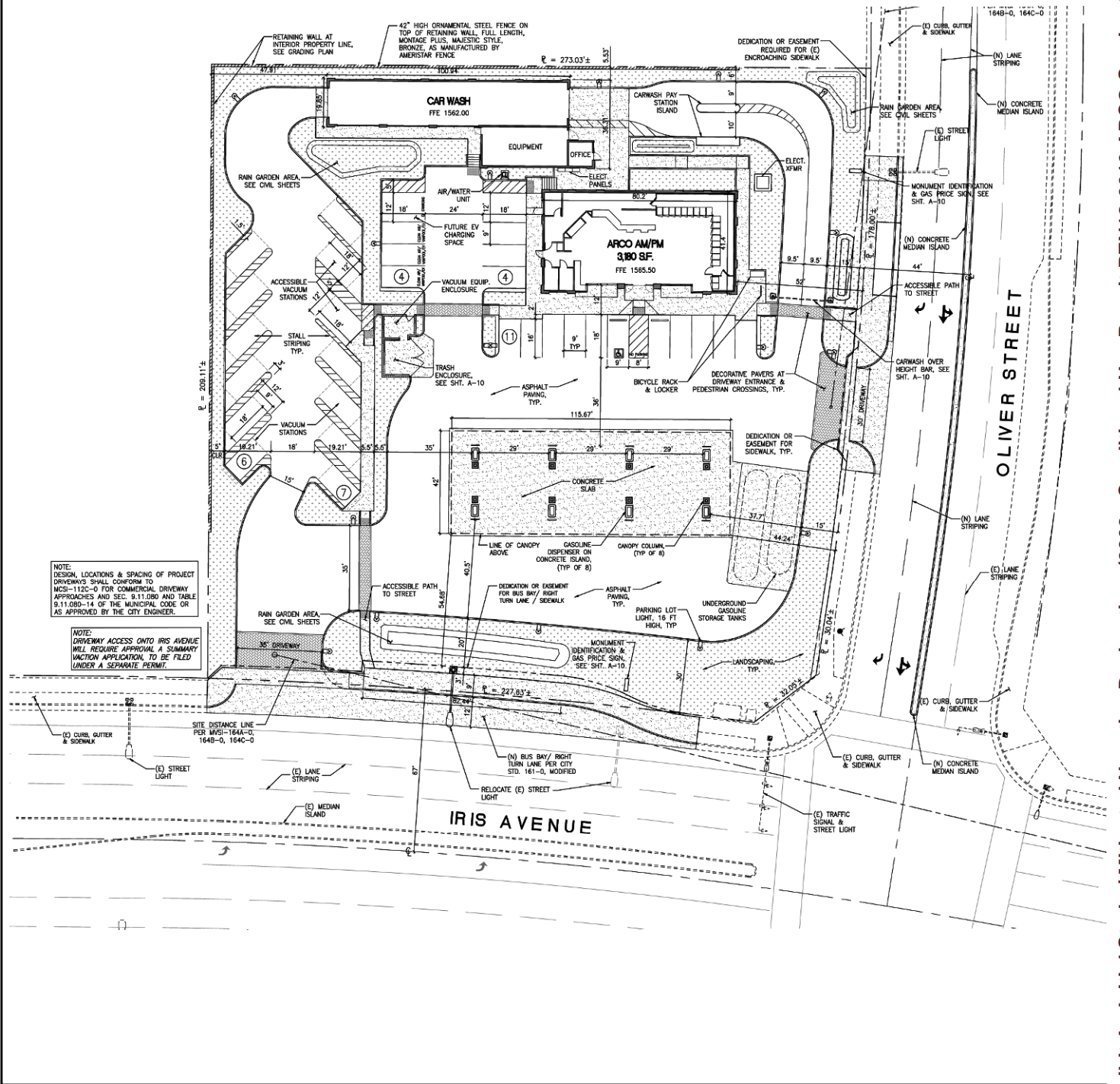
Attachment: Exhibit A - Initial Study / Mitigated Negative Declaration (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



FIGURE 3

ARCO Iris and Olive  
Moreno Valle

Site Photographs

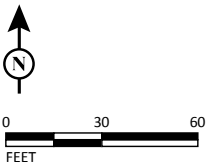


NOTE: DESIGN, LOCATIONS & SPACING OF PROJECT DRIVEWAYS SHALL CONFORM TO MCS-112C-0 FOR COMMERCIAL DRIVEWAY APPROACHES AND SEC. 9.11.080 AND TABLE 9.11.080-14 OF THE MUNICIPAL CODE OR AS APPROVED BY THE CITY ENGINEER.

NOTE: DRIVEWAY ACCESS ONTO IRIS AVENUE WILL REQUIRE APPROVAL A SUMMARY WATCH APPLICATION TO BE FILED UNDER A SEPARATE PERMIT.

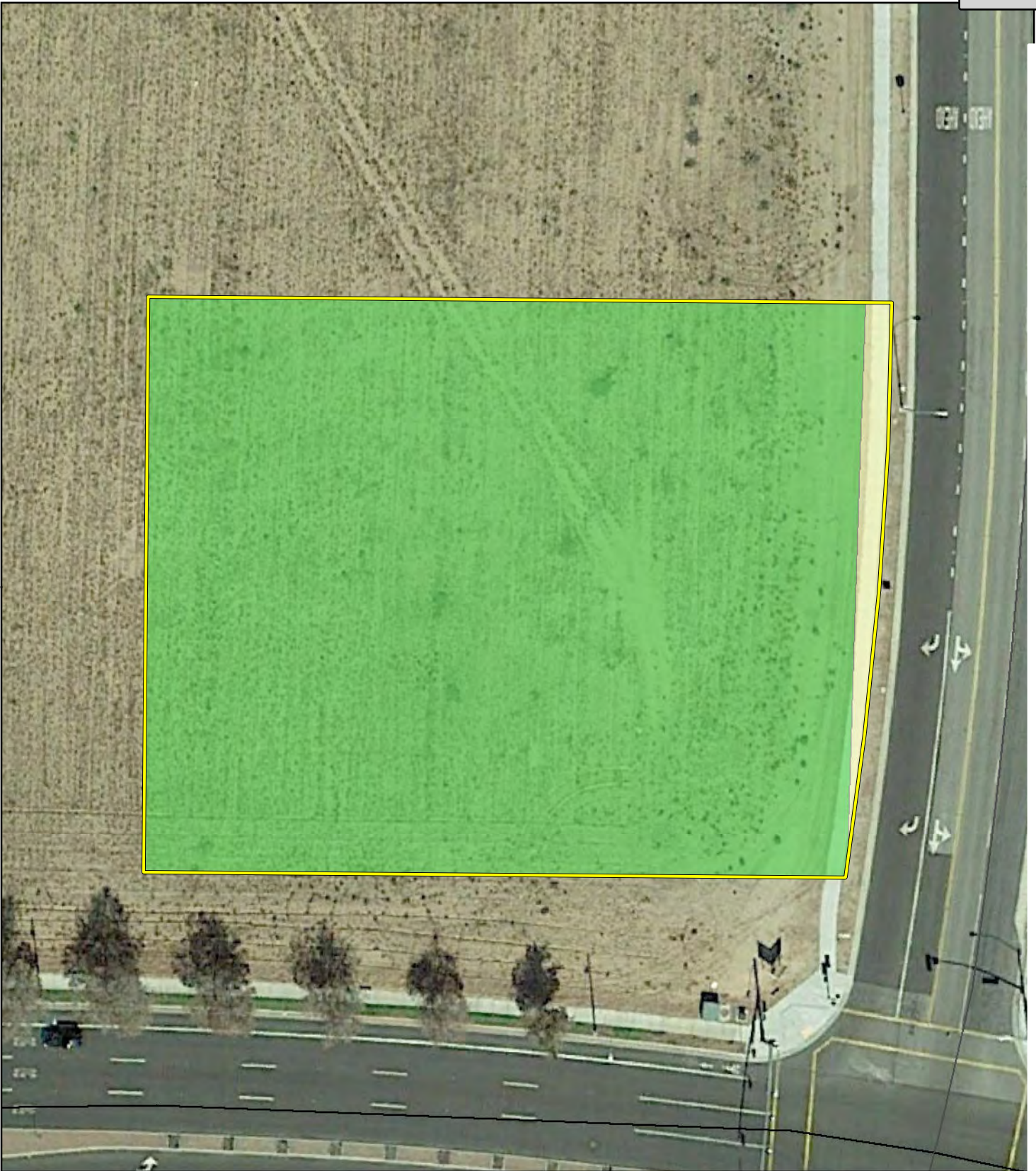
LSA

FIGURE 4



SOURCE: Bing (2015)  
 I:\SAT1701\GIS\MXD\ConceptualSitePlan.mxd (11/16/2018)

ARCO Iris and Olive  
 Moreno Valle,  
 Conceptual Site Plan



LSA

LEGEND

- Project Location
- State Farmland Designations**
- D, Urban and Built-up Land
- L, Farmland of Local Importance



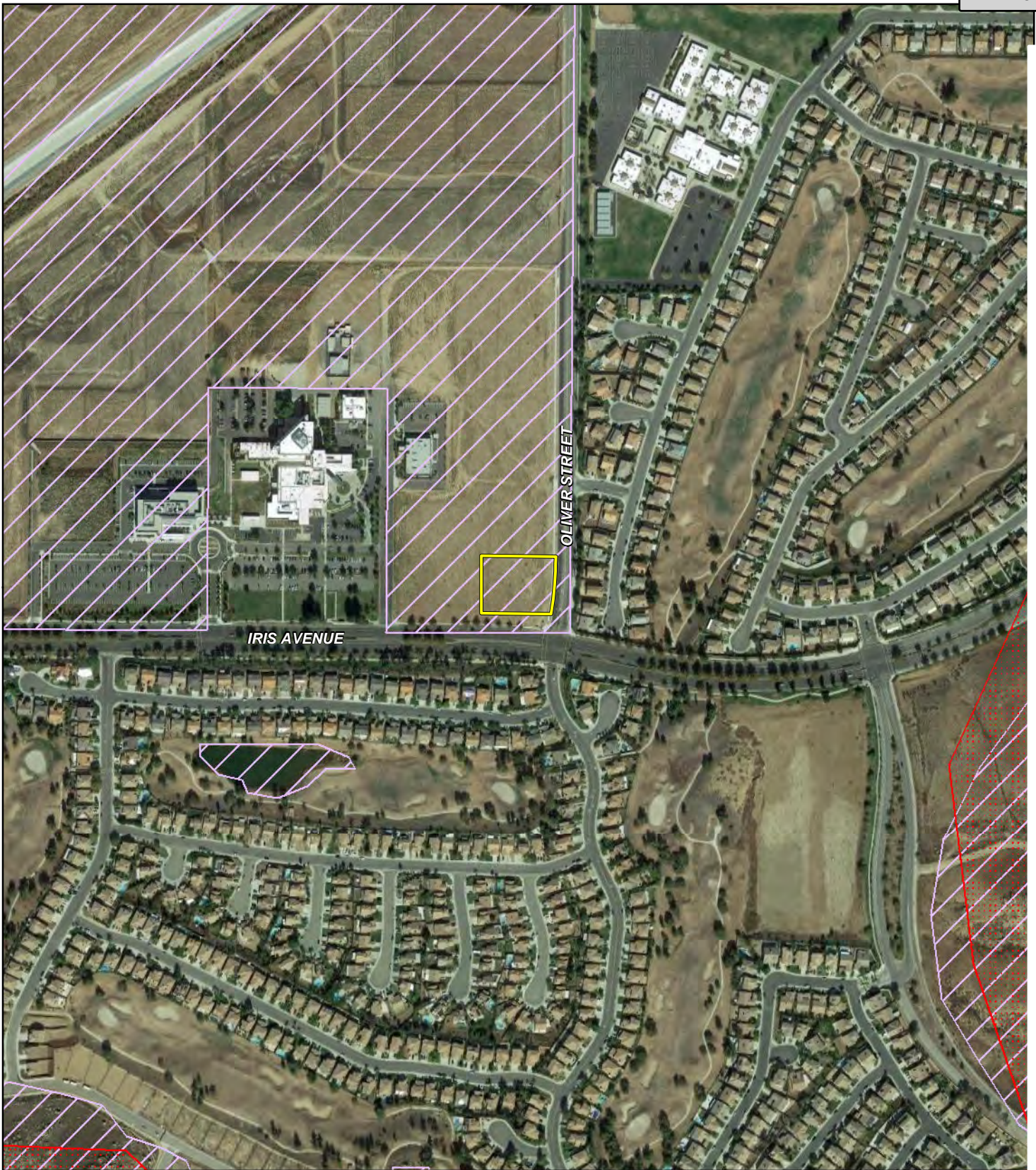
FIGURE !

ARCO Iris and Olive  
Moreno Valle,

Attachment: Exhibit A - Initial Study / Mitigated Negative Declaration (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)




SOURCE: Google Earth, 2016; Farmland Mapping & Monitoring Program, 2014

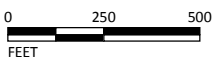
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LSA

LEGEND

-  Project Location
-  Small Mammal Survey Area
-  Burrowing Owl Survey Area



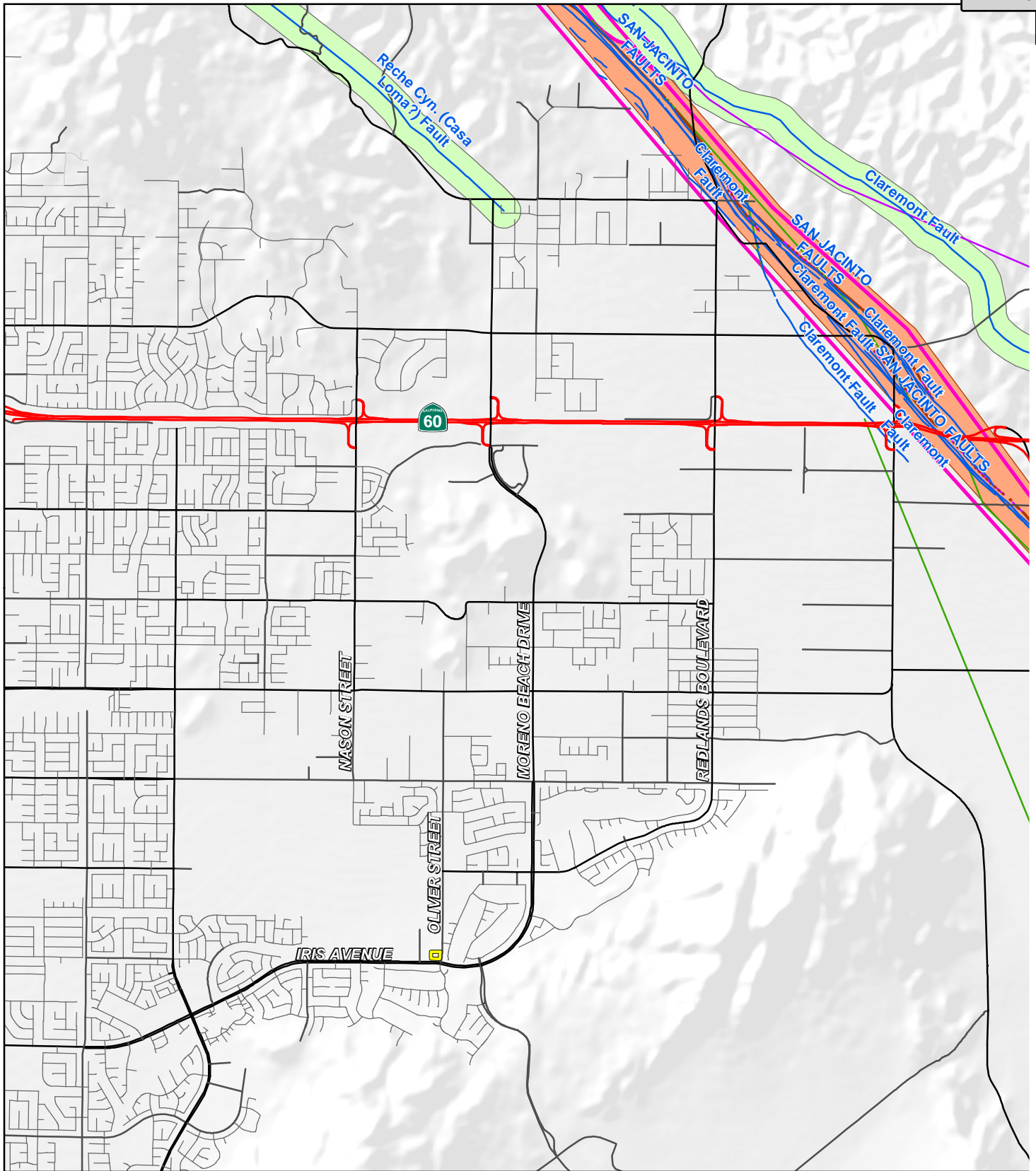
SOURCE: Google Earth, 2016; MHCP, 2005

I:\SAT1701\Reports\IS\fig6\_MSHCPsurvey.mxd (12/12/2017)

FIGURE (

ARCO Iris and Olive  
 Moreno Valle,  
 MSHCP Survey Areas

Attachment: Exhibit A - Initial Study / Mitigated Negative Declaration (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



LSA

LEGEND

Project Location

CGS Faults, 2005

USGS Faults, 2010

County Fault Zones

Alquist-Priolo

Riverside County

County Faults, 2003

Alquist-Priolo Zone

Alquist-Priolo Zone

Fault, Certain

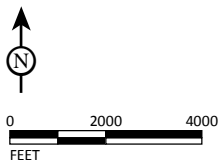
Fault, Approximate

Fault, Concealed

FIGURE

ARCO Iris and Olive Moreno Valle,

Alquist-Priolo Fault Zone and Earthquake Faults

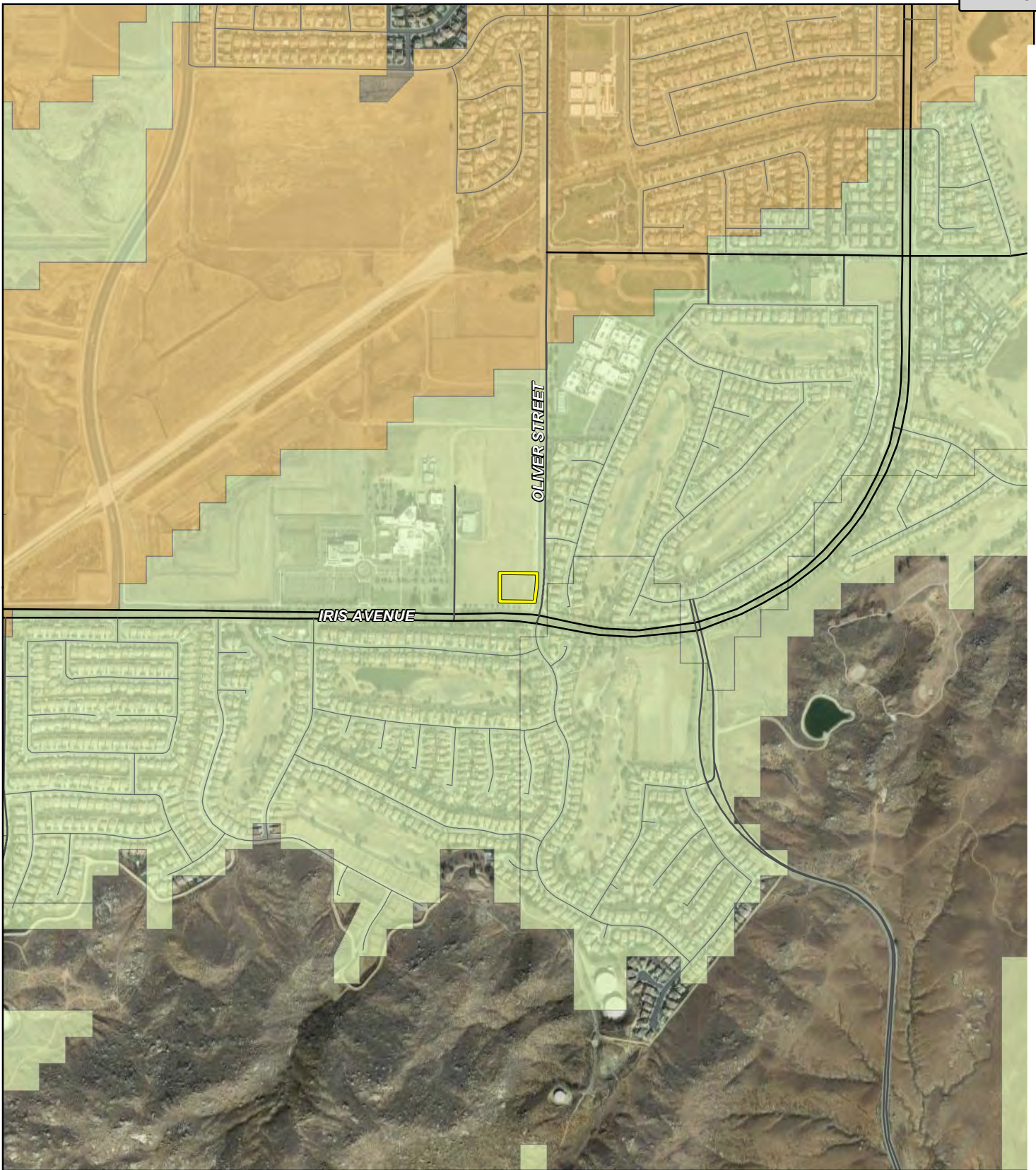


SOURCE: Google Earth, 2016; USGS, 2010; CGS, 2005; Riverside County, 2003

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Attachment: Exhibit A - Initial Study / Mitigated Negative Declaration (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)






LSA

LEGEND

 Project Location

**Liquefaction Susceptibility**

 Moderate

 Low



SOURCE: Google Earth, 2016; Riverside County, 2003

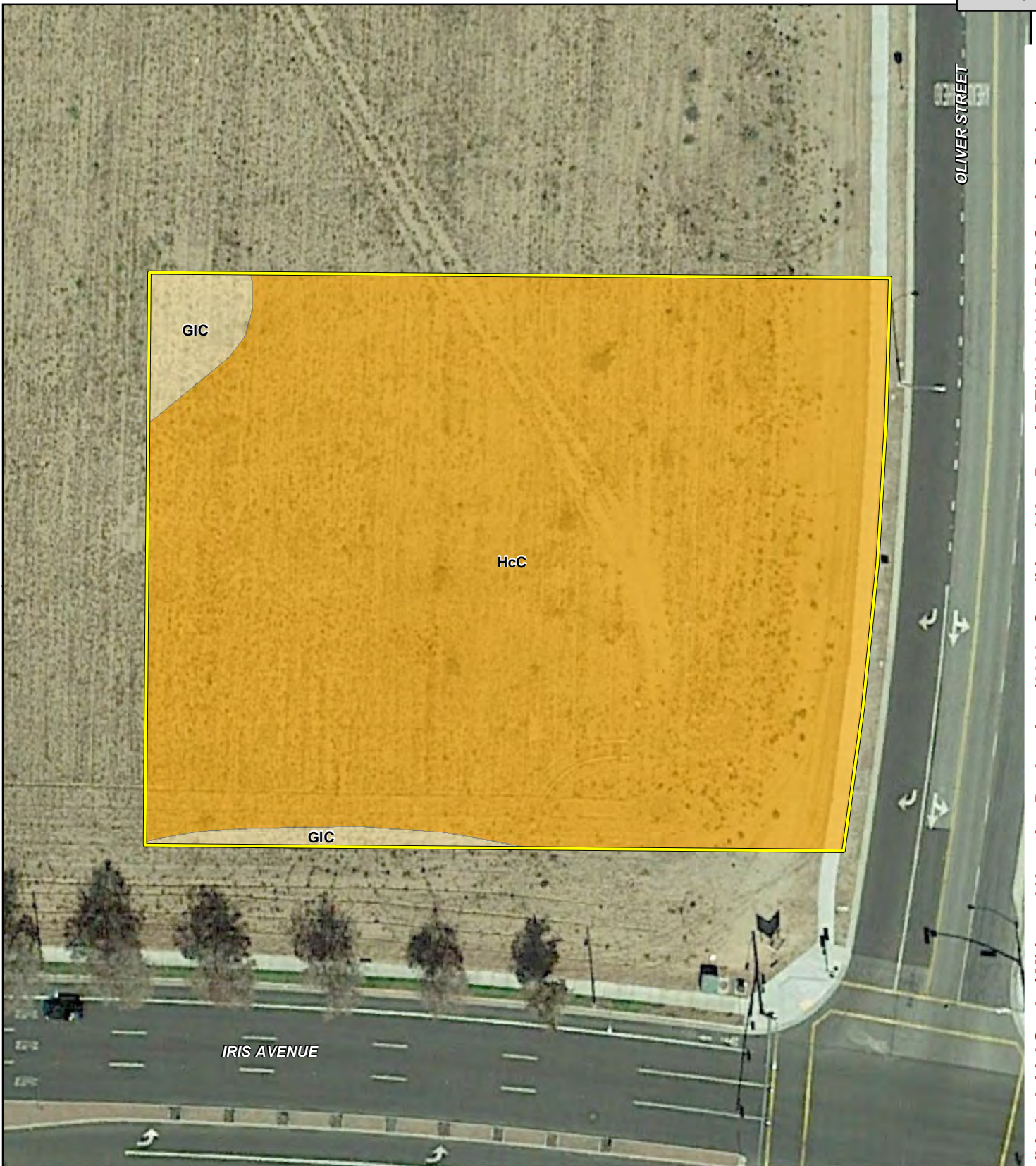
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FIGURE 8

ARCO Iris and Olive  
Moreno Valle

Liquefaction Susceptibility

Attachment: Exhibit A - Initial Study / Mitigated Negative Declaration (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



LSA

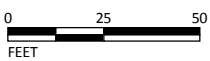
LEGEND

Project Location

Soils

GIC: Gorgonio loamy sand, deep, 2 to 8 percent slopes

HcC: Hanford coarse sandy loam, 2 to 8 percent slopes



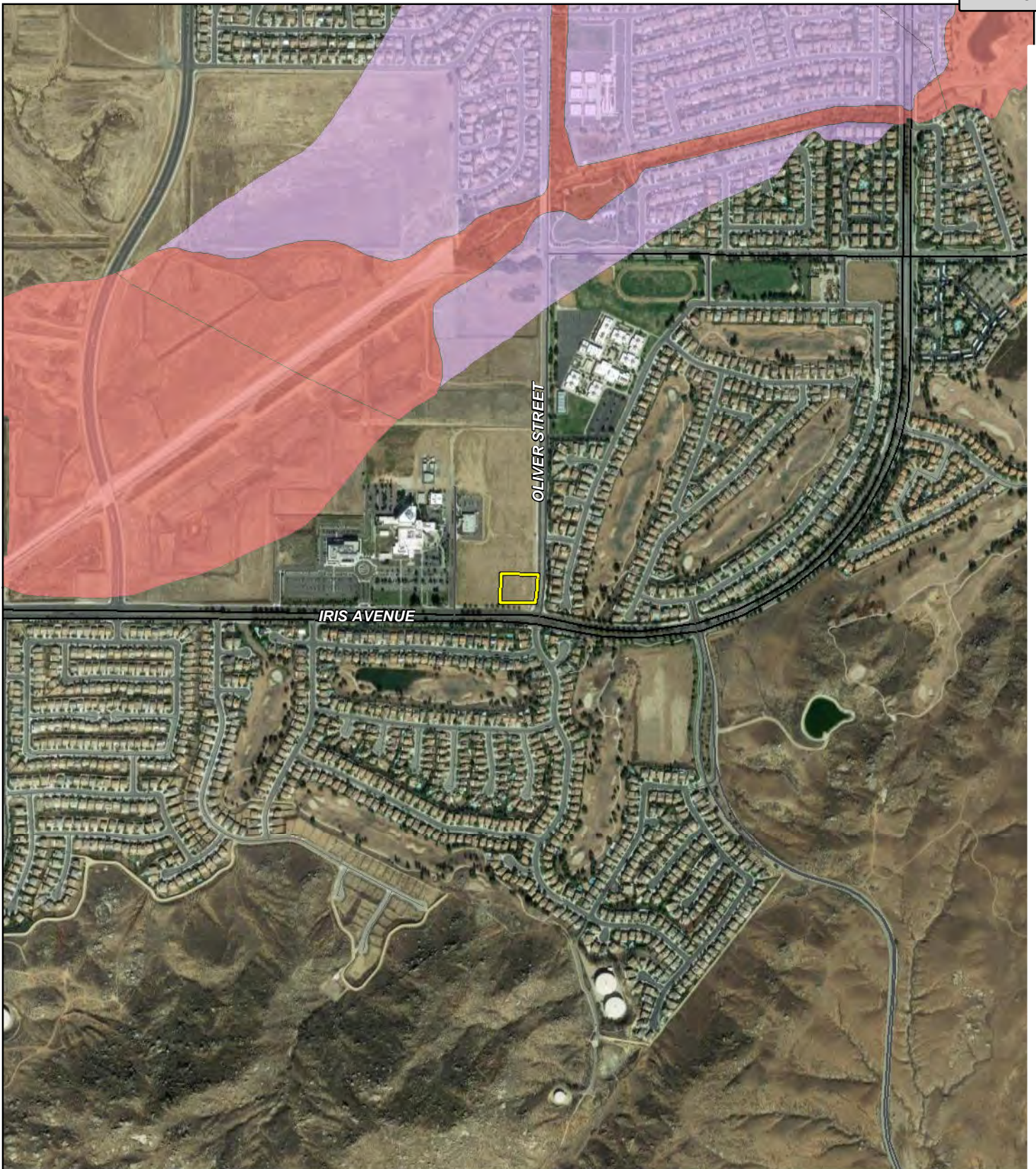
SOURCE: Google Earth, 2016; Soil Data Mart, 2015

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FIGURE 9

ARCO Iris and Olive  
Moreno Valle,  
Soils

Attachment: Exhibit A - Initial Study / Mitigated Negative Declaration (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)





LSA

LEGEND

 Project Location

FEMA DFIRM Flood Zones

 500-Year Floodplain

 100-Year Floodplain



SOURCE: Google Earth, 2016; Riverside County, 2003; FEMA DFIRM Data, 2008.

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FIGURE 10

ARCO Iris and Olive  
Moreno Valle

FEMA Flood Zones

Attachment: Exhibit A - Initial Study / Mitigated Negative Declaration (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

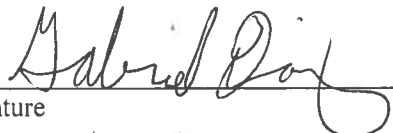
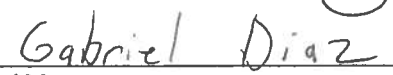
The environmental factors checked below( ■ ) would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

	Aesthetics		Greenhouse Gas Emissions		Public Services
	Agricultural Resources		Hazards & Hazardous Materials		Recreation
	Air Quality		Hydrology/Water Quality		Transportation/Traffic
	Biological Resources		Land Use/Planning		Utilities/Service Systems
	Cultural Resources		Mineral Resources		Mandatory Findings of Significance
	Geology/Soils		Noise		Tribal Cultural Resources
	Tribal Cultural Resources		Population/Housing		

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	
I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.	<b>X</b>
I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	
I find that the proposed project MAY have a “potential significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	

  
 Signature \_\_\_\_\_ Date 11/20/18  
  
 Printed Name \_\_\_\_\_ For \_\_\_\_\_

## EVALUATION OF ENVIRONMENTAL IMPACTS

- 1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
- 4) “Negative Declaration: Potentially Significant Unless Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from “Earlier Analysis,” as described in (5) below, may be cross-referenced).
- 5) Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063 (c) (3) (d). In this case, a brief discussion should identify the following:
  - (a) Earlier Analysis Used. Identify and state where they are available for review.
  - (b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
  - (c) Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g. general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.
- 9) The analysis of each issue should identify: (a) the significance criteria or threshold used to evaluate each question; and (b) the mitigation measure identified, if any, to reduce the impact to less than significance.

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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**I. AESTHETICS.** Would the project:

a) Have a substantial adverse effect on a scenic vista? | | | X |

*Less than Significant Impact.* Scenic vistas are publicly accessible viewpoints that provide views of areas from the project site and only the project site that exemplify a community’s environment. Scenic vistas within the City include Box Springs Mountains and Reche Canyon area to the north, the “Badlands” to the east, and the Mount Russel area to the south.

The project site is located on the northwest corner of Oliver Street and Iris Avenue. Surrounding land uses include: one and two-story single-family residential units to the east, two-story single-family residential units to the south; vacant land to the west and north. Just beyond the vacant land to the west is the Kaiser Permanente Hospital. Permanent walls exist between the single-family residential homes located to the east and south of the project site, blocking scenic vistas on the first floor of the single-family residential homes. The single-family residential units to the south are approximately 10 feet higher in elevation compared to the project site. Ornamental trees are located along Iris Avenue to the north and south, partially blocking scenic views of the Box Springs Mountains, and are also located east of Oliver Street, partially blocking views of the Box Spring Mountains from the single-family residential units to the east of Oliver Street.

The proposed ARCO gas station/convenience store is 24.5 feet in height at its tallest point and the 42-foot by 116-foot canopy is 18.5 feet in height. Views of the Box Spring Mountains to the north of the project site would be intermittently blocked while traveling east on Iris Avenue due to ornamental trees located north of the street. While traveling west on Iris Avenue, views of the Box Spring Mountains will be partially and temporarily blocked by the new gas station building and canopy, while some views will continue to be blocked by the existing ornamental trees located north of Iris Avenue. The development of the Arco gas station will block some views of Box Spring Mountains to the north of the site, but is not considered a substantial adverse effect. The Upland Game Hunting Area can be seen traveling south on Oliver Street and views will be partially be blocked by the proposed Arco gas station. Overall, the development of the proposed project would have a **less than significant** impact on scenic vistas due to its limited size and height, and no mitigation is required.

b) Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway? | | | X |

*Less than Significant Impact.* The proposed project site is currently vacant. Surrounding land uses include single-family residential to the east and south, and vacant land to the north and west. Two scenic highways are located within the City which includes State Route 60 (SR-60) and Moreno Beach Drive.<sup>1</sup> State Route 60 is located approximately 3 miles north of the project site while Moreno Beach Drive is located approximately 0.3 mile east of the project site. However, single-family residential units are currently blocking views of the project site from Moreno Beach Drive. Therefore, the development of the Project will have a **less than significant** impact related to scenic resources and no mitigation is required.

c) Substantially degrade the existing visual character or quality of the site and its surroundings? | | | X |

*Less than Significant Impact.* The construction phase of the project would introduce the use of machinery such as excavators and bull dozer. The presence of the construction equipment, as well as the construction activities would temporarily alter the visual character of portion of the proposed project. Construction staging areas, including earth stockpiling, storage of equipment and supplies, and related activities would contribute to a disturbed site, which would be a short-term visual impact. However, these construction activities would be temporary, so this would not create a permanent significant visual impact. Once the project is completed, the overall visual character of the area would return to its present condition.

<sup>1</sup> Chapter 7 – Conservation, City of Moreno Valley General Plan, July 11, 2006.

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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Regarding long-term views, the project site is currently vacant and undeveloped. Single-family residential units are located to the south and east of the project site, with vacant undeveloped land located to the north and west. Just west of the vacant land is Kaiser Permanente Hospital (refer to Figures 2 and 3). The proposed project would comply with the City of Moreno Valley General Plan policies and regulations regarding the appearance of the proposed building and canopy. In addition, the height of the gas station building and fueling canopy is equal or less than a single-family home. Therefore, the minor changes in visual character that would result from implementation of the project would be **less than significant**. No mitigation is required.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | | | X |

*Less than Significant Impact.* The project site presently does not contain any source of light. Sources of light in the area include street lighting along Iris Avenue and Oliver Street, as well as the fully improved roadways, and single-family residential lighting south and east of the site. Glare is daytime occurrence resulting from light reflecting off polished surfaces and affecting viewers in nearby moving vehicles. The development of the Arco AM/PM gas station would create new sources of light and glare. At night, the project’s interior and exterior building lights and landscape lighting would be visible from the adjacent single-family residential uses, and to a lesser extent, from the surrounding public streets. However, these light sources would not have a significant impact on the night sky, as they would not exceed existing background light levels already present within the surrounding area. In addition, new construction shall comply with the City of Moreno Valley’s General Plan and Municipal Code requirements. Therefore, lighting impacts would be **less than significant**. No mitigation is required.

Sources of glare as a result of project implementation include reflective building materials and vehicles parked within and traveling to and from the property. The amount of glare would depend on the location of the reflective surfaces and the direction of the sun. Any glare produced by the reflective surfaces would be temporary, as the location of the sun would be changing throughout the day. The project site is consistent with the City’s General Plan and Zoning. Therefore, impacts from glare would be **less than significant**. No mitigation is required.

**II. AGRICULTURAL RESOURCES:** In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project?

a) Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | | | | X

*No Impact.* The California Department of Conservation, Farmland Mapping and Monitoring Program (FMMP) compile important farmland maps pursuant to the provisions of Section 65570 of the California Government Code. The maps are updated every two years using computer mapping system, aerial imagery, public review and field reconnaissance. According to the FMMP, the project site lies within “farmland of local importance (refer to Figure 5).”<sup>2</sup> The project site is surrounded by farmland of local importance and urban and built-up land, however, much of this land has already been developed or is planned to be developed into various urban uses. The closest Prime Farmland to the project site is located approximately 2.8 miles north of the proposed project site. Therefore, no Prime, Unique, or Statewide Importance Farmland is located within the project limits and **no impact** to state designated farmland would result from the development of the proposed project. No mitigation is required.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | | | | X

<sup>2</sup> Department of Conservation, Farmland Mapping and Monitoring Program, <http://maps.conservation.ca.gov/ciff/ciff.html> (Accessed September 19, 2017).

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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*No Impact.* The California Land Conservation Act of 1965 – or commonly known as the Williamson Act, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space uses. In return, landowners are given a lower property tax assessment. The project site does not contain land that is enrolled in a Williamson Act contract.<sup>3</sup> Additionally, according to the City of Moreno Valley’s Zoning Map, the project site is currently zoned for “Neighborhood Commercial (NC).” In addition, the surrounding area contained existing or planned suburban development, and the City has no agricultural land use designations in its General Plan or zoning. Due to the project site not part of a Williamson Act contract, nor is zoned for agricultural uses, **no impact** associated with this issue would occur. No mitigation is required.

c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				X
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*No Impact.* The proposed project site is currently vacant and undeveloped. The site does not contain any forest land, Timberland Production, nor is it zoned for such uses. Therefore, the project will have **no impact** on forest land, timberland, or timberland zoned Timberland Production. No mitigation is warranted.

d) Would the project result in loss of forest land or conversion of forest land to non-forest use?				X
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*No Impact.* Please refer to Checklist Response IIC.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				X
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*No Impact.* As noted above, the project site is currently vacant and is not utilized for agricultural production or timberland. Neither the project site nor adjacent facilities are being used for, or zoned for farmland or forest land. Please refer to Checklist Responses IIa and IIc. Therefore, the development of the proposed project will not result in the conversion of farmland to non-agricultural use or forest land to non-forest uses. **No impact** to the conversion of agricultural lands or forest lands would occur. No mitigation is required.

**III. AIR QUALITY:** Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
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*Less than Significant Impact.* The project site is located in the South Coast Air Basin (Basin), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The Basin includes all of Orange County and portions of Los Angeles, Riverside, and San Bernardino Counties. The SCAQMD adopted an Air Quality Management Plan (AQMP), the main purpose of which is to describe air pollution control strategies to be taken by a city, county, or region classified as a nonattainment area in order to bring the area into compliance with federal and state air quality standards. A nonattainment area is considered to have air quality worse than the National Ambient Air Quality Standards (NAAQS) as defined in the Federal Clean Air Act. The Basin is in nonattainment for the federal and state standards for ozone (O3) and particulate matter less than 2.5 microns in diameter (PM2.5) and in nonattainment for the state standards for particulate matter less than 10 microns in diameter (PM10) and nitrogen dioxide (NO2). The Basin is

<sup>3</sup> California Department of Conservation, Division of Land Resource Protection, Riverside County Williamson Act FY 2015/2016, Sheet 1 of 3, website: [http://ftp.consrv.ca.gov/pub/dlrp/wa/Riverside\\_w\\_15\\_16\\_WA.pdf](http://ftp.consrv.ca.gov/pub/dlrp/wa/Riverside_w_15_16_WA.pdf) (Accessed September 19, 2017).



<b>Issues and Supporting Information</b>	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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in attainment/maintenance/unclassified status for all other federal and state criteria pollutant standards.

Consistency with the draft 2016 AQMP (i.e., an update to the adopted 2012 AQMP) for the Basin means that a project will be consistent with the goals, objectives, and assumptions in the respective plan to achieve the federal and state air quality standards. Pursuant to the methodology provided in Chapter 12 of the 1993 SCAQMD CEQA Air Quality Handbook, consistency with the Basin 2016 AQMP is affirmed when a project (1) does not increase the frequency or severity of an air quality standards violation or cause a new violation; and (2) is consistent with the growth assumptions in the AQMP. For the proposed project to be consistent with the AQMP adopted by the SCAQMD, the pollutants emitted from the project should not exceed the SCAQMD daily threshold or cause a significant impact on air quality, or the project must already have been included in the AQMP projections. Additionally, if feasible mitigation measures are implemented and shown to reduce the impact level from significant to less than significant, a project may be deemed consistent with the AQMP.

According to the CEQA Air Quality Handbook, consistency with AQMP growth assumptions must be analyzed for new or amended General Plan elements, Specific Plans, and significant projects. The proposed project does not propose or require any change in land use designation, nor any increase in development intensity beyond that currently anticipated for the subject site. Because the land uses and development intensities proposed by the proposed project are consistent with the current adopted City General Plan and applicable zoning standards, the proposed project would not result in air quality violations. The proposed project would not generate operational-source criteria pollutant emissions not already reflected in the current AQMP regional emissions inventory. Based on the preceding, the proposed project is considered to be consistent with the AQMP. In addition, the proposed project is not considered a significant project (e.g., large-scale projects such as airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and offshore drilling facilities). As discussed in checklist response 3b, below, the proposed project’s short-term construction and long-term pollutant emissions will not exceed the emissions thresholds established in the SCAQMD’s CEQA Air Quality Handbook; therefore, the project would not result in an increase in the frequency or severity of any air quality standards violation and will not cause a new air quality standard violation. For these reasons, the proposed project is consistent with the City’s General Plan and the regional AQMP. Therefore, impacts related to implementation of the AQMP would be **less than significant**, and no mitigation is required.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation. | | | X |  
*Less than Significant Impact.* The following analysis analyzes both short-term impacts caused by construction activities and long-term impacts caused by occupancy and operation of the project as proposed.<sup>4</sup>

**Short-Term Impacts**

Grading and other construction activities would result in combustion emissions from heavy-duty construction vehicles, haul trucks, and vehicles transporting construction crews. Exhaust emissions during these construction activities will vary daily as construction activity levels change. The grading phase of construction represent the most intense construction period during which daily emissions would be at their greatest level, based on the potential amount of equipment and duration of use. Construction equipment estimates are based on default values in CalEEMod (Version 2016.3.1). The project would balance grading activity onsite, which means that no soil would be transported offsite for disposal nor would soil be transported onsite for use in construction activities. Table A below provides a “worst-case” estimate of the short-term construction emissions during each calendar year. Table A indicates that the construction pollutant emissions from the proposed project would not exceed the corresponding SCAQMD daily emissions threshold criteria pollutants.

Currently, the Basin is designated as a nonattainment area for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub>. Project construction will be required to comply with regional fugitive dust reduction practices (SCAQMD Rule 403) that assist in reducing short-term air pollutant emissions. The purpose of SCAQMD Rule 403 is to reduce the amount of particulate matter in the atmosphere resulting from man-made fugitive dust sources. Among the requirements under this rule, fugitive dust must

Attachment: Exhibit A - Initial Study / Mitigated Negative Declaration (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

<sup>4</sup> Air Quality and Greenhouse Gas Emissions Analysis and Screening Health Risk Assessment Technical Memorandum, October 27, 2017.

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be controlled so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. This is achieved by requiring actions to prevent, reduce, or mitigate dust emissions. Adherence to Rule 403 is a standard requirement for any construction activity occurring within the Basin. As depicted in Table A, construction emissions would not exceed daily SCAQMD thresholds, so impacts are **less than significant** and no mitigation is required (see Appendix A).

**Table A: Estimated Construction Emissions**

Construction Phase	Peak Daily Pollutant Emissions (lbs/day)					
	VOC	NOx	CO	SOx	PM <sub>10</sub>	PM <sub>2.5</sub>
Max. Daily Emissions During Year 1	2.60	20.78	13.93	0.02	6.84	3.85
Max. Daily Emissions during Year 2	3.34	15.98	13.53	0.02	0.93	0.89
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Significant Emissions?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: Table D, LSA, November 2017 (Appendix A).

CO = carbon monoxide  
 lbs/day = pounds per day  
 NOx = nitrogen oxides

PM<sub>2.5</sub> = particulate matter less than 2.5 microns in size

PM<sub>10</sub> = particulate matter less than 10 microns in size  
 SCAQMD = South Coast Air Quality Management District  
 SOx = sulfur oxides  
 VOC = volatile organic compounds

**Long-Term Impacts**

Operational emissions from area sources include the combustion of natural gas for heating and hot water, engine emissions from landscape maintenance equipment, and the use of appliances. Mobile source emissions are associated with project-related vehicle trip generation. Based on the CalEEMod (Version 2016.3.1) default mode at full buildout, the project would generate approximately 1,111 average daily trips (ADT). The long-term operational emissions associated with the proposed project, calculated using the CalEEMod 2016.3.1 model are shown in Table B and demonstrates operational activities associated with the project would be below the SCAQMD threshold (Appendix A). Therefore, project-related long-term air quality impacts would be **less than significant**, and no mitigation is required.

**Table B: Operational Emissions**

Source	Pollutant Emissions (lbs/day)					
	VOC	NOx	CO	SOx	PM <sub>10</sub>	PM <sub>2.5</sub>
Area Sources	0.05	<0.01	<0.01	0.00	<0.01	0.02
Energy Sources	<0.01	0.02	0.02	<0.01	<0.01	<0.01
Mobile Sources	5.55	24.40	26.14	0.08	3.73	1.03
<b>Total Project Emissions</b>	<b>5.60</b>	<b>24.42</b>	<b>26.16</b>	<b>0.08</b>	<b>3.73</b>	<b>1.03</b>
<b>SCAQMD Thresholds</b>	<b>55</b>	<b>55</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Significant Emissions?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: Table F, LSA Associates, November 2017 (Appendix A).

CO = carbon monoxide  
 lbs/day = pounds per day  
 NOx = nitrogen oxides  
 PM<sub>2.5</sub> = particulate matter less than 2.5 microns in size

PM<sub>10</sub> = particulate matter less than 10 microns in size  
 SCAQMD = South Coast Air Quality Management District  
 SOx = sulfur oxides  
 VOC = volatile organic compounds

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

X

The majority of the project-related operational emissions would be due to natural gas for heating and hot water and customer and employee vehicle trips to and from the project. Tables A and B indicate that all emissions of criteria

**Issues and Supporting Information**

Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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pollutants from the proposed project would be less than the applicable SCAQMD thresholds over both the short and long term, therefore, no significant cumulative impacts would occur and no mitigation is required.

d) Expose sensitive receptors to substantial pollutant concentrations? | | | X |

Localized Significance Thresholds (LSTs) represent the maximum emissions from a project that would not result in an exceedance of the national or state ambient air quality standards. LSTs are based on the ambient concentrations of that pollutant within the project source receptor area (SRA) and the distance to the nearest sensitive receptor. For this project, the appropriate SRA is the Perris Valley Area (SRA 24) according to the project air quality analysis included in Appendix A of this report.

**Short-Term LST Impacts**

As previously described, it is expected that construction would occur in one phase, and the site is only 1.58 acres, so much less than 5 acres would be actively worked on during any given day. The closest sensitive receptors to the site are several existing residences surrounding the project site, the closest of which is approximately 100 feet. Table C shows that emissions are well below LST thresholds and thus would be less than significant and not require mitigation.

**Table C: Construction Localized Impacts Analysis**

Emissions Sources	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
Onsite Emissions (lbs/day)	21.0	14.0	3.2	2.0
<b>Local Significance Thresholds (lbs/day)</b>	<b>125.0</b>	<b>670.0</b>	<b>5.9</b>	<b>3.2</b>
<b>Significant Emissions?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: Table E, LSA Associates, November 2017 (Appendix A).

Note: Source Receptor Area 24 – Perris Valley, 1 acre, 31 meter distance

CO = carbon monoxide

lbs/day = pounds per day

NO<sub>x</sub> = nitrogen oxides

PM<sub>2.5</sub> = particulate matter less than 2.5 microns in size

PM<sub>10</sub> = particulate matter less than 10 microns in size

**Long-Term LST Analysis**

The potential long-term daily air pollutant emissions from the proposed gas station operational activities were calculated and compared with the appropriate LSTs from the SCAQMD based on CalEEMod 2016.3.1 model data from the project air quality assessment (Appendix A). As shown in Table D, the calculations determined that the operational emission rates would not exceed the LST thresholds for the closest sensitive receptors. Therefore, the proposed operational activity would not result in a localized significant air quality impact and no mitigation is required.

**Table D: Long-Term Operational Localized Impacts Analysis**

Emissions Sources	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
Onsite Emissions (lbs/day) <sup>1</sup>	0.3	1.4	0.07	0.04
<b>Local Significance Thresholds (lbs/day)</b>	<b>125.0</b>	<b>670.0</b>	<b>1.50</b>	<b>1.00</b>
<b>Significant Emissions?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: Table G, LSA Associates, November 2017 (Appendix A).

Note: Source Receptor Area 24 – Perris Valley, 1 acre, 31 meter distance.

<sup>1</sup> CalEEMod clearly delineates the onsite and offsite emissions and mobile source trips within the project area (i.e., driveways and parking lots).

CO = carbon monoxide

NO<sub>x</sub> = nitrogen oxides

PM<sub>2.5</sub> = particulate matter less than 2.5 microns in size

PM<sub>10</sub> = particulate matter less than 10 microns in size

**Health Risk Assessment**

The California Air Resources Board (ARB) has developed an Air Quality and Land Use Handbook (Handbook) intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. According to the Handbook, recent air pollution studies have shown an association between respiratory and other non-cancer health effects and proximity to high-traffic roadways. The

<b>Issues and Supporting Information</b>	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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Handbook recommends that planning agencies strongly consider proximity to these sources when finding new locations for “sensitive” land uses such as residential homes. Key recommendations in the Handbook include taking steps to avoid siting new, sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). Please note that this ARB buffer recommendation in the 2005 Handbook does not consider the ARB required enhanced vapor recovery systems for gasoline dispensing facilities. The Handbook specifically states that its recommendations are advisory and acknowledges land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

**Table E: SCAQMD Toxic Air Contaminant Incremental Risk Thresholds**

Maximum Individual Cancer Risk	≥ 10 in 1 million
Cancer Burden	> 0.5 excess cancer cases
Hazard Index	≥ 1.0

Source: Table C, LSA Associates, November 2017 (Appendix A).

e) Create objectionable odors affecting a substantial number of people? | | | X |

The SCAQMD Air Quality CEQA Guidelines establish risk thresholds for projects under CEQA that have the potential to expose sensitive receptors (including residential areas) or the general public to substantial levels of toxic air contaminants (TACs). Table E lists the air district’s TAC incremental risk thresholds for operation of a project.<sup>5</sup> As indicated in Table B, project operational emissions of criteria pollutants would be below SCAQMD significance thresholds; thus, they are not likely to have a significant impact on these residences given the distance and the dispersion that would occur. Exposure by individuals pumping gasoline would be limited in time, so the dose level for customers would be low. In addition, SCAQMD Rule 461 - Gasoline Transfer and Dispensing, require the installation of enhanced vapor recovery systems that would reduce the amount of vapor that would be emitted into the atmosphere by 95 to 98 percent from levels without such systems. This would further limit TAC doses and exposures, reducing potential health risk related to gasoline vapors to a level that is not significant. Overall, project impacts related to exposure of sensitive receptors to emissions are considered less than significant. The project health risk screening determined the project would not result in significant cancer or non-cancer risks from fuel dispensing activities (Appendix A)

*Less Than Significant Impact.* Project construction will generate limited odors over the short term, mainly fumes from gasoline- and diesel-powered construction equipment. These odors would be temporary and not likely to be noticeable beyond the project limits. The painting of buildings or the installation of concrete paving may also create temporary odors. SCAQMD Rule 1113 outlines standards for paint applications, while Rule 1108 identifies standards regarding the application of asphalt. Adherence to the standards identified in these SCAQMD Rules would reduce temporary odor impacts to a less than significant level, and no mitigation is required.

Land uses generally associated with long-term objectionable odors include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting operations, refineries, landfills, dairies, and fiberglass molding facilities. The site plan currently shows the trash enclosure will be in the west portion of the site, on the south side of the convenience store. The proposed project is a gas station and convenience store and waste odors are not expected to result in significant odor impacts because waste storage is required to adhere to City waste storage requirements (i.e., covered outdoor storage containers that are regularly emptied). Through the adherence of these existing requirements, the proposed project is not expected to generate long-term objectionable odors. Because the project would not involve any substantial short-term or long-term sources of strong negative odors, impacts are considered **less than significant** and no mitigation is required.

<sup>5</sup> Air Quality and Greenhouse Gas Emissions Analysis and Screening Health Risk Assessment Technical Memorandum, October 27, 2017.

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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**IV. BIOLOGICAL RESOURCES.** Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U. S. Fish and Wildlife Service?

	X			
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*Less Than Significant With Mitigation Incorporated.* A Biological Resource Assessment and Multiple Species Habitat Conservation Plan Consistency Analysis and Habitat Assessment were prepared in September 2017 by LSA.<sup>6</sup> No special-status species were found or observed during the field reconnaissance. However, a literature review indicates that some special-interest species, including federal/State listed species, are known to occur in the region. These species include coastal California gnatcatcher (*Polioptila californica californica*), least Bell’s vireo (*Vireo bellii pusillua*), western yellow-billed cuckoo (*Coccyzus americanus accidentalis*), San Bernardino kangaroo rat (*Dipodomys merriami parvus*), and Stephen’s kangaroo rat (*Dipodomys stephensi*). Because the site is highly disturbed and lacking vegetation, the site is not suitable for the species listed above (see Appendix B).

The proposed Project site lies within the MSHCP survey area for burrowing owl. The project site has been recently plowed for weed abatement and is un-vegetated. Because the project site lies within the MSHCP survey area for burrowing owl (see Figure 6), a burrowing owl habitat assessment was conducted on August 30, 2017 and found no evidence of owls or owl sign, and no evidence of usable burrows. Because burrowing owls are mobile and seasonally migratory birds, **Mitigation Measure BIO-1** will reduce impacts to a **less than significant with mitigation incorporated**.

**BIO-1**

Prior to the issuance of grading permit, a pre-construction survey for burrowing owl shall be conducted by a qualified biologist no more than 30 days before the commencement of vegetation removal or ground disturbing activities to confirm the absence of burrowing owl onsite. If burrowing owl(s) are detected during the focused surveys, a Burrowing Owl Mitigation and Monitoring Plan (“Plan”) shall be prepared by a qualified biologist and submitted to the California Department of Fish and Wildlife for review and approval prior to commencement of project activities. The Plan shall describe appropriate avoidance, minimization, and mitigation measures to reduce impacts to burrowing owls and ensure the implementation of appropriate and commensurate compensatory mitigation for the loss of burrowing owl nesting and foraging habitat. No further action is required if the 30-day pre-construction survey does not result in burrowing owl sign or observations.

b) Have a substantially adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U. S. Wildlife Service?

			X	
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*Less Than Significant Impact.* No riparian or riverine habitats were identified within or adjacent to the project site.<sup>7</sup> The project site has been recently plowed for weed abatement and is unvegetated. Emergent plant and plant debris includes Saharan mustard (*Brassica tounefortii*), Russian thistle (*salsola tragus*), doveweed (*Croton setigerus*), puncture vine (*Tribulus terrestris*), red brome (*Bromus madritensis ssp. rubens*), flax-leaved horseweed (*Erigeron bonariensis*), morning glory (*Calystegia macrostegia*), jimsonweed (*Datura wrightii*), and Fremont’s goosefoot (*Chenopodium fremontii*). No MSHCP Narrow Endemic Plant species are known to occur within the project area. As a result, focused surveys are not required. A **less than significant** impact related to this issue would occur, and no mitigation is required.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or

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<sup>6</sup> Biological Resources Assessment and MSHCP Consistency Analysis and Habitat Assessment, AM-PM Gasoline Service Station Project, City of Moreno Valley, LSA Associated Inc., September 2017.  
<sup>7</sup> IBID.

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other means?

*No Impact.* The project site is currently vacant and is currently surrounded by residential and commercial uses. No federal jurisdictional waters, wetlands, and/or streambeds regulated by CDFW were identified within the project area. Therefore, **no impact** related to this issue would occur. No mitigation is required.

d) Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
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*Less Than Significant Impact.* The project is currently vacant and is surrounded by residential and commercial uses. The project will not affect wildlife movement since the parcel is surrounded by urban development and species associated with urban environments are able to navigate these areas. A **less than significant** impact related to this issue would occur, and no mitigation is required.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
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f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?			X	
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*Less Than Significant Impact.* The site contains no native vegetation, drainages, or other biological resources and is not subject to the City’s tree protection ordinance 9.16.210. The project site is located within the Multiple Species Habitat Conservation Plan (MSHCP) City of Moreno Valley Area Plan. The proposed project site is not located in a Criteria Cell and is not adjacent to Public-Quasi-Public or Conservation Land. Therefore, it is not subject to possible land conservation requirement under the MSHCP. However, the project will be required to pay the established MSHCP impact fee. For these reasons, the project will have **less than significant** impacts related to local biological ordinances and policies, and any Habitat Conservation Plans. No mitigation is required (see Appendix B).

**V. CULTURAL RESOURCES.** Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?		X		
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*Less than Significant with Mitigation Incorporated.* There are no sites within Moreno Valley study area listed as a state landmark, nor are there any sites on the National Register of Historic Places. The old Moreno Schoolhouse was designated a City landmark<sup>8</sup> In 1988 but it is 2 miles northeast of the project site. According to the Cultural Resource Assessment,<sup>9</sup> eight (8) previous cultural resources studies have been conducted within a 1-mile radius of the Project, none of which included any portion of the Project area. Although no cultural resources have been documented in the Project area, 21 prehistoric sites have been recorded within 1-mile: 1 rock shelter with an associated milling feature, 4 bedrock milling complexes (milling surfaces on three or more outcrops), 1 bedrock milling feature with associated rock circle, and 15 bedrock milling feature sites (milling surfaces on 1 or 2 outcrops).<sup>7</sup> The nearest resource (bedrock milling feature) is approximate 0.4 mile south of the Project area. None of the resources documented within the study area were in any of the inventories, directories, or registers<sup>7</sup> (see Appendix C).

During the field reconnaissance on September 1, 2017, an isolated fragment of riveted steel irrigation pipe was identified on the project site. Isolated artifacts with no specific association are generally considered not significant and therefore are not “historical resources” under CEQA.<sup>7</sup> Although no other cultural resources were identified within the Project area, a subsurface concrete cistern was noted approximately 100 feet from the western edge of the property and an additional

<sup>8</sup> Chapter 7 – Conservation, City of Moreno Valley General Plan, July 11, 2006.  
<sup>9</sup> Cultural Resource Assessment, Sater Arco Project, City of Moreno Valley, LSA Associates Inc., October 2018.

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fragment of riveted steel pipe was noted approximately 80 feet north of the site. Although no cultural resources were previously documented within or near the Project area by the records search, a water tank was once located on the parcel, a fragment of historic period irrigation pipe was identified during the survey and a concrete cistern remains to the west. Also, numerous prehistoric resources lie to the south and the sensitivity of the area between these resources and the Project is unknown. Therefore, **Mitigation Measures CUL-1 through CUL-5** shall be implemented to reduce impacts related to historical resources to **less than significant with mitigation incorporated**.

**CUL-1** Prior to the issuance of a grading permit, the Developer shall retain a professional archaeologist to conduct monitoring of all mass grading and trenching activities. The Project Archaeologist shall have the authority to temporarily redirect earthmoving activities in the event that suspected archaeological resources are unearthed during Project construction. The Project Archaeologist, in consultation with the Consulting Tribe(s), the contractor, and the City, shall develop a Cultural Resources Management Plan (CRMP) in consultation pursuant to the definition in AB52 to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the project site. A consulting tribe is defined as a tribe that initiated the AB 52 tribal consultation process for the Project, has not opted out of the AB52 consultation process, and has completed AB 52 consultation with the City as provided for in Cal Pub Res Code Section 21080.3.2(b)(1) of AB52. Details in the Plan shall include:

- a. Project grading and development scheduling;
- b. The Project archeologist and the Consulting Tribes(s) as defined in CR-1 shall attend the pre-grading meeting with the City, the construction manager and any contractors and will conduct a mandatory Cultural Resources Worker Sensitivity Training to those in attendance. The Training will include a brief review of the cultural sensitivity of the Project and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. All new construction personnel that will conduct earthwork or grading activities that begin work on the Project following the initial Training must take the Cultural Sensitivity Training prior to beginning work and the Project archaeologist and Consulting Tribe(s) shall make themselves available to provide the training on an as-needed basis;
- c. The protocols and stipulations that the contractor, City, Consulting Tribe(s) and Project archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation.

**CUL-2** Prior to the issuance of a grading permit, the Developer shall secure agreements with the Pechanga Band of Luiseño Indians and Soboba Band of Luiseño Indians for tribal monitoring. The Developer is also required to provide a minimum of 30 days advance notice to the tribes of all mass grading and trenching activities. The Native American Tribal Representatives shall have the authority to temporarily halt and redirect earth moving activities in the affected area in the event that suspected archaeological resources are unearthed. If the Native American Tribal Representatives suspect that an archaeological resource may have been unearthed, the Project Archaeologist or the Tribal Representatives shall immediately redirect grading operations in a 100-foot radius around the find to allow identification and evaluation of the suspected resource. In consultation with the Native American Tribal Representatives, the Project Archaeologist shall evaluate the suspected resource and make a determination of significance pursuant to California Public Resources Code Section 21083.2.

**CUL-3** In the event that Native American cultural resources are discovered during the course of grading (inadvertent discoveries), the following procedures shall be carried out for final disposition of the

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discoveries:

- a. One or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be provided to the City of Moreno Valley Planning Department:
  - i. Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place they were found with no development affecting the integrity of the resources.
  - ii. Onsite reburial of the discovered items as detailed in the treatment plan required pursuant to Mitigation Measure CUI-1. This shall include measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed. No recordation of sacred items is permitted without the written consent of all Consulting Native American Tribal Governments as defined in CUL-1.

**CUL-4** The City shall verify that the following note is included on the Grading Plan:

“If any suspected archaeological resources are discovered during ground-disturbing activities and the Project Archaeologist or Native American Tribal Representatives are not present, the construction supervisor is obligated to halt work in a 100-foot radius around the find and call the Project Archaeologist and the Tribal Representatives to the site to assess the significance of the find.”

**CUL-5** If potential historic or cultural resources are uncovered during excavation or construction activities at the project site, work in the affected area must cease immediately and a qualified person meeting the Secretary of the Interior's standards (36 CFR 61), Tribal Representatives, and all site monitors per the Mitigation Measures, shall be consulted by the City to evaluate the find, and as appropriate recommend alternative measures to avoid, minimize or mitigate negative effects on the historic, or prehistoric resource. Determinations and recommendations by the consultant shall be immediately submitted to the Planning Division for consideration, and implemented as deemed appropriate by the Community Development Director, in consultation with the State Historic Preservation Officer (SHPO) and any and all Consulting Native American Tribes as defined in CR-1 before any further work commences in the affected area.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5? | | X | |

*Less than Significant with Mitigation Incorporated.* According to the South Central Coastal Information Center, there have been thirty (30) reported cultural resource areas within 1-mile of the project, one prehistoric site within the project’s boundary. With **Mitigation Measures CUL-1 through CUL-5** noted in CEQA Checklist V(a) discussion above would reduce the impact to **less than significant with mitigation incorporated** (see Appendix C).

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | | X | |

*Less than Significant with Mitigation Incorporated.* The project site contains Alluvial Fan Deposits which consist of unconsolidated gravel, sand, and silt. Cobble- and boulder-size clasts are also present and become more abundant closer to the hills and mountains. These sediments were eroded from higher elevations, carried by flooding streams and debris flows, and deposited in a fan or lobe shape at the base of the hills. Based on the geology of the site, construction of the project would not impact, either directly or indirectly, any known unique paleontological resource or site of unique geologic features. Given the site’s history of disturbance, the potential for undiscovered paleontological or geological

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resources is considered low. However, ground-disturbing activities at the project site still have the potential to disturb previously unknown resources. With implementation of **Mitigation Measure CUL-6**, a **less than significant with mitigation incorporated** impact to paleontological resources would occur.

**CUL-6** If paleontological resources (fossils) are discovered during project grading, work will be halted in that area until a qualified paleontologist can be retained to assess the significance of the find. The project paleontologist shall monitor remaining earthmoving activities at the project site and shall be equipped to record and salvage fossil resources that may be unearthed during grading activities. The paleontologist shall be empowered to temporarily halt or divert grading equipment to allow recording and removal of the unearthed resources. Any fossils found shall be evaluated in accordance with the CEQA Guidelines and offered for curation at an accredited facility approved by the City of Moreno Valley. Once grading activities have ceased or the paleontologist determines that monitoring is no longer necessary, monitoring activities shall be discontinued. This measure shall be implemented to the satisfaction of the City Planning Division.

d) Disturb any human remains, including those interred outside of formal cemeteries? | | X | |

*Less than Significant with Mitigation Incorporated.* California Health and Safety Code §7050.5, Public Resources Code § 5097.98, and § 15064.5 of the California Code of Regulations (CEQA Guidelines) mandate procedures to be followed, including that, if human remains are encountered during excavation, all work must halt, and the County Coroner must be notified (Section 7050.5 of the California Health and Safety Code). The coroner will determine whether the remains are of forensic interest. If the coroner, with the aid of the supervising archaeologist, determines that the remains are prehistoric, the coroner will contact the Native American Heritage Commission (NAHC).

The NAHC will be responsible for designating the most likely descendant (MLD) responsible for the ultimate disposition of the remains, as required by Section 5097.98 of the Public Resources Code. The MLD should make his/her recommendations within 48 hours of their notification by the NAHC. This recommendation may include A) the non-destructive removal and analysis of human remains and items associated with Native American human remains; (B) preservation of Native American human remains and associated items in place; (C) relinquishment of Native American human remains and associated items to the descendants for treatment; or (D) other culturally appropriate treatment. Section 7052 of the Health & Safety Code also states that disturbance of Native American cemeteries is a felony. With adherence to these existing regulation and **Mitigation Measure CUL-7** impacts would be **less than significant with mitigation incorporated**.

**CUL-7** If human remains are discovered, no further disturbance shall occur in the affected area until the County Coroner has made necessary findings as to origin. If the County Coroner determines that the remains are potentially Native American, the California Native American Heritage Commission shall be notified within 24 hours of the published finding to be given a reasonable opportunity to identify the “most likely descendant”. The “most likely descendant” shall then make recommendations, and engage in consultations concerning the treatment of the remains (California Public Resources Code 5097.98). (GP Objective 23.3, CEQA).

**VI. GEOLOGY AND SOILS.** Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:

(i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | | | X | |

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*Less Than Significant Impact.* The project site is located within the Peninsular Range Geomorphic Province, an area characterized by active northeast trending strike slip faults, including the San Jacinto Fault and the Elsinore Fault (see Figure 7).<sup>10</sup> The project site is not located within the boundaries of an Earthquake Fault Zone as defined by the Alquist-Priolo Earthquake Fault Zoning Act of 1972 (California Geological Survey 2005).<sup>10</sup> There are no known active or potentially active faults that traverse the project site and the risk of ground rupture due to a fault displacement beneath the site is low. The closest known fault is the San Jacinto-San Jacinto Valley (San Bernardino) Fault zone approximately 4.1 miles northeast of the project site.<sup>10,11</sup> Therefore, impacts related to earthquake faults would be **less than significant**. No mitigation is required (see Appendix D).

(ii) Strong seismic ground shaking? | | | X |

*Less than Significant.* Like all of Southern California, the project site will continue to be subject to ground shaking generated from activity on local and regional faults. In addition, the site lies in relative close proximity to an active fault;<sup>9</sup> therefore, during the life of the proposed improvements, the property will probably experience similar moderate to occasionally high ground shaking from these fault zones, as well as some background shaking from other seismically active areas of the Southern California region. However, the design and construction in accordance with the current California Building Code (CBC) requirements is anticipated to address the issues related to potential ground shaking. With the implementation of California Building Code (CBC) requirement, seismic-related impacts would be **less than significant**. No mitigation is required.

(iii) Seismic-related ground failure, including liquefaction? | | | X |

*Less than Significant.* Liquefaction describes the phenomenon where ground shaking works cohesion less soil particles into a tighter packing, which induces excess pore pressure. There are three basic factors that must exist concurrently in order for liquefaction to occur. These factors include:

- A source of ground shaking, such as an earthquake, capable of generating soil mass distortions;
- A relatively loose silty and/or sandy soil; and
- A relatively shallow groundwater table (within approximately 50 feet below ground surface) or completely saturated soil conditions that will allow positive pore pressure generation.

The site is not located within a liquefaction zone (see Figure 8).<sup>8,12</sup> Considering the granular nature of the existing subsoils, along with the absence of groundwater table within 50-feet, potential susceptibility for liquefaction due to an earthquake is considered unlikely.<sup>13</sup> Therefore, a **less than significant** impact related to this issue would occur. No mitigation is required.

(iv) Landslides? | | | X |

*Less than Significant.* The geologic and topographic characteristics of an area, often determine its potential for landslides. Steep slopes, the extent of erosion, and the rock composition of a hillside all contribute to the potential for slope failure and landslide events. In order to fail, unstable slopes typically need to be disturbed; the common triggering mechanisms of slope failure include undercutting of slopes by erosion or grading, saturation of marginally stable slopes by rainfall or irrigation, and shaking of marginally stable slopes during earthquakes. The project is not located in an area that is susceptible to landslides.<sup>14,15</sup> The Upland Game Hunting Area is located approximately 0.4 mile south of the site, which has the potential for landslides. However, the proposed project would be required to adhere to applicable regulations regarding the City’s Building Ordinance. With the use of these safety regulations, the potential for landslides to occur within the project site is considered to be low. The impacts related to landslides would be **less than significant**. No

<sup>10</sup> Preliminary Geotechnical Engineering Investigation, Salem Engineering Group, Inc., November 30, 2017.  
<sup>11</sup> Figure 6-3: Geologic Faults and Liquefaction, City of Moreno Valley General Plan, July 11, 2006.  
<sup>12</sup> 7.4 – Liquefaction, Preliminary Geotechnical Engineering Investigation, Salem Engineering Group, Inc., November 30, 2017.  
<sup>13</sup> Feasibility Study Report of Soils and Foundation Evaluations, Soils Southwest, Inc., November 12, 2003.  
<sup>14</sup> Section 4.12 “Geology and Soils,” County of Riverside Environmental Impact Report No. 521, March 2014.  
<sup>15</sup> 7.6 – Landslides, Preliminary Geotechnical Engineering Investigation, Salem Engineering Group, Inc., November 30, 2017.

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mitigation is required.

(b) Result in substantial soil erosion or the loss of topsoil?

	X		
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*Less than Significant With Mitigation Incorporated.* The project site is underlain by a mix of Gorgonio loamy sand and Hanford coarse sandy loam (see Figure 9).<sup>16</sup> Prior to the issuance of grading permits, the project proponent would be required to prepare and submit detailed grading plans for the project site. These plans must be prepared in conformance with applicable standards of the City’s Grading Ordinance.

Construction activities associated with the development of the proposed Project would expose underlying soils, thus increasing their susceptibility to erosion until the Project is fully developed. Development of the site would involve more than one acre of ground disturbance; therefore, the proposed project is required to obtain a National Pollutant Discharge Elimination System (NPDES) permit. A Storm Water Pollution Prevention Plan (SWPPP) would also be required to address erosion and discharge impacts associated with the proposed onsite grading by implementing appropriate best management practices (BMPs). Adherence to the BMPs contained in the SWPPP and **Mitigation Measures HYD-1 through HYD-3** would ensure that the potential for soil erosion impacts would be reduced to **less than significant with mitigation incorporated** levels by implementation of existing water quality regulations. No mitigation is required.

(c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

		X	
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*Less than Significant With Mitigation Incorporated.* Subsidence is the sudden sinking or gradual downward settling of the earth’s surface with little or no horizontal movement. Subsidence is caused by a variety of activities, which include, but are not limited to, withdrawal of groundwater, pumping of oil and gas from underground, the collapse of underground mines, liquefaction, and hydrocompaction. The Project site is generally flat and gently slopes down to the northwest. On-site soils primarily consist of upper 3 to 4 feet of dry, loose and compressible silty fine sand, overlying gravelly fine to medium coarse sand of moderate consistency with scattered rock fragments and rocks.<sup>17</sup> Due to the absence of groundwater within 50-feet and the relatively flat site topography, the potential susceptibility for onsite soil liquefaction and lateral spreading due to an earthquake is considered low.<sup>12,18</sup>

No structural fills and/or load bearing foundations and concrete slabs should be constructed bearing directly on the surface soils currently existing on the Project site.<sup>12</sup> Therefore, with implementation of **Mitigation Measure GEO-1** will ensure a less than significant impact with development of the proposed Project. The project site is not located within an area that is susceptible to landslides.<sup>10</sup> The proposed project would be required to adhere to applicable regulations ensuring building safety; a **less than significant impact with mitigation incorporated** would result from the construction and operation of the proposed onsite uses with implementation of all applicable regulations and **Mitigation Measure GEO-1.** (see Appendix E).

**GEO-1** Prior to issuance of building permits, the project applicant or its designee shall demonstrate all recommendations contained in project-specific geotechnical and/or soils and foundation evaluation report by Salem Engineering Group Inc. dated November 30, 2017 are implemented. This measure shall be implemented to the satisfaction of the City Engineer.

(d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

	X		
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*Less Than Significant with Mitigation Incorporated.* Expansive soils are fine-grained silts and clays which are subject to

<sup>16</sup> Web Soil Survey, United States Department of Agriculture, Natural Resources Conservation Service, August 10, 2017. <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm> (Accessed October 2, 2017).  
<sup>17</sup> Feasibility Study Report of Soils and Foundation Evaluations, Soils Southwest, Inc., November 12, 2003.  
<sup>18</sup> 7.5 – Lateral Spreading, Preliminary Geotechnical Engineering Investigation, Salem Engineering Group, Inc., November 30, 2017.

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swelling and contracting. The swelling and contracting is due to the amount of fine-grained clay materials present in the soils and the amount of moisture either introduced or extracted from the soils. According to the Soils Feasibility Study,<sup>13</sup> onsite soils are considered non-expansive. However, **Mitigation Measure GEO-2** will ensure impacts related to expansive soils are reduced to **less than significant with mitigation incorporated** (see Appendix E).

**GEO-2** Prior to the issuance of a grading permit, the project applicant shall provide proof to the City of Moreno Valley that supplemental laboratory testing has been conducted for expansive soils and that any identified conditions in this regard will be eliminated or reduced to safe levels by proposed grading activities and/or foundation design. This measure shall be implemented to the satisfaction of the City Engineer.

(e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
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*No Impact.* The proposed project is expected to connect to existing sewer main lines and service lines. The project would not use septic tanks or other alternative wastewater disposal system. Therefore, the development of the project would have **no impact** related to this issue. No mitigation measures are required.

**VII. GREENHOUSE GAS EMISSIONS.** Would this project?

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
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This section provides an analysis of greenhouse gas (GHG) emissions associated with the proposed project. This analysis examines the short-term construction and long-term operational impacts of the proposed project as it relates to greenhouse gases. A detailed assessment of project-related GHG emissions is included in Appendix A.

**Calculation of Greenhouse Gas Emissions**

The project’s GHG emissions during construction and mobile sources during project operation were estimated by using the CalEEMod 2016.3.1 computer model developed and maintained by the South Coast Air Quality Management District (SCAQMD). The project’s GHG emissions from onsite equipment were estimated using the emission factors found on the SCAQMD website.

The proposed project would generate a total of 198 metric tons (MT) of CO<sub>2</sub>e GHGs during construction plus 6.6 metric tons of CO<sub>2</sub>e each year amortized over a 30-year period consistent with SCAQMD methodologies. The long-term GHG emissions of the project are estimated to be 1,235 metric tons of CO<sub>2</sub>e per year (Appendix A).

For comparison, the existing emissions from the entire SCAG region are estimated to be approximately 176.79 MMT/yr of CO<sub>2</sub>e, and the existing emissions for the entire State are estimated at approximately 496.95 MMT/yr of CO<sub>2</sub>e. The carbon dioxide, methane, and nitrous oxide emissions that would be associated with the proposed project is less than a thousandth of one percent of California’s total emissions for carbon dioxide, methane, and nitrous oxide.

According to the Air Quality Analysis, the project’s short- and long-term GHG emissions would be lower than the SCAQMD’s interim Tier 3 GHG emissions “efficiency” threshold for commercial projects of 1,400 MT/yr of CO<sub>2</sub>e even assuming worst-case conditions (i.e., not accounting for the elimination of the ongoing GHG emissions from the existing service station). Since projected short- and long-term GHG emissions are well below the SCAQMD’s efficiency threshold, cumulative GHG impacts are **less than significant** and no mitigation measures are required.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	
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*Less Than Significant Impact.* The City of Moreno Valley has adopted the following goals and policies under the City’s General Plan to reduce greenhouse gas emissions relative to the proposed project:

**Policy 2.10.4** Landscaping and open spaces should be provided as an integral part of project design to enhance building design, public views, and interior spaces; provide buffers and transitions as needed; and facilitate energy and resource conservation.

**Policy 6.7.6** Require building construction to comply with the energy conservation requirements of Title 24 of the California Administrative Code.

**Policy 7.5.1** Encourage building, site design, and landscaping techniques that provide passive heating and cooling to reduce energy demand.

**Policy 7.5.4** Encourage the use of solar power and other renewable energy systems.

The project is required to meet Title 24 energy conservation requirements and all applicable Green Building Code requirements regarding energy and water conservation. With implementation of these regulatory requirements, project-related GHG emissions will be **less than significant** so the project will not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases, and no mitigation is required.

**VIII. HAZARDS AND HAZARDOUS MATERIALS.** Would the project?

a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials? | | | X |

*Less than Significant Impact.* Potentially hazardous materials such as fuels, lubricants, and solvents would be used during project construction. The proposed ARCO AM/PM gas station would utilize hazardous materials on a daily basis including gasoline, oil, solvents, and cleaning products. Two underground storage tanks (USTs) (22,000 and 25,000 gallons) are proposed on the east side of the proposed canopy along with 8 MPDs (16 total fueling stations). The transport, use, and storage of hazardous materials during construction of the project would be conducted in accordance with all applicable State and federal laws, such as the Hazardous Materials Transportation Act, Resource Conservation and Recovery Act, the California Hazardous Material Management Act, and the California Code of Regulations, Title 22. Compliance with all applicable laws and regulations during project construction would reduce the potential impact associated with the routine transport, use, storage, or disposal of hazardous materials to a **less than significant** level. No mitigation is required.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | | | X |

*Less Than Significant Impact.* A Phase I Environmental Site Assessment (ESA)<sup>19</sup> was completed for an 18.81-acre parcel which encompasses the 1.58-acre project site (see Appendix F). There is no indication if the proposed project site was once used for agricultural purposes. Dating back to 1967, the project site has been vacant and undeveloped with the exception of a structure that once stood on the southeast corner of the property (probably a water tank), but was removed sometime between 1978 and 1996.<sup>20</sup> According to the EnviroStor website<sup>21</sup> and the Phase I ESA, no hazardous material sites on or adjacent to the proposed project site were identified. The closest site is the La Jolla Elementary School located approximately 1-mile north of the project site.<sup>15</sup> The site type was a school investigation with no action required as of

<sup>19</sup> Phase I ESA, Registered Environmental Assessor, September 26, 2003.  
<sup>20</sup> Cultural Resource Assessment, Sater Arco Project, City of Moreno Valley, LSA Associates Inc., September 2017.  
<sup>21</sup> EnviroStor, Department of Toxic Substances Control, 2007.

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September 8, 2003. The gas station use will be required to comply with all applicable federal, state, and local laws and regulations regarding hazardous materials. The underground fuel storage tanks will also require permitting and monitoring by the City Fire Department and the County Department of Environmental Health as the Certified Unified Program Agency (CUPA) for Riverside County. With this compliance, the project would have a **less than significant** impact on the release of hazardous materials and no mitigation is required.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | | | X |

*Less Than Significant Impact.* The nearest school is the Landmark Middle School located at 15261 Legendary Drive approximately 0.2 mile north of the project site. The City does not have jurisdiction with respect to the location, design, or construction of school facilities. However, the City works with the Moreno Valley Unified School District concerning the design of roads and other public improvements in and around school sites, and is responsible for fire, police, and public safety concerns involving all facilities within the City, including schools. The handling of hazardous materials or emission of hazardous substances, if present, will be in accordance with a Hazardous Materials Business Emergency Plan administered by the City Fire Prevention Bureau, as applicable, in accordance with California Health and Safety Code Section 25507 and other local, state, and federal standards, ordinances, and regulations.

Compliance with Health and Safety Code Section 25507 will ensure that impacts associated with environmental and health hazards related to an accidental release of hazardous materials or emissions of hazardous substance near existing or proposed schools are **less than significant**. No mitigation is required.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result would it create a significant hazard to the public or the environment? | | | | X

*No Impact.* According to the Phase I ESA,<sup>14</sup> the proposed project site is not located on a list of hazardous material sites pursuant to Government Code Section 65962.5. Additionally, the project site is not located on the EnviroStor website.<sup>16</sup> Therefore, **no impact** related to this issue will occur and no mitigation is required.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | | | X |

*Less Than Significant Impact.* The closest airport is the March Air Reserve Base located approximately 3.5 miles west of the project site. The project site is not located within a Compatibility Zone of the March Air Reserve Base.<sup>22</sup> Because the project site lies outside the Compatibility Zones, no impact would occur related to the safety of people within an airport land use plan. No mitigation is required.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | | | | X

*No Impact.* The project does not lie within the vicinity of a private airstrip. Therefore, the project will have **no impact** related to the safety of people near a private airstrip. No mitigation is required.

g) Impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan? | | X | |

Attachment: Exhibit A - Initial Study / Mitigated Negative Declaration (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

<sup>22</sup> Map MA-1: Compatibility Map, March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan, Riverside County Airport Land Use Commission, November 13, 2017.

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*Less Than Significant with Mitigation Incorporated.* The Project site is currently vacant and unoccupied. Police, fire, and paramedic services are currently provided by the City to the entire area, including the project site. The project site will be accessible via two limited-access driveways, one on Iris Avenue and one on Oliver Street (right-in, right-out only). A detailed traffic study and site circulation study were prepared for this project to determine the appropriate vehicle stacking distances to provide onsite emergency access (see Appendix J). Due to the existing center divider on Iris Avenue and the proposed center divider on Oliver Street, **Mitigation Measure HAZ-1** will ensure a **less than significant impact with mitigation incorporated** related to emergency plans and access.

**HAZ-1** Prior to issuance of construction permit, the project applicant shall provide proof to the City of Moreno Valley that City police and fire services, as applicable, have reviewed and approved the emergency response plan.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			X	
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*No Impact.* The project in and of itself is not located within a wildfire susceptibility area, respectively. However, the Upland Game Hunting Area is located approximately 0.4 mile south of the project site and is identified as a high wildfire susceptibility area.<sup>23</sup> In the event of a fire emergency within the proposed project, the Moreno Valley Fire Department, more specifically Fire Station 91 located at 16110 Lasselle Street approximately 1.3 miles west-southwest of the project site, would provide initial fire protection services. Because of the close proximity of the Moreno Valley Fire Department and the distance from the Upland Game Hunting Area, a **less than significant** impact would occur related to wildland fire. No mitigation is required.

**IX. HYDROLOGY AND WATER QUALITY.** Would the project:

a) Violate any water quality standards or waste discharge requirements?		X		
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*Less Than Significant Impact with mitigation incorporated.* The proposed Project is located within the Santa Ana River Watershed. The project site is currently undeveloped. The Project site is currently 100 percent pervious and has been routinely disked. Construction of the project will involve site clearing, rough grading and compaction, pouring of concrete and asphalt, and construction of the structures. The project site clearing and grading phases will disturb vegetation and surface soils, potentially resulting in erosion and sedimentation. If left exposed and with no vegetative cover, the project site's bare soil could be subject to additional wind and water erosion. Since the proposed project involves over one acre of ground disturbance, it is subject to National Pollution Discharge Elimination System (NPDES) requirements and must implement a Storm Water Pollution Prevention Plan (SWPPP). Implementation of site-specific best management practices (BMPs), as established by the SWPPP, will ensure all impacts related to erosion and sedimentation from ground disturbance are less than significant (see Appendices G and H).

Under existing conditions, the project site drains in a northwesterly direction toward the Kaiser Permanente Hospital. The proposed project includes three bio-filtration systems located throughout the site. To address potential water contaminants, the project is required to comply with applicable federal, state, and local water quality regulations in accordance with the project-specific NPDES and SWPPP. Given compliance with all applicable federal, state, and local laws regulating surface water quality, and with implementation of **Mitigation measures HYD-1 through HYD-3**, the proposed project as designed will result in a **less than significant impact with mitigation incorporated** to any water quality standards or waste discharge. No mitigation is required.

**HYD-1** Prior to the issuance of a grading permit, the project applicant shall file and obtain a Notice of Intent (NOI) with the Regional Water Quality Control Board (RWQCB) in order to be in compliance with the State NPDES General Construction Storm Water Permit for discharge of surface runoff associated with

<sup>23</sup> Figure S-11 "Wildfire Susceptibility," Riverside County General Plan, December 15, 2015.

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construction activities. Evidence that this has been obtained (i.e., a copy of the Waste Discharger's Identification Number) shall be submitted to the City for coverage under the NPDES General Construction Permit. The NOI shall address the potential for an extended and discontinuous construction period based on funding availability.

**HYD-2**

Prior to the issuance of a grading permit, the project applicant shall prepare a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP shall include a surface water control plan and erosion control plan citing specific measures to control on-site and off-site erosion during the entire grading and construction period. In addition, the SWPPP shall emphasize structural and nonstructural Best Management Practices (BMPs) to control sediment and non-visible discharges from the site. The SWPPP will include inspection forms for routine monitoring of the site during construction phase to ensure NPDES compliance and additional BMPs and erosion control measures will be documented in the SWPPP and utilized if necessary. The SWPPP shall address the potential for an extended and discontinuous construction period based on funding availability. The SWPPP will be kept on site for the entire duration of project construction and will be available to the local RWQCB for inspection at any time. BMPs included in the SWPPP may include the following:

- Sediment discharges from the site may be controlled by the following: sandbags, silt fences, straw wattles and temporary basins (if deemed necessary), and other discharge control devices. The construction and condition of the BMPs will be periodically inspected during construction and repairs will be made when necessary as required by the SWPPP.
- Materials that have the potential to contribute to non-visible pollutants to storm water must not be placed in drainage ways and must be contained, elevated, and placed in temporary storage containment areas.
- All loose piles of soil, silt, clay, sand, debris, and other earthen material shall be protected in a reasonable manner to eliminate any discharge from the site. Stockpiles will be surrounded by silt fences and covered with plastic tarps.
- In addition, the construction contractor shall be responsible for performing and documenting the application of BMPs identified in the SWPPP. Weekly inspections shall be performed on sandbag barriers and other sediment control measures called for in the SWPPP. Monthly reports and inspection logs shall be maintained by the Contractor and reviewed by the City and the representatives of the State Water Resources Control Board. In the event that it is not feasible to implement specific BMPs, the City can make a determination that other BMPs will provide equivalent or superior treatment either on or off site.

**HYD-3**

Prior to the issuance of a grading permit, the applicant shall submit a Water Quality Management Plan (WQMP) to the City, for review and approval. The project shall implement project design features identified in the Water Quality Management Plan. This measure shall be implemented to the satisfaction of the City Public Works Department.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

			X	
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*Less Than Significant Impact.* Groundwater in the project area is managed and distributed by the Eastern Municipal Water District (EMWD). The EMWD is required by state law (Urban Water Planning Management Act or AB 797 in



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1983) to prepare an Urban Water Management Plan (UWMP) to identify its sources/supplies of potable water, its historical and projected consumption by its customers, and evaluate various mandated scenarios for water shortages (e.g., single dry year, and multiple dry years) to assure its customers and the state that it will have adequate water supplies now and in the future, even under expected drought conditions.

The 2015 UWMP concluded the City could supply water to its customers until at least 2040 under single dry and multiple drought year scenarios. The project does not involve a General Plan Amendment or Zone Change, so the City in its UWMP has accounted for future water consumption of existing and planned land uses, including residential and commercial uses such as the proposed project.

The project is also subject to NPDES requirements and will be designed and constructed to ensure compliance with the water quality standards and waste discharge requirements. Compliance with these regulations, along with all City water supply requirements, will ensure there will be no significant impacts related to groundwater supply or recharge resulting from the proposed project. A **less than significant** impact would occur related to this issue and no mitigation is required.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? | | | X |

*Less Than Significant Impact.* Development of the proposed project (buildings and pavement) will alter the amount of existing impervious surface area and the amount of generated runoff. Currently, runoff generally drains from the southeast to the northwest. No streams, rivers, or other drainage features are located on site. The proposed project would implement structures and impervious surfaces that could potentially alter the current drainage pattern. Pursuant to the requirements of the NPDES permit, as discussed previously, excess flows and sediment would be captured by BMPs identified in the SWPPP and WQMP. With implementation of required BMPs, the proposed project is not expected to result in substantial erosion or siltation. Impacts would be **less than significant** and no mitigation is required.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or surface runoff in a manner which would result in flooding on- or off site? | | | | X

*No Impact.* No streams, rivers, or other drainage features are located on site. Pursuant to the requirements of the NPDES permit, as discussed previously, excess flows and sediment would be captured by BMPs identified in the SWPPP and WQMP. Since the proposed project not increase storm water flows, **no impact** related to flooding would occur. No mitigation is warranted.

e) Create or contribute runoff which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | | | X |

*Less Than Significant Impact.* The existing site slopes down from the southeast to the northwest toward the Moreno Valley Hospital. The project proposes three bio-filtration systems located throughout the project site and offsite discharge will be routed to Oliver Street. The nature of the proposed development would not generate flows previously unaccounted for in drainage plans. The project will incorporate BMPs that will moderate flows into existing storm drain systems. As the project would maintain drainage patterns and flow rates comparable to the existing condition. A **less than significant** impact would occur with the development of the proposed project, and no mitigation is warranted.

f) Otherwise substantially degrade water quality? | | X | |

*Less Than Significant Impact with Mitigation Incorporated.* The proposed project is in a developed urban setting and through adherence to City water quality regulations and **Mitigation Measures HYD-1 through HYD-3** would not

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substantially degrade water quality. A **less than significant** impact would occur with implementation of the recommended mitigation measures. No additional mitigation measures are required.

g) Place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
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*No Impact.* The Project does not include the construction of housing. There will be **no impact** caused by this project, as it will not place housing within a 100-year flood hazard area (see Figure 10). No mitigation is required.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
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*No Impact.* The project site is not located within a 100-year flood hazard area and does not include the development of housing (see Figure 10).<sup>24</sup> Therefore, the project will not place a structure within a 100-year flood hazard area that would impede or redirect flood flows. **No impact** would occur and no mitigation is required.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
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*No Impact.* Two locations of concern exist within the City of Moreno Valley: Poorman Reservoir (Pigeon Pass Reservoir) and Lake Perris. Dam failure at Portman’s Reservoir could result in extensive flooding along the downstream watercourse. Dam failure at Lake Perris would only affect a very small area south of Nandina Avenue along the Perris Valley Storm Drain and the Mystic Lake area in the southeast corner of the City.<sup>25</sup> According to the City’s General Plan,<sup>20</sup> the project site will not expose people or structures to a risk of loss, injury or death involving the failure of a levee or dam. **No impact** would occur and no mitigation is required.

j) Inundation by seiche, tsunami, or mudflow?				X
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*No Impact.* The Project site is located approximately 2-miles north of Lake Perris. At this distance, the Project site is not considered susceptible to seiche-related hazards originating at Lake Parris. Additionally, the Upland Game Hunting Area is located between the Project site and Lake Perris, initially creating a buffer from the Project site and the waterbody. The Project site and Lake Perris have an elevation of approximately 1560 feet above mean sea level (amsl) while the Upland Game Hunting Area hills are approximately 1813 feet amsl which approximately 253 feet above the Project site. The Project site is located approximately 42-miles northeast of the Pacific Ocean and is approximately 1,560 feet amsl. As such, the project is not subject to tsunami hazards and **no impact** would occur.

**X. LAND USE AND PLANNING.** Would the project:

a) Physically divide an established community?				X
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*No Impact.* The Project proposes the development of an ARCO gas station on land designated as commercial. To the north and west is vacant land while residential communities are located to the south and east. The project would not introduce features such as highways or transit lines that would divide an established community. **No impact** regarding dividing an established neighborhood would occur. No mitigation is required.

b) Conflict with an applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
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<sup>24</sup> Figure 6-4 “Flood Hazards,” Chapter 6-Safety, City of Moreno Valley General Plan, July 11, 2006.  
<sup>25</sup> Chapter 6-Safety, City of Moreno Valley General Plan, July 11, 2006.

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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*No Impact.* The Project proposed the development of an ARCO gas station. The General Plan designates the site as Commercial (C) and the City’s Zoning Map designate the project as Neighborhood Commercial (NC). Therefore, the proposed Project is consistent with the general plan land use and the City’s zoning map. Therefore, the development of the proposed project would have **no impact** on any applicable land use plan, policy, or regulation. No mitigation is required.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?			X	
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*Less Than Significant Impact.* The proposed Project is located within the Multiple Species Habitat Conservation Plan (MSHCP) City of Moreno Valley Area Plan; however, the Project is not located in a criteria cell and is not adjacent to Public/Quasi-Public or Conservation Land. The Project is located within the MSHCP survey area for burrowing owl. Because the project is not located within a Criteria Cell, it is not subject to possible land conservation requirement under the MSHCP. Therefore, development of the Project would have a **less than significant** impact related to a habitat conservation plan and no mitigation is required.

**XI. MINERAL RESOURCES.** Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

*No Impact.* The Project site is vacant and undeveloped. The mineral resources known to occur within the City of Moreno Valley include sand, gravel and rock which is used to make concrete and as road base.<sup>26</sup> According to the City’s General Plan, one recently active sand and gravel quarry is known to occur within the City’s sphere of influence: the Jack Rabbit Canyon Quarry.<sup>22</sup> The Jack Rabbit Canyon Quarry was inactive as of 2001 and is located in a drainage course at the northeast corner of Jack Rabbit Trail and Gilman Springs Road approximately 6.5 miles west of the Project site. No regionally or statewide significant mineral resources are located within the planning area.<sup>27</sup> Due to the absence of mineral resources, **no impact** would occur related to the project and no mitigation measures are required.

**XII. NOISE.** Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		
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*Less than Significant with Mitigation Incorporated*

**Short-Term Noise**

LSA Associates Inc. (LSA) prepared a detailed assessment of noise impacts for the proposed project based on the project development characteristics (LSA 2017) (Appendix I).<sup>28</sup> The assessment indicates that short-term noise impacts would be associated with grading and erecting of building on-site during construction of the proposed project. Noise associated with the use of construction equipment is estimated to be between 55 and 85 dBA L<sub>max</sub> at a distance of 50 feet from the active construction area for the site preparation phase. The maximum noise level generated by each scraper and dozer is assumed to be approximately 85 dBA L<sub>max</sub> at 50 feet from heavy equipment. Each doubling of the sound sources with equal strength increases the noise level by 3dBA. Assuming that each piece of construction equipment operates at same

<sup>26</sup> Chapter 7 – Conservation, 7.8 Mineral Resources, City of Moreno Valley General Plan, July 11, 2006.  
<sup>27</sup> Chapter 5.14 – Mineral Resources, City of Moreno Valley General Plan Final Program EIR, July 2006.  
<sup>28</sup> Noise and Vibration Impact Analysis Memorandum, AM/PM Gasoline Service Station, LSA Associates, Inc., November, 2017.

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distance from the other equipment, the worst-case combined noise level during construction would be 84 dBA  $L_{max}$  at 50 feet from active construction area. The existing traffic noise levels without the project is based on a usage factor of 40 percent, the worst-case combined noise level during construction would be 84 dBA  $L_{eq}$  at a distance of 50 feet from the active construction area. It should be noted the construction hours will be limited to those set forth in the City's Municipal Code Section 8.14.040E. The Municipal Code limits hours of construction to 7 a.m. to 7 p.m. Monday through Friday, excluding holidays and from 8 a.m. to 4 p.m. on Saturday, unless written approval is obtained from the city building official or city engineer.

According to the Noise Impact Analysis, the nearest sensitive receptors are single-family residences located approximately 85 feet east of the project site across Oliver Street and single-family residences located approximately 150 feet south of the project site across Iris Avenue. The residences to the east are bordered by a concrete wall, reducing potential noise exposure. In addition, Kaiser Permanente, a medical center, is located approximately 700 feet to the northwest, and Landmark Middle School is approximately a quarter mile to the north on Oliver Street.

The nearest sensitive receptors that may be subject to construction noise include the single-family residences located approximately 85 feet east of the project site across Oliver Street. At 85 feet, noise levels would attenuate approximately 5 dBA from the increased distance compared to the noise level measured at 50 feet from the active construction area. In addition to distance damping, for a conservative analysis, the current concrete fence bordering the residents to the east may reduce noise exposure by 5 to 10 dBA. Therefore, the closest sensitive receptors may be subject to short-term construction noise reaching 76 dBA  $L_{max}$  when construction occurs at the project site boundary. However, when LSA conducted ambient noise monitoring for the project on-site at the residences to the east, LSA measured an  $L_{max}$  of 76.9 dBA. Therefore, the closest sensitive receptor would not be exposed to a temporary increase in noise levels. In addition, construction noise is permitted by the City between the hours of 7 a.m. and 7 p.m. Monday through Friday, excluding holidays and from 8 a.m. to 4 p.m. on Saturday, unless written approval is obtained from the city building official or city engineer. However mitigation measures should be implemented to reduce impacts to the extent feasible.

Construction noise would result in a temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. With the implementation of **Mitigation Measure NOI-1**, short-term construction noise impacts would be reduced to **less than significant** levels. No additional mitigation is warranted.

**NOI-1** Prior to the issuance of a grading permit, the project applicant shall incorporate the following standards as notes on the grading plan cover sheet to minimize construction noise to the greatest extent practical:

- Equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.
- Place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the active project site.
- Locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active project site during all project construction.
- Prohibit extended idling time of internal combustion engines.
- All noise producing construction activities shall be limited to the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday, excluding holidays and from 8 a.m. to 4 p.m. on Saturday, unless written approval is obtained from the city building official or city engineer.
- Designate a "disturbance coordinator" who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler) and would determine and implement reasonable measures warranted to correct the problem.

<b>Issues and Supporting Information</b>	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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*Less than Significant Impact*

**Long-Term Noise**

**Traffic Noise.** The proposed project would include a convenience store, fueling stations, and a car wash in a developed area of the City. Operational noise can be categorized as mobile source noise and stationary source noise. Mobile source noise would be attributable to the additional trips that would be a result of the proposed project. Stationary source noise includes noise generated by the proposed project, such as parking lot activities and the car wash.

Tables F and G show a minor change in the traffic noise levels associated with the implementation of the proposed project. The largest increase in traffic-related noise as a result of the project would occur on the east side of the project site on Oliver Street between Driveway 2 and Iris Avenue. This increase in traffic would occur due to the addition of an AM/PM convenience store, eight fueling stations, and a drive through car wash adjacent to residences. Oliver Street could result in an up to 1.2 dBA increase over existing conditions. This noise level would not exceed the 3 dBA increase considered to be perceptible by the human ear in an outdoor environment. The resulting noise level along Oliver Street would be approximately 58.6 dBA CNEL, which would be lower than existing noise associated with other surrounding roadways (i.e. Iris Avenue) and would be in the normally acceptable range for residential and commercial land uses. Noise along the southern border of the project site adjacent to Iris Avenue would result in an increase of 0.2 dBA from baseline conditions. This noise level increase is less than the 3 dBA increase considered to be perceptible by the human ear in an outdoor environment and the resulting noise level would be 68.3 dBA CNEL, which would remain conditionally acceptable for residential land uses and normally acceptable for commercial land uses. Therefore, no significant traffic noise impacts would occur for off-site land uses. As a result, no mitigation is required.

**Parking Lot Activity.** Parking lot noise, including engine sounds, car doors slamming, car alarms, loud music, and people conversing, would occur as a result of the proposed project at the project site and on nearby streets. Typical parking lot activities, such as people conversing or doors slamming, generates approximately 60 dBA to 70 dBA  $L_{max}$  at 50 feet.

The nearest sensitive receptors that may be affected by parking lot activity are the single-family residences located approximately 85 feet east of the project boundary. Based on current project plans, the nearest proposed parking and fueling station would be located approximately 120 feet from the existing sensitive receptors. Therefore, adjusted for a distance of 120 feet, the nearest sensitive receptors would be exposed to a noise level of 52 to 62 dBA  $L_{max}$  generated by parking lot activities. This noise level could exceed the City’s maximum sound level at residential land uses of 60 dBA during the daytime (8:00 a.m. to 10:00 p.m.) and 55 dBA during the nighttime (10:00 p.m. to 8:00 a.m.). However, LSA conducted ambient noise monitoring for the project at location ST-3, located adjacent to the residences east of the project site, an  $L_{max}$  of 76.9 dBA was measured. Therefore, the closest sensitive receptor would not be exposed to a maximum level in excess of the existing noise environment. In addition, due to the intermittent nature of parking activity, when averaged over a 24-hour period, this noise level would not cause an increase in noise levels of more than 3 dBA. Also, the nearest residential receptors would be surrounded by a solid concrete fence, acting also as a noise barrier. Based on LSA’s previous experience and calculations, this concrete fence may reduce noise levels by approximately 5 to 10 dBA. Therefore, parking lot noise associated with the proposed project would not be expected to substantially increase noise levels, and therefore, the proposed project would not result in significant parking lot noise.

**Table F: Existing Traffic Noise Levels Without and With Project (2017)**

Roadway Segment	Existing Traffic Volumes (2017)											
	Without Project					With Project						
	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane	ADT	Increase in ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane	Increase from Baseline Conditions
Oliver Street - John F. Kennedy Drive to Project Driveway 2	2,700	< 50	< 50	< 50	57.4	2,900	200	< 50	< 50	< 50	57.7	0.3
Oliver Street - Driveway 2 to Iris Avenue	2,700	< 50	< 50	< 50	57.4	3,500	800	< 50	< 50	56	58.6	1.2
Iris Avenue - Nason Street to Kaiser Hospital Entrance	20,300	75	146	307	68.9	21,100	800	77	150	315	69.1	0.2
Iris Avenue - Kaiser Hospital Entrance to Project Driveway 1	17,000	69	131	274	68.1	17,800	800	70	135	282	68.3	0.2
Iris Avenue - Project Driveway 1 to Oliver Street	17,000	69	131	274	68.1	17,800	800	70	135	282	68.3	0.2
Iris Avenue - Oliver Street to Via Del Lago	14,200	63	117	243	67.3	14,900	700	65	121	251	67.5	0.2

Source: LSA, November 2017.  
 Notes: Traffic noise within 50 feet of the roadway centerline should be evaluated with site-specific information.  
 Shaded cells indicate road segments directly adjacent to the project.  
 ADT rounded to nearest hundred.  
 ADT = average daily traffic  
 CNEL = Community Noise Equivalent Level  
 dBA = A-weighted decibels

**Table G: Future Traffic Noise Levels Without and With Project (2022)**

Roadway Segment	Opening Year Traffic Volumes (2022)											
	Without Project					With Project						
	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane	ADT	Increase in ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane	Increase from Baseline Conditions
Oliver Street - John F. Kennedy Drive to Project Driveway 2	3,000	< 50	< 50	< 50	57.9	3,200	200	< 50	< 50	< 50	58.2	0.3
Oliver Street - Driveway 2 to Iris Avenue	3,000	< 50	< 50	< 50	57.9	3,800	800	< 50	< 50	58	58.9	1.0
Iris Avenue - Nason Street to Kaiser Hospital Entrance	22,400	79	156	328	69.3	23,200	800	80	159	336	69.5	0.2
Iris Avenue - Kaiser Hospital Entrance to Project Driveway 1	18,800	72	139	292	68.6	19,600	800	74	143	300	68.7	0.1
Iris Avenue - Project Driveway 1 to Oliver Street	18,800	72	139	292	68.6	19,600	800	74	143	300	68.7	0.1
Iris Avenue - Oliver Street to Via Del Lago	15,600	66	124	259	67.7	16,400	800	67	128	267	68.0	0.3

Source: LSA, November 2017.  
 Note: Traffic noise within 50 feet of the roadway centerline should be evaluated with site-specific information.  
 Shaded cells indicate road segments directly adjacent to the project.  
 ADT rounded to nearest hundred.  
 ADT = average daily traffic  
 CNEL = Community Noise Equivalent Level  
 dBA = A-weighted decibels

Attachment: Exhibit A - Initial Study / Mitigated Negative Declaration (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

<b>Issues and Supporting Information</b>	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

**Car Wash Noise**

The proposed car wash is located near the northern border of the project site. Typical car wash noises include the sprayers and blowers within the washing building and the vacuum stations located outside. Car wash noise levels near the exit of the blower area could reach up to 101 dBA  $L_{max}$ . Shop vacuum cleaners can produce noise levels approximately 65 dBA  $L_{max}$ . The car wash equipment is enclosed providing additional noise attenuation barriers. The car wash exit would be located approximately 350 feet from the property line of the closest sensitive receptors located to the south across Iris Avenue and to the east across Oliver Street. At this distance, the combined car wash noise, including both the car wash and the vacuum noise, would be approximately 64 dBA  $L_{max}$  at the nearest receiving sensitive receptor. This noise exposure would exceed the City’s maximum sound level at residential land uses of 60 dBA during the daytime (8:00 a.m. to 10:00 p.m.). However, the closest sensitive receptors to the car wash have either a bordering concrete wall and/or the property is raised in elevation when compared to the car wash exit. The existing noise barrier in place would reduce noise by approximately 5-10 dBA, resulting in a 54-59 dBA noise exposure from the car wash which is less than the City’s 60 dBA daytime standard. In addition, LSA’s traffic study models existing noise conditions to be 68.1 dBA along Iris Avenue between the car wash exit and the adjacent receptors. The resulting noise level from the car wash would be lower than the existing noise associated with traffic on Iris Avenue. The addition of a noise level of up to 59 dBA to the 68.1 dBA CNEL conditions would not result in a substantial increase in noise. The resulting noise level would not exceed the 3 dBA increase considered to be perceptible by the human ear in an outdoor environment. The car wash would not operate during nighttime hours and therefore would not exceed the nighttime standard of 55 dBA (10:00 p.m. to 8:00 a.m.). In addition, because the drying cycle is a small part of the overall wash, the dryers along with the vacuums would be anticipated to operate no more than 30 minutes in any hour. The calculated hourly  $L_{eq}$  from the car wash given a usage factor of 0.5 would be approximately 63 dBA during operating hours before any noise reduction, and range from 53-58 dBA with sound attenuation from the noise barrier. Therefore, the car wash would be operating within existing noise conditions. Therefore, impacts associated with noise from the car wash are **less than significant** and no mitigation is required.

**Conclusions**

Overall, with implementation of **Mitigation Measure NOI-1**, short-term construction noise impacts would be rendered **less than significant with mitigation incorporated**. No additional mitigation measures are warranted for short term, long term, or cumulative impacts. Long-term noise impacts would not exceed existing ambient noise standards at nearby sensitive receptors; therefore, long term impacts would be considered **less than significant** with no mitigation required.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | | | X |

*Less Than Significant Impact.* Vibration refers to groundborne noise and perceptible motion. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors, where the motion may be discernible, but without the effects associated with the shaking of a building, there is a less adverse reaction. According to Federal Transit Administration (FTA) guidelines, vibration levels up to 102 VdB will not result in structural damage to buildings. Table H shows the vibration level for equipment that could potentially be used during construction. Table I shows the human response to different levels of groundborne noise and vibration.

**Table H: Vibration Source Amplitudes for Construction Equipment**

Equipment	Reference PPV/ $L_v$ at 25 ft	
	PPV (in/sec)	$L_v$ (VdB)
Large Bulldozer	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79

Sources: Transit Noise and Vibration Impact Assessment (FTA 2006).

Attachment: Exhibit A - Initial Study / Mitigated Negative Declaration (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

<b>Issues and Supporting Information</b>	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

ft = feet  
 L<sub>v</sub> = velocity in decibels  
 VdB = vibration velocity decibels

in/sec = inches per second  
 PPV = peak particle velocity

**Table I: Human Response to Groundborne Noise and Vibration**

Vibration Velocity Level	Noise Level		Human Response
	Low Frequency <sup>1</sup>	Mid Frequency <sup>2</sup>	
65 VdB	25 dBA	40 dBA	Approximate threshold of perception for many humans. Low-frequency sound usually inaudible; mid-frequency sound excessive for quiet sleeping areas.
75 VdB	35 dBA	50 dBA	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find transit vibration at this level unacceptable. Low-frequency noise acceptable for sleeping areas; mid-frequency noise annoying in most quiet occupied areas.
85 VdB	45 dBA	60 dBA	Vibration acceptable only if there are an infrequent number of events per day. Low-frequency noise unacceptable for sleeping areas; mid-frequency noise unacceptable even for infrequent events with institutional land uses such as schools and churches.

Source: *Transit Noise and Vibration Impact Assessment* (FTA 2006).

<sup>1</sup> Approximate noise level when vibration spectrum peak is near 30 Hz.

<sup>2</sup> Approximate noise level when vibration spectrum peak is near 60 Hz.

dBA = A-weighted decibels

Hz = Hertz

VdB = vibration velocity decibels

### Short-Term Vibration

During site grading, vibration may be felt at the residences to the east of the project across Oliver Street. Table J lists the projected vibration level from various construction equipment expected to be used on the project site to the nearest buildings in the project vicinity. For typical construction activity, the equipment with the highest vibration generation potential is the large bulldozer, which would generate 87 VdB at 25-feet. The nearest sensitive receptors to the project would be approximately 85 feet from the project boundary to the east. Based on the distance attenuation, the closest residences would experience vibration levels of up to 71 Vdb (0.014 PPV [in/sec]) This vibration level at the closest residential structures from construction equipment would not exceed FTA threshold of 94 VdB (0.2 in/sec PPV) for building damage. This level is also below the FTA's "barely perceptible" human response criteria of 0.04 PPV for transient sources of vibration events. Therefore, ground-borne vibration impacts from project-related construction activities would be considered **less than significant**. No mitigation is warranted.

**Table J: Summary of Construction Equipment and Activity Vibration**

Land Use	Direction	Equipment/ Activity	Reference Vibration Level (VdB) at 25 feet	Reference Vibration Level (PPV) at 25 feet	Distance (feet)	Maximum Vibration Level (VdB)	Maximum Vibration Level (PPV)
Residential	North/ West	Large Bulldozers	87	0.089	10	99	0.352
		Loaded Trucks	86	0.076	10	98	0.300
Church	North	Large Bulldozers	87	0.089	25	94	0.191
		Loaded Trucks	86	0.076	25	93	0.164
Office	West	Large Bulldozers	87	0.089	65	75	0.021
		Loaded Trucks	86	0.076	65	73	0.018



Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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Source: Compiled by LSA (2017).

Note: The FTA-recommended building damage threshold is 0.2 PPV (in/sec) or approximately 94 VdB at the receiving residential/church structure and 0.3 PPV (in/sec) or approximately 98 VdB at the receiving commercial structure.

ft = foot/feet

in/sec = inch/inches per second

FTA = Federal Transit Administration

PPV = peak particle velocity

VdB = vibration velocity decibels

**Long-Term Vibration**

The streets surrounding the project area are paved, smooth, and unlikely to cause significant ground-borne vibration. In addition, the rubber tires and suspension systems of buses and other on-road vehicles make it unusual for on-road vehicles to cause ground-borne noise or vibration problems. It is, therefore, assumed that no such vehicular vibration impacts would occur and, therefore, no vibration impact analysis of on-road vehicles is necessary. Additionally, once constructed, the proposed project would not contain uses that would generate ground-borne vibration. Therefore, a less than significant impact would occur regarding long-term vibration, and no mitigation is required.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | | | X |

*Less Than Significant Impact.* Please refer to Checklist Response XII.a. A **less than significant** impact related to increase in ambient noise levels would occur. No mitigation is required.

d) A substantially temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | | | X |

*Less Than Significant Impact.* Please refer to Checklist Response XII.a. A **less than significant** impact related to increase in ambient noise levels would occur. No mitigation is required.

e) For a project located within an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | | | | X

*No Impact.* The closest airport to the proposed project site is March Air Reserve Base (RIV) located approximately 3.5 miles west of the project site. Aircraft noise is rarely audible at the project site; and no portion of the site lies within the 55 dBA CNEL noise contours of the airport. Therefore, **no impact** would occur with the exposure of people residing or working within the project boundaries. No mitigation is required.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | | | | X

*No Impact.* Please refer to Checklist Response XII.e. **No impact** would occur and no mitigation is required.

**XIII. POPULATION AND HOUSING.** Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | | | X |

*Less than Significant Impact.* During the construction process, the Project would create short-term construction jobs and

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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are anticipated to be filled primarily by workers who reside in the project vicinity. The proposed Project would generate a maximum of 12 employees.<sup>29</sup> New employment opportunities are projected to be filled by local residents who reside in the City of Moreno Valley, so a large influx of new residents to the City due to the proposed project is not expected.

Due to the construction of an ARCO AM/PM gas station opposed to residential units, the proposed project will not have a direct effect on population growth within the City. The proposed project would generate employment opportunities, but are not expected to induce substantial growth in the City or region beyond the growth forecasts detailed in the City’s General Plan or SCAG’s regional growth forecasts since the proposed project is consistent with the existing land use and zoning designations (i.e., Commercial). Therefore, a **less than significant** impact related to this issue. No mitigation is required.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | | | | X

*No Impact.* The proposed project is currently vacant and does not contain any residences that would be removed as a result of the proposed Project. Therefore, the Project would not displace a substantial number of existing housing or residences so as to necessitate the construction of replacement of housing. **No impact** would occur with respect to the displacement of existing housing. No mitigation is required.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | | | | X

*No Impact.* Please refer to Response Question XIII.b. **No impact** related to this issue would occur as a result of the Project and no mitigation is required.

**XIV. PUBLIC SERVICES.** Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a) Fire protection? | | | X |

*Less Than Significant Impact.* The proposed Project would place an ARCO AM/PM gas station on undeveloped land. The City of Moreno Valley Fire Service contracts with the Riverside County Fire Department Services. Fire Station 91 (College Park) is the closest station to the site located at 16110 Lasselle Street approximately 1.4 miles southwest. Fire Station 91 houses one 75-foot ladder truck, one second line engine and a breathing support. Because the Project proposes a gas station, fire services may be needed at a quick response time. According to the City’s General Plan, a five-minute response time is considered to be the maximum time standard for serving urban and suburban uses.<sup>30</sup> However, the need for fire services to the Project site is considered unlikely. Considering this, the project will have a **less than significant** impact on fire protection. No mitigation is required.

b) Police protection? | | | X |

*Less Than Significant Impact.* The Project includes the development of an ARCO AM/PM gasoline station on the northwest corner of Iris Avenue and Oliver Street. Police services are provided by the Moreno Valley Police Department (MVPD) which has 162 sworn officers and a current officer to population ration of 0.9 officers per 1,000 populations. The nearest police station is located at 22850 Calle San Juan De Los Lagos approximately 4.8 miles west northwest of

<sup>29</sup> Personal email with Leslie Burnside.  
<sup>30</sup> Chapter 6 “Safety,” City of Moreno Valley General Plan, July 11, 2006.

Attachment: Exhibit A - Initial Study / Mitigated Negative Declaration (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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the project site. The Project could introduce a maximum of 12 new employees to the City, which would incrementally increase the need for police. Therefore, development of the project would have a **less than significant** impact on police protection. No mitigation is required.

c) Schools? | | | | X

*No Impact.* The Project proposed the development of an ARCO AM/PM gas station as it would not generate school aged children. Therefore, **no impact** would occur related to this issue and no mitigation is required.

d) Parks? | | | | X

*No Impact.* As mentioned above, the proposed Project would not generate additional residences into the City of Moreno Valley. Because the project does not include housing and would not generate additional residences into the City, **no impact** would occur in relation to the development of the project. No mitigation is warranted.

e) Other public facilities? | | | X |

*Less Than Significant Impact.* The proposed Project would not induce population growth within the City of Moreno Valley. The project could introduce a maximum of 12 new employees into the City. Because the Project would not introduce a substantial amount of population into the City of Moreno Valley, development of the Project would have a **less than significant** impact. No mitigation is required.

**XV. RECREATION.**

a) Would the project increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | | | X |

*Less than Significant Impact.* The proposed project includes the construction of an ARCO AM/PM gas station on the northwest corner of Iris Avenue and Oliver Street. The project would generate a maximum of 12 employees and may contribute to residents working and living in the City of Moreno Valley. The closest parks to the proposed project are the Fairway Park and Celebration Park approximately 0.4 mile north of the Project site. The Project would be required to pay development fees to offset the impact to parks and recreation. Therefore, with the development of the proposed Project, it will not create a significant increase in the use of existing neighborhood, regional parks, or other recreational facilities, with a **less than significant** impact related to this issue. No mitigation is required.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | | | | X

*No Impact.* The proposed project does not include any recreational facilities or parkland. Furthermore, the project does not include any residential development and will not directly increase population associated with the proposed Project. The Project will also be required to pay applicable development fees to offset the impact to parks and recreation. Therefore, the construction or expansion of recreational facilities in the absence of a population increase is not necessary. **No impact** would occur regarding this issue. No mitigation is required.

**XVI. TRANSPORTATION/TRAFFIC.** Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and | | | X |

<b>Issues and Supporting Information</b>	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Access to the gas station on the project site would be provided via two street accesses, one on Iris Avenue and the other on Oliver Street. As detailed in Table K, the proposed project is expected to generate 1,111 daily trips with 88 trips occurring during the a.m. peak hour and 101 trips occurring during the p.m. peak hour (see Appendix J).

**Table K: Project Trip Generation**

Land Use	Units	A.M. Peak Hour			P.M. Peak Hour			Daily Trips
		In	Out	Total	In	Out	Total	
Gasoline Station with Convenience Market and Car Wash	16 Fueling Stations							
Trip Generation		45	43	88	52	49	101	1,111

Source: Table 5-A – Traffic Impact Analysis, LSA, July 2018 (Appendix J).

The study intersections were identified via the Scoping Agreement process and, where with the addition of peak hour project trips to a Collector Street or higher classification, project traffic has the potential to cause a significant impact. The study intersections are listed as follows:<sup>31</sup>

- Nason Street/Iris Avenue;
- Kaiser Hospital Entrance/Iris Avenue;
- Project Driveway 1/Iris Avenue;
- Oliver Street/John F. Kennedy Drive;
- Oliver Street/Project Driveway 2;
- Oliver Street/Iris Avenue; and
- Via Del Lago/Iris Avenue.

The roadway segments are listed as follows:

- Oliver Street, from John F. Kennedy Drive to Project Driveway 2;
- Oliver Street, from Project Driveway 2 to Iris Avenue;
- Iris Avenue, from Nason Street to Kaiser Hospital Entrance;
- Iris Avenue, from Kaiser Hospital Entrance to Project Driveway 1;
- Iris Avenue, from Project Driveway 1 to Oliver Street; and
- Iris Avenue, from Oliver Street to Via Del Lago.

Study intersections analyzed are under the jurisdiction of the City of Moreno Valley. The City uses both LOS C and LOS D as its minimum level of service criteria for intersections and roadway segments. As stated in the City’s General Plan and TIA Guidelines, LOS D is applicable to intersections and roadway segments adjacent to employment generated land uses while LOS C is applicable to all other areas. As detailed in Tables L and M, all intersections are anticipated to operate at an LOS D or better. Additionally, all roadway intersections are anticipated to operate at a satisfactory level. Therefore, a less than significant impact related to this issue would occur, and no mitigation is required.

**Table L: Existing (2017) Intersection Levels of Service**

Intersection	Without Project		With Project		Significant Impact?
	A.M Peak Hour	P.M Peak Hour	A.M Peak Hour	P.M Peak Hour	
1. Nason Street/Iris Avenue	C	C	C	C	No

<sup>31</sup> Traffic Impact Analysis, AM/PM Gasoline Service Station, LSA, July 2018. (Appendix J)

<b>Issues and Supporting Information</b>	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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2. Kaiser Hospital Entrance/Iris Avenue	A	A	A	A	No
3. Project Driveway 1/Iris Avenue	N/A	N/A	A	A	No
4. Oliver Street/John F. Kennedy Drive	B	A	B	A	No
5. Oliver Street/Project Driveway 2	N/A	N/A	A	A	No
6. Oliver Street/Iris Avenue	C	B	D	C	No
7. Via Del Lago/Iris Avenue – Moreno Beach Drive	C	C	C	C	No

Source: Table 7-A, Traffic Impact Analysis, LSA, July 2018 (AppendixJI).

**Table M: Opening Year (2022) Intersection Levels of Service**

Intersection	Without Project		With Project		Significant Impact?
	A.M Peak Hour	P.M Peak Hour	A.M Peak Hour	P.M Peak Hour	
1. Nason Street/Iris Avenue	C	C	C	C	No
2. Kaiser Hospital Entrance/Iris Avenue	A	A	A	A	No
3. Project Driveway 1/Iris Avenue	N/A	N/A	A	A	No
4. Oliver Street/John F. Kennedy Drive	B	A	B	A	No
5. Oliver Street/Project Driveway 2	N/A	N/A	A	A	No
6. Oliver Street/Iris Avenue	C	B	D	C	No
7. Via Del Lago/Iris Avenue – Moreno Beach Drive	C	C	C	C	No

Source: Table 7-A, Traffic Impact Analysis, LSA, July 2018 (Appendix J).

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

			X	
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*Less Than Significant Impact.* The 2010 Highway Capacity Manual (HCM 2010) establishes levels of service A through F for intersections. The project trip generation analysis (LSA, Appendix J) indicated the project would generate approximately 1,111 daily trips. The cumulative projects are expected to generate 62,227 net daily trips, with 4,066 net trips in the a.m. peak hour, and 4,934 net trips in the p.m. peak hour. Tables H and I summarize the existing and Opening Year (2022) intersection levels of service and with improvements and show that all study area intersections are projected to operate at satisfactory level of service. Because all intersections and roadway segments are to operate at LOS D or better, a **less than significant** impact related to this issue would occur. No mitigation is required.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?

				X
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*No Impact.* The nearest airport is the March Air Reserve Base located approximately 3.5 miles west of the project site. The proposed gas station is consistent with the City’s General Plan Land Use designation and the Specific Plan. The proposed project is outside the Airport Influence Area. The project does not include uses or components that would affect air traffic, so no substantial safety risks would result from project implementation. Because of these reasons, **no impact**

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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would occur with the development of the project. No mitigation required.

d) Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?			X	
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*Less Than Significant Impact.* The project is on a small infill site (under 5 acres) located on one corner of a major intersection with no long roadway segments within the property. The design of roadways must provide adequate sight distance and traffic control measures. This provision is normally realized through roadway design to facilitate roadway traffic flows. Roadway improvements in and around the project site would be designed and constructed to satisfy all City requirements for street widths, corner radii, intersection control as well as incorporate design standards tailored specifically to site access requirements. Adherence to applicable City requirements would ensure the proposed development would not include any sharp curves or dangerous intersections. Therefore, no substantial increase in hazards due to a design feature would occur, resulting in a **less than significant** impact. No mitigation is required.

e) Result in inadequate emergency access?				X
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*No Impact.* The Moreno Valley Police Service (located at 22850 Calle San Juan De Los Lagos) is approximately 4.8 miles northwest of the project site, and the Moreno Valley Fire Department Station 74 (located at 16110 Lasselle Street) is approximately 1.4 miles southwest of the project site. Traffic associated with project construction may have a temporary effect on existing traffic circulation patterns. The proposed project is in an urban setting and direct access to the site will be available via Iris Avenue and Oliver Street which would also accommodate emergency services. Due to the proximity of emergency services, the urban setting, and availability of access to the site, impacts to emergency access will be less than significant. The proposed project will also comply with all of the City’s requirements for emergency access. Therefore, there will be **no significant impacts** and no mitigation is required.

f) Conflict with adopted policies or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				X
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*No Impact.* Iris Avenue is currently improved with on-street bike lanes. The Riverside Transit Agency currently provides bus service to the project site in the form of Route 20 that runs east-west along Iris Avenue adjacent to the project site and connects to other routes in the City and surrounding communities. The proposed project would not impede the implementation of City programs supporting walking, bicycling, and use of buses. The proposed project will not conflict with any adopted transportation policies. **No impact** associated with this issue would occur. No mitigation is required.

**XVII. TRIBAL CULTURAL RESOURCES**

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:		X		
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i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or		X		
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Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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*Less Than Significant with Mitigation Incorporated.*

Chapter 532, Statutes of 2014 (i.e., AB 52), requires Lead Agencies evaluate a project’s potential to impact “tribal cultural resources.” Such resources include “[s]ites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are eligible for inclusion in the California Register of Historical Resources or included in a local register of historical resources.” AB 52 also gives Lead Agencies the discretion to determine, supported by substantial evidence, whether a resource qualifies as a “tribal cultural resource.”

Per AB 52 (specifically PRC 21080.3.1), Native American consultation is required upon request by a California Native American tribe that has previously requested that the City provide it with notice of such projects. In February 2018, the City of Moreno Valley sent the required AB 52 notices to the relevant tribes as required through certified mail. All of the notices were delivered appropriately with receipts returned to the City. Following delivery of the notices, three tribes responded. These tribes and there comments are:

- Pechanga Band of Luiseno Indians, Letter dated March 1, 2018. Requested to begin formal consultation. Letter dated June 29, 2018, containing minor suggestions to the Cultural report and request for full-time construction monitoring instead of part-time.
- Rincon Band of Luiseno Indians, Email dated March 6, 2018. Did not request to begin formal consultation.
- Soboba Band of Luiseno Indians, Letter dated March 20, 2018.

Although the project-specific cultural resources assessment, which included an archaeological and historical records search, communication with Native American tribal representatives, and an intensive pedestrian survey of the project site (Appendix J), did not identify Native American resources on the surface of the project site, there remains some potential for the proposed project to unearth previously undocumented tribal cultural resources during construction. Therefore, previously referenced **Mitigation Measures CUL-1 through CUL-5 and CUL-7** are proposed. Adherence to **Mitigation Measures CUL-1 through CUL-5 and CUL-7** would ensure impacts to listed or eligible for listing tribal cultural resources would be reduced to **less than significant with mitigation incorporated** levels.

ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resource Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5025.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		X	
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*Less Than Significant with Mitigation Incorporated.*

See response to checklist question XVII above. Implementation of **Mitigation Measures CUL-1 through CUL-5 and CUL-7** would reduce impacts to Tribal Cultural Resources to less than significant levels.

**XVIII. UTILITIES AND SERVICE SYSTEMS.** Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X
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*Less Than Significant Impact.* Wastewater services in the City of Moreno Valley are provided by the Eastern Municipal

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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Water District (EMWD), serving most of the City and surrounding areas, and the Edgemont Community Services District.<sup>32</sup> The EMWD provides wastewater services to approximately 239,000 customers within its service area and currently treats approximately 43 million gallons per day of wastewater at its five active regional water reclamation facilities through 1,813 miles of sewer pipelines.<sup>33</sup> These reclamation plants include: San Jacinto Regional Water Reclamation Facility; Moreno Valley Regional Water Reclamation Facility; Perris Valley Regional Water Reclamation Facility; Sun City Regional Water Reclamation Facility; and Temecula Valley Regional Water Reclamation Facility. Generated wastewater from the Project site would be treated at the Moreno Valley Regional Water Reclamation Facility. The proposed Project is expected to generate a maximum of 12 employees. The proposed project is expected to generate 900 gallons of wastewater per day or 328,500 gallons per year of wastewater.<sup>34</sup> The typical daily flow at the MVRWRF is 10.6 million gallons per day with a current capacity of 16 million gallons per day, having a current excess capacity of approximately 5.4 million gallons per day. The proposed project would be required to comply with the applicable waste discharge prohibitions and water quality objectives established by the Santa Ana RWQCB. The project proponent would also be required to satisfy City requirements related to the payment of fees and/or the provision of wastewater conveyance features, and installation and maintenance prior to the issuance of building permits. Adherence to requirements included in the NPDES permit, SWPPP, WQMP, and City wastewater conveyance standards would reduce potential wastewater quality impacts to a **less than significant** level and no mitigation is required.

b) Require or result in construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
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*Less Than Significant Impact.* Wastewater flows from the proposed project site would be handled by the Eastern Municipal Water District (EMWD) and would be conveyed to the Moreno Valley Regional Water Reclamation Facility (MVRWRF) located in the southwestern portion of the City. Current capacity at this facility is 16 million gallons per day (mgd) with an existing average inflow of approximately 10.6 mgd per day. Under current conditions, the average daily surplus treatment capacity is approximately 5.4 mgd. Generally, water use and wastewater flows are related in that wastewater is generated from indoor water uses. The Project is expected to generate up to 900 gallons of wastewater per day or 328,500 gallons per year. Because the amount of wastewater generated would be within the existing surplus treatment capacity, the proposed project would not require the construction of a new water or wastewater treatment facilities or expansion of existing facilities, which could cause significant environmental effects; and impacts related to this issue would be considered **less than significant**. No mitigation is required.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				
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*Less Than Significant Impact.* There is no existing stormwater infrastructure located within Iris Ave and Oliver St, as such the project will collect surface runoff in three separate bioretention planters prior to collecting in a stormwater sump with a pump. The stormwater will be pumped to the surface adjacent to Oliver St where it will gravity flow to the street curb and gutter. The stormwater will ultimately discharge to the north as it does in the existing condition. The proposed project will also pay the City's established Development Impact Fee (DIF) for drainage to help offset costs for new storm water drainage facilities. Therefore the proposed project will have a **less than significant** impact on these facilities, and no mitigation is required.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
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*Less Than Significant Impact.* Due to the size of the project, a water supply assessment report to determine water supply availability was not prepared for this project. The project is consistent with the City of Moreno Valley General Plan Land

<sup>32</sup> Sewer Services, Public Services and Utilities, City of Moreno Valley General Plan Final Program EIR, July 2006.  
<sup>33</sup> Wastewater Service, Eastern Municipal Water District (EMWD), 2017. <https://www.emwd.org/services/wastewater-service> (Accessed December 5, 2017).  
<sup>34</sup> Personal email from Leslie Burnside, Senior Project Manager, November 7, 2017.



Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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Use designation and the City’s zoning of Neighborhood Commercial (NC). The City of Moreno Valley is served by two water purveyors: Eastern Municipal Water District (EMWD) and the Box Springs Mutual Water Company.<sup>35</sup> However, the EMWD is the primary water purveyor from the City and would provide water to the project site. Water demands of the project are consistent with, and are anticipated under the EMWD 2015 Urban Water Management Plan (UWMP). This is because water demands reflected in the UWMP takes into account anticipated development growth in the City pursuant to the City’s General Plan. Therefore, the UWMP reflects and anticipates General Commercial (I-G) development proposed by the project. As identified in the 2015 UWMP, EMWD has the ability to meet current and project water demands through 2040 during normal, historic single-dry and historic multiple-dry year periods using imported water from Metropolitan Water District (MWD) with existing supply resources.<sup>36</sup> Therefore, a **less than significant** impact would occur related to this issue, and no mitigation required.

e) Result in a determination by the wastewater treatment provider which serves or may serve the project determined that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?			X	
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*Less Than Significant Impact.* Please refer to response to Checklist Question 16(b).

f) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?			X	
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*Less Than Significant Impact.* Solid waste collection is a “demand-responsive” service and current service levels can be expanded and funded through user fees without difficulty. Solid waste generated within the proposed Project will be generated in the Riverside County Waste Management Department’s (RCWMD) Badlands Landfill located at 31125 Ironwood Avenue approximately 5-miles northeast of the Project site. The Badlands Sanitary Landfill has a maximum daily permitted throughput of 4,800 tons per day, a remaining capacity of 15,748,799 cubic yards, and an estimated closure of 2022.<sup>37</sup> During the year 2002, the landfill received 469,705 tons of solid waste for disposal, an average of 1,520 tons per day, a surplus capacity of 2,480 tons per day.<sup>38</sup> Based on a solid waste generation of 0.006 pound per square foot per day, the proposed project is anticipated to generate approximately 6.73 tons of solid waste per day (2,456 tons/year). The volume of solid waste generated by the proposed project per day represents 0.0017 percent of the current permitted throughput and 0.0032 percent of the current surplus capacity at the Badlands Sanitary Landfill. As adequate daily surplus capacity exists at the receiving landfill, development of the proposed project would not significantly impact current operations or the expected lifetime of the landfill serving the project area. A **less than significant** impact would occur and no mitigation is required.

g) Comply with federal, state, and local statutes and regulations related to solid waste?			X	
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*Less Than Significant Impact.* The proposed project would be required to comply with applicable elements of AB 1327, Chapter 18 (California Solid Waste Reuse and Recycling Access Act of 1991) and other applicable local, state, and federal solid waste disposal standards, thereby ensuring that the solid waste stream to the Badlands Sanitary Landfill is reduced in accordance with existing regulations. A **less than significant** impact related to this issue would occur. No mitigation is required.

**XIX. MANDATORY FINDINGS OF SIGNIFICANCE.**

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to		X		
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<sup>35</sup> City of Moreno Valley General Plan Final Program EIR, City of Moreno Valley, July 2006.  
<sup>36</sup> Tables 7-4 through 7-9, Eastern Municipal Water District, 2015 Urban Water Management Plan, June 2016.  
<sup>37</sup> Facility/Site Summary Details: Badlands Sanitary Landfill, CalRecycle, 2017.  
<sup>38</sup> 5.13 Public Services and Utilities, Solid Waste, City of Moreno Valley General Plan Final Program EIR, July 2006.

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

*Less Than Significant with Mitigation Incorporated.* The Project proposes an ARCO AM/PM gas station on 1.58-acres of vacant land. Surrounding land uses include commercial and residential development. No federal jurisdictional waters, wetlands, and/or streambeds regulated by CDFW were identified within the project area. As mentioned before, the project site is located within the Multiple Species Habitat Conservation Plan (MSHCP) City of Moreno Valley Area Plan. No special-status species were found or observed during the field reconnaissance. However, based on a literature review and the field survey, some special-interest species, including federal/State listed species, are known to occur in the region. Because the project site is currently un-vegetated, a burrowing owl habitat assessment and burrow survey was conducted and concluding negative results for owls and owl sign, and no evidence of usable burrows. Because the burrowing owl is mobile and seasonally migratory bird, **Mitigation Measure BIO-1** will reduce impacts to a **less than significant with mitigation incorporated** levels. The project site is currently vacant and is currently surrounded by residential and commercial uses.

There are no sites within the City of Moreno Valley listed as a state landmark, nor are there any sites on the National Register of Historic Places. Eight (8) cultural resource studies have been previously conducted within a 1-mile radius of the Project, none of which included any portion of the Project.<sup>39</sup> Although no cultural resources were identified on the Project site, 21 prehistoric sites have been recorded within 1-mile (see Checklist Question V.a). According to the cultural resource assessment, a water tank was once located on the parcel, a fragment of historic period irrigation pipe was identified during the survey and a concrete cistern remains to the west. Also, numerous prehistoric resources lie to the south and the sensitivity of the area between these resources and the Project is unknown. With implementation of **Mitigation measure CUL-1** through **Mitigation Measure CUL-7**, impacts to cultural resources would be **less than significant**. No mitigation is required.

b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

		X		
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*Less Than Significant with Mitigation Incorporated.* The City’s General Plan identifies the site as Commercial (C) and the zoning as Neighborhood Commercial (NC). The project proposes the development of a 3,180 ARCO gas station with a car wash facility within an area of the City where such uses have been anticipated in local and regional planning documents. The potential environmental effects associated with the proposed project and cumulative projects in the City are addressed within the scope of impacts identified in the City’s General Plan.

The project traffic study evaluated cumulative projects and the associated analysis (see Checklist Question XVI.a) determined the project would not generate significant amounts of cumulative traffic. The Air Quality/Greenhouse Gas and Noise studies prepared for the proposed project are based on the traffic volumes developed in the traffic study, and these two studies determined air pollution and GHG emissions and roadway noise levels would be correspondingly less than significant. In addition, there are no other projects whose impacts would comingle with the proposed project and create a cumulatively significant impact over and above those previously identified in this Initial Study. Consequently, the construction and operation of the proposed uses would result in a **less than significant with mitigation incorporated** cumulative impact with implementation of the identified mitigation measures, and no additional mitigation is warranted.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

		X		
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*Less Than Significant with Mitigation Incorporated.* The proposed project would result in impacts to human beings by

<sup>39</sup> Cultural Resource Assessment, Sater ARCO Project, City of Moreno Valley, LSA Associates Inc., September 2017.

Attachment: Exhibit A - Initial Study / Mitigated Negative Declaration (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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degrading water quality. While potential water quality impacts could result from the proposed project, implementation of NPDES permits ensures that the State's mandatory standards for the maintenance of clean water and the Federal minimums are met. Adherence to **Mitigation Measures HYD-1 through HYD-3** would ensure impacts to water quality would be reduced to **less than significant with mitigation incorporated**. Therefore, the proposed project would not have a significant water quality impact.

The South Coast Air Basin is currently designated as a non-attainment area for ozone, PM10, and PM2.5. Development of the project would contribute to air pollutant emissions on a short-term basis. The project would be required to comply with regional rules that assist in reducing short-term air pollutant emissions. The purpose of SCAQMD Rule 403 is to reduce the amount of particulate matter in the atmosphere resulting from man-made fugitive dust sources. Adherence to these measures would reduce short-term construction air quality impacts to a less than significant level.

Like all of Southern California, the project site could be subject to strong ground shaking resulting from large earthquakes. Additionally, the proposed project could experience adverse effects from unstable soils. Adherence to existing Uniform Building Code and California Building Code standards as well as recommendations detailed in the project-specific geotechnical studies would ensure potential impacts related to geologic and soil conditions are **less than significant**.

As detailed in the preceding responses, development of the proposed project would not result, either directly or indirectly, in adverse impacts to human beings.

Issues and Supporting Information	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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## Appendices

Appendix A: Air Quality and Greenhouse Gas Emissions Analysis and Screening Health Risk Assessment, AM-PM Gasoline Service Station Project, City of Moreno Valley, LSA, November 8, 2017.

Appendix B: Biological Resources Assessment and MSHCP Consistency Analysis and Habitat Assessment, AM-PM Gasoline Service Station Project, City of Moreno Valley, LSA, September 2017.

Appendix C: Cultural Resource Assessment, Sater Arco Project, City of Moreno Valley, LSA, September 2017.

Appendix D: Preliminary Geotechnical Engineering Investigation, ARCO Gas Station, Salem Engineering Group, Inc., November 30, 2017.

Appendix E: Feasibility Study Report of Soils and Foundation Evaluations, Soils Southwest, Inc., November 12, 2003.

Appendix F: Phase I Environmental Site Assessment Report, 18.81 Acres of Vacant Land, Oliver Street and Iris Avenue, Orswell & Kasman, Inc., September 26, 2003.

Appendix G: Project Specific Water Quality Management Plan, Moreno Valley ARCO, Barghausen Consulting Engineers, Inc., October 12, 2018.

Appendix H: Preliminary Drainage Report, Moreno Valley ARCO Fuel Station, Barghausen Consulting Engineers, Inc., September 25, 2018

Appendix I: Noise and Vibration Impact Analysis, AM/PM Gasoline Service Station, LSA Associates Inc., November 2017.

Appendix J: Traffic Impact Analysis, AM/PM Gasoline Service Station, LSA Associates Inc., July 2018.

## References

California Department of Conservation, Division of Land Resource Protection, Riverside County Williamson Act FY 2015/2016, Sheet 1 of 3, website: [ftp://ftp.consrv.ca.gov/pub/dlrp/wa/Riverside\\_w\\_15\\_16\\_WA.pdf](ftp://ftp.consrv.ca.gov/pub/dlrp/wa/Riverside_w_15_16_WA.pdf) (Accessed September 19, 2017).

City of Moreno Valley General Plan, July 11, 2006.

City of Moreno Valley General Plan Environmental Impact Report, July 2006.

Department of Conservation, Farmland Mapping and Monitoring Program, <http://maps.conservation.ca.gov/ciff/ciff.html> (Accessed September 19, 2017).

2015 Final Urban Water Management Plan, Eastern Municipal Water District, RMC Water and Environment, June 2016.

March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan, Riverside County Airport Land Use Commission, Mead & Hunt, November 13, 2017.

## **Appendix A:**

**Air Quality and Greenhouse Gas Emissions Analysis and Screening Health**

**Risk Assessment Technical Memorandum**

**Proposed ARCO AM/PM Gas Service Station with Convenience Store and**

**Car Wash Project**

**Appendix B:**  
**Biological Resources Assessment and MSHCP Consistency Analysis and**  
**Habitat Assessment**  
**AM/PM Gasoline Service Station Project**

**Appendix C:**  
**Cultural Resources Assessment**  
**Sater Arco Project**

**Appendix D:**  
**Preliminary Geotechnical Engineering Investigation**  
**ARCO Gas Station**



# Appendix E:

**Feasibility Study Report of Soils and Foundation Evaluations**

**Proposed Commercial Center NWC Iris Ave & Oliver St**

# Appendix F:

## Phase I Environmental Site Assessment Report

### 18.81 Acres of Vacant Land, Oliver Street and Iris Avenue

# Appendix G:

## Project Specific Water Quality Management Plan

### Moreno Valley ARCO

**Appendix H:**  
**Preliminary Drainage Report**  
**Moreno Valley ARCO Fuel Station**

# **Appendix I:**

## **Noise and Vibration Impact Analysis Memorandum**

### **AM/PM Gasoline Service Station**

**Appendix J:**  
**Traffic Impact Analysis**  
**AM/PM Gasoline Service Station**

## MITIGATION MONITORING AND REPORTING PROGRAM SATER ARCO AM/PM GAS STATION PROJECT (PEN 18 - 0016)

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This Mitigation Monitoring and Reporting Program has been prepared for use in implementing mitigation for the:

### Sater ARCO AM/PM Gas Station Project (PEN 18 - 0016)

The program has been prepared in compliance with State law and the Mitigated Negative Declaration (MND) prepared for the project by the City of Moreno Valley (City).

The California Environmental Quality Act (CEQA) requires adoption of a reporting or monitoring program for those measures placed on a project to mitigate or avoid adverse effects on the environment (Public Resource Code Section 21081.6). The law states the reporting or monitoring program shall be designed to ensure compliance during project implementation.

The monitoring program contains the following elements:

- 1) The mitigation measures are recorded with the action and procedure necessary to ensure compliance. In some instances, one action may be used to verify implementation of several mitigation measures.
- 2) A procedure for compliance and verification has been outlined for each action necessary. This procedure designates who will take action, what action will be taken and when, and to whom and when compliance will be reported.
- 3) The program has been designed to be flexible. As monitoring progresses, changes to compliance procedures may be necessary based upon recommendations by those responsible for the program. As changes are made, new monitoring compliance procedures and records will be developed and incorporated into the program.

This Mitigation Monitoring and Reporting Program includes mitigation identified in the MND.

### MITIGATION MONITORING AND RESPONSIBILITIES

As the Lead Agency, the City is responsible for ensuring full compliance with the mitigation measures adopted for the proposed project. The City will monitor and report on all mitigation activities. Mitigation measures will be implemented at different stages of development throughout the project site. In this regard, the responsibilities for implementation have been assigned to the Applicant, Contractor, or a combination thereof. If during the course of project implementation, any of the mitigation measures identified herein cannot be successfully implemented, the City shall be immediately informed, and the City will then inform any affected responsible agencies. The City, in conjunction with any affected responsible agencies, will then determine if modification to the project is required and/or whether alternative mitigation is appropriate.

### STANDARD CONDITIONS

Standard Conditions are presented in instances where the proposed project would not create a significant impact but would be required to adhere to regulatory requirements in order to ensure impacts do not become significant. Standard Conditions outline compliance with various federal, State, and/or local acts, laws, rules, regulations, municipal codes, etc.

**MITIGATION MONITORING AND REPORTING PROGRAM  
SATER ARCO AM/PM GAS STATION PROJECT (PEN 18 - 0016)**

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Attachment: Exhibit B - Mitigation Monitoring Program (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



**MITIGATION MONITORING AND REPORTING PROGRAM  
SATER ARCO AM/PM GAS STATION PROJECT (PEN 18 - 0016)**

Attachment: Exhibit B - Mitigation Monitoring Program (3362 : Conditional Use Permit PEN18-0016 ARCO

**MITIGATION MONITORING AND REPORTING PROGRAM CHECKLIST**

Project Name: Sater ARCO AM/PM Gas Station Project (PEN 18 - 0016)

Applicant: Sater Oil International, LLC

Date: November 2018

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
<b>BIOLOGICAL RESOURCES</b>					
<b>BIO-1:</b> Prior to the issuance of grading permit, a pre-construction survey for burrowing owl shall be conducted by a qualified biologist no more than 30 days before the commencement of vegetation removal or ground disturbing activities to confirm the absence of burrowing owl onsite. If burrowing owl(s) are detected during the focused surveys, a Burrowing Owl Mitigation and Monitoring Plan ("Plan") shall be prepared by a qualified biologist and submitted to the California Department of Fish and Wildlife for review and approval prior to commencement of project activities. The Plan shall describe appropriate avoidance, minimization, and mitigation measures to reduce impacts to burrowing owls and ensure the implementation of appropriate and commensurate compensatory mitigation for the loss of burrowing owl nesting and foraging habitat. No further action is required if the 30-day pre-construction survey does not result in burrowing owl sign or observations.	City Planner or designee	Prior to the issuance of grading permits and/or during grading activities	Evidence the required pre-construction survey has been completed, and (as applicable), the establishment and maintenance of appropriate buffers.		Withhold grading permit and/or issuance of a stop work order
<b>CULTURAL RESOURCES</b>					
<b>CUL-1:</b> Prior to the issuance of a grading permit, the Developer shall retain a professional archaeologist to conduct monitoring of all mass grading and trenching activities. The Project Archaeologist shall	City Planner or designee	Prior to the issuance of grading permit and during	Evidence the construction documents include instructions in the event such a resource is detected,		Withhold grading permit and/or issuance of a

**MITIGATION MONITORING AND REPORTING PROGRAM  
SATER ARCO AM/PM GAS STATION PROJECT (PEN 18 - 0016)**

**Project Name: Sater ARCO AM/PM Gas Station Project (PEN 18 - 0016)**

**Applicant: Sater Oil International, LLC  
Date: November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
<p>have the authority to temporarily redirect earthmoving activities in the event that suspected archaeological resources are unearthed during Project construction. The Project Archaeologist, in consultation with the Consulting Tribe(s), the contractor, and the City, shall develop a Cultural Resources Management Plan (CRMP) in consultation pursuant to the definition in AB52 to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the project site. A consulting tribe is defined as a tribe that initiated the AB 52 tribal consultation process for the Project, has not opted out of the AB52 consultation process, and has completed AB 52 consultation with the City as provided for in Cal Pub Res Code Section 21080.3.2(b)(1) of AB52. Details in the Plan shall include:</p> <ul style="list-style-type: none"> <li>a) Project grading and development scheduling;</li> <li>b) The Project archeologist and the Consulting Tribes(s) as defined in CR-1 shall attend the pre-grading meeting with the City, the construction manager and any contractors and will conduct a mandatory Cultural Resources Worker Sensitivity Training to those in attendance. The Training will include a brief review of the cultural sensitivity of the Project and the surrounding area; what resources could</li> </ul>		grading	<p>and as applicable,</p> <ul style="list-style-type: none"> <li>1) Evidence appropriate buffer areas have been established;</li> <li>2) Evidence qualified archaeologist has been retained to inspect the find; and</li> <li>3) Completion of required evaluation and report by a qualified archeologist.</li> </ul>		stop work order

Attachment: Exhibit B - Mitigation Monitoring Program (3362 : Conditional Use Permit PEN18-0016 ARCO

**MITIGATION MONITORING AND REPORTING PROGRAM  
SATER ARCO AM/PM GAS STATION PROJECT (PEN 18 - 0016)**

**Project Name: Sater ARCO AM/PM Gas Station Project (PEN 18 - 0016)**

**Applicant: Sater Oil International, LLC  
Date: November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
<p>potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. All new construction personnel that will conduct earthwork or grading activities that begin work on the Project following the initial Training must take the Cultural Sensitivity Training prior to beginning work and the Project archaeologist and Consulting Tribe(s) shall make themselves available to provide the training on an as-needed basis;</p> <p>c) The protocols and stipulations that the contractor, City, Consulting Tribe(s) and Project archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation.</p>					
<p><b>CUL 2:</b> Prior to the issuance of a grading permit, the Developer shall secure agreements with the Pechanga Band of Luiseño Indians and Soboba Band of Luiseño Indians for tribal monitoring. The Developer is also required to provide a minimum of</p>	<p>City Planner or designee</p>	<p>Prior to the issuance of grading permits and during grading</p>	<p>Evidence the construction documents include instructions in the event such a resource is detected, and as applicable,</p>		<p>Withhold grading permit and/or issuance of a stop work</p>

Attachment: Exhibit B - Mitigation Monitoring Program (3362 : Conditional Use Permit PEN18-0016 ARCO

**MITIGATION MONITORING AND REPORTING PROGRAM  
SATER ARCO AM/PM GAS STATION PROJECT (PEN 18 - 0016)**

**Project Name: Sater ARCO AM/PM Gas Station Project (PEN 18 - 0016)**

**Applicant: Sater Oil International, LLC**

**Date: November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
30 days advance notice to the tribes of all mass grading and trenching activities. The Native American Tribal Representatives shall have the authority to temporarily halt and redirect earth moving activities in the affected area in the event that suspected archaeological resources are unearthed. If the Native American Tribal Representatives suspect that an archaeological resource may have been unearthed, the Project Archaeologist or the Tribal Representatives shall immediately redirect grading operations in a 100-foot radius around the find to allow identification and evaluation of the suspected resource. In consultation with the Native American Tribal Representatives, the Project Archaeologist shall evaluate the suspected resource and make a determination of significance pursuant to California Public Resources Code Section 21083.2.			1) Evidence appropriate buffer areas have been established;  2) Evidence qualified archaeologist has been retained to inspect the find;  3) Completion of required evaluation and report by a qualified archeologist; and  4) Secure agreements with the Pechanga Band of Luiseño Indians and Soboba Band of Luiseño Indians for tribal monitoring.		order
<p><b>CUL 3:</b> In the event that Native American cultural resources are discovered during the course of grading (inadvertent discoveries), the following procedures shall be carried out for final disposition of the discoveries.</p> <p>a) One or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be provided to the City of Moreno Valley Planning Department:</p>	City Planner or designee	During shovel testing, construction, or any other ground-disturbing activities	Provide evidence to the City that a qualified archaeological monitor has been retained and that the monitor will be present during all grading and other significant ground-disturbing, and as applicable,  1) Evidence appropriate		Withhold grading permit and/or issuance of a stop work order

Attachment: Exhibit B - Mitigation Monitoring Program (3362 : Conditional Use Permit PEN18-0016 ARCO

**MITIGATION MONITORING AND REPORTING PROGRAM  
SATER ARCO AM/PM GAS STATION PROJECT (PEN 18 - 0016)**

**Project Name: Sater ARCO AM/PM Gas Station Project (PEN 18 - 0016)**

**Applicant: Sater Oil International, LLC  
Date: November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
i. Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place they were found with no development affecting the integrity of the resources.  ii. Onsite reburial of the discovered items as detailed in the treatment plan required pursuant to Mitigation Measure CUL-1. This shall include measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed. No recordation of sacred items is permitted without the written consent of all Consulting Native American Tribal Governments as defined in CUL-1.			buffer areas have been established;  2) Evidence of preparation of Cultural Resources Discovery, Monitoring, and Treatment Plan;  3) Evidence appropriate Native American Parties have been engaged; and  4) Completion of required evaluation and report by a qualified archeologist.		
<b>CUL 4:</b> The City shall verify that the following note is included on the Grading Plan:  "If any suspected archaeological resources are discovered during ground-disturbing activities and the Project Archaeologist or Native American Tribal Representatives are not present, the construction	City Planner or designee	During shovel testing, construction, or any other ground-disturbing activities	Provide evidence to the City that a qualified archaeological monitor has been retained and that the monitor will be present during all grading and other significant ground-		Withhold grading permit and/or issuance of a stop work order

Attachment: Exhibit B - Mitigation Monitoring Program (3362 : Conditional Use Permit PEN18-0016 ARCO

**MITIGATION MONITORING AND REPORTING PROGRAM  
SATER ARCO AM/PM GAS STATION PROJECT (PEN 18 - 0016)**

**Project Name:** Sater ARCO AM/PM Gas Station Project (PEN 18 - 0016)

**Applicant:** Sater Oil International, LLC  
**Date:** November 2018

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
supervisor is obligated to halt work in a 100-foot radius around the find and call the Project Archaeologist and the Tribal Representatives to the site to assess the significance of the find."			disturbing, and as applicable, 1) Evidence appropriate buffer areas have been established; 2) Evidence of preparation of Cultural Resources Discovery, Monitoring, and Treatment Plan; 3) Evidence appropriate Native American Parties have been engaged; and 4) Completion of required evaluation and report by a qualified archeologist.		
<b>CUL 5:</b> If potential historic or cultural resources are uncovered during excavation or construction activities at the project site, work in the affected area must cease immediately and a qualified person meeting the Secretary of the Interior's standards (36 CFR 61), Tribal Representatives, and all site monitors per the Mitigation Measures, shall be consulted by the City to evaluate the find, and as appropriate recommend alternative measures to avoid, minimize or mitigate negative effects on the historic, or prehistoric resource. Determinations and	City Planner or designee	During shovel testing, construction, or any other ground-disturbing activities	Provide evidence to the City that a qualified archaeological monitor has been retained and that the monitor will be present during all grading and other significant ground-disturbing, and as applicable, 1) Evidence appropriate buffer areas have been		Withhold grading permit and/or issuance of a stop work order

Attachment: Exhibit B - Mitigation Monitoring Program (3362 : Conditional Use Permit PEN18-0016 ARCO

**MITIGATION MONITORING AND REPORTING PROGRAM  
SATER ARCO AM/PM GAS STATION PROJECT (PEN 18 - 0016)**

**Project Name: Sater ARCO AM/PM Gas Station Project (PEN 18 - 0016)**

**Applicant: Sater Oil International, LLC  
Date: November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
recommendations by the consultant shall be immediately submitted to the Planning Division for consideration, and implemented as deemed appropriate by the Community Development Director, in consultation with the State Historic Preservation Officer (SHPO) and any and all Consulting Native American Tribes as defined in CR-1 before any further work commences in the affected area.			established;  2) Evidence of preparation of Cultural Resources Discovery, Monitoring, and Treatment Plan;  3) Evidence appropriate Native American Parties have been engaged; and  4) Completion of required evaluation and report by a qualified archeologist.		
<b>CUL 6:</b> If paleontological resources (fossils) are discovered during project grading, work will be halted in that area until a qualified paleontologist can be retained to assess the significance of the find. The project paleontologist shall monitor remaining earthmoving activities at the project site and shall be equipped to record and salvage fossil resources that may be unearthed during grading activities. The paleontologist shall be empowered to temporarily halt or divert grading equipment to allow recording and removal of the unearthed resources. Any fossils found shall be evaluated in accordance with the CEQA Guidelines and offered for curation at an accredited facility approved by the City of Moreno Valley. Once grading activities have ceased or the paleontologist determines that	City Planner or designee	During shovel testing, construction, or any other ground-disturbing activities	Provide evidence to the City that a qualified archaeological monitor has been retained and that the monitor will be present during all grading and other significant ground-disturbing, and as applicable,  1) Evidence appropriate buffer areas have been established;  2) Evidence of preparation of Cultural Resources		Withhold grading permit and/or issuance of a stop work order

Attachment: Exhibit B - Mitigation Monitoring Program (3362 : Conditional Use Permit PEN18-0016 ARCO

**MITIGATION MONITORING AND REPORTING PROGRAM  
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**Project Name: Sater ARCO AM/PM Gas Station Project (PEN 18 - 0016)**

**Applicant: Sater Oil International, LLC  
Date: November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
monitoring is no longer necessary, monitoring activities shall be discontinued. This measure shall be implemented to the satisfaction of the City Planning Division.			Discovery, Monitoring, and Treatment Plan;  3) Evidence appropriate Native American Parties have been engaged; and  4) Completion of required evaluation and report by a qualified archeologist.		
<b>CUL 7:</b> If human remains are discovered, no further disturbance shall occur in the affected area until the County Coroner has made necessary findings as to origin. If the County Coroner determines that the remains are potentially Native American, the California Native American Heritage Commission shall be notified within 24 hours of the published finding to be given a reasonable opportunity to identify the “most likely descendant”. The “most likely descendant” shall then make recommendations, and engage in consultations concerning the treatment of the remains (California Public Resources Code 5097.98). (GP Objective 23.3, CEQA).	City Planner or designee	During shovel testing, construction, or any other ground-disturbing activities	Provide evidence to the City that a qualified archaeological monitor has been retained and that the monitor will be present during all grading and other significant ground-disturbing, and as applicable,  1) Evidence appropriate buffer areas have been established;  2) Evidence of preparation of Cultural Resources Discovery, Monitoring, and Treatment Plan;  3) Evidence appropriate		Withhold grading permit and/or issuance of a stop work order

Attachment: Exhibit B - Mitigation Monitoring Program (3362 : Conditional Use Permit PEN18-0016 ARCO



**MITIGATION MONITORING AND REPORTING PROGRAM  
SATER ARCO AM/PM GAS STATION PROJECT (PEN 18 - 0016)**

**Project Name:** Sater ARCO AM/PM Gas Station Project (PEN 18 - 0016)

**Applicant:** Sater Oil International, LLC  
**Date:** November 2018

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
			Native American Parties have been engaged; and  4) Completion of required evaluation and report by a qualified archeologist.		
<b>GEOLOGY AND SOILS</b>					
<b>GEO 1:</b> Prior to issuance of building permits, the project applicant or its designee shall demonstrate all recommendations contained in project-specific geotechnical and/or soils and foundation evaluation report by Salem Engineering Group Inc. dated November 30, 2017 are implemented. This measure shall be implemented to the satisfaction of the City Engineer.	City building official or designee	Prior to the issuance of grading or building permits	Evidence of construction of the improvements.		Withhold building permit.
<b>GEO 2:</b> Prior to the issuance of a grading permit, the project applicant shall provide proof to the City of Moreno Valley that supplemental laboratory testing has been conducted for expansive soils and that any identified conditions in this regard will be eliminated or reduced to safe levels by proposed grading activities and/or foundation design. This measure shall be implemented to the satisfaction of the City Engineer.	City building official or designee	Prior to the issuance of grading or building permits	Evidence of construction of the improvements.		Withhold building permit.
<b>HAZARDOUS MATERIALS</b>					
<b>HAZ-1:</b> Prior to issuance of construction permit, the project applicant shall provide proof to the City	City Development	Prior to the issuance of	Evidence of City police and fire services have		Withhold building

Attachment: Exhibit B - Mitigation Monitoring Program (3362 : Conditional Use Permit PEN18-0016 ARCO

**MITIGATION MONITORING AND REPORTING PROGRAM  
SATER ARCO AM/PM GAS STATION PROJECT (PEN 18 - 0016)**

**Project Name: Sater ARCO AM/PM Gas Station Project (PEN 18 - 0016)**

**Applicant: Sater Oil International, LLC  
Date: November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
of Moreno Valley that City police and fire services, as applicable, have reviewed and approved the emergency response plan.	Services Department, Building and Safety Division, or designee	grading and building permits	conducted their review provided approval		permit.
<b>HYDROLOGY AND WATER QUALITY</b>					
<b>HYD-1:</b> Prior to the issuance of a grading permit, the project applicant shall file and obtain a Notice of Intent (NOI) with the Regional Water Quality Control Board (RWQCB) in order to be in compliance with the State NPDES General Construction Storm Water Permit for discharge of surface runoff associated with construction activities. Evidence that this has been obtained (i.e., a copy of the Waste Discharger’s Identification Number) shall be submitted to the City for coverage under the NPDES General Construction Permit. The NOI shall address the potential for an extended and discontinuous construction period based on funding availability.	City Municipal Utilities & Public Works Department and Development Services Department, as appropriate	Prior to the issuance of grading permits.	Submittal of NOI to the City.		Withhold building permit.
<b>HYD-2:</b> Prior to the issuance of a grading permit, the project applicant shall prepare a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP shall include a surface water control plan and erosion control plan citing specific measures to control on-site and off-site erosion during the entire grading and construction period. In addition, the SWPPP shall emphasize structural and nonstructural Best Management Practices (BMPs) to control sediment	City Municipal Utilities & Public Works Department and Development Services Department, as appropriate	Prior to the issuance of grading permits.	Evidence of construction of the improvements.		Withhold building permit.

**Attachment: Exhibit B - Mitigation Monitoring Program (3362 : Conditional Use Permit PEN18-0016 ARCO**

**MITIGATION MONITORING AND REPORTING PROGRAM  
SATER ARCO AM/PM GAS STATION PROJECT (PEN 18 - 0016)**

**Project Name: Sater ARCO AM/PM Gas Station Project (PEN 18 - 0016)**

**Applicant: Sater Oil International, LLC  
Date: November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
<p>and non-visible discharges from the site. The SWPPP will include inspection forms for routine monitoring of the site during construction phase to ensure NPDES compliance and additional BMPs and erosion control measures will be documented in the SWPPP and utilized if necessary. The SWPPP shall address the potential for an extended and discontinuous construction period based on funding availability. The SWPPP will be kept on site for the entire duration of project construction and will be available to the local RWQCB for inspection at any time. BMPs included in the SWPPP may include the following:</p> <ul style="list-style-type: none"> <li>• Sediment discharges from the site may be controlled by the following: sandbags, silt fences, straw wattles and temporary basins (if deemed necessary), and other discharge control devices. The construction and condition of the BMPs will be periodically inspected during construction and repairs will be made when necessary as required by the SWPPP.</li> <li>• Materials that have the potential to contribute to non-visible pollutants to storm water must not be placed in drainage ways and must be contained, elevated, and placed in temporary storage containment areas.</li> <li>• All loose piles of soil, silt, clay, sand,</li> </ul>					

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Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
<p>debris, and other earthen material shall be protected in a reasonable manner to eliminate any discharge from the site. Stockpiles will be surrounded by silt fences and covered with plastic tarps.</p> <ul style="list-style-type: none"> <li>In addition, the construction contractor shall be responsible for performing and documenting the application of BMPs identified in the SWPPP. Weekly inspections shall be performed on sandbag barriers and other sediment control measures called for in the SWPPP. Monthly reports and inspection logs shall be maintained by the Contractor and reviewed by the City and the representatives of the State Water Resources Control Board. In the event that it is not feasible to implement specific BMPs, the City can make a determination that other BMPs will provide equivalent or superior treatment either on or off site.</li> </ul>					
<p><b>HYD-3:</b> Prior to the issuance of a grading permit, the applicant shall submit a Water Quality Management Plan (WQMP) to the City, for review and approval. The project shall implement project design features identified in the Water Quality Management Plan. This measure shall be implemented to the satisfaction of the City Public</p>	<p>City Municipal Utilities &amp; Public Works Department and Development Services</p>	<p>Prior to the issuance of demolition and grading permits.</p>	<p>Evidence of construction of the improvements.</p>		<p>Withhold building permit.</p>

Attachment: Exhibit B - Mitigation Monitoring Program (3362 : Conditional Use Permit PEN18-0016 ARCO

**MITIGATION MONITORING AND REPORTING PROGRAM  
SATER ARCO AM/PM GAS STATION PROJECT (PEN 18 - 0016)**

**Project Name: Sater ARCO AM/PM Gas Station Project (PEN 18 - 0016)**

**Applicant: Sater Oil International, LLC  
Date: November 2018**

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
Works Department.	Department, as appropriate				
<b>NOISE</b>					
<p><b>NOI-1:</b> Prior to the issuance of a grading permit, the project applicant shall incorporate the following standards as notes on the grading plan cover sheet to minimize construction noise to the greatest extend practical:</p> <ul style="list-style-type: none"> <li>• Equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers’ standards.</li> <li>• Place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the active project site.</li> <li>• Locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active project site during all project construction.</li> <li>• Prohibit extended idling time of internal combustion engines.</li> <li>• All noise producing construction activities shall be limited to the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday, excluding holidays and from 8 a.m. to 4 p.m. on Saturday, unless written approval</li> </ul>	City Planner or designee	Prior to approval of development plan.	Implement measures to maintain City noise standards.		Withhold building permit.

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**MITIGATION MONITORING AND REPORTING PROGRAM  
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**Project Name:** Sater ARCO AM/PM Gas Station Project (PEN 18 - 0016)

**Applicant:** Sater Oil International, LLC

**Date:** November 2018

Mitigation Measure No. / Implementing Action	Responsible for Monitoring	Timing of Verification	Method of Verification	Verified Date/ Initials	Sanctions for Non-Compliance
<p>is obtained from the city building official or city engineer.</p> <ul style="list-style-type: none"> <li>Designate a “disturbance coordinator” who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler) and would determine and implement reasonable measures warranted to correct the problem.</li> </ul>					

Attachment: Exhibit B - Mitigation Monitoring Program (3362 : Conditional Use Permit PEN18-0016 ARCO

## RESOLUTION NO. YYYY-\_\_\_\_

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MORENO VALLEY, CALIFORNIA, APPROVING CONDITIONAL USE PERMIT APPLICATION PEN18-0016 FOR DEVELOPMENT OF A 3,180 SQUARE FOOT GAS STATION WITH CONVENIENCE STORE AND CAR WASH ON A 1.31 ACRE SITE LOCATED ON THE NORTHWEST CORNER OF IRIS AVENUE AND OLIVER STREET (ASSESSOR'S PARCEL NUMBER 486-310-038).

WHEREAS, Sater Oil International, LLC, has filed an application for Conditional Use Permit (CUP) PEN18-0016 to develop a new 3,180 square foot ARCO AM/PM gas station, operating 24 hours, with 8 fuel islands, a car wash, and a Type-20 alcohol sales license for beer and wine; and

WHEREAS, the application has been evaluated in accordance with established City of Moreno Valley (City) procedures, and with consideration of the Municipal Code, General Plan and other applicable regulations; and

WHEREAS, an environmental assessment, including an Initial Study, has been prepared for the application, PEN18-0016 as described above and a Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program have been prepared pursuant to the California Environmental Quality Act (CEQA) as there is no evidence that the proposed Conditional Use Permit will have a significant impact on the environment with the incorporation of mitigation measures; and

WHEREAS, on December 13, 2018, the Planning Commission of the City of Moreno Valley held a public hearing and approved Resolution No. 2018-54, certifying the adoption of the Mitigated Negative Declaration, and Resolution No. 2018-55 approving Conditional Use Permit; and

WHEREAS, on December 14, 2018 a City Council member made a request for the City Council to assume jurisdiction as provided for in Section 9.02.200(E) Public hearing and notification procedures of the Municipal Code; and

WHEREAS, the project was duly noticed for a public hearing before the City Council on February 19, 2019; and

WHEREAS, the City Council of the City of Moreno Valley held a public hearing on February 19, 2019 to consider the approval of a Conditional Use Permit PEN18-0016; and

WHEREAS, all legal prerequisites to the adoption of this Resolution have occurred; and

WHEREAS, pursuant to Government Code Section 66020(d)(1), NOTICE IS HEREBY GIVEN that this project is subject to certain fees, dedications, reservations and other exactions as provided herein.

WHEREAS, all of the facts set forth in the Resolution are true and correct.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF MORENO VALLEY, CALIFORNIA, DOES HEREBY FIND, DETERMINE AND RESOLVE AS FOLLOWS:

- A. This City Council hereby specifically finds that all of the facts set forth above in this Resolution are true and correct.
- B. Based upon substantial evidence presented to this City Council during the meeting on February 19, 2019, including written and oral staff reports, public testimony and the record from the public hearing, this Planning Commission hereby specifically finds as follows:
  1. Conformance with General Plan Policies – The proposed use is consistent with the General Plan, and its goals, objectives, policies and programs.

FACT: State Planning Law required cities and counties to set forth goals, policies, and implementation programs for the long-term physical development of the community. Section 65302(a) of the Government Code requires preparation of a land use element that designates the proposed general distribution and general location of the uses of land for housing, business, industry, public buildings, and open space. The proposed development is located within the Commercial (C) land use designation of the Moreno Valley General Plan.

The CUP has been evaluated against General Plan Objective 2.4, which states that the Commercial designation is intended to “provide commercial areas within the City that are conveniently located, efficient, attractive, and have safe and easy pedestrian and vehicular circulation in order to serve the retail and service commercial needs of Moreno Valley residents and businesses.” Staff has confirmed that the proposed project does not conflict with any of the goals, objectives, policies, and programs of the General Plan. The addition of a new gas station provides a convenience to the surrounding neighborhood. The project as designed and conditioned would be consistent with the Commercial General Plan land use designation.

2. Conformance with Zoning Regulations – The proposed use complies with all applicable zoning and other regulations.

FACT: General Plan Policy 2.4.1 states the primary purpose of areas designated Commercial is to provide property for business purposes, including, but not limited to, retail stores, restaurants, banks, hotels, professional offices, personal services and repair services. The zoning



regulations identify the uses permitted on each parcel of land. The proposed project is within the Neighborhood Commercial (NC) zoning district. A Conditional Use Permit is required for this service station because the site is located within 300 feet of existing residences, which are zoned Medium/Low (ML) residential zone.

The project is designed in accordance with the development standards of the Municipal Code, Section 9.04 Commercial Districts, and Section 9.16 Design Guidelines. The project as designed and conditioned would comply with all applicable zoning and other regulations.

3. Health, Safety and Welfare – The proposed use will not be detrimental to the public health, safety or welfare or materially injurious to properties or improvements in the vicinity.

FACT: As designed and conditioned, the proposed 3,180 square foot ARCO AM/PM gas station, with 8 fuel islands and convenience store, carwash, and a Type-20 alcohol sales license for beer and wine project will provide acceptable levels of protection from natural and man-made hazards to life, health, and property consistent with General Goal 9.6.1. The project site is located within approximately one and three quarter miles from Fire Station No. 91. Therefore, adequate emergency services and response times can be provided to the site consistent with General Plan Goal 9.6.2.

Planning staff has reviewed the request in accordance with the California Environmental Quality Act (CEQA) Guidelines. An Initial Study was prepared by LSA Associates, Inc. in compliance with the California Environmental Quality Act (CEQA) Guidelines. The Initial Study examined the potential of the proposed project to have any significant impact on the environment. The Initial Study provides information in support of the finding that a Mitigated Negative Declaration is an appropriate CEQA document for the project, in that the proposed project, with the implementation of mitigation measures identified, will not have a significant effect on the environment. Therefore, the gas station with a convenience store, carwash, and a Type-20 alcohol sales license for beer and wine project will not cause substantial environmental damage or substantially and avoidably injure fish, wildlife, or their habitat.

The proposed project as designed and conditioned will result in a development that will minimize the potential for loss of life and protect residents and visitors to the City from physical injury and property damage due to seismic ground shaking and flooding as provided for in General Plan Objective 6.1 and General Plan Objective 6.2. The project as designed and conditioned will be consistent with the Neighborhood Commercial (NC) zoning.

4. Location, Design and Operation – The location, design and operation of the proposed project will be compatible with existing and planned land uses in the vicinity.

FACT: The project site is consistent with the Commercial (C) General Plan and Neighborhood Commercial (NC) zoning designations. Based on the project location at the intersection of Iris Avenue and Oliver Street, the gas station with a convenience store, car wash, and a Type-20 alcohol sales license for beer and wine will provide ease of access and convenience to motorists and residents.

Overall, the proposed project has been found to be consistent with the objectives, goals and policies outlined in the City's General Plan, as well as being compatible with the existing and planned land uses in the project area.

This project, as designed conforms to all development standards of the Neighborhood Commercial (NC) zone and the design guidelines for commercial developments prescribed in the City's Municipal Code. The architectural design of the building strives to achieve an attractive and appealing structure that will be located at a prominent street corner. The building is rectangular in shape, single story and has a contemporary modern style that includes a flat roof design, with a more prominent tower element as the building's main entrance. Exterior finishes proposed include brick veneer treatments, aluminum composite rustic wood finishes, aluminum awnings and stucco wall finishes with a blend of pewter and white as the primary colors. The gasoline station canopy and car wash building are complementary to the main building, using flat roofs, and incorporating the same brick veneer and stucco colors of the main building.

The proposed project will add economic vitality and architectural character along this portion of Iris Avenue, which is highly desirable given its proximity to Kaiser Permanente Hospital, medical offices and single-family homes. As designed and conditioned the proposed project is compatible with existing and proposed land uses in the vicinity.

#### C. FEES, DEDICATIONS, RESERVATIONS, AND OTHER EXACTIONS

##### 1. FEES

Impact, mitigation and other fees are due and payable under currently applicable ordinances and resolutions. These fees may include but are not limited to: Development Impact Fee, Transportation Uniform Mitigation Fee (TUMF), Multi-species Habitat Conservation Plan (MSHCP) Mitigation Fee, Stephens Kangaroo Habitat Conservation fee, Underground Utilities in lieu Fee, Area Drainage Plan fee, Bridge and Thoroughfare Mitigation fee (Future)

and Traffic Signal Mitigation fee. The final amount of fees payable is dependent upon information provided by the applicant and will be determined at the time the fees become due and payable.

Unless otherwise provided for by this Resolution, all impact fees shall be calculated and collected at the time and in the manner provided in Chapter 3.32 of the City of Moreno Valley Municipal Code or as so provided in the applicable ordinances and resolutions. The City expressly reserves the right to amend the fees and the fee calculations consistent with applicable law.

## 2. DEDICATIONS, RESERVATIONS, AND OTHER EXACTIONS

The adopted Conditions of Approval for PEN18-0016, incorporated herein by reference, may include dedications, reservations, and exactions pursuant to Government Code Section 66020 (d) (1).

## 3. CITY RIGHT TO MODIFY/ADJUST; PROTEST LIMITATIONS

The City expressly reserves the right to establish, modify or adjust any fee, dedication, reservation or other exaction to the extent permitted and as authorized by law.

Pursuant to Government Code Section 66020(d)(1), NOTICE IS FURTHER GIVEN that the 90 day period to protest the imposition of any impact fee, dedication, reservation, or other exaction described in this Resolution begins on the effective date of this Resolution and any such protest must be in a manner that complies with Section 66020(a) and failure to timely follow this procedure will bar any subsequent legal action to attack, review, set aside, void or annul imposition.

The right to protest the fees, dedications, reservations, or other exactions does not apply to planning, zoning, grading, or other similar application processing fees or service fees in connection with this project and it does not apply to any fees, dedication, reservations, or other exactions of which a notice has been given similar to this, nor does it revive challenges to any fees for which the applicable statute of limitations has previously expired.

BE IT FURTHER RESOLVED that the City Council HEREBY APPROVE Resolution No. 2019-XX, and thereby:

- 1. APPROVES PEN18-0016 Conditional Use Permit based on the findings contained in this resolution, and subject to the attached conditions of approval included as Exhibit A.

APPROVED AND ADOPTED this 19th day of February 2019.

\_\_\_\_\_  
 Mayor of the City of Moreno Valley

ATTEST:

\_\_\_\_\_  
 City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
 City Attorney

Attachment: Resolution Conditional Use Permit [Revision 1] (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

RESOLUTION JURAT

STATE OF CALIFORNIA )  
COUNTY OF RIVERSIDE ) ss.  
CITY OF MORENO VALLEY )

I, Patricia Jacquez-Nares, City Clerk of the City of Moreno Valley, California, do hereby certify that Resolution No. YYYY-\_\_\_ was duly and regularly adopted by the City Council of the City of Moreno Valley at a regular meeting thereof held on the \_\_\_\_ day of \_\_\_\_\_, YYYY by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

(Council Members, Mayor Pro Tem and Mayor)

\_\_\_\_\_  
CITY CLERK

(SEAL)

Attachment: Resolution Conditional Use Permit [Revision 1] (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

**CONDITIONS OF APPROVAL**

Conditional Use Permit (PEN18-0016)

Page 1

CITY OF MORENO VALLEY  
 CONDITIONS OF APPROVAL  
 Conditional Use Permit (PEN18-0016)

EFFECTIVE DATE:

EXPIRATION DATE:

**COMMUNITY DEVELOPMENT DEPARTMENT**Planning Division

1. A change or modification to the land use or the approved site plans may require a separate approval. Prior to any change or modification, the property owner shall contact the City of Moreno Valley Community Development Department to determine if a separate approval is required.
2. Any expansion to this use or exterior alterations will require the submittal of a separate application(s) and shall be reviewed and approved under separate permit(s). (MC 9.02.080)
3. The developer, or the developer's successor-in-interest, shall be responsible for maintaining any undeveloped portion of the site in a manner that provides for the control of weeds, erosion and dust. (MC 9.02.030)
4. This approval shall expire three years after the approval date of this project unless used or extended as provided for by the City of Moreno Valley Municipal Code; otherwise it shall become null and void and of no effect whatsoever. Use means the beginning of substantial construction contemplated by this approval within the three-year period, which is thereafter pursued to completion, or the beginning of substantial utilization contemplated by this approval. (MC 9.02.230)
5. In the event the use hereby permitted ceases operation for a period of one (1) year or more, or as defined in the current Municipal Code, this permit may be revoked in accordance with provisions of the Municipal Code.
6. All landscaped areas shall be maintained in a healthy and thriving condition, free from weeds, trash and debris. (MC 9.02.030)
7. The site shall be developed in accordance with the approved plans on file in the Community Development Department - Planning Division, the Municipal Code regulations, General Plan, and the conditions contained herein. Prior to any use of the project site or business activity being commenced thereon, all Conditions of Approval shall be completed to the satisfaction of the Planning Official. (MC 9.14.020)

**CONDITIONS OF APPROVAL**

Conditional Use Permit (PEN18-0016)

Page 2

8. All site plans, grading plans, landscape and irrigation plans, fence/wall plans, lighting plans and street improvement plans shall be coordinated for consistency with this approval.

Special Conditions

9. Drive-up or drive-through speaker system shall not be detectable above daytime ambient noise levels beyond the property line boundaries, and shall not exceed fifty-five (55) dBA at any one time beyond the boundaries of the property line. (MC9.09.080 C.6 and 9.10.140)
10. The following Mitigation Measures apply to this project:

Prior to the issuance of a grading permit, the Developer shall retain a professional archaeologist to conduct monitoring of all mass grading and trenching activities. The Project Archaeologist shall have the authority to temporarily redirect earthmoving activities in the event that suspected archaeological resources are unearthed during Project construction. The Project Archaeologist, in consultation with the Consulting Tribe(s), the contractor, and the City, shall develop a Cultural Resources Management Plan (CRMP) in consultation pursuant to the definition in AB52 to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the project site. A consulting tribe is defined as a tribe that initiated the AB 52 tribal consultation process for the Project, has not opted out of the AB52 consultation process, and has completed AB 52 consultation with the City as provided for in Cal Pub Res Code Section 21080.3.2(b)(1) of AB52. Details in the Plan shall include:

- a. Project grading and development scheduling;
- b. The Project archeologist and the Consulting Tribes(s) as defined in CR-1 shall attend the pre-grading meeting with the City, the construction manager and any contractors and will conduct a mandatory Cultural Resources Worker Sensitivity Training to those in attendance. The Training will include a brief review of the cultural sensitivity of the Project and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. All new construction personnel that will conduct earthwork or grading activities that begin work on the Pr
11. Prior to the issuance of a grading permit, the City of Moreno Valley shall secure agreements with the Soboba Band of Luiseño Indians and Pechanga Band of

**CONDITIONS OF APPROVAL**

Conditional Use Permit (PEN18-0016)

Page 3

Luiseño Indians for tribal monitoring. The City is also required to provide a minimum of 30 days advance notice to the tribes of all mass grading and trenching activities. The Native American Tribal Representatives shall have the authority to temporarily halt and redirect earth moving activities in the affected area in the event that suspected archaeological resources are unearthed. If the Native American Tribal Representatives suspect that an archaeological resource may have been unearthed, the Project Archaeologist or the Tribal Representatives shall immediately redirect grading operations in a 100-foot radius around the find to allow identification and evaluation of the suspected resource. In consultation with the Native American Tribal Representatives, the Project Archaeologist shall evaluate the suspected resource and make a determination of significance pursuant to California Public Resources Code Section 21083.2. (only applicable if tribes require monitoring)

12. In the event that Native American cultural resources are discovered during the course of grading (inadvertent discoveries), the following procedures shall be carried out for final disposition of the discoveries:

a) One or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be provided to the City of Moreno Valley Planning Department:

i. Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place they were found with no development affecting the integrity of the resources.

ii. Onsite reburial of the discovered items as detailed in the treatment plan required pursuant to Mitigation Measure CR-1. This shall include measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed. No recordation of sacred items is permitted without the written consent of all Consulting Native American Tribal Governments as defined in CR-1. The location for the future reburial area shall be identified on a confidential exhibit on file with the City, and concurred to by the Consulting Native American Tribal Governments prior to certification of the environmental document.

13. The City shall verify that the following note is included on the Grading Plan:

"If any suspected archaeological resources are discovered during ground-disturbing activities and the Project Archaeologist or Native American Tribal Representatives are not present, the construction supervisor is obligated to halt work in a 100-foot radius around the find and call the Project Archaeologist and the Tribal Representatives to the site to assess the significance of the find."



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14. If potential historic or cultural resources are uncovered during excavation or construction activities at the project site, work in the affected area must cease immediately and a qualified person meeting the Secretary of the Interior's standards (36 CFR 61), Tribal Representatives, and all site monitors per the Mitigation Measures, shall be consulted by the City to evaluate the find, and as appropriate recommend alternative measures to avoid, minimize or mitigate negative effects on the historic, or prehistoric resource. Determinations and recommendations by the consultant shall be immediately submitted to the Planning Division for consideration, and implemented as deemed appropriate by the Community Development Director, in consultation with the State Historic Preservation Officer (SHPO) and any and all Consulting Native American Tribes as defined in CR-1 before any further work commences in the affected area.
15. If human remains are discovered, no further disturbance shall occur in the affected area until the County Coroner has made necessary findings as to origin. If the County Coroner determines that the remains are potentially Native American, the California Native American Heritage Commission shall be notified within 24 hours of the published finding to be given a reasonable opportunity to identify the "most likely descendant". The "most likely descendant" shall then make recommendations, and engage in consultations concerning the treatment of the remains (California Public Resources Code 5097.98). (GP Objective 23.3, CEQA).
16. The Police Chief may require the business owner to provide future security within buildings and parking lot to address issues that arise from the operation of the business.
17. All licenses and approval from the California Department of Alcohol Beverage Control (ABC) must be secured prior to the sale of alcohol.
18. The alcoholic beverage license issued at this location shall be a Type-20 Off-Sale General Alcohol License (Package Store) authorizing the sale of beer and wine for the consumption off the premises where sold.
19. The coolers storing beer and wine which can be accessed by the public shall be locked between the hours of 2:00 a.m. and 6:00 a.m., or as provided for in Section 25631 of the Business and Professions Code which limits hours for sale of alcoholic beverages.
20. No trespassing/loitering signs as well as signs prohibiting the consumption of alcoholic beverages on-site shall be posted at the entrance to the convenience store.
21. Address numbers should be placed at multiple locations on the building and be illuminated.

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22. Prior to the start of any construction, temporary security fencing shall be erected. The fencing shall be a minimum of six (6) feet high with locking, gated access and shall remain through the duration of construction. Security shall remain in place until the project is completed or the above conditions no longer exist. (Security fencing is required if there is: construction, unsecured structures, unenclosed storage of materials and/or equipment, and/or the condition of the site constitutes a public hazard).
23. The site has been approved for a new 3,180 square foot gas station, operating 24 hours, with 8 fuel islands, a carwash, and convenience store with a Type-20 alcohol sales license for beer and wine. A change or modification shall require separate approval. For a Conditional Use Permit, violation may result in revocation of the Conditional Use Permit.
24. One outdoor trash receptacle shall be provided shall be provided for every ten (10) required parking spaces, with a minimum of one receptacle provided to be located front portion of the site for use by patrons. (MC 9.09.080 C 5.)
25. The use of the carwash and vacuum stations shall be limited to the operating hours of 8:00 a.m. and 10:00 p.m. The use of the carwash and vacuum stations shall be prohibited between 10:00 p.m. and 8:00 a.m.

Prior to Grading Permit

26. Prior to issuance of any grading permit, all Conditions of Approval, and Mitigation Measures shall be printed on the grading plans.
27. Prior to the issuance of grading permits, decorative (e.g. colored/scored concrete or as approve by the Planning Official) pedestrian pathways across circulation aisles/paths shall be provided throughout the development to connect the commercial buildings with open space and/or the public right-of-way. The pathways shall be shown on the precise grading plan. (GP Objective 46.8, DG)
28. Prior to issuance of any grading permits, mitigation measures contained in the Mitigation Monitoring Program approved with this project shall be implemented as provided therein. A mitigation monitoring fee, as provided by City ordinance, shall be paid by the applicant within 30 days of project approval. No City permit or approval shall be issued until such fee is paid. (CEQA)
29. Prior to issuance of grading permits, the developer shall pay the applicable Stephens' Kangaroo Rat (SKR) Habitat Conservation Plan mitigation fee. (Ord)
30. Within thirty (30) days prior to any grading or other land disturbance, a pre-construction survey for Burrowing Owls shall be conducted pursuant to the

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established guidelines of Multiple Species Habitat Conservation Plan. The pre-construction survey shall be submitted to the Planning Division prior to any disturbance of the site and/or grading permit issuance.

31. Prior to the issuance of grading permits, the site plan and grading plans shall show decorative hardscape (e.g. colored concrete, stamped concrete, pavers or as approved by the Planning Official) consistent and compatible with the design, color and materials of the proposed development for all driveway ingress/egress locations of the project.
32. Prior to issuance of grading permits, the developer shall submit wall/fence plans to the Planning Division for review and approval as follows:
  - A. 3-foot high decorative wall, solid hedge or berm shall be placed in any setback areas between a public right of way and a parking lot for screening.
  - B. Any proposed retaining walls shall also be decorative in nature, while the combination of retaining and other walls on top shall not exceed the height requirement.
33. Prior to the issuance of grading permits, a temporary project identification sign shall be erected on the site in a secure and visible manner. The sign shall be conspicuously posted at the site and remain in place until occupancy of the project. The sign shall include the following:
  - a. The name (if applicable) and address of the development.
  - b. The developer's name, address, and a 24-hour emergency telephone number.
34. Prior to issuance of grading permits, the location of the trash enclosure shall be included on the plans.

Prior to Building Permit

35. Prior to issuance of any grading permit, all Conditions of Approval and Mitigation Measures shall be printed on the building plans.
36. Prior to the issuance of building permits, the developer shall provide documentation that contact was made to the U.S. Postal Service to determine the appropriate type and location of mailboxes.
37. Prior to the issuance of building permits, proposed covered trash enclosures shall be included in the Planning review of the Fence and Wall plan or separate Planning submittal. The trash enclosure(s), including the roof materials, shall be compatible

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with the architecture, color and materials of the building(s) design. Trash enclosure areas shall include landscaping on three sides. Approved design plans shall be included in a Building submittal (Fence and Wall or building design plans). (GP Objective 43.6, DG)

38. Prior to issuance of any building permits, final landscaping and irrigation plans shall be submitted with a plan check fee for review and approval by the Planning Division. After the third plan check review for landscape plans, an additional plan check fee shall apply. The plans shall be prepared in accordance with the City's Landscape Requirements and shall include:
- A. A three (3) foot high decorative wall, solid hedge or berm shall be placed in any setback areas between a public right of way and a parking lot for screening.
  - B. End planters with required step outs and curbing shall be provided adjacent to end parking stalls as well as at the terminus of each aisle.
  - C. Drought tolerant landscape shall be used. Sod shall be limited to gathering areas.
  - D. Street trees shall be provided every 40 feet on center in the right of way.
  - E. On-site trees shall be planted at an equivalent of one (1) tree per thirty (30) linear feet of the perimeter of a parking lot and per thirty linear feet of a building dimension for the portions of the building visible from a parking lot or right of way. Trees may be massed for pleasing aesthetic effects.
  - F. Enhanced landscaping shall be provided at all driveway entries and street corner locations. The review of all utility boxes, transformers etc. shall be coordinated to provide adequate screening from public view.
  - G. Landscaping on three sides of any trash enclosure.
  - H. All site perimeter and parking lot landscape and irrigation shall be installed prior to the release of certificate of occupancy permit for the site.
39. Prior to issuance of building permits, the Planning Division shall review and approve the location and method of enclosure or screening of transformer cabinets, commercial gas meters and back flow preventers as shown on the final working drawings. Location and screening shall comply with the following criteria: transformer cabinets and commercial gas meters shall not be located within required setbacks and shall be screened from public view either by architectural treatment or landscaping; multiple electrical meters shall be fully enclosed and incorporated into the overall architectural design of the building(s); back-flow

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preventers shall be screened by landscaping. (GP Objective 43.30)

40. Prior to issuance of a building permit, the developer/property owner or developer's successor-in-interest shall pay all applicable impact fees due at permit issuance, including but not limited to Multi-species Habitat Conservation Plan (MSHCP) mitigation fees. (Ord)
41. Prior to building final, the developer/owner or developer's/owner's successor-in-interest shall pay all applicable impact fees, including but not limited to Transportation Uniform Mitigation fees (TUMF), and the City's adopted Development Impact Fees. (Ord)
42. Prior to or at building plan check submittal, the elevation plans shall include decorative lighting sconces on all sides of the buildings of the complex facing a parking lot, courtyard or plaza, or public right of way or open space to provide up-lighting and shadowing on the structures. Include drawings of the sconce details for each building within the elevation plans, approved by the Planning Division prior to building permit issuance.
43. Prior to or at building plan check submittal, two copies of a detailed, on-site, computer generated, point-by-point comparison lighting plan, including exterior building, parking lot, and landscaping lighting, with a plan check fee shall be submitted to the Planning Division for review and approval prior to the issuance of a building permit. The lighting plan shall be generated on the plot plan and shall be integrated with the final landscape plan. The plan shall indicate the manufacturer's specifications for light fixtures used, shall include style, illumination, location, height and method of shielding per the City's Municipal Code requirements. After the third plan check review for lighting plans, an additional plan check fee will apply. (MC 9.08.100, 9.16.280)
44. Prior to issuance of building permits, screening details shall be addressed on the building plans for roof top equipment submitted for Planning Division review and approval through the building plan check process. All equipment shall be completely screened so as not to be visible from public view, and the screening shall be an integral part of the building.
45. Prior to issuance of building permits, proposed covered trash enclosure(s) shall be included in the Planning review of the Fence and Wall plans. The trash enclosure(s), including the roof materials, shall be compatible with the architecture, color and materials of the building(s) design. Trash enclosure areas shall include landscaping on three sides unless located within the truck loading area. Approved design plans shall be included in a Building submittal (Fence and walls or building design plans). (GP Objective 43.6, DG)

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Building Division

46. The proposed non-residential project shall comply with the latest Federal Law, Americans with Disabilities Act, and State Law, California Code of Regulations, Title 24, Chapter 11B for accessibility standards for the disabled including access to the site, exits, bathrooms, work spaces, etc.
47. Prior to submittal, all new development, including residential second units, are required to obtain a valid property address prior to permit application. Addresses can be obtained by contacting the Building Safety Division at 951.413.3350.
48. Contact the Building Safety Division for permit application submittal requirements.
49. Any construction within the city shall only be completed between the hour of seven a.m. to seven p.m. Monday through Friday, excluding holidays and from eight a.m. to four p.m. on Saturday, unless written approval is obtained from the city building official or city engineer (Municipal Code Section 8.14.040.E).
50. Building plans submitted shall be signed and sealed by a California licensed design professional as required by the State Business and Professions Code.
51. The proposed development is subject to the payment of applicable processing fees as required by the City's current Fee Ordinance at the time a building permit application is submitted or prior to the issuance of permits as determined by the City.
52. The proposed project will be subject to approval by the Eastern Municipal Water District and all applicable fees and charges shall be paid prior to permit issuance. Contact the water district at 951.928.3777 for specific details.
53. All new structures shall be designed in conformance to the latest design standards adopted by the State of California in the California Building Code, (CBC) Part 2, Title 24, California Code of Regulations including requirements for allowable area, occupancy separations, fire suppression systems, accessibility, etc. The current code edition is the 2016 CBC.
54. The proposed non-residential project shall comply with 2016 California Green Building Standards Code, Section 5.106.5.3, mandatory requirements for Electric Vehicle Charging Station (EVCS).
55. The proposed project's occupancy shall be classified by the Building Official and must comply with exiting, occupancy separation(s) and minimum plumbing fixture requirements. Minimum plumbing fixtures shall be provided per the 2016 California Plumbing Code, Table 422.1. The occupant load and occupancy classification shall

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be determined in accordance with the California Building Code.

56. Prior to permit issuance, every applicant shall submit a properly completed Waste Management Plan (WMP), as a portion of the building or demolition permit process. (MC 8.80.030)
57. Prior to building final, all required landscaping and irrigation shall be installed per plan, certified by the Landscape Architect and inspected by the Planning Division. (MC 9.03.040, MC 9.17).
58. Prior to building final, Planning approved/stamped landscape plans shall be provided to the Community Development Department – Planning Division on a CD disk.
59. Prior to building final, all required and proposed fences and walls shall be constructed according to the approved plans on file in the Planning Division. (MC 9.080.070).
60. Prior to building final or Certificate of Occupancy, the owner or owner's representative shall provide documentation to the Planning Division that they have contacted the Moreno Valley Police Department to establish and maintain a relationship with the City of Moreno Valley Police Department and cooperate with the Problem Oriented Policing (POP) program, or its successors. [multi-family, night clubs, liquor stores]

**ECONOMIC DEVELOPMENT DEPARTMENT (EDD)**

61. New Moreno Valley businesses may work with the Economic Development Department to coordinate job recruitment fairs.
62. New Moreno Valley businesses may adopt a "First Source" approach to employee recruitment that gives notice of job openings to Moreno Valley residents for one week in advance of the public recruitment.
63. New Moreno Valley businesses are encouraged to hire local residents.
64. New Moreno Valley businesses are encouraged to provide a job fair flyer and/or web announcement to the City in advance of job recruitments, so that the City can assist in publicizing these events.
65. New Moreno Valley businesses may utilize the workforce recruitment services provided by the Moreno Valley Employment Resource Center ("ERC").

The ERC offers no cost assistance to businesses recruiting and training potential employees. Complimentary services include:

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- Job Announcements
- Applicant testing / pre-screening
- Interviewing
- Job Fair support
- Training space

**FIRE DEPARTMENT****Fire Prevention Bureau**

66. Prior to issuance of Certificate of Occupancy or Building Final, all commercial buildings shall display street numbers in a prominent location on the street side and rear access locations. The numerals shall be a minimum of twelve inches in height. (CFC 505.1, MVMC 8.36.060[I])
67. Prior to issuance of Certificate of Occupancy, approval shall be required from the County of Riverside Community Health Agency (Department of Environmental Health) and Moreno Valley Fire Prevention Bureau to maintain, store, use, handle materials, or conduct processes which produce conditions hazardous to life or property, and to install equipment used in connection with such activities. (CFC 105)
68. Prior to issuance of Building Permits, the applicant/developer shall participate in the Fire Impact Mitigation Program. (Fee Resolution as adopted by City Council)
69. Final fire and life safety conditions will be addressed when the Fire Prevention Bureau reviews building plans. These conditions will be based on occupancy, use, California Building Code (CBC), California Fire Code (CFC), and related codes, which are in effect at the time of building plan submittal.
70. The Fire Code Official is authorized to enforce the fire safety during construction requirements of Chapter 33. (CFC Chapter 33 & CBC Chapter 33)
71. Fire lanes and fire apparatus access roads shall have an unobstructed width of not less than twenty-four (24) feet and an unobstructed vertical clearance of not less than thirteen (13) feet six (6) inches. (CFC 503.2.1 and MVMC 8.36.060[E])
72. Prior to issuance of a Certificate of Occupancy or Building Final, a "Knox Box Rapid Entry System" shall be provided. The Knox-Box shall be installed in an accessible location approved by the Fire Code Official. All exterior security emergency access gates shall be electronically operated and be provided with Knox key switches for access by emergency personnel. (CFC 506.1)



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73. The minimum number of fire hydrants required, as well as the location and spacing of fire hydrants, shall comply with the C.F.C., MVMC, and NFPA 24. Fire hydrants shall be located no closer than 40 feet to a building. A fire hydrant shall be located within 50 feet of the fire department connection for buildings protected with a fire sprinkler system. The size and number of outlets required for the approved fire hydrants are (6" x 4" x 2 ½" x 2 ½") (CFC 507.5.1, 507.5.7, Appendix C, NFPA 24-7.2.3, MVMC 912.2.1)
74. During phased construction, dead end roadways and streets which have not been completed shall have a turn-around capable of accommodating fire apparatus. (CFC 503.1 and 503.2.5)
75. The Fire Prevention Bureau is required to set a minimum fire flow for the remodel or construction of all commercial buildings per CFC Appendix B and Table B105.1. The applicant/developer shall provide documentation to show there exists a water system capable of delivering said waterflow for 2 hour(s) duration at 20-PSI residual operating pressure. The required fire flow may be adjusted during the approval process to reflect changes in design, construction type, or automatic fire protection measures as approved by the Fire Prevention Bureau. Specific requirements for the project will be determined at time of submittal. (CFC 507.3, Appendix B)

**FINANCIAL & MANAGEMENT SERVICES DEPARTMENT****Moreno Valley Utility**

76. This project requires the installation of electric distribution facilities. A non-exclusive easement shall be provided to Moreno Valley Utility and shall include the rights of ingress and egress for the purpose of operation, maintenance, facility repair, and meter reading.
77. This project requires the installation of electric distribution facilities. The developer shall submit a detailed engineering plan showing design, location and schematics for the utility system to be approved by the City Engineer. In accordance with Government Code Section 66462, the Developer shall execute an agreement with the City providing for the installation, construction, improvement and dedication of the utility system following recordation of final map and/or concurrent with trenching operations and other improvements so long as said agreement incorporates the approved engineering plan and provides financial security to guarantee completion and dedication of the utility system.

The Developer shall coordinate and receive approval from the City Engineer to install, construct, improve, and dedicate to the City all utility infrastructure including but not limited to, conduit, equipment, vaults, ducts, wires, switches, conductors,

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transformers, and “bring-up” facilities including electrical capacity to serve the identified development and other adjoining, abutting, or benefiting projects as determined by Moreno Valley Utility – collectively referred to as “utility system”, to and through the development, along with any appurtenant real property easements, as determined by the City Engineer necessary for the distribution and/or delivery of any and all “utility services” to and within the project. For purposes of this condition, “utility services” shall mean electric, cable television, telecommunication (including video, voice, and data) and other similar services designated by the City Engineer. “Utility services” shall not include sewer, water, and natural gas services, which are addressed by other conditions of approval.

The City, or the City’s designee, shall utilize dedicated utility facilities to ensure safe, reliable, sustainable and cost effective delivery of utility services and maintain the integrity of streets and other public infrastructure. Developer shall, at developer's sole expense, install or cause the installation of such interconnection facilities as may be necessary to connect the electrical distribution infrastructure within the project to the Moreno Valley Utility owned and controlled electric distribution system.

78. Existing Moreno Valley Utility electrical infrastructure shall be preserved in place. The developer will be responsible, at developer’s expense, for any and all costs associated with the relocation of any of Moreno Valley Utility’s underground electrical distribution facilities, as determined by Moreno Valley Utility, which may be in conflict with any developer planned construction on the project site.
79. This project is subject to a Reimbursement Agreement. The Developer is responsible for a proportionate share of costs associated with electrical distribution infrastructure previously installed that directly benefits the project. Payment shall be required prior to issuance of occupancy.

**PUBLIC WORKS DEPARTMENT****Land Development**

80. The developer shall comply with all applicable City ordinances and resolutions including the City’s Municipal Code (MC) and if subdividing land, the Government Code (GC) of the State of California, specifically Sections 66410 through 66499.58, said sections also referred to as the Subdivision Map Act (SMA). [MC 9.14.010]
81. The final approved conditions of approval (COAs) and any applicable Mitigation Measures issued by the Planning Division shall be photographically or electronically placed on mylar sheets and included in the Grading and Street Improvement plans.
82. The developer shall monitor, supervise and control all construction related activities, so as to prevent these activities from causing a public nuisance, including but not

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limited to, insuring strict adherence to the following:

- (a) Removal of dirt, debris, or other construction material deposited on any public street no later than the end of each working day.
- (b) Observance of working hours as stipulated on permits issued by the Land Development Division.
- (c) The construction site shall accommodate the parking of all motor vehicles used by persons working at or providing deliveries to the site.
- (d) All dust control measures per South Coast Air Quality Management District (SCAQMD) requirements during the grading operations.

Violation of any condition, restriction or prohibition set forth in these conditions shall subject the owner, applicant, developer or contractor(s) to remedy as noted in City Municipal Code 8.14.090. In addition, the City Engineer or Building Official may suspend all construction related activities for violation of any condition, restriction or prohibition set forth in these conditions until such time as it has been determined that all operations and activities are in conformance with these conditions.

- 83. Drainage facilities (e.g., catch basins, water quality basins, etc.) with sump conditions shall be designed to convey the tributary 100-year storm flows. Secondary emergency escape shall also be provided.
- 84. In the event right-of-way or offsite easements are required to construct offsite improvements necessary for the orderly development of the surrounding area to meet the public health and safety needs, the developer shall make a good faith effort to acquire the needed right-of-way in accordance with the Land Development Division's administrative policy. If unsuccessful, the Developer shall enter into an agreement with the City to acquire the necessary right-of-way or offsite easements and complete the improvements at such time the City acquires the right-of-way or offsite easements which will permit the improvements to be made. The developer shall be responsible for all costs associated with the right-of-way or easement acquisition. [GC 66462.5]
- 85. If improvements associated with this project are not initiated within two (2) years of the date of approval of the Public Improvement Agreement (PIA), the City Engineer may require that the engineer's estimate for improvements associated with the project be modified to reflect current City construction costs in effect at the time of request for an extension of time for the PIA or issuance of a permit. [MC 9.14.210(B)(C)]
- 86. The developer shall protect downstream properties from damage caused by alteration of drainage patterns (i.e. concentration or diversion of flow, etc). Protection shall be provided by constructing adequate drainage facilities, including, but not limited to, modifying existing facilities or by securing a drainage easement. [MC 9.14.110]

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87. This project shall submit civil engineering design plans, reports and/or documents (prepared by a registered/licensed civil engineer) for review and approval by the City Engineer per the current submittal requirements, prior to the indicated threshold or as required by the City Engineer. The submittal consists of, but is not limited to, the following:
- a. Rough grading w/ erosion control plan (prior to grading permit issuance);
  - b. Precise grading w/ erosion control plan (prior to building permit issuance);
  - c. Street improvement plan (prior to encroachment permit issuance);
  - d. Final drainage study (prior to grading plan approval);
  - e. Final WQMP (prior to grading plan approval);
  - f. Sidewalk easement and offer of dedication (prior to grading permit issuance);
  - g. As-Built revision for all plans (prior to Occupancy release);

Prior to Grading Plan Approval

88. Resolution of all drainage issues shall be as approved by the City Engineer.
89. A final detailed drainage study (prepared by a registered/licensed civil engineer) shall be submitted for review and approved by the City Engineer. The study shall include, but not be limited to: existing and proposed hydrologic conditions as well as hydraulic calculations for all drainage control devices and storm drain lines. The study shall analyze 1, 3, 6 and 24-hour duration events for the 2, 5, 10 and 100-year storm events [MC 9.14.110(A.1)]. A digital (pdf) copy of the approved drainage study shall be submitted to the Land Development Division.
90. Emergency overflow areas shall be shown at all applicable drainage improvement locations in the event that the drainage improvement fails or exceeds full capacity. This may include, but not be limited to spillways at proposed basins, overflow pipes, or under sidewalk parkway culverts.
91. A final project-specific Water Quality Management Plan (WQMP) shall be submitted for review and approved by the City Engineer, which:
- a. Addresses Site Design Best Management Practices (BMPs) such as minimizing impervious areas, maximizing permeability, minimizes directly connected impervious areas to the City's street and storm drain systems, and conserves natural areas;
  - b. Incorporates Source Control BMPs and provides a detailed description of their implementation;
  - c. Describes the long-term operation and maintenance requirements for BMPs requiring maintenance; and
  - d. Describes the mechanism for funding the long-term operation and maintenance of the BMPs.

A copy of the final WQMP template can be obtained on the City's Website or by

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- contacting the Land Development Division. A digital (pdf) copy of the approved final project-specific Water Quality Management Plan (WQMP) shall be submitted to the Land Development Division.
92. The developer shall ensure compliance with the City Grading ordinance, these Conditions of Approval and the following criteria:
    - a. The project street and lot grading shall be designed in a manner that perpetuates the existing natural drainage patterns with respect to tributary drainage area and outlet points. Unless otherwise approved by the City Engineer, lot lines shall be located at the top of slopes.
    - b. Any grading that creates cut or fill slopes adjacent to the street shall provide erosion control, sight distance control, and slope easements as approved by the City Engineer.
    - c. All improvement plans are substantially complete and appropriate clearance letters are provided to the City.
    - d. A soils/geotechnical report (addressing the soil's stability and geological conditions of the site) shall be submitted to the Land Development Division for review. A digital (pdf) copy of the soils/geotechnical report shall be submitted to the Land Development Division.
  93. Grading plans (prepared by a registered/licensed civil engineer) shall be submitted for review and approved by the City Engineer per the current submittal requirements.
  94. The developer shall select Low Impact Development (LID) Best Management Practices (BMPs) designed per the latest version of the Water Quality Management Plan (WQMP) - a guidance document for the Santa Ana region of Riverside County.
  95. The developer shall submit recorded slope easements from adjacent property owners in all areas where grading resulting in slopes is proposed to take place outside of the project boundaries. For all other offsite grading, written permission from adjacent property owners shall be submitted.
  96. The developer shall pay all remaining plan check fees.
  97. For projects that will result in discharges of storm water associated with construction with a soil disturbance of one or more acres of land, the developer shall submit a Notice of Intent (NOI) and obtain a Waste Discharger's Identification number (WDID#) from the State Water Quality Control Board (SWQCB) which shall be noted on the grading plans.
  98. Prior to rough grading plan approval, the Applicant shall prepare and submit for approval a final, project-specific water quality management plan (F-WQMP). The F-WQMP shall be consistent with the approved P-WQMP, as well as in full conformance with the document; "Water Quality Management Plan - A Guidance

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Document for the Santa Ana Region of Riverside County” dated October 22, 2012. The F-WQMP shall be submitted and approved prior to application for and issuance of grading permits. At a minimum, the F-WQMP shall include the following: Site Design BMPs; Source Control BMPs, Treatment Control BMPs, Operation and Maintenance requirements for BMPs and sources of funding for BMP implementation.

(a) The Applicant has proposed to incorporate the use of bio-retention basins. Final design and sizing details of all BMPs must be provided in the first submittal of the F-WQMP. The Applicant acknowledges that more area than currently shown on the plans may be required to treat site runoff as required by the WQMP guidance document.

(b) The Applicant shall substantiate the applicable Hydrologic Condition of Concerns (HCOC) in Section F of the F-WQMP. The HCOC designates that the project will be exempt from mitigation requirements based on Exemption 3.

(c) All proposed LID BMP's shall be designed in accordance with the RCFC&WCD's Design Handbook for Low Impact Development Best Management Practices, dated September 2011.

(d) The proposed LID BMP's as identified in the project-specific P-WQMP shall be incorporated into the Final WQMP.

(e) The NPDES notes per City Standard Drawing No. MVFE-350-0 shall be included in the grading plans.

(f) Post-construction treatment control BMPs, once placed into operation for post-construction water quality control, shall not be used to treat runoff from construction sites or unstabilized areas of the site.

(g) Prior to precise grading plan approval, the grading plan shall show any proposed trash enclosure to include a cover (roof) and sufficient size for dual bin; one bin for trash and one bin for recyclables. The architecture shall be approved by the Planning Division and any structural approvals shall be made by the Building and Safety Division.

Prior to Grading Permit

99. A receipt showing payment of the Area Drainage Plan (ADP) fee to Riverside County Flood Control and Water Conservation District shall be submitted. [MC 9.14.100(O)]
100. A digital (pdf) copy of all approved grading plans shall be submitted to the Land Development Division.
101. Security, in the form of a cash deposit (preferable), or letter of credit shall be submitted as a guarantee of the implementation and maintenance of erosion control measures. At least twenty-five (25) percent of the required security shall be in the form of a cash deposit with the City. [MC 8.21.160(H)]

**CONDITIONS OF APPROVAL**

Conditional Use Permit (PEN18-0016)

Page 18

102. Security, in the form of a cash deposit (preferable), or letter of credit shall be submitted as a guarantee of the completion of the grading operations for the project. [MC 8.21.070]
103. The developer shall pay all applicable inspection fees.

Prior to Improvement Plan Approval

104. The developer is required to bring any existing access ramps adjacent to and fronting the project to current ADA (Americans with Disabilities Act) requirements. However, when work is required in an intersection that involves or impacts existing access ramps, all access ramps in that intersection shall be retrofitted to comply with current ADA requirements, unless otherwise approved by the City Engineer.
105. The developer shall submit clearances from all applicable agencies, and pay all applicable plan check fees.
106. The street improvement plans shall comply with current City policies, plans and applicable City standards (i.e. MVSI-160 series, etc.) throughout this project.
107. The hydrology study shall be designed to accept and properly convey all off-site drainage flowing onto or through the site. In the event that the City Engineer permits the use of streets for drainage purposes, the provisions of current City standards shall apply. Should the quantities exceed the street capacity or the use of streets be prohibited for drainage purposes, as in the case where one travel lane in each direction shall not be used for drainage conveyance for emergency vehicle access on streets classified as minor arterials and greater, the developer shall provide adequate facilities as approved by the City Engineer. [MC 9.14.110 A.2]
108. All public improvement plans (prepared by a licensed/registered civil engineer) shall be submitted for review and approved by the City Engineer per the current submittal requirements.
109. Any missing or deficient existing improvements along the project frontage within Iris Avenue or Oliver Street shall be constructed or secured for construction. The City Engineer may require the ultimate structural section for pavement to half-street width plus 18 feet or provide core test results confirming that existing pavement section is per current City Standards; additional signing & striping to accommodate increased traffic imposed by the development, etc.
110. For non-subdivision projects, all street dedications shall be free of encumbrances, irrevocably offered to the public and shall continue in force until the City accepts or abandons such offers, unless otherwise approved by the City Engineer.

**CONDITIONS OF APPROVAL**

Conditional Use Permit (PEN18-0016)

Page 19

111. The plans shall indicate any restrictions on trench repair pavement cuts to reflect the City's moratorium on disturbing newly-constructed pavement less than three (3) years old and recently slurry sealed streets less than one (1) year old. Pavement cuts for trench repairs may be allowed for emergency repairs or as specifically approved by the City Engineer.
112. All dry and wet utilities shall be shown on the plans and any crossings shall be potholed to determine actual location and elevation. Any conflicts shall be identified and addressed on the plans. The pothole survey data shall be submitted to Land Development with the public improvement plans for reference purposes only. The developer is responsible to coordinate with all affected utility companies and bear all costs of any utility relocation.
113. A 4-foot minimum pedestrian right-of-way dedication behind any driveway approach, per City Standard MVS1-112c-0, on both Iris Avenue and Oliver Street.

Prior to Encroachment Permit

114. A digital (pdf) copy of all approved improvement plans shall be submitted to the Land Development Division.
115. All applicable inspection fees shall be paid.
116. For non-subdivision projects, execution of a Public Improvement Agreement (PIA) and/or security (in the form of a cash deposit or other approved means) may be required as determined by the City Engineer. [MC 9.14.220]
117. Any work performed within public right-of-way requires an encroachment permit.

Prior to Building Permit

118. An engineered-fill certification, rough grade certification and compaction report shall be submitted for review and approved by the City Engineer. A digital (pdf) copy of the approved compaction report shall be submitted to the Land Development Division. All pads shall meet pad elevations per approved grading plans as noted by the setting of "blue-top" markers installed by a registered land surveyor or licensed civil engineer.
119. For non-subdivision projects, the developer shall guarantee the completion of all related public improvements required for this project by executing a Public Improvement Agreement (PIA) with the City and posting the required security. [MC 9.14.220]
120. For Commercial/Industrial projects, the owner may have to secure coverage under



**CONDITIONS OF APPROVAL**

Conditional Use Permit (PEN18-0016)

Page 20

the State's General Industrial Activities Storm Water Permit as issued by the State Water Resources Control Board.

121. A walk through with a Land Development Inspector shall be scheduled to inspect existing improvements within public right of way along project frontage. Any missing, damaged or substandard improvements including handicap access ramps that do not meet current City standards shall be required to be installed, replaced and/or repaired. The applicant shall post security to cover the cost of the repairs and complete the repairs within the time allowed in the public improvement agreement used to secure the improvements.
122. Certification to the line, grade, flow test and system invert elevations for the water quality control BMPs shall be submitted for review and approved by the City Engineer (excluding models homes).

Prior to Occupancy

123. All outstanding fees shall be paid.
124. All required as-built plans (prepared by a registered/licensed civil engineer) shall be submitted for review and approved by the City Engineer per the current submittal requirements.
125. The final/precise grade certification shall be submitted for review and approved by the City Engineer.
126. For commercial, industrial and multi-family projects, in compliance with Proposition 218, the developer shall agree to approve the City of Moreno Valley NPDES Regulatory Rate Schedule that is in place at the time of certificate of occupancy issuance. Under the current permit for storm water activities required as part of the National Pollutant Discharge Elimination System (NPDES) as mandated by the Federal Clean Water Act, this project is subject to the following requirements:
  - a. Select one of the following options to meet the financial responsibility to provide storm water utilities services for the required continuous operation, maintenance, monitoring system evaluations and enhancements, remediation and/or replacement, all in accordance with Resolution No. 2002-46.
    - i. Participate in the mail ballot proceeding in compliance with Proposition 218, for the Common Interest, Commercial, Industrial and Quasi-Public Use NPDES Regulatory Rate Schedule and pay all associated costs with the ballot process; or
    - ii. Establish an endowment to cover future City costs as specified in the Common Interest, Commercial, Industrial and Quasi-Public Use NPDES Regulatory Rate Schedule.
  - b. Notify the Special Districts Division of the intent to request building permits 90

**CONDITIONS OF APPROVAL**

Conditional Use Permit (PEN18-0016)

Page 21

days prior to their issuance and the financial option selected. The financial option selected shall be in place prior to the issuance of certificate of occupancy. [California Government Code & Municipal Code]

127. The developer shall complete all public improvements in conformance with current City standards including but not limited to the following:
- a. Street improvements including, but not limited to: pavement, base, curb and/or gutter, cross gutters, spandrel, sidewalks, drive approaches, pedestrian ramps, street lights, signing, striping, under sidewalk drains, landscaping and irrigation, medians, pavement tapers/transitions and traffic control devices as appropriate.
  - b. Storm drain facilities including, but not limited to: storm drain pipe, storm drain laterals, open channels, catch basins and local depressions.
  - c. City-owned utilities.
  - d. Sewer and water systems including, but not limited to: sanitary sewer, potable water and recycled water.
  - e. Under grounding of all existing and proposed utilities adjacent to and on-site. [MC 9.14.130]
  - f. Relocation of overhead electrical utility lines including, but not limited to: electrical, cable and telephone.
128. For commercial, industrial and multi-family projects, a “Stormwater Treatment Device and Control Measure Access and Maintenance Covenant” shall be recorded to provide public notice of the maintenance requirements to be implemented per the approved final project-specific WQMP. A boilerplate copy of the “Stormwater Treatment Device and Control Measure Access and Maintenance Covenant” can be obtained by contacting the Land Development Division.
129. The applicant shall ensure the following, pursuant to Section XII. I. of the 2010 NPDES Permit:
- a. Field verification that structural Site Design, Source Control and Treatment Control BMPs are designed, constructed and functional in accordance with the approved Final Water Quality Management Plan (WQMP).
  - b. Certification of best management practices (BMPs) from a state licensed civil engineer. An original WQMP BMP Certification shall be submitted for review and approved by the City Engineer.
130. The Developer shall comply with the following water quality related items:
- a. Notify the Land Development Division prior to construction and installation of all structural BMPs so that an inspection can be performed.
  - b. Demonstrate that all structural BMPs described in the approved final project-specific WQMP have been constructed and installed in conformance with the approved plans and specifications;
  - c. Demonstrate that Developer is prepared to implement all non-structural BMPs

**CONDITIONS OF APPROVAL**

Conditional Use Permit (PEN18-0016)

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described in the approved final project-specific WQMP; and

d. Demonstrate that an adequate number of copies of the approved final project-specific WQMP are available for future owners/occupants.

e. Clean and repair the water quality BMP's, including re-grading to approved civil drawing if necessary.

f. Obtain approval and complete installation of the irrigation and landscaping.

Special Districts Division

131. Existing turf parkway along Iris Ave. in front of the project shall become part of the on-site landscaping for this project. Any existing irrigation in this area shall be abandoned, and new irrigation installed as part of the on-site irrigation system. Special Districts shall be contacted to coordinate capping off of existing irrigation lines. Contact Dan Monto, Landscape Services Supervisor, @ (951) 413-3480.
132. The ongoing maintenance of any landscaping required to be installed behind the curb shall be the responsibility of the property owner.
133. Any damage to existing landscape areas maintained by the City of Moreno Valley due to project construction shall be repaired/replaced by the Developer, or Developer's successors in interest, at no cost to the City of Moreno Valley.
134. The parcel(s) associated with this project have been incorporated into the Moreno Valley Community Services District Zone A (Parks & Community Services), Zone C (Arterial Street Lighting), and Landscape Maintenance District (LMD) 2014-02 Zone 04 (Moreno Valley Ranch East). All assessable parcels therein shall be subject to annual parcel taxes for Zone A and Zone C and an annual assessment for LMD 2014-02 Zone 04 for operations and capital improvements.
135. This project has been identified to potentially be included in the formation of a Map Act Area of Benefit Special District for the construction of major thoroughfares and/or freeway improvements. The property owner(s) shall participate in such District and pay any special tax, assessment, or fee levied upon the project property for such District. At the time of the public hearing to consider formation of the district, the property owner(s) will not protest the formation, but will retain the right to object any eventual assessment that is not equitable should the financial burden of the assessment not be reasonably proportionate to the benefit the affected property obtains from the improvements to be installed. The Developer must notify the Special Districts Division at 951.413.3480 or at [specialdistricts@moval.org](mailto:specialdistricts@moval.org) of its selected financial option when submitting an application for the first building permit to determine whether the development will be subjected to this condition. If subject to the condition, the special election requires a 90 day process in compliance with the provisions of Article 13C of the California Constitution. (Street & Highway Code, GP Objective 2.14.2, MC 9.14.100).

**CONDITIONS OF APPROVAL**

Conditional Use Permit (PEN18-0016)

Page 23

136. Commercial (BP) If Land Development, a Division of the Public Works Department, requires this project to supply a funding source necessary to provide for, but not limited to, stormwater utilities services for the continuous operation, remediation and/or replacement, monitoring, systems evaluations and enhancement of on-site facilities and performing annual inspections of the affected areas to ensure compliance with state mandated stormwater regulations, a funding source needs to be established. The Developer must notify the Special Districts Division at 951.413.3480 or at [specialdistricts@moval.org](mailto:specialdistricts@moval.org) of its selected financial option for the National Pollution Discharge Elimination System (NPDES) program when submitting the application for the first building permit issuance (see Land Development's related condition). Participating in a special election the process requires a 90 day period prior to the City's issuance of a building permit. This allows adequate time to be in compliance with the provisions of Article 13D of the California Constitution. (California Health and Safety Code Sections 5473 through 5473.8 (Ord. 708 Section 3.1, 2006) & City of Moreno Valley Municipal Code Title 3, Section 3.50.050.)
137. This project has been identified to be included in the formation of a Community Facilities District (Mello-Roos) for Public Safety services, including but not limited to Police, Fire Protection, Paramedic Services, Park Rangers, and Animal Control services. The property owner(s) shall not protest the formation; however, they retain the right to object to the rate and method of maximum special tax. In compliance with Proposition 218, the property owner shall agree to approve the mail ballot proceeding (special election) for either formation of the CFD or annexation into an existing district. The Developer must notify the Special Districts Division at 951.413.3480 or at [specialdistricts@moval.org](mailto:specialdistricts@moval.org) when submitting the application for building permit issuance to determine the requirement for participation. If the first building permit is pulled prior to formation of the district, this condition will not apply. If the condition applies, the special election will require a minimum of 90 days prior to issuance of the first building permit. This allows adequate time to be in compliance with the provisions of Article 13C of the California Constitution. (California Government Code Section 53313 et. seq.)
138. This project is conditioned for a proposed district to provide a funding source for the operation and maintenance of public improvements and/or services associated with new development in that territory. The Developer shall satisfy this condition with one of the options outlined below.
- a. Participate in a special election for maintenance/services and pay all associated costs of the election process and formation, if any. Financing may be structured through a Community Facilities District, Landscape and Lighting Maintenance District, or other financing structure as determined by the City; or

**CONDITIONS OF APPROVAL**

Conditional Use Permit (PEN18-0016)

Page 24

b. Establish an endowment fund to cover the future maintenance and/or service costs.

The Developer must notify the Special Districts Division at 951.413.3480 or at specialdistricts@moval.org when submitting the application for building permit issuance. If the first building permit is pulled prior to formation of the district, this condition will not apply. If the district has been or is in the process of being formed the Developer must inform the Special Districts Division of its selected financing option (a. or b. above). The option for participating in a special election requires 90 days to complete the special election process. This allows adequate time to be in compliance with the provisions of Article 13C of the California Constitution.

The financial option selected shall be in place prior to the issuance of the first certificate of occupancy for the project.

Transportation Engineering Division

139. Conditions of approval may be modified or added if a phasing plan is submitted for this development.
140. All proposed on-site traffic signing and striping should be accordance with the latest California Manual on Uniform Traffic Control Devices (CAMUTCD).
141. Iris Avenue is classified as a Divided Major Arterial at this location (134' RW/110'CC) per City Standard Plan No. MVSI-101A-0. Communication conduits along project frontage may be required per City Standard Plan No. MVSI-186-0. Any improvements undertaken by this project shall be consistent with the City's standards for this facility.
142. Oliver Street is classified as a Minor Arterial (88'RW/64'CC) per City Standard Plan No. MVSI-105A-1. Any improvements undertaken by this project shall be consistent with the City's standards for this facility.
143. The driveways shall conform to City of Moreno Valley Standard No. MVSI-112C-0 for Commercial Driveway Approaches. Access at the driveways shall be allowed as follows:
- Iris Avenue: right turn in/out only.
  - Oliver Street: right turn in/out only.
144. Prior to final approval of the landscape plans and construction plans for any type of fencing or monument sign, the project plans shall demonstrate that sight distance at the project driveway conforms to City Standard Plan No. MVSI-164A-0 through MVSI-164C-0. Trees, plants, shrubs, fence and monument sign shall not be located

**CONDITIONS OF APPROVAL**

Conditional Use Permit (PEN18-0016)

Page 25

in an area that obstructs the drivers' line-of-sight.

145. Prior to the final approval of the street improvement plans, a signing and striping plan shall be prepared per City of Moreno Valley Standard Plans - Section 4 for all streets along the project frontages. Signing and striping plans shall be prepared per the latest edition of the California Manual on Uniform Traffic Control Devices (CAMUTCD) and current City of Moreno Valley Standard Plans by a qualified registered civil or traffic engineer.
146. Prior to the final approval of the street improvement plans, a median improvement plan shall be prepared by a registered civil engineer for a raised concrete median on Oliver Street along the project frontage.
147. Prior to the final approval of the street improvement plans, a bus turnout/right turn lane combination shall be designed per the latest City of Moreno Valley Standard Plans for westbound traffic and shall be located on the north side of Iris Avenue, between the project driveway and Oliver Street.
148. Prior to issuance of an encroachment permit for work within the public right-of-way, construction traffic control plans prepared by a qualified, registered Civil or Traffic engineer shall be required for plan approval by the City Traffic Engineer.
149. Prior to final approval of any landscaping or monument sign plans, the project plans shall demonstrate that sight distance at the project driveways conforms to City Standard Plan No. MVS1-164A, B, C-0.
150. Prior to issuance of Certificate of Occupancy, raised median improvement on Oliver Street along the project frontage shall be completed and fully operational per the approved plans to the satisfaction of the City Engineer. Median construction shall include but not be limited to: paving, concrete curbs, signing and striping.
151. Prior to issuance of Certificate of Occupancy, all signing and striping shall be installed per current City Standards and the approved plans.
152. Prior to issuance of Certificate of Occupancy, a bus turnout/right turn lane combination shall be installed for westbound traffic and shall be located on the north side of Iris Avenue, between the project driveway and Oliver Street. Bus turnout construction shall include but not be limited to: paving, concrete curbs, ADA access ramps, landscaping, signing and striping.

**PARKS & COMMUNITY SERVICES DEPARTMENT**

153. The parcel(s) associated with this project have been incorporated into the Moreno Valley Community Services District Zone A (Parks and Community Services). All assessable parcels therein shall be subject to the annual Zone 'A' charge for

**CONDITIONS OF APPROVAL**

Conditional Use Permit (PEN18-0016)

Page 26

operations and capital improvements. Proof of such shall be supplied to Parks and Community Services upon Final Map and at Building Permits.

Attachment: Exhibit A - Conditions of Approval (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



**PROJECT DATA**

ASSESSOR PARCEL NUMBER  
APN 486-310-038

LEGAL DESCRIPTION  
PARCEL 1 AS SHOWN ON PARCEL MAP NO. 33361, RECORDED IN BOOK 239, PAGES 30-32 OF PARCEL MAPS, OFFICIAL RECORD OF RIVERSIDE COUNTY, CALIFORNIA, LYING WITHIN SECTION 22, TOWNSHIP 3 SOUTH, RANGE 3 WEST, S.B.M., CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

SITE AREA  
1.58 ACRES, ±68,779 S.F.

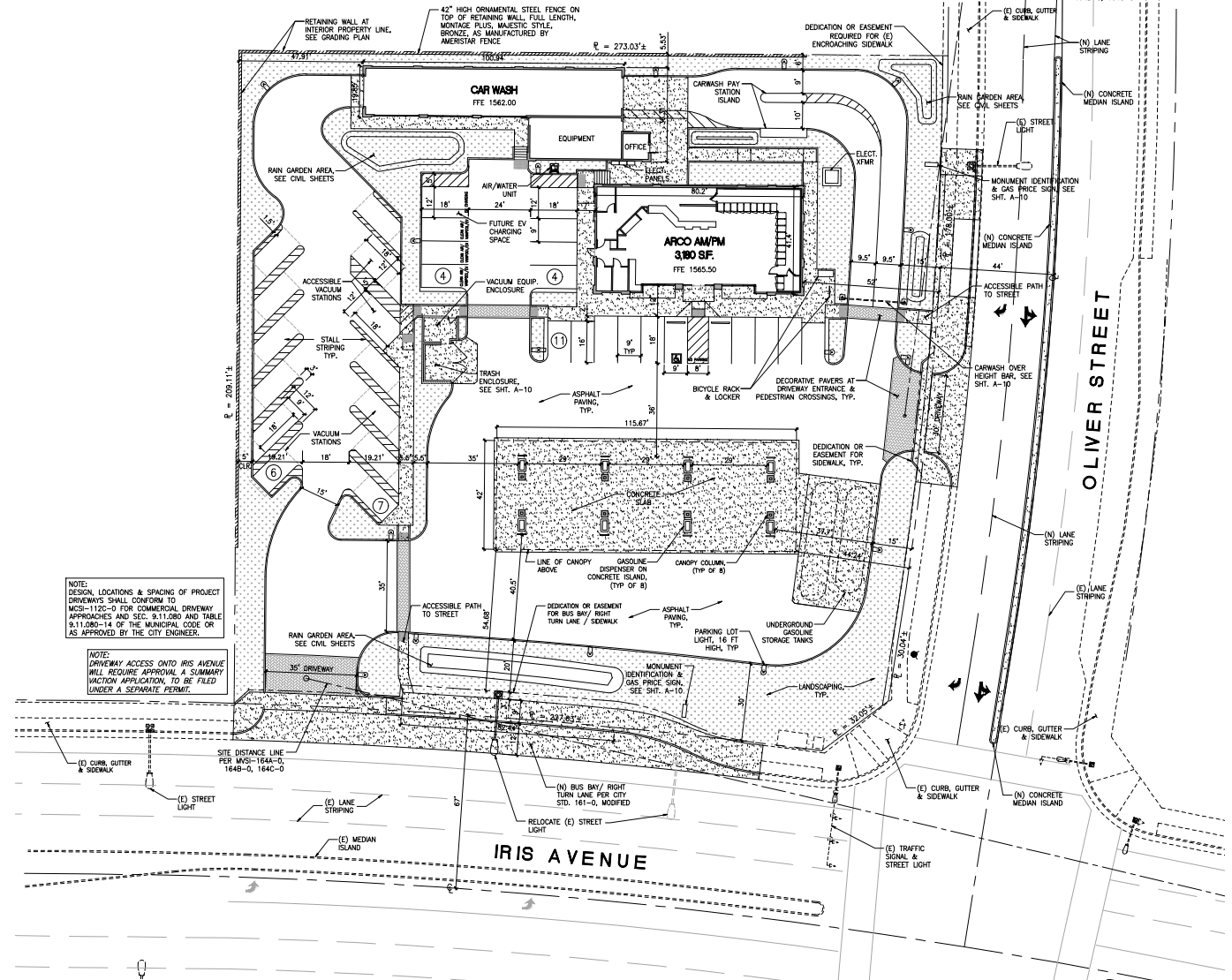
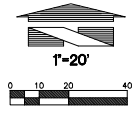
BUILDINGS  
CONVENIENCE STORE: 3,180 S.F.  
CARWASH: 2,605 S.F.  
FUELING AREA CANOPY: 4,858 S.F.

LOT COVERAGE  
15.3% (INCLUDES FUELING AREA CANOPY)

LANDSCAPE COVERAGE  
16,811 S.F. (24.4%)

PARKING  
REQUIRED:  
C-STORE: 3,180 S.F. / 225 = 14.13 (15)  
CARWASH: 10 ± 1 PER 2 PER EMPLOYEE = 11  
TOTAL: = 26  
PROVIDED: 32

FOR  
**ARCO AM/PM**  
PTN OF SEC. 22,  
TWP. 3 S., RGE 3 WEST, S.B.M.  
RIVERSIDE COUNTY STATE OF CALIFORNIA



NOTE:  
DESIGN, LOCATIONS & SPACING OF PROJECT DRIVEWAYS SHALL CONFORM TO MCS-112C-0 FOR COMMERCIAL DRIVEWAY APPROACHES AND SEC. 9.11.08D AND TABLE 9.11.08E-14 OF THE MUNICIPAL CODE OR AS APPROVED BY THE CITY ENGINEER.

NOTE:  
DRIVEWAY ACCESS ONTO IRIS AVENUE WILL REQUIRE APPROVAL A SUMMARY ACTION APPLICATION TO BE FILED UNDER A SEPARATE PERMIT.

18215 72ND AVENUE  
KENT, WA 98032  
(425)251-6222  
(425)251-6762 FAX

CIVIL ENGINEERING, LAND SURVEYING, ENVIRONMENTAL

NO.	DATE	REVISION
1	5/20/18	CITY COM
2	6/01/18	CITY COM
3	8/07/18	CITY COM

Attachment: Site Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

DEVELOPMENT INFORMATION

ARCO N  
3000 am/1  
FUEL CANI  
w/ 8 MP2  
26'x100' CAR

SITE ADDRESS  
NWC IRIS AVE @ O  
MORENO VALLE

FACILITY #

DESIGNED BY	ALAN
DRAWN BY	SK
VERSION	PREL

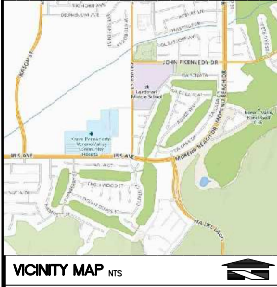
DRAWING TITLE  
ARCHITECT  
SITE PL

SHEET NO.

Preliminary Not For Construction

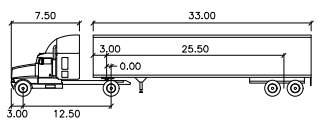
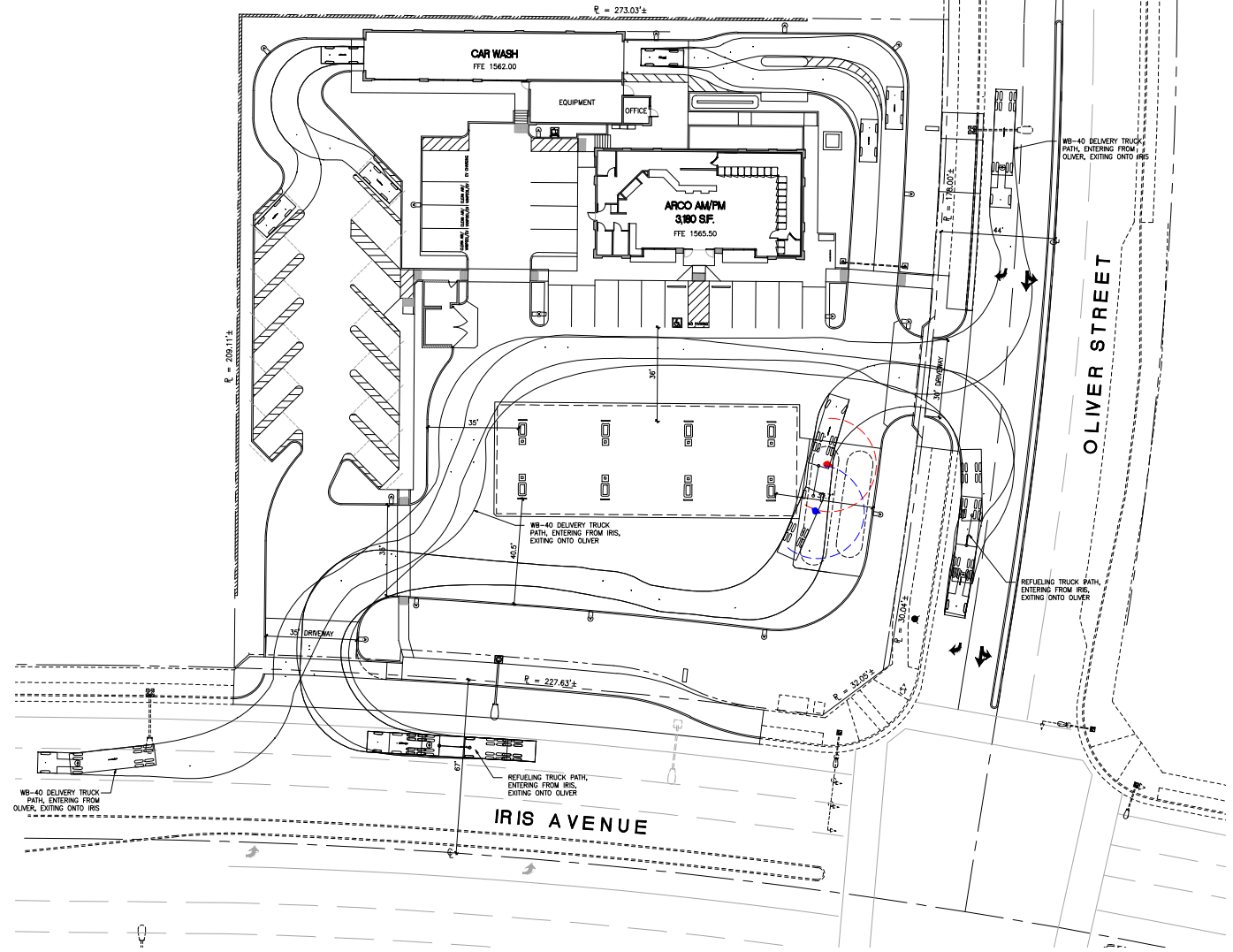
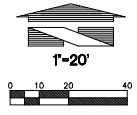
PEN18-0016 SP-





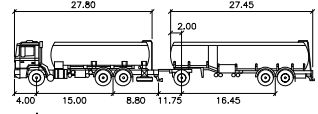
VICINITY MAP NTS

FOR  
**ARCO AM/PM**  
PTN OF SEC. 22,  
TWP. 3 S., RGE 3 WEST, S.B.M  
RIVERSIDE COUNTY STATE OF CALIFORNIA



WB-40 feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.00	Steering Angle	: 20.3
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.00		



Arco65' feet

First Part Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.00	Steering Angle	: 35.0
First Part Track	: 7.70	Articulating Angle	: 70.0
Trailer Track	: 7.70		



18215 72ND AVENUE  
KENT, WA 98032  
(425)251-6222  
(425)251-8782 FAX

CIVIL ENGINEERING, LAND SURVEYING, ENVIRONMENTAL

NO.	DATE	REVISION
1	3/20/18	CITY COM
2	6/01/18	CITY COM
3	8/07/18	CITY COM

DEVELOPMENT INFORMATION:  
**ARCO N**  
3000 am/i  
FUEL CAN/  
w/ 8 MPF  
26'x100' CAR

SITE ADDRESS:  
NWC IRIS AVE @ O  
MORENO VALL

FACILITY #

DESIGNED BY	ALANK
DRAWN BY	DIG
VERSION	SK
	ALANK
	PROJEC

DRAWING TITLE:  
**TRUCK P  
SITE PL**

SHEET NO:

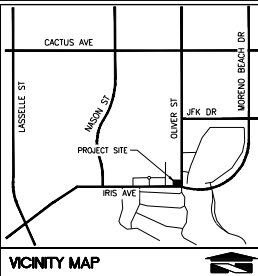
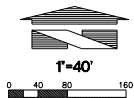
**SP-1**

PEN18-0016

Preliminary Not For Construction

Attachment: Site Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

PRELIMINARY GRADING COVER SHEET FOR ARCO AM/PM PTN OF SEC. 22, TWP. 3 S., RGE 3 WEST, S.B.M. RIVERSIDE COUNTY STATE OF CALIFORNIA



18215 72ND AVENUE, KENT, WA 98032 (425)251-6222 (425)251-8782 FAX (425)251-8782

Table with columns: NO, DATE, REVISION. Rows: 1/20/18 CITY CO, 6/19/18 CITY CO, 8/07/18 CITY CO, 9/26/18 CITY CO.

SURVEY INFORMATION

TOPD AND ALTA SURVEY PERFORMED BY SALEM ENGINEERING GROUP NOVEMBER, 2017. CALCULATED AREA: 68,787± SQ. FT. (1.56± ACRES). CALCULATED AREA AFTER DEDICATIONS OF ROW: 67,376± SQ. FT. (1.55± ACRES). APN: 486-310-039

PARCELS 1 AS SHOWN ON PARCEL MAP NO. 33361, RECORDED IN BOOK 239, PAGES 35-32 OF PARCEL MAPS, OFFICIAL RECORD OF RIVERSIDE COUNTY, CALIFORNIA. LYING WITHIN SECTION 22, TOWNSHIP 3 SOUTH, RANGE 3 WEST, S.B.M. CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.

BENCHMARK: RIVERSIDE COUNTY VERTICAL CONTROL POINT "M-32", BEING A 1" IRON PIPE AND COUNTY TAG STAMPED COUNTY SURVEYOR IN A HAND WELL AT THE INTERSECTION PERMS BOULEVARD AND IRIS AVENUE. 58.55 FEET SOUTHWEST OF A CHISELED "C" IN A 3" IRON CORNER POST. 40.89 FEET NORTHWEST OF WALK AND TAG IN THE WEST SIDE POWER POLE #213136, 34.69 FEET NORTHWEST OF A NAIL AND TAG SET IN SOUTHWEST SIDE TELEPHONE POLE \*15160, A

FLOOD NOTE: THE SUBJECT PROPERTY IS LOCATED WITHIN A ZONE "X" DESIGNATION PER FLOOD INSURANCE RATE MAP NO. 0606507700 MAP EFFECTIVE DATE AUGUST 28, 2009. AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

LEGAL DESCRIPTION

THE LAND IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, CALIFORNIA, DESCRIBED AS FOLLOWS: PARCEL A: PARCEL 1 OF PARCEL MAP NO. 33361, IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 239, PAGE 30 THROUGH 32 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

UTILITY AND SERVICE PURVEYORS

POWER: SOUTHERN CALIFORNIA EDISON; GAS: THE GAS COMPANY; PHONE: FRONTIER; CABLE: FRONTIER; WATER: EASTERN MUNICIPAL WATER DISTRICT; SEWER: EASTERN MUNICIPAL WATER DISTRICT; SCHOOL DISTRICT: MORENO VALLEY UNITED SCHOOL DISTRICT

APPLICANT: SATER OIL INTERNATIONAL, LLC 683 CLIFFSIDE DRIVE SAN DIMAS, CA 91773 PHONE: (909) 293-7588 CONTACT: ERIC LEVAUGHN

ENGINEER: BARGHAUSEN CONSULTING ENGINEERS, INC. 18215 72ND AVE. SOUTH KENT, WA 98032 TEL: (425) 251-6222 FAX: (425) 251-8782 CONTACT: HAL GRUBBE, P.E.

GEOTECHNICAL

SALEM ENGINEERING GROUP, INC. 11650 MISSION PARK DR., #108 RANCHO CUCAMONGA, CA 91750 TEL: (909) 980-6455 FAX: (909) 980-6435

ARCHITECT

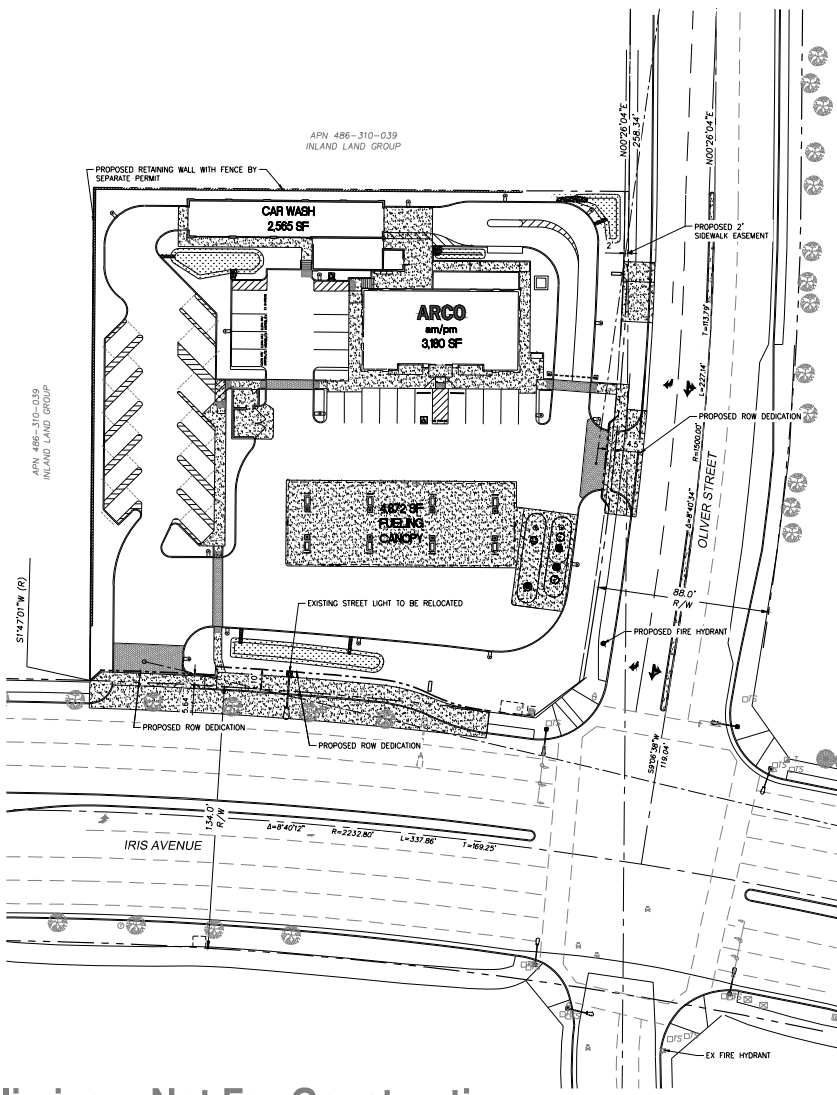
BARGHAUSEN CONSULTING ENGINEERS, INC. 18215 72ND AVE. SOUTH KENT, WA 98032 TEL: (425) 251-6222 FAX: (425) 251-8782 CONTACT: DAN GOALWIN

LANDSCAPE ARCHITECT

BARGHAUSEN CONSULTING ENGINEERS, INC. 18215 72ND AVE. SOUTH KENT, WA 98032 TEL: (425) 251-6222 FAX: (425) 251-8782 CONTACT: JEFF WARELY, R.L.A.

SURVEYOR

SALEM ENGINEERING GROUP, INC. 11650 MISSION PARK DRIVE, SUITE 108 RANCHO CUCAMONGA CA 91730 TEL: (909) 980-6455



EASEMENTS:

1. A NONEXCLUSIVE, PERMANENT SEWER AND ACCESS EASEMENT OVER AND ACROSS THAT CERTAIN PARCEL OF LAND SITUATED IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, BEING A PORTION OF LOT 7 AND LOT 8 IN BLOCK 151, OF BEAR VALLEY AND ALESSANDRO DEVELOPMENTS CO. AS SHOWN BY MAP ON FILE IN BOOK 11 OF MAPS, PAGE 10, RECORDS OF SAN BERNARDINO COUNTY, CALIFORNIA LYING WITHIN SECTION 22, TOWNSHIP 3 SOUTH, RANGE 3 WEST, S.B.M.

LEGEND table with columns: PROPOSED, EXISTING. Rows include: CURB AND OUTER, BARRIER CURB, CONCRETE, ASPHALT, SWALE, SANICUT, CONTOUR, WATER, WATER METER, STORM, CONCRETE CONTROL JOINT, CONCRETE EXPANSION JOINT, SANITARY, GAS, POWER, PAINT STRIPE, NEW RETAINING WALL, TYPE 1 CATCH BASIN, TYPE 2 CATCH BASIN, SANITARY SEWER CLEANOUT, LOT LIGHT, FIRE HYDRANT, CURB, PAINT STRIPE, WATER, SANITARY, GAS, POWER OVERHEAD, POWER UNDERGROUND, CH/JUC TEL. LINE, IRRIGATION CONTROL, ELECTRICAL TRANSFORMER, ELECTRICAL METER, LUMINAIRE (LUM.), WATER VALVE (WV), FIRE HYDRANT, SS MANHOLE, TREES, TRAFFIC SWITCH, TELEPHONE RISER.

Preliminary Not For Construction

NOT FOR CONSTRUCTION

PEN18-0016

C1.

Attachment: Preliminary Grading Plans (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



18215 72ND AVENUE  
KENT, WA 98032  
(425)251-8222  
(425)251-8782 FAX

CIVIL ENGINEERING, LAND SURVEYING, ENVIRONMENTAL ENGINEERING

NO.	DATE	REVISION
1	5/20/18	CITY CD
2	6/5/18	CITY CD
3	8/07/18	CITY CD
4	9/26/18	CITY CD

SCALE

DEVELOPMENT PERCENTAGE

ARCO N  
3000 sq ft  
FUEL CAN  
w/ 5 MPI  
26'x100' CARP

SITE ADDRESS:  
NWC IRIS AVE @ C  
MORENO VALL

FACILITY #

DESIGNED BY: ALAN  
CHECKED BY: JEFF  
DRAWN BY: JEFF  
VERSION: 2.1

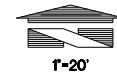
DRAWING TITLE:  
PRELIMINARY GRADING

SHEET NO.

C2.

Attachment: Preliminary Grading Plans (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

PRELIMINARY GRADING PLAN FOR  
**ARCO AM/PM**  
PTN OF SEC. 22,  
TWP. 3 S., RGE 3 WEST, S.B.M  
RIVERSIDE COUNTY STATE OF CALIFORNIA



**RETAINING WALL ELEVATIONS:**

NOTE: WALLS ARE PER SEPARATE PERMIT

DIFFERENCE IN ELEVATIONS

PROPERTY LINE RETAINING WALL

TW=TOP OF RETAINING WALL ELEVATION

BW=FACE OF WALL AT FINISHED GRADE

DIFFERENCE BETWEEN TW AND BW

TF=TOP OF RETAINING WALL FOOTING

**ESTIMATED EARTHWORK QUANTITIES:**

CUT: 1000 CY

FILL: 5000 CY

NET: 4000 CY (FILL)

AREA TO BE DISTURBED = 158 AC

EARTHWORK QUANTITIES ARE APPROXIMATE AND HIGHLY

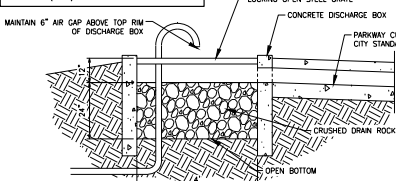
DEPENDANT ON SOIL CONDITIONS ENCOUNTERED DURING

CONSTRUCTION. CONTRACTOR SHOULD PERFORM INDEPENDENT

ESTIMATE FOR BIDDING.

**STORM STRUCTURES:**

CB #1 - PUMP STA. 60" MH W/ PUMP EQUIPMENT RM 1565.07 E 1565.42 (18" W) E 1556.19 (12" N)	CB#9, D2424, W/STANDARD GRATE RM 1564.47 E 1562.91 (6" E)
CB#2, 48" MH W/ SOLID LOCKING LID RM 1565.01 E 1565.55 (18" W) E 1555.95 (18" E)	CB#10, D2424, W/STANDARD GRATE RM 1561.90 E 1567.40 (6" NW) E 1557.02 (6" W) E 1557.40 (6" S)
CB#3, D2424 W/ SOLID LOCKING LID RM 1565.01 E 1565.58 (18" W) E 1556.58 (18" E)	CB#11, 48" MH W/ SOLID LOCKING LID RM 1564.61 E 1566.02 (12" S) E 1566.02 (8" N) E 1557.02 (6" W) E 1557.00 (6" SW) E 1556.02 (18" E)
CB#4, D2424, W/STANDARD GRATE RM 1560.20 E 1566.70 (6" W) E 1556.70 (6" E)	CB#12, D2424 W/STANDARD GRATE RM 1561.89 E 1559.11 (6" NW)
CB#5, D2424, W/STANDARD GRATE RM 1560.55 E 1566.44 (6" W) E 1556.44 (8" S)	CB#13, PUBLIC CATCH BASIN PER COM STANDARD PLAN 300A RM 1561.10 E 1567.43 (12" E)
CB#6, D2424, W/STANDARD GRATE RM 1560.75 E 1566.72 (12" W) E 1556.72 (8" E)	CB#14, D2424, W/STANDARD GRATE RM 1560.35 E 1566.44 (6" S) BUBBLE UP STRUCTURE E 1556.72 (8" N)
CB#7, D2424, W/STANDARD GRATE RM 1561.75 E 1567.04 (12" W) BUBBLE UP STRUCTURE E 1556.72 (8" N)	SDCO#1, W/ TRAFFIC RATED LID RM 1565.06 E 1562.77 (8" W) E 1562.77 (8" N)
CB#8, D2424, W/STANDARD GRATE RM 1561.75 E 1569.07 (6" SE) E 1559.07 (6" N)	



**STORM DISCHARGE BOX**

NOT TO SCALE

**SURFACE SLOPES:**

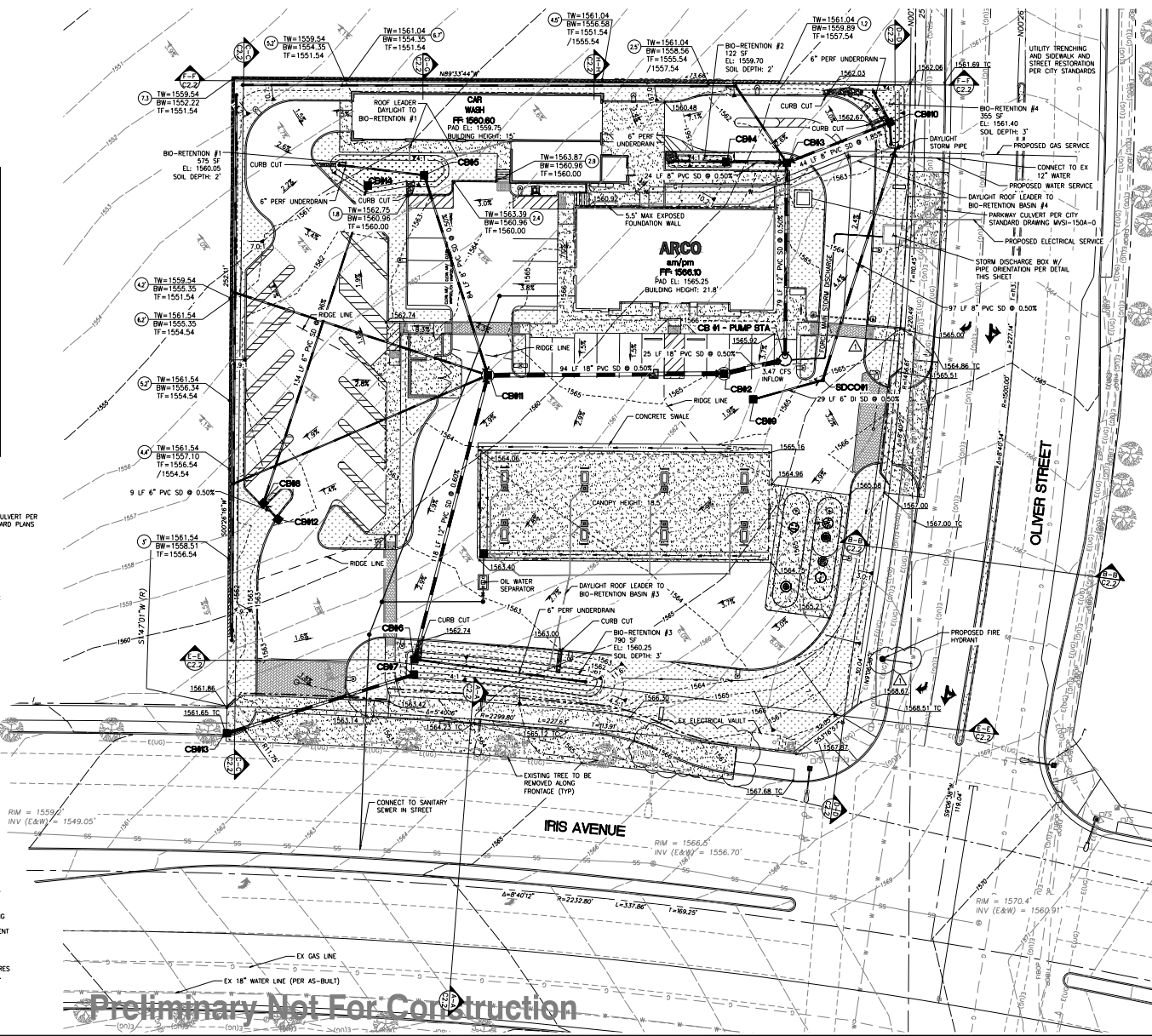
3.1%	PROPOSED PAVED SURFACE SLOPE
1.0-2.1	PROPOSED LANDSCAPE SLOPE
2.0%	EXISTING SURFACE SLOPE

**SURFACE COVERAGE SUMMARY:**

DEVELOPED ON-SITE AREA:	67,420	1.55 ACRE
PROPOSED IMPERVIOUS AREA:	49,586	1.14 ACRE
PERVIOUS TRIBUTARY TO BIO-RETENTION:	12,135	0.28 ACRE
PERVIOUS SELF TREATING:	5,719	0.13 ACRE
OFFSITE IMPERVIOUS AREA:	4,807	0.11 ACRE

**SOURCE CONTROL BMP NOTES:**

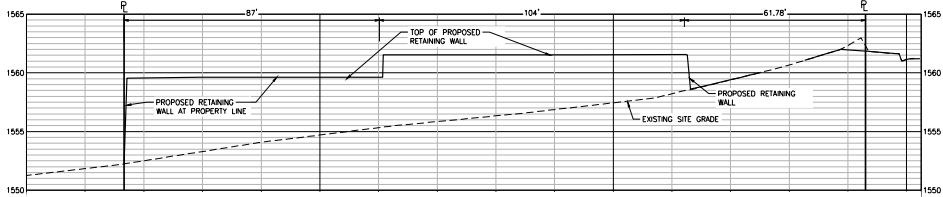
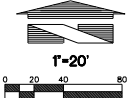
1. GREASE CONTROL FROM FOOD HANDLING ACTIVITIES WILL BE PART OF THIS PROJECT BUT WILL BE SPECIFIED IN A LATER SUBMITTAL.
2. CAR WASH ACTIVITIES WILL BE CONTAINED WITHIN THE CAR WASH BUILDING. GRADING AND DRAINAGE WILL DIRECT RUNOFF FROM CARS LEAVING THE CAR WASH WILL BE COLLECTED BY THE CAR-WASH WATER TREATMENT FACILITIES TO THE GREATEST EXTENT POSSIBLE.
3. INTERIOR FLOOR DRAINS WILL BE PLUMBED TO SANITARY SEWER.
4. FUEL DISPENSING AREAS ARE TO BE HYDRAULICALLY ISOLATED WITH GRADING FEATURES AND THE CANOPY IS NOT TO BE DRAINED TO THE FUELING AREA GROUND SURFACE.
5. TRASH AND RECYCLING ENCLOSURE IS GRADED TO HYDRAULICALLY ISOLATE THE SURFACE TO PREVENT RUN ON FROM THE SURROUNDING SITE.



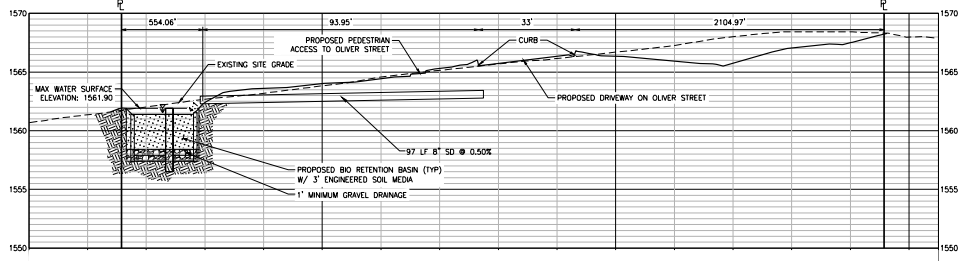
Preliminary Not For Construction

PEN18-0016

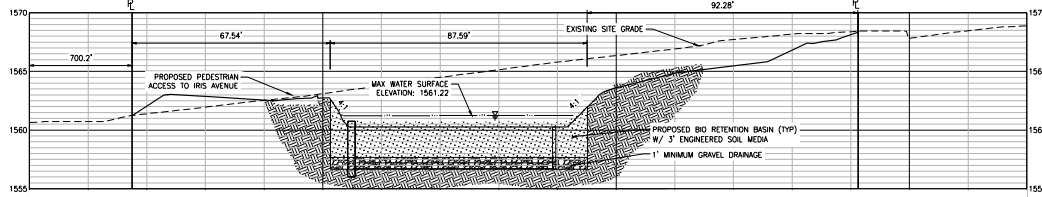
PRELIMINARY SITE CROSS SECTIONS FOR  
**ARCO AM/PM**  
 PTN OF SEC. 22,  
 TWP. 3 S., RGE 3 WEST, S.B.M  
 RIVERSIDE COUNTY STATE OF CALIFORNIA



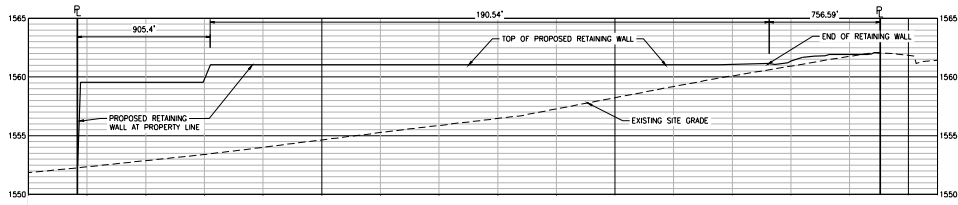
**C-C**  
 WEST PROPERTY BOUNDARY N TO S  
 SCALE: H: 1"=20' V: 1"=5'



**D-D**  
 EAST PROPERTY BOUNDARY N TO S  
 SCALE: H: 1"=20' V: 1"=5'

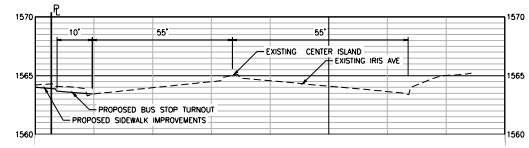


**E-E**  
 SOUTH PROPERTY BOUNDARY W TO E  
 SCALE: H: 1"=20' V: 1"=5'

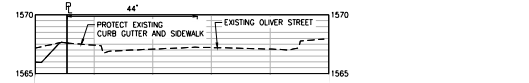


**F-F**  
 NORTH PROPERTY BOUNDARY W TO E  
 SCALE: H: 1"=20' V: 1"=5'

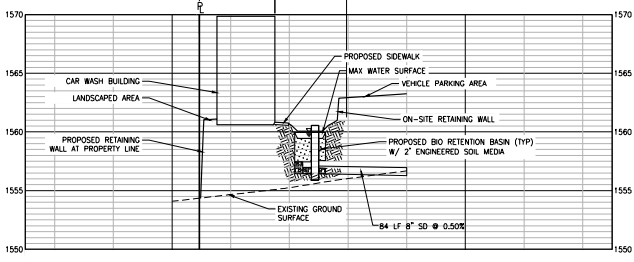
Preliminary Not For Construction



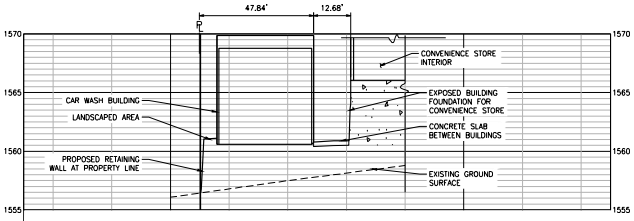
**A-A**  
 IRIS AVE N TO S  
 SCALE: H: 1"=20' V: 1"=5'



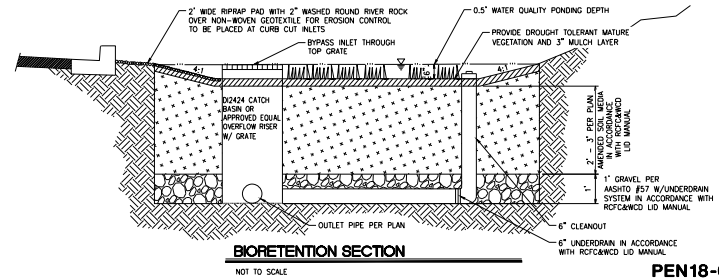
**B-B**  
 OLIVER ST W TO E  
 SCALE: H: 1"=20' V: 1"=5'



**G-G**  
 NORTH PROPERTY BOUNDARY W TO E  
 SCALE: H: 1"=20' V: 1"=5'



**H-H**  
 NORTH PROPERTY BOUNDARY W TO E  
 SCALE: H: 1"=20' V: 1"=5'



**BIORETENTION SECTION**  
 NOT TO SCALE

PEN18-0016



18215 72ND AVENUE  
 KENT, WA 98032  
 (425)251-6222  
 (425)251-8782 FAX

CIVIL ENGINEERING, LINC.  
 SURVEYING, ENVIRONMENTAL

No.	DATE	REVISION
1	5/20/18	CITY COO
2	6/15/18	CITY COO
3	8/07/18	CITY COO
4	9/26/18	CITY COO

NOT FOR CONSTRUCTION

DEVELOPMENT INFORMATION

**ARCO N**  
 3000 sqm/  
 FUEL CAN  
 W/ 6 MPI  
 26'x100' CAR

SITE ADDRESS  
 NWC IRIS AVE @ C  
 MORENO VALL

FACILITY #

DESIGNED BY: ALVIN  
 CHECKED BY: J.C.  
 DRAWN BY: Z.J.  
 REVISION: 1

DRAWING TITLE  
**PRELIMINARY SITE CROSS SECTION**

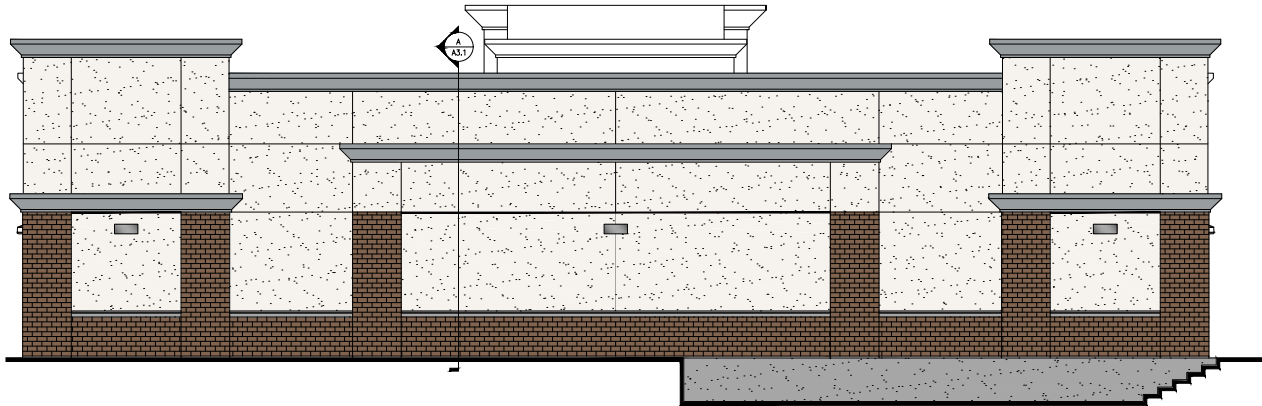
SHEET NO.

**C2.**

Attachment: Preliminary Grading Plans (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



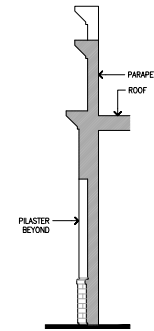
01 SOUTH (FRONT) ELEVATION  
SCALE: 1/4"=1'-0"



02 NORTH (REAR) ELEVATION  
SCALE: 1/4"=1'-0"




COLOR / MATERIAL LEGEND

- P-1 BENJAMIN MOORE, OC-69, "WHITE OPULDENCE"
- P-2 BENJAMIN MOORE, 2121-30, "PEWTER", HIGH GLOSS
- ACM-1 ALUMINUM COMPOSITE MATERIAL, PANTONE FMS 196C, "ORANGE"
- ACM-2 ALUMINUM COMPOSITE MATERIAL, ALUCOBOND, "RUSTIC WALNUT"
- BRICK VENEER - HC MUDDOX 3 5/8" x 7 5/8" THIN BRICK COLOR: SIERRA SLATE
- 1/2" CEMENT PLASTER, INSTALLED PER MFG. SPECIFICATIONS, TEXTURE: FINE SAND FINISH
- ALUM CLEAR ANODIZED ALUMINUM
- STL-1 STEEL ANMING
- C-SILL PRE-CAST CONCRETE SILL



A WALL SECTION  
SCALE: 1/4"=1'-0"

NOT FOR CONSTRUCTION

1821 S 72ND AVENUE  
 KENT, WA 98032  
 (425)251-6222  
 (425)251-6782 FAX

CIVIL, ENGINEERING, LAND &  
 SURVEYING, ENVIRONMENTAL

NO.	DATE	REVISION
1	5/20/18	CITY COME
2	6/01/18	CITY COME
3	8/07/18	CITY COME

DEVELOPMENT INFORMATION:  
 ARCO NTI  
 3000 amv/ph  
 FUEL CANO  
 w/ 8 MPD:  
 26'x100' CAR V

SITE ADDRESS:  
 NWC IRIS AVE @ OLJ  
 MORENO VALLE

FACILITY # 1

DESIGNED BY:	APPROVED:
CHECKED BY:	DATE:
DRAWN BY:	SCALE:
VERSION:	PROJECT:

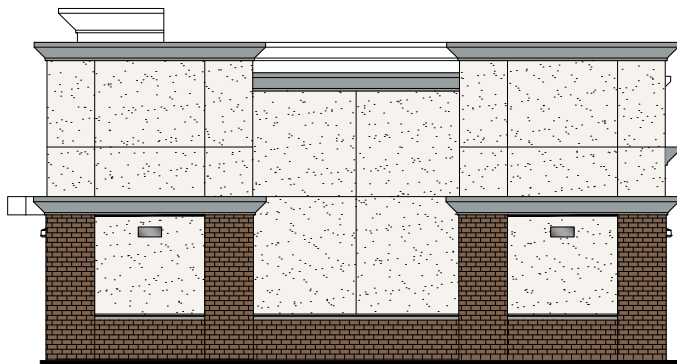
DRAWING TITLE:  
 COLOR  
 ELEVATIO

SHEET NO.:  
 A-3.

Attachment: Color Elevations (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



03 WEST (LEFT) ELEVATION  
SCALE: 1/4"=1'-0"



04 EAST (RIGHT) ELEVATION  
SCALE: 1/4"=1'-0"

COLOR LEGEND

- P-1 BENJAMIN MOORE, OC-69, "WHITE OPULENCE"
- P-2 BENJAMIN MOORE, 2121-30, "FEWTER", HIGH GLOSS

MATERIAL LEGEND

- ACM-1 ALUMINUM COMPOSITE MATERIAL, PANTONE PMS 166C, "ORANGE"
- ACM-2 ALUMINUM COMPOSITE MATERIAL, ALUCOBOND, "RUSTIC WALNUT"
- BRICK BRICK VENEER - HC MUDGOK 3 5/8" x 7 5/8" THIN BRICK COLOR: SIERRA SLATE
- STUCCO 1/2" CEMENT PLASTER, INSTALLED PER MFC SPECIFICATIONS; TEXTURE: FINE SAND FINISH
- ALUM CLEAR ANODIZED ALUMINUM
- SIL-1 STEEL AWNING
- C. SILL PRE-CAST CONCRETE SILL

NOT FOR CONSTRUCTION



18215 72ND AVENUE  
KENT, WA 98032  
(425)251-6222  
(425)251-6782 FAX

CIVIL ENGINEERING, LAND SURVEYING, ENVIRONMENTAL

NO.	DATE	REVISION
1	5/20/18	CITY COME
2	6/01/18	CITY COME
3	8/07/18	CITY COME
4		
5		
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7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

SEAL

DEVELOPMENT INFORMATION

ARCO NT  
3000 acm/pt  
FUEL CANO  
w/ 8 MPD  
26'x100' CAR V

SITE ADDRESS:  
NWC IRIS AVE @ OLI  
MORENO VALLE

FACILITY # 1

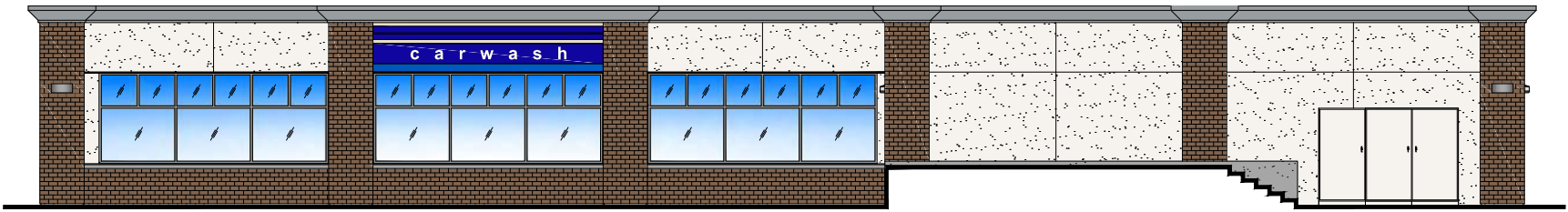
DESIGNED BY:	ALLIANCE
CHECKED BY:	BP RETE
DRAWN BY:	ALLIANCE
VERSION:	PROJECT
	1:

DRAWING TITLE:  
COLOR ELEVATIO

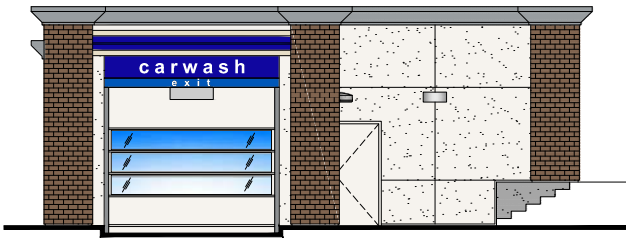
SHEET NO.:

A-4.

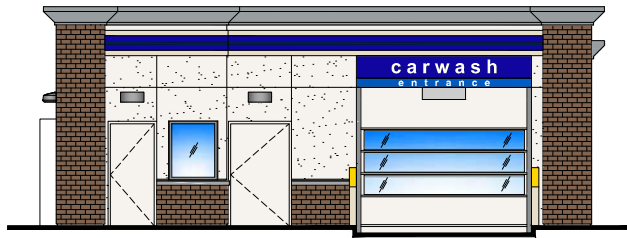
Attachment: Color Elevations (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



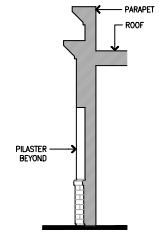
01 EAST ELEVATION  
SCALE: 1/4"=1'-0"



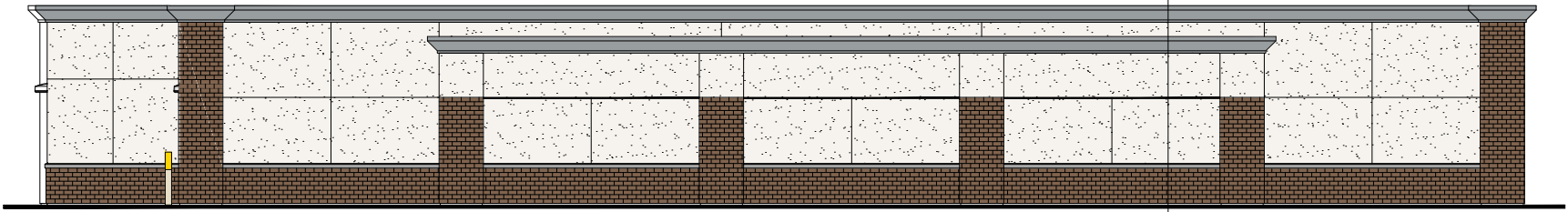
02 SOUTH ELEVATION  
SCALE: 1/4"=1'-0"



03 NORTH ELEVATION  
SCALE: 1/4"=1'-0"



04 WALL SECTION  
SCALE: 1/4"=1'-0"



04 WEST ELEVATION  
SCALE: 1/4"=1'-0"

- COLOR LEGEND**
- [P-1] BENJAMIN MOORE, 00-69, "WHITE ORCHIDE"
  - [P-2] BENJAMIN MOORE, 2121-30, "TEXTURE, HIGH GLOSS"
  - [C-01] EP PEARL - BENJAMIN MOORE, 00-8, "ELEPHANT TUSK"
  - [C-03] EP YELLOW - BENJAMIN MOORE, 2022-10, "YELLOW"
- MATERIAL LEGEND**
- [STUCCO] 3" CEMENT PLASTER, TEXTURE: FINE SAND FINISH
  - [ACM] ALUMINUM COMPOSITE MATERIAL
  - [C. SILL] PRE-CAST CONCRETE SILL
  - [ALUM] ALUMINUM STOREFRONT SYSTEM, CLEAR ANODIZED
  - [BRICK] BRICK VENEER - HC MUDDOX 3 5/8" x 7 5/8" THIN BRICK, COLOR: SIERRA SLATE

Preliminary Not For Construction

18215 72ND AVENUE  
KENT, WA 98032  
(425)251-6222  
(425)251-6782 FAX

CIVIL, ENGINEERING, LAND USE PLANNING, ENVIRONMENTAL

NO.	DATE	REVISION
1	3/20/18	CITY COME
2	6/01/18	CITY COME
3	8/07/18	CITY COME

SEAL

**DEVELOPMENT INFORMATION**

ARCO NT  
3000 sqm/pt  
FUEL CANO  
w/ 8 MPD  
26'x100' CAR V

**SITE ADDRESS**

NWC IRIS AVE @ OLI  
MORENO VALLE

**FACILITY # 1**

DESIGNED BY:	APPROVED BY:

**DRAWING TITLE**

CAR WASH ELEVATION

SHEET NO.

A-8.

Attachment: Color Elevations (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



18115 72ND AVENUE  
KENT, WA 98032  
(425)251-6222  
(425)251-6782 FAX

CIVIL ENGINEERING, LAND & SURVEYING, ENVIRONMENTAL

NO.	DATE	REVISION
1	3/20/18	CITY COME
2	6/01/18	CITY COME
3	8/07/18	CITY COME
4		
5		
6		
7		
8		
9		
10		

NOT FOR CONSTRUCTION

DEVELOPMENT INFORMATION

ARCO NTI  
3000 sqm/pt  
FUEL CANO  
w/ 8 MPD  
26'x100' CAR V

SITE ADDRESS  
NWC IRIS AVE @ OL  
MORENO VALLE

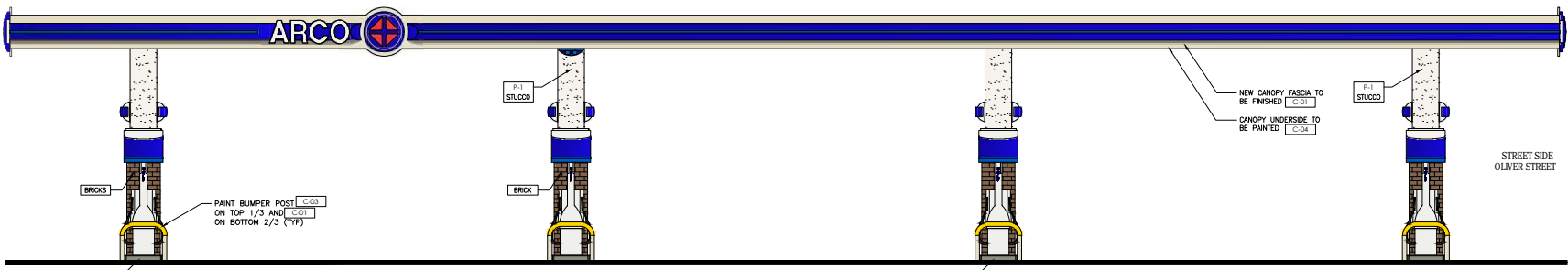
FACILITY # 1

DESIGNED BY	ALLIANCE
CHECKED BY	PT
DRAWN BY	JMW
VERSION	

DRAWING TITLE  
CANOPY ELEVATIC

SHEET NO.

Attachment: Color Elevations (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



01 CANOPY ELEVATION (FACING IRIS AVENUE)  
SCALE: 1/4"=1'-0"

COLOR LEGEND

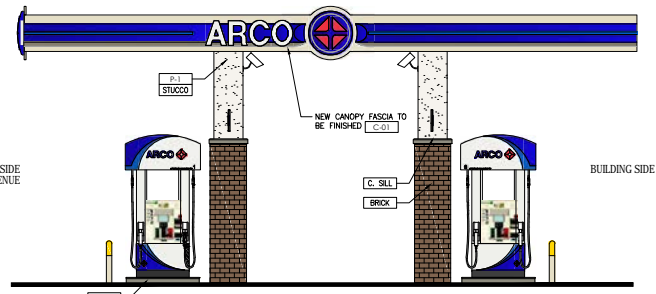
C-01	SP PEARL - BENJAMIN MOORE, OC-4, "ELEPHANT TUSK"	C-04	HIGH HING WHITE - BENJAMIN MOORE, 2123-70, "ICE MIST"
C-02	SP WARM GREY - BENJAMIN MOORE, 2137-40, "DESERT TWILIGHT"	P-1	BENJAMIN MOORE, OC-69, "WHITE OPULENCE"
C-03	SP YELLOW - BENJAMIN MOORE, 2022-10, "YELLOW"		

EXTERIOR FINISHES

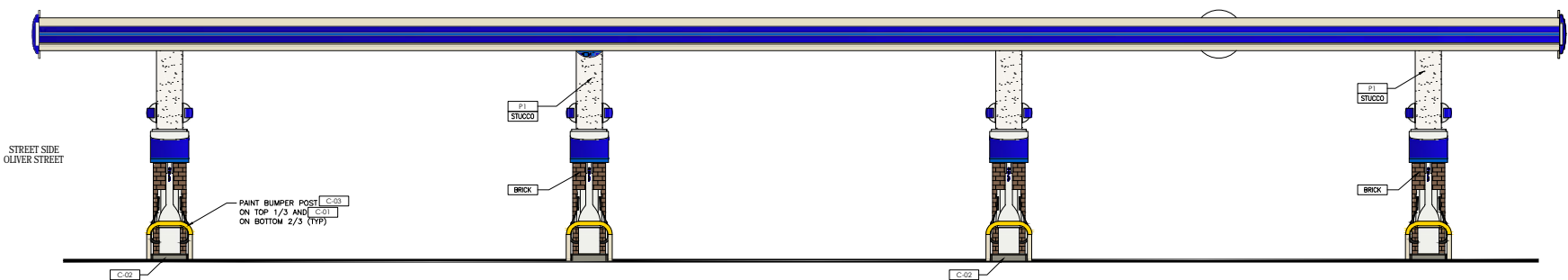
BRICK	BRICK VENEER - HC MUDDOK 3 5/8" x 7 5/8" THIN BRICK COLOR: SIERRA SLATE
STUCCO	3/4" CEMENT PLASTER, INSTALLED PER MFG. SPECIFICATIONS, TEXTURE: FINE SAND FINISH
C. SILL	PRECAST CONCRETE SILL/CAP



02 CANOPY ELEVATION  
SCALE: 1/4"=1'-0"





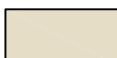



03 CANOPY ELEVATION (FACING OLIVER STREET)  
SCALE: 1/4"=1'-0"



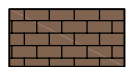


04 CANOPY ELEVATION  
SCALE: 1/4"=1'-0"



# COLOR LEGEND

-  **P-1** BENJAMIN MOORE, OC-69, "WHITE OPULENCE"
-  **P-2** BENJAMIN MOORE, 2121-30, "PEWTER", HIGH GLOSS
-  **C-01** BP PEARL – BENJAMIN MOORE, OC-8, "ELEPHANT TUSK"
-  **C-02** BP WARM GREY – BENJAMIN MOORE, 2137-40, "DESERT TWILIGHT"
-  **C-03** BP YELLOW – BENJAMIN MOORE, 2022-10, "YELLOW"
-  **C-04** HIGH HIDING WHITE – BENJAMIN MOORE, 2123-70, "ICE MIST"

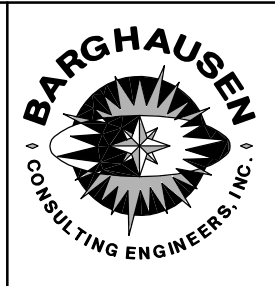
# MATERIAL LEGEND

-  **BRICK** BRICK VENEER – HC MUDDOX 3 5/8"x 7 5/8" THIN BRICK COLOR: SIERRA SLATE
-  **ACM-1** ALUMINUM COMPOSITE MATERIAL, PANTONE PMS 166c, "ORANGE"
-  **ACM-2** ALUMINUM COMPOSITE MATERIAL, ALUCOBOND, "RUSTIC WALNUT"

# EXTERIOR FINISHES

- STUCCO** 7/8" CEMENT PLASTER, INSTALLED PER MFG. SPECIFICATIONS; TEXTURE: FINE SAND FINISH
- ALUM** CLEAR ANODIZED ALUMINUM
- STL-1** STEEL AWNING
- C. SILL** PRE-CAST CONCRETE SILL

Designed \_\_\_\_\_  
 Drawn \_\_\_\_\_  
 Checked \_\_\_\_\_  
 Approved \_\_\_\_\_  
 Date 03/20/18



For: **ARCO AM/PM**  
 NWC IRIS AVENUE • OLIVER STREET  
 MORENO VALLEY, CA

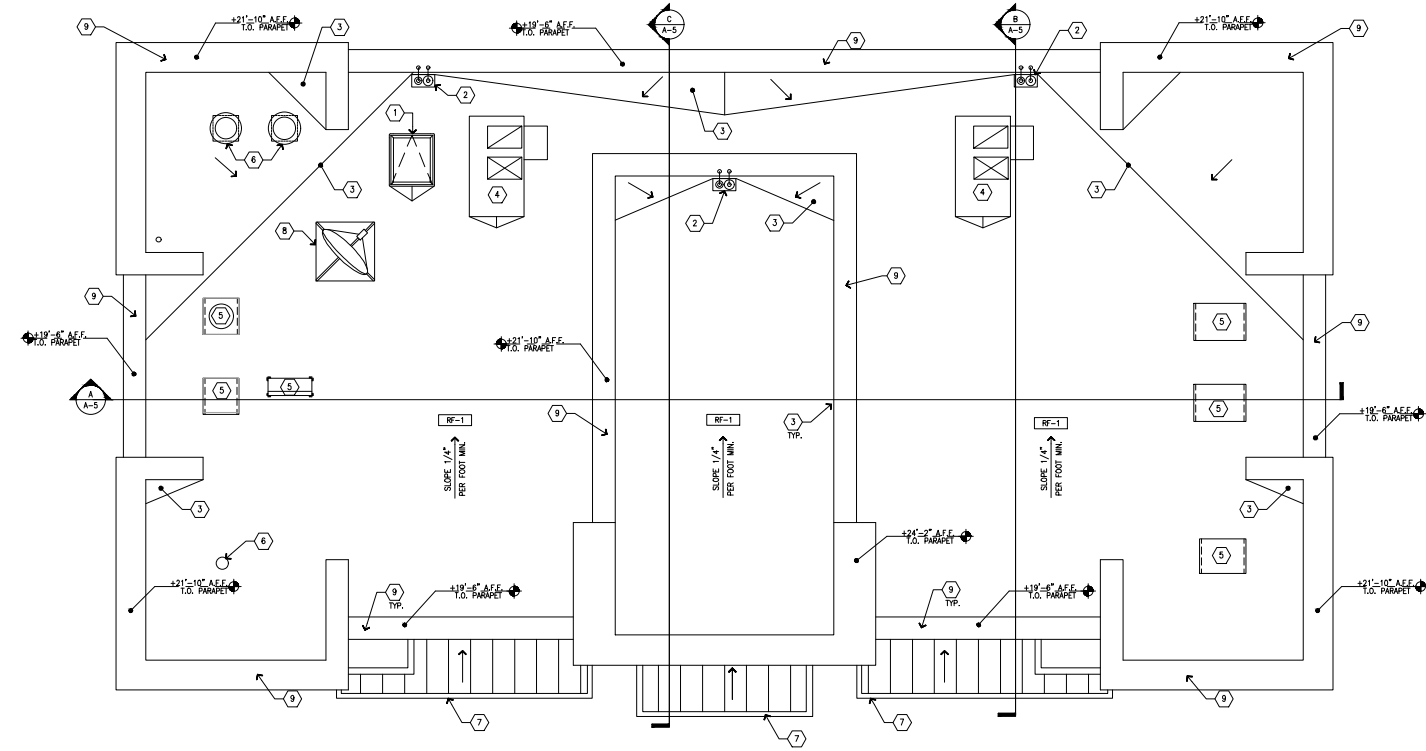
Title: **COLOR BOARD**

Job Number  
**18501**

Sheet  
**1 of 1**

Attachment: Material Color Board (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)





**KEYED NOTES**

- ① ROOF HATCH
- ② ROOF DRAIN AND OVERFLOW
- ③ TAPERED INSULATION CRICKET
- ④ ROOFTOP HVAC UNIT
- ⑤ REFRIGERATION CONDENSER UNIT
- ⑥ EXHAUST FAN
- ⑦ STEEL CANOPY BELOW
- ⑧ SATELLITE DISH ON BALLASTED SLED
- ⑨ PRE-FINISHED METAL COPING OVER PARAPET WALL

**ROOFING**

RF-1 REINFORCED MECHANICALLY FASTENED .045\"/>



18215 72ND AVENUE  
KENT, WA 98032  
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(425)251-0782 FAX

CIVIL ENGINEERING, LAND SURVEYING, ENVIRONMENT

NO.	DATE	REVISION

**DEVELOPMENT INFORMATION:**

ARCO N  
3000 sqm/l  
FUEL CAN:  
w/ 8 MPPI  
26'x100' CAR

**SITE ADDRESS:**

NWC IHS AVE @ O  
MORENO VALL

**FACILITY #**

DESIGNED BY:	ALKAW
CHECKED BY:	BP REP
DRAWN BY:	ALKAW
VERSION:	PROJECT

**DRAWING TITLE:**

ROOF PI

**SHEET NO.:**



**01 PRELIMINARY ROOF PLAN**  
SCALE: 1/4"=1'-0"

Attachment: Architectural Plans (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



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CIVIL ENGINEERING, LAND SURVEYING, ENVIRONMENTAL

NO.	DATE	REVISION
1	5/20/18	CITY COM
2		
3		
4		
5		
6		
7		
8		

NOT FOR CONSTRUCTION

DEVELOPMENT INFORMATION:

ARCO N°  
3000 am/1  
FUEL CANI  
w/ 8 MPI  
26'x100' CAR

SITE ADDRESS:  
NWC IRS AVE @ C  
MORENO VALL

FACILITY #

DESIGNED BY: ALANK  
DESIGNED BY: BP REP  
DRAWN BY: ALANK  
VERSION: PROJECT

DRAWING TITLE:  
C-STOP  
ELEVATION

SHEET NO:



Attachment: Architectural Plans (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

**KEYED NOTES**

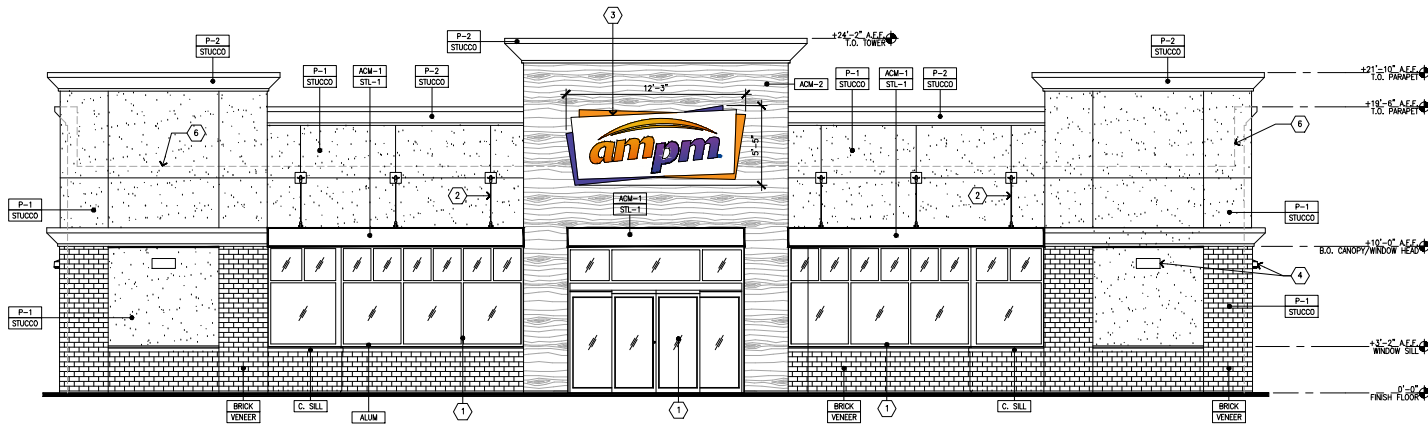
- 1 ALUMINUM ENTRANCE AND STOREFRONT SYSTEM
- 2 STEEL ANNING, ROD AND CLEVIS
- 3 INTERNALLY ILLUMINATED SURFACE MOUNTED WALL SIGN
- 4 WALL MOUNTED LED FIXTURE
- 5 ROOF TOP EQUIPMENT BEYOND
- 6 ROOF LINE BEYOND
- 7 CLEARESTORY WINDOWS BEYOND
- 8 1" REVEAL

**COLOR LEGEND**

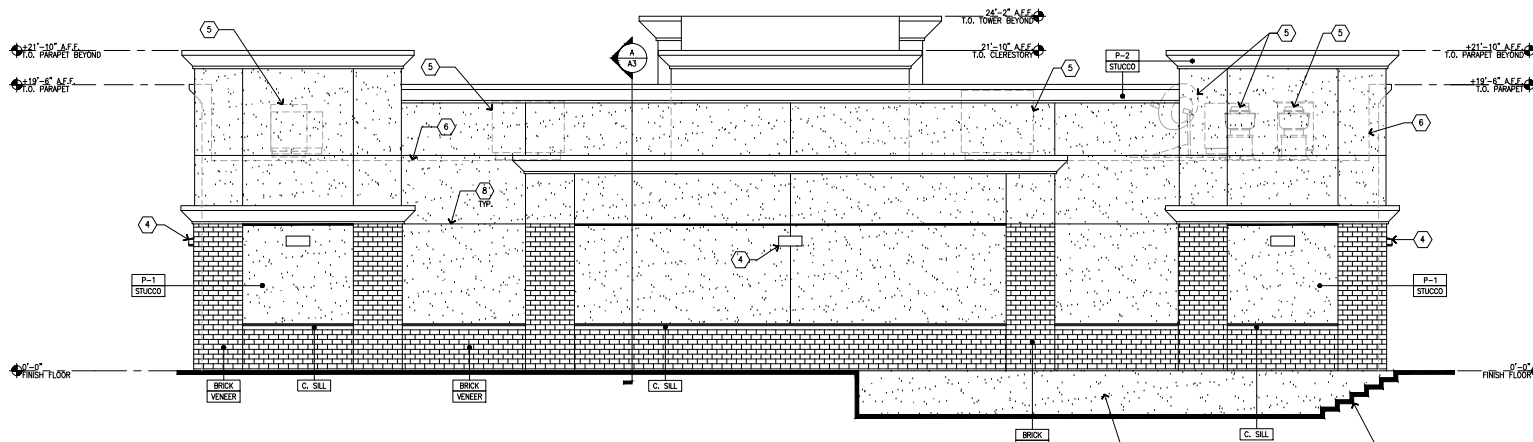
- P-1 BENJAMIN MOORE, OC-69, "WHITE OPULANCE"
- P-2 BENJAMIN MOORE, 2121-30, "PEWTER", HIGH GLOSS

**MATERIAL LEGEND**

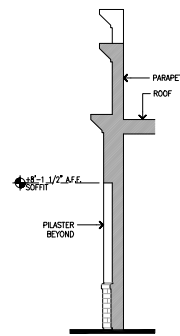
- STUCCO 3/4" CEMENT PLASTER, INSTALLED PER MFG. SPECIFICATIONS; TEXTURE: FINE SAND FINISH
- ACM-1 ALUMINUM COMPOSITE MATERIAL, PANTONE PMS 166C, "ORANGE"
- ACM-2 ALUMINUM COMPOSITE MATERIAL, ALUCOBOND, "TRUSTIC WALNUT"
- STL-1 STEEL ANNING
- BRICK VENEER - HC HUDCOX 3 5/8" x 7 5/8" THIN BRICK COLOR: SIERRA SLATE
- C. SILL PRE-CAST CONCRETE SILL



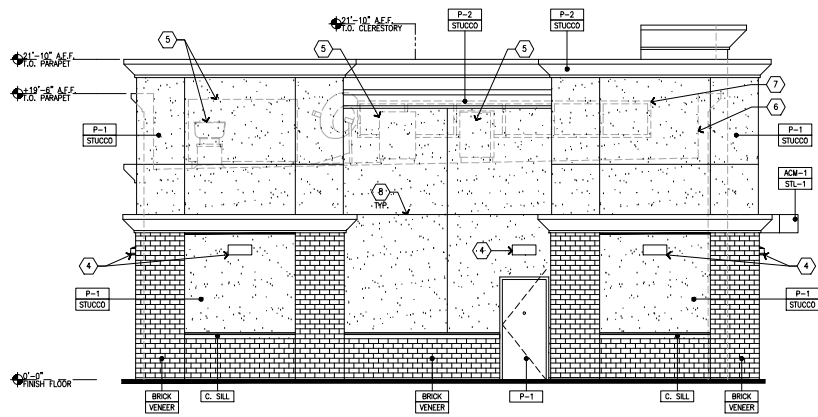
01 SOUTH (FRONT) ELEVATION  
SCALE: 1/4"=1'-0"



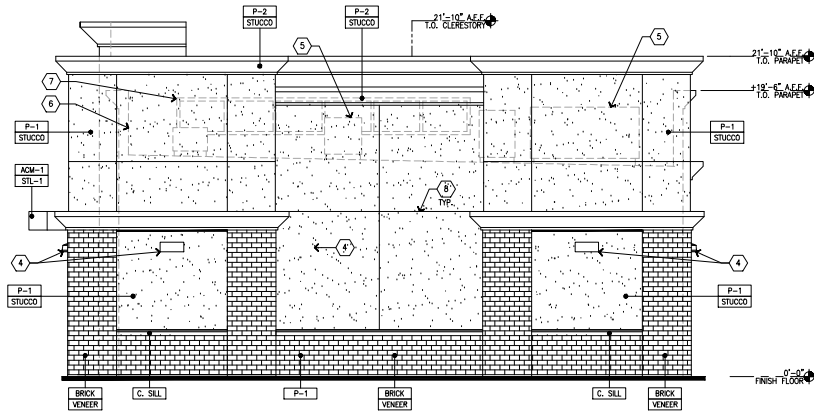
02 NORTH (REAR) ELEVATION  
SCALE: 1/4"=1'-0"



WALL SECTION  
SCALE: 1/4"=1'-0"



03 WEST (LEFT) ELEVATION  
SCALE: 1/4"=1'-0"



04 EAST (RIGHT) ELEVATION  
SCALE: 1/4"=1'-0"

KEYED NOTES

- 1 ALUMINUM ENTRANCE AND STOREFRONT SYSTEM
- 2 STEEL ANMING, ROD AND CLEVIS
- 3 INTERNALLY ILLUMINATED SURFACE MOUNTED WALL SIGN
- 4 WALL MOUNTED LED FIXTURE
- 5 ROOF TOP EQUIPMENT BEYOND
- 6 ROOF LINE BEYOND
- 7 CLEARESTORY WINDOWS BEYOND
- 8 1" REVEAL

COLOR LEGEND

- P-1 BENJAMIN MOORE, OC-69, "WHITE OPULANCE"
- P-2 BENJAMIN MOORE, 2121-30, "PEWTER", HIGH GLOSS

MATERIAL LEGEND

- STUCCO 3/4" CEMENT PLASTER, INSTALLED PER MFG. SPECIFICATIONS; TEXTURE: FINE SAND FINISH
- ACM-1 ALUMINUM COMPOSITE MATERIAL, PANTONE PMS 166C, "ORANGE"
- ACM-2 ALUMINUM COMPOSITE MATERIAL, ALUCOBOND, "TRUSTIC WALNUT"
- ALUM CLEAR ANODIZED ALUMINUM
- STL-1 STEEL ANMING
- BRICK BRICK VENEER - HC HUDOX 3 5/8" x 7 5/8" THIN BRICK COLOR: SIERRA SLATE
- C. SILL PRE-CAST CONCRETE SILL



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CIVIL ENGINEERING, LAND SURVEYING, ENVIRONMENTAL

NO.	DATE	REVISION
1	5/20/18	CITY COM

NOT FOR CONSTRUCTION

DEVELOPMENT INFORMATION:

ARCO N°  
3000 am/l  
FUEL CANI  
w/ 8 MPPE  
26'x100' CAR

SITE ADDRESS:

NWC IRIS AVE @ O  
MORENO VALL

FACILITY #

DESIGNED BY: ALAN  
CHECKED BY: BP REP  
DRAWN BY: ALAN  
VERSION: PROJECT

DRAWING TITLE

C-STOP  
ELEVATION

SHEET NO:

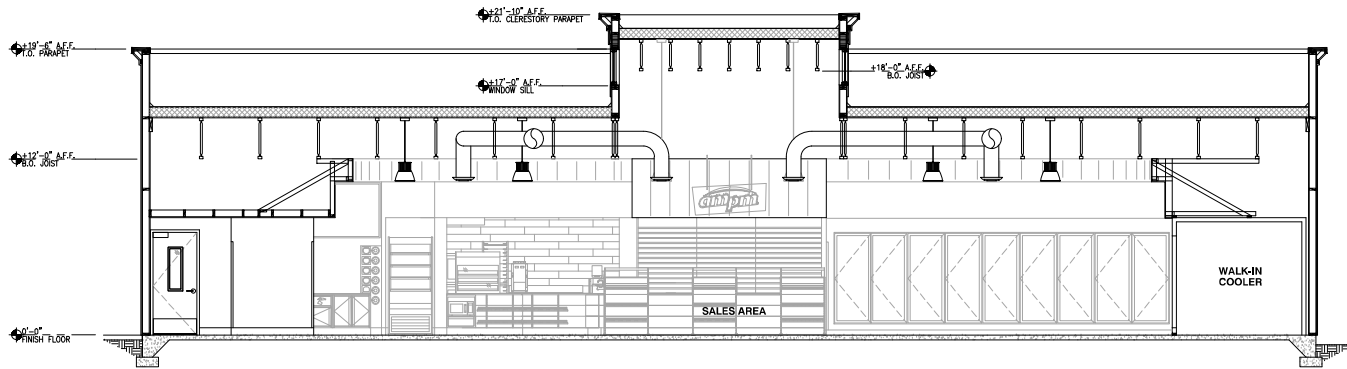


Attachment: Architectural Plans (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

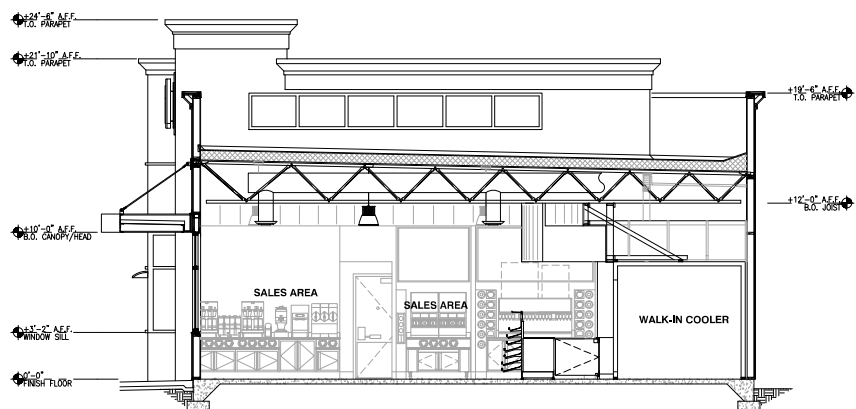


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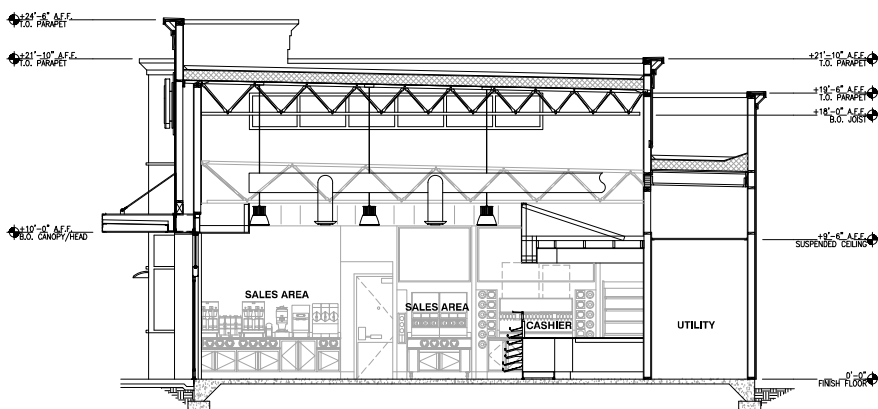
NO.	DATE	REVISION



**A** BUILDING SECTION  
SCALE: 1/4"=1'-0"



**B** BUILDING SECTION  
SCALE: 1/4"=1'-0"



**C** BUILDING SECTION  
SCALE: 1/4"=1'-0"

NOT FOR CONSTRUCTION

DEVELOPMENT INFORMATION:

**ARCO N**  
3000 gal/m<sup>3</sup>  
FUEL CANS  
w/ 8 MP2  
26'x100' CAR

SITE ADDRESS:  
NWC IRIS AVE @ O  
MORENO VALL

FACILITY #

DESIGNED BY: ALANK  
CHECKED BY: BP REP  
DRAWN BY: ALANK  
VERSION: PROJE

DRAWING TITLE:  
**C-STOF  
BLDG SEC**

SHEET NO:

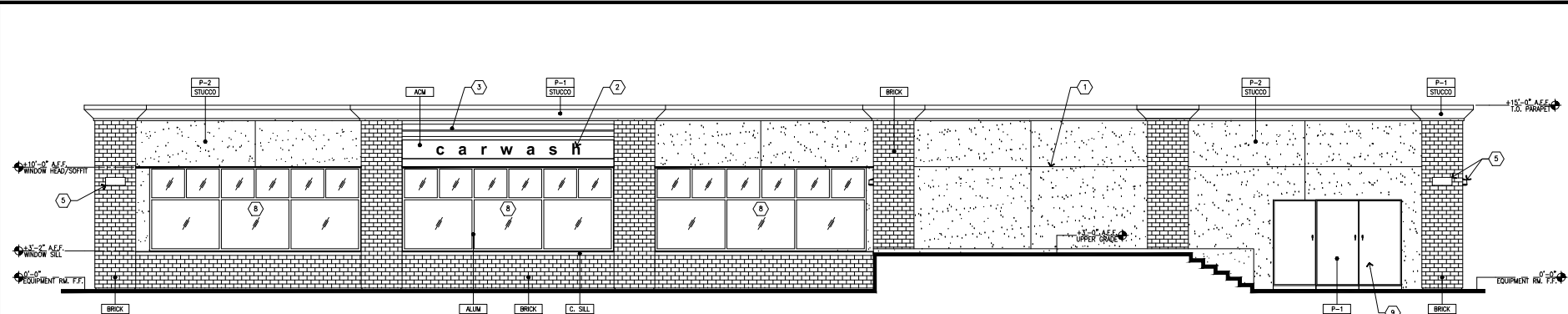


Attachment: Architectural Plans (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

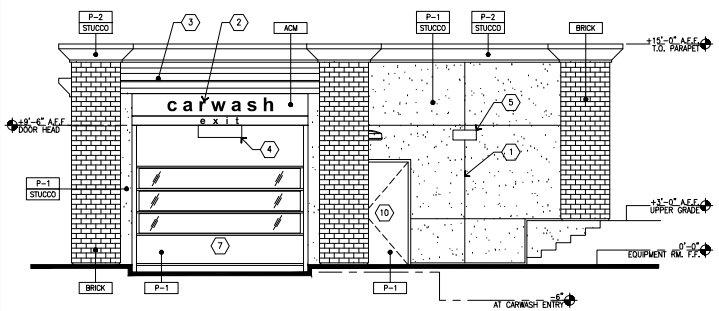




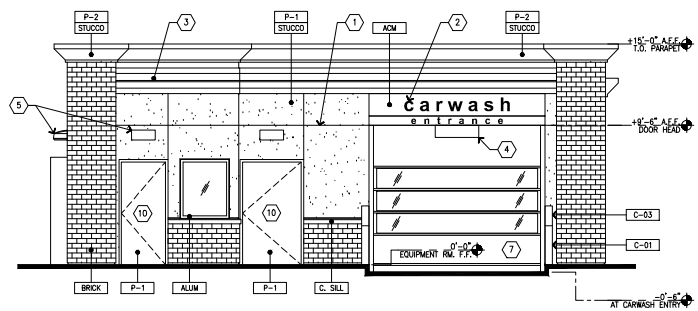




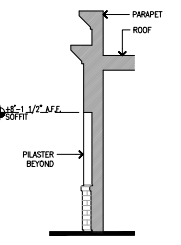
01 SOUTH ELEVATION  
SCALE: 1/4"=1'-0"



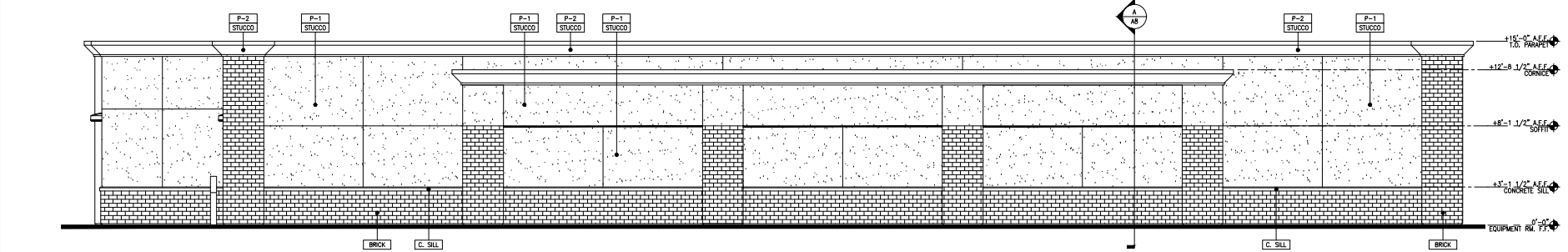
02 WEST ELEVATION  
SCALE: 1/4"=1'-0"



03 EAST ELEVATION  
SCALE: 1/4"=1'-0"



A WALL SECTION  
SCALE: 1/4"=1'-0"



04 NORTH ELEVATION  
SCALE: 1/4"=1'-0"

KEYED NOTES

- 1) 1" REVEAL
- 2) VINYL LETTERS APPLIED TO ACM
- 3) VINYL DECAL APPLIED TO ACM
- 4) OVERHEAD CLEARANCE BAR
- 5) WALL MOUNTED LED LIGHTURE
- 6) 6" ROUND CONCRETE FILLED BOLLARD
- 7) VINYL ROLL UP DOOR
- 8) WASH BAY WINDOWS
- 9) ELECTRICAL SERVICE EQUIPMENT
- 10) METAL DOOR

COLOR LEGEND

- P-1 BENJAMIN MOORE, OC-69, "WHITE OPLENCE"
- P-2 BENJAMIN MOORE, 2121-30, "PEWTER" HIGH GLOSS
- C-01 SP PEARL - BENJAMIN MOORE, OC-8, "ELEPHANT TUSK"
- C-03 SP YELLOW - BENJAMIN MOORE, 2022-10, "YELLOW"

MATERIAL LEGEND

- STUCCO 3/8" CEMENT PLASTER TEXTURE: FINE SAND FINISH
- ALUM ALUMINUM COMPOSITE MATERIAL
- C. SILL PRE-CAST CONCRETE SILL
- ALUM ALUMINUM STOREFRONT SYSTEM CLEAR ANODIZED
- BRICK VENEER - HC MUDBOX 3 5/8" x 7 5/8" THIN BRICK COLOR: SIERRA SLATE
- BRICK 3 5/8" x 7 5/8" THIN BRICK COLOR: SIERRA SLATE

Preliminary Not For Construction



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CIVIL ENGINEERING, LAND SURVEYING, ENVIRONMENTAL

NO.	DATE	REVISION
1	5/20/18	CITY COM

DEVELOPMENT INFORMATION  
ARCO N  
3000 sqm  
FUEL CANI  
W/ 8 MPFI  
26'x100' CAR

SITE ADDRESS  
NWC IRIS AVE @ C  
MORENO VALL

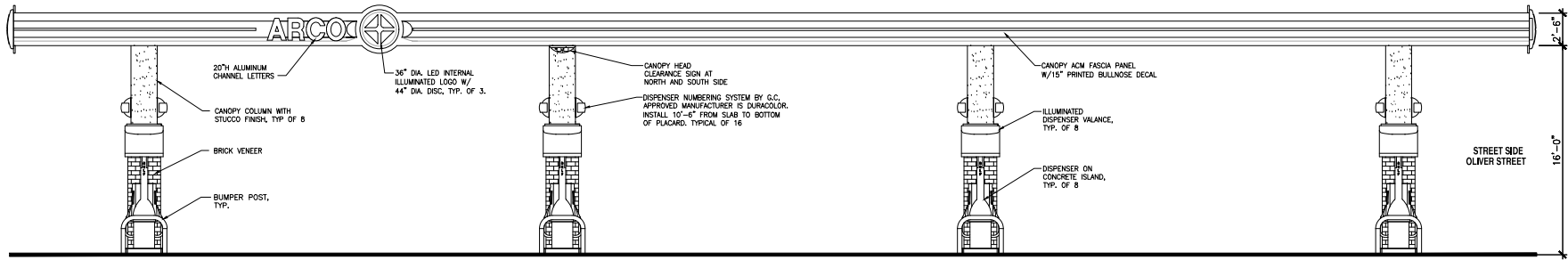
FACILITY #  
DESIGNED BY: ALUM  
CHECKED BY: SP RD  
DRAWN BY: ALUM  
PROJECT: IRIS

DRAWING TITLE  
CAR WA  
ELEVATI

SHEET NO:

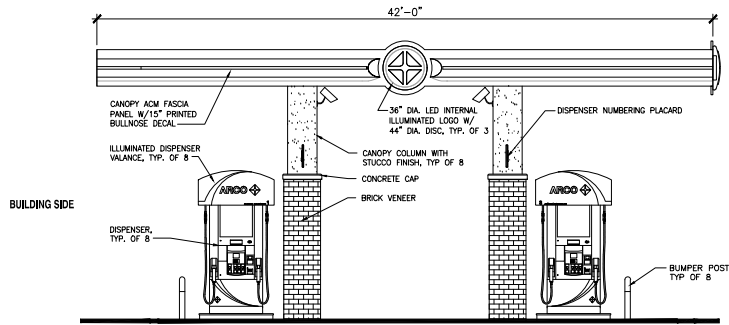
A-ξ

Attachment: Architectural Plans (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



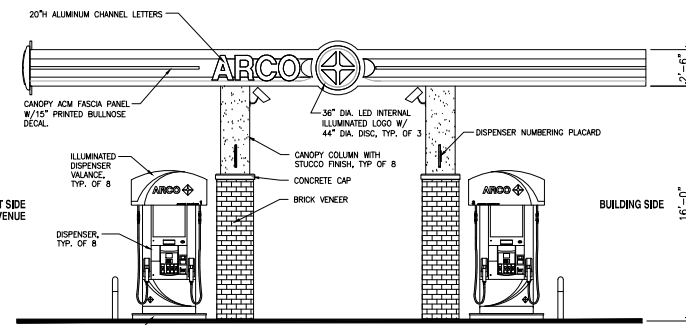
01 CANOPY ELEVATION (ALONG IRIS AVENUE)

SCALE: 1/4"=1'-0"



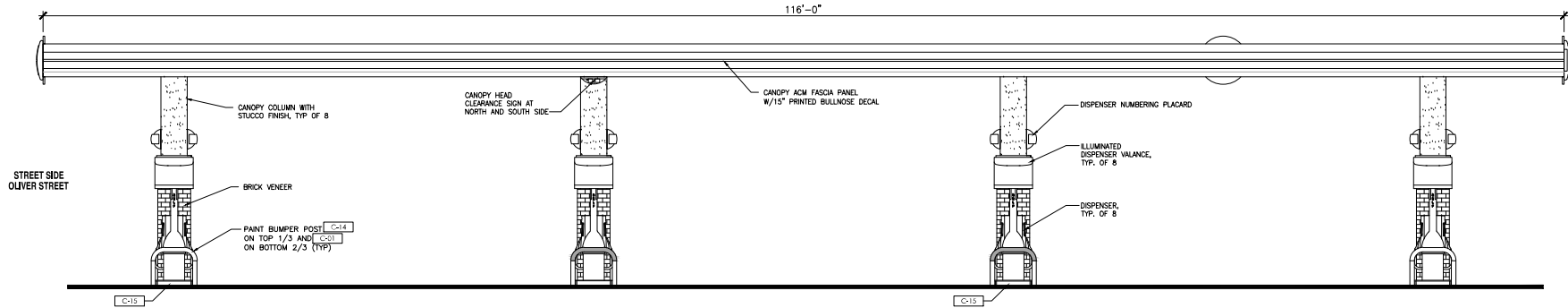
02 CANOPY ELEVATION

SCALE: 1/4"=1'-0"



03 CANOPY ELEVATION (ALONG OLIVER STREET)

SCALE: 1/4"=1'-0"



04 CANOPY ELEVATION

SCALE: 1/4"=1'-0"

SIGNAGE NOTE:  
 ALL SIGNAGE SHOWN IS FOR VISUAL REFERENCE ONLY-  
 SIGN PERMIT UNDER SEPARATE PERMIT



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 (425)251-9382 FAX

CIVIL, ENGINEERING, LAND SURVEYING, ENVIRONMENT

NO.	DATE	REVISION

NOT FOR CONSTRUCTION

DEVELOPMENT INFORMATION:

ARCO N°  
 3000 amm/1  
 FUEL CANN  
 w/ 8 MPPE  
 26'x100' CAR

SITE ADDRESS:

NWC IRIS AVE @ 0  
 MORENO VALL

FACILITY #

DESIGNED BY: ALLAN

CHECKED BY: PT DP REP

DRAWN BY: JMMV ALLAN

VERSION: PREL

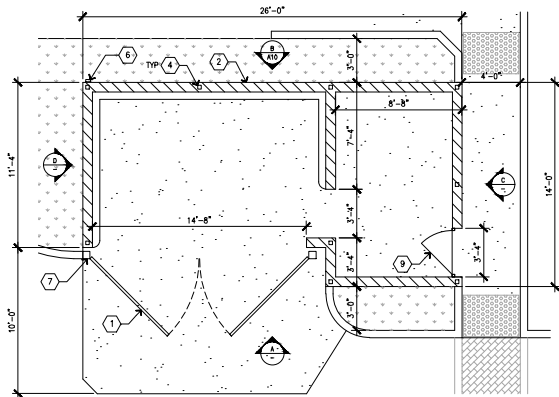
DRAWING TITLE:

CANOPY ELEVATI

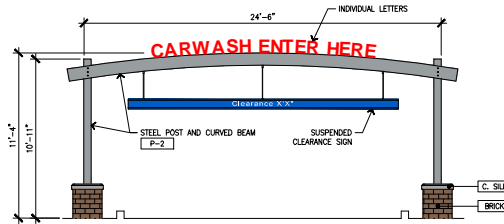
SHEET NO:

A-G

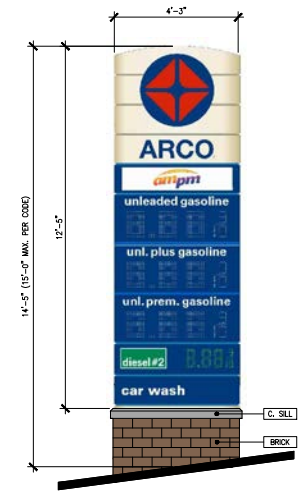
Attachment: Architectural Plans (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



**01 TRASH ENCLOSURE PLAN**  
SCALE: 1/4"=1'-0"



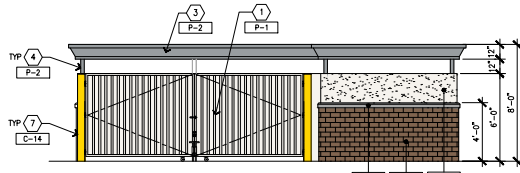
**03 CARWASH CLEARANCE BAR**  
SCALE: 1/4"=1'-0"



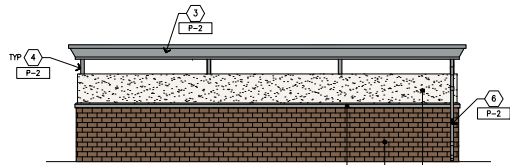
**02 MONUMENT SIGN**  
SCALE: 1/2"=1'-0"



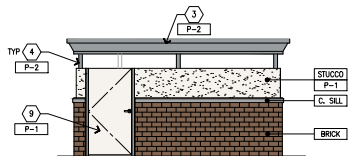
REPRESENTATIVE PHOTO OF THE PROPOSED SYSTEM WITH FABRIC CANOPY  
**04 CARWASH VACUUMS**  
SCALE: NTS



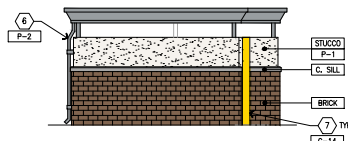
**05 EAST ELEVATION - FRONT**  
SCALE: 1/4"=1'-0"



**06 WEST ELEVATION - REAR**  
SCALE: 1/4"=1'-0"



**07 NORTH ELEVATION - SIDE**  
SCALE: 1/4"=1'-0"



**08 SOUTH ELEVATION - SIDE**  
SCALE: 1/4"=1'-0"

**KEYED NOTES**

- 1 GALVANIZED METAL DECKING GATE, PAINTED
- 2 STUCCO OVER CMU WALL, PAINTED
- 3 24 GA STEEL FASCIA, PAINTED
- 4 3 1/2" STEEL TUBE SUPPORT, PAINTED
- 5 3" DEEP METAL DECK ROOFING, PAINTED
- 6 2 1/4" DOWNSPOUT, PAINTED
- 7 6" TUBE STEEL FILLED W/ CONCRETE, PAINTED
- 8 METAL GUTTER, PAINTED
- 9 36"x72" STEEL DOOR, LOCKABLE, PAINTED

**COLOR LEGEND**

- P-1 BENJAMIN MOORE, OC-69, "WHITE OPULENCE"
- P-2 BENJAMIN MOORE, 2121-30, "PEWTER", HIGH GLOSS
- C-14 BP "YELLOW" - BENJAMIN MOORE, 2022-10, "YELLOW"
- BRICK BRICK VENEER, SIERRA SLATE

**MATERIAL LEGEND**

- STUCCO 3/4" CEMENT PLASTER OVER CMU TEXTURE: FINE SAND FINISH, PAINTED
- C. SILL PRE-CAST CONCRETE SILL
- BRICK HC MUDDOX 3 5/8" x 7 5/8" THIN BRICK, COLOR: MISSION COMMON

NOT FOR CONSTRUCTION



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KENT, WA 98032  
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CIVIL ENGINEERING, LAND & SURVEYING, ENVIRONMENTAL

NO.	DATE	REVISION
1	3/20/18	CITY COME
2	6/01/18	CITY COME
3	8/07/18	CITY COME
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20		

SEAL

**DEVELOPMENT INFORMATION**

ARCO NT  
3000 arn/p  
FUEL CANO  
w/ 8 MPD  
26'x100' CAR V

SITE ADDRESS:  
NWC IRIS AVE @ OLI  
MORENO VALLE

FACILITY # 1

DESIGNED BY:	APPROVED BY:
DRAWN BY:	PROJECT:
VERSION:	SCALE:

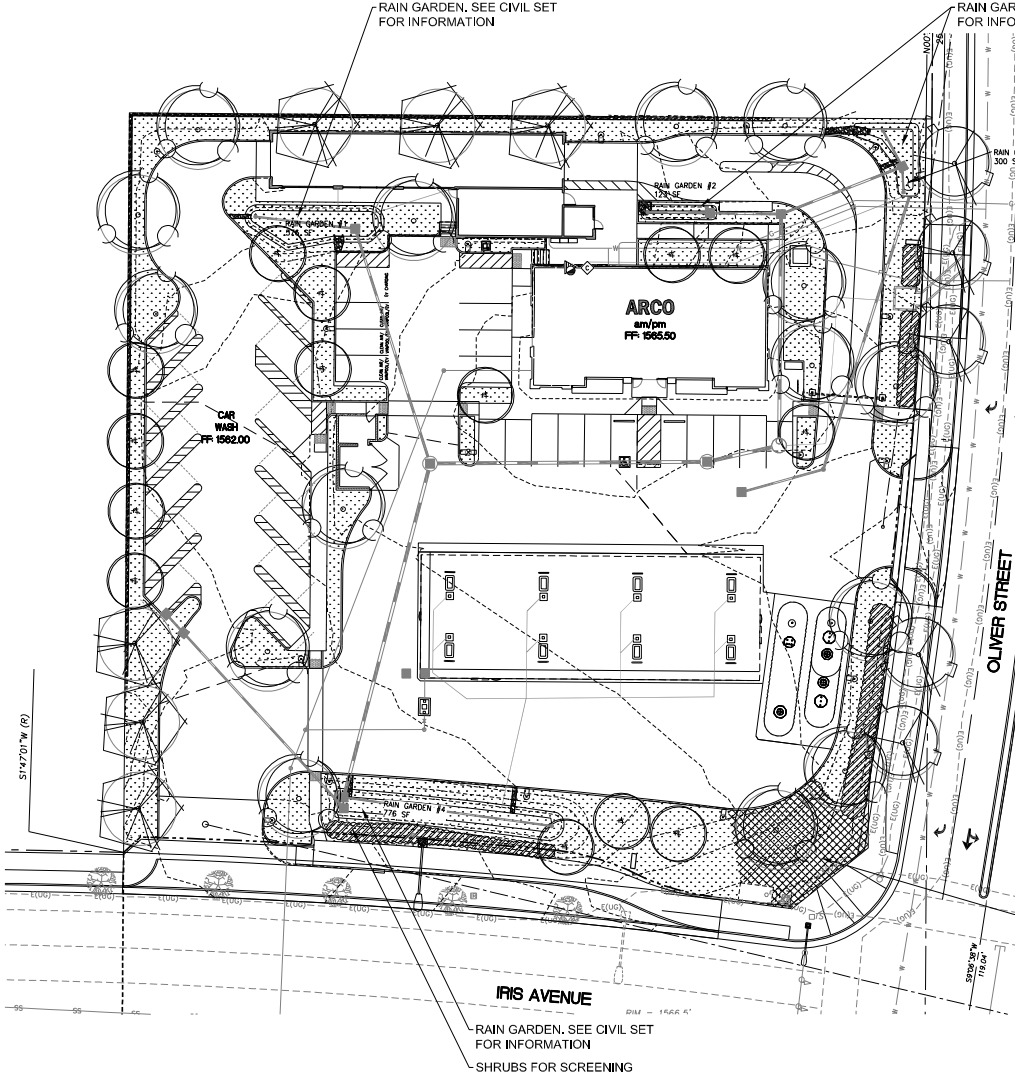
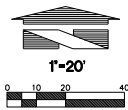
**SITE DETAIL**

SHEET NO.

**A-1**

Attachment: Architectural Plans (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

PRELIMINARY LANDSCAPE and IRRIGATION PLAN  
FOR  
**ARCO AM/PM**  
PTN OF SEC. 22,  
TWP. 3 S., RGE 3 WEST, S.B.M  
RIVERSIDE COUNTY STATE OF CALIFORNIA






**PLANT SCHEDULE**

SYMBOL	BOTANICAL/COMMON NAMES	SIZE CONDITION	SPACING	QUANTITY	WUCOLS IV IRRIGATION REGION: 4	REMARKS
<b>TREES:</b>						
	ACACIA BAILEYANA PURPUREA / PURPLE FERNLIF ACACIA	24" BOX	AS SHOWN		LOW	STAKE & GUY ONE GROWING SEASON; NURSERY GROWN, BRANCHED AT 5'
	PARKINSONIA FLORIDA / BLUE PALM YERBE	24" BOX	AS SHOWN		VERY LOW	STAKE & GUY ONE GROWING SEASON; NURSERY GROWN, BRANCHED AT 5'
	LAURUS NOBILIS / SWEET BAY	24" BOX	AS SHOWN		LOW	STAKE & GUY ONE GROWING SEASON; NURSERY GROWN, BRANCHED AT 5'
	PARBOTIA PERSEA 'VANESSA' / PERSIAN IRONWOOD	24" BOX	30'-0" O.C.		LOW	STAKE & GUY ONE GROWING SEASON; NURSERY GROWN, BRANCHED AT 5'
<b>SHRUBS:</b>						
	PENNINGTUM ALOPECUROIDES / FOUNTAIN GRASS	1 GALLON	AS SHOWN		LOW	FULL & BUSHY
	SALVIA SOMMENSIS / CREEPING SAGE	1 GALLON	AS SHOWN		LOW	FULL & BUSHY
	LAVANDULA STOECHAS 'OTTO DUAST' / SPANISH LAVENDER	1 GALLON	AS SHOWN		LOW	FULL & BUSHY
	CISTIS SALICIFOLIA 'PROSTRATUS' / SAGELEAF ROCKROSE	1 GALLON	AS SHOWN		LOW	FULL & BUSHY
	WESTRINGIA ROSMARNIFORMIS / COAST ROSEMARY	1 GALLON	AS SHOWN		LOW	FULL & BUSHY
<b>GROUNDCOVERS:</b>						
	DYMONDIA MARGARETAE / DYMONDIA	1 GALLON	24" O.C.	AS REQ'D	LOW	HOLD BACK 16" FROM BORDERS, TREES, AND SHRUBS
	MIMULUS CARDINALIS / SCARLET MONKEY FLOWER	1 GALLON	24" O.C.	AS REQ'D	LOW	HOLD BACK 16" FROM BORDERS, TREES, AND SHRUBS
	APTENA 'RED APPLE' / SHINY SUN ROSE	1 GALLON	24" O.C.	AS REQ'D	LOW	HOLD BACK 16" FROM BORDERS, TREES, AND SHRUBS
<b>BIORETENTION CELL PLANTS:</b>						
	33% ROSA CALIFORNICA / CALIFORNIA WILD ROSE	1 GALLON	24" O.C.	AS REQ'D	LOW	FULL & BUSHY, ZONES 1 & 2
	33% JUNCUS PATENS 'ELK BLUE' / RUSH	1 GALLON	24" O.C.	AS REQ'D	LOW	FULL & BUSHY, ZONES 1 & 2
	33% SPORYNCHUM BELLUM / BLUE-HEED GRASS	1 GALLON	24" O.C.	AS REQ'D	VERY LOW	FULL & BUSHY, ZONES 1 & 2
	LOW-GROWING BARRIER SHRUBS: BERBERIS AQUIFOLIUM 'COMPACTA' / COMPACT OREGON GRAPE	2 GALLON	24" O.C.	AS REQ'D	LOW	FULL & BUSHY; 25% OF EACH SPECIES, INSTALL IN GROUPS OF 15+ PLANTS
	ERCAMERIA LARICIFOLIA / TURPENTINE BUSH					
	EUPHORBIA MILII / CROWN OF THORNS					
	HESPEROLUCCA WHIPPLEI / YUCCA					

LOW-MEDIUM HEIGHT SHRUBS, MAXIMUM 2', TO BE INSTALLED TO BLOCK PEDESTRIAN TRAFFIC INTO SITE FROM STREET CORNER


**NOT FOR CONSTRUCTION**

18215 72ND AVE  
KENT, WA 98032  
(425)251-4222  
(425)251-8782 F

CIVIL ENGINEERING, LA SURVEYING, ENVIRONMENTAL

NO.	DATE	REVISION
1	3/22/18	CITY
2	6/7/18	CITY
3	6/7/18	CITY



DEVELOPMENT INFORMATION

ARCO I  
3000 AM  
FUEL CAI  
W/ 8 MF  
26'x100' CAI

SITE ADDRESS

MVC IRIS AVE @  
MORENO VAL


FACILITY

DESIGNED BY: BLS  
CHECKED BY: JHY  
DRAWN BY: BLS  
APPROVED: JHY

DRAWING TITLE

PRELIMI  
LANDSCAPE  
PLA

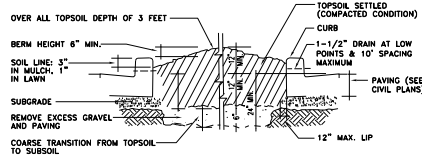
SHEET NO.



**Attachment: Preliminary Landscape Plans (3362 : Conditional Use Permit PEN18-0016 ARCO Service**

**Preliminary Not For Construction**

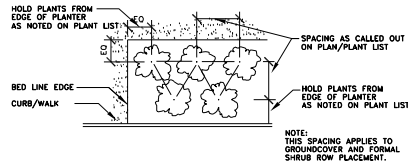
**PRELIMINARY LANDSCAPE and IRRIGATION PLAN  
FOR  
ARCO AM/PM  
PTN OF SEC. 22,  
TWP. 3 S., RGE 3 WEST, S.B.M  
RIVERSIDE COUNTY STATE OF CALIFORNIA**



NOTE:  
OVER EXCAVATE PARKING LOT PLANTERS TO LOOSEN COMPACTED SUBBASE

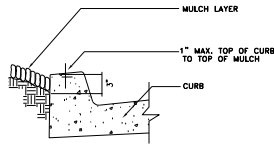
**GRADING • PARKING LOT PLANTERS DETAIL**

NOT TO SCALE



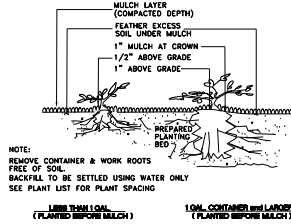
**PLANT MATERIAL SPACING DETAIL**

NOT TO SCALE



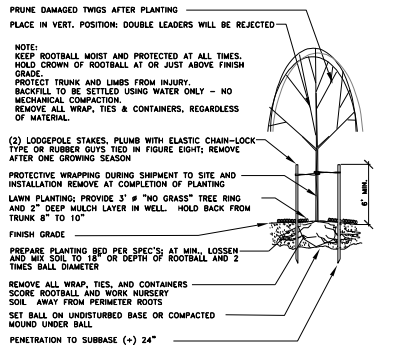
**MULCH AT CURB DETAIL**

NOT TO SCALE



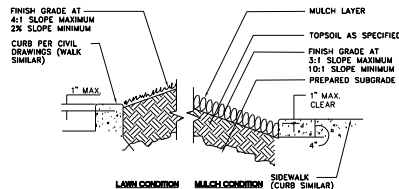
**GROUNDCOVER PLANTING DETAIL**

NOT TO SCALE



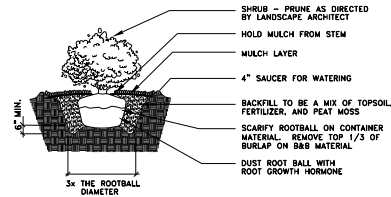
**DECIDUOUS TREE PLANTING/STAKING DETAIL**

NOT TO SCALE



**PLANTER SECTION DETAIL**

NOT TO SCALE



NOTE:  
APPLY ADDITIONAL 4 OZ. 8-32-16 FERTILIZER INTO TOP 2" OF PLANTING MIX.  
PLANT SHRUB HIGH ENOUGH TO ALLOW POSITIVE DRAINAGE AWAY FROM ROOTBALL. ROUGHEN ALL SURFACES OF PIT.  
CUT AND REMOVE BURLAP FROM ROOT BALL.

**SHRUB PLANTING DETAIL**

NOT TO SCALE

**NOT FOR CONSTRUCTION**

18215 72ND AVE  
KENT, WA 98032  
(425)251-4322  
(425)251-8782 F

CIVIL ENGINEERING, LA SURVEYING, ENVIRONMENTAL

NO.	DATE	REVISION
1	3/22/18	CITY
2	6/7/18	CITY

SEAL:

DEVELOPMENT INFORMATION  
ARCO I  
3000 am  
FUEL CAN  
w/ 8 MF  
26'x100' CAF

SITE ADDRESS:  
MVC IRIS AVE @  
MORENO VAL

FACILITY:  
PRELIMI  
LANDSC  
NOTES/DI

SHEET NO:

**Attachment: Preliminary Landscape Plans (3362) : Conditional Use Permit PEN18-0016 ARCO Service**

Preliminary Not For Construction

PRELIMINARY LANDSCAPE and IRRIGATION PLAN FOR ARCO AM/PM PTN OF SEC. 22, TWP. 3 S., RGE 3 WEST, S.B.M RIVERSIDE COUNTY STATE OF CALIFORNIA

SECTION 1000 - LAWNS AND GRASSES

SECTION 1000 - LAWNS AND GRASSES PART 1 GENERAL 1.1 DESCRIPTION 1.2 REFERENCES 1.3 DEFINITIONS 1.4 QUALITY ASSURANCE 1.5 REGULATORY REQUIREMENTS 1.6 TESTS 1.7 MAINTENANCE DATA 1.8 DELIVERY, STORAGE AND HANDLING 1.9 COORDINATION 1.10 WARRANTY 1.11 MAINTENANCE SERVICE 1.12 PRODUCTS 2.1 MATERIALS 2.2 HARVESTING SOO 2.3 EXECUTION 2.4 VERIFICATION 2.5 FERTILIZATION 2.6 CLEAN-UP AND PROTECTION 2.7 MAINTENANCE 2.8 WATERING 2.9 CLEAN-UP 2.10 COMPLETION OF WORK

1.4 LAYING SOO 1.4.1 QUANTITIES 1.4.2 GUARANTEE 1.4.3 MAINTENANCE 1.4.4 WATERING 1.4.5 CLEAN-UP 1.4.6 COMPLETION OF WORK 1.5 GUARANTEE 1.5.1 DESCRIPTION 1.5.2 DEFINITIONS 1.5.3 QUALITY ASSURANCE 1.5.4 REGULATORY REQUIREMENTS 1.5.5 TESTS 1.5.6 MAINTENANCE DATA 1.5.7 DELIVERY, STORAGE AND HANDLING 1.5.8 COORDINATION 1.5.9 WARRANTY 1.5.10 MAINTENANCE SERVICE 1.5.11 PRODUCTS 2.1 MATERIALS 2.2 HARVESTING SOO 2.3 EXECUTION 2.4 VERIFICATION 2.5 FERTILIZATION 2.6 CLEAN-UP AND PROTECTION 2.7 MAINTENANCE 2.8 WATERING 2.9 CLEAN-UP 2.10 COMPLETION OF WORK

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SECTION 1100 - TREES, PLANTS AND GROUND COVERS PART 1 GENERAL 1.1 DESCRIPTION 1.2 REFERENCES 1.3 DEFINITIONS 1.4 QUALITY ASSURANCE 1.5 REGULATORY REQUIREMENTS 1.6 TESTS 1.7 MAINTENANCE DATA 1.8 DELIVERY, STORAGE AND HANDLING 1.9 COORDINATION 1.10 WARRANTY 1.11 MAINTENANCE SERVICE 1.12 PRODUCTS 2.1 MATERIALS 2.2 HARVESTING SOO 2.3 EXECUTION 2.4 VERIFICATION 2.5 FERTILIZATION 2.6 CLEAN-UP AND PROTECTION 2.7 MAINTENANCE 2.8 WATERING 2.9 CLEAN-UP 2.10 COMPLETION OF WORK

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SECTION 1300 - TREES, PLANTS AND GROUND COVERS PART 1 GENERAL 1.1 DESCRIPTION 1.2 REFERENCES 1.3 DEFINITIONS 1.4 QUALITY ASSURANCE 1.5 REGULATORY REQUIREMENTS 1.6 TESTS 1.7 MAINTENANCE DATA 1.8 DELIVERY, STORAGE AND HANDLING 1.9 COORDINATION 1.10 WARRANTY 1.11 MAINTENANCE SERVICE 1.12 PRODUCTS 2.1 MATERIALS 2.2 HARVESTING SOO 2.3 EXECUTION 2.4 VERIFICATION 2.5 FERTILIZATION 2.6 CLEAN-UP AND PROTECTION 2.7 MAINTENANCE 2.8 WATERING 2.9 CLEAN-UP 2.10 COMPLETION OF WORK

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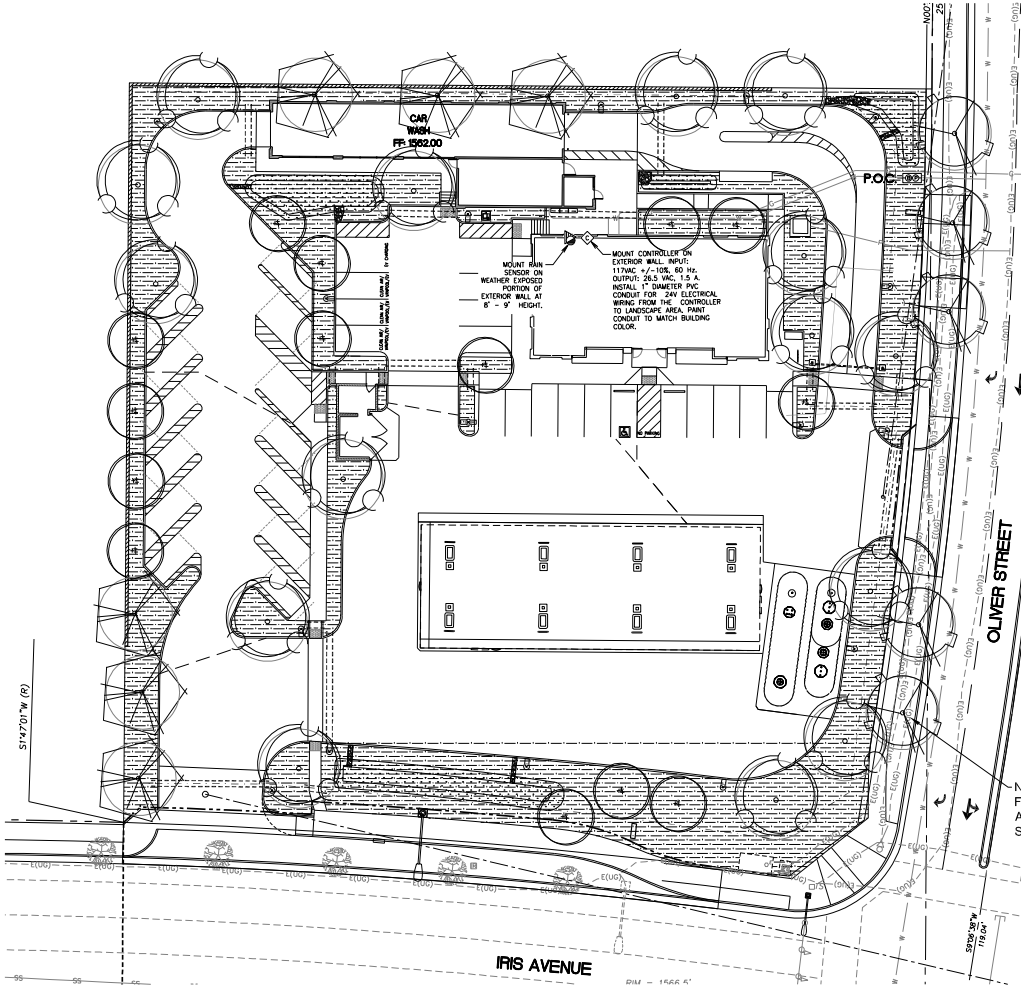
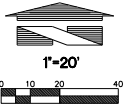
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Preliminary Not For Construction

NOT FOR CONSTRUCTION

Logos for ARCO, andec, BARGHA CONSULTING INC., and Riverside County State of California. Includes project details: 18215 72ND AVE, KENT, WA 98032, and permit information: Permit PEN18-0016 ARCO Service.

PRELIMINARY LANDSCAPE and IRRIGATION PLAN FOR ARCO AM/PM PTN OF SEC. 22, TWP. 3 S., RGE 3 WEST, S.B.M RIVERSIDE COUNTY STATE OF CALIFORNIA



LANDSCAPE IRRIGATION LEGEND

Table with columns: SYMBOL, DESCRIPTION, MIN. PSI, EMITTER SPACING, EMITTER GPH, EMITTER MAXIMUM LINEAR FT. Includes symbols for various irrigation components and their specifications.

- GENERAL IRRIGATION NOTES: IRRIGATION DESIGN SHOWN DIAGRAMMATICALLY FOR PLAN CLARITY. PRIORITY TO INSTALLATION OF DRIP IRRIGATION CONTRACTOR IS REQUIRED TO CONTACT LOCAL METAFIM REPRESENTATIVE FOR TRAINING ON THE INSTALLATION AND RUN TIME MANAGEMENT OF DRIP SYSTEM AND NOTIFY LANDSCAPE ARCHITECT THAT FACTORY TRAINING HAS OCCURRED PRIOR TO INSTALLATION.

Preliminary Not For Construction

NOT FOR CONSTRUCTION

Professional stamps and logos for ARCO, andec, BARGHA CONSULTING ENG, CIVIL ENGINEERING, LAND SURVEYING, ENVIRONMENTAL, and the State of California seal.

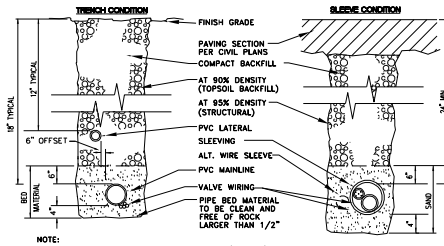
Attachment: Preliminary Landscape Plans (3362 : Conditional Use Permit PEN18-0016 ARCO Service

PRELIMINARY LANDSCAPE and IRRIGATION PLAN FOR ARCO AM/PM

PTN OF SEC. 22, TWP. 3 S., RGE 3 WEST, S.B.M RIVERSIDE COUNTY STATE OF CALIFORNIA

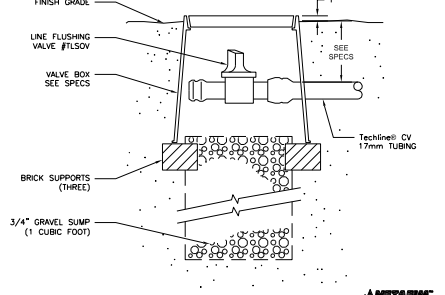
LANDSCAPE IRRIGATION NOTES

- 1. GENERAL CONTRACTOR AND LANDSCAPE CONTRACTOR TO COORDINATE.
2. LANDSCAPE CONTRACTOR TO TEST AVAILABLE WATER PRESSURE AND PROVIDE WRITTEN TEST RESULTS TO LANDSCAPE ARCHITECT PRIOR TO BEGINNING ANY WORK.
3. ALL WORK PER LOCAL CODE. INSTALLATION PER MANUFACTURER'S WRITTEN SPECIFICATIONS.
4. ALL VALVES TO BE PLACED IN "CARSON" GRADE LEVEL BOXES WITH BOLT-LOCK LIDS (OR APPROVED EQUIVALENT).
5. MAINLINE PIPE TO BE BURIED 18 INCHES AND LATERALS 12 INCHES BELOW FINISH GRADE.
6. IRRIGATION DESIGN SHOWN DIAGRAMMATICALLY FOR PLAN CLARITY.
7. DRIP TUBING SHALL BE INSTALLED FOUR (4) INCHES BELOW FINAL GRADE.
8. PROVIDE OWNER WITH TWO (2) SETS "AS-BUILT" DRAWINGS AND (3) SETS OF OPERATOR'S MANUALS UPON COMPLETION.
9. FAMILIARIZE OWNERS FACILITY OPERATOR WITH IRRIGATION SYSTEM FUNCTION.
10. ALL CONTROL WIRE SPLICES TO BE MADE AT VALVE BOXES WITH WATER TIGHT ELECTRICAL SPLICES.
11. EACH VALVE BOX TO CONTAIN A MINIMUM OF TWO (2) SPARE ORANGE CONTROL WIRES FOR JACKETED WIRE.
12. ALL ELECTRICAL EQUIPMENT TO BE U.L. TESTED AND APPROVED, AND BEAR THE U.L. LABEL.
13. GROSS CONNECTION PROTECTION INSPECTION REQUIRED.
14. CONTRACTOR TO PROVIDE SYSTEM WINTERIZATION/SPRING SERVICE WHEN INSTALLATION HAS BEEN COMPLETED WITHIN 30 DAYS OF NOVEMBER 1 FOR WINTERIZATION, OR MAY 15 FOR SPRING SERVICE.
15. IRRIGATION SCHEDULING: THE IRRIGATION CONTROLLER CONTAINS A WATER BUDGET FEATURE.
16. SUBSTITUTION OF IRRIGATION MATERIAL/EQUIPMENT TO BE MADE ONLY UPON WRITTEN APPROVAL OF LANDSCAPE ARCHITECT AND OWNER'S REPRESENTATIVE.
17. ALL ZONES TO PASS A MINIMUM DISTRIBUTION UNIFORMITY WATER AUDIT, AS REQUIRED BY THE STATE OF CALIFORNIA'S WATER EFFICIENT LANDSCAPE ORDINANCE.

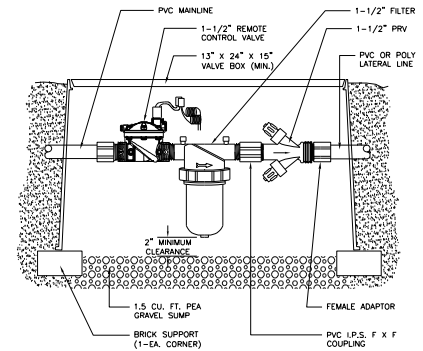


NOTE: SLEEVING MATERIAL SHALL BE PVC CLASS 160(SDR-26). DIMENSIONS ARE WITH CLEARANCES. ALL IRRIGATION SLEEVING TRENCH BACKFILL MATERIAL SHALL BE CLASS #5 OR BETTER (MAX. OF 10% PASSING NO.40 SCREEN) AND BE COMPACTED TO MIN. 95% OPTIMUM DENSITY PER ASTM D-1557-70 (MODIFIED PROCTOR).

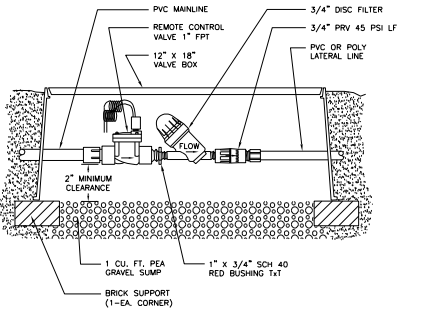
SLEEVE/TRENCHING DETAIL NOT TO SCALE



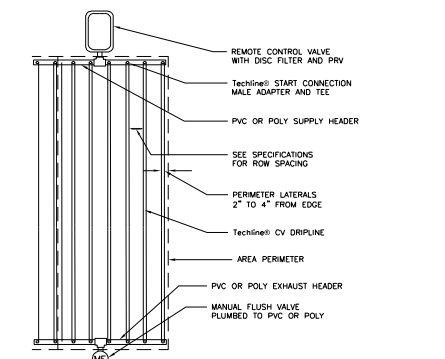
MANUAL LINE FLUSHING VALVE TLISOV PLUMBED TO TUBING NOT TO SCALE



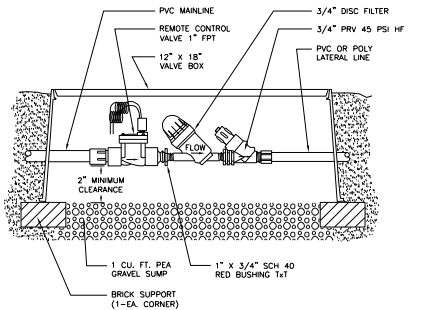
COMMERCIAL CONTROL ZONE ASSEMBLY: P/N LVCZ-150 11 - 35 GPM NOT TO SCALE



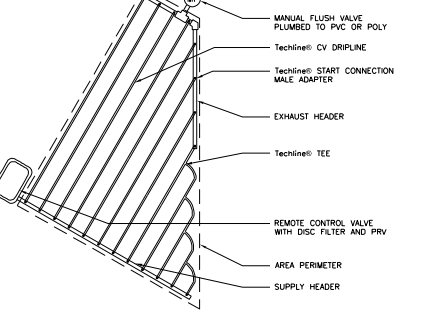
LOW-VOLUME CONTROL SYSTEM: P/N LVCZS80-10075-LF .25 - 4.4 GPM NOT TO SCALE



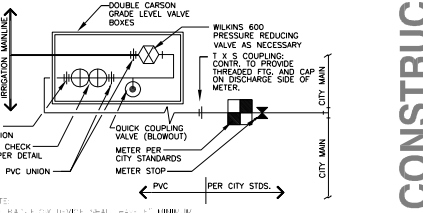
TECHLINE CV END FEED LAYOUT NOT TO SCALE



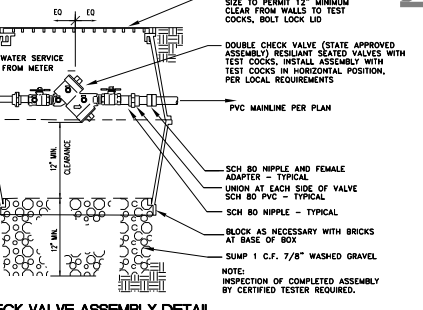
LOW-VOLUME CONTROL ZONE ASSEMBLY: P/N LVCZS80-10075-HF 4.5 - 17.6 GPM NOT TO SCALE



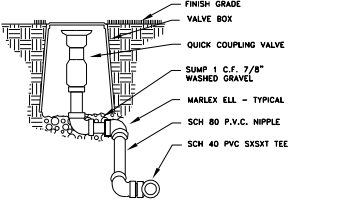
TECHLINE CV IRREGULAR AREAS: Triangular NOT TO SCALE



POINT OF CONNECTION (P.O.C.) DETAIL NOT TO SCALE



CHECK VALVE ASSEMBLY DETAIL NOT TO SCALE



QUICK COUPLING VALVE DETAIL

Preliminary Not For Construction

NOT FOR CONSTRUCTION

Vertical sidebar containing logos for ARCO, andec, BARGHA CONSULTING ENG, and NWC IRIS AVE @ MORENO VAL. Includes permit information: Preliminary Irrigation Notes/Drawings, Permit PEN18-0016 ARCO Service, and sheet number E.2.o.



## MEMORANDUM

**DATE:** November 8, 2017

**To:** Kent Norton, Associate, LSA

**FROM:** Michael Slavick, Senior Air Quality Specialist, LSA

**SUBJECT:** Air Quality and Greenhouse Gas Emission Analysis and Screening Health Risk Assessment Technical Memorandum for the Proposed ARCO AM/PM Gas Service Station with Convenience Store and Car Wash Project (LSA Project No. SAT1701)

This Technical Memorandum provides an evaluation of air quality and greenhouse gas emissions associated with the proposed ARCO Gas Station on 1.31 acres at the northwest corner of Iris Avenue and Oliver Street in the City of Moreno Valley (City), Riverside County. The proposed project site is currently vacant bounded by single-family residential homes approximately 100 feet to the east and 150 feet to the south. Because of the close proximity to the gas station, the City has requested a screening health risk assessment (HRA).

### SUMMARY OF AIR QUALITY AND GREENHOUSE GAS EMISSION IMPACT ANALYSIS

Criteria pollutant emissions from construction and operational activities associated with the proposed project would be less than significant. Results of the screening HRA conclude that the cancer risk for future residents associated with exposure to gas station emissions would not exceed the significance criteria for Toxic Air Contaminants (TACs) as established by the South Coast Air Quality Management District (SCAQMD). Therefore, the future residents' and office workers' exposure to the gas station emissions would be less than significant. Lastly, the greenhouse gas (GHG) emissions from construction and operational activities associated with the proposed project would be less than significant.

A brief discussion of the air quality, screening health risk, and GHG impact analysis associated with the proposed project is provided below.

### SUMMARY OF CEQA SIGNIFICANCE THRESHOLD LIMITS

The SCAQMD has established emissions thresholds for construction and operation for California Environmental Quality Act (CEQA) evaluation of the proposed project in the South Coast Air Basin (Basin). It should be noted that the emissions thresholds were established based on the attainment status of the Basin in regard to air quality standards for specific criteria pollutants. Four sets of thresholds are summarized below.

#### Regional Emissions Thresholds

Table A presents the significance thresholds for construction and operational emissions as established by the SCAQMD.

**Table A: SCAQMD Significance Thresholds**

Air Pollutant	Construction Phase	Operational Phase
VOCs	75 lbs/day	55 lbs/day
CO	550 lbs/day	550 lbs/day
NOx	100 lbs/day	55 lbs/day
SOx	150 lbs/day	150 lbs/day
PM <sub>10</sub>	150 lbs/day	150 lbs/day
PM <sub>2.5</sub>	55 lbs/day	55 lbs/day

Source: South Coast Air Quality Management District Air Quality Significance Thresholds (Last revisions: March 2015).

CO = carbon monoxide

lbs = pounds

NOx = nitrogen oxides

PM<sub>2.5</sub> = particulate matter less than 2.5 microns in size

PM<sub>10</sub> = particulate matter less than 10 microns in size

VOCs = volatile organic compounds

SCAQMD = South Coast Air Quality Management District

SOx = sulfur oxides

Projects with construction and/or operational emissions that exceed any of these emission thresholds are considered to be significant under the SCAQMD guidelines.

### Localized Significance Thresholds

The SCAQMD published its *Final Localized Significance Threshold Methodology* in June 2003 with revisions in July 2008, recommending that all air quality analyses include an assessment of both construction and operational impacts on the air quality of nearby sensitive receptors. Localized Significance Thresholds (LSTs) represent the maximum emissions from a project site that is not expected to result in an exceedance of the California Ambient Air Quality Standards (CAAQS). LSTs are based on the ambient concentrations of that pollutant within the project Source Receptor Area (SRA) and the distance to the nearest sensitive receptor. For this project, the appropriate SRA for the LST is the Perris Valley Area (SRA 24).

Existing sensitive receptors nearest to the project site are approximately 100 feet, or approximately 31 meters (m), from the project site. Using the operations LST for receptors at 31 m from a 1-acre site for this project would result in a conservative analysis. Therefore, Table B presents the emissions thresholds that apply during project operations.

**Table B: SCAQMD Localized Significance Thresholds (lbs/day)**

	NOx	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
Construction	125.0	670.0	5.9	3.2
Operations	125.0	670.0	1.5	1.0

Source: SCAQMD Localized Significance Threshold Methodology (Last revisions: July 2008).

Note: SRA 24 – Perris Valley, 1 acre, 31-meter distance.

### Health Risk assessment Thresholds

The California Air Resources Board (ARB) has developed an *Air Quality and Land Use Handbook*<sup>1</sup> (*Handbook*) intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. According to the *Handbook*, recent air pollution studies have shown an association between respiratory and other non-cancer health effects and proximity to high-traffic roadways. The

<sup>1</sup> California Air Resources Board, 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. April.

*Handbook* recommends that planning agencies strongly consider proximity to these sources when finding new locations for “sensitive” land uses such as residential homes. Key recommendations in the *Handbook* include taking steps to avoid siting new, sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). Please note that this ARB buffer recommendation in the 2005 *Handbook* does not consider the ARB required enhanced vapor recovery systems for gasoline dispensing facilities. The *Handbook* specifically states that its recommendations are advisory and acknowledges land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

The SCAQMD *Air Quality CEQA Guidelines* establish risk thresholds for projects under CEQA that have the potential to expose sensitive receptors (including residential areas) or the general public to substantial levels of TACs. Table C lists the air district’s TAC incremental risk thresholds for operation of a project.

**Table C: SCAQMD Toxic Air Contaminant Incremental Risk Thresholds**

Maximum Individual Cancer Risk	≥ 10 in 1 million
Cancer Burden	> 0.5 excess cancer cases
Hazard Index	≥ 1.0

Source: South Coast Air Quality Management District Air Quality Significance Thresholds (Last revisions: March 2015).

### GHG Emission Thresholds

For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, the SCAQMD requires an assessment of GHG emissions. The SCAQMD, under Option 1 has identified a “bright-line” screening level threshold of 3,000 metric tons of carbon dioxide equivalents (MTCO<sub>2e</sub>) annually for all land use types or, under Option 2, the following land-use-specific thresholds: 1,400 MTCO<sub>2e</sub> for commercial projects, 3,500 MTCO<sub>2e</sub> for residential projects, or 3,000 MTCO<sub>2e</sub> for mixed-use projects. This bright-line threshold is based on a review of the Governor’s Office of Planning and Research (OPR) database of CEQA projects. Based on OPR review of 711 CEQA projects, 90 percent of CEQA projects would exceed the bright-line thresholds identified above. Therefore, projects that do not exceed the bright-line threshold would have a nominal and therefore less than cumulatively considerable impact on GHG emissions. For the proposed project, the GHG threshold is 1,400 MTCO<sub>2e</sub> for commercial projects.

### AIR QUALITY ANALYSIS

To evaluate air quality and GHG emissions from the construction and operation of the proposed project, LSA conducted an analysis using the California Emission Estimator Model (CalEEMod), which is the current air quality and land use emissions model recommended by the California Air Pollution Control Officers Association (CAPCOA) for evaluating emissions from land use projects (CAPCOA 2016). Emissions from construction were based on the CalEEMod model default mode construction scenario and schedule. Emissions from operation of the project included vehicle emissions, area source emissions, and energy use emissions. Emissions were then compared with significance thresholds from the SCAQMD.

### AQMP Consistency

The SCAQMD 2016 Air Quality Management Plan (AQMP) incorporates the latest scientific and technical information and planning assumptions; updated emissions inventory methodologies for various emissions source categories; and reflects information, plans, and programs presented in the Southern California Association of Governments (SCAG) 2016 Regional Transportation Plan/ Sustainable Communities Strategy (2016 RTP/SCS). Air quality conditions and trends presented in the 2016 AQMP assume that regional development will occur in accordance with population growth projections identified by SCAG in its 2016 RTP/SCS.

The SCAG 2016 RTP/SCS in turn derives its assumptions, in part, from general plans of cities within the SCAG region. Accordingly, if a project is consistent with the development and growth projections reflected in an adopted general plan, that project is considered consistent with the growth assumptions in the 2016 AQMP. The 2016 AQMP further assumes that development projects within the region will implement appropriate strategies to reduce air pollutant emissions, thereby promoting timely implementation of the AQMP.

The proposed project does not propose or require any change in land use designations, nor any increase in development intensity beyond that currently anticipated for the subject site. Because the land uses and development intensities proposed by the proposed project are consistent with the currently adopted City General Plan and applicable zoning standards, the proposed project would not result in air quality violations. The proposed project would not generate operational-source criteria pollutant emissions not already reflected in the current AQMP regional emissions inventory. Based on the preceding, the proposed project is considered to be consistent with the AQMP. The potential for the project to conflict with or obstruct implementation of the applicable air quality plan is therefore considered less than significant.

### Construction Air Quality Emissions

Construction emissions can vary greatly depending on the level of activity, the specific operations taking place, the equipment being operated, local soils, weather conditions, and other factors. Construction would require heavy equipment during grading, utility installations, building construction and paving. Construction equipment estimates are based on default values in CalEEMod (Version 2016.3.1). CalEEMod is designed to model construction emissions for land development projects and allows for the input of project-specific information, such as the amount of equipment, hours of operations, duration of construction activities, and selection of emission control measures. Attachment A shows results from the model. Table D shows the construction emissions from the CalEEMod output tables. Application of water three times daily during grading was taken into consideration. The proposed project will be required to comply with SCAQMD Rule 403 to control fugitive dust. Table D includes implementation of fugitive dust control measures required by SCAQMD under Rule 403, including watering disturbed areas a minimum of three times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, and replacing groundcover quickly. Based on CalEEMod default selections, the fugitive dust control efficiency for onsite watering three times daily is 61 percent. The project would balance grading activity on-site, which means that no soil would be transported off-site for disposal nor would soil be transported on-site for use in construction activities. Attachment A includes CalEEMod outputs.

Table D provides a summary of the daily construction emissions estimates by construction activity during each calendar year. Results from the CalEEMod analysis, as shown in Table D, indicate that the construction pollutant emissions from the proposed project would not exceed the corresponding SCAQMD daily emission thresholds for criteria pollutants. Therefore, construction impacts would be less than significant.

**Table D: Estimated Construction Emissions**

Construction Phase	Peak Daily Pollutant Emissions (lbs/day)					
	VOC	NOx	CO	SOx	PM <sub>10</sub>	PM <sub>2.5</sub>
Max Daily Emissions during Year 1	2.60	20.78	13.93	0.02	6.84	3.85
Max Daily Emissions during Year 2	3.34	15.98	13.53	0.02	0.93	0.89
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Significant Emissions?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: Compiled by LSA (October 2017).

CO = carbon monoxide  
lbs/day = pounds per day

NOx = nitrogen oxides

PM<sub>2.5</sub> = particulate matter less than 2.5 microns in size

PM<sub>10</sub> = particulate matter less than 10 microns in size

SCAQMD = South Coast Air Quality Management District

SOx = sulfur oxides

VOC = volatile organic compounds

### Localized Impacts Analysis

The SCAQMD has issued guidance on applying CalEEMod results to localized impacts analyses. Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality. There are several existing residences surrounding the project site, the closest of which is approximately 100 feet (31 m). Using the SCAQMD LST guidance for one acre, Table E shows that the emissions of the pollutants on the peak day of construction will result in concentrations of pollutants at the nearest residences that are all below the SCAQMD thresholds of significance. Therefore, project-related construction emissions would be less than significant.

**Table E: Construction Localized Impacts Analysis**

Emissions Sources	NOx	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
Onsite Emissions (lbs/day)	21.0	14.0	3.2	2.0
<b>Local Significance Thresholds (lbs/day)</b>	<b>125.0</b>	<b>670.0</b>	<b>5.9</b>	<b>3.2</b>
<b>Significant Emissions?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: Compiled by LSA (October 2017).

Note: Source Receptor Area 24 – Perris Valley, 1 acre, 31 meter distance

CO = carbon monoxide  
lbs/day = pounds per day  
NOx = nitrogen oxides

PM<sub>2.5</sub> = particulate matter less than 2.5 microns in size

PM<sub>10</sub> = particulate matter less than 10 microns in size

### Operational Air Quality Emissions

Operational emissions from area sources include the combustion of natural gas for heating and hot water, engine emissions from landscape maintenance equipment, and the use of appliances at the residences. Mobile source emissions are associated with project-related vehicle trip generation. Based on the CalEEMod default mode at full buildout, the project would generate approximately 1,111 average daily trips (ADT). Table F presents the estimated operational emissions for the

proposed project and demonstrates criteria pollutant emissions from operational activities associated with the proposed project would be below the SCAQMD thresholds. Therefore, project-related operational emissions would be less than significant.

**Table F: Operational Emissions**

Source	Pollutant Emissions (lbs/day)					
	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Area Sources	0.05	<0.01	<0.01	0.00	<0.01	0.02
Energy Sources	<0.01	0.02	0.02	<0.01	<0.01	<0.01
Mobile Sources	5.55	24.40	26.14	0.08	3.73	1.03
<b>Total Project Emissions</b>	<b>5.60</b>	<b>24.42</b>	<b>26.16</b>	<b>0.08</b>	<b>3.73</b>	<b>1.03</b>
<b>SCAQMD Thresholds</b>	55	55	550	150	150	55
<b>Significant?</b>	No	No	No	No	No	No

Source: Compiled by LSA. (October 2017).

CO = carbon monoxide  
lbs/day = pounds per day

NO<sub>x</sub> = nitrogen oxides

PM<sub>2.5</sub> = particulate matter less than 2.5 microns in size

PM<sub>10</sub> = particulate matter less than 10 microns in size

SCAQMD = South Coast Air Quality Management District

SO<sub>x</sub> = sulfur oxides

VOC = volatile organic compounds

### Localized Impacts Analysis

Table G shows the calculated emissions for the proposed operational activities compared with the appropriate LSTs. By design, the localized impacts analysis only includes onsite sources; however, CalEEMod outputs do not separate onsite and offsite emissions for mobile sources. For a worst-case scenario assessment, the emissions shown in Table G include all onsite project-related stationary sources and 2 percent of the project-related new mobile sources, which is an estimate of the amount of project-related new vehicle traffic that would occur onsite (i.e., driveways and parking lots). All offsite emissions are subtracted from the total emissions.

**Table G: Long-Term Operational Localized Impacts Analysis**

Emissions Sources	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
Onsite Emissions (lbs/day) <sup>1</sup>	0.3	1.4	0.07	0.04
<b>Local Significance Thresholds (lbs/day)</b>	<b>125.0</b>	<b>670.0</b>	<b>1.50</b>	<b>1.00</b>
<b>Significant Emissions?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: Compiled by LSA. (October 2017).

Note: Source Receptor Area 24 – Perris Valley, 1 acre, 31 meter distance.

<sup>1</sup> CalEEMod clearly delineates the onsite and offsite emissions and mobile source trips within the project area (i.e., driveways and parking lots).

CO = carbon monoxide  
NO<sub>x</sub> = nitrogen oxides

PM<sub>2.5</sub> = particulate matter less than 2.5 microns in size  
PM<sub>10</sub> = particulate matter less than 10 microns in size

Table G shows that the operational emissions rates would not exceed the LSTs for residential receptors at 100 feet (31 m). Therefore, the proposed operational activities would not result in a locally significant air quality impact.

### Toxic Air Contaminant Emissions

Dispensing gasoline products has the potential to introduce air toxics (primarily benzene emissions) into the local environment. The SCAQMD regulates these emissions through a permitting process (Health Risk Assessment) that applies to all service stations within Riverside County. As part of its permitting process, the SCAQMD performs an analysis of potential cancer risk associated with anticipated benzene emissions from individual service stations.

The SCAQMD has established thresholds of significance that account for site-specific factors such as gasoline throughput and the locations of nearby receptors. If the analysis indicates that the cancer risk at a nearby receptor location (i.e., area where persons reside, work, or attend school—not including streets or sidewalks) is less than one (1) case per million persons, the risk is considered less than significant and no mitigation is required. If the analysis results indicate that the lifetime cancer risk is between 1 and 10 cases per million, the impact is considered less than significant with the application of Toxics Best Available Control Technology (TBACT). Under existing SCAQMD regulations, a permit cannot be issued for a gas station project with an identified cancer risk between 1 and 10 unless TBACT is made a part of the project. The ARB must certify all vapor recovery equipment that is used at service stations, which would satisfy the TBACT requirement. If the analysis indicates that the cancer risk is greater than 10 cases per million, the impact is considered significant and the SCAQMD would further constrain the service station's operations in order to stay below a cancer risk of 10 cases in a million.

SCAQMD staff has indicated on previous gas station projects that only a very high throughput service station in close proximity to a school or other sensitive receptor would be likely to exceed the theoretical 10 cases per million threshold. At present, SCAQMD staff runs individual cancer risk assessments on all new service stations or projects where a school is located within 1,000 feet of the project site and there is an increase in emissions. There are no schools within 1,000 feet to the project. The nearest sensitive receptor to the project site is a residential area approximately 100 feet to the east and 150 feet to the south. Compliance with existing SCAQMD rules and regulations would ensure potential impacts associated with air toxics would be less-than-significant.

As indicated in Table F, project operational emissions of criteria pollutants would be below SCAQMD significance thresholds; thus, they are not likely to have a significant impact on these residences given the distance and the dispersion that would occur. Exposure by individuals pumping gasoline would be limited in time, so the dose level for customers would be low. In addition, SCAQMD Rule 461 - Gasoline Transfer and Dispensing, require the installation of enhanced vapor recovery systems that would reduce the amount of vapor that would be emitted into the atmosphere by 95 to 98 percent from levels without such systems.

This would further limit doses and exposures, reducing potential health risk related to gasoline vapors to a level that is not significant. Overall, project impacts related to exposure of sensitive receptors to emissions are considered less than significant.

### Odors

CEQA and the SCAQMD Guide consider objectionable odors as a potentially significant environmental impact. SCAQMD Rule 402 prohibits the discharge of air contaminants that could be

a nuisance or an annoyance. This prohibition includes potential odors. Potential sources of odors associated with the project include the release of gasoline vapors. Such odors in general would be confined mainly to the project site and would readily dissipate. In accordance with SCAQMD Rule 461, enhanced vapor recovery systems would be required. Project impacts related to odors are considered less than significant.

### Conclusion for Air Quality Impacts

As shown in Tables D through G, criteria pollutant emissions from construction and operational activities associated with the proposed project would be below the SCAQMD thresholds. Therefore, project-related construction and operational emissions would be less than significant. Results of the qualitative HRA conclude that compliance with existing SCAQMD rules and regulations and that SCAQMD would ensure the proposed gas station emissions would not exceed the significance criteria for TACs. Therefore, the existing residents' exposure to the gas station emissions would be less than significant.

### GREENHOUSE GAS EMISSIONS ANALYSIS

Construction and operation of the project could result in the generation of GHG emissions as described below.

#### Construction Greenhouse Gas Emissions

Construction activities produce combustion emissions from various sources, such as site grading, utility engines, onsite heavy-duty construction vehicles, and equipment hauling materials to and from the site, asphalt paving, and motor vehicles transporting the construction crew. Exhaust emissions from onsite construction activities would vary daily as construction activity levels change.

Construction GHG emissions were calculated using CalEEMod. Please refer to the CalEEMod modeling output in Attachment A for details. The construction phase in Table H shows GHG emissions from equipment exhaust and energy use. Results indicate that project construction would generate approximately 198 MTCO<sub>2</sub>e per year. Amortized over 30 years, the total construction emissions would generate approximately 6.6 MTCO<sub>2</sub>e per year.

**Table H: Estimated Construction Greenhouse Gas Emissions**

Construction Phase	Peak Annual Emissions (mt/yr)			Total Emissions (MTCO <sub>2</sub> e)
	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	
Year 1	180.34	0.04	0.00	181.27
Year 2	17.11	<0.01	0.00	17.20
<b>Total Construction Emissions</b>				<b>198.45</b>
<b>Total Construction Emissions Amortized over 30 years</b>				<b>6.62</b>

Source: Compiled by LSA (October 2017).

CO<sub>2</sub> = carbon dioxide

CH<sub>4</sub> = methane

N<sub>2</sub>O = nitrous oxide

mt/yr = metric tons per year

CO<sub>2</sub>e = carbon dioxide equivalent

MTCO<sub>2</sub>e = metric tons of carbon dioxide equivalent



## Operational Greenhouse Gas Emissions

Long-term operation of the proposed project would generate GHG emissions from area and mobile sources and indirect emissions from stationary sources associated with energy consumption. Mobile source emissions of GHGs would include project-generated vehicle trips associated with onsite facilities and customers/visitors to the project site. Area source emissions would be associated with activities such as landscaping and maintenance of proposed land uses, natural gas for heating, and other sources. Increases in stationary source emissions would also occur at offsite utility providers as a result of demand for electricity, natural gas, and water by the proposed uses.

The GHG emission estimates presented in Table I show the emissions associated with the level of development envisioned by the proposed project at opening. Attachment A includes the model outputs. Area sources include architectural coatings, consumer products, and landscaping. Energy sources include natural gas consumption for space heating.

**Table I: Estimated Operational Greenhouse Gas Emissions**

Source	Pollutant Emissions (MT/yr)			
	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO <sub>2</sub> e
Construction emissions amortized over 30 years	6.58	<0.01	0.00	6.62
<b>Operational Emissions</b>				
Area Sources	<0.01	<0.01	0.00	<0.01
Energy Sources	11	<0.01	<0.01	11.42
Mobile Sources	1,207.20	<0.01	0.15	1,210.84
Waste Sources	1.7	1.75	0.10	4.34
Water Usage	11	1.41	<0.01	1.64
<b>Total Project Emissions</b>	<b>1,228.31</b>	<b>0.25</b>	<b>0.00</b>	<b>1,234.85</b>
<b>SCAQMD GHG Threshold</b>	—	—	—	<b>1,400</b>
<b>Significant Emissions?</b>	—	—	—	<b>No</b>

Source: Compiled by LSA (October 2017).

Note: Numbers in table may not appear to add up correctly due to rounding of all numbers to two decimal places.

MT/yr = metric tons per year

CH<sub>4</sub> = methane

N<sub>2</sub>O = nitrous oxide

CO<sub>2</sub>e = carbon dioxide equivalent

CO<sub>2</sub> = carbon dioxide

As shown in Table I, the project will result in a net increase of 1,235 MTCO<sub>2</sub>e per year. The emissions level of 1,235 MTCO<sub>2</sub>e per year is less than the SCAQMD Tier 3 threshold of 1,400 MTCO<sub>2</sub>e per year for commercial projects; therefore, project-level and cumulative GHG emissions would be less than significant.

## Conclusion for Greenhouse Gas Impacts

As shown in Tables H and I, GHG emissions from construction and operational activities associated with the proposed project would be below the SCAQMD thresholds. Therefore, project-related construction and operational GHG emissions would be less than significant.

## REFERENCES

California Air Pollution Control Officers Association (CAPCOA). 2016. California Emissions Estimator Model User's Guide, Version 2016.3.1. September 2016. Website: <http://www.caleemod.com/>, accessed October 2017

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**ATTACHMENT A**  
**CALEEMOD MODEL OUTPUTS**

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Summer

### ARCO AM/PM Gas Station Iris Ave Moreno Valley Riverside-South Coast County, Summer

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Gasoline/Service Station	16.00	Pump	1.31	2,258.80	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.4	<b>Precipitation Freq (Days)</b>	28
<b>Climate Zone</b>	10			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project site is 1.31 acres.

Construction Phase -

Grading - Grading entire 1.3 acres.

Fleet Mix - Assume 54% LDA, 18% LDT1, 8% LDT2, 12% MDV, 7% HHD, and 1% MC.

Construction Off-road Equipment Mitigation - Fugitive dust control with on-site watering three times daily.

Area Mitigation -

Energy Mitigation -

Water Mitigation - Project applicant will install low flow water appllance and water efficient irrigation system.

Waste Mitigation - Waste diversion would acheive 75% goal.

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Summer

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Summer

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	PhaseEndDate	4/1/2018	1/28/2019
tblConstructionPhase	PhaseEndDate	4/1/2018	1/14/2019
tblConstructionPhase	PhaseEndDate	4/1/2018	4/9/2018
tblConstructionPhase	PhaseEndDate	4/1/2018	1/28/2019
tblConstructionPhase	PhaseEndDate	4/1/2018	4/3/2018
tblConstructionPhase	PhaseStartDate	4/2/2018	1/15/2019
tblConstructionPhase	PhaseStartDate	4/2/2018	4/10/2018
tblConstructionPhase	PhaseStartDate	4/2/2018	4/4/2018
tblConstructionPhase	PhaseStartDate	4/2/2018	1/15/2019
tblFleetMix	HHD	0.07	0.07
tblFleetMix	LDA	0.54	0.54
tblFleetMix	LDT1	0.04	0.18
tblFleetMix	LDT2	0.18	0.08
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.3390e-003	0.00
tblFleetMix	MCY	4.6290e-003	0.01
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MH	1.1200e-003	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	1.3650e-003	0.00
tblFleetMix	SBUS	9.5900e-004	0.00
tblFleetMix	UBUS	1.2130e-003	0.00
tblGrading	AcresOfGrading	1.50	1.30
tblLandUse	LotAcreage	0.05	1.31
tblProjectCharacteristics	OperationalYear	2018	2020

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Summer

**2.0 Emissions Summary**

**2.1 Overall Construction (Maximum Daily Emission)**

**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	2.5979	20.7778	13.9261	0.0222	5.8890	1.0581	6.8418	2.9774	1.0217	3.8540	0.0000	2,042.5716	2,042.5716	0.5431	0.0000	2,052.8012
2019	3.3355	15.9836	13.5315	0.0222	0.1453	0.9159	0.9271	0.0385	0.8846	0.8876	0.0000	2,029.3976	2,029.3976	0.4391	0.0000	2,039.1042
<b>Maximum</b>	<b>3.3355</b>	<b>20.7778</b>	<b>13.9261</b>	<b>0.0222</b>	<b>5.8890</b>	<b>1.0581</b>	<b>6.8418</b>	<b>2.9774</b>	<b>1.0217</b>	<b>3.8540</b>	<b>0.0000</b>	<b>2,042.5716</b>	<b>2,042.5716</b>	<b>0.5431</b>	<b>0.0000</b>	<b>2,052.8012</b>

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	2.5979	20.7778	13.9261	0.0222	2.3513	1.0581	3.3041	1.1757	1.0217	2.0522	0.0000	2,042.5716	2,042.5716	0.5431	0.0000	2,052.8012
2019	3.3355	15.9836	13.5315	0.0222	0.1453	0.9159	0.9271	0.0385	0.8846	0.8876	0.0000	2,029.3976	2,029.3976	0.4391	0.0000	2,039.1042
<b>Maximum</b>	<b>3.3355</b>	<b>20.7778</b>	<b>13.9261</b>	<b>0.0222</b>	<b>2.3513</b>	<b>1.0581</b>	<b>3.3041</b>	<b>1.1757</b>	<b>1.0217</b>	<b>2.0522</b>	<b>0.0000</b>	<b>2,042.5716</b>	<b>2,042.5716</b>	<b>0.5431</b>	<b>0.0000</b>	<b>2,052.8012</b>

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	58.63	0.00	45.54	59.74	0.00	38.00	0.00	0.00	0.00	0.00	0.00	0.00



ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Summer

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0506	2.0000e-005	1.6400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.5000e-003	3.5000e-003	1.0000e-005		3.7400e-003
Energy	2.1700e-003	0.0198	0.0166	1.2000e-004		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		23.7056	23.7056	4.5000e-004	4.3000e-004	23.8464
Mobile	5.5456	24.4040	26.1451	0.0757	3.6759	0.0513	3.7271	0.9766	0.0479	1.0245		7,750.9534	7,750.9534	0.8460		7,772.1033
<b>Total</b>	<b>5.5984</b>	<b>24.4238</b>	<b>26.1633</b>	<b>0.0758</b>	<b>3.6759</b>	<b>0.0528</b>	<b>3.7287</b>	<b>0.9766</b>	<b>0.0494</b>	<b>1.0260</b>		<b>7,774.6625</b>	<b>7,774.6625</b>	<b>0.8465</b>	<b>4.3000e-004</b>	<b>7,795.9534</b>

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0506	2.0000e-005	1.6400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.5000e-003	3.5000e-003	1.0000e-005		3.7400e-003
Energy	2.1200e-003	0.0193	0.0162	1.2000e-004		1.4700e-003	1.4700e-003		1.4700e-003	1.4700e-003		23.1439	23.1439	4.4000e-004	4.2000e-004	23.2814
Mobile	5.5456	24.4040	26.1451	0.0757	3.6759	0.0513	3.7271	0.9766	0.0479	1.0245		7,750.9534	7,750.9534	0.8460		7,772.1033
<b>Total</b>	<b>5.5984</b>	<b>24.4233</b>	<b>26.1629</b>	<b>0.0758</b>	<b>3.6759</b>	<b>0.0528</b>	<b>3.7286</b>	<b>0.9766</b>	<b>0.0494</b>	<b>1.0260</b>		<b>7,774.1008</b>	<b>7,774.1008</b>	<b>0.8464</b>	<b>4.2000e-004</b>	<b>7,795.3884</b>

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ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.06	0.00	0.00	0.01	0.01	0.00	2.33	0.01

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/2/2018	4/3/2018	5	2	
2	Grading	Grading	4/4/2018	4/9/2018	5	4	
3	Building Construction	Building Construction	4/10/2018	1/14/2019	5	200	
4	Architectural Coating	Architectural Coating	1/15/2019	1/28/2019	5	10	
5	Paving	Paving	1/15/2019	1/28/2019	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.3

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,388; Non-Residential Outdoor: 1,129; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

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ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Building Construction	Welders	3	8.00	46	0.45

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	1.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

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ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Summer

**3.1 Mitigation Measures Construction**

Water Exposed Area

Clean Paved Roads

**3.2 Site Preparation - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.8061	20.7472	8.0808	0.0172		0.9523	0.9523		0.8761	0.8761		1,735.3630	1,735.3630	0.5402		1,748.8690
<b>Total</b>	<b>1.8061</b>	<b>20.7472</b>	<b>8.0808</b>	<b>0.0172</b>	<b>5.7996</b>	<b>0.9523</b>	<b>6.7518</b>	<b>2.9537</b>	<b>0.8761</b>	<b>3.8298</b>		<b>1,735.3630</b>	<b>1,735.3630</b>	<b>0.5402</b>		<b>1,748.8690</b>

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Summer

**3.2 Site Preparation - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0482	0.0306	0.3957	9.4000e-004	0.0894	5.6000e-004	0.0900	0.0237	5.1000e-004	0.0242		93.8617	93.8617	2.8600e-003		93.9332
<b>Total</b>	<b>0.0482</b>	<b>0.0306</b>	<b>0.3957</b>	<b>9.4000e-004</b>	<b>0.0894</b>	<b>5.6000e-004</b>	<b>0.0900</b>	<b>0.0237</b>	<b>5.1000e-004</b>	<b>0.0242</b>		<b>93.8617</b>	<b>93.8617</b>	<b>2.8600e-003</b>		<b>93.9332</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2618	0.0000	2.2618	1.1519	0.0000	1.1519			0.0000			0.0000
Off-Road	1.8061	20.7472	8.0808	0.0172		0.9523	0.9523		0.8761	0.8761	0.0000	1,735.3630	1,735.3630	0.5402		1,748.8690
<b>Total</b>	<b>1.8061</b>	<b>20.7472</b>	<b>8.0808</b>	<b>0.0172</b>	<b>2.2618</b>	<b>0.9523</b>	<b>3.2141</b>	<b>1.1519</b>	<b>0.8761</b>	<b>2.0280</b>	<b>0.0000</b>	<b>1,735.3630</b>	<b>1,735.3630</b>	<b>0.5402</b>		<b>1,748.8690</b>

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ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Summer

**3.2 Site Preparation - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0482	0.0306	0.3957	9.4000e-004	0.0894	5.6000e-004	0.0900	0.0237	5.1000e-004	0.0242		93.8617	93.8617	2.8600e-003		93.9332
<b>Total</b>	<b>0.0482</b>	<b>0.0306</b>	<b>0.3957</b>	<b>9.4000e-004</b>	<b>0.0894</b>	<b>5.6000e-004</b>	<b>0.0900</b>	<b>0.0237</b>	<b>5.1000e-004</b>	<b>0.0242</b>		<b>93.8617</b>	<b>93.8617</b>	<b>2.8600e-003</b>		<b>93.9332</b>

**3.3 Grading - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.8612	0.0000	4.8612	2.5199	0.0000	2.5199			0.0000			0.0000
Off-Road	1.4972	17.0666	6.7630	0.0141		0.7947	0.7947		0.7311	0.7311		1,421.2605	1,421.2605	0.4425		1,432.3219
<b>Total</b>	<b>1.4972</b>	<b>17.0666</b>	<b>6.7630</b>	<b>0.0141</b>	<b>4.8612</b>	<b>0.7947</b>	<b>5.6560</b>	<b>2.5199</b>	<b>0.7311</b>	<b>3.2510</b>		<b>1,421.2605</b>	<b>1,421.2605</b>	<b>0.4425</b>		<b>1,432.3219</b>

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Summer

**3.3 Grading - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0482	0.0306	0.3957	9.4000e-004	0.0894	5.6000e-004	0.0900	0.0237	5.1000e-004	0.0242		93.8617	93.8617	2.8600e-003		93.9332
<b>Total</b>	<b>0.0482</b>	<b>0.0306</b>	<b>0.3957</b>	<b>9.4000e-004</b>	<b>0.0894</b>	<b>5.6000e-004</b>	<b>0.0900</b>	<b>0.0237</b>	<b>5.1000e-004</b>	<b>0.0242</b>		<b>93.8617</b>	<b>93.8617</b>	<b>2.8600e-003</b>		<b>93.9332</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.8959	0.0000	1.8959	0.9828	0.0000	0.9828			0.0000			0.0000
Off-Road	1.4972	17.0666	6.7630	0.0141		0.7947	0.7947		0.7311	0.7311	0.0000	1,421.2605	1,421.2605	0.4425		1,432.3219
<b>Total</b>	<b>1.4972</b>	<b>17.0666</b>	<b>6.7630</b>	<b>0.0141</b>	<b>1.8959</b>	<b>0.7947</b>	<b>2.6906</b>	<b>0.9828</b>	<b>0.7311</b>	<b>1.7139</b>	<b>0.0000</b>	<b>1,421.2605</b>	<b>1,421.2605</b>	<b>0.4425</b>		<b>1,432.3219</b>

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Summer

**3.3 Grading - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0482	0.0306	0.3957	9.4000e-004	0.0894	5.6000e-004	0.0900	0.0237	5.1000e-004	0.0242		93.8617	93.8617	2.8600e-003		93.9332
<b>Total</b>	<b>0.0482</b>	<b>0.0306</b>	<b>0.3957</b>	<b>9.4000e-004</b>	<b>0.0894</b>	<b>5.6000e-004</b>	<b>0.0900</b>	<b>0.0237</b>	<b>5.1000e-004</b>	<b>0.0242</b>		<b>93.8617</b>	<b>93.8617</b>	<b>2.8600e-003</b>		<b>93.9332</b>

**3.4 Building Construction - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5919	17.4280	13.8766	0.0220		1.0580	1.0580		1.0216	1.0216		2,030.8389	2,030.8389	0.4088		2,041.0596
<b>Total</b>	<b>2.5919</b>	<b>17.4280</b>	<b>13.8766</b>	<b>0.0220</b>		<b>1.0580</b>	<b>1.0580</b>		<b>1.0216</b>	<b>1.0216</b>		<b>2,030.8389</b>	<b>2,030.8389</b>	<b>0.4088</b>		<b>2,041.0596</b>

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ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Summer

**3.4 Building Construction - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	6.0200e-003	3.8300e-003	0.0495	1.2000e-004	0.0112	7.0000e-005	0.0113	2.9600e-003	6.0000e-005	3.0300e-003		11.7327	11.7327	3.6000e-004		11.7416
<b>Total</b>	<b>6.0200e-003</b>	<b>3.8300e-003</b>	<b>0.0495</b>	<b>1.2000e-004</b>	<b>0.0112</b>	<b>7.0000e-005</b>	<b>0.0113</b>	<b>2.9600e-003</b>	<b>6.0000e-005</b>	<b>3.0300e-003</b>		<b>11.7327</b>	<b>11.7327</b>	<b>3.6000e-004</b>		<b>11.7416</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5919	17.4280	13.8766	0.0220		1.0580	1.0580		1.0216	1.0216	0.0000	2,030.8389	2,030.8389	0.4088		2,041.0596
<b>Total</b>	<b>2.5919</b>	<b>17.4280</b>	<b>13.8766</b>	<b>0.0220</b>		<b>1.0580</b>	<b>1.0580</b>		<b>1.0216</b>	<b>1.0216</b>	<b>0.0000</b>	<b>2,030.8389</b>	<b>2,030.8389</b>	<b>0.4088</b>		<b>2,041.0596</b>

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ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Summer

**3.4 Building Construction - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	6.0200e-003	3.8300e-003	0.0495	1.2000e-004	0.0112	7.0000e-005	0.0113	2.9600e-003	6.0000e-005	3.0300e-003		11.7327	11.7327	3.6000e-004		11.7416
<b>Total</b>	<b>6.0200e-003</b>	<b>3.8300e-003</b>	<b>0.0495</b>	<b>1.2000e-004</b>	<b>0.0112</b>	<b>7.0000e-005</b>	<b>0.0113</b>	<b>2.9600e-003</b>	<b>6.0000e-005</b>	<b>3.0300e-003</b>		<b>11.7327</b>	<b>11.7327</b>	<b>3.6000e-004</b>		<b>11.7416</b>

**3.4 Building Construction - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2721	15.9802	13.4870	0.0220		0.9158	0.9158		0.8846	0.8846		2,018.0224	2,018.0224	0.3879		2,027.7210
<b>Total</b>	<b>2.2721</b>	<b>15.9802</b>	<b>13.4870</b>	<b>0.0220</b>		<b>0.9158</b>	<b>0.9158</b>		<b>0.8846</b>	<b>0.8846</b>		<b>2,018.0224</b>	<b>2,018.0224</b>	<b>0.3879</b>		<b>2,027.7210</b>

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ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Summer

**3.4 Building Construction - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	5.5100e-003	3.3800e-003	0.0444	1.1000e-004	0.0112	7.0000e-005	0.0113	2.9600e-003	6.0000e-005	3.0300e-003		11.3752	11.3752	3.2000e-004		11.3832
<b>Total</b>	<b>5.5100e-003</b>	<b>3.3800e-003</b>	<b>0.0444</b>	<b>1.1000e-004</b>	<b>0.0112</b>	<b>7.0000e-005</b>	<b>0.0113</b>	<b>2.9600e-003</b>	<b>6.0000e-005</b>	<b>3.0300e-003</b>		<b>11.3752</b>	<b>11.3752</b>	<b>3.2000e-004</b>		<b>11.3832</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2721	15.9802	13.4870	0.0220		0.9158	0.9158		0.8846	0.8846	0.0000	2,018.0224	2,018.0224	0.3879		2,027.7210
<b>Total</b>	<b>2.2721</b>	<b>15.9802</b>	<b>13.4870</b>	<b>0.0220</b>		<b>0.9158</b>	<b>0.9158</b>		<b>0.8846</b>	<b>0.8846</b>	<b>0.0000</b>	<b>2,018.0224</b>	<b>2,018.0224</b>	<b>0.3879</b>		<b>2,027.7210</b>

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ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Summer

**3.4 Building Construction - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	5.5100e-003	3.3800e-003	0.0444	1.1000e-004	0.0112	7.0000e-005	0.0113	2.9600e-003	6.0000e-005	3.0300e-003		11.3752	11.3752	3.2000e-004		11.3832
<b>Total</b>	<b>5.5100e-003</b>	<b>3.3800e-003</b>	<b>0.0444</b>	<b>1.1000e-004</b>	<b>0.0112</b>	<b>7.0000e-005</b>	<b>0.0113</b>	<b>2.9600e-003</b>	<b>6.0000e-005</b>	<b>3.0300e-003</b>		<b>11.3752</b>	<b>11.3752</b>	<b>3.2000e-004</b>		<b>11.3832</b>

**3.5 Architectural Coating - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.0936					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
<b>Total</b>	<b>2.3601</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>		<b>0.1288</b>	<b>0.1288</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>282.0423</b>

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ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Summer

**3.5 Architectural Coating - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.0936					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
<b>Total</b>	<b>2.3601</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>		<b>0.1288</b>	<b>0.1288</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>282.0423</b>

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ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Summer

**3.5 Architectural Coating - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

**3.6 Paving - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9038	9.1743	8.9025	0.0135		0.5225	0.5225		0.4815	0.4815		1,325.0953	1,325.0953	0.4112		1,335.3751
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.9038</b>	<b>9.1743</b>	<b>8.9025</b>	<b>0.0135</b>		<b>0.5225</b>	<b>0.5225</b>		<b>0.4815</b>	<b>0.4815</b>		<b>1,325.0953</b>	<b>1,325.0953</b>	<b>0.4112</b>		<b>1,335.3751</b>

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Summer

**3.6 Paving - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0716	0.0439	0.5775	1.4900e-003	0.1453	9.0000e-004	0.1462	0.0385	8.3000e-004	0.0394		147.8779	147.8779	4.1400e-003		147.9814
<b>Total</b>	<b>0.0716</b>	<b>0.0439</b>	<b>0.5775</b>	<b>1.4900e-003</b>	<b>0.1453</b>	<b>9.0000e-004</b>	<b>0.1462</b>	<b>0.0385</b>	<b>8.3000e-004</b>	<b>0.0394</b>		<b>147.8779</b>	<b>147.8779</b>	<b>4.1400e-003</b>		<b>147.9814</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9038	9.1743	8.9025	0.0135		0.5225	0.5225		0.4815	0.4815	0.0000	1,325.0953	1,325.0953	0.4112		1,335.3751
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.9038</b>	<b>9.1743</b>	<b>8.9025</b>	<b>0.0135</b>		<b>0.5225</b>	<b>0.5225</b>		<b>0.4815</b>	<b>0.4815</b>	<b>0.0000</b>	<b>1,325.0953</b>	<b>1,325.0953</b>	<b>0.4112</b>		<b>1,335.3751</b>

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**3.6 Paving - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0716	0.0439	0.5775	1.4900e-003	0.1453	9.0000e-004	0.1462	0.0385	8.3000e-004	0.0394		147.8779	147.8779	4.1400e-003		147.9814
<b>Total</b>	<b>0.0716</b>	<b>0.0439</b>	<b>0.5775</b>	<b>1.4900e-003</b>	<b>0.1453</b>	<b>9.0000e-004</b>	<b>0.1462</b>	<b>0.0385</b>	<b>8.3000e-004</b>	<b>0.0394</b>		<b>147.8779</b>	<b>147.8779</b>	<b>4.1400e-003</b>		<b>147.9814</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

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ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.5456	24.4040	26.1451	0.0757	3.6759	0.0513	3.7271	0.9766	0.0479	1.0245		7,750.953 4	7,750.953 4	0.8460		7,772.103 3
Unmitigated	5.5456	24.4040	26.1451	0.0757	3.6759	0.0513	3.7271	0.9766	0.0479	1.0245		7,750.953 4	7,750.953 4	0.8460		7,772.103 3

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Gasoline/Service Station	2,696.96	2,696.96	2,696.96	1,744,364	1,744,364
Total	2,696.96	2,696.96	2,696.96	1,744,364	1,744,364

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Gasoline/Service Station	16.60	8.40	6.90	2.00	79.00	19.00	14	27	59

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Gasoline/Service Station	0.540000	0.180000	0.080000	0.120000	0.000000	0.000000	0.000000	0.070000	0.000000	0.000000	0.010000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

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**5.1 Mitigation Measures Energy**

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.1200e-003	0.0193	0.0162	1.2000e-004		1.4700e-003	1.4700e-003		1.4700e-003	1.4700e-003		23.1439	23.1439	4.4000e-004	4.2000e-004	23.2814
NaturalGas Unmitigated	2.1700e-003	0.0198	0.0166	1.2000e-004		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		23.7056	23.7056	4.5000e-004	4.3000e-004	23.8464

**5.2 Energy by Land Use - NaturalGas**

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Gasoline/Service Station	201.497	2.1700e-003	0.0198	0.0166	1.2000e-004		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		23.7056	23.7056	4.5000e-004	4.3000e-004	23.8464
<b>Total</b>		<b>2.1700e-003</b>	<b>0.0198</b>	<b>0.0166</b>	<b>1.2000e-004</b>		<b>1.5000e-003</b>	<b>1.5000e-003</b>		<b>1.5000e-003</b>	<b>1.5000e-003</b>		<b>23.7056</b>	<b>23.7056</b>	<b>4.5000e-004</b>	<b>4.3000e-004</b>	<b>23.8464</b>

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**5.2 Energy by Land Use - Natural Gas**

**Mitigated**

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Gasoline/Service Station	0.196723	2.1200e-003	0.0193	0.0162	1.2000e-004		1.4700e-003	1.4700e-003		1.4700e-003	1.4700e-003		23.1439	23.1439	4.4000e-004	4.2000e-004	23.2814
<b>Total</b>		<b>2.1200e-003</b>	<b>0.0193</b>	<b>0.0162</b>	<b>1.2000e-004</b>		<b>1.4700e-003</b>	<b>1.4700e-003</b>		<b>1.4700e-003</b>	<b>1.4700e-003</b>		<b>23.1439</b>	<b>23.1439</b>	<b>4.4000e-004</b>	<b>4.2000e-004</b>	<b>23.2814</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

No Hearths Installed

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0506	2.0000e-005	1.6400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.5000e-003	3.5000e-003	1.0000e-005		3.7400e-003
Unmitigated	0.0506	2.0000e-005	1.6400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.5000e-003	3.5000e-003	1.0000e-005		3.7400e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.7400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0447					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5000e-004	2.0000e-005	1.6400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.5000e-003	3.5000e-003	1.0000e-005		3.7400e-003
<b>Total</b>	<b>0.0506</b>	<b>2.0000e-005</b>	<b>1.6400e-003</b>	<b>0.0000</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>		<b>3.5000e-003</b>	<b>3.5000e-003</b>	<b>1.0000e-005</b>		<b>3.7400e-003</b>

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Summer

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.7400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0447					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5000e-004	2.0000e-005	1.6400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.5000e-003	3.5000e-003	1.0000e-005		3.7400e-003
<b>Total</b>	<b>0.0506</b>	<b>2.0000e-005</b>	<b>1.6400e-003</b>	<b>0.0000</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>		<b>3.5000e-003</b>	<b>3.5000e-003</b>	<b>1.0000e-005</b>		<b>3.7400e-003</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Use Water Efficient Irrigation System

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Summer

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

### ARCO AM/PM Gas Station Iris Ave Moreno Valley Riverside-South Coast County, Winter

## 1.0 Project Characteristics

### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Gasoline/Service Station	16.00	Pump	1.31	2,258.80	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.4	<b>Precipitation Freq (Days)</b>	28
<b>Climate Zone</b>	10			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project site is 1.31 acres.

Construction Phase -

Grading - Grading entire 1.3 acres.

Fleet Mix - Assume 54% LDA, 18% LDT1, 8% LDT2, 12% MDV, 7% HHD, and 1% MC.

Construction Off-road Equipment Mitigation - Fugitive dust control with on-site watering three times daily.

Area Mitigation -

Energy Mitigation -

Water Mitigation - Project applicant will install low flow water appllance and water efficient irrigation system.

Waste Mitigation - Waste diversion would acheive 75% goal.

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter



ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	PhaseEndDate	4/1/2018	1/28/2019
tblConstructionPhase	PhaseEndDate	4/1/2018	1/14/2019
tblConstructionPhase	PhaseEndDate	4/1/2018	4/9/2018
tblConstructionPhase	PhaseEndDate	4/1/2018	1/28/2019
tblConstructionPhase	PhaseEndDate	4/1/2018	4/3/2018
tblConstructionPhase	PhaseStartDate	4/2/2018	1/15/2019
tblConstructionPhase	PhaseStartDate	4/2/2018	4/10/2018
tblConstructionPhase	PhaseStartDate	4/2/2018	4/4/2018
tblConstructionPhase	PhaseStartDate	4/2/2018	1/15/2019
tblFleetMix	HHD	0.07	0.07
tblFleetMix	LDA	0.54	0.54
tblFleetMix	LDT1	0.04	0.18
tblFleetMix	LDT2	0.18	0.08
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.3390e-003	0.00
tblFleetMix	MCY	4.6290e-003	0.01
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MH	1.1200e-003	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	1.3650e-003	0.00
tblFleetMix	SBUS	9.5900e-004	0.00
tblFleetMix	UBUS	1.2130e-003	0.00
tblGrading	AcresOfGrading	1.50	1.30
tblLandUse	LotAcreage	0.05	1.31
tblProjectCharacteristics	OperationalYear	2018	2020

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

**2.0 Emissions Summary**

**2.1 Overall Construction (Maximum Daily Emission)**

**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	2.5978	20.7789	13.9168	0.0222	5.8890	1.0581	6.8418	2.9774	1.0217	3.8540	0.0000	2,041.3660	2,041.3660	0.5427	0.0000	2,051.5945
2019	3.3339	15.9837	13.5231	0.0221	0.1453	0.9159	0.9271	0.0385	0.8846	0.8876	0.0000	2,028.2276	2,028.2276	0.4386	0.0000	2,037.9331
<b>Maximum</b>	<b>3.3339</b>	<b>20.7789</b>	<b>13.9168</b>	<b>0.0222</b>	<b>5.8890</b>	<b>1.0581</b>	<b>6.8418</b>	<b>2.9774</b>	<b>1.0217</b>	<b>3.8540</b>	<b>0.0000</b>	<b>2,041.3660</b>	<b>2,041.3660</b>	<b>0.5427</b>	<b>0.0000</b>	<b>2,051.5945</b>

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	2.5978	20.7789	13.9168	0.0222	2.3513	1.0581	3.3041	1.1757	1.0217	2.0522	0.0000	2,041.3660	2,041.3660	0.5427	0.0000	2,051.5945
2019	3.3339	15.9837	13.5231	0.0221	0.1453	0.9159	0.9271	0.0385	0.8846	0.8876	0.0000	2,028.2276	2,028.2276	0.4386	0.0000	2,037.9331
<b>Maximum</b>	<b>3.3339</b>	<b>20.7789</b>	<b>13.9168</b>	<b>0.0222</b>	<b>2.3513</b>	<b>1.0581</b>	<b>3.3041</b>	<b>1.1757</b>	<b>1.0217</b>	<b>2.0522</b>	<b>0.0000</b>	<b>2,041.3660</b>	<b>2,041.3660</b>	<b>0.5427</b>	<b>0.0000</b>	<b>2,051.5945</b>

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	58.63	0.00	45.54	59.74	0.00	38.00	0.00	0.00	0.00	0.00	0.00	0.00

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0506	2.0000e-005	1.6400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.5000e-003	3.5000e-003	1.0000e-005		3.7400e-003
Energy	2.1700e-003	0.0198	0.0166	1.2000e-004		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		23.7056	23.7056	4.5000e-004	4.3000e-004	23.8464
Mobile	4.4504	23.7154	26.0021	0.0686	3.6759	0.0533	3.7292	0.9766	0.0498	1.0264		7,021.1740	7,021.1740	0.9300		7,044.4235
<b>Total</b>	<b>4.5032</b>	<b>23.7352</b>	<b>26.0203</b>	<b>0.0687</b>	<b>3.6759</b>	<b>0.0548</b>	<b>3.7307</b>	<b>0.9766</b>	<b>0.0513</b>	<b>1.0280</b>		<b>7,044.8831</b>	<b>7,044.8831</b>	<b>0.9304</b>	<b>4.3000e-004</b>	<b>7,068.2737</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0506	2.0000e-005	1.6400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.5000e-003	3.5000e-003	1.0000e-005		3.7400e-003
Energy	2.1200e-003	0.0193	0.0162	1.2000e-004		1.4700e-003	1.4700e-003		1.4700e-003	1.4700e-003		23.1439	23.1439	4.4000e-004	4.2000e-004	23.2814
Mobile	4.4504	23.7154	26.0021	0.0686	3.6759	0.0533	3.7292	0.9766	0.0498	1.0264		7,021.1740	7,021.1740	0.9300		7,044.4235
<b>Total</b>	<b>4.5032</b>	<b>23.7347</b>	<b>26.0199</b>	<b>0.0687</b>	<b>3.6759</b>	<b>0.0548</b>	<b>3.7306</b>	<b>0.9766</b>	<b>0.0513</b>	<b>1.0279</b>		<b>7,044.3214</b>	<b>7,044.3214</b>	<b>0.9304</b>	<b>4.2000e-004</b>	<b>7,067.7087</b>

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ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.06	0.00	0.00	0.01	0.01	0.00	2.33	0.01

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/2/2018	4/3/2018	5	2	
2	Grading	Grading	4/4/2018	4/9/2018	5	4	
3	Building Construction	Building Construction	4/10/2018	1/14/2019	5	200	
4	Architectural Coating	Architectural Coating	1/15/2019	1/28/2019	5	10	
5	Paving	Paving	1/15/2019	1/28/2019	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.3

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,388; Non-Residential Outdoor: 1,129; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Building Construction	Welders	3	8.00	46	0.45

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	1.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

**3.1 Mitigation Measures Construction**

Water Exposed Area

Clean Paved Roads

**3.2 Site Preparation - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.8061	20.7472	8.0808	0.0172		0.9523	0.9523		0.8761	0.8761		1,735.3630	1,735.3630	0.5402		1,748.8690
<b>Total</b>	<b>1.8061</b>	<b>20.7472</b>	<b>8.0808</b>	<b>0.0172</b>	<b>5.7996</b>	<b>0.9523</b>	<b>6.7518</b>	<b>2.9537</b>	<b>0.8761</b>	<b>3.8298</b>		<b>1,735.3630</b>	<b>1,735.3630</b>	<b>0.5402</b>		<b>1,748.8690</b>

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

**3.2 Site Preparation - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0470	0.0317	0.3216	8.5000e-004	0.0894	5.6000e-004	0.0900	0.0237	5.1000e-004	0.0242		84.2175	84.2175	2.4900e-003		84.2797
<b>Total</b>	<b>0.0470</b>	<b>0.0317</b>	<b>0.3216</b>	<b>8.5000e-004</b>	<b>0.0894</b>	<b>5.6000e-004</b>	<b>0.0900</b>	<b>0.0237</b>	<b>5.1000e-004</b>	<b>0.0242</b>		<b>84.2175</b>	<b>84.2175</b>	<b>2.4900e-003</b>		<b>84.2797</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2618	0.0000	2.2618	1.1519	0.0000	1.1519			0.0000			0.0000
Off-Road	1.8061	20.7472	8.0808	0.0172		0.9523	0.9523		0.8761	0.8761	0.0000	1,735.3630	1,735.3630	0.5402		1,748.8690
<b>Total</b>	<b>1.8061</b>	<b>20.7472</b>	<b>8.0808</b>	<b>0.0172</b>	<b>2.2618</b>	<b>0.9523</b>	<b>3.2141</b>	<b>1.1519</b>	<b>0.8761</b>	<b>2.0280</b>	<b>0.0000</b>	<b>1,735.3630</b>	<b>1,735.3630</b>	<b>0.5402</b>		<b>1,748.8690</b>

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ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

**3.2 Site Preparation - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0470	0.0317	0.3216	8.5000e-004	0.0894	5.6000e-004	0.0900	0.0237	5.1000e-004	0.0242		84.2175	84.2175	2.4900e-003		84.2797
<b>Total</b>	<b>0.0470</b>	<b>0.0317</b>	<b>0.3216</b>	<b>8.5000e-004</b>	<b>0.0894</b>	<b>5.6000e-004</b>	<b>0.0900</b>	<b>0.0237</b>	<b>5.1000e-004</b>	<b>0.0242</b>		<b>84.2175</b>	<b>84.2175</b>	<b>2.4900e-003</b>		<b>84.2797</b>

**3.3 Grading - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.8612	0.0000	4.8612	2.5199	0.0000	2.5199			0.0000			0.0000
Off-Road	1.4972	17.0666	6.7630	0.0141		0.7947	0.7947		0.7311	0.7311		1,421.2605	1,421.2605	0.4425		1,432.3219
<b>Total</b>	<b>1.4972</b>	<b>17.0666</b>	<b>6.7630</b>	<b>0.0141</b>	<b>4.8612</b>	<b>0.7947</b>	<b>5.6560</b>	<b>2.5199</b>	<b>0.7311</b>	<b>3.2510</b>		<b>1,421.2605</b>	<b>1,421.2605</b>	<b>0.4425</b>		<b>1,432.3219</b>

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

**3.3 Grading - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0470	0.0317	0.3216	8.5000e-004	0.0894	5.6000e-004	0.0900	0.0237	5.1000e-004	0.0242		84.2175	84.2175	2.4900e-003		84.2797
<b>Total</b>	<b>0.0470</b>	<b>0.0317</b>	<b>0.3216</b>	<b>8.5000e-004</b>	<b>0.0894</b>	<b>5.6000e-004</b>	<b>0.0900</b>	<b>0.0237</b>	<b>5.1000e-004</b>	<b>0.0242</b>		<b>84.2175</b>	<b>84.2175</b>	<b>2.4900e-003</b>		<b>84.2797</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.8959	0.0000	1.8959	0.9828	0.0000	0.9828			0.0000			0.0000
Off-Road	1.4972	17.0666	6.7630	0.0141		0.7947	0.7947		0.7311	0.7311	0.0000	1,421.2605	1,421.2605	0.4425		1,432.3219
<b>Total</b>	<b>1.4972</b>	<b>17.0666</b>	<b>6.7630</b>	<b>0.0141</b>	<b>1.8959</b>	<b>0.7947</b>	<b>2.6906</b>	<b>0.9828</b>	<b>0.7311</b>	<b>1.7139</b>	<b>0.0000</b>	<b>1,421.2605</b>	<b>1,421.2605</b>	<b>0.4425</b>		<b>1,432.3219</b>

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

**3.3 Grading - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0470	0.0317	0.3216	8.5000e-004	0.0894	5.6000e-004	0.0900	0.0237	5.1000e-004	0.0242		84.2175	84.2175	2.4900e-003		84.2797
<b>Total</b>	<b>0.0470</b>	<b>0.0317</b>	<b>0.3216</b>	<b>8.5000e-004</b>	<b>0.0894</b>	<b>5.6000e-004</b>	<b>0.0900</b>	<b>0.0237</b>	<b>5.1000e-004</b>	<b>0.0242</b>		<b>84.2175</b>	<b>84.2175</b>	<b>2.4900e-003</b>		<b>84.2797</b>

**3.4 Building Construction - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5919	17.4280	13.8766	0.0220		1.0580	1.0580		1.0216	1.0216		2,030.8389	2,030.8389	0.4088		2,041.0596
<b>Total</b>	<b>2.5919</b>	<b>17.4280</b>	<b>13.8766</b>	<b>0.0220</b>		<b>1.0580</b>	<b>1.0580</b>		<b>1.0216</b>	<b>1.0216</b>		<b>2,030.8389</b>	<b>2,030.8389</b>	<b>0.4088</b>		<b>2,041.0596</b>

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

**3.4 Building Construction - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	5.8700e-003	3.9700e-003	0.0402	1.1000e-004	0.0112	7.0000e-005	0.0113	2.9600e-003	6.0000e-005	3.0300e-003		10.5272	10.5272	3.1000e-004		10.5350
<b>Total</b>	<b>5.8700e-003</b>	<b>3.9700e-003</b>	<b>0.0402</b>	<b>1.1000e-004</b>	<b>0.0112</b>	<b>7.0000e-005</b>	<b>0.0113</b>	<b>2.9600e-003</b>	<b>6.0000e-005</b>	<b>3.0300e-003</b>		<b>10.5272</b>	<b>10.5272</b>	<b>3.1000e-004</b>		<b>10.5350</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5919	17.4280	13.8766	0.0220		1.0580	1.0580		1.0216	1.0216	0.0000	2,030.8389	2,030.8389	0.4088		2,041.0596
<b>Total</b>	<b>2.5919</b>	<b>17.4280</b>	<b>13.8766</b>	<b>0.0220</b>		<b>1.0580</b>	<b>1.0580</b>		<b>1.0216</b>	<b>1.0216</b>	<b>0.0000</b>	<b>2,030.8389</b>	<b>2,030.8389</b>	<b>0.4088</b>		<b>2,041.0596</b>

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

**3.4 Building Construction - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	5.8700e-003	3.9700e-003	0.0402	1.1000e-004	0.0112	7.0000e-005	0.0113	2.9600e-003	6.0000e-005	3.0300e-003		10.5272	10.5272	3.1000e-004		10.5350
<b>Total</b>	<b>5.8700e-003</b>	<b>3.9700e-003</b>	<b>0.0402</b>	<b>1.1000e-004</b>	<b>0.0112</b>	<b>7.0000e-005</b>	<b>0.0113</b>	<b>2.9600e-003</b>	<b>6.0000e-005</b>	<b>3.0300e-003</b>		<b>10.5272</b>	<b>10.5272</b>	<b>3.1000e-004</b>		<b>10.5350</b>

**3.4 Building Construction - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2721	15.9802	13.4870	0.0220		0.9158	0.9158		0.8846	0.8846		2,018.0224	2,018.0224	0.3879		2,027.7210
<b>Total</b>	<b>2.2721</b>	<b>15.9802</b>	<b>13.4870</b>	<b>0.0220</b>		<b>0.9158</b>	<b>0.9158</b>		<b>0.8846</b>	<b>0.8846</b>		<b>2,018.0224</b>	<b>2,018.0224</b>	<b>0.3879</b>		<b>2,027.7210</b>

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

**3.4 Building Construction - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	5.3800e-003	3.5000e-003	0.0360	1.0000e-004	0.0112	7.0000e-005	0.0113	2.9600e-003	6.0000e-005	3.0300e-003		10.2052	10.2052	2.8000e-004		10.2121
<b>Total</b>	<b>5.3800e-003</b>	<b>3.5000e-003</b>	<b>0.0360</b>	<b>1.0000e-004</b>	<b>0.0112</b>	<b>7.0000e-005</b>	<b>0.0113</b>	<b>2.9600e-003</b>	<b>6.0000e-005</b>	<b>3.0300e-003</b>		<b>10.2052</b>	<b>10.2052</b>	<b>2.8000e-004</b>		<b>10.2121</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2721	15.9802	13.4870	0.0220		0.9158	0.9158		0.8846	0.8846	0.0000	2,018.0224	2,018.0224	0.3879		2,027.7210
<b>Total</b>	<b>2.2721</b>	<b>15.9802</b>	<b>13.4870</b>	<b>0.0220</b>		<b>0.9158</b>	<b>0.9158</b>		<b>0.8846</b>	<b>0.8846</b>	<b>0.0000</b>	<b>2,018.0224</b>	<b>2,018.0224</b>	<b>0.3879</b>		<b>2,027.7210</b>

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

**3.4 Building Construction - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	5.3800e-003	3.5000e-003	0.0360	1.0000e-004	0.0112	7.0000e-005	0.0113	2.9600e-003	6.0000e-005	3.0300e-003		10.2052	10.2052	2.8000e-004		10.2121
<b>Total</b>	<b>5.3800e-003</b>	<b>3.5000e-003</b>	<b>0.0360</b>	<b>1.0000e-004</b>	<b>0.0112</b>	<b>7.0000e-005</b>	<b>0.0113</b>	<b>2.9600e-003</b>	<b>6.0000e-005</b>	<b>3.0300e-003</b>		<b>10.2052</b>	<b>10.2052</b>	<b>2.8000e-004</b>		<b>10.2121</b>

**3.5 Architectural Coating - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.0936					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
<b>Total</b>	<b>2.3601</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>		<b>0.1288</b>	<b>0.1288</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>282.0423</b>

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

**3.5 Architectural Coating - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	2.0936					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
<b>Total</b>	<b>2.3601</b>	<b>1.8354</b>	<b>1.8413</b>	<b>2.9700e-003</b>		<b>0.1288</b>	<b>0.1288</b>		<b>0.1288</b>	<b>0.1288</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0238</b>		<b>282.0423</b>



ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

**3.5 Architectural Coating - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>

**3.6 Paving - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9038	9.1743	8.9025	0.0135		0.5225	0.5225		0.4815	0.4815		1,325.0953	1,325.0953	0.4112		1,335.3751
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.9038</b>	<b>9.1743</b>	<b>8.9025</b>	<b>0.0135</b>		<b>0.5225</b>	<b>0.5225</b>		<b>0.4815</b>	<b>0.4815</b>		<b>1,325.0953</b>	<b>1,325.0953</b>	<b>0.4112</b>		<b>1,335.3751</b>

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

**3.6 Paving - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0699	0.0455	0.4681	1.3300e-003	0.1453	9.0000e-004	0.1462	0.0385	8.3000e-004	0.0394		132.6672	132.6672	3.6000e-003		132.7572
<b>Total</b>	<b>0.0699</b>	<b>0.0455</b>	<b>0.4681</b>	<b>1.3300e-003</b>	<b>0.1453</b>	<b>9.0000e-004</b>	<b>0.1462</b>	<b>0.0385</b>	<b>8.3000e-004</b>	<b>0.0394</b>		<b>132.6672</b>	<b>132.6672</b>	<b>3.6000e-003</b>		<b>132.7572</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9038	9.1743	8.9025	0.0135		0.5225	0.5225		0.4815	0.4815	0.0000	1,325.0953	1,325.0953	0.4112		1,335.3751
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.9038</b>	<b>9.1743</b>	<b>8.9025</b>	<b>0.0135</b>		<b>0.5225</b>	<b>0.5225</b>		<b>0.4815</b>	<b>0.4815</b>	<b>0.0000</b>	<b>1,325.0953</b>	<b>1,325.0953</b>	<b>0.4112</b>		<b>1,335.3751</b>

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

**3.6 Paving - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0699	0.0455	0.4681	1.3300e-003	0.1453	9.0000e-004	0.1462	0.0385	8.3000e-004	0.0394		132.6672	132.6672	3.6000e-003		132.7572
<b>Total</b>	<b>0.0699</b>	<b>0.0455</b>	<b>0.4681</b>	<b>1.3300e-003</b>	<b>0.1453</b>	<b>9.0000e-004</b>	<b>0.1462</b>	<b>0.0385</b>	<b>8.3000e-004</b>	<b>0.0394</b>		<b>132.6672</b>	<b>132.6672</b>	<b>3.6000e-003</b>		<b>132.7572</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.4504	23.7154	26.0021	0.0686	3.6759	0.0533	3.7292	0.9766	0.0498	1.0264		7,021.1740	7,021.1740	0.9300		7,044.4235
Unmitigated	4.4504	23.7154	26.0021	0.0686	3.6759	0.0533	3.7292	0.9766	0.0498	1.0264		7,021.1740	7,021.1740	0.9300		7,044.4235

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Gasoline/Service Station	2,696.96	2,696.96	2,696.96	1,744,364	1,744,364
Total	2,696.96	2,696.96	2,696.96	1,744,364	1,744,364

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Gasoline/Service Station	16.60	8.40	6.90	2.00	79.00	19.00	14	27	59

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Gasoline/Service Station	0.540000	0.180000	0.080000	0.120000	0.000000	0.000000	0.000000	0.070000	0.000000	0.000000	0.010000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

**5.1 Mitigation Measures Energy**

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.1200e-003	0.0193	0.0162	1.2000e-004		1.4700e-003	1.4700e-003		1.4700e-003	1.4700e-003		23.1439	23.1439	4.4000e-004	4.2000e-004	23.2814
NaturalGas Unmitigated	2.1700e-003	0.0198	0.0166	1.2000e-004		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		23.7056	23.7056	4.5000e-004	4.3000e-004	23.8464

**5.2 Energy by Land Use - NaturalGas**

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Gasoline/Service Station	201.497	2.1700e-003	0.0198	0.0166	1.2000e-004		1.5000e-003	1.5000e-003		1.5000e-003	1.5000e-003		23.7056	23.7056	4.5000e-004	4.3000e-004	23.8464
<b>Total</b>		<b>2.1700e-003</b>	<b>0.0198</b>	<b>0.0166</b>	<b>1.2000e-004</b>		<b>1.5000e-003</b>	<b>1.5000e-003</b>		<b>1.5000e-003</b>	<b>1.5000e-003</b>		<b>23.7056</b>	<b>23.7056</b>	<b>4.5000e-004</b>	<b>4.3000e-004</b>	<b>23.8464</b>

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

**5.2 Energy by Land Use - NaturalGas**

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Gasoline/Service Station	0.196723	2.1200e-003	0.0193	0.0162	1.2000e-004		1.4700e-003	1.4700e-003		1.4700e-003	1.4700e-003		23.1439	23.1439	4.4000e-004	4.2000e-004	23.2814
<b>Total</b>		<b>2.1200e-003</b>	<b>0.0193</b>	<b>0.0162</b>	<b>1.2000e-004</b>		<b>1.4700e-003</b>	<b>1.4700e-003</b>		<b>1.4700e-003</b>	<b>1.4700e-003</b>		<b>23.1439</b>	<b>23.1439</b>	<b>4.4000e-004</b>	<b>4.2000e-004</b>	<b>23.2814</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

No Hearths Installed

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0506	2.0000e-005	1.6400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.5000e-003	3.5000e-003	1.0000e-005		3.7400e-003
Unmitigated	0.0506	2.0000e-005	1.6400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.5000e-003	3.5000e-003	1.0000e-005		3.7400e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.7400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0447					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5000e-004	2.0000e-005	1.6400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.5000e-003	3.5000e-003	1.0000e-005		3.7400e-003
<b>Total</b>	<b>0.0506</b>	<b>2.0000e-005</b>	<b>1.6400e-003</b>	<b>0.0000</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>		<b>3.5000e-003</b>	<b>3.5000e-003</b>	<b>1.0000e-005</b>		<b>3.7400e-003</b>

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.7400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0447					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.5000e-004	2.0000e-005	1.6400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.5000e-003	3.5000e-003	1.0000e-005		3.7400e-003
<b>Total</b>	<b>0.0506</b>	<b>2.0000e-005</b>	<b>1.6400e-003</b>	<b>0.0000</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>		<b>3.5000e-003</b>	<b>3.5000e-003</b>	<b>1.0000e-005</b>		<b>3.7400e-003</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Use Water Efficient Irrigation System

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit



ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Winter

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Annual

**ARCO AM/PM Gas Station Iris Ave Moreno Valley  
Riverside-South Coast County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Gasoline/Service Station	16.00	Pump	1.31	2,258.80	0

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.4	<b>Precipitation Freq (Days)</b>	28
<b>Climate Zone</b>	10			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

- Project Characteristics -
- Land Use - Project site is 1.31 acres.
- Construction Phase -
- Grading - Grading entire 1.3 acres.
- Fleet Mix - Assume 54% LDA, 18% LDT1, 8% LDT2, 12% MDV, 7% HHD, and 1% MC.
- Construction Off-road Equipment Mitigation - Fugitive dust control with on-site watering three times daily.
- Area Mitigation -
- Energy Mitigation -
- Water Mitigation - Project applicant will install low flow water appliance and water efficient irrigation system.
- Waste Mitigation - Waste diversion would acheive 75% goal.

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Annual

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Annual

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	0
tblConstructionPhase	PhaseEndDate	4/1/2018	1/28/2019
tblConstructionPhase	PhaseEndDate	4/1/2018	1/14/2019
tblConstructionPhase	PhaseEndDate	4/1/2018	4/9/2018
tblConstructionPhase	PhaseEndDate	4/1/2018	1/28/2019
tblConstructionPhase	PhaseEndDate	4/1/2018	4/3/2018
tblConstructionPhase	PhaseStartDate	4/2/2018	1/15/2019
tblConstructionPhase	PhaseStartDate	4/2/2018	4/10/2018
tblConstructionPhase	PhaseStartDate	4/2/2018	4/4/2018
tblConstructionPhase	PhaseStartDate	4/2/2018	1/15/2019
tblFleetMix	HHD	0.07	0.07
tblFleetMix	LDA	0.54	0.54
tblFleetMix	LDT1	0.04	0.18
tblFleetMix	LDT2	0.18	0.08
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.3390e-003	0.00
tblFleetMix	MCY	4.6290e-003	0.01
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MH	1.1200e-003	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	1.3650e-003	0.00
tblFleetMix	SBUS	9.5900e-004	0.00
tblFleetMix	UBUS	1.2130e-003	0.00
tblGrading	AcresOfGrading	1.50	1.30
tblLandUse	LotAcreage	0.05	1.31
tblProjectCharacteristics	OperationalYear	2018	2020

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ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Annual

**2.0 Emissions Summary**

**2.1 Overall Construction**

**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.2517	1.7110	1.3449	2.1500e-003	0.0168	0.1031	0.1199	8.3400e-003	0.0994	0.1077	0.0000	180.3415	180.3415	0.0366	0.0000	181.2555
2019	0.0280	0.1352	0.1238	2.0000e-004	7.7000e-004	7.8400e-003	8.6100e-003	2.0000e-004	7.4800e-003	7.6800e-003	0.0000	17.1055	17.1055	3.7500e-003	0.0000	17.1993
<b>Maximum</b>	<b>0.2517</b>	<b>1.7110</b>	<b>1.3449</b>	<b>2.1500e-003</b>	<b>0.0168</b>	<b>0.1031</b>	<b>0.1199</b>	<b>8.3400e-003</b>	<b>0.0994</b>	<b>0.1077</b>	<b>0.0000</b>	<b>180.3415</b>	<b>180.3415</b>	<b>0.0366</b>	<b>0.0000</b>	<b>181.2555</b>

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.2517	1.7110	1.3449	2.1500e-003	7.3600e-003	0.1031	0.1104	3.4600e-003	0.0994	0.1029	0.0000	180.3413	180.3413	0.0366	0.0000	181.2553
2019	0.0280	0.1352	0.1238	2.0000e-004	7.7000e-004	7.8400e-003	8.6100e-003	2.0000e-004	7.4800e-003	7.6800e-003	0.0000	17.1055	17.1055	3.7500e-003	0.0000	17.1992
<b>Maximum</b>	<b>0.2517</b>	<b>1.7110</b>	<b>1.3449</b>	<b>2.1500e-003</b>	<b>7.3600e-003</b>	<b>0.1031</b>	<b>0.1104</b>	<b>3.4600e-003</b>	<b>0.0994</b>	<b>0.1029</b>	<b>0.0000</b>	<b>180.3413</b>	<b>180.3413</b>	<b>0.0366</b>	<b>0.0000</b>	<b>181.2553</b>

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	53.81	0.00	7.37	57.14	0.00	4.23	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-2-2018	7-1-2018	0.6499	0.6499
2	7-2-2018	10-1-2018	0.6581	0.6581
3	10-2-2018	1-1-2019	0.6575	0.6575
4	1-2-2019	4-1-2019	0.1567	0.1567
		Highest	0.6581	0.6581

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	9.2300e-003	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-004	4.0000e-004	0.0000	0.0000	4.2000e-004
Energy	4.0000e-004	3.6100e-003	3.0300e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	11.3664	11.3664	3.8000e-004	1.4000e-004	11.4164
Mobile	0.8029	4.4127	4.7034	0.0130	0.6580	9.4800e-003	0.6674	0.1750	8.8500e-003	0.1839	0.0000	1,207.204 1	1,207.204 1	0.1455	0.0000	1,210.841 7
Waste						0.0000	0.0000		0.0000	0.0000	1.7498	0.0000	1.7498	0.1034	0.0000	4.3350
Water						0.0000	0.0000		0.0000	0.0000	0.0674	1.3427	1.4101	6.9800e-003	1.7000e-004	1.6368
<b>Total</b>	<b>0.8125</b>	<b>4.4164</b>	<b>4.7067</b>	<b>0.0130</b>	<b>0.6580</b>	<b>9.7500e-003</b>	<b>0.6677</b>	<b>0.1750</b>	<b>9.1200e-003</b>	<b>0.1842</b>	<b>1.8172</b>	<b>1,219.913 7</b>	<b>1,221.730 9</b>	<b>0.2563</b>	<b>3.1000e-004</b>	<b>1,228.230 3</b>

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	9.2300e-003	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-004	4.0000e-004	0.0000	0.0000	4.2000e-004
Energy	3.9000e-004	3.5200e-003	2.9600e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	11.1903	11.1903	3.8000e-004	1.3000e-004	11.2394
Mobile	0.8029	4.4127	4.7034	0.0130	0.6580	9.4800e-003	0.6674	0.1750	8.8500e-003	0.1839	0.0000	1,207.2041	1,207.2041	0.1455	0.0000	1,210.8417
Waste						0.0000	0.0000		0.0000	0.0000	1.7498	0.0000	1.7498	0.1034	0.0000	4.3350
Water						0.0000	0.0000		0.0000	0.0000	0.0569	1.1771	1.2340	5.8900e-003	1.5000e-004	1.4254
<b>Total</b>	<b>0.8125</b>	<b>4.4163</b>	<b>4.7066</b>	<b>0.0130</b>	<b>0.6580</b>	<b>9.7500e-003</b>	<b>0.6677</b>	<b>0.1750</b>	<b>9.1200e-003</b>	<b>0.1842</b>	<b>1.8067</b>	<b>1,219.5719</b>	<b>1,221.3786</b>	<b>0.2552</b>	<b>2.8000e-004</b>	<b>1,227.8419</b>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.03	0.03	0.43	9.68	0.03

3.0 Construction Detail

Construction Phase

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/2/2018	4/3/2018	5	2	
2	Grading	Grading	4/4/2018	4/9/2018	5	4	
3	Building Construction	Building Construction	4/10/2018	1/14/2019	5	200	
4	Architectural Coating	Architectural Coating	1/15/2019	1/28/2019	5	10	
5	Paving	Paving	1/15/2019	1/28/2019	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.3

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,388; Non-Residential Outdoor: 1,129; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit



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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Building Construction	Welders	3	8.00	46	0.45

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	1.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

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**3.1 Mitigation Measures Construction**

Water Exposed Area

Clean Paved Roads

**3.2 Site Preparation - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8100e-003	0.0208	8.0800e-003	2.0000e-005		9.5000e-004	9.5000e-004		8.8000e-004	8.8000e-004	0.0000	1.5743	1.5743	4.9000e-004	0.0000	1.5866
<b>Total</b>	<b>1.8100e-003</b>	<b>0.0208</b>	<b>8.0800e-003</b>	<b>2.0000e-005</b>	<b>5.8000e-003</b>	<b>9.5000e-004</b>	<b>6.7500e-003</b>	<b>2.9500e-003</b>	<b>8.8000e-004</b>	<b>3.8300e-003</b>	<b>0.0000</b>	<b>1.5743</b>	<b>1.5743</b>	<b>4.9000e-004</b>	<b>0.0000</b>	<b>1.5866</b>

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**3.2 Site Preparation - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.4000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0784	0.0784	0.0000	0.0000	0.0784
<b>Total</b>	<b>4.0000e-005</b>	<b>3.0000e-005</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>9.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0784</b>	<b>0.0784</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0784</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.2600e-003	0.0000	2.2600e-003	1.1500e-003	0.0000	1.1500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8100e-003	0.0208	8.0800e-003	2.0000e-005		9.5000e-004	9.5000e-004		8.8000e-004	8.8000e-004	0.0000	1.5743	1.5743	4.9000e-004	0.0000	1.5866
<b>Total</b>	<b>1.8100e-003</b>	<b>0.0208</b>	<b>8.0800e-003</b>	<b>2.0000e-005</b>	<b>2.2600e-003</b>	<b>9.5000e-004</b>	<b>3.2100e-003</b>	<b>1.1500e-003</b>	<b>8.8000e-004</b>	<b>2.0300e-003</b>	<b>0.0000</b>	<b>1.5743</b>	<b>1.5743</b>	<b>4.9000e-004</b>	<b>0.0000</b>	<b>1.5866</b>

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**3.2 Site Preparation - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.4000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0784	0.0784	0.0000	0.0000	0.0784
<b>Total</b>	<b>4.0000e-005</b>	<b>3.0000e-005</b>	<b>3.4000e-004</b>	<b>0.0000</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>9.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0784</b>	<b>0.0784</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0784</b>

**3.3 Grading - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.7200e-003	0.0000	9.7200e-003	5.0400e-003	0.0000	5.0400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9900e-003	0.0341	0.0135	3.0000e-005		1.5900e-003	1.5900e-003		1.4600e-003	1.4600e-003	0.0000	2.5787	2.5787	8.0000e-004	0.0000	2.5988
<b>Total</b>	<b>2.9900e-003</b>	<b>0.0341</b>	<b>0.0135</b>	<b>3.0000e-005</b>	<b>9.7200e-003</b>	<b>1.5900e-003</b>	<b>0.0113</b>	<b>5.0400e-003</b>	<b>1.4600e-003</b>	<b>6.5000e-003</b>	<b>0.0000</b>	<b>2.5787</b>	<b>2.5787</b>	<b>8.0000e-004</b>	<b>0.0000</b>	<b>2.5988</b>

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**3.3 Grading - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	7.0000e-005	6.8000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1567	0.1567	0.0000	0.0000	0.1568
<b>Total</b>	<b>9.0000e-005</b>	<b>7.0000e-005</b>	<b>6.8000e-004</b>	<b>0.0000</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>1.8000e-004</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.1567</b>	<b>0.1567</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.1568</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.7900e-003	0.0000	3.7900e-003	1.9700e-003	0.0000	1.9700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9900e-003	0.0341	0.0135	3.0000e-005		1.5900e-003	1.5900e-003		1.4600e-003	1.4600e-003	0.0000	2.5787	2.5787	8.0000e-004	0.0000	2.5988
<b>Total</b>	<b>2.9900e-003</b>	<b>0.0341</b>	<b>0.0135</b>	<b>3.0000e-005</b>	<b>3.7900e-003</b>	<b>1.5900e-003</b>	<b>5.3800e-003</b>	<b>1.9700e-003</b>	<b>1.4600e-003</b>	<b>3.4300e-003</b>	<b>0.0000</b>	<b>2.5787</b>	<b>2.5787</b>	<b>8.0000e-004</b>	<b>0.0000</b>	<b>2.5988</b>

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**3.3 Grading - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	7.0000e-005	6.8000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1567	0.1567	0.0000	0.0000	0.1568
<b>Total</b>	<b>9.0000e-005</b>	<b>7.0000e-005</b>	<b>6.8000e-004</b>	<b>0.0000</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>1.8000e-004</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.1567</b>	<b>0.1567</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.1568</b>

**3.4 Building Construction - 2018**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2462	1.6557	1.3183	2.0900e-003		0.1005	0.1005		0.0971	0.0971	0.0000	175.0229	175.0229	0.0352	0.0000	175.9037
<b>Total</b>	<b>0.2462</b>	<b>1.6557</b>	<b>1.3183</b>	<b>2.0900e-003</b>		<b>0.1005</b>	<b>0.1005</b>		<b>0.0971</b>	<b>0.0971</b>	<b>0.0000</b>	<b>175.0229</b>	<b>175.0229</b>	<b>0.0352</b>	<b>0.0000</b>	<b>175.9037</b>

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**3.4 Building Construction - 2018**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.9000e-004	4.0200e-003	1.0000e-005	1.0400e-003	1.0000e-005	1.0500e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.9306	0.9306	3.0000e-005	0.0000	0.9313
<b>Total</b>	<b>5.2000e-004</b>	<b>3.9000e-004</b>	<b>4.0200e-003</b>	<b>1.0000e-005</b>	<b>1.0400e-003</b>	<b>1.0000e-005</b>	<b>1.0500e-003</b>	<b>2.8000e-004</b>	<b>1.0000e-005</b>	<b>2.8000e-004</b>	<b>0.0000</b>	<b>0.9306</b>	<b>0.9306</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.9313</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2462	1.6557	1.3183	2.0900e-003		0.1005	0.1005		0.0971	0.0971	0.0000	175.0227	175.0227	0.0352	0.0000	175.9035
<b>Total</b>	<b>0.2462</b>	<b>1.6557</b>	<b>1.3183</b>	<b>2.0900e-003</b>		<b>0.1005</b>	<b>0.1005</b>		<b>0.0971</b>	<b>0.0971</b>	<b>0.0000</b>	<b>175.0227</b>	<b>175.0227</b>	<b>0.0352</b>	<b>0.0000</b>	<b>175.9035</b>

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**3.4 Building Construction - 2018**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.9000e-004	4.0200e-003	1.0000e-005	1.0400e-003	1.0000e-005	1.0500e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.9306	0.9306	3.0000e-005	0.0000	0.9313
<b>Total</b>	<b>5.2000e-004</b>	<b>3.9000e-004</b>	<b>4.0200e-003</b>	<b>1.0000e-005</b>	<b>1.0400e-003</b>	<b>1.0000e-005</b>	<b>1.0500e-003</b>	<b>2.8000e-004</b>	<b>1.0000e-005</b>	<b>2.8000e-004</b>	<b>0.0000</b>	<b>0.9306</b>	<b>0.9306</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.9313</b>

**3.4 Building Construction - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0114	0.0799	0.0674	1.1000e-004		4.5800e-003	4.5800e-003		4.4200e-003	4.4200e-003	0.0000	9.1536	9.1536	1.7600e-003	0.0000	9.1976
<b>Total</b>	<b>0.0114</b>	<b>0.0799</b>	<b>0.0674</b>	<b>1.1000e-004</b>		<b>4.5800e-003</b>	<b>4.5800e-003</b>		<b>4.4200e-003</b>	<b>4.4200e-003</b>	<b>0.0000</b>	<b>9.1536</b>	<b>9.1536</b>	<b>1.7600e-003</b>	<b>0.0000</b>	<b>9.1976</b>

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**3.4 Building Construction - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	1.9000e-004	0.0000	5.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0475	0.0475	0.0000	0.0000	0.0475
<b>Total</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>6.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0475</b>	<b>0.0475</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0475</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0114	0.0799	0.0674	1.1000e-004		4.5800e-003	4.5800e-003		4.4200e-003	4.4200e-003	0.0000	9.1536	9.1536	1.7600e-003	0.0000	9.1976
<b>Total</b>	<b>0.0114</b>	<b>0.0799</b>	<b>0.0674</b>	<b>1.1000e-004</b>		<b>4.5800e-003</b>	<b>4.5800e-003</b>		<b>4.4200e-003</b>	<b>4.4200e-003</b>	<b>0.0000</b>	<b>9.1536</b>	<b>9.1536</b>	<b>1.7600e-003</b>	<b>0.0000</b>	<b>9.1976</b>

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**3.4 Building Construction - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	2.0000e-005	1.9000e-004	0.0000	5.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0475	0.0475	0.0000	0.0000	0.0475
<b>Total</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>6.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0475</b>	<b>0.0475</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0475</b>

**3.5 Architectural Coating - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0105					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3300e-003	9.1800e-003	9.2100e-003	1.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	1.2766	1.2766	1.1000e-004	0.0000	1.2793
<b>Total</b>	<b>0.0118</b>	<b>9.1800e-003</b>	<b>9.2100e-003</b>	<b>1.0000e-005</b>		<b>6.4000e-004</b>	<b>6.4000e-004</b>		<b>6.4000e-004</b>	<b>6.4000e-004</b>	<b>0.0000</b>	<b>1.2766</b>	<b>1.2766</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.2793</b>

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**3.5 Architectural Coating - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0105					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3300e-003	9.1800e-003	9.2100e-003	1.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	1.2766	1.2766	1.1000e-004	0.0000	1.2793
<b>Total</b>	<b>0.0118</b>	<b>9.1800e-003</b>	<b>9.2100e-003</b>	<b>1.0000e-005</b>		<b>6.4000e-004</b>	<b>6.4000e-004</b>		<b>6.4000e-004</b>	<b>6.4000e-004</b>	<b>0.0000</b>	<b>1.2766</b>	<b>1.2766</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.2793</b>

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**3.5 Architectural Coating - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**3.6 Paving - 2019**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.5200e-003	0.0459	0.0445	7.0000e-005		2.6100e-003	2.6100e-003		2.4100e-003	2.4100e-003	0.0000	6.0105	6.0105	1.8700e-003	0.0000	6.0572
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>4.5200e-003</b>	<b>0.0459</b>	<b>0.0445</b>	<b>7.0000e-005</b>		<b>2.6100e-003</b>	<b>2.6100e-003</b>		<b>2.4100e-003</b>	<b>2.4100e-003</b>	<b>0.0000</b>	<b>6.0105</b>	<b>6.0105</b>	<b>1.8700e-003</b>	<b>0.0000</b>	<b>6.0572</b>

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**3.6 Paving - 2019**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	2.4000e-004	2.4700e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6173	0.6173	2.0000e-005	0.0000	0.6177
<b>Total</b>	<b>3.2000e-004</b>	<b>2.4000e-004</b>	<b>2.4700e-003</b>	<b>1.0000e-005</b>	<b>7.1000e-004</b>	<b>0.0000</b>	<b>7.2000e-004</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>0.6173</b>	<b>0.6173</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.6177</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.5200e-003	0.0459	0.0445	7.0000e-005		2.6100e-003	2.6100e-003		2.4100e-003	2.4100e-003	0.0000	6.0105	6.0105	1.8700e-003	0.0000	6.0572
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>4.5200e-003</b>	<b>0.0459</b>	<b>0.0445</b>	<b>7.0000e-005</b>		<b>2.6100e-003</b>	<b>2.6100e-003</b>		<b>2.4100e-003</b>	<b>2.4100e-003</b>	<b>0.0000</b>	<b>6.0105</b>	<b>6.0105</b>	<b>1.8700e-003</b>	<b>0.0000</b>	<b>6.0572</b>

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**3.6 Paving - 2019**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	2.4000e-004	2.4700e-003	1.0000e-005	7.1000e-004	0.0000	7.2000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6173	0.6173	2.0000e-005	0.0000	0.6177
<b>Total</b>	<b>3.2000e-004</b>	<b>2.4000e-004</b>	<b>2.4700e-003</b>	<b>1.0000e-005</b>	<b>7.1000e-004</b>	<b>0.0000</b>	<b>7.2000e-004</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>0.6173</b>	<b>0.6173</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.6177</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.8029	4.4127	4.7034	0.0130	0.6580	9.4800e-003	0.6674	0.1750	8.8500e-003	0.1839	0.0000	1,207.2041	1,207.2041	0.1455	0.0000	1,210.8417
Unmitigated	0.8029	4.4127	4.7034	0.0130	0.6580	9.4800e-003	0.6674	0.1750	8.8500e-003	0.1839	0.0000	1,207.2041	1,207.2041	0.1455	0.0000	1,210.8417

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Gasoline/Service Station	2,696.96	2,696.96	2,696.96	1,744,364	1,744,364
Total	2,696.96	2,696.96	2,696.96	1,744,364	1,744,364

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Gasoline/Service Station	16.60	8.40	6.90	2.00	79.00	19.00	14	27	59

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Gasoline/Service Station	0.540000	0.180000	0.080000	0.120000	0.000000	0.000000	0.000000	0.070000	0.000000	0.000000	0.010000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

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5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	7.3586	7.3586	3.0000e-004	6.0000e-005	7.3849
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	7.4417	7.4417	3.1000e-004	6.0000e-005	7.4683
NaturalGas Mitigated	3.9000e-004	3.5200e-003	2.9600e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	3.8317	3.8317	7.0000e-005	7.0000e-005	3.8545
NaturalGas Unmitigated	4.0000e-004	3.6100e-003	3.0300e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	3.9247	3.9247	8.0000e-005	7.0000e-005	3.9481

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**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Gasoline/Service Station	73546.5	4.0000e-004	3.6100e-003	3.0300e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	3.9247	3.9247	8.0000e-005	7.0000e-005	3.9481
<b>Total</b>		<b>4.0000e-004</b>	<b>3.6100e-003</b>	<b>3.0300e-003</b>	<b>2.0000e-005</b>		<b>2.7000e-004</b>	<b>2.7000e-004</b>		<b>2.7000e-004</b>	<b>2.7000e-004</b>	<b>0.0000</b>	<b>3.9247</b>	<b>3.9247</b>	<b>8.0000e-005</b>	<b>7.0000e-005</b>	<b>3.9481</b>

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Gasoline/Service Station	71803.9	3.9000e-004	3.5200e-003	2.9600e-003	2.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	3.8317	3.8317	7.0000e-005	7.0000e-005	3.8545
<b>Total</b>		<b>3.9000e-004</b>	<b>3.5200e-003</b>	<b>2.9600e-003</b>	<b>2.0000e-005</b>		<b>2.7000e-004</b>	<b>2.7000e-004</b>		<b>2.7000e-004</b>	<b>2.7000e-004</b>	<b>0.0000</b>	<b>3.8317</b>	<b>3.8317</b>	<b>7.0000e-005</b>	<b>7.0000e-005</b>	<b>3.8545</b>

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**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Gasoline/Service Station	23356	7.4417	3.1000e-004	6.0000e-005	7.4683
<b>Total</b>		<b>7.4417</b>	<b>3.1000e-004</b>	<b>6.0000e-005</b>	<b>7.4683</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Gasoline/Service Station	23095.1	7.3586	3.0000e-004	6.0000e-005	7.3849
<b>Total</b>		<b>7.3586</b>	<b>3.0000e-004</b>	<b>6.0000e-005</b>	<b>7.3849</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Annual

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	9.2300e-003	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-004	4.0000e-004	0.0000	0.0000	4.2000e-004
Unmitigated	9.2300e-003	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-004	4.0000e-004	0.0000	0.0000	4.2000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.0500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	8.1600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-004	4.0000e-004	0.0000	0.0000	4.2000e-004
<b>Total</b>	<b>9.2300e-003</b>	<b>0.0000</b>	<b>2.1000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>4.0000e-004</b>	<b>4.0000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>4.2000e-004</b>

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Annual

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.0500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	8.1600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.0000e-004	4.0000e-004	0.0000	0.0000	4.2000e-004
<b>Total</b>	<b>9.2300e-003</b>	<b>0.0000</b>	<b>2.1000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>4.0000e-004</b>	<b>4.0000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>4.2000e-004</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Use Water Efficient Irrigation System

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.2340	5.8900e-003	1.5000e-004	1.4254
Unmitigated	1.4101	6.9800e-003	1.7000e-004	1.6368

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Gasoline/Service Station	0.21251 / 0.130248	1.4101	6.9800e-003	1.7000e-004	1.6368
<b>Total</b>		<b>1.4101</b>	<b>6.9800e-003</b>	<b>1.7000e-004</b>	<b>1.6368</b>

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Annual

**7.2 Water by Land Use**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Gasoline/Service Station	0.179359 / 0.122303	1.2340	5.8900e-003	1.5000e-004	1.4254
<b>Total</b>		<b>1.2340</b>	<b>5.8900e-003</b>	<b>1.5000e-004</b>	<b>1.4254</b>

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.7498	0.1034	0.0000	4.3350
Unmitigated	1.7498	0.1034	0.0000	4.3350

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Annual

**8.2 Waste by Land Use**

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Gasoline/Service Station	8.62	1.7498	0.1034	0.0000	4.3350
<b>Total</b>		<b>1.7498</b>	<b>0.1034</b>	<b>0.0000</b>	<b>4.3350</b>

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Gasoline/Service Station	8.62	1.7498	0.1034	0.0000	4.3350
<b>Total</b>		<b>1.7498</b>	<b>0.1034</b>	<b>0.0000</b>	<b>4.3350</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

Attachment: Appendix A - Air Quality and Greenhouse Gas Analysis (3362 : Conditional Use Permit

ARCO AM/PM Gas Station Iris Ave Moreno Valley - Riverside-South Coast County, Annual

### 10.0 Stationary Equipment

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#### Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

#### Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

#### User Defined Equipment

Equipment Type	Number
----------------	--------

### 11.0 Vegetation

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**BIOLOGICAL RESOURCES ASSESSMENT AND  
MSHCP CONSISTENCY ANALYSIS AND HABITAT  
ASSESSMENT**

**AM/PM GASOLINE SERVICE STATION PROJECT  
CITY OF MORENO VALLEY  
RIVERSIDE COUNTY, CALIFORNIA**

**LSA**

September 2017

**BIOLOGICAL RESOURCES ASSESSMENT AND  
MSHCP CONSISTENCY ANALYSIS AND HABITAT  
ASSESSMENT**

**AM/PM GASOLINE SERVICE STATION PROJECT  
CITY OF MORENO VALLEY  
RIVERSIDE COUNTY, CALIFORNIA**

Prepared for:

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Project No. SAT1701

**LSA**

September 2017

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## INTRODUCTION

LSA has conducted a biological resources survey and Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) consistency analysis for the proposed 1.3-acre AM/PM Gasoline Service Station Project (project). The project site is located at the northwest corner of Iris Avenue and Oliver Street in the City of Moreno Valley, (Assessor's Parcel Number 486-310-038). Figure 1 depicts the project location. Figure 2 provides an aerial photograph of the project site to show existing conditions. Figure 3 provides representative site photographs.

## BACKGROUND

Mr. Eric Le Vaughn, Sater Oil International, requested LSA to complete the following tasks to acquire development entitlements from the City of Moreno Valley:

- Complete Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) consistency analysis;
- Evaluate California Environmental Quality Act (CEQA) thresholds of significance; and
- Determine the next steps for CEQA compliance.

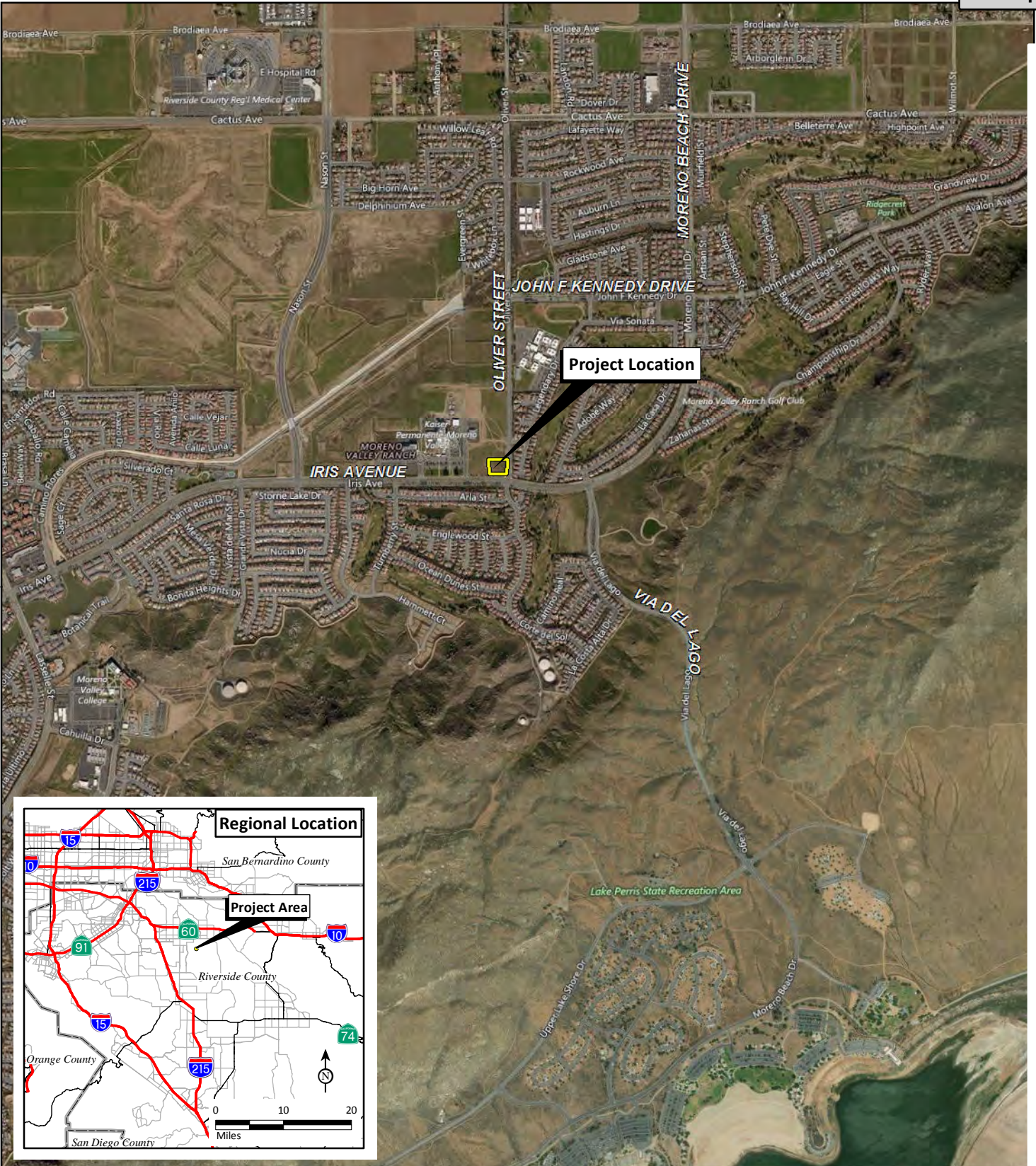
## METHODS

### Literature Review

A literature review was conducted to determine the existence or potential occurrence of special-status plant and animal species on the project site and in the project vicinity. Database records for the *Sunnymead* and *Perris, California* U.S. Geological Survey (USGS) 7.5-minute series quadrangles and surrounding quadrangles were searched on August 30, 2017, using the California Department of Fish and Wildlife (CDFW) California Natural Diversity Data Base *Rarefind 5* online application (<https://map.dfg.ca.gov/rarefind/>) and the California Native Plant Society's *Inventory of Rare and Endangered Plants* (<http://www.cnps.org/inventory>). The United State Fish and Wildlife Service (USFWS) database of designated Critical Habitat, the Riverside County Integrated Project (RCIP) Conservation Summary Report ([http://onlineservices.rctlma.org/content/rcip\\_report\\_generator.aspx](http://onlineservices.rctlma.org/content/rcip_report_generator.aspx)), and Volume 1 of the MSHCP (Riverside County Transportation and Land Management Agency) were queried to determine MSHCP habitat assessment and survey requirements. Soil information was taken from electronic data provided by the Web Soil Survey (Natural Resource Conservation Service 2013). Current and historical aerial photographs were also reviewed in Google Earth (Google Earth 2016).

### Field Surveys

Habitat assessments and focused surveys were conducted by LSA Biologist Lonnie Rodriguez on August 30, 2017. Weather conditions consisted of clear skies, warm temperatures (87 to 95° F), calm winds, and visibility of 10 miles. Observations regarding general site conditions, vegetation, potential jurisdictional waters, and habitat suitability for special-interest plant and wildlife species and other biological resources were recorded. All plant and animal species observed during the field survey are listed as Appendix A.



Project Location

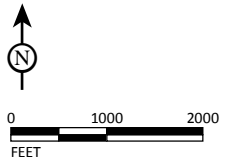
Regional Location

Project Area

LEGEND

Project Boundary

LSA



SOURCE: Bing Aerial, 2015; Riverside County, 2015.

I:\SAT1701\Reports\Bio\_MSHCP\fig1\_RegLoc.mxd (8/31/2017)

FIGURE :

ARCO Iris and Olive  
 Moreno Valle,  
 Regional and Project Location

Attachment: Appendix B - Biological Resources Assessment (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



LSA

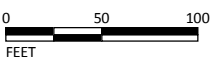
LEGEND

- Biological Study Area
- Additional Burrowing Owl Survey Area

- Burrowing Owl Transects
- 2 Photo Location

Land Cover

- Disturbed (Disced Field)



SOURCE: Google Earth, 2016.

I:\SAT1701\Reports\Bio\_MSHCP\fig2\_ProjectSite.mxd (9/5/2017)

FIGURE :

ARCO Iris and Olive Moreno Valle

Biological Study Area, Burrowing Owl Transects, Land Cover and Photo Locations

Attachment: Appendix B - Biological Resources Assessment (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



Photograph 1: *View looking east (8/30/2017).*



Photograph 2: *View looking north (8/30/2017).*



Photograph 3: *View looking south (8/30/2017)*



Photograph 4: *View of Botta's gopher hole (8/30/2017).*

LSA

FIGURE :

Attachment: Appendix B - Biological Resources Assessment (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

ARCO Iris and Olive  
Moreno Valle

Site Photographs

The project site is located within the MSHCP City of Moreno Valley Area Plan. The project is not located in a criteria cell and is not adjacent to Public/Quasi-Public or Conservation Land. The project site was assessed for the presence of riparian/riverine and vernal pool resources.

#### *MSHCP Section 6.1.3 NEPSSA Plants Habitat Assessment*

No Narrow Endemic Plant Species Survey Area (NEPSSA) survey is needed within this cell.<sup>1</sup>

#### *MSHCP Section 6.3.2 Burrowing Owl Habitat Suitability Assessment*

A burrowing owl habitat assessment was conducted in accordance with MSHCP accepted guidelines (*Burrowing Owl Survey Instructions for the Western Riverside County Multiple Species Habitat Conservation Plan Area*, Riverside County Environmental Programs Department, March 29, 2006). The project is adjacent to the MSHCP Burrowing Owl Survey Area. A burrowing owl survey was conducted on the undeveloped project site and adjacent survey buffer area, since there was potential for suitable burrows or for owls to occur in the remainder of the vacant lot. The survey was conducted by walking throughout all potential suitable habitat on the project site using transects spaced at no more than 100 feet, which allowed for 100 percent visual coverage of suitable habitat. Any burrows encountered during the survey were examined for owl sign (e.g., feathers, pellets, whitewash, and prey remnants).

#### *MSHCP Section 6.1.2 Species Associated with Riparian and Riverine Habitat*

No riparian habitat was identified on the project area nor were species associated with riparian habitat identified.

#### *Jurisdictional Waters and Streambeds*

The site was assessed for the presence of potential jurisdictional waters subject to the regulatory authority of the U.S. Army Corps of Engineers (USACE), CDFW, and Regional Water Quality Control Board (RWQCB). Any areas meeting these definitions were measured and mapped onto an aerial photograph in the field.

## EXISTING SETTING

The 1.3-acre project site (survey area) is primarily vacant and not utilized at this time. The project site is bordered by residential and commercial development on all sides.

## RESULTS

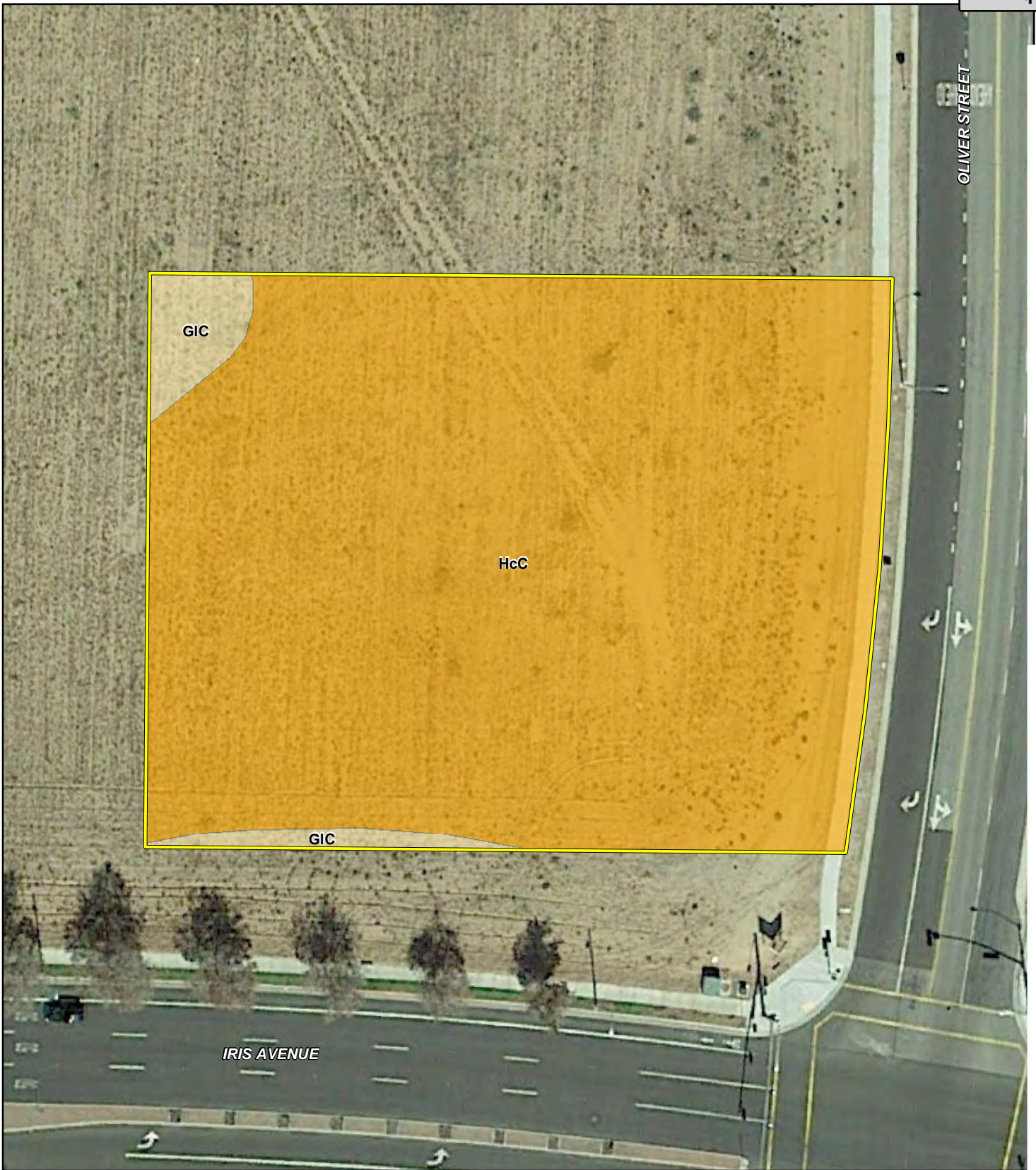
### Topography and Soils

The topography of the project site slightly drops in elevation from the south to north. The elevation averaged 1,580 feet above mean sea level. As Figure 4 shows, the soils within the project site consist

<sup>1</sup> <https://www.wrc-rca.org/rcamaps/conservation-summary-report-generator/>



of Gorgonio loamy sand, deep, 2 to 8 percent slopes (GIC), and Hanford coarse sandy loam, 2 to 8 percent slopes (HcC).



LSA

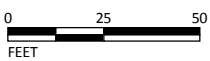
LEGEND

Project Location

Soils

GIC: Gorgonio loamy sand, deep, 2 to 8 percent slopes

HcC: Hanford coarse sandy loam, 2 to 8 percent slopes



SOURCE: Google Earth, 2016; Soil Data Mart, 2015

I:\SAT1701\Reports\Bio\_MSHCP\fig4\_Soils.mxd (8/31/2017)

FIGURE 4

ARCO Iris and Olive  
Moreno Valle,  
Soils

Attachment: Appendix B - Biological Resources Assessment (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

## Vegetation

The field is unvegetated since it has been recently plowed for weed abatement. Emergent plant and plant debris includes Saharan mustard (*Brassica tournefortii*), Russian thistle (*Salsola tragus*), doveweed (*Croton setigerus*), puncture vine (*Tribulus terrestris*), red brome (*Bromus madritensis* ssp. *rubens*), flax-leaved horseweed (*Erigeron bonariensis*), morning glory (*Calystegia macrostegia*), Jimsonweed (*Datura wrightii*), and Fremont's goosefoot (*Chenopodium fremontii*). At the time of the survey, the ground was bare with exposed soil, as shown in previously referenced Figure 3.

## Riparian/Riverine Habitat

No riparian or riverine habitat was identified within or adjacent to the project area.

## Non-Federal Jurisdictional Waters, Wetlands, and Streambeds Regulated by CDFW

No federal jurisdictional waters, wetlands, and/or streambeds regulated by CDFW were identified within the project area.

## Wildlife

Wildlife identified within the project area was minimal. No burrowing owl complexes were identified and the two burrows identified were occupied by Botta's pocket gopher (*Thomomys bottae*). See Appendix A, Animal Species Observed.

## Special-Status Species

No suitable habitat is present on the project site for the majority of the special-interest plant and animal species known to have occurred in this region of Riverside County.

Based on literature review and the field survey, some special-interest species, including Federal/State listed species, are known to occur in the region. The species records provided by the CDFW and the USFWS identified the potential occurrence of coastal California gnatcatcher (*Polioptila californica californica*), least Bell's vireo (*Vireo bellii pusillus*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), San Bernardino kangaroo rat (*Dipodomys merriami parvus*), and Stephen's kangaroo rat (*Dipodomys stephensi*). The site is devoid of vegetation preferred by the bird species listed above and the soil is highly disturbed (disked) and is therefore not suitable for the kangaroo rat species named above.

### Western Burrowing Owl

No special-status species were found or observed during the field surveys. The project is located within the MSHCP Survey Area for the Burrowing Owl. Because the land is an open field, LSA conducted a burrowing owl habitat assessment and burrow survey on August 30, 2017, with negative results for owls and owl sign, and no evidence of usable burrows. CDFW states useable burrows are at least 11 cm/4.3 inches in diameter and longer than 150 cm/58.5 inches deep. Since the species is a mobile and seasonally migratory bird, a pre-construction burrowing owl survey (BIO-2) will be required prior to grading for compliance with the Migratory Bird Treaty Act (MBTA) and the MSHCP. No additional mitigation is required for negative pre-construction survey findings.

### *MSHCP NEPSSA Plants Habitat Assessment*

There are no MSHCP Narrow Endemic Plant species known to occur within the project area. As a result, focused surveys are not required and no further action is required.

### **MSHCP Consistency Analysis**

#### *Conservation Area Requirements*

The project site is not located within a Criteria Cell; therefore, it is not subject to possible land conservation requirements under the MSHCP. No further action or mitigation is required.

#### *Listed Plant Species*

The site is not suitable for narrow endemics due to lack of suitable soil characteristics and current land use disturbances. No further action is required. No mitigation is required.

#### *Federal Designated Critical Habitat*

No federally designated Critical Habitats occur within the project area. Therefore, the project will have no effects to special-interest species or federally designated Critical Habitats.

#### *Other Listed Animal Species*

Based on literature review and the field survey, some special-interest species, including Federal/State listed species, are known to occur in the region.

#### *Wildlife Movement*

The project will not affect wildlife movement since the parcel is surrounded by urban development and species associated with urban environments are able to navigate these areas.

## **MSHCP CONSISTENCY AND CEQA MITIGATION REQUIREMENTS**

### **Special-Status Species**

#### *BIO-1: Migratory/Nesting Birds*

Sycamore trees (*Platanus racemose*) adjacent to the project site may provide nesting habitat for birds commonly found in the region. It is recommended that initial ground-disturbing activities be conducted outside the general bird nesting season (February 15 through August 31). If project activities are planned during the general bird nesting season, nesting bird surveys would be required within three days prior to any ground-disturbing activities to ensure birds protected under the MBTA and California Fish and Game Code are not affected.

#### *BIO-2: Burrowing Owl*

No burrowing owls or features potentially occupied by burrowing owls were detected on the project or adjacent areas during the August 2017 survey. Because the burrowing owl is a mobile species, and site conditions may change, a pre-construction survey would be required within 30 days prior to beginning of site grading, per the MSHCP Burrowing Owl Survey Guidelines Section 6.3.2. If

burrowing owls are found to be present at that time, project-specific mitigation would be developed and authorized through consultation with the City of Moreno Valley and the CDFW. No further action is required if the 30-day pre-construction survey does not result in burrowing owl sign or observations.

### **MSHCP Section 6.1.2: Species Associated with Riparian/Riverine Habitat and Jurisdictional Waters**

#### *Riparian/Riverine Habitat*

The project contains no riparian or riverine habitat and no action would be needed for a USACE Waters Delineation or preparation of a Determination of Biological Equivalent or Superior Preservation Report (DBESP) for compliance with MSHCP Section 6.1.2.

#### *Non-Federal Jurisdictional Waters, Wetlands, and Streambeds Regulated by CDFW*

No non-federal jurisdictional waters, wetlands and streambeds regulated by CDFW were located on site.

## REFERENCES

- California Department of Fish and Wildlife, Natural Diversity Database. 2017. *Rarefind 5, Commercial Version online*.
- California Native Plant Society Electronic Inventory 2015. Online edition, version 8-2 (<http://www.cnps.org/inventory>).
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- United States Department of Agriculture, Natural Resources Conservation Service. 2003. Soil Survey Geographic (SSURGO) Database for Riverside County, California, 2003. Available online at <http://soildatamart.nrcs.usda.gov>.

## APPENDIX A

### PLANT AND ANIMAL SPECIES OBSERVED

### PLANT AND ANIMAL SPECIES OBSERVED

Scientific Name	Common Name
<b>PLANTS</b>	
<b>Chenopodiaceae</b>	<b>Goosefoot family</b>
<i>Salsola tragus</i> (non-native species)	Russian-thistle
<i>Chenopodium</i> sp.	Chenopodium sp.
<b>Fabaceae</b>	<b>Legume Family</b>
<i>Parkinsonia aculeate</i> (non-native species)	Mexican palo verde
<b>Solanaceae</b>	<b>Nightshade family</b>
<i>Datura wrightii</i>	Jimsonweed
<b>Zygophyllaceae</b>	<b>Caltrop Family</b>
<i>Tribulus terrestris</i> (non-native species)	Puncture vine
<b>ANIMALS</b>	
<b>Tyrannidae</b>	<b>Tyrant Flycatchers</b>
<i>Sayornis nigricans</i>	Black phoebe
<b>Libellulidae</b>	<b>Skimmers</b>
<i>Tramea lacerate</i>	Black saddlebags
<b>REPTILIA</b>	<b>REPTILES</b>
<i>Sceloporus occidentalis</i>	Western fence lizard
<b>AVES</b>	<b>BIRDS</b>
<b>Corvidae</b>	<b>Crows and Jay</b>
<i>Corvus corax</i>	Common raven
<b>Alaudidae</b>	<b>Larks</b>
<i>Eremophila alpestris</i>	Horned Lark
<b>Fringillidae</b>	<b>Fringilline and Cardueline and Allies</b>
<i>Haemorpus mexicanus</i>	House finch
<b>MAMMALIA</b>	<b>MAMMALS</b>
<b>Geomyidae</b>	<b>Pocket Gopher</b>
<i>Thomomys bottae</i>	Botta's pocket gopher

Taxonomy and scientific nomenclature generally conform to Baldwin, B.G., D.H. Goldman et al., eds. (2012; *The Jepson Manual: Vascular Plants of California*, Second Edition; University of California Press, Berkeley and Los Angeles, California).

Common names for each taxa generally conform to Roberts, F.M., Jr. (2008; *The Vascular Plants of Orange County, California: An Annotated Checklist*; F.M. Roberts Publications, San Luis Rey, California) except where Abrams, L. (1923, 1944, and 1951; *Illustrated Flora of the Pacific States: Washington, Oregon, and California*, Vols. I-III; Stanford University Press, Stanford, California) and Abrams, L. and Ferris, R.S. (1960; *Illustrated Flora of the Pacific States: Washington, Oregon, and California*, Vol. IV; Stanford University Press, Stanford, California) were used, particularly when species-specific common names were not identified in Roberts, F.M., Jr. (2008).



# CULTURAL RESOURCES ASSESSMENT

SATER ARCO PROJECT  
CITY OF MORENO VALLEY  
RIVERSIDE COUNTY, CALIFORNIA

The logo for LSA, consisting of the letters 'L', 'S', and 'A' in a bold, blue, sans-serif font.

September 2017

# CULTURAL RESOURCES ASSESSMENT

## SATER ARCO PROJECT CITY OF MORENO VALLEY RIVERSIDE COUNTY, CALIFORNIA

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LSA Associates, Inc.  
1500 Iowa Avenue, Suite 200  
Riverside, California 92507

LSA Project No. SAT1701

### **National Archaeological Data Base Information:**

*Type of Study:* Reconnaissance Survey

*Sites Recorded:* 33-027260 (Isolate)

*USGS 7.5' Quadrangle:* Sunnymead, California

*Acreage:* 1.31 acres

*Keywords:* Phase I, previously unsurveyed, positive results, monitoring recommended.

# LSA

September 2017

## MANAGEMENT SUMMARY

LSA was retained by Barghausen Consulting Engineers to conduct a cultural resources assessment for the proposed Sater ARCO Project located in Moreno Valley, Riverside County, California. This cultural resources assessment was completed pursuant to the California Environmental Quality Act (CEQA).

A cultural resources records search, additional research, and a field survey were conducted for the Project area. Although no cultural resources were previously documented within or near the Project area by the records search, a water tank was once located on the parcel, a fragment of historic period irrigation pipe was identified during the survey and a concrete cistern remains to the west. Also, numerous prehistoric resources lie to the south and the sensitivity of the area between these resources and the Project is unknown. Therefore, the Project area has some potential for subsurface resources and part-time archaeological monitoring is recommended.

In the event previously undocumented archaeological resources are identified during earthmoving activities, further work in the area should be halted until the nature and significance of the find can be assessed by a qualified archaeologist.

If human remains are encountered, State Health and Safety Code Section 7050.5. states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to State Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be Native American, the County Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendent (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. The MLD recommendations may include scientific removal and nondestructive analysis of human remains and items associated with Native American burials, preservation of Native American human remains and associated items in place, relinquishment of Native American human remains and associated items to the descendants for treatment, or any other culturally appropriate treatment.

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## INTRODUCTION

LSA was retained by Barghausen Consulting Engineers to conduct a cultural resources assessment for the proposed Sater ARCO Project (Project) located in Moreno Valley, Riverside County, California. This cultural resources assessment was completed per the California Environmental Quality Act (CEQA), Public Resources Code Chapter 2.6, Section 21083.2, and California Code of Regulations Title 14, Chapter 3, Article 5, Section 15064.5. The research and field survey was conducted to determine whether the proposed Project would adversely affect any resources considered historical resources per CEQA.

## PERSONNEL

LSA staff that worked on this Project included Senior Cultural Resources Manager/Archaeologist Riordan Goodwin who conducted the research and survey and authored the report; Senior Cultural Resources Manager Gini Austerman who conducted the records search; and Deborah McLean, who served as technical editor.

## PROJECT LOCATION AND DESCRIPTION

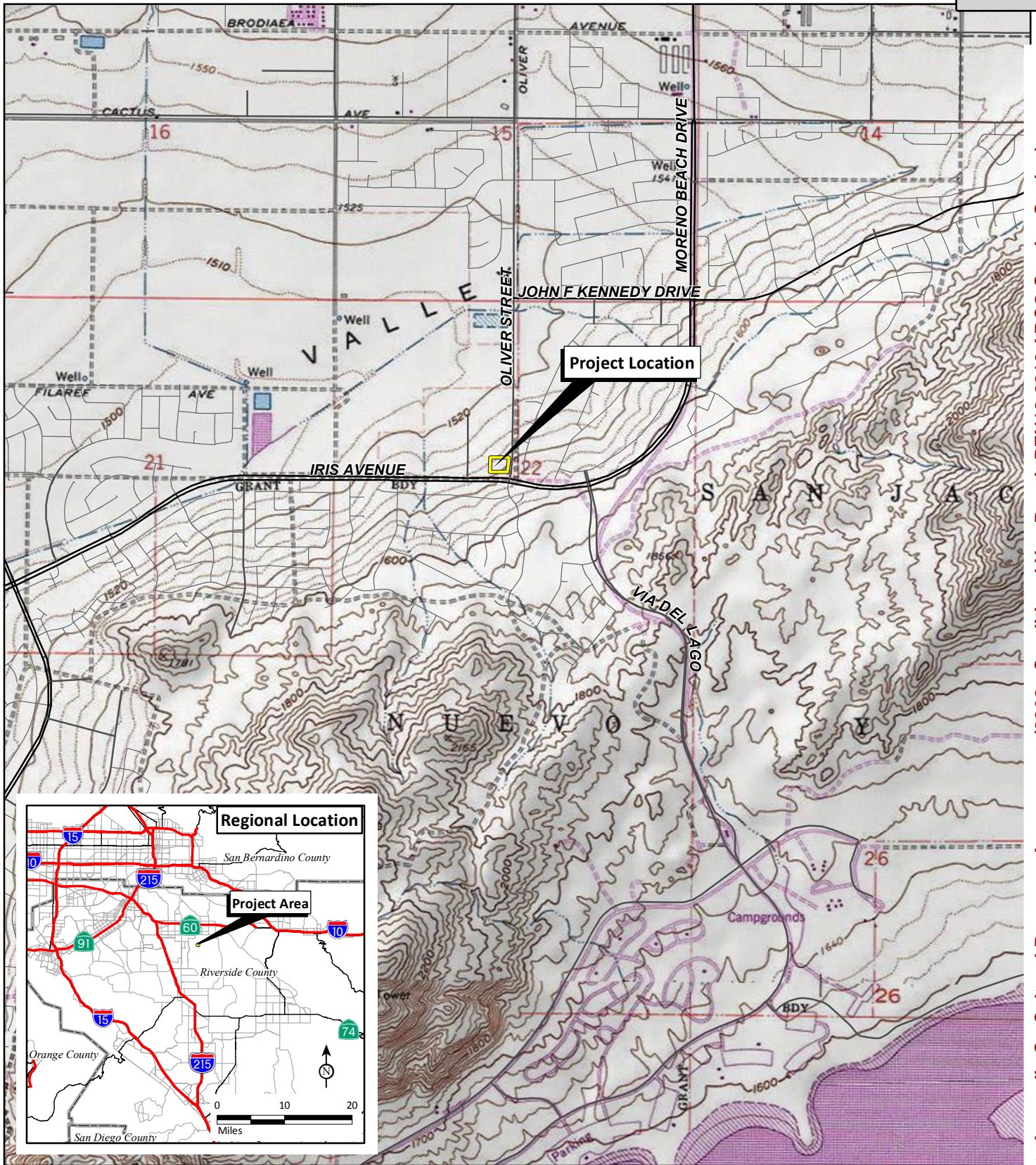
The Project area is near the northwestern corner of Iris Avenue and Oliver Street, bounded by a vacant lot to the north, residential development to the south and east, and a medical center to the west. The Project is depicted on the United States Geological Survey (USGS) *Sunnymead, California* topographic quadrangle map in Township 3 South, Range 3 West in Section 22, San Bernardino Baseline and Meridian (USGS 1967; photo revised 1980; Figure 1). The Project area is within Assessor's Parcel Number 486-310-038, an approximately 1.31-acre lot, which is currently vacant. The proposed Project is an ARCO AM/PM service station with a 3,800-square foot convenience store, a fuel facility with 8 dispensers, a 42-foot × 116-foot canopy, two underground storage tanks, a 24-foot × 100-foot conveyor system carwash, 27 parking stalls, and related site improvements.

## NATURAL SETTING

The natural setting of the Project vicinity is presented based on the underlying theoretical assumption that humans and human societies are in continual interaction with the physical environment. Being an integral and major part of the ecological system, humans adapt to the environment through technological and behavioral changes. Locations of archaeological sites are based on the constraints of these adaptations, whether it is proximity to a particular resource, topographical restrictions, or shelter and protection. Sites will also contain an assemblage of artifacts and ecofacts consistent with the particular interaction.

### Hydrology

The Project region is characterized by a temperate climate, with dry, hot summers and moderate winters. Rainfall ranges from 12 to 16 inches annually (Beck and Haase 1974). Precipitation usually occurs in the form of winter rain, with warm monsoonal showers in summer. The Project is bracketed by three ephemeral drainages within 0.5 mile, all of which drain north and west.



Attachment: Appendix C - Cultural Resource Assessment (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

LSA

LEGEND

 Project Boundary



0 1000 2000  
FEET

SOURCE: USGS 7.5' Quads: Sunnymeadm 1980 and Perris, 1979; Riverside County, 2015.

I:\SAT1701\Reports\Cultural\fig1\_RegLoc.mxd (8/21/2017)

FIGURE :

ARCO Iris and Olive  
Moreno Valle,  
Cultural Resources Assessment  
Regional and Project Location

## Biology

At an elevation of approximately 1,560 feet above mean sea level (amsl), the Project is within the Lower Sonoran Life Zone of California (Schoenherr 1992), which ranges from below sea level to 3,500 feet amsl. Although the natural vegetation has been almost completely removed from the Project by development, pioneer species such as mustard, Russian thistle, hare oats and xeric grasses were noted on the property. Common animals of this region include rodents, rabbits, coyotes, raptors, reptiles, vultures, and insects.

## Geology

The Project area is located at the northern end of the Peninsular Ranges Geomorphic Province, a 900-mile-long northwest-southeast trending structural block that extends from the Transverse Ranges to the tip of Baja California and includes the Los Angeles Basin (California Geological Survey 2002; Norris and Webb 1976). The province is approximately 225 miles wide, extending from the Colorado Desert in the east, across the continental shelf to the Southern Channel Islands (Santa Barbara, San Nicolas, Santa Catalina, and San Clemente) in the west (Sharp 1976). This region is characterized by a series of mountain ranges separated by northwest-trending valleys subparallel to faults branching from the San Andreas Fault. The geology of this province is similar to that of the Sierra Nevada, with granitic rock intruding into the older metamorphic rocks. It contains extensive pre-Cretaceous (older than 145 million years ago [Ma]) igneous and metamorphic rocks covered by limited exposures of post-Cretaceous (younger than 66 Ma) sedimentary deposits (Norris and Webb 1976). Within this province, the Project is located on the Perris Block, a fault-bounded structural block that extends from the southern foot of the San Gabriel and San Bernardino Mountains southeast to the vicinity of Bachelor Mountain and Polly Butte (Morton and Miller 2006; Kenney 1999). It is bounded on the northeast by the San Jacinto Fault and on the southwest by the Elsinore Fault Zone (Morton and Miller 2006).

## CULTURAL SETTING

### Prehistory

Chronologies of prehistoric cultural change in Southern California area have been attempted numerous times, and several are reviewed in Moratto (2004). No single description is universally accepted as the various chronologies are based primarily on material developments identified by researchers familiar with sites in a particular region and variation exists essentially due to the differences in those items found at the sites. Small differences occur over time and space, which combine to form patterns that are variously interpreted.

Currently, two primary regional culture chronology syntheses are commonly referenced in the archaeological literature. The first, Wallace (1955), describes four cultural horizons or time periods: Horizon I – Early Man (9000–6000 BC), Horizon II – Milling Stone Assemblages (6000–3000 BC), Horizon III – Intermediate Cultures (3000 BC–AD 500), and Horizon IV – Late Prehistoric Cultures (AD 500–historic contact). This chronology was refined (Wallace 1978) using absolute chronological dates obtained after 1955.

The second cultural chronology (Warren 1968) is based broadly on Southern California prehistoric cultures and was also revised (Warren 1984; Warren and Crabtree 1986). Warren's (1984) chronology includes five periods in prehistory: Lake Mojave (7000–5000 BC), Pinto (5000–2000 BC), Gypsum (2000 BC–AD 500), Saratoga Springs (AD 500–1200), and Protohistoric (AD 1200–historic contact). Changes in settlement pattern and subsistence focus are viewed as cultural adaptations to a changing environment, which begins with gradual environmental warming in the late Pleistocene, continues with the desiccation of the desert lakes, followed by a brief return to pluvial conditions, and concludes with a general warming and drying trend, with periodic reversals that continue to the present (Warren and Crabtree 1986).

### Ethnography

The Project area is situated within the traditional boundaries of the Cahuilla (Kroeber 1976). Tribal territorial boundaries were somewhat fluid and changed over time. The first written accounts of the Cahuilla are attributed to the mission fathers. Later documentation was by Barrows (1900), Hooper (1920), and Strong (1929) among others.

#### *Cahuilla*

The territory of the Cahuilla ranged from the San Bernardino Mountains south to Borrego Springs and the Chocolate Mountains, from Orocopia Mountain to the east, to the San Jacinto Plain and Palomar Mountain to the west (Bean 1978). Cahuilla territory lies within the geographic center of Southern California and encompasses diverse environments ranging from inland river valleys and foothills to mountains and desert (Bean and Shipek 1978).

Cahuilla villages, generally located near water sources within canyons or near alluvial fans, comprised groups of related individuals, generally from a single lineage, and the territory around the village was owned by the villagers (Bean 1978). Like other Native American groups in Southern California, the Cahuilla were semi-nomadic peoples leaving their villages and utilizing temporary campsites to exploit seasonably available plant and animal resources (James 1960).

Cahuilla subsistence was based primarily on acorns, honey mesquite, screw beans, piñon nuts, and cactus fruit, supplemented by a variety of wild fruits and berries, tubers, roots, and greens (Kroeber 1976; Heizer and Elsasser 1980). Hunting deer, rabbit, antelope, bighorn sheep, reptiles, small rodents, quail, doves, ducks, and reptiles by means of bows, throwing sticks, traps, and communal drives is documented (James 1960).

### History

In California, the historic era is generally divided into three periods: the Spanish Period (1769 to 1821), the Mexican Period (1821 to 1848), and the American Period (1848 to present). Early exploration of the Riverside County area was slow until Lieutenant Pedro Fages, then the military governor of San Diego, crossed through the San Jacinto Valley in 1772.



### *Riverside County*

The Southern Pacific Railroad completed its line from Los Angeles through the San Geronio Pass in 1876. The trains were eventually used to transport settlers into the area, creating a period of agricultural and land development, ultimately resulting in the establishment of Riverside County in 1893. Transportation, agriculture, and the control of water have continued to be central themes in the settlement, development, and growth of Riverside County (Robinson 1979).

### *Moreno Valley*

Originally platted as “New Haven,” the community of Moreno Valley was renamed Moreno (Spanish for “brown”) in honor of real estate entrepreneur/founder Frank E. Brown who had helped organize the Bear Valley Land and Water Company and instituted an irrigation district that fostered large-scale grain and fruit farming (Holtzclaw et al. 2007). The community thrived during its first few years in the late 1880s and, by 1893, it included a hotel, weekly newspaper, pharmacy, livery stable, stores, offices, two churches, and a nursery; and the surrounding farmland became known as Moreno Valley (Gunther 1984; Brown 1985). The town’s prosperity was short-lived, however, and a drought, combined with the City of Redlands’ water rights claim along the same Bear Valley Pipeline, precipitated its decline in the final years of the 19<sup>th</sup> century (Brown 1985; Holtzclaw et al. 2007). Many settlers relocated, homes and all, to nearby Riverside (Brown 1985).

Subsequent attempts at municipal revival of the Moreno Valley area in the 20<sup>th</sup> century were unsuccessful until 1973, when locals created Lake Perris to retain water transported from the Feather River. The new lake provided recreational infrastructure in addition to a reliable water supply, and stimulated growth throughout Moreno Valley. The communities of Moreno, Sunnymead, and Edgemont were incorporated as the City of Moreno Valley in 1984 (Gunther 1984).

## **METHODS**

### **Records Search**

On August 30, 2017, LSA Archaeologist Gini Austerman conducted a cultural resources records search for the Project area at the Eastern Information Center (EIC) at the University of California, Riverside. The EIC houses the pertinent archaeological site and survey information necessary to determine whether cultural resources are recorded within the study area boundaries and which specific areas have been previously surveyed. The research included a review of all recorded historic and prehistoric archaeological sites within one mile of the Project, as well as a review of known cultural resource survey and excavation reports. In addition, LSA examined the California State Historic Property Data File (HPD), which includes the National Register of Historic Places (National Register), California Historical Landmarks (CHL), and California Points of Historical Interest (CPHI), various local historic registers, and historic maps.

### **Additional Research**

In August 2017, LSA Archaeologist Riordan Goodwin reviewed historic period maps and aerials and conducted additional online research.

## Field Survey

On September 1, 2017, the Project area was surveyed by Mr. Goodwin who walked transects spaced by 10 meters, with particular attention given to rodent burrows and back dirt.

## RESULTS

### Records Search

Results of the August 30, 2017, records search at the EIC indicate there have been 8 previous cultural resources studies conducted within a 1-mile radius of the Project, none of which included any portion of the Project area. Approximately 30 percent of the 1-mile radius study area has been previously surveyed. Although no cultural resources have been documented in the Project area, 21 prehistoric sites have been recorded within 1 mile: 1 rock shelter with an associated milling feature, 4 bedrock milling complexes (milling surfaces on three or more outcrops), 1 bedrock milling feature with associated rock circle, and 15 bedrock milling feature sites (milling surfaces on 1 or 2 outcrops). See Table A. The nearest resource, (33-000543) is approximately 600 meters south of the Project area. Survey of the area between the Project and the bedrock milling feature sites to the south is not documented in the EIC database, and therefore sensitivity of this adjacent area is unknown. None of the resources documented within the study area was in any of the inventories, directories, or registers (see Appendix A for Records Search Bibliography).

**Table A: Cultural Resources Within One Mile**

Primary #	Site Description
33-000482	Bedrock milling complex
33-000483	Bedrock milling features
33-000484	Bedrock milling complex
33-000485	Bedrock milling complex
33-000536	Bedrock milling features
33-000537	Bedrock milling feature
33-000538	Bedrock milling features
33-000539	Bedrock milling feature
33-000540	Bedrock milling complex
33-000541	Bedrock milling features
33-000542	Bedrock milling feature
33-000543	Bedrock milling features
33-000544	Rock shelter and milling features
33-002867	Bedrock milling feature
33-002963	Bedrock milling feature
33-002964	Bedrock milling feature
33-002965	Bedrock milling features
33-002968	Bedrock milling feature
33-002994	Bedrock milling features
33-004218	Bedrock milling features
33-013110	Bedrock milling feature and rock circle

### Additional Research

Review of historic period maps and online research indicated a structure once stood on the southeast corner of the property (probably a water tank), but was removed sometime between 1978 and 1996 (USGS 1954, 1967; Historic Aerials 1978, 1996). This suggests the parcel may have once been under cultivation; however, this was not documented in historic period photographs, nor was it indicated on any maps.

### Field Survey

The September 1, 2017, field survey revealed that the Project area is virtually devoid of vegetation, and visibility was excellent throughout the parcel at nearly 100 percent (Figures 2 and 3). The Project parcel has been subjected to surface disturbance from weed abatement disking. Sparse modern refuse was noted on the surface. Soils are medium to fine sandy alluvial silt.

An isolated fragment of riveted steel irrigation pipe (33-027260) was identified in the eastern portion of the site (see evaluation below and Appendix B). Isolated artifacts (particularly historic period items) with no specific association are generally considered not significant and therefore not “historical resources” under CEQA.

Although no other cultural resources were identified within the Project area, a subsurface concrete cistern was noted approximately 100 feet from the western edge of the property and an additional fragment of riveted steel pipe was noted approximately 80 feet north of the Project.



Figure 2: Southern edge of Project area showing site conditions. View to the east.



Figure 3: View west of the Project area.

## RECOMMENDATIONS

A cultural resources records search, additional research, and a field survey were conducted for the Project area. Although no cultural resources were previously documented within or near the Project area by the records search, a water tank was once located on the parcel, a fragment of historic period irrigation pipe was identified during the survey and a concrete cistern remains to the west. Also, numerous prehistoric resources lie to the south and the sensitivity of the area between these resources and the Project is unknown. Therefore, the Project area has some potential for subsurface resources and part-time archaeological monitoring is recommended.

In the event previously undocumented archaeological resources are identified during earthmoving activities, further work in the area should be halted until the nature and significance of the find can be assessed by a qualified archaeologist.

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1996 Aerial photograph of Project area.

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**APPENDIX A**

**RECORDS SEARCH BIBLIOGRAPHY**

Attachment: Appendix C - Cultural Resource Assessment (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



### Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
RI-02105	NADB-R - 1082531; Voided - MF-2297	1987	DROVER, C.E.	AN ARCHAEOLOGICAL ASSESSMENT OF THE A.L.T.A. SPECIFIC PLAN, MORENO VALLEY, CALIFORNIA	AUTHOR(S)	
RI-02160	NADB-R - 1082589; Voided - MF-2347	1987	DROVER, C.E.	LETTER REPORT: ARCHAEOLOGICAL EVALUATION OF POTENTIAL HOSPITAL SITE IN MORENO VALLEY	AUTHOR(S)	
RI-02709	NADB-R - 1083199; Voided - MF-2913	1990	PADON, BETH	MORENO RANCH STUDIES ARCHAEOLOGICAL DOCUMENTATION OF CA-RIV-2994 MORENO VALLEY, CALIFORNIA.	LSA ASSOCIATES	33-002994
RI-05288	NADB-R - 1086651	2000	WHITE, LAURIE	LETTER REPORT: RECORDS SEARCH RESULTS FOR SPRINT PCS FACILITY RV35XC093D (GOLF COURSE MAINTENANCE), CITY OF MORENO VALLEY, RIVERSIDE COUNTY, CA	MICHAEL BRANDMAN ASSOCIATES, Irvine, CA	
RI-06644	NADB-R - 1088011; Submitter - JOB #CA-8393B	2006	BILLAT, SCOTT	COLLOCATION ("CO") SUBMISSION PACKET FCC FORM 621, ASHLEY PROJECT	EARTH TOUCH, INC.	
RI-08802		2012	Bai "Tom" Tang, Michael Hogan, Deirdre Encarnacion, and Daniel Ballester	Phase I archaeological Assessment: Moreno Master Drainage Plan Revision	CRM TECH	
RI-09652	Other - TCNS# 107863	2014	Heather R. Puckett	Cultural Resources Summary for the Proposed Verizon Wireless, Inc., Property Site, 27905 John F Kennedy Drive, Moreno Valley, Riverside County, California 92555	TetraTech Inc.	

## APPENDIX B

### DEPARTMENT OF PARKS AND RECREATION ARTIFACT RECORD FORM

Attachment: Appendix C - Cultural Resource Assessment (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

State of California — The Resources Agency  
DEPARTMENT OF PARKS AND RECREATION  
**PRIMARY RECORD**

Primary # 33-027260

HRI #

Trinomial

NRHP Status Code

Other Listings  
Review Code

Reviewer

Date

Page 1 of 2

\*Resource Name or #: LSA-SAT1701-R-1

**P1. Other Identifier:**\*P2. Location:  Not for Publication  Unrestricted

\*a. County: Riverside, California

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

\*b. USGS 7.5' Quad: *Sunnymeadt* Date: 1980 T 3S; R 3W; SE ¼ of NW ¼ of Sec 22; M.D. SBB.M.

c. Address: 27420 Iris Avenue

City: Moreno Valley

Zip: 92555

d. UTM: Zone: 11 ; 483068 mE/ 3750632 mN (G.P.S. NAD 83)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) APN 486-310-038. Elevation: 1,560 feet AMSL. Access to this site from State Route 60 is via Moreno Beach Drive. The resource is approximately 130 feet northwest of the intersection of Iris Avenue and Oliver Road.

\*P3a. **Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries) Fragment of pre-WWII riveted steel irrigation pipe, probably associated with water tank or cistern formerly located in SE corner of parcel or board-formed subsurface cistern approximately 100 feet west of the parcel.

\*P3b. **Resource Attributes:** (List attributes and codes) AP16 (Isolated artifact)\*P4. **Resources Present:**  Building  Structure  Object  Site  District  Element of District  Other (Isolates, etc.)

P5b. Description of Photo: (View, date, accession #) Photo of pipe fragment.

\*P6. **Date Constructed/Age and Sources:**  Historic Prehistoric  Both  
Pre-World War II\*P7. **Owner and Address:**Eric LeVaughn  
Sater Oil International  
683 Cliffside Drive  
San Dimas, CA 91773\*P8. **Recorded by:** (Name, affiliation, and address)  
Riordan Goodwin,  
LSA Associates, Inc.  
1500 Iowa Avenue, Suite 200  
Riverside, California 92507\*P9. **Date Recorded:**

August 31, 2017

\*P10. **Survey Type:** (Describe)

Reconnaissance

\*P11. **Report Citation:** (Cite survey report and other sources, or enter "none.") Cultural Resources Assessment, Sater ARCO Project, City of Moreno Valley, Riverside County California.

\*Attachments:  NONE  Location Map  Sketch Map  Continuation Sheet  Building, Structure, and Object Record  
 Archaeological Record  District Record  Linear Feature Record  Milling Station Record  Rock Art Record  
 Artifact Record  Photograph Record  Other (List):

DPR 523A (1/95)

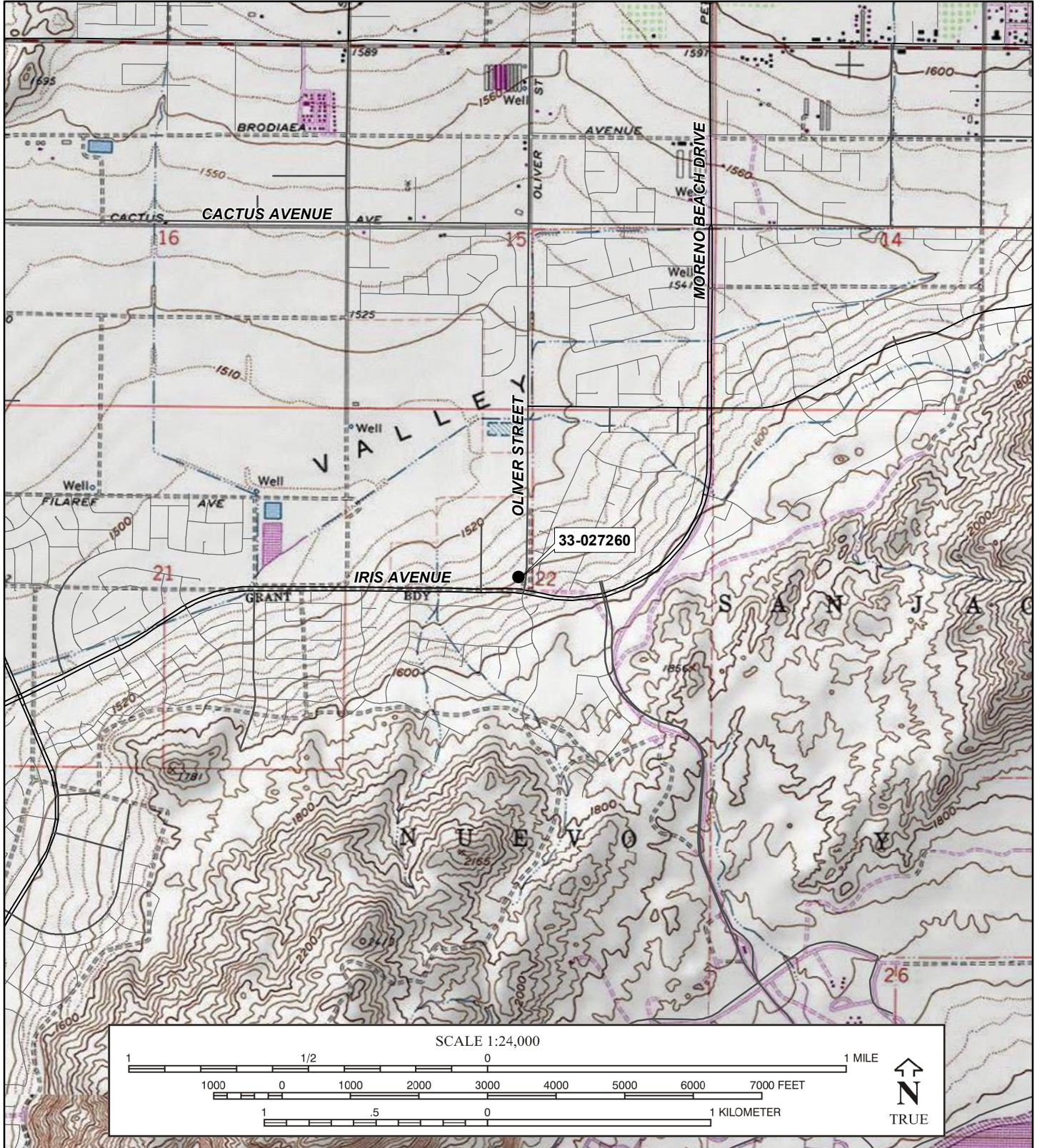
\*Required information

State of California - Resource Agency  
DEPARTMENT OF PARKS AND RECREATION  
LOCATION MAP

Primary # 33-027260

HRI # \_\_\_\_\_

Trinomial \_\_\_\_\_



Attachment: Appendix C - Cultural Resource Assessment (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



**SALEM**  
engineering group, inc.

## PRELIMINARY GEOTECHNICAL ENGINEERING INVESTIGATION

PROPOSED ARCO STATION  
NWC IRIS AVENUE AND OLIVER STREET  
MORENO VALLEY, CALIFORNIA

SALEM PROJECT NO. 3-217-1265  
NOVEMBER 30, 2017

*PREPARED FOR:*

MR. ERIC LEVAUGHN  
SATER OIL INTERNATIONAL, LLC  
683 CLIFFSIDE DRIVE  
SAN DIMAS, CA 91773

*PREPARED BY:*

SALEM ENGINEERING GROUP, INC.  
11650 MISSION PARK DR., #108  
RANCHO CUCAMONGA, CA 91730  
P: (909) 980-6455  
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11650 Mission Park Dr., #108  
 Rancho Cucamonga, CA 91730  
 Phone (909) 980-6455  
 Fax (909) 980-6435

November 30, 2017

Project No. 3-217-1265

Mr. Eric LeVaughn  
**Sater Oil International, LLC**  
 683 Cliffside Drive  
 San Dimas, CA 91773 85255

**SUBJECT: PRELIMINARY GEOTECHNICAL ENGINEERING INVESTIGATION  
 PROPOSED ARCO STATION  
 NWC IRIS AVENUE AND OLIVER STREET  
 MORENO VALLEY, CALIFORNIA**

Dear Mr. LeVaughn:

At your request and authorization, SALEM Engineering Group, Inc. (SALEM) has prepared this Preliminary Geotechnical Engineering Investigation report for the Proposed ARCO Station to be located at the subject site.

The accompanying report presents our findings, conclusions, and recommendations regarding the geotechnical aspects of designing and constructing the project as presently proposed. In our opinion, the proposed project is feasible from a geotechnical viewpoint provided our recommendations are incorporated into the design and construction of the project.

We appreciate the opportunity to assist you with this project. Should you have questions regarding this report or need additional information, please contact the undersigned at (909) 980-6455.

Respectfully Submitted,

**SALEM ENGINEERING GROUP, INC.**

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**PRELIMINARY GEOTECHNICAL ENGINEERING INVESTIGATION  
 PROPSOED ARCO STATION  
 NWC IRIS AVENUE AND OLIVER STREET  
 MORENO VALLEY, CALIFORNIA**

**1. PURPOSE AND SCOPE**

This report presents the results of our Preliminary Geotechnical Engineering Investigation for the site of the Proposed ARCO Station to be located near the intersection of NWC Iris Avenue and Oliver Street in Moreno Valley, California (see Figure 1, Vicinity Map).

The purpose of our geotechnical engineering investigation was to observe and sample the subsurface conditions encountered at the site, and provide conclusions and recommendations relative to the geotechnical aspects of constructing the project as presently proposed.

The scope of this investigation included a field exploration, percolation testing, laboratory testing, engineering analysis and the preparation of this report. Our field exploration was performed on November 14, 2017 and included the drilling of five (5) small-diameter soil borings to a maximum depth of 50 feet at the site. Additionally, four (4) percolation tests were performed at depths of approximately 8 and 10 feet below existing grade for the determination of the infiltration rate. The locations of the soil borings and percolation tests are depicted on Figure 2, Site Plan. A detailed discussion of our field investigation, percolation tests, and exploratory boring logs are presented in Appendix A.

Laboratory tests were performed on selected soil samples obtained during the investigation to evaluate pertinent physical properties for engineering analyses. Appendix B presents the laboratory test results in tabular and graphic format.

The recommendations presented herein are based on analysis of the data obtained during the investigation and our experience with similar soil and geologic conditions.

If project details vary significantly from those described herein, SALEM should be contacted to determine the necessity for review and possible revision of this report. Earthwork and Pavement Specifications are presented in Appendix C. If text of the report conflict with the specifications in Appendix C, the recommendations in the text of the report have precedence.

**2. PROJECT DESCRIPTION**

Based on the Site Plan provided to us, we understand that the proposed development will include construction of an ARCO station with an approximately 3,800 square-foot AM/PM convenience store, an 8-MPD's fuel canopy, a 24 feet by 100 feet car wash, and underground storage tanks. On-site parking and landscaping are planned to be associated with the development. Maximum wall load is expected to

be on the order of 3 kips per linear foot. Maximum column load is expected to be on the order of 70 kips. Floor slab soil bearing pressure is expected to be on the order of 150 psf.

A site grading plan was not available at the time of preparation of this report. As the existing project area is essentially level, we anticipate that cuts and fills during earthwork will be minimal and limited to providing a level pad and positive site drainage. In the event that changes occur in the nature or design of the project, the conclusions and recommendations contained in this report will not be considered valid unless the changes are reviewed and the conclusions of our report are modified. The site configuration and locations of proposed improvements are shown on the Site Plan, Figure 2.

### 3. SITE LOCATION AND DESCRIPTION

The subject site is located at the northwest corner of the intersection of Iris Avenue and Oliver Street, in the City of Moreno Valley, CA (see Vicinity Map, Figure 1). The subject site is rectangular in shape and encompasses approximately 1.31 acres.

At the time of SALEM's field exploration, the site was a vacant lot with sparse shrubs. The site is bounded by vacant lands to the north and west, Oliver Street to the east, and Iris Avenue to the south. The site area is gently sloping to the north with elevations ranging from approximately 1,566 to 1,555 feet above mean sea level based on google earth imagery.

### 4. FIELD EXPLORATION

Our field exploration consisted of site surface reconnaissance and subsurface exploration. The exploratory test borings (B-1 through B-5) were drilled on November 14, 2017 in the area shown on the Site Plan, Figure 2. The test borings were advanced with a 6-inch diameter hollow stem auger and a 4 inch diameter solid flight auger rotated by a truck-mounted CME 45C drill rig. The test borings were extended to a maximum depth of 50 feet below existing grade.

The materials encountered in the test borings were visually classified in the field, and logs were recorded by a field engineer and stratification lines were approximated on the basis of observations made at the time of drilling. Visual classification of the materials encountered in the test borings were generally made in accordance with the Unified Soil Classification System (ASTM D2487). A soil classification chart and key to sampling is presented on the Unified Soil Classification Chart, in Appendix "A." The logs of the test borings are presented in Appendix "A." The Boring Logs include the soil type, color, moisture content, dry density, and the applicable Unified Soil Classification System symbol.

The location of the test borings were determined by measuring from features shown on the Site Plan, provided to us. Hence, accuracy can be implied only to the degree that this method warrants. The actual boundaries between different soil types may be gradual and soil conditions may vary. For a more detailed description of the materials encountered, the Boring Logs in Appendix "A" should be consulted.

Soil samples were obtained from the test borings at the depths shown on the logs of borings. The MCS samples were recovered and capped at both ends to preserve the samples at their natural moisture content; SPT samples were recovered and placed in a sealed bag to preserve their natural moisture content. The borings were backfilled with soil cuttings after completion of the drilling.

## 5. LABORATORY TESTING

Laboratory tests were performed on selected soil samples to evaluate their physical characteristics and engineering properties. The laboratory-testing program was formulated with emphasis on the evaluation of natural moisture, in-situ density, shear strength, consolidation potential, maximum density and optimum moisture determination, and gradation of the materials encountered.

In addition, chemical tests were performed to evaluate the corrosivity of the soils to buried concrete and metal. Details of the laboratory test program and the results of laboratory test are summarized in Appendix "B." This information, along with the field observations, was used to prepare the final boring logs in Appendix "A."

## 6. GEOLOGIC SETTING

The subject site is located within the Peninsular Range Geomorphic Province, an area characterized by active northeast trending strike slip faults, including the San Jacinto to the northwest, and the Elsinore to the southwest. The project site is situated between the Santa Rosa Mountains and the San Jacinto Mountains to the east; and Santa Ana Mountains to the west and south. The near-surface deposits in the vicinity of the subject site are comprised of recent alluvium consisting of unconsolidated sands, silt, and clays derived from erosion of local mountain ranges. Deposits encountered on the subject site during exploratory drilling are discussed in detail in this report.

## 7. GEOLOGIC HAZARDS

### 7.1 Faulting and Seismicity

The Peninsular Range has historically been a province of relatively high seismic activity. The nearest faults to the project site are associated with the San Jacinto Fault system located approximately 4.1 miles from the site. There are no known active fault traces in the project vicinity. Based on mapping and historical seismicity, the seismicity of the Peninsular Range has been generally considered high by the scientific community.

The project area is not within an Alquist-Priolo Earthquake Fault (Special Studies) Zone and will not require a special site investigation by an Engineering Geologist. Soils on site are classified as Site Class D in accordance with Chapter 16 of the California Building Code. The proposed structures are determined to be in Seismic Design Category D.

To determine the distance of known active faults within 100 miles of the site, we used the United States Geological Survey (USGS) web-based application *2008 National Seismic Hazard Maps - Fault Parameters*. Site latitude is 33.8958° North; site longitude is 117.1833° West. The ten closest active faults are summarized below in Table 7.1.

**TABLE 7.1  
REGIONAL FAULT SUMMARY**

<b>Fault Name</b>	<b>Distance to Site (miles)</b>	<b>Max. Earthquake Magnitude, <math>M_w</math></b>
San Jacinto; SBV+SJV+A+CC+B+SM	4.1	7.9
San Jacinto; A+CC+B+SM	4.3	7.6
San Jacinto; SBV	8.9	7.1
S. San Andreas; PK+CH+CC+BB+NM+SM+NSB+SSB+BG+CO	15.1	8.2
S. San Andreas; PK+CH+CC+BB+NM+SM+NSB	17.7	8.0
Elsinore; W+GI+T+J+CM	18.2	7.9
S. San Andreas; BG+CO	22.3	7.4
Chino, alt 2	22.6	6.8
Elsinore; W	23.9	7.0

*The faults tabulated above and numerous other faults in the region are sources of potential ground motion. However, earthquakes that might occur on other faults throughout California are also potential generators of significant ground motion and could subject the site to intense ground shaking.*

## 7.2 Surface Fault Rupture

The site is not within a currently established State of California Earthquake Fault Zone for surface fault rupture hazards. No active faults with the potential for surface fault rupture are known to pass directly beneath the site. Therefore, the potential for surface rupture due to faulting occurring beneath the site during the design life of the proposed development is considered low.

## 7.3 Ground Shaking

We used the USGS web-based application *US Seismic Design Maps* to estimate the peak ground acceleration adjusted for site class effects ( $PGA_M$ ). Because of the proximity to the subject site and the maximum probable events for these faults, it appears that a maximum probable event along the fault zones could produce a peak horizontal acceleration of approximately 0.871g (2% probability of being exceeded in 50 years). While listing PGA is useful for comparison of potential effects of fault activity in a region, other considerations are important in seismic design, including frequency and duration of motion and soil conditions underlying the site.

## 7.4 Liquefaction

Soil liquefaction is a state of soil particles suspension caused by a complete loss of strength when the effective stress drops to zero. Liquefaction normally occurs under saturated conditions in soils such as sand in which the strength is purely frictional. Primary factors that trigger liquefaction are: moderate to strong ground shaking (seismic source), relatively clean, loose granular soils (primarily poorly graded sands and silty sands), and saturated soil conditions (shallow groundwater). Due to the increasing overburden pressure with depth, liquefaction of granular soils is generally limited to the upper 50 feet of a soil profile. However, liquefaction has occurred in soils other than clean sand.

The soils encountered within the depth of 50 feet on the project site consisted predominately of very loose to dense silty sand with various amounts of clay and gravel, and dense to very dense silty clayey sand. Low to very low cohesion strength is associated with the sandy soil. A seismic hazard, which could cause damage to the proposed development during seismic shaking, is the post-liquefaction settlement of the liquefied sands.

The site was evaluated for liquefaction potential. The liquefaction analysis indicated that the soils had a low potential for liquefaction under seismic conditions. Therefore, no mitigation measures are warranted. Detailed geotechnical engineering recommendations are presented in the remaining portions of the text. The recommendations are based on the properties of the materials identified during our investigation.

### **7.5 Lateral Spreading**

Lateral spreading is a phenomenon in which soils move laterally during seismic shaking and is often associated with liquefaction. The amount of movement depends on the soil strength, duration and intensity of seismic shaking, topography, and free face geometry. Due to the relatively flat site topography and low liquefaction potential, we judge the likelihood of lateral spreading to be low.

### **7.6 Landslides**

There are no known landslides at the site, nor is the site in the path of any known or potential landslides. We do not consider the potential for a landslide to be a hazard to this project.

### **7.7 Tsunamis and Seiches**

The site is not located within a coastal area. Therefore, tsunamis (seismic sea waves) are not considered a significant hazard at the site. Seiches are large waves generated in enclosed bodies of water in response to ground shaking. No major water-retaining structures are located immediately up gradient from the project site. Flooding from a seismically-induced seiche is considered unlikely.

## **8. SOIL AND GROUNDWATER CONDITIONS**

### **8.1 Subsurface Conditions**

The subsurface conditions encountered appear typical of those found in the geologic region of the site. In general, the soils within the depth of exploration consisted of alluvium deposits of very loose to dense silty sand with various amounts of clay and gravel, and dense to very dense silty clayey sand.

Fill soils maybe present on-site between our test boring locations. Verification of the extent of fill should be determined during site grading. Field and laboratory tests suggest that the deeper native soils are moderately strong and slightly compressible.

The soils were classified in the field during the drilling and sampling operations. The stratification lines were approximated by the field engineer on the basis of observations made at the time of drilling. The actual boundaries between different soil types may be gradual and soil conditions may vary. For a more detailed description of the materials encountered, the Boring Logs in Appendix "A" should be consulted.

The Boring Logs include the soil type, color, moisture content, dry density, and the applicable Unified Soil Classification System symbol. The locations of the test borings were determined by measuring from feature shown on the Site Plan, provided to us. Hence, accuracy can be implied only to the degree that this method warrants.

## 8.2 Groundwater

The test boring locations were checked for the presence of groundwater during and after the drilling operations. Free groundwater was not encountered during this investigation.

It should be recognized that water table elevations may fluctuate with time, being dependent upon seasonal precipitation, irrigation, land use, localized pumping, and climatic conditions as well as other factors. Therefore, water level observations at the time of the field investigation may vary from those encountered during the construction phase of the project. The evaluation of such factors is beyond the scope of this report.

## 8.3 Soil Corrosion Screening

Excessive sulfate in either the soil or native water may result in an adverse reaction between the cement in concrete and the soil. The 2011 Edition of ACI 318 (ACI 318) has established criteria for evaluation of sulfate and chloride levels and how they relate to cement reactivity with soil and/or water.

A soil sample was obtained from the project site and was tested for the evaluation of the potential for concrete deterioration or steel corrosion due to attack by soil-borne soluble salts and soluble chloride. The water-soluble sulfate concentration in the saturation extract from the soil sample was detected to be 50 mg/kg. ACI 318 Tables 4.2.1 and 4.3.1 outline exposure categories, classes, and concrete requirements by exposure class. ACI 318 requirements for site concrete based upon soluble sulfate are summarized in Table 8.3 below.

**TABLE 8.3  
WATER SOLUBLE SULFATE EXPOSURE REQUIREMENTS**

Water Soluble Sulfate (SO <sub>4</sub> ) in Soil, Percentage by Weight	Exposure Severity	Exposure Class	Maximum w/cm Ratio	Minimum Concrete Compressive Strength	Cementitious Materials Type
0.005	Not Applicable	S0	N/A	2,500 psi	No Restriction

The water-soluble chloride concentration detected in saturation extract from the soil samples was 21 mg/kg. This level of chloride concentration is not considered to be severely corrosive.

It is recommended that a qualified corrosion engineer be consulted regarding protection of buried steel or ductile iron piping and conduit or, at a minimum, applicable manufacturer's recommendations for corrosion protection of buried metal pipe be closely followed.

## 8.4 Percolation Testing

Four percolation tests (P-1 through P-4) were performed within assumed infiltration areas and were conducted in accordance with the guidelines established by the County of Riverside. The approximate locations of the percolation tests are shown on the attached Site Plan, Figure 2.

Four (4) 8-inch diameter boreholes were advanced to the depths shown on the percolation test worksheets. The holes were pre-saturated before percolation testing commenced. Percolation rates were measured by filling the test holes with clean water and measuring the water drops at a certain time interval.

The percolation rate data are presented in tabular format at the end of this Report. The difference in the percolation rates are reflected by the varied type of soil materials at the bottom of the test holes. The percolation rates were converted to infiltration rates using the “Porchet Method” according to County Design handbook. The test results are shown on the table below.

### PERCOLATION TEST RESULTS

Test No.	Depth (feet)	Measured Percolation Rate (min/inch)	Infiltration Rate* (inch/hour)	Soil Type
P-1	8	7.6	<b>1.43</b>	Silty SAND (SM)
P-2	10	25.0	<b>0.55</b>	Silty SAND (SM)
P-3	8	25.0	<b>0.51</b>	Silty SAND (SM)
P-4	10	7.6	<b>1.27</b>	Silty SAND (SM)

\* Tested infiltration Rate =  $(\Delta H 60 r) / (\Delta t(r + 2H_{avg}))$

The soil infiltration or percolation rates are based on tests conducted with clear water. The infiltration/percolation rates may vary with time as a result of soil clogging from water impurities. The infiltration/percolation rates will deteriorate over time due to the soil conditions.

The soils may also become less permeable to impermeable if the soil is compacted. Thus, periodic maintenance consisting of clearing the bottom of the drainage system of clogged soils should be expected. The infiltration/percolation rate may become slower if the surrounding soil is wet or saturated due to prolonged rainfalls. Additional percolation tests may be conducted at bottom of the drainage system during construction to verify the infiltration/percolation rate. Groundwater, if closer to the bottom of the drainage system, will also reduce the infiltration/percolation rate.

The scope of our services did not include a groundwater study and was limited to the performance of percolation testing and soil profile description, and the submitted data only. Our services did not include those associated with septic system design. Neither did services include an Environmental Site Assessment for the presence or absence of hazardous and/or toxic materials in the soil, groundwater, or atmosphere; or the presence of wetlands.

Any statements, or absence of statements, in this report or on any boring logs regarding odors, unusual or suspicious items, or conditions observed, are strictly for descriptive purposes and are not intended to convey engineering judgment regarding potential hazardous and/or toxic assessment.

The geotechnical engineering information presented herein is based upon professional interpretation utilizing standard engineering practices. The work conducted through the course of this investigation, including the preparation of this report, has been performed in accordance with the generally accepted standards of geotechnical engineering practice, which existed in the geographic area at the time the report was written. No other warranty, express or implied, is made.

Please be advised that when performing percolation testing services in relatively small diameter borings, that the testing may not fully model the actual full scale long term performance of a given site. This is particularly true where percolation test data is to be used in the design of large infiltration system such as may be proposed for the site. The measured percolation rate includes dispersion of the water at the sidewalls of the boring as well as into the underlying soils. Subsurface conditions, including percolation rates, can change over time as fine-grained soils migrate. It is not warranted that such information and interpretation cannot be superseded by future geotechnical engineering developments. We emphasize that this report is valid for the project outlined above and should not be used for any other sites.

## 9. CONCLUSIONS AND RECOMMENDATIONS

### 9.1 General

- 9.1.1 Based upon the data collected during this investigation, and from a geotechnical engineering standpoint, it is our opinion that the site is suitable for the proposed construction of improvements at the site as planned, provided the recommendations contained in this report are incorporated into the project design and construction. Conclusions and recommendations provided in this report are based on our review of available literature, analysis of data obtained from our field exploration and laboratory testing program, and our understanding of the proposed development at this time.
- 9.1.2 The primary geotechnical constraints identified in our investigation is the presence of loose and potentially compressible material at the site. Recommendations to mitigate the effects of these soils are provided in this report.
- 9.1.3 Fill soils may be present on-site between our test boring locations. Undocumented fill materials are not suitable to support any future structures and should be replaced with Engineered Fill. Prior to fill placement, Salem Engineering Group, Inc. should inspect the bottom of the excavation to verify the fill condition.
- 9.1.4 Site demolition activities shall include removal of all surface obstructions not intended to be incorporated into final site design. In addition, underground buried structures and/or utility lines encountered during demolition and construction should be properly removed and the resulting excavations backfilled with Engineered Fill. It is suspected that possible demolition activities of the existing structures may disturb the upper soils. After demolition activities, it is recommended that disturbed soils be removed and/or recompacted.



- 9.1.5 The near-surface onsite soils are moisture-sensitive and are moderately to highly compressible (collapsible soil) under saturated conditions. Structures within the project vicinity have experienced excessive post-construction settlement, when the foundation soils become near saturated. The collapsible or weak soils should be removed and recompacted according to the recommendations in the Grading section of this report (Section 9.5).
- 9.1.6 Based on the subsurface conditions at the site and the anticipated structural loading, we anticipate that the proposed building may be supported using conventional shallow foundations provided that the recommendations presented herein are incorporated in the design and construction of the project.
- 9.1.7 Provided the site is graded in accordance with the recommendations of this report and foundations constructed as described herein, we estimate that total settlement due to static loads utilizing conventional shallow foundations for the proposed building will be within 1 inch and corresponding differential settlement will be less than ½ inch.
- 9.1.8 All references to relative compaction and optimum moisture content in this report are based on ASTM D 1557 (latest edition).
- 9.1.9 SALEM shall review the project grading and foundation plans prior to final design submittal to assess whether our recommendations have been properly implemented and evaluate if additional analysis and/or recommendations are required. If SALEM is not provided plans and specifications for review, we cannot assume any responsibility for the future performance of the project.
- 9.1.10 SALEM shall be present at the site during site demolition and preparation to observe site clearing/demolition, preparation of exposed surfaces after clearing, and placement, treatment and compaction of fill material.
- 9.1.11 SALEM's observations should be supplemented with periodic compaction tests to establish substantial conformance with these recommendations. Moisture content of footings and slab subgrade should be tested immediately prior to concrete placement. SALEM should observe foundation excavations prior to placement of reinforcing steel or concrete to assess whether the actual bearing conditions are compatible with the conditions anticipated during the preparation of this report.

## 9.2 Seismic Design Criteria

- 9.2.1 For seismic design of the structures, and in accordance with the seismic provisions of the 2016 CBC, our recommended parameters are shown below. These parameters are based on Probabilistic Ground Motion of 2% Probability of Exceedance in 50 years. The Site Class was determined based on the results of our field exploration.

**TABLE 9.2.1  
SEISMIC DESIGN PARAMETERS**

Seismic Item	Symbol	Value	2016 CBC Reference
Site Coordinates (Datum = NAD 83)		33.8958 Lat -117.1833 Lon	
Site Class	--	D	ASCE 7 Table 20.3
Soil Profile Name	--	Stiff Soil	ASCE 7 Table 20.3
Risk Category	--	II	CBC Table 1604.5
Site Coefficient for PGA	$F_{PGA}$	1.200	ASCE 7 Table 11.8-1
Peak Ground Acceleration (adjusted for Site Class effects)	$PGA_M$	0.871 g	ASCE 7 Equation 11.8-1
Seismic Design Category	SDC	D	ASCE 7 Table 11.6-1 & 2
Mapped Spectral Acceleration (Short period - 0.2 sec)	$S_S$	1.715 g	CBC Figure 1613.3.1(1-6)
Mapped Spectral Acceleration (1.0 sec. period)	$S_1$	0.670 g	CBC Figure 1613.3.1(1-6)
Site Class Modified Site Coefficient	$F_a$	1.200	CBC Table 1613.3.3(1)
Site Class Modified Site Coefficient	$F_v$	1.700	CBC Table 1613.3.3(2)
MCE Spectral Response Acceleration (Short period - 0.2 sec) $S_{MS} = F_a S_S$	$S_{MS}$	2.058 g	CBC Equation 16-37
MCE Spectral Response Acceleration (1.0 sec. period) $S_{M1} = F_v S_1$	$S_{M1}$	1.139 g	CBC Equation 16-38
Design Spectral Response Acceleration $S_{DS} = \frac{2}{3} S_{MS}$ (short period - 0.2 sec)	$S_{DS}$	1.372 g	CBC Equation 16-39
Design Spectral Response Acceleration $S_{D1} = \frac{2}{3} S_{M1}$ (1.0 sec. period)	$S_{D1}$	0.759 g	CBC Equation 16-40

9.2.2 Conformance to the criteria in the above table for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

### 9.3 Soil and Excavation Characteristics

9.3.1 Based on the soil conditions encountered in our soil borings, the onsite soils can be excavated with moderate to laborious effort using conventional heavy-duty or special excavation and earthmoving equipment.

9.3.2 It is the responsibility of the contractor to ensure that all excavations and trenches are properly shored and maintained in accordance with applicable Occupational Safety and Health Administration (OSHA) rules and regulations to maintain safety and maintain the stability of adjacent existing improvements. Temporary excavations are further discussed in a later Section of this report.

- 9.3.3 The upper soils within the project site are identified primarily as silty sands and clayey sands. The sandy soils are moisture-sensitive and moderately collapsible under saturated conditions. These soils, in their present condition, possess moderate risk to construction in terms of possible post-construction movement of the foundations and floor systems if no mitigation measures are employed. Accordingly, measures are considered necessary to reduce anticipated expansion and collapse potential.

As recommended in Section 9.5, the collapsible soils should be removed and replaced with properly moisture conditioned and compacted Engineered Fill. Mitigation measures will not eliminate post-construction soil movement, but will reduce the soil movement. Success of the mitigation measures will depend on the thoroughness of the contractor in dealing with the soil conditions.

- 9.3.4 The near surface soils identified as part of our investigation are, generally, slightly moist to moist due to the absorption characteristics of the soil. Earthwork operations may encounter very moist unstable soils which may require removal to a stable bottom. Exposed native soils exposed as part of site grading operations shall not be allowed to dry out and should be kept continuously moist prior to placement of subsequent fill.

#### 9.4 Materials for Fill

- 9.4.1 Excavated soils generated from cut operations at the site are suitable for use as general Engineered Fill in structural areas, provided they do not contain deleterious matter, organic material, or rock material larger than 3 inches in maximum dimension.
- 9.4.2 The preferred materials specified for Engineered Fill are suitable for most applications with the exception of exposure to erosion. Project site winterization and protection of exposed soils during the construction phase should be the sole responsibility of the Contractor, since they have complete control of the project site.
- 9.4.3 Import soil shall be well-graded, slightly cohesive silty fine sand or sandy silt, with relatively impervious characteristics when compacted. A clean sand or very sandy soil is not acceptable for this purpose. This material should be approved by the Engineer prior to use and should typically possess the soil characteristics summarized below in Table 9.4.3.

**TABLE 9.4.3  
IMPORT FILL REQUIREMENTS**

Minimum Percent Passing No. 200 Sieve	20
Maximum Percent Passing No. 200 Sieve	50
Minimum Percent Passing No. 4 Sieve	80
Maximum Particle Size	3"
Maximum Plasticity Index	10
Maximum CBC Expansion Index	15

- 9.4.4 Environmental characteristics and corrosion potential of import soil materials should also be considered.
- 9.4.5 Proposed import materials should be sampled, tested, and approved by SALEM prior to its transportation to the site.

## 9.5 Grading

- 9.5.1 A representative of our firm should be present during all site clearing and grading operations to test and observe earthwork construction. This testing and observation is an integral part of our service as acceptance of earthwork construction is dependent upon compaction of the material and the stability of the material. The Geotechnical Engineer may reject any material that does not meet compaction and stability requirements. Further recommendations of this report are predicated upon the assumption that earthwork construction will conform to recommendations set forth in this section as well as other portions of this report.
- 9.5.2 A preconstruction conference should be held at the site prior to the beginning of grading operations with the owner, contractor, civil engineer and geotechnical engineer in attendance.
- 9.5.3 Site preparation should begin with removal of existing surface/subsurface structures, underground utilities (as required), any existing uncertified fill, and debris. Excavations or depressions resulting from site clearing operations, or other existing excavations or depressions, should be restored with Engineered Fill in accordance with the recommendations of this report.
- 9.5.4 Surface vegetation consisting of grasses and other similar vegetation should be removed by stripping to a sufficient depth to remove organic-rich topsoil. The upper 2 to 4 inches of the soils containing, vegetation, roots and other objectionable organic matter encountered at the time of grading should be stripped and removed from the surface. Deeper stripping may be required in localized areas. In addition, existing concrete and asphalt materials shall be removed from areas of proposed improvements and stockpiled separately from excavated soil material. The stripped vegetation, asphalt and concrete materials will not be suitable for use as Engineered Fill or within 5 feet of building pads or within pavement areas. However, stripped topsoil may be stockpiled and reused in landscape or non-structural areas or exported from the site.
- 9.5.5 Structural building pad areas should be considered as areas extending a minimum of 5 feet horizontally beyond the outside dimensions of building, including footings and non-cantilevered overhangs carrying structural loads.
- 9.5.6 To minimize post-construction soil movement and provide uniform support for the proposed building, overexcavation and recompaction within the proposed building areas should be performed to a minimum depth of **five (5) feet** below existing grade or **three (3) feet** below proposed footing bottom, whichever is deeper. The overexcavation and recompaction should also extend laterally to a minimum of 5 feet beyond the outer edges of the proposed footings.
- 9.5.7 Within pavement areas, it is recommended that overexcavation and recompaction be performed to a minimum depth of **1.5 feet** below existing grade or proposed grade, whichever is deeper. Deeper overexcavation may be required in some local areas to removal all unsuitable materials.

The overexcavation and recompaction should also extend laterally to a minimum of 2 feet beyond the outer edges of the proposed pavement.

- 9.5.8 Any fill or disturbed soils encountered during grading should be removed and replaced with engineered fill. The actual depth of the overexcavation and recompaction should be determined by our field representative during construction.
- 9.5.9 Prior to placement of fill soils, the upper 8 to 10 inches of native subgrade soils should be scarified, moisture-conditioned to no less than the optimum moisture content and recompacted to a minimum of 95 percent of the maximum dry density based on ASTM D1557 Test Method latest edition.
- 9.5.10 All Engineered Fill (including scarified ground surfaces and backfill) should be placed in thin lifts which will allow for adequate bonding and compaction (typically 6 to 8 inches in loose thickness).
- 9.5.11 Engineered Fill soils should be placed, moisture conditioned to near optimum moisture content, and compacted to at least 95% relative compaction.
- 9.5.12 An integral part of satisfactory fill placement is the stability of the placed lift of soil. If placed materials exhibit excessive instability as determined by a SALEM field representative, the lift will be considered unacceptable and shall be remedied prior to placement of additional fill material. Additional lifts should not be placed if the previous lift did not meet the required dry density or if soil conditions are not stable.
- 9.5.13 Final pavement subgrade should be finished to a smooth, unyielding surface. We further recommend proof-rolling the subgrade with a loaded water truck (or similar equipment with high contact pressure) to verify the stability of the subgrade prior to placing aggregate base.
- 9.5.14 The most effective site preparation alternatives will depend on site conditions prior to grading. We should evaluate site conditions and provide supplemental recommendations immediately prior to grading, if necessary.
- 9.5.15 We do not anticipate groundwater or seepage to adversely affect construction if conducted during the drier months of the year (typically summer and fall). However, groundwater and soil moisture conditions could be significantly different during the wet season (typically winter and spring) as surface soil becomes wet; perched groundwater conditions may develop. Grading during this time period will likely encounter wet materials resulting in possible excavation and fill placement difficulties. Project site winterization consisting of placement of aggregate base and protecting exposed soils during construction should be performed. If the construction schedule requires grading operations during the wet season, we can provide additional recommendations as conditions warrant.
- 9.5.16 Typical remedial measures include: discing and aerating the soil during dry weather; mixing the soil with dryer materials; removing and replacing the soil with an approved fill material or placement of crushed rocks or aggregate base material; or mixing the soil with an approved lime or cement product.

The most common remedial measure of stabilizing the bottom of the excavation due to wet soil condition is to reduce the moisture of the soil to near the optimum moisture content by having the subgrade soils scarified and aerated or mixed with drier soils prior to compacting. However, the drying process may require an extended period of time and delay the construction operation.

To expedite the stabilizing process, crushed rock may be utilized for stabilization provided this method is approved by the owner for the cost purpose.

If the use of crushed rock is considered, it is recommended that the upper soft and wet soils be replaced by 6 to 24 inches of ¾-inch to 1-inch crushed rocks. The thickness of the rock layer depends on the severity of the soil instability. The recommended 6 to 24 inches of crushed rock material will provide a stable platform. It is further recommended that lighter compaction equipment be utilized for compacting the crushed rock. A layer of geofabric is recommended to be placed on top of the compacted crushed rock to minimize migration of soil particles into the voids of the crushed rock, resulting in soil movement.

Although it is not required, the use of geogrid (e.g. Tensar TX 140) below the crushed rock will enhance stability and reduce the required thickness of crushed rock necessary for stabilization. Our firm should be consulted prior to implementing remedial measures to provide appropriate recommendations.

## 9.6 Shallow Foundations

- 9.6.1 The site is suitable for use of conventional shallow foundations consisting of continuous footings and isolated pad footings bearing in properly compacted Engineered Fill.
- 9.6.2 The bearing wall footings considered for the structure should be continuous with a minimum width of 15 inches and extend to a minimum depth of 18 inches below the lowest adjacent grade. Isolated column footings should have a minimum width of 24 inches and extend a minimum depth of 18 inches below the lowest adjacent grade.
- 9.6.3 The bottom of footing excavations should be maintained free of loose and disturbed soil. Footing concrete should be placed into a neat excavation.
- 9.6.4 For design purposes, total settlement due to static loading on the order of 1 inch may be assumed for shallow footings. Differential settlement due to static loading, along a 20-foot exterior wall footing or between adjoining column footings, should be ½ inch, producing an angular distortion of 0.002. Most of the settlement is expected to occur during construction as the loads are applied. However, additional post-construction settlement may occur if the foundation soils are flooded or saturated. The footing excavations should not be allowed to dry out any time prior to pouring concrete.

- 9.6.5 Footings proportioned as recommended above may be designed for the maximum allowable soil bearing pressures shown in the table below.

Loading Condition	Allowable Bearing
Dead Load Only	2,000 psf
Dead-Plus-Live Load	2,500 psf
Total Load, Including Wind or Seismic Loads	3,325 psf

- 9.6.6 Resistance to lateral footing displacement can be computed using an allowable coefficient of friction factor of 0.40 acting between the base of foundations and the supporting subgrade.
- 9.6.7 Lateral resistance for footings can alternatively be developed using an allowable equivalent fluid passive pressure of 400 pounds per cubic foot acting against the appropriate vertical native footing faces. The frictional and passive resistance of the soil may be combined without reduction in determining the total lateral resistance. An increase of one-third is permitted when using the alternate load combination in Section 1605.3.2 of the 2015 IBC/2016 CBC that includes wind or earthquake loads.
- 9.6.8 Underground utilities running parallel to footings should not be constructed in the zone of influence of footings. The zone of influence may be taken to be the area beneath the footing and within a 1:1 plane extending out and down from the bottom edge of the footing.
- 9.6.9 The foundation subgrade should be sprinkled as necessary to maintain a moist condition without significant shrinkage cracks as would be expected in any concrete placement. Prior to placing rebar reinforcement, foundation excavations should be evaluated by a representative of SALEM for appropriate support characteristics and moisture content. Moisture conditioning may be required for the materials exposed at footing bottom, particularly if foundation excavations are left open for an extended period.

## 9.7 Concrete Slabs-on-Grade

- 9.7.1 Slab thickness and reinforcement should be determined by the structural engineer based on the anticipated loading. We recommend that non-structural slabs-on-grade be at least 4 inches thick and underlain by six (6) inches of compacted granular aggregate subbase material compacted to at least 95% relative compaction.
- 9.7.2 Granular aggregate subbase material shall conform to ASTM D-2940, Latest Edition (Table 1, bases) with at least 95 percent passing a 1½-inch sieve and not more than 8% passing a No. 200 sieve or its approved equivalent to prevent capillary moisture rise.
- 9.7.3 We recommend reinforcing slabs, at a minimum, with No. 3 reinforcing bars placed 18 inches on center, each way.

- 9.7.4 Slabs subject to structural loading may be designed utilizing a modulus of subgrade reaction K of 180 pounds per square inch per inch. The K value was approximated based on inter-relationship of soil classification and bearing values (Portland Cement Association, Rocky Mountain Northwest).
- 9.7.5 The spacing of crack control joints should be designed by the project structural engineer. In order to regulate cracking of the slabs, we recommend that full depth construction joints or control joints be provided at a maximum spacing of 15 feet in each direction for 5-inch thick slabs and 12 feet for 4-inch thick slabs.
- 9.7.6 Crack control joints should extend a minimum depth of one-fourth the slab thickness and should be constructed using saw-cuts or other methods as soon as practical after concrete placement. The exterior floors should be poured separately in order to act independently of the walls and foundation system.
- 9.7.7 It is recommended that the utility trenches within the structure be compacted, as specified in our report, to minimize the transmission of moisture through the utility trench backfill. Special attention to the immediate drainage and irrigation around the structures is recommended.
- 9.7.8 Moisture within the structure may be derived from water vapors, which were transformed from the moisture within the soils. This moisture vapor penetration can affect floor coverings and produce mold and mildew in the structure. To minimize moisture vapor intrusion, it is recommended that a vapor retarder be installed in accordance with manufacturer's recommendations and/or ASTM guidelines, whichever is more stringent. In addition, ventilation of the structure is recommended to reduce the accumulation of interior moisture.
- 9.7.9 In areas where it is desired to reduce floor dampness where moisture-sensitive coverings are anticipated, construction should have a suitable waterproof vapor retarder (a minimum of 15 mils thick polyethylene vapor retarder sheeting, Raven Industries "VaporBlock 15, Stego Industries 15 mil "StegoWrap" or W.R. Meadows Sealtight 15 mil "Perminator") incorporated into the floor slab design. The water vapor retarder should be decay resistant material complying with ASTM E96 not exceeding 0.04 perms, ASTM E154 and ASTM E1745 Class A. The vapor barrier should be placed between the concrete slab and the compacted granular aggregate subbase material. The water vapor retarder (vapor barrier) should be installed in accordance with ASTM Specification E 1643-94.
- 9.7.10 The concrete maybe placed directly on vapor retarder. The vapor retarder should be inspected prior to concrete placement. Cut or punctured retarder should be repaired using vapor retarder material lapped 6 inches beyond damaged areas and taped.
- 9.7.11 The recommendations of this report are intended to reduce the potential for cracking of slabs due to soil movement. However, even with the incorporation of the recommendations presented herein, foundations, stucco walls, and slabs-on-grade may exhibit some cracking due to soil movement. This is common for project areas that contain expansive soils since designing to eliminate potential soil movement is cost prohibitive. The occurrence of concrete shrinkage cracks is independent of the supporting soil characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of the concrete, proper concrete placement and curing,



and by the placement of crack control joints at periodic intervals, in particular, where re-entrant slab corners occur.

- 9.7.12 Proper finishing and curing should be performed in accordance with the latest guidelines provided by the American Concrete Institute, Portland Cement Association, and ASTM.

## 9.8 Caisson Foundations

- 9.8.1 It is recommended that the caisson foundation should have a minimum depth of 12 feet below the lowest adjacent grade.
- 9.8.2 The caissons may be designed using an allowable sidewall friction of 160 psf. This value is for dead-plus-live loads. An allowable end bearing capacity of 3,000 psf may be used provided that the bottom of the caisson is cleaned with the use of a clean-out bucket or equivalent and inspected by our representative prior to placement of reinforcement and concrete. An increase of one-third is permitted when using the alternate load combination in Section 1605.3.2 of the CBC that includes wind or earthquake loads.
- 9.8.3 Uplift loads can be resisted by caissons using an allowable sidewall friction of 120 psf of the surface area and the weight of the caisson.
- 9.8.4 The total static settlement of the caisson footing is not expected to exceed 1 inches. Differential settlement should be less than ½ inch. Most of the settlement is expected to occur during construction as the loads are applied.
- 9.8.5 Lateral loads for caissons may be designed utilizing the Isolated Pole Formula and Specifications shown on Table 1804.2, Sections 1804.3.1 and 1808.2.2 of the California Building Code. The drilled caissons may be designed for a lateral capacity of 400 pounds per square foot per foot of depth below the lowest adjacent grade to a maximum of 6,000 psf.
- 9.8.6 The top one-foot of adjacent subgrade should be deleted from the passive pressure computation.
- 9.8.7 These values may be increased by one-third when using the alternative load combinations in Section 1605.3.2 of the IBC that include wind or earthquake loads. These values should not be doubled since the values given herein are higher than the tabular values shown on the Table 1804.2. The lateral loading criteria is based on the assumption that the load application is applied at the ground level, flexible cap connections applied and a minimum embedment depth of 10 feet.
- 9.8.8 Sandy soils were encountered at the site. Casing will be required during drilling of the caisson footings.

## 9.9 Lateral Earth Pressures and Frictional Resistance

9.9.1 Active, at-rest and passive unit lateral earth pressures against footings and walls are summarized in the table below:

Lateral Pressure Level Backfill and Drained Conditions	Equivalent Fluid Pressure, pcf
Active Pressure	35
At-Rest Pressure	55
Passive Pressure	400
Related Parameters	
Allowable Coefficient of Friction	0.40
In-Place Soil Density (lbs/ft <sup>3</sup> )	120

9.9.2 Active pressure applies to walls, which are free to rotate. At-rest pressure applies to walls, which are restrained against rotation. The preceding lateral earth pressures assume sufficient drainage behind retaining walls to prevent the build-up of hydrostatic pressure.

9.9.3 The top one-foot of adjacent subgrade should be deleted from the passive pressure computation.

9.9.4 A safety factor consistent with the design conditions should be included when using the values in the above table.

9.9.5 For stability against lateral sliding, which is resisted solely by the passive pressure, we recommend a minimum safety factor of 1.5.

9.9.6 For stability against lateral sliding, which is resisted by the combined passive and frictional resistance, a minimum safety factor of 2.0 is recommended.

9.9.7 For lateral stability against seismic loading conditions, we recommend a minimum safety factor of 1.1.

9.9.8 For dynamic seismic lateral loading the following equation shall be used:

Dynamic Seismic Lateral Loading Equation
Dynamic Seismic Lateral Load = $\frac{3}{8}\gamma K_h H^2$
Where: $\gamma$ = In-Place Soil Density
$K_h$ = Horizontal Acceleration = $\frac{2}{3}PGA_M$
H = Wall Height

## 9.10 Retaining Walls

- 9.10.1 Retaining and/or below grade walls should be drained with either perforated pipe encased in free-draining gravel or a prefabricated drainage system. The gravel zone should have a minimum width of 12 inches wide and should extend upward to within 12 inches of the top of the wall. The upper 12 inches of backfill should consist of native soils, concrete, asphaltic-concrete or other suitable backfill to minimize surface drainage into the wall drain system. The gravel should conform to Class II permeable materials graded in accordance with the current CalTrans Standard Specifications.
- 9.10.2 Prefabricated drainage systems, such as Miradrain®, Enkadrain®, or an equivalent substitute, are acceptable alternatives in lieu of gravel provided they are installed in accordance with the manufacturer’s recommendations. If a prefabricated drainage system is proposed, our firm should review the system for final acceptance prior to installation.
- 9.10.3 Drainage pipes should be placed with perforations down and should discharge in a non-erosive manner away from foundations and other improvements. The top of the perforated pipe should be placed at or below the bottom of the adjacent floor slab or pavements. The pipe should be placed in the center line of the drainage blanket and should have a minimum diameter of 4 inches. Slots should be no wider than 1/8-inch in diameter, while perforations should be no more than ¼-inch in diameter.
- 9.10.4 If retaining walls are less than 5 feet in height, the perforated pipe may be omitted in lieu of weep holes on 4 feet maximum spacing. The weep holes should consist of 2-inch minimum diameter holes (concrete walls) or unmortared head joints (masonry walls) and placed no higher than 18 inches above the lowest adjacent grade. Two 8-inch square overlapping patches of geotextile fabric (conforming to the CalTrans Standard Specifications for "edge drains") should be affixed to the rear wall opening of each weep hole to retard soil piping.
- 9.10.5 During grading and backfilling operations adjacent to any walls, heavy equipment should not be allowed to operate within a lateral distance of 5 feet from the wall, or within a lateral distance equal to the wall height, whichever is greater, to avoid developing excessive lateral pressures. Within this zone, only hand operated equipment ("whackers," vibratory plates, or pneumatic compactors) should be used to compact the backfill soils.

## 9.11 Temporary Excavations

- 9.11.1 We anticipate that the majority of the sandy site soils will be classified as Cal-OSHA “Type C” soil when encountered in excavations during site development and construction. Excavation sloping, benching, the use of trench shields, and the placement of trench spoils should conform to the latest applicable Cal-OSHA standards. The contractor should have a Cal-OSHA-approved “competent person” onsite during excavation to evaluate trench conditions and make appropriate recommendations where necessary.
- 9.11.2 It is the contractor’s responsibility to provide sufficient and safe excavation support as well as protecting nearby utilities, structures, and other improvements which may be damaged by earth movements. All onsite excavations must be conducted in such a manner that potential surcharges

from existing structures, construction equipment, and vehicle loads are resisted. The surcharge area may be defined by a 1:1 projection down and away from the bottom of an existing foundation or vehicle load.

- 9.11.3 Temporary excavations and slope faces should be protected from rainfall and erosion. Surface runoff should be directed away from excavations and slopes.
- 9.11.4 Open, unbraced excavations in undisturbed soils should be made according to the slopes presented in the following table:

#### RECOMMENDED EXCAVATION SLOPES

Depth of Excavation (ft)	Slope (Horizontal : Vertical)
0-5	1:1
5-10	2:1

- 9.11.5 If, due to space limitation, excavations near property lines or existing structures are performed in a vertical position, slot cuts, braced shorings or shields may be used for supporting vertical excavations. Therefore, in order to comply with the local and state safety regulations, a properly designed and installed shoring system would be required to accomplish planned excavations and installation. A Specialty Shoring Contractor should be responsible for the design and installation of such a shoring system during construction.
- 9.11.6 Braced shorings should be designed for a maximum pressure distribution of 30H, (where H is the depth of the excavation in feet). The foregoing does not include excess hydrostatic pressure or surcharge loading. Fifty percent of any surcharge load, such as construction equipment weight, should be added to the lateral load given herein. Equipment traffic should concurrently be limited to an area at least 3 feet from the shoring face or edge of the slope.
- 9.11.7 The excavation and shoring recommendations provided herein are based on soil characteristics derived from the borings within the area. Variations in soil conditions will likely be encountered during the excavations. SALEM Engineering Group, Inc. should be afforded the opportunity to provide field review to evaluate the actual conditions and account for field condition variations not otherwise anticipated in the preparation of this recommendation. Slope height, slope inclination, or excavation depth should in no case exceed those specified in local, state, or federal safety regulation, (e.g. OSHA) standards for excavations, 29 CFR part 1926, or Assessor's regulations.

## 9.12 Underground Utilities

- 9.12.1 Underground utility trenches should be backfilled with properly compacted material. The material excavated from the trenches should be adequate for use as backfill provided it does not contain deleterious matter, vegetation or rock larger than 3 inches in maximum dimension. Trench backfill should be placed in loose lifts not exceeding 8 inches and compacted to at least 95% relative compaction at or above optimum moisture content.

- 9.12.2 Bedding and pipe zone backfill typically extends from the bottom of the trench excavations to approximately 6 to 12 inches above the crown of the pipe. Pipe bedding and backfill material should conform to the requirements of the governing utility agency.
- 9.12.3 It is suggested that underground utilities crossing beneath new or existing structures be plugged at entry and exit locations to the buildings or structures to prevent water migration. Trench plugs can consist of on-site clay soils, if available, or sand cement slurry. The trench plugs should extend 2 feet beyond each side of individual perimeter foundations.
- 9.12.4 The contractor is responsible for removing all water-sensitive soils from the trench regardless of the backfill location and compaction requirements. The contractor should use appropriate equipment and methods to avoid damage to the utilities and/or structures during fill placement and compaction.

### 9.13 Surface Drainage

- 9.13.1 Proper surface drainage is critical to the future performance of the project. Uncontrolled infiltration of irrigation excess and storm runoff into the soils can adversely affect the performance of the planned improvements. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change to important engineering properties. Proper drainage should be maintained at all times.
- 9.13.2 The ground immediately adjacent to the foundation shall be sloped away from the building at a slope of not less than 5 percent for a minimum distance of 10 feet.
- 9.13.3 Impervious surfaces within 10 feet of the building foundation shall be sloped a minimum of 2 percent away from the building and drainage gradients maintained to carry all surface water to collection facilities and off site. These grades should be maintained for the life of the project. Ponding of water should not be allowed adjacent to the structure. Over-irrigation within landscaped areas adjacent to the structure should not be performed.
- 9.13.4 Roof drains should be installed with appropriate downspout extensions out-falling on splash blocks so as to direct water a minimum of 5 feet away from the structures or be connected to the storm drain system for the development.

### 9.14 Pavement Design

- 9.14.1 Based on site soil conditions, an R-value of 40 was used for the preliminary flexible asphaltic concrete pavement design. The R-value may be verified during grading of the pavement areas.
- 9.14.2 The pavement design recommendations provided herein are based on the State of California Department of Transportation (CALTRANS) design manual. The asphaltic concrete (flexible pavement) is based on a 20-year pavement life utilizing 1200 passenger vehicles, 10 single unit trucks, and 2 multi-unit trucks. The following table shows the recommended pavement sections for various traffic indices.

**TABLE 9.14.2  
ASPHALT CONCRETE PAVEMENT THICKNESSES**

Traffic Index	Asphaltic Concrete	Class II Aggregate Base*	Compacted Subgrade*
5.0 (Parking and Vehicle Drive Areas)	2.5"	5.0"	18.0"
6.0 (Heavy Truck Areas)	3.0"	6.0"	18.0"

*\*95% compaction based on ASTM D1557-07 Test Method or Cal 216*

- 9.14.3 The following recommendations are for light-duty and heavy-duty Portland Cement Concrete pavement sections.

**TABLE 9.14.3  
PORTLAND CEMENT CONCRETE PAVEMENT THICKNESSES**

Traffic Index	Portland Cement Concrete*	Class II Aggregate Base**	Compacted Subgrade**
5.0 (Light Duty)	5.0"	5.0"	18.0"
6.0 (Heavy Duty)	6.0"	5.0"	18.0"

*\* Minimum Compressive Strength of 4,000 psi*

*\*\* 95% compaction based on ASTM D1557-07 Test Method or Cal 216*

## 10. PLAN REVIEW, CONSTRUCTION OBSERVATION AND TESTING

### 10.1 Plan and Specification Review

- 10.1.1 SALEM should review the project plans and specifications prior to final design submittal to assess whether our recommendations have been properly implemented and evaluate if additional analysis and/or recommendations are required.

### 10.2 Construction Observation and Testing Services

- 10.2.1 The recommendations provided in this report are based on the assumption that we will continue as Geotechnical Engineer of Record throughout the construction phase. It is important to maintain continuity of geotechnical interpretation and confirm that field conditions encountered are similar to those anticipated during design. If we are not retained for these services, we cannot assume any responsibility for others interpretation of our recommendations, and therefore the future performance of the project.
- 10.2.2 SALEM should be present at the site during site preparation to observe site clearing, preparation of exposed surfaces after clearing, and placement, treatment and compaction of fill material.
- 10.2.3 SALEM's observations should be supplemented with periodic compaction tests to establish substantial conformance with these recommendations. Moisture content of footings and slab

subgrade should be tested immediately prior to concrete placement. SALEM should observe foundation excavations prior to placement of reinforcing steel or concrete to assess whether the actual bearing conditions are compatible with the conditions anticipated during the preparation of this report.

## 11. LIMITATIONS AND CHANGED CONDITIONS

The analyses and recommendations submitted in this report are based upon the data obtained from the test borings drilled at the approximate locations shown on the Site Plan, Figure 2. The report does not reflect variations which may occur between borings. The nature and extent of such variations may not become evident until construction is initiated.

If variations then appear, a re-evaluation of the recommendations of this report will be necessary after performing on-site observations during the excavation period and noting the characteristics of such variations. The findings and recommendations presented in this report are valid as of the present and for the proposed construction. If site conditions change due to natural processes or human intervention on the property or adjacent to the site, or changes occur in the nature or design of the project, or if there is a substantial time lapse between the submission of this report and the start of the work at the site, the conclusions and recommendations contained in our report will not be considered valid unless the changes are reviewed by SALEM and the conclusions of our report are modified or verified in writing.

The validity of the recommendations contained in this report is also dependent upon an adequate testing and observations program during the construction phase. Our firm assumes no responsibility for construction compliance with the design concepts or recommendations unless we have been retained to perform the on-site testing and review during construction. SALEM has prepared this report for the exclusive use of the owner and project design consultants.

SALEM does not practice in the field of corrosion engineering. It is recommended that a qualified corrosion engineer be consulted regarding protection of buried steel or ductile iron piping and conduit or, at a minimum, that manufacturer's recommendations for corrosion protection be closely followed. Further, a corrosion engineer may be needed to incorporate the necessary precautions to avoid premature corrosion of concrete slabs and foundations in direct contact with native soil.

The importation of soil and or aggregate materials to the site should be screened to determine the potential for corrosion to concrete and buried metal piping. The report has been prepared in accordance with generally accepted geotechnical engineering practices in the area. No other warranties, either express or implied, are made as to the professional advice provided under the terms of our agreement and included in this report.

If you have any questions, or if we may be of further assistance, please do not hesitate to contact our office at (909) 980-6455.

Respectfully Submitted,

**SALEM ENGINEERING GROUP, INC.**



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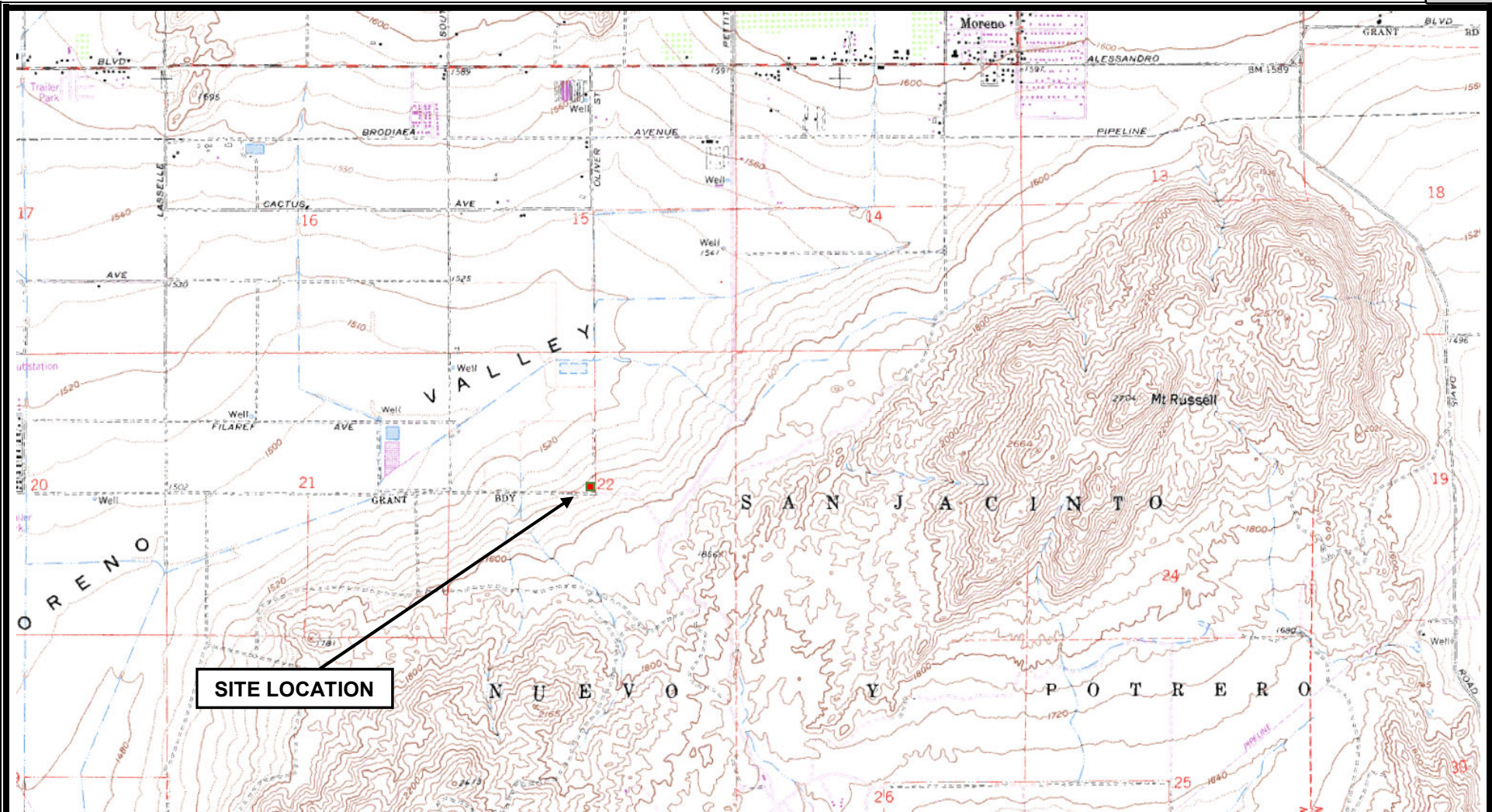


R. Sammy Salem, MS, PE, GE  
Principal Engineer  
RCE 52762 / RGE 2549



Attachment: Appendix D - Geotechnical Engineering Investigation (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)





Source Image: U.S. Geological Survey, Sunnymead, Calif. 7.5' Quadrangle, 1967 (Photo Revised 1980)



**VICINITY MAP**  
**GEOTECHNICAL ENGINEERING INVESTIGATION**  
 Proposed Arco Station  
 NWC Iris Avenue & Oliver Street  
 Moreno Valley, California

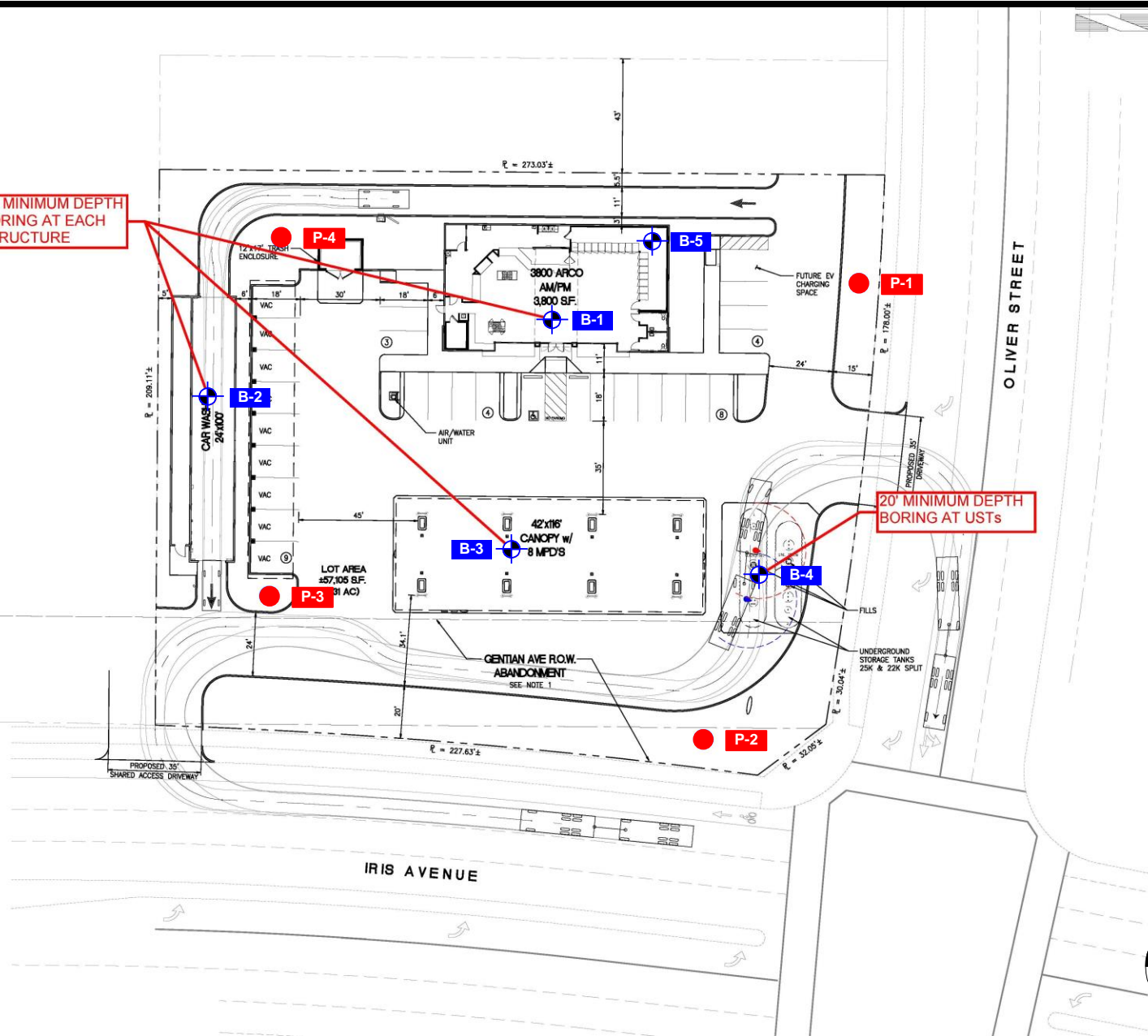
SCALE:  
 NOT TO SCALE  
 DRAWN BY:  
 II  
 PROJECT NO.  
 3-217-1265

DATE:  
 11/2017  
 APPROVED BY:  
 CJ  
 FIGURE NO.  
 1



15' MINIMUM DEPTH BORING AT EACH STRUCTURE

20' MINIMUM DEPTH BORING AT USTs



**SITE PLAN**  
**GEOTECHNICAL ENGINEERING INVESTIGATION**  
 Proposed Arco Station  
 NWC Iris Avenue & Oliver Street  
 Moreno Valley, California

SCALE:  
 NOT TO SCALE  
 DRAWN BY:  
 II  
 PROJECT NO.  
 3-217-1265

DATE:  
 11/2017  
 APPROVED BY:  
 CJ  
 FIGURE NO.  
 2

LEGEND:  
 B-1 Soil Boring Location  
 P-1 Percolation Location  
 All Locations Approximate



Attachment: Appendix D - Geotechnical Engineering Investigation (3362 : Conditional Use Permit PEN18-

APPENDIX

A

Attachment: Appendix D - Geotechnical Engineering Investigation (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



## APPENDIX A FIELD EXPLORATION

Fieldwork for our investigation (drilling) was conducted on November 14, 2017 and included a site visit, subsurface exploration, and soil sampling. Percolation tests were performed on November 15, 2017. The locations of the exploratory borings and percolation tests are shown on the Site Plan, Figure 2. Boring logs for our exploration are presented in figures following the text in this appendix. Borings were located in the field using existing reference points. Therefore, actual boring locations may deviate slightly.

In general, our borings were performed using a truck-mounted CME 45C drill rig equipped with an 8-inch and a 6-inch hollow-stem augers and a 4-inch diameter solid flight auger. Sampling in the borings was accomplished using a hydraulic 140-pound hammer with a 30-inch drop. Samples were obtained with a 3-inch outside-diameter (OD), split spoon (California Modified) sampler, and a 2-inch OD, Standard Penetration Test (SPT) sampler. The number of blows required to drive the sampler the last 12 inches (or fraction thereof) of the 18-inch sampling interval were recorded on the boring logs. The blow counts shown on the boring logs should not be interpreted as standard SPT “N” values; corrections have not been applied. Upon completion, the borings were backfilled with soil cuttings.

Subsurface conditions encountered in the exploratory borings were visually examined, classified and logged in general accordance with the American Society for Testing and Materials (ASTM) Practice for Description and Identification of Soils (Visual-Manual Procedure D2488). This system uses the Unified Soil Classification System (USCS) for soil designations. The logs depict soil and geologic conditions encountered and depths at which samples were obtained. The logs also include our interpretation of the conditions between sampling intervals. Therefore, the logs contain both observed and interpreted data. We determined the lines designating the interface between soil materials on the logs using visual observations, drill rig penetration rates, excavation characteristics and other factors. The transition between materials may be abrupt or gradual. Where applicable, the field logs were revised based on subsequent laboratory testing.

## Unified Soil Classification System

Major Divisions			Letter	Symbol	Description	
<b>Coarse-grained Soils</b> More than ½ retained on the No. 200 Sieve	<b>Gravels</b> More than ½ coarse fraction retained on the No. 4 sieve	Clean Gravels	GW		Well-graded gravels and gravel-sand mixtures, little or no fines.	
		Gravels	GP		Poorly-graded gravels and gravel-sand mixtures, little or no fines.	
		Gravels With Fines	GM		Silty gravels, gravel-sand-silt mixtures.	
			GC		Clayey gravels, gravel-sand-clay mixtures.	
	<b>Sands</b> More than ½ passing through the No. 200 sieve	Clean Sands	SW		Well-graded sands and gravelly sands, little or no fines.	
			SP		Poorly-graded sands and gravelly sands, little or no fines.	
		Sands With Fines	SM		Silty sands, sand-silt mixtures	
			SC		Clayey sands, sandy-clay mixtures.	
			<b>Silts and Clays</b> Liquid Limit less than 50%	ML		Inorganic silts, very fine sands, rock flour, silty or clayey fine sands.
				CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
OL		Organic clays of medium to high plasticity.				
<b>Silts and Clays</b> Liquid Limit greater than 50%	MH		Inorganic silts, micaceous or diatomaceous fines sands or silts, elastic silts.			
	CH		Inorganic clays of high plasticity, fat clays.			
	OH		Organic clays of medium to high plasticity.			
<b>Highly Organic Soils</b>			PT		Peat, muck, and other highly organic soils.	
<b>Consistency Classification</b>						
<i>Granular Soils</i>			<i>Cohesive Soils</i>			
Description - Blows Per Foot (Corrected)			Description - Blows Per Foot (Corrected)			
Very loose	<u>MCS</u> <5	<u>SPT</u> <4	Very soft	<u>MCS</u> <3	<u>SPT</u> <2	
Loose	5 - 15	4 - 10	Soft	3 - 5	2 - 4	
Medium dense	16 - 40	11 - 30	Firm	6 - 10	5 - 8	
Dense	41 - 65	31 - 50	Stiff	11 - 20	9 - 15	
Very dense	>65	>50	Very Stiff	21 - 40	16 - 30	
			Hard	>40	>30	
MCS = Modified California Sampler			SPT = Standard Penetration Test Sampler			

# Boring No. B-1

**Project:** Proposed Arco Station  
**Client:** Sater Oil International, LLC  
**Location:** NWC Iris Avenue & Oliver Street, Moreno Valley, CA  
**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 3-217-1265  
**Figure No.:** A-1  
**Logged By:** JH  
**Initial:** None  
**At Completion:** None

Depth to Water >

SUBSURFACE PROFILE			SAMPLE					Penetration Test				Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	20	40	60	80	
0		Ground Surface										
		<b>Silty SAND (SM)</b> Loose; brown; moist; fine to medium-grained.	82.4	10.5	MCS		6					
5		Grades as above.	111.2	3.1	MCS		11					
10		Grades as above; medium dense.	109.1	4.6	MCS		22					
		<b>Silty Clayey SAND (SC)</b> Dense; brown-orange; moist; fine to medium-grained; low plasticity.	--	9.6	SPT		48					
20		<b>Silty SAND (SM)</b> Medium dense; brown; moist; fine to medium-grained.	--	4.2	SPT		23					
25		Grades as above.	--	4.9	SPT		28					

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 45C  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 2

**Drill Date:** 11/14/2017  
**Borehole Size:** 6 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs./30 in.



Attachment: Appendix D - Geotechnical Engineering Investigation (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# Boring No. B-1

**Project:** Proposed Arco Station  
**Client:** Sater Oil International, LLC  
**Location:** NWC Iris Avenue & Oliver Street, Moreno Valley, CA  
**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 3-217-1265  
**Figure No.:** A-1  
**Logged By:** JH  
**Initial:** None  
**At Completion:** None

Depth to Water >

SUBSURFACE PROFILE			SAMPLE					Penetration Test	Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count		
30		Grades as above; dense.	-	5.6	SPT		37	20 40 60 80	
35		Grades as above; medium dense.	-	4.9	SPT		25	20 40 60 80	
40		Grades as above; with trace of clay.	-	5.9	SPT		29	20 40 60 80	
45		Grades as above.	-	5.9	SPT		25	20 40 60 80	
50		Grades as above.						20 40 60 80	
		End of Borehole						20 40 60 80	

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 45C  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 2 of 2

**Drill Date:** 11/14/2017  
**Borehole Size:** 6 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs./30 in.



Attachment: Appendix D - Geotechnical Engineering Investigation (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

## Boring No. B-2

**Project:** Proposed Arco Station  
**Client:** Sater Oil International, LLC  
**Location:** NWC Iris Avenue & Oliver Street, Moreno Valley, CA  
**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No.:** 3-217-1265  
**Figure No.:** A-2  
**Logged By:** JH  
**Initial:** None  
**At Completion:** None

Depth to Water >

SUBSURFACE PROFILE			SAMPLE					Penetration Test				Water Level	
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count						20
0		Ground Surface											
		<b>Silty SAND (SM) with trace of Gravel</b> Very loose; brown; moist; fine to coarse-grained.	104.0	4.8	MCS		3						
5		<b>Silty SAND (SM)</b> Loose; brown; moist; fine to medium-grained.	108.8	5.4	MCS		9						
10		Grades as above; medium dense.	109.8	4.1	MCS		32						
15		<b>Silty Clayey SAND (SC)</b> Very dense; brown; moist; fine to medium-grained.	--	8.4	SPT		50						
		End of Borehole											
20													
25													

**Drill Method:** Solid Flight Auger  
**Drill Rig:** CME 45C  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 11/14/2017  
**Borehole Size:** 4 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



Attachment: Appendix D - Geotechnical Engineering Investigation (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



## Boring No. B-3

**Project:** Proposed Arco Station  
**Client:** Sater Oil International, LLC  
**Location:** NWC Iris Avenue & Oliver Street, Moreno Valley, CA  
**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 3-217-1265  
**Figure No.:** A-3  
**Logged By:** JH  
**Initial:** None  
**At Completion:** None

Depth to Water >

SUBSURFACE PROFILE			SAMPLE					Penetration Test				Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	20	40	60	80	
0		Ground Surface										
		<b>Silty SAND (SM)</b> Medium dense; brown; moist; fine to medium-grained.	107.2	2.2	MCS		19					
5		Grades as above; loose.	104.4	2.0	MCS		11					
10		Grades as above; medium dense.	108.9	4.5	MCS		17					
		<b>Silty Clayey SAND (SC)</b> Dense; brown; moist; fine to medium-grained.	--	8.6	SPT		48					
15		End of Borehole										
20												
25												

**Drill Method:** Solid Flight Auger  
**Drill Rig:** CME 45C  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 11/14/2017  
**Borehole Size:** 4 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



Attachment: Appendix D - Geotechnical Engineering Investigation (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

## Boring No. B-4

**Project:** Proposed Arco Station  
**Client:** Sater Oil International, LLC  
**Location:** NWC Iris Avenue & Oliver Street, Moreno Valley, CA  
**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 3-217-1265  
**Figure No.:** A-4  
**Logged By:** JH  
**Initial:** None  
**At Completion:** None

Depth to Water >

SUBSURFACE PROFILE			SAMPLE					Penetration Test				Water Level	
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count						
0		Ground Surface											
		<b>Silty SAND (SM)</b> Loose; brown; moist; fine to medium-grained.	111.7	4.0	MCS		7						
5		Grades as above.	106.3	5.2	MCS		7						
10		Grades as above; medium dense.	112.5	2.5	MCS		22						
15		<b>Silty Clayey SAND (SC)</b> Dense; brown; moist; fine to medium-grained.	--	9.2	SPT		32						
20		<b>Silty SAND (SM)</b> Dense; brown; moist; fine to medium-grained.	--	6.4	SPT		36						
25		Grades as above.	--	5.4	SPT		39						
		End of Borehole											

**Drill Method:** Solid Flight Auger  
**Drill Rig:** CME 45C  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 11/14/2017  
**Borehole Size:** 4 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



Attachment: Appendix D - Geotechnical Engineering Investigation (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

## Boring No. B-5

**Project:** Proposed Arco Station  
**Client:** Sater Oil International, LLC  
**Location:** NWC Iris Avenue & Oliver Street, Moreno Valley, CA  
**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 3-217-1265  
**Figure No.:** A-5  
**Logged By:** JH  
**Initial:** None  
**At Completion:** None

Depth to Water >

SUBSURFACE PROFILE			SAMPLE					Penetration Test				Water Level	
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count						
0		Ground Surface											
		<b>Silty SAND (SM)</b> Loose; brown; moist; fine to medium-grained.	105.7	2.0	MCS		11						
5		Grades as above.	105.8	2.0	MCS		12						
10		Grades as above; medium dense.	114.6	4.4	MCS		23						
15		Grades as above; with clay.	--	7.9	SPT		19						
		End of Borehole											
20													
25													

**Drill Method:** Solid Flight Auger  
**Drill Rig:** CME 45C  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 11/14/2017  
**Borehole Size:** 4 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



Attachment: Appendix D - Geotechnical Engineering Investigation (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

## Percolation Test Worksheet

**Project:** Proposed Arco Station  
 NWC Iris Ave & Oliver Street  
 Moreno Valley, CA

**Job No.:** 3-217-1265  
**Date Drilled:** 11/14/2017  
**Soil Classification:** Silty SAND (SM)

Hole Radius: 4 in.  
 Pipe Dia.: 3 in.  
 Total Depth of Hole: 96 in.

**Test Hole No.:** P-1  
**Tested by:** JH  
**Drilled Hole Depth:** 8 ft.

**Presoaking Date:** 11/14/2017  
**Test Date:** 11/15/2017

Stick Up 0 ft

Time Start	Time Finish	Depth of Test Hole (ft) <sup>#</sup>	Refill- Yes or No	Elapsed Time (hrs:min)	Initial Water Level <sup>#</sup> (ft)	Final Water Level <sup>#</sup> (ft)	Δ Water Level (in.)	Δ Min.	Meas. Perc Rate (min/in)	Initial Height of Water (in)	Final Height of Water (in)	Average Height of Water (in)	Infiltration Rate, It (in/hr)
11:21	11:46	8.0	Y	0:25	6.15	6.75	7.20	25	3.5	22.2	15.0	18.6	1.68
11:47	12:12	8.0	Y	0:25	6.22	6.77	6.60	25	3.8	21.4	14.8	18.1	1.58
12:14	12:24	8.0	Y	0:10	6.41	6.62	2.52	10	4.0	19.1	16.6	17.8	1.53
12:24	12:34	8.0	N	0:10	6.62	6.80	2.16	10	4.6	16.6	14.4	15.5	1.48
12:34	12:44	8.0	N	0:10	6.80	6.96	1.92	10	5.2	14.4	12.5	13.4	1.49
12:44	12:54	8.0	N	0:10	6.96	7.10	1.68	10	6.0	12.5	10.8	11.6	1.48
12:54	13:04	8.0	N	0:10	7.10	7.22	1.44	10	6.9	10.8	9.4	10.1	1.43
13:04	13:14	8.0	N	0:10	7.22	7.33	1.32	10	7.6	9.4	8.0	8.7	1.48
<b>Recommended for Design:</b>										<b>Infiltration Rate</b>			<b>1.43</b>



## Percolation Test Worksheet

**Project:** Proposed Arco Station  
 NWC Iris Ave & Oliver Street  
 Moreno Valley, CA

**Job No.:** 3-217-1265  
**Date Drilled:** 11/14/2017  
**Soil Classification:** Silty SAND (SM)

Hole Radius: 4 in.

Pipe Dia.: 3 in.

Total Depth of Hole: 120 in.

**Test Hole No.:** P-2

**Presoaking Date:** 11/14/2017

**Tested by:** JH

**Test Date:** 11/15/2017

**Drilled Hole Depth:** 10 ft.

Stick Up 0 ft

Time Start	Time Finish	Depth of Test Hole (ft) <sup>#</sup>	Refill- Yes or No	Elapsed Time (hrs:min)	Initial Water Level <sup>#</sup> (ft)	Final Water Level <sup>#</sup> (ft)	Δ Water Level (in.)	Δ Min.	Meas. Perc Rate (min/in)	Initial Height of Water (in)	Final Height of Water (in)	Average Height of Water (in)	Infiltration Rate, It (in/hr)
11:13	11:43	10.0	Y	0:30	6.25	6.91	7.92	30	3.8	45.0	37.1	41.0	0.74
11:43	12:13	10.0	N	0:30	6.91	7.41	6.00	30	5.0	37.1	31.1	34.1	0.67
12:13	12:43	10.0	N	0:30	7.41	7.82	4.92	30	6.1	31.1	26.2	28.6	0.64
12:43	13:13	10.0	N	0:30	7.82	8.15	3.96	30	7.6	26.2	22.2	24.2	0.61
13:13	13:43	10.0	N	0:30	8.15	8.42	3.24	30	9.3	22.2	19.0	20.6	0.57
13:43	14:13	10.0	N	0:30	8.42	8.65	2.76	30	10.9	19.0	16.2	17.6	0.56
14:13	14:43	10.0	N	0:30	8.65	8.85	2.40	30	12.5	16.2	13.8	15.0	0.56
14:43	15:13	10.0	N	0:30	8.85	9.02	2.04	30	14.7	13.8	11.8	12.8	0.55
15:13	15:43	10.0	N	0:30	9.02	9.17	1.80	30	16.7	11.8	10.0	10.9	0.56
15:43	16:13	10.0	N	0:30	9.17	9.30	1.56	30	19.2	10.0	8.4	9.2	0.56
16:13	16:43	10.0	N	0:30	9.30	9.42	1.44	30	20.8	8.4	7.0	7.7	0.60
16:43	17:13	10.0	N	0:30	9.42	9.52	1.20	30	25.0	7.0	5.8	6.4	0.57
<b>Recommended for Design:</b>										<b>Infiltration Rate</b>		<b>0.55</b>	



### Percolation Test Worksheet

**Project:** Proposed Arco Station  
 NWC Iris Ave & Oliver Street  
 Moreno Valley, CA

**Job No.:** 3-217-1265  
**Date Drilled:** 11/14/2017  
**Soil Classification:** Silty SAND (SM)

Hole Radius: 4 in.  
 Pipe Dia.: 3 in.  
 Total Depth of Hole: 96 in.

**Test Hole No.:** P-3  
**Tested by:** JH  
**Drilled Hole Depth:** 8 ft.

**Presoaking Date:** 11/14/2017  
**Test Date:** 11/15/2017

Stick Up 0 ft

Time Start	Time Finish	Depth of Test Hole (ft) <sup>#</sup>	Refill- Yes or No	Elapsed Time (hrs:min)	Initial Water Level <sup>#</sup> (ft)	Final Water Level <sup>#</sup> (ft)	Δ Water Level (in.)	Δ Min.	Meas. Perc Rate (min/in)	Initial Height of Water (in)	Final Height of Water (in)	Average Height of Water (in)	Infiltration Rate, It (in/hr)
11:15	11:45	8.0	Y	0:30	4.52	5.11	7.08	30	4.2	41.8	34.7	38.2	0.70
11:45	12:15	8.0	N	0:30	5.11	5.54	5.16	30	5.8	34.7	29.5	32.1	0.61
12:15	12:45	8.0	N	0:30	5.54	5.88	4.08	30	7.4	29.5	25.4	27.5	0.55
12:45	13:15	8.0	N	0:30	5.88	6.16	3.36	30	8.9	25.4	22.1	23.8	0.52
13:15	13:45	8.0	N	0:30	6.16	6.40	2.88	30	10.4	22.1	19.2	20.6	0.51
13:45	14:15	8.0	N	0:30	6.40	6.61	2.52	30	11.9	19.2	16.7	17.9	0.51
14:15	14:45	8.0	N	0:30	6.61	6.80	2.28	30	13.2	16.7	14.4	15.5	0.52
14:45	15:15	8.0	N	0:30	6.80	6.97	2.04	30	14.7	14.4	12.4	13.4	0.53
15:15	15:45	8.0	N	0:30	6.97	7.12	1.80	30	16.7	12.4	10.6	11.5	0.53
15:45	16:15	8.0	N	0:30	7.12	7.25	1.56	30	19.2	10.6	9.0	9.8	0.53
16:15	16:45	8.0	N	0:30	7.25	7.36	1.32	30	22.7	9.0	7.7	8.3	0.51
16:45	17:15	8.0	N	0:30	7.36	7.46	1.20	30	25.0	7.7	6.5	7.1	0.53
<b>Recommended for Design:</b>										<b>Infiltration Rate</b>		<b>0.51</b>	



### Percolation Test Worksheet

**Project:** Proposed Arco Station  
 NWC Iris Ave & Oliver Street  
 Moreno Valley, CA

**Job No.:** 3-217-1265  
**Date Drilled:** 11/14/2017  
**Soil Classification:** Silty SAND (SM)

Hole Radius: 4 in.  
 Pipe Dia.: 3 in.  
 Total Depth of Hole: 120 in.

**Test Hole No.:** P-4  
**Tested by:** JH  
**Drilled Hole Depth:** 10 ft.

**Presoaking Date:** 11/14/2017  
**Test Date:** 11/15/2017

Stick Up 0 ft

Time Start	Time Finish	Depth of Test Hole (ft) <sup>#</sup>	Refill- Yes or No	Elapsed Time (hrs:min)	Initial Water Level <sup>#</sup> (ft)	Final Water Level <sup>#</sup> (ft)	Δ Water Level (in.)	Δ Min.	Meas. Perc Rate (min/in)	Initial Height of Water (in)	Final Height of Water (in)	Average Height of Water (in)	Infiltration Rate, It (in/hr)
11:23	11:48	10.0	Y	0:25	8.00	8.57	6.84	25	3.7	24.0	17.2	20.6	1.45
11:49	12:14	10.0	Y	0:25	8.11	8.62	6.12	25	4.1	22.7	16.6	19.6	1.36
12:16	12:26	10.0	Y	0:10	8.36	8.55	2.28	10	4.4	19.7	17.4	18.5	1.33
12:26	12:36	10.0	N	0:10	8.55	8.72	2.04	10	4.9	17.4	15.4	16.4	1.33
12:36	12:46	10.0	N	0:10	8.72	8.87	1.80	10	5.6	15.4	13.6	14.5	1.31
12:46	12:56	10.0	N	0:10	8.87	9.00	1.56	10	6.4	13.6	12.0	12.8	1.27
12:56	13:06	10.0	N	0:10	9.00	9.12	1.44	10	6.9	12.0	10.6	11.3	1.30
13:06	13:16	10.0	N	0:10	9.12	9.23	1.32	10	7.6	10.6	9.2	9.9	1.33
<b>Recommended for Design:</b>										<b>Infiltration Rate</b>		<b>1.27</b>	



Attachment: Appendix D - Geotechnical Engineering Investigation (3362 : Conditional Use Permit PEN18-

APPENDIX

B

Attachment: Appendix D - Geotechnical Engineering Investigation (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

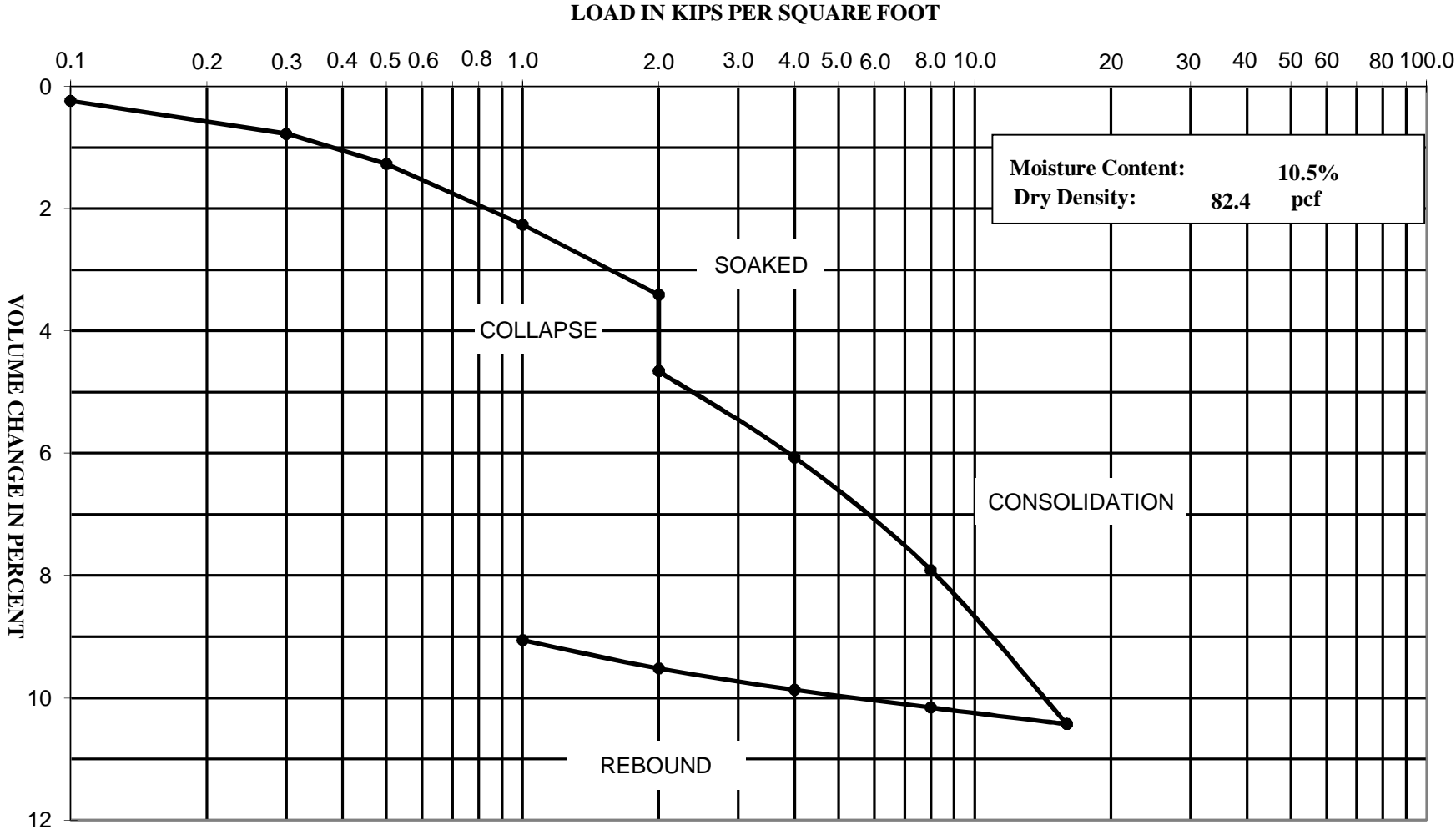




## APPENDIX B LABORATORY TESTING

Laboratory tests were performed in accordance with generally accepted test methods of the American Society for Testing and Materials (ASTM), Caltrans, or other suggested procedures. Selected samples were tested for in-situ dry density and moisture content, corrosivity, consolidation, shear strength, maximum density and optimum moisture content, and grain size distribution. The results of the laboratory tests are summarized in the following figures.

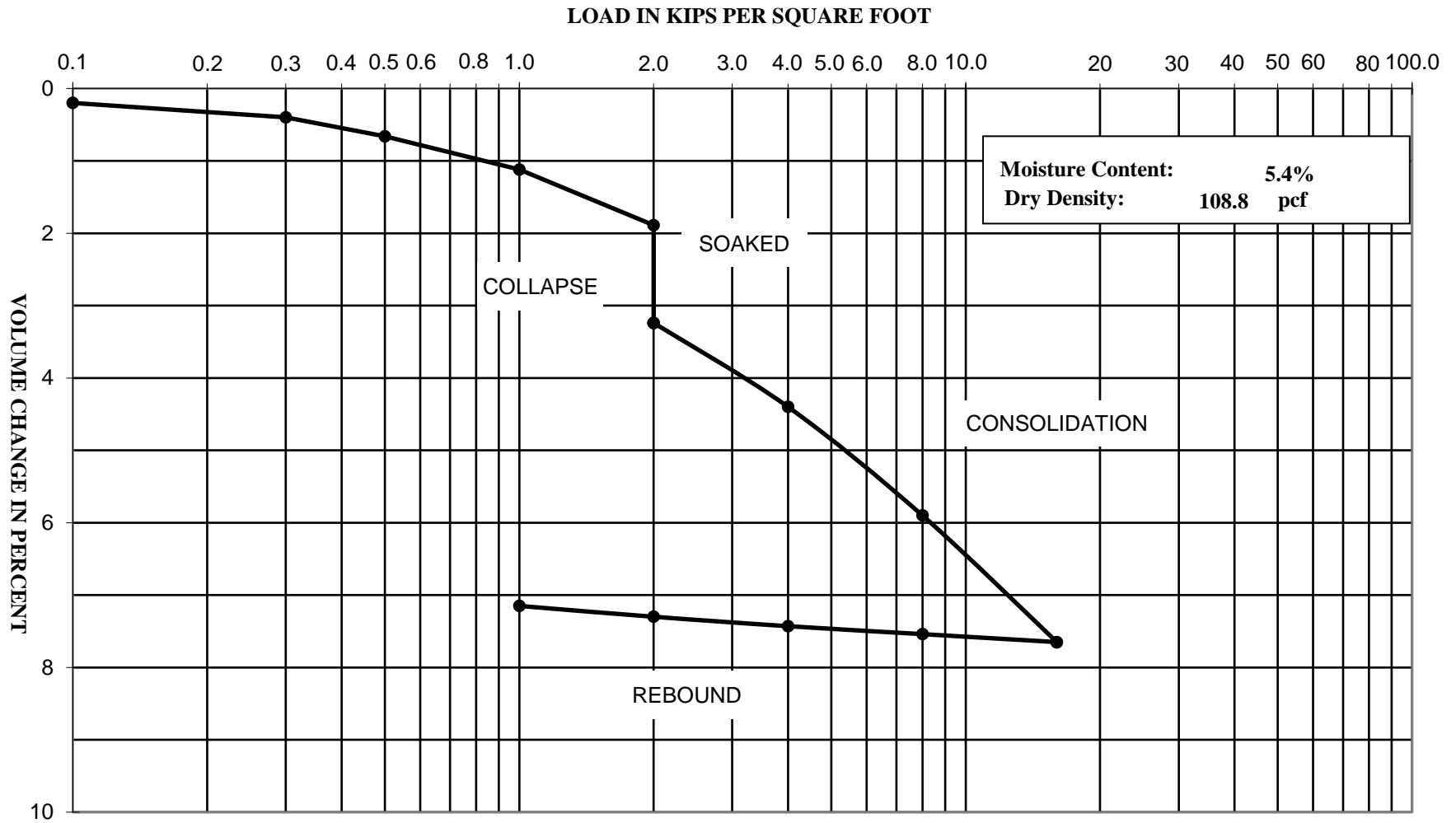
### CONSOLIDATION - PRESSURE TEST DATA ASTM D 2435



Prop. Arco Station - Moreno Valley, CA  
Project Number: 3-217-1265  
Boring: B-1 @ 2'



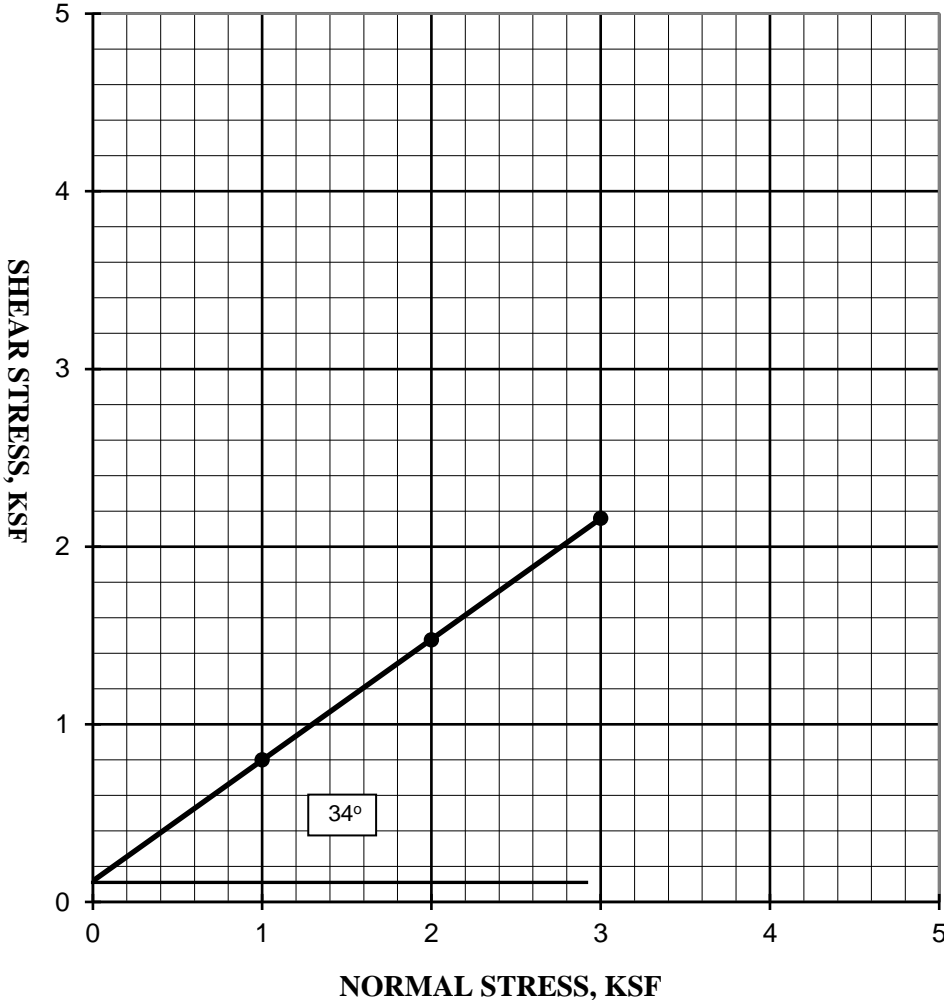
### CONSOLIDATION - PRESSURE TEST DATA ASTM D 2435



Prop. Arco Station - Moreno Valley, CA  
Project Number: 3-217-1265  
Boring: B-2 @ 5'



# SHEAR STRENGTH DIAGRAM (DIRECT SHEAR) ASTM D - 3080



**Prop. Arco Station - Moreno Valley, CA**

**Project Number: 3-217-1265**

**Boring: B-1 @ 5'**  
**Soil Type: Silty SAND (SM)**

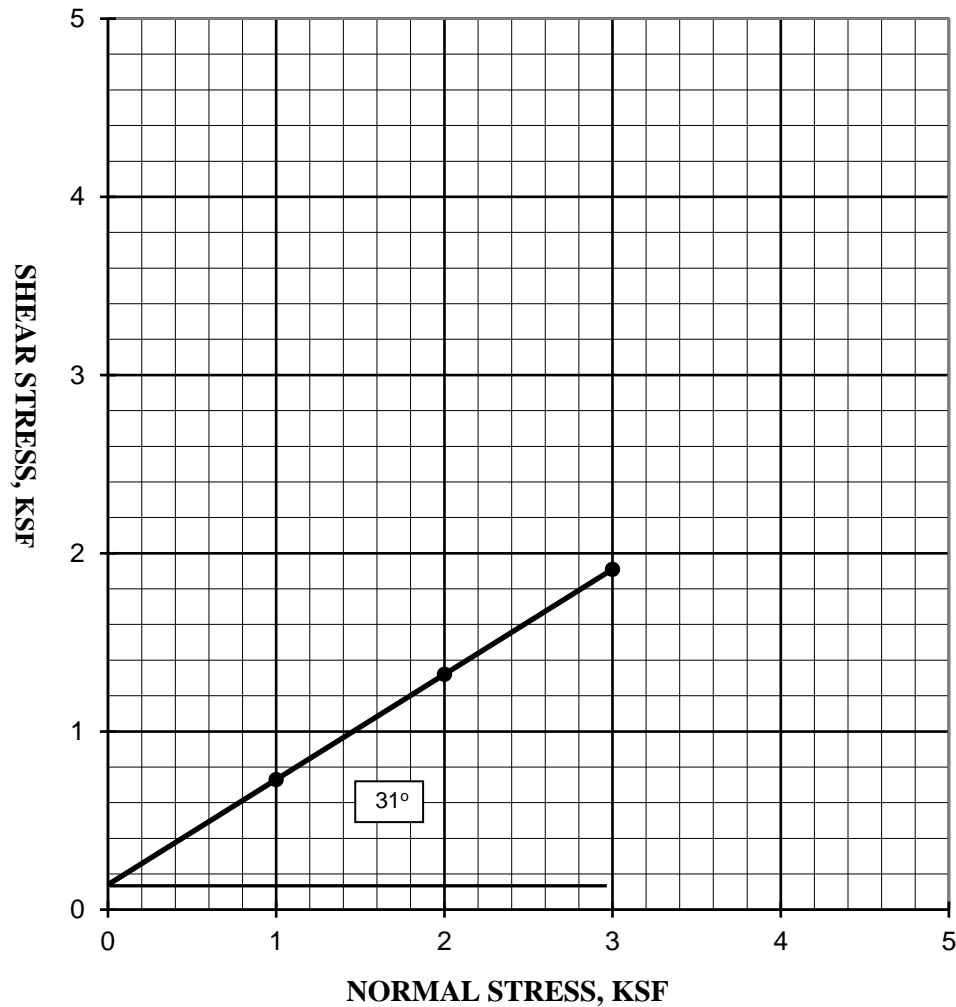
**Friction Angle: 34 degrees**  
**Cohesion: 120 psf**

**Moisture Content 3.1%**  
**Dry Density 111.2 pcf**



Attachment: Appendix D - Geotechnical Engineering Investigation (3362 : Conditional Use Permit PEN18-

# SHEAR STRENGTH DIAGRAM (DIRECT SHEAR) ASTM D - 3080



Prop. Arco Station - Moreno Valley, CA

Project Number: 3-217-1265

Boring: B-2 @ 2'

Soil Type: Silty SAND (SM)

Friction Angle: 31 degrees

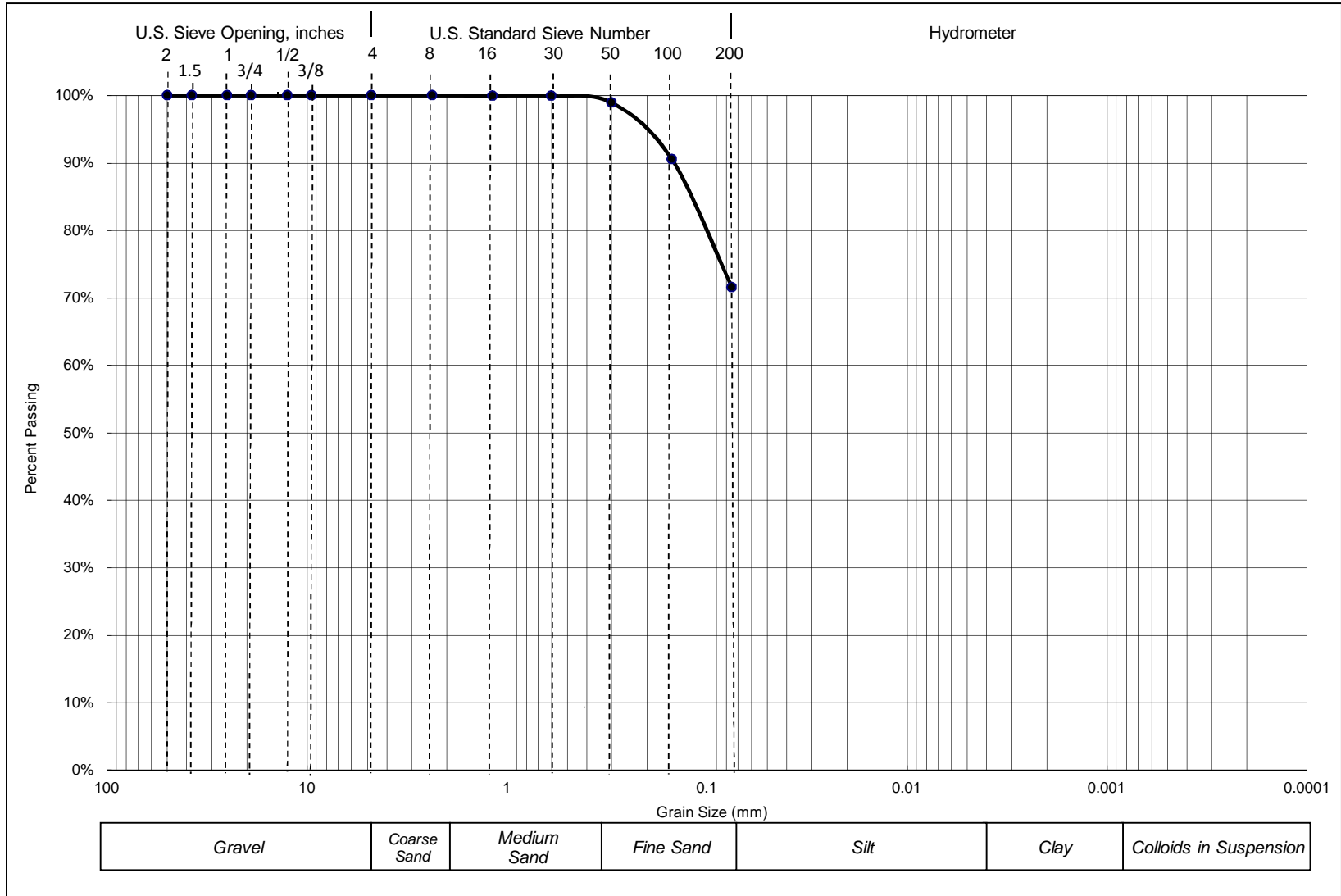
Cohesion: 140 psf

Moisture Content 4.8%

Dry Density 104.0 pcf



### PARTICLE SIZE DISTRIBUTION DIAGRAM GRADATION TEST - ASTM C136



**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-1 @ 2'**



Attachment: Appendix D - Geotechnical Engineering Investigation (3362 : Conditional Use Permit PEN18-

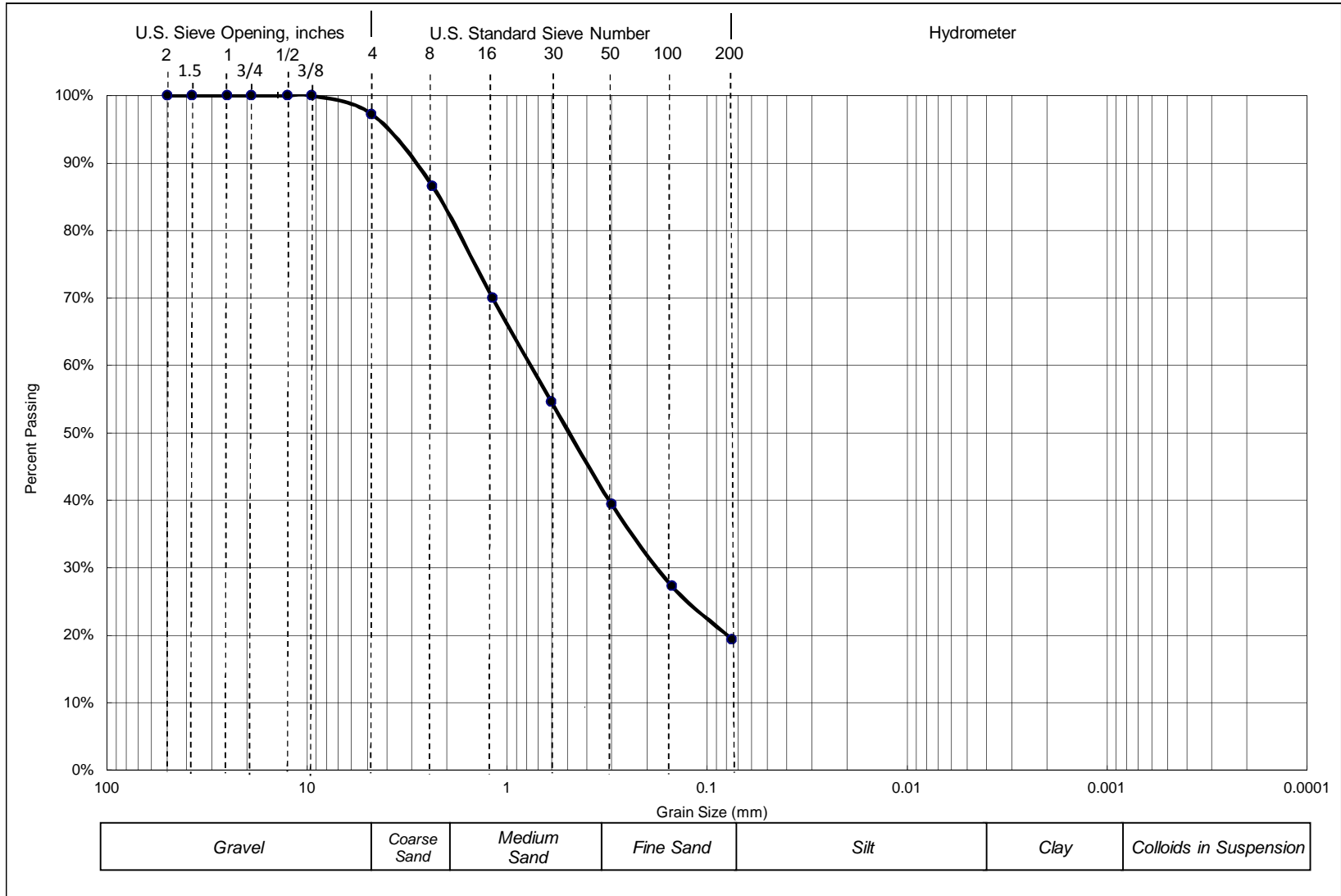
**DRY SIEVE ANALYSIS**  
**ASTM C136 (without Hydrometer)**

Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	100.0%
No. 8	2.36	100.0%
No. 16	1.18	100.0%
No. 30	0.6	100.0%
No. 50	0.3	99.0%
No. 100	0.15	90.6%
No. 200	0.075	71.59%

**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-1 @ 2'**



### PARTICLE SIZE DISTRIBUTION DIAGRAM GRADATION TEST - ASTM C136



**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-1 @ 5'**





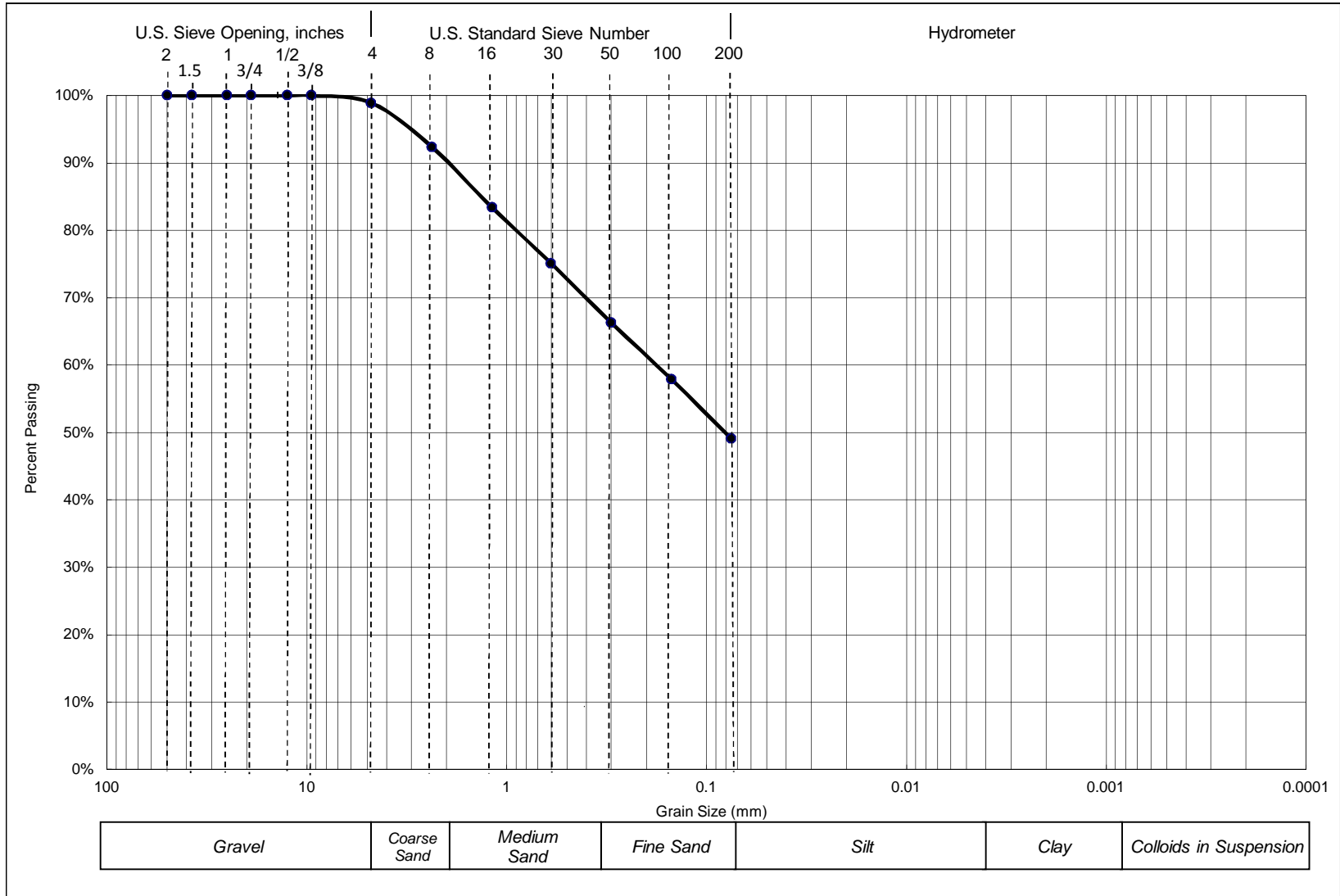
**DRY SIEVE ANALYSIS**  
**ASTM C136 (without Hydrometer)**

Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	97.2%
No. 8	2.36	86.6%
No. 16	1.18	70.0%
No. 30	0.6	54.6%
No. 50	0.3	39.4%
No. 100	0.15	27.3%
No. 200	0.075	19.36%

**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-1 @ 5'**



### PARTICLE SIZE DISTRIBUTION DIAGRAM GRADATION TEST - ASTM C136



**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-1 @ 15'**



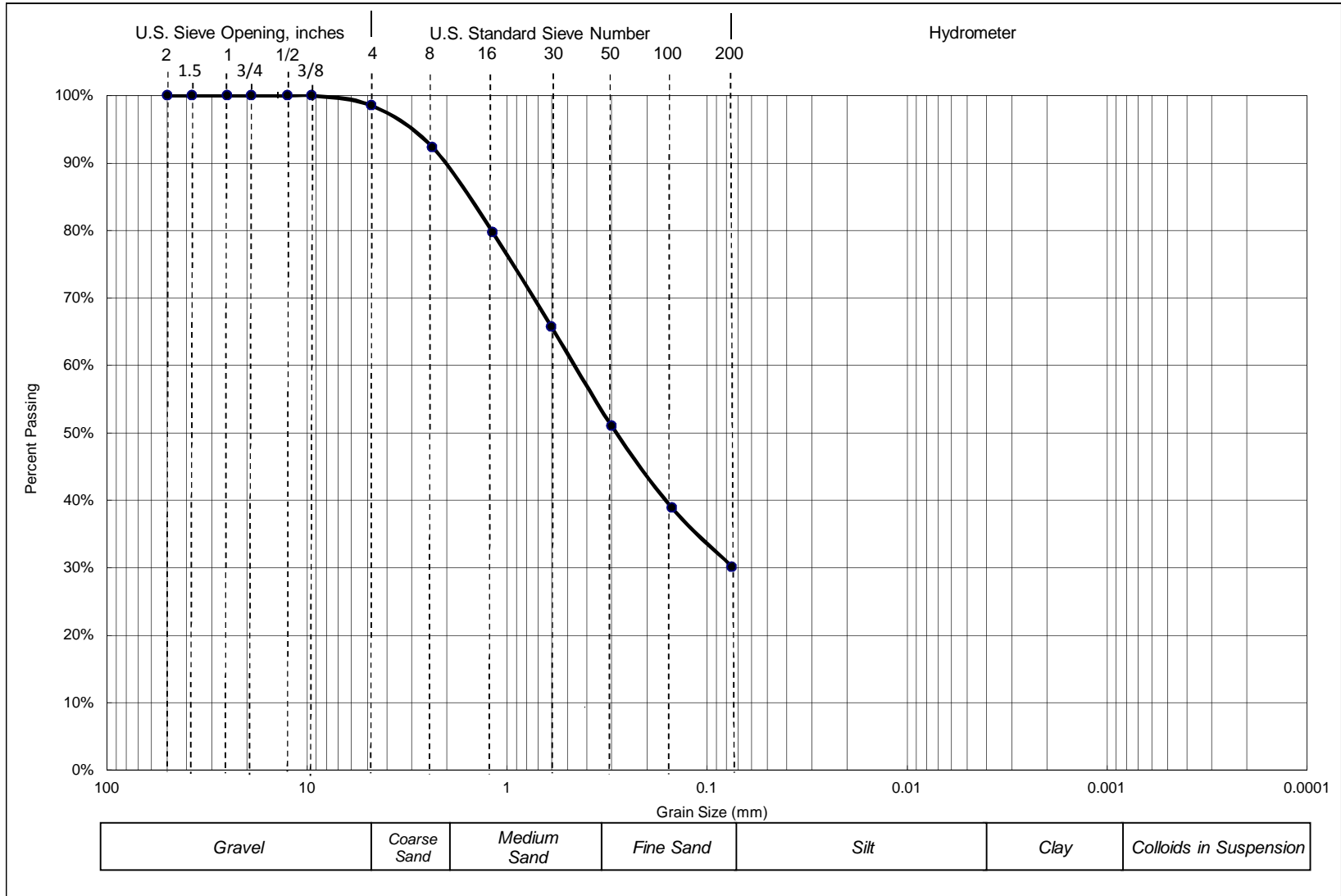
**DRY SIEVE ANALYSIS**  
**ASTM C136 (without Hydrometer)**

Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	98.9%
No. 8	2.36	92.3%
No. 16	1.18	83.4%
No. 30	0.6	75.1%
No. 50	0.3	66.3%
No. 100	0.15	57.9%
No. 200	0.075	49.05%

**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-1 @ 15'**



### PARTICLE SIZE DISTRIBUTION DIAGRAM GRADATION TEST - ASTM C136



**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-1 @ 30'**



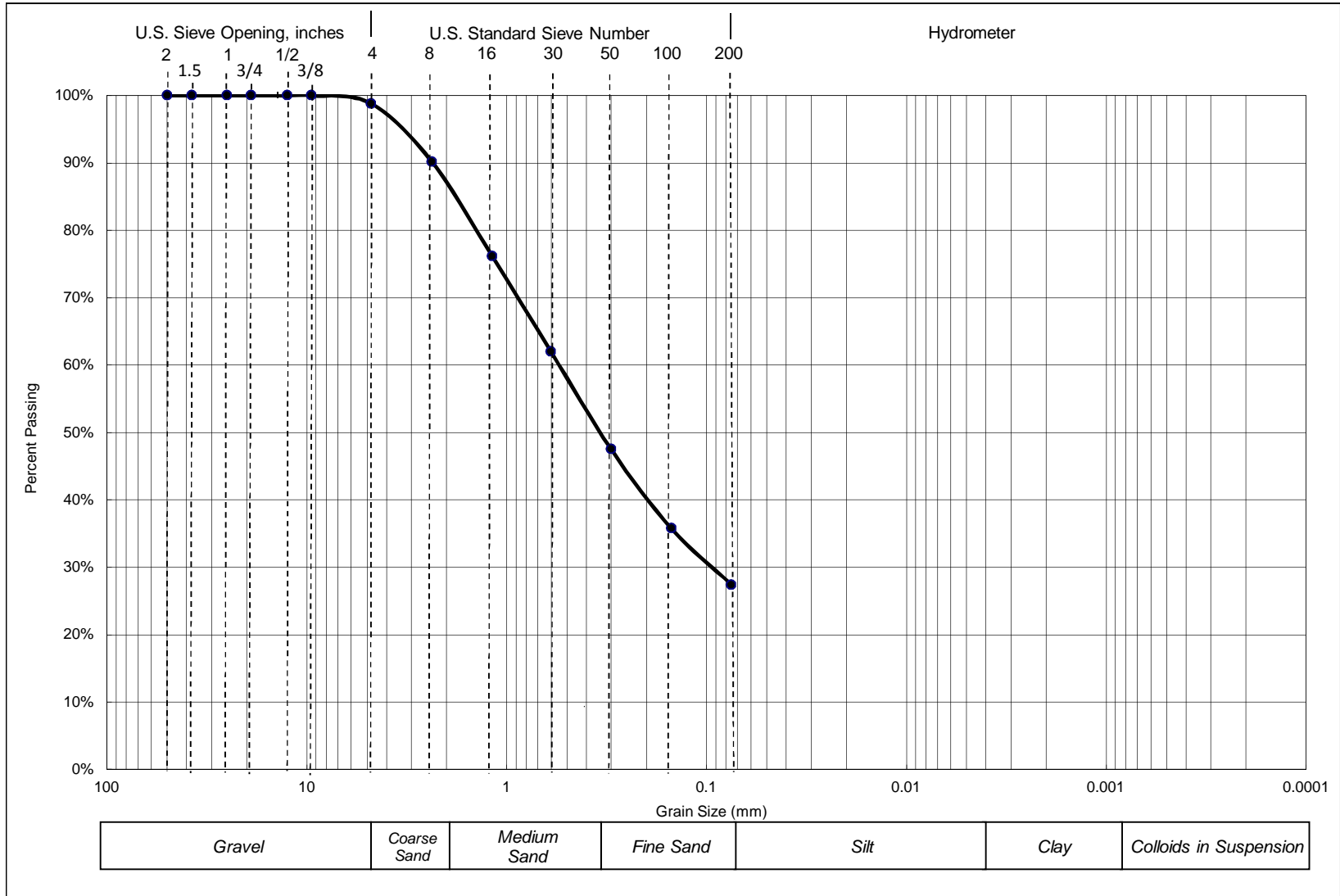
**DRY SIEVE ANALYSIS**  
**ASTM C136 (without Hydrometer)**

Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	98.5%
No. 8	2.36	92.3%
No. 16	1.18	79.7%
No. 30	0.6	65.7%
No. 50	0.3	51.0%
No. 100	0.15	38.9%
No. 200	0.075	30.13%

**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-1 @ 30'**



### PARTICLE SIZE DISTRIBUTION DIAGRAM GRADATION TEST - ASTM C136



**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-1 @ 40'**



Attachment: Appendix D - Geotechnical Engineering Investigation (3362 : Conditional Use Permit PEN18-

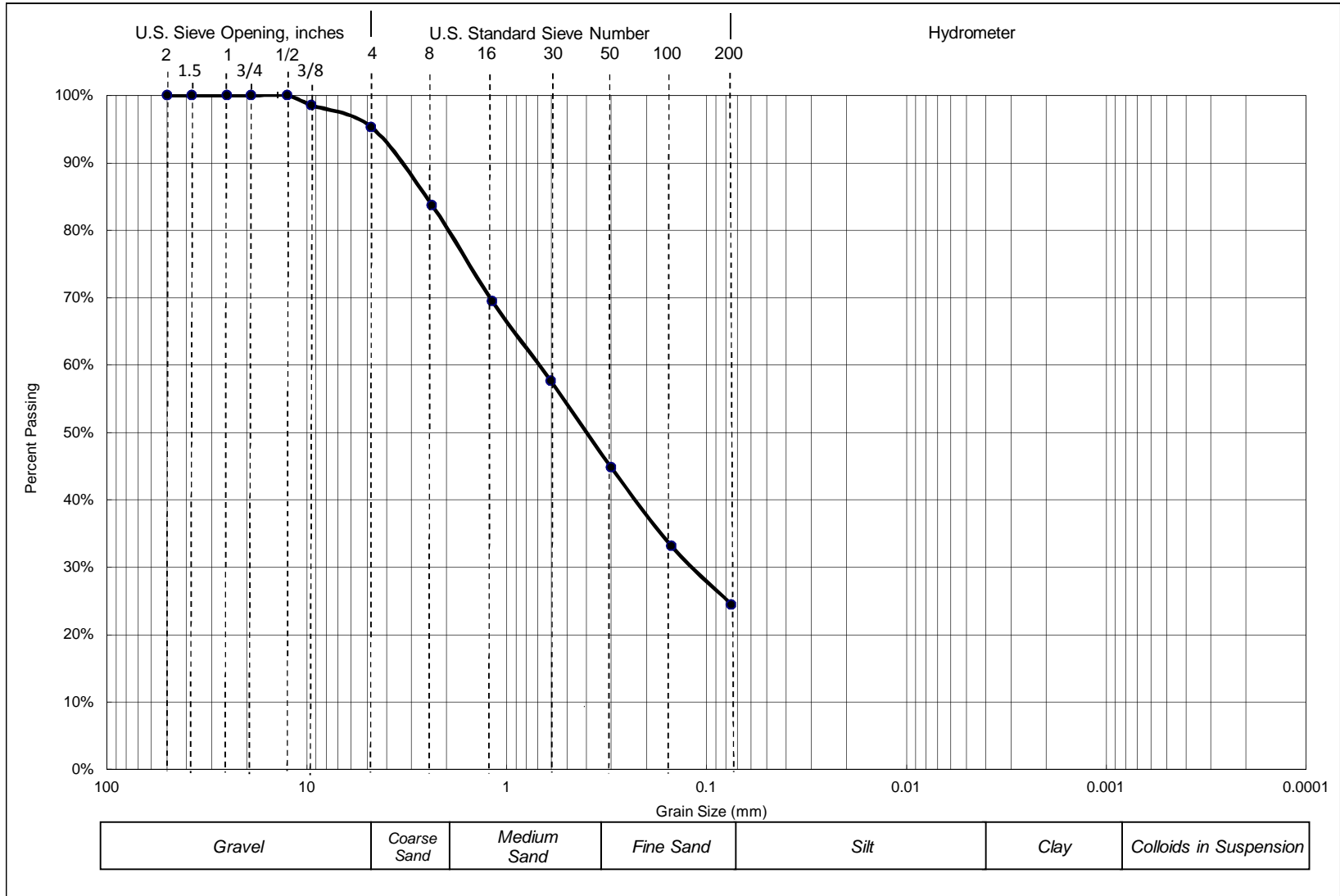
**DRY SIEVE ANALYSIS**  
**ASTM C136 (without Hydrometer)**

Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	98.8%
No. 8	2.36	90.1%
No. 16	1.18	76.1%
No. 30	0.6	62.0%
No. 50	0.3	47.5%
No. 100	0.15	35.7%
No. 200	0.075	27.40%

**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-1 @ 40'**



### PARTICLE SIZE DISTRIBUTION DIAGRAM GRADATION TEST - ASTM C136



**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-2 @ 2'**





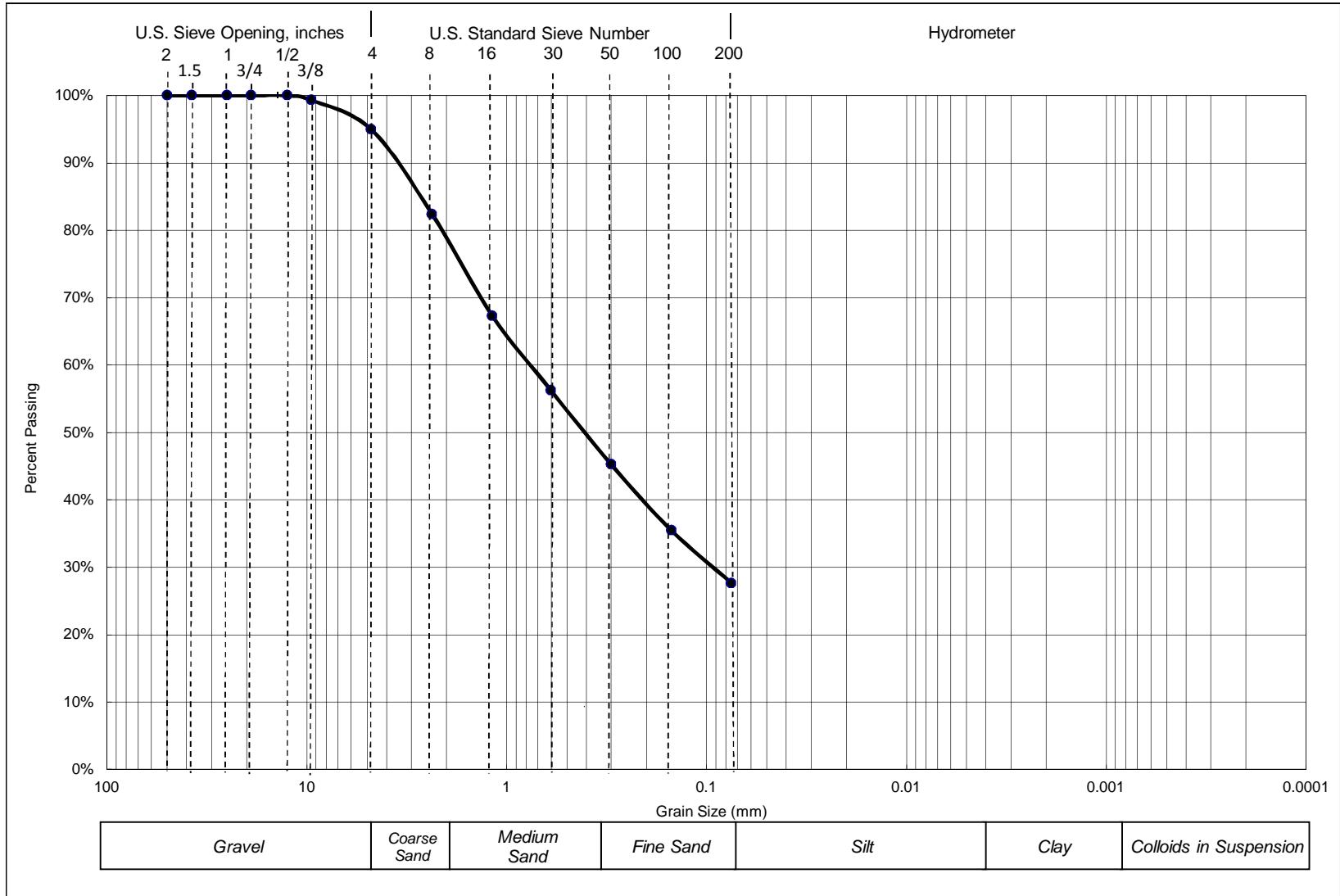
**DRY SIEVE ANALYSIS**  
**ASTM C136 (without Hydrometer)**

Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	98.6%
No. 4	4.75	95.3%
No. 8	2.36	83.7%
No. 16	1.18	69.5%
No. 30	0.6	57.6%
No. 50	0.3	44.8%
No. 100	0.15	33.2%
No. 200	0.075	24.46%

**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-2 @ 2'**



### PARTICLE SIZE DISTRIBUTION DIAGRAM GRADATION TEST - ASTM C136



Prop. Arco Station - Moreno Valley, CA  
Project Number: 3-217-1265  
Boring: B-2 @ 5'



**DRY SIEVE ANALYSIS**  
**ASTM C136 (without Hydrometer)**

Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	99.3%
No. 4	4.75	95.0%
No. 8	2.36	82.4%
No. 16	1.18	67.3%
No. 30	0.6	56.2%
No. 50	0.3	45.2%
No. 100	0.15	35.5%
No. 200	0.075	27.65%

**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-2 @ 5'**



## CHEMICAL ANALYSIS

### SO<sub>4</sub> - Modified Caltrans 417 & Cl - Modified Caltrans 417/422

Prop. Arco Station - Moreno Valley, CA

Project Number: 3-217-1265

Date: 11/17/17

Soil Classification: Silty SAND (SM)

Sample Number	Sample Location	Soluble Sulfate SO <sub>4</sub> -S	Soluble Chloride Cl	pH
1a.	B-1 @ 0 - 3'	50 mg/kg	21 mg/kg	7.0
1b.	B-1 @ 0 - 3'	50 mg/kg	20 mg/kg	7.0
1c.	B-1 @ 0 - 3'	50 mg/kg	21 mg/kg	7.0
<b>Average:</b>		<b>50 mg/kg</b>	<b>21 mg/kg</b>	<b>7.0</b>

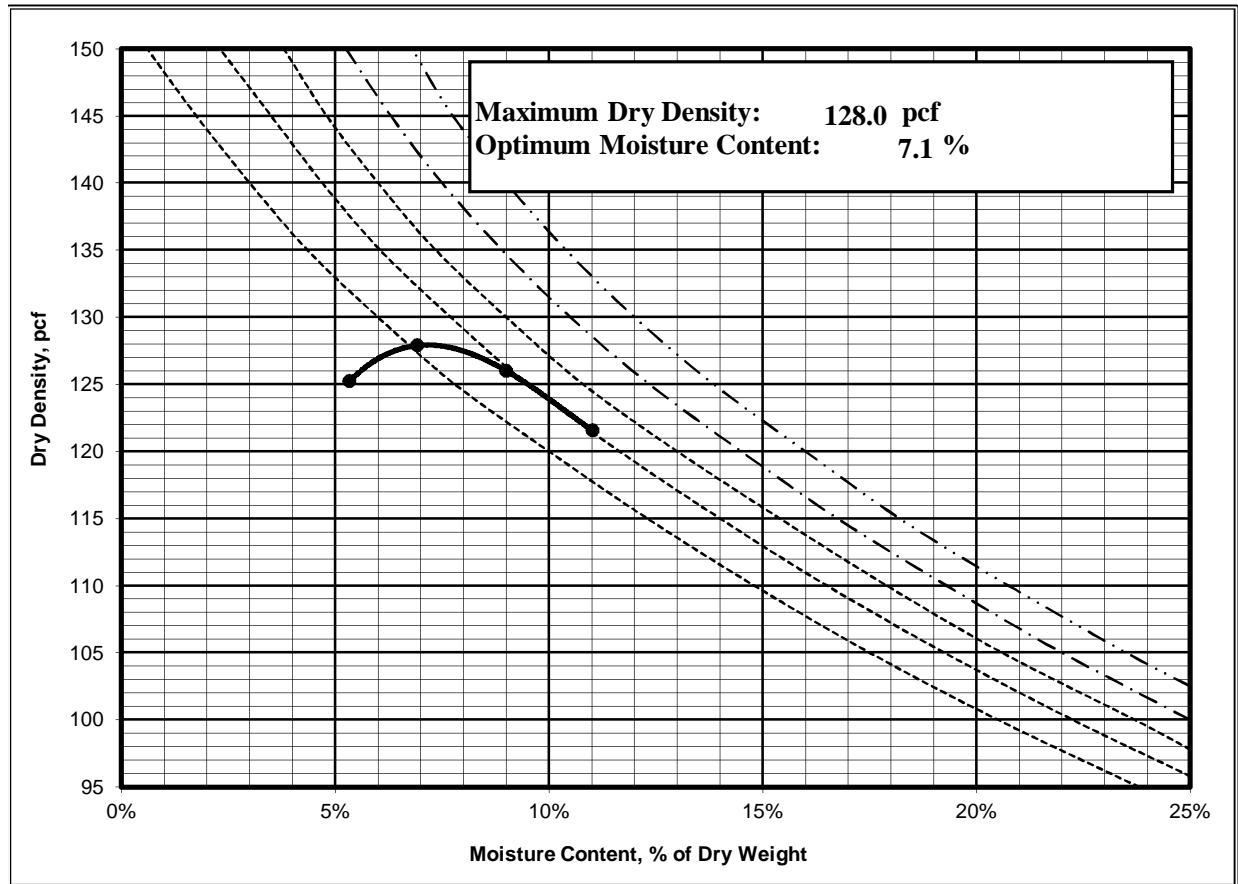
Attachment: Appendix D - Geotechnical Engineering Investigation (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



## Laboratory Compaction Curve ASTM D1557

Prop. Arco Station - Moreno Valley, CA  
 Project Number: 3-217-1265  
 Date Tested: 11/17/17  
 Sample Location: B-1 @ 0 - 3'  
 Soil Classification: Silty Sand, Brown, Non-Cohesive  
 Sample/Curve Number: 1  
 Test Method: 1557 A

	1	2	3	4
Weight of Moist Specimen & Mold, (g)	3991.6	4064.2	4073.2	4037.0
Weight of Compaction Mold, (g)	1998.9	1998.9	1998.9	1998.9
Weight of Moist Specimen, (g)	1992.7	2065.3	2074.3	2038.1
Volume of mold, (ft <sup>3</sup> )	0.0333	0.0333	0.0333	0.0333
Wet Density, (pcf)	131.9	136.7	137.3	134.9
Weight of Wet (Moisture) Sample, (g)	341.2	341.2	341.2	341.2
Weight of Dry (Moisture) Sample, (g)	323.9	319.1	313.0	307.3
Moisture Content, (%)	5.3%	6.9%	9.0%	11.0%
Dry Density, (pcf)	125.2	127.9	126.0	121.5



Attachment: Appendix D - Geotechnical Engineering Investigation (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

APPENDIX

C



Attachment: Appendix D - Geotechnical Engineering Investigation (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

## APPENDIX C GENERAL EARTHWORK AND PAVEMENT SPECIFICATIONS

When the text of the report conflicts with the general specifications in this appendix, the recommendations in the report have precedence.

**1.0 SCOPE OF WORK:** These specifications and applicable plans pertain to and include all earthwork associated with the site rough grading, including, but not limited to, the furnishing of all labor, tools and equipment necessary for site clearing and grubbing, stripping, preparation of foundation materials for receiving fill, excavation, processing, placement and compaction of fill and backfill materials to the lines and grades shown on the project grading plans and disposal of excess materials.

**2.0 PERFORMANCE:** The Contractor shall be responsible for the satisfactory completion of all earthwork in accordance with the project plans and specifications. This work shall be inspected and tested by a representative of SALEM Engineering Group, Incorporated, hereinafter referred to as the Soils Engineer and/or Testing Agency. Attainment of design grades, when achieved, shall be certified by the project Civil Engineer. Both the Soils Engineer and the Civil Engineer are the Owner's representatives. If the Contractor should fail to meet the technical or design requirements embodied in this document and on the applicable plans, he shall make the necessary adjustments until all work is deemed satisfactory as determined by both the Soils Engineer and the Civil Engineer. No deviation from these specifications shall be made except upon written approval of the Soils Engineer, Civil Engineer, or project Architect.

No earthwork shall be performed without the physical presence or approval of the Soils Engineer. The Contractor shall notify the Soils Engineer at least 2 working days prior to the commencement of any aspect of the site earthwork.

The Contractor shall assume sole and complete responsibility for job site conditions during the course of construction of this project, including safety of all persons and property; that this requirement shall apply continuously and not be limited to normal working hours; and that the Contractor shall defend, indemnify and hold the Owner and the Engineers harmless from any and all liability, real or alleged, in connection with the performance of work on this project, except for liability arising from the sole negligence of the Owner or the Engineers.

**3.0 TECHNICAL REQUIREMENTS:** All compacted materials shall be densified to no less than 95 percent of relative compaction (90 percent for cohesive soils) based on ASTM D1557 Test Method (latest edition), UBC or CAL-216, or as specified in the technical portion of the Soil Engineer's report. The location and frequency of field density tests shall be determined by the Soils Engineer. The results of these tests and compliance with these specifications shall be the basis upon which satisfactory completion of work will be judged by the Soils Engineer.

**4.0 SOILS AND FOUNDATION CONDITIONS:** The Contractor is presumed to have visited the site and to have familiarized himself with existing site conditions and the contents of the data presented in the Geotechnical Engineering Report. The Contractor shall make his own interpretation of the data contained in the Geotechnical Engineering Report and the Contractor shall not be relieved of liability for any loss sustained as a result of any variance between conditions indicated by or deduced from said report and the actual conditions encountered during the progress of the work.

**5.0 DUST CONTROL:** The work includes dust control as required for the alleviation or prevention of any dust nuisance on or about the site or the borrow area, or off-site if caused by the Contractor's operation either during the performance of the earthwork or resulting from the conditions in which the Contractor leaves the site. The Contractor shall assume all liability, including court costs of codefendants, for all claims related to dust or wind-blown materials attributable to his work. Site preparation shall consist of site clearing and grubbing and preparation of foundation materials for receiving fill.

**6.0 CLEARING AND GRUBBING:** The Contractor shall accept the site in this present condition and shall demolish and/or remove from the area of designated project earthwork all structures, both surface and subsurface, trees, brush, roots, debris, organic matter and all other matter determined by the Soils Engineer to be deleterious. Such materials shall become the property of the Contractor and shall be removed from the site.

Tree root systems in proposed improvement areas should be removed to a minimum depth of 3 feet and to such an extent which would permit removal of all roots greater than 1 inch in diameter. Tree roots removed in parking areas may be limited to the upper 1½ feet of the ground surface. Backfill of tree root excavations is not permitted until all exposed surfaces have been inspected and the Soils Engineer is present for the proper control of backfill placement and compaction. Burning in areas which are to receive fill materials shall not be permitted.

**7.0 SUBGRADE PREPARATION:** Surfaces to receive Engineered Fill and/or building or slab loads shall be prepared as outlined above, scarified to a minimum of 12 inches, moisture-conditioned as necessary, and recompacted to 95 percent relative compaction (90 percent for cohesive soils).

Loose soil areas and/or areas of disturbed soil shall be moisture-conditioned as necessary and recompacted to 95 percent relative compaction (90 percent for cohesive soils). All ruts, hummocks, or other uneven surface features shall be removed by surface grading prior to placement of any fill materials. All areas which are to receive fill materials shall be approved by the Soils Engineer prior to the placement of any fill material.

**8.0 EXCAVATION:** All excavation shall be accomplished to the tolerance normally defined by the Civil Engineer as shown on the project grading plans. All over-excavation below the grades specified shall be backfilled at the Contractor's expense and shall be compacted in accordance with the applicable technical requirements.

**9.0 FILL AND BACKFILL MATERIAL:** No material shall be moved or compacted without the presence or approval of the Soils Engineer. Material from the required site excavation may be utilized for construction site fills, provided prior approval is given by the Soils Engineer. All materials utilized for constructing site fills shall be free from vegetation or other deleterious matter as determined by the Soils Engineer.

**10.0 PLACEMENT, SPREADING AND COMPACTION:** The placement and spreading of approved fill materials and the processing and compaction of approved fill and native materials shall be the responsibility of the Contractor. Compaction of fill materials by flooding, ponding, or jetting shall not be permitted unless specifically approved by local code, as well as the Soils Engineer. Both cut and fill shall be surface-compacted to the satisfaction of the Soils Engineer prior to final acceptance.



**11.0 SEASONAL LIMITS:** No fill material shall be placed, spread, or rolled while it is frozen or thawing, or during unfavorable wet weather conditions. When the work is interrupted by heavy rains, fill operations shall not be resumed until the Soils Engineer indicates that the moisture content and density of previously placed fill is as specified.

**12.0 DEFINITIONS** - The term "pavement" shall include asphaltic concrete surfacing, untreated aggregate base, and aggregate subbase. The term "subgrade" is that portion of the area on which surfacing, base, or subbase is to be placed.

The term "Standard Specifications": hereinafter referred to, is the most recent edition of the Standard Specifications of the State of California, Department of Transportation. The term "relative compaction" refers to the field density expressed as a percentage of the maximum laboratory density as determined by ASTM D1557 Test Method (latest edition) or California Test Method 216 (CAL-216), as applicable.

**13.0 PREPARATION OF THE SUBGRADE** - The Contractor shall prepare the surface of the various subgrades receiving subsequent pavement courses to the lines, grades, and dimensions given on the plans. The upper 12 inches of the soil subgrade beneath the pavement section shall be compacted to a minimum relative compaction of 95 percent based upon ASTM D1557. The finished subgrades shall be tested and approved by the Soils Engineer prior to the placement of additional pavement courses.

**14.0 AGGREGATE BASE** - The aggregate base material shall be spread and compacted on the prepared subgrade in conformity with the lines, grades, and dimensions shown on the plans. The aggregate base material shall conform to the requirements of Section 26 of the Standard Specifications for Class II material, ¾-inch or 1½-inches maximum size. The aggregate base material shall be compacted to a minimum relative compaction of 95 percent based upon CAL-216. The aggregate base material shall be spread in layers not exceeding 6 inches and each layer of aggregate material course shall be tested and approved by the Soils Engineer prior to the placement of successive layers.

**15.0 AGGREGATE SUBBASE** - The aggregate subbase shall be spread and compacted on the prepared subgrade in conformity with the lines, grades, and dimensions shown on the plans. The aggregate subbase material shall conform to the requirements of Section 25 of the Standard Specifications for Class II Subbase material. The aggregate subbase material shall be compacted to a minimum relative compaction of 95 percent based upon CAL-216, and it shall be spread and compacted in accordance with the Standard Specifications. Each layer of aggregate subbase shall be tested and approved by the Soils Engineer prior to the placement of successive layers.

**16.0 ASPHALTIC CONCRETE SURFACING** - Asphaltic concrete surfacing shall consist of a mixture of mineral aggregate and paving grade asphalt, mixed at a central mixing plant and spread and compacted on a prepared base in conformity with the lines, grades, and dimensions shown on the plans. The viscosity grade of the asphalt shall be PG 64-10, unless otherwise stipulated or local conditions warrant more stringent grade. The mineral aggregate shall be Type A or B, ½ inch maximum size, medium grading, and shall conform to the requirements set forth in Section 39 of the Standard Specifications. The drying, proportioning, and mixing of the materials shall conform to Section 39. The prime coat, spreading and compacting equipment, and spreading and compacting the mixture shall conform to the applicable chapters of Section 39, with the exception that no surface course shall be placed when the atmospheric temperature is below 50 degrees F. The surfacing shall be rolled with a combination steel-wheel and pneumatic rollers, as described in the Standard Specifications. The surface course shall be placed with an approved self-propelled mechanical spreading and finishing machine.



# SOILS SOUTHWEST, INC.

SOILS, MATERIALS AND ENVIRONMENTAL ENGINEERING CONSULTANTS

897 VIA LATA, SUITE N • COLTON, CA 92324 • (909) 370-0474 • (909) 370-0481 • FAX (909) 370-3156

**Feasibility Study  
Report of Soils and Foundation Evaluations  
Proposed Commercial Center  
NWC Iris Ave & Oliver St  
City of Moreno Valley, California**

**Project No. 03194-F  
November 12, 2003**

**Prepared for:**

**Mr. Guy Roney  
3495 Pontiac Drive  
Carlsbad, California 92008**

**Attachment: Appendix E - Soils Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)**



# SOILS SOUTHWEST, INC.

SOILS, MATERIALS AND ENVIRONMENTAL ENGINEERING CONSULTANTS

897 VIA LATA, SUITE N • COLTON, CA 92324 • (909) 370-0474 • (909) 370-0481 • FAX (909) 370-3156

November 12, 2003

Project No. 03194-F

Mr. Guy Roney  
3495 Pontiac Drive  
Carlsbad, California 92008

Subject: Feasibility Study  
Report of Soils and Foundation Evaluations  
Proposed Commercial Center  
NWC Iris Ave & Oliver St  
City of Moreno Valley, California

Dear Mr. Roney:

Presented herewith is the Feasibility Study-Report of Soils and Foundation Evaluations conducted for the site of the planned commercial development to be located near the northwest intersection of Iris Avenue and Oliver Street, City of Moreno Valley, California. In absence of site-specific grading and/or development plan, the recommendations supplied should be considered as preliminary, and may require revision and/or modification following development and grading plan review.

Soils encountered primarily consist of upper 3 to 4 feet of dry, loose and compressible silty fine sand, overlying gravelly fine to medium coarse sand of moderate consistency with scattered rock fragments and rocks. Based on field explorations, laboratory testing and engineering evaluations it is our opinion that the upper dry, loose soils existing at their present state should be considered inadequate for directly supporting structural loadings without excessive differential settlements to footings and concrete slab-on-grade. When, however, graded in form of subexcavations of the upper soils and their replacement as structural fills as recommended herein, the near surface soils used, should be adequate for structural support with tolerable settlements.

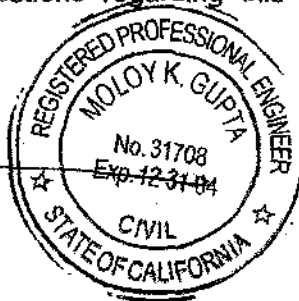
In absence of site-specific grading and development plan, the recommendations supplied should be considered preliminary and may require substantial modifications following grading plan review.

This report has been substantiated by subsurface explorations and mathematical analysis made in accordance with the generally accepted engineering principles, including those field and laboratory testing considered necessary in the circumstances. We offer no other warranty, express or implied. Should you have any questions regarding this report, please call the undersigned at your convenience.

Respectfully submitted,  
Soils Southwest, Inc.

Moley Gupta, RCE 31708

Dist/5-addressee



Roy White

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33°53'50" N, 117°11'02" W  
117°11'00" W

WGS84 117°10'00" W

117°12'00" W

33°55'00" N

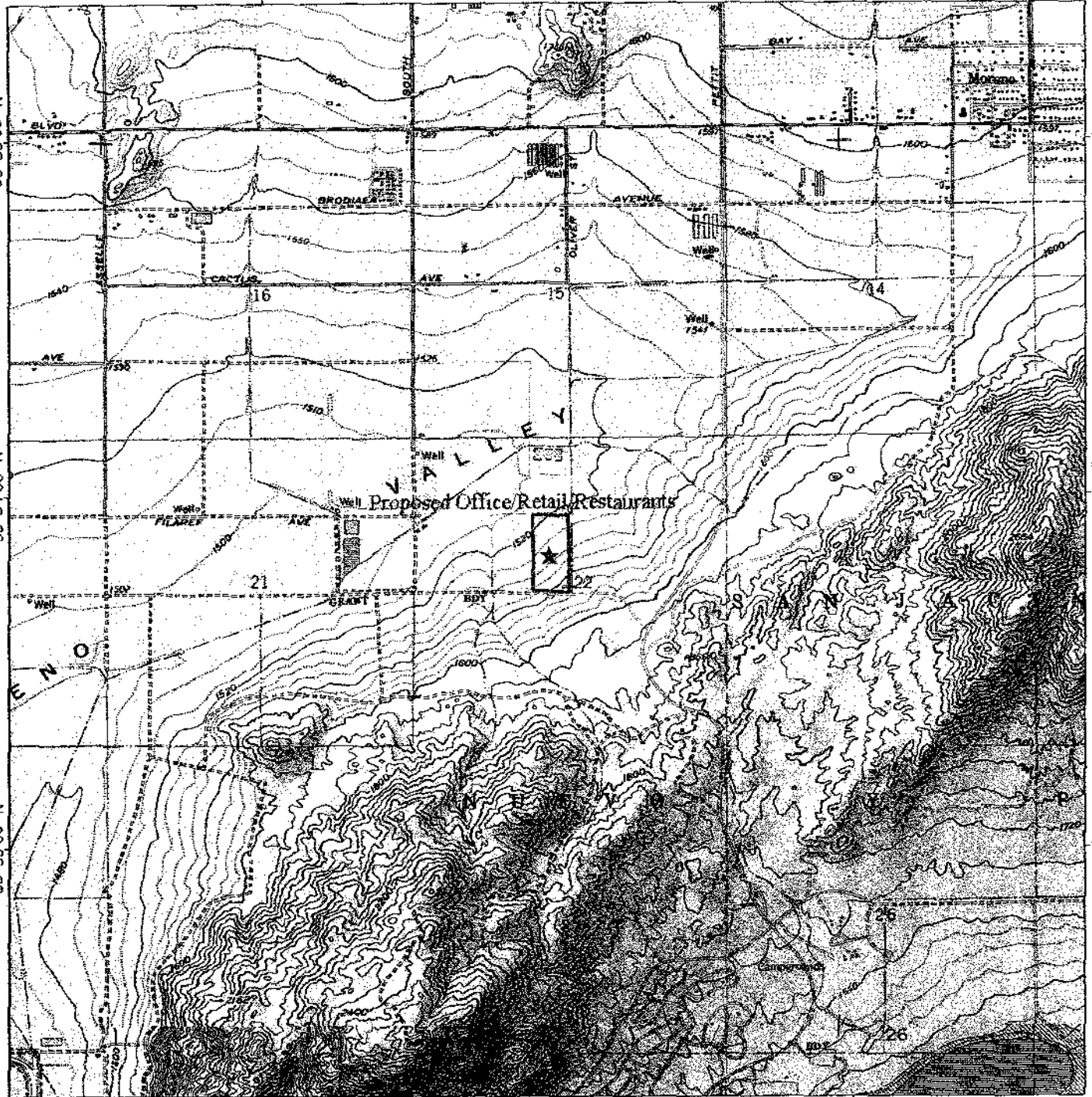
33°54'00" N

33°53'00" N

33°55'00" N

33°54'00" N

33°53'00" N

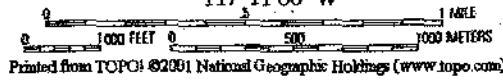


117°12'00" W

117°11'00" W

WGS84 117°10'00" W

TNT/MIN  
13%



Attachment: Appendix E - Soils Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



**Soils Southwest, Inc.**

Site Index Map

**PROPOSED OFFICE / RETAIL /  
RESTAURANTS  
NWC IRIS AVE & OLIVER ST  
MORENO VALLEY, CA**

FIGURE: 1  
PN: 03194-F  
DATE: NOV. 2003

## 1.0 Introduction

This report presents the results of Feasibility Study-Results of Soils and Foundation Evaluations conducted for the site of the planned commercial center to be constructed on the vacant parcel located near the northwest intersection of Iris Avenue and Oliver Street, City of Moreno Valley, California.

The purpose of this evaluation is to determine the nature and engineering properties of the near grade and subsurface soils, and to provide geotechnical recommendations for foundation design, slab-on-grade, retaining wall, paving and parking, site grading, utility trench backfill and inspection and testing during construction.

The geotechnical evaluations included subsurface explorations, soil sampling, laboratory testing, engineering analyses and preparation of this report. No site-specific geologic evaluation is made and none such is requested at this time.

The recommendations contained reflect our best estimate of the soils conditions encountered during field investigations conducted for the site. It is not to be considered as a warranty of the soils conditions in other areas or for the depths beyond the excavations conducted. Should any unusual subsurface condition becomes apparent during actual grading, this office should be notified.

### 1.1 Proposed Development

No site grading and/or development plans are prepared and none such is available for review. However based on the project information supplied, it is understood that the subject development, may include a combination of office, retail and/or restaurant buildings.

In absence of site grading plan, and considering the existing sloping nature of the property, moderate site grading, in form of cut and fill placements, is anticipated. Conventional one-story wood frame and stucco construction is expected with spread footings and concrete slab-on-grade. Associated interior paving/parking and off-site street improvements are expected to complete the project.

### 1.2 Site Description

The rectangular shaped property of 18.81 acres is currently vacant and undeveloped. The near level parcel is bounded on the north by undeveloped parcels, on the south by Iris Avenue, on the east by Oliver Street, and on the west by Moreno Valley Community Hospital. Overall vertical relief within the parcel is estimated to about 55 feet, with sheetflow from incidental rainfall flowing towards the northwest. With the exception of minor weed and scattered debris, no other significant features, pertinent to the planned development, were noted.

## 2.0 Scope of Work

Geotechnical evaluation for the project included subsurface explorations, soil sampling, necessary laboratory testing, engineering analyses and the preparation of this report. The scope of work included the following tasks:

- o Explorations of four (4) test borings advanced to the maximum 25 feet below the present grade surface. The test explorations were made by using a truck mounted Hollow-Stem Auger (HSA) drilling equipped for Standard Penetration Testing (SPT) and undisturbed soil sampling. During explorations, soils encountered were continuously logged, and bulk and undisturbed samples were procured where feasible. Collected samples were subsequently transferred to our laboratory for necessary testing.

Descriptions of the soils encountered are provided on the Boring Logs in Appendix A. Approximate locations of the excavated test borings with respect to the surroundings, are shown on Plate 1.

- o Laboratory testing conducted on selected bulk and undisturbed soil samples were programmed according to the project requirements. The laboratory testing included determinations of Moisture-Density, Maximum Dry Density and Optimum Moisture contents, soil's Shear Strengths and Consolidation characteristics under anticipated structural loadings. Considering gravelly in nature, no testing is included to evaluate soil's Expansion Index, E<sub>i</sub>.

Descriptions of the test procedures used along with the test results are provided in Appendix B.

- o Based on the data of our field investigations and laboratory testing, engineering analyses and evaluations were made on which to base our recommendations for foundation design, slab-on-grade, site preparations and grading and inspection during construction, and
- o The preparation of this report.

### 3.0 Existing Site Conditions

#### 3.1 Subsurface Conditions

Evaluations for site subsoil conditions are based upon soil explorations, laboratory testing and on engineering analyses considered necessary for the project.

The subsoils encountered primarily consist of loose, dry, disturbed and compressible near surface soils to about 3.5 to 4 feet, followed by moderately dense gravelly silty sand with pebbles and minor rocks. No shallow-depth groundwater and/or bedrock, was encountered.

Based on field explorations, in-situ testing, laboratory analyses and engineering evaluations, the following describes the site soil characteristics as observed.

Laboratory shear tests conducted on the upper bulk samples remolded to 90 percent indicate moderate shear strengths under increased moisture conditions. Results of the laboratory shear tests are provided in Plate B-1 in Appendix B.

Consolidation testing conducted on the near surface undisturbed samples indicates potential for compressibility under structural loading. When remolded to 90%, the soil sample indicates potential for tolerable settlements under increased moisture conditions. Results of the laboratory determined soils consolidation potentials are shown on the Plate B-2 in Appendix B.

Generally sandy, the site soils are considered non-expansive in nature with an Expansion Index, EI, less than 20. Supplemental laboratory testing on such should be considered following mass grading completion.

With the compressible nature of the near grade soils as described, it is our opinion that no structural fills and/or load bearing foundations and concrete slabs should be constructed bearing directly on the surface soils currently existing. When, however, re-worked in form of subexcavations and their replacement as engineered fills compacted to minimum 90%, the upper soils used, should be geotechnically suitable for directly supporting structural footings with tolerable settlements.

#### 3.2 Excavatability

It is our opinion that grading and excavations required for the project may be accomplished using conventional construction equipment. However, some difficulty may be experienced during deep trenching due to potential susceptibility to heavy caving for the dry gravelly nature of the sandy soils existing with numerous cobbles and rocks.

#### 3.3 Groundwater

No shallow depth groundwater was encountered. Historical groundwater is expected at a depth in excess of 50 feet below grade.

#### 3.4 Subsurface Variations

It is our opinion that variations in the continuity, depths of subsoil deposits and ground water conditions may be expected. Due to the nature and depositional characteristics of the soils underlying, care should be exercised in interpolating or extrapolating of the subsurface soils existing in between and beyond the test explorations described.



### 3.5 Liquefaction

Liquefaction is caused by build up of excess hydrostatic pressure in saturated cohesionless soils due to cyclic stress generated by ground shaking during an earthquake. The significant factors on which liquefaction potential of a soil deposit depends, among others include, soil type, relative soil density, intensity of earthquake, duration of ground shaking, and depth of ground water.

Considering granular nature of the existing subsoils, along with the absence of groundwater table within 50 feet; potential susceptibility for site soil liquefaction due to an earthquake, should be considered remote.

### 3.6 Seismic Design Parameters as Per 1997 UBC

The site is situated at about 5.8 km of B-Fault (San Jacinto-San Jacinto Valley Fault). Accordingly, based on the 1997 UBC, the following Seismic Design Parameters are suggested:

UBC Chapter 16 Table No.	Seismic Design Parameters	Recommended Values
16-I	Seismic Zone Factor, $Z$	0.4
16-J	Soil Profile Type	$S_d$
16-Q	Seismic Coefficient, $C_a$	$0.44N_a$
16-R	Seismic Coefficient, $C_v$	$0.75N_v$
16-S	Near Source Factor, $N_a$	1.0
16-T	Near Source Factor, $N_v$	1.2
16-U	Seismic Source Type	$M \geq 6.9$

Supplemental seismic design parameters are provided in Appendix C of this report.

## 4.0 Evaluations and Recommendations

### 4.1 General Evaluations

Based on field explorations, laboratory testing, subsequent engineering analysis, the following conclusions and recommendations are presented for the project under study.

- (i) From geotechnical viewpoint, the site is considered grossly stable and suitable for the proposed development, provided the recommendations supplied are implemented during grading and construction.
- (ii) Because of the dry and unconsolidated nature, the surface soils should be reworked in form of subexcavations and their replacement as engineered fill compacted to minimum 90%. In event imported fill soils are required; such should be placed following subgrade preparations as described. Unless otherwise specified, a minimum 24-inch thick compacted fill mat blanket should be maintained below footings.
- (iii) The subexcavation depths described in the following sections should be considered as 'minimum'. During grading, localized deeper subexcavations may be required in event buried debris and/or abandoned utilities are encountered, or other undesirable subgrade conditions are exposed. IT WILL BE THE RESPONSIBILITY OF THE GRADING CONTRACTOR TO INFORM SOILS ENGINEER THE PRESENCE OF BURIED DEBRIS OR UTILITIES SUCH AS SEPTIC TANK, WHEN SUCH ARE ENCOUNTERED DURING GRADING.
- (iv) In order to minimize potentials for differential settlements, it is recommended that structural footings should be established exclusively into engineered fills of local soils or its equivalent or better, compacted to minimum 90%. Construction of footings and slabs straddling over cut/fill transitions should be avoided.
- (v) Structural design consideration should include probability for moderate to high peak ground acceleration from relatively active nearby earthquake faults. The effects of ground shaking can be satisfactorily mitigated by implementation of the seismic design requirements and procedures as outlined in the latest Uniform Building Code and as described in Section 3.6.
- (vi) Although no groundwater was encountered, provisions should be maintained during construction to divert incidental rainfall away from the structural pads constructed.
- (vii) It is our opinion that, if site preparations and grading are performed as recommended herein, and in accordance with the generally accepted construction practices, the proposed development will not adversely affect the stability of the site, or the properties adjacent.

#### 4.1.1 Preparations for Structural Pad

In absence of grading/development plans, it is assumed that the near grade dry, loose and compressible as encountered are considered susceptible to differential settlements under structural loading. For adequate support with tolerable settlements to footings, it is our opinion that the upper soils existing should be subexcavated and such are replaced as engineered fills compacted to minimum 90%. Local soils excavated should be suitable for re-use as structural backfill. Accordingly, the following grading recommendations are suggested for "preliminary" estimation purpose.

The subexcavation depth should extend vertically to MINIMUM (i) 3.5 FEET BELOW THE PRESENT GRADE SURFACE, OR (ii) TO THE SUFFICIENT DEPTH SO AS REQUIRED TO MAINTAIN A MINIMUM 24-INCH THICK COMPACTED FILL BLANKET BELOW THE FOOTING BOTTOMS; OR (iii) TO THE DEPTH OF THE UNDERLYING MOIST AND DENSE NATURAL SUBGRADES APPROVED BY SOILS ENGINEER, WHICHEVER IS GREATER.

In planar, such subexcavations should encompass the proposed structural footprint areas and five feet beyond. Where constraint exists from nearby development, or from adjacent property lines, the horizontal extent may be limited to the constraints or to the extent as determined by soils engineer during grading.

For the low-lying areas requiring fill soils to establish pad grade, such may be placed following removal of the upper disturbed soils to about 3 feet, or to the depth as determined by soils engineer, followed by scarification, moisturization and recompaction to minimum 90 percent. The overall compacted fill depth below footings, however, should be maintained to minimum 18-inch as described.

Within areas of the planned pads requiring cuts to existing grade, if any, following such cuts, the subgrades exposed should be further over excavated to sufficient depth so as to maintain the minimum 18-inch thick compacted blanket fill blanket below footings as described.

General earthwork recommendations for fill placement are provided in Section 5 of this report. Unless otherwise stated, structural fills should be compacted to minimum 90% as described below. To provide par certification for further construction, structural fill placement should be monitored by this firm during grading.

#### 4.1.2 Compacted Fills

On-site soils free of organic, debris and rocks larger than 8-inch should be considered suitable for re-use during construction. In event larger rocks are encountered, such may be used within deeper fills in excess of 10 feet. No 'nesting' of large rocks, however, will be allowed during grading. Additional recommendations for such will be provided during grading, if warranted.

#### 4.2 Spread Foundations

The planned structures may be supported by continuous wall and/or isolated spread footings founded exclusively into compacted engineered fills. For adequate support, footings for single story structures should be sized to at least 15-inch wide, embedded to at least 18-inch below the lowest adjacent final grade. No footings and slabs straddling over cut/fill transition conditions should be allowed.

For design, allowable vertical bearing for footings placed into compacted fills may be calculated based on the following equations:

$$\begin{array}{ll} \text{Square Footings:} & q_{\text{allowable}} = 800 + 500d + 240b, \text{ and} \\ \text{Continuous Footing:} & q_{\text{allowable}} = 700 + 500d + 300b, \text{ where} \end{array}$$

$q$  = allowable soil vertical bearing capacity, in psf.

$d$  = footing depth in ft., minimum recommended 1.5 ft.,

$b$  = smallest width of footing in ft., minimum recommended 1.25 ft.

The recommended bearing capacities may be increased for each increment in footing depth in excess of the minimum depth recommended. The bearing values indicated are for total dead and frequently applied live loads. However, in order to minimize potential excessive settlements, total maximum bearing values should be limited to 2500 pounds per square foot.

If normal code requirements are applied, the above capacities may further be increased by an additional 1/3 for short duration of loading which include the effect of wind and seismic forces.

From geotechnical view point, footing reinforcements consisting of minimum 2-#4 rebar placed near the top and 2-#4 rebar near the bottom of continuous footings, are recommended. Additional reinforcements if specified by project structural engineer should be incorporated during construction.

The settlements of properly designed and constructed foundations supported on engineered fill, comprising of site soils or its equivalent or better, and carrying maximum anticipated vertical loadings, are expected to be within tolerable limits. Estimated total and differential settlements are about 3/4 and 1/2-inch, respectively.

#### 4.3 Concrete Slab-on-Grade

The prepared subgrade to receive foundations should be considered adequate for concrete slab-on-grade. For normal load bearing conditions, 4-inch thick (nominal) concrete slabs reinforced with #3 rebar at 24-inch o/c, may be considered. Within storage areas, concrete slabs should be at least 4-inch thick (net), reinforced as recommended by structural engineer. A soil subgrade reaction of 300 pcf may be considered in concrete slab thickness design.

Within moisture sensitive areas (office etc.), concrete slabs should be underlain by 2-inch thick of granular sand, overlying 6-mil thick Visqueen, or with other commercially available similar water proofing membrane.

#### 4.4 Resistance to Lateral Loads

Resistance to lateral loads can be restrained by friction acting at the base of foundations and by passive earth pressure. A coefficient of friction of 0.3 may be assumed with normal dead load forces for footing established into compacted fill. An allowable passive lateral earth resistance of 230 pounds per square foot per foot of depth may be assumed for the sides of foundations poured against compacted fill. The maximum lateral passive earth pressure is recommended not to exceed 2300 pounds per square foot. For design, lateral pressure of native soils when used as level backfill may be estimated from the following equivalent fluid density:

Active:	33 pcf
Passive:	230 pcf
At Rest:	60 pcf

#### 4.5 Shrinkage and Subsidence

Based on the results of field observations and laboratory testing, it is our opinion that the upper soils when reworked may be subjected to a volume change. Assuming a 90% relative compaction for structural fills, and assuming an overexcavation and re-compaction of 36-inch, such volume change due to shrinkage may be on the order of 15 to 20 percent. Further volume change may be expected following removal of concrete slabs, asphalt paving, surface debris and buries utilities such as septic tank and seepage pits etc.

## 4.6 Construction Consideration

### 4.6.1 Unsupported Excavation

Temporary construction excavations up to a maximum depth of 5 feet may be made without any lateral support. It is recommended that no surcharge loading such as construction equipment etc., shall be allowed within a line drawn upward at 45 degree from the toe of excavation. Use of sloping for deep excavation may be applicable where plan dimensions of the excavation are not constrained by any existing structure.

### 4.6.2 Supported Excavations

If vertical excavations exceeding 4 feet in depths become warranted, such should be achieved using shoring to support side walls.

## 4.7 Site Preparations

Following removal of surface vegetation and tree roots etc., site preparations should include subexcavations of the upper porous and/or upper disturbed, dry loose soils to about 3 feet, stockpiling of the soils excavated, followed by moisturization and/or aeration of the subgrades exposed to 3% to 5% over optimum moisture content. Site preparations should also include re-placement of the excavated on-site and/or imported fill materials as load bearing fill mat blanket compacted to 90 percent or better. Such earth work should be in accordance with the applicable grading recommendations provided in the current UBC and as recommended in Section 5.0 of this report. Considering dry nature, pre-moisturization may be required.

## 4.8 Soil Caving

During excavations for deep utility trench etc., some caving may be expected. Otherwise specified, temporary excavations should be made at a slope ratio of 2 to 1 (horizontal to vertical) or flatter, and as per the construction guidelines provided by Cal-Osha.

## 4.9 Structural Pavement Thickness (Flexible & Rigid)

### Flexible Paving:

Based on estimated Traffic Index (TI) and on R-value of 60 for the local sandy soils as encountered, the following flexible pavement sections are recommended for the traffic conditions as described.

Service Area	Traffic Index (TI)	Pavement Type	Thickness (inch)	
			a.c	Cl II base
Driveway & Auto Parking	5.5	a.c over base	3.0	3.5

For interior paving, subgrade soils should be scarified to minimum 12-inch, moisture conditioned from 3% to 5% percent over optimum and compacted to 90% Base material used should conform to Caltrans Class II specification, placed compacted to minimum 95%.

### Concrete Paving:

Rigid paving if desired, may be constructed of 5.5-inch thick (net) concrete, placed over local soils compacted to minimum 90%. In order to minimize concrete shrinkage cracks, adequate construction/expansion joints at intervals not exceeding 15 feet, or as recommended by structural engineer, should be considered.

The final design recommendations for rigid paving should be supplied by the project structural engineer based on soils Subgrade Reaction of 250 pcf.

The recommendations supplied are for estimation purposes. Final pavement sections should be verified based on supplemental R-value testing on the soils procured following mass grading completion using the TI as supplied by the local governing agency.

### 4.10 Retaining Wall

It is unknown if any retaining wall will be associated for the development planned. Retaining wall, if proposed, should be designed using the following equivalent earth pressure:

Slope Surface of Retained Material (horz. to vert.)	Equivalent Fluid Density (pcf)	
	Imported Clean Sand	Local Site Soil
Level	30	34
2:1	35	45

The recommended lateral pressures do not include any surface load surcharge. Use of heavy equipment near retaining wall may develop lateral pressure in excess of the parameters described above. Walls adjacent to traffic areas should be designed to resist a uniform lateral pressure of 100 pounds per square foot, which is a result of an assumed 300 pounds per square foot surcharge behind the walls due to normal traffic. If the traffic is kept back ten feet from the wall, the traffic surcharge may be neglected.

Installation of 'french-drain' behind retaining walls is recommended to minimize water pressure build-up. Use of impervious material is preferred within the upper 18 inches of the backfill placed.

Backfill behind retaining wall should be compacted to a minimum 90 percent relative compaction relative to the Maximum Dry Density as determined by the ASTM D1557-91 test method. Flooding and/or jetting behind wall should not be permitted. On-site sandy soils may be used for backfill behind walls.

#### 4.11 Utility Trench Backfill

Utility trench backfill within the structural pad and beyond should be placed in accordance with the following recommendations:

- o Trench backfill should be placed in thin lifts compacted to 90 percent or better of the laboratory maximum dry density for the soils used. As alternative, clean granular sand may be used having a SE value greater than 30. Adequate jetting is required underneath utilities placed at depth. Soils Southwest, Inc assumes no responsibility, in event sufficient jetting is not associated, thereby causing potential future caving to street paving, curb-gutter, or other peripheral structures.
- o Exterior trenches along a foundation or a toe of a slope and extending below a 1:1 imaginary line projected from the outside bottom edge of the footing or toe of the slope, should be compacted to 90 percent of the Maximum Dry Density for the soils used during backfill. Trench excavations should conform to the requirements and safety as specified by the Cal-Osha

#### 4.12 Pre-Construction Meeting

It is recommended that no clearing of the site or any grading operation be performed without the presence of a representative of this office. An on-site pre-grading meeting should be arranged between the soils engineer and the grading contractor prior to any construction.

ALTHOUGH NOT ENCOUNTERED, CONSIDERING PAST USAGE OF THE PROPERTY, IT IS POSSIBLE THAT BURIED UTILITIES SUCH AS ABANDONED SEPTIC TANKS MAY STILL BE EXISTING UNDERLYING THE SITE. IF SUCH AREA ENCOUNTERED DURING EXCAVATIONS, IT SHOULD BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO UN-EARTH SUCH CONSTRUCTION AND TO BRING TO SOILS ENGINEER'S ATTENTION SO AS TO SUPPLY SUPPLEMENTAL RECOMMENDATIONS FOR FURTHER GRADING.

#### 4.13 Seasonal Limitations

No fill shall be placed, spread or rolled during unfavorable weather conditions. Where the work is interrupted by heavy rains, fill operations shall not be resumed until moisture conditions are considered favorable by the soils engineer.

#### 4.14 Planters

To minimize potential differential settlement to foundations, planters requiring heavy irrigation should be restricted from using adjacent to footings. In event such becomes unavoidable, planter boxes with sealed bottoms, should be considered.

#### 4.15 Landscape Maintenance

Only the amount of irrigation necessary to sustain plant life should be provided. Pad drainage should be directed towards streets and to other approved areas away from foundations. Slope areas should be planted with draught resistant vegetation. Over watering landscape areas could adversely affect the proposed site development during its life-time use.

#### 4.16 Observations and Testing During Construction

Recommendations provided in this report are based on the assumption that footings will be placed exclusively into properly compacted engineered fill. Excavated footings should be inspected, verified and certified by soils engineer prior to steel and concrete placement to ensure their sufficient embedment and proper bearing on compacted soil. Additional inspections by soils engineer are recommended to verify footing excavations for being free of loose and disturbed material. Structural backfill should be placed and compacted under direct observations and testing by this facility. Excess soils generated from footing excavations should be removed from pad areas and such should not be used as un-compacted subsoil to receive concrete slab-on-grade.

#### 4.17 Plan Review

In absence of precise grading plan, the recommendations presented should be considered 'preliminary'. It is recommended that foundation and grading plans, when prepared, should be reviewed by soils engineer in order to minimize misunderstanding between the plans and the recommendations supplied.



## 5.0 General Site Grading Recommendations

### Structural Backfills:

During grading, excavated site soils may be considered suitable for reuse as structural backfill. Loose soils, formwork and debris should be removed prior to backfilling. On-site soils as backfill should be placed and compacted in accordance with the recommended specifications as provided below. Where space limitations do not allow conventional backfilling operations, special backfill materials and procedures may be required. Pea gravel or other select backfill can be used in limited space areas. Recommendations for placement and densification of pea gravel or other special backfill can be provided during construction.

### Site Drainage:

Adequate positive drainage should be provided away from the structure to prevent water from ponding and to reduce percolation of water into backfill. A desirable slope for surface drainage is 2 percent in landscape areas and 1 percent in paved areas. Planters and landscaped areas adjacent to building perimeter should be designed to minimize water filtration into subsoils. Consideration should be given to the use of closed planter bottoms, concrete slabs and perimeter subdrains, where applicable.

### Utility Trenches:

Buried utility conduits should be bedded and backfilled around the conduit in accordance with the project specifications. Where conduit underlies concrete slab-on-grade and pavement, the trench backfilled with local soils should be compacted to minimum 90%. In place of mechanically compaction of the backfill, the trench may be backfilled with granular sand followed by water-jetting provided positive drainage for excess water is established.

### General Grading Recommendations:

Recommended general specifications for surface preparation to receive fill and compaction for structural and utility trench backfill and others are presented below.

1. Areas to be graded, backfilled or paved, shall be grubbed, stripped and cleaned of buried and undetected debris, structures, concrete, vegetation and other deleterious materials prior to grading.
2. Where compacted fill is to provide vertical support, loose, soft and other incompetent local soils should be removed to full depth as approved by soils engineer, or at least up to the depth as previously described in this report. In plan, areas of such removal should extend to at least 5 feet beyond the perimeter of exterior foundation, or to the extent as approved by soils engineer during grading.
3. Unless otherwise specified, the recommended compaction for fill soils to support foundations and slab should be at least 90% of the soil's Maximum Dry Density, at or near optimum moisture content.
4. Utility trenches within structural pad and beyond, should be backfilled with granular material, and should be compacted to at least 90% of the maximum density for the material used.
5. Compaction for structural fills shall be determined relative to the Maximum Dry Density as determined by ASTM D1557-91 compaction methods. In-situ field density shall be determined by the ASTM D1556-90 standard method, or by other approved procedure.

6. Imported soils if required for filling shall be clean granular, non-expansive in nature as approved by soils engineer.
7. During grading, fill soils shall be placed in thin layers, with maximum compacted thickness not exceeding six inches.
8. No rocks over six inches in diameter shall be used as a grading material without prior approval of soils engineer.
9. No jetting and/or water tampering be considered for backfill compaction for utility trenches without prior approval of the soils engineer. For such backfill, hand tampering with fill layers of 8 to 12 inches thickness, or as approved by the soils engineer, is recommended.
10. Abandoned utility trenches, cesspool or septic tank if encountered during grading, should either be completely excavated and removed, or such should be backfilled with gravel, slurry or by other material as approved by soils engineer.
11. Import soils if required during grading, should be equivalent to the site soils or better. Such materials should be approved by the soils engineer prior to their use.
12. Grading required for pavement, side-walk or other facilities to be used by general public, should be constructed under direct observation of soils engineer as required by the local public agency.
13. A site meeting should be held between grading contractor and soils engineer prior to actual construction. Two days of prior notice will be required for such meeting.

## 6.0 Closure

The conclusions and recommendations contained are based on the findings and observations made at the time of the subsurface test explorations, laboratory testing and engineering analyses. The recommendations presented should be considered 'preliminary'. If during construction, the subsoils conditions are found to be different from those as described in this report, this office should be notified to consider possible need for modification for the geotechnical recommendations provided.

Recommendations are based on the assumptions that structural footings will be established exclusively into compacted fill. No footings and/or slabs should be allowed straddling over cut/fill transition interface.

Grading plans should be supplied and such should be reviewed prior to site preparations and construction. In event revised or updated plans are used, such should be the available to verify adequacy of the recommendations supplied.

Footing excavations should be inspected prior to steel and concrete placement to ensure that foundations are founded into satisfactory soils and excavations are free of loose and disturbed materials.

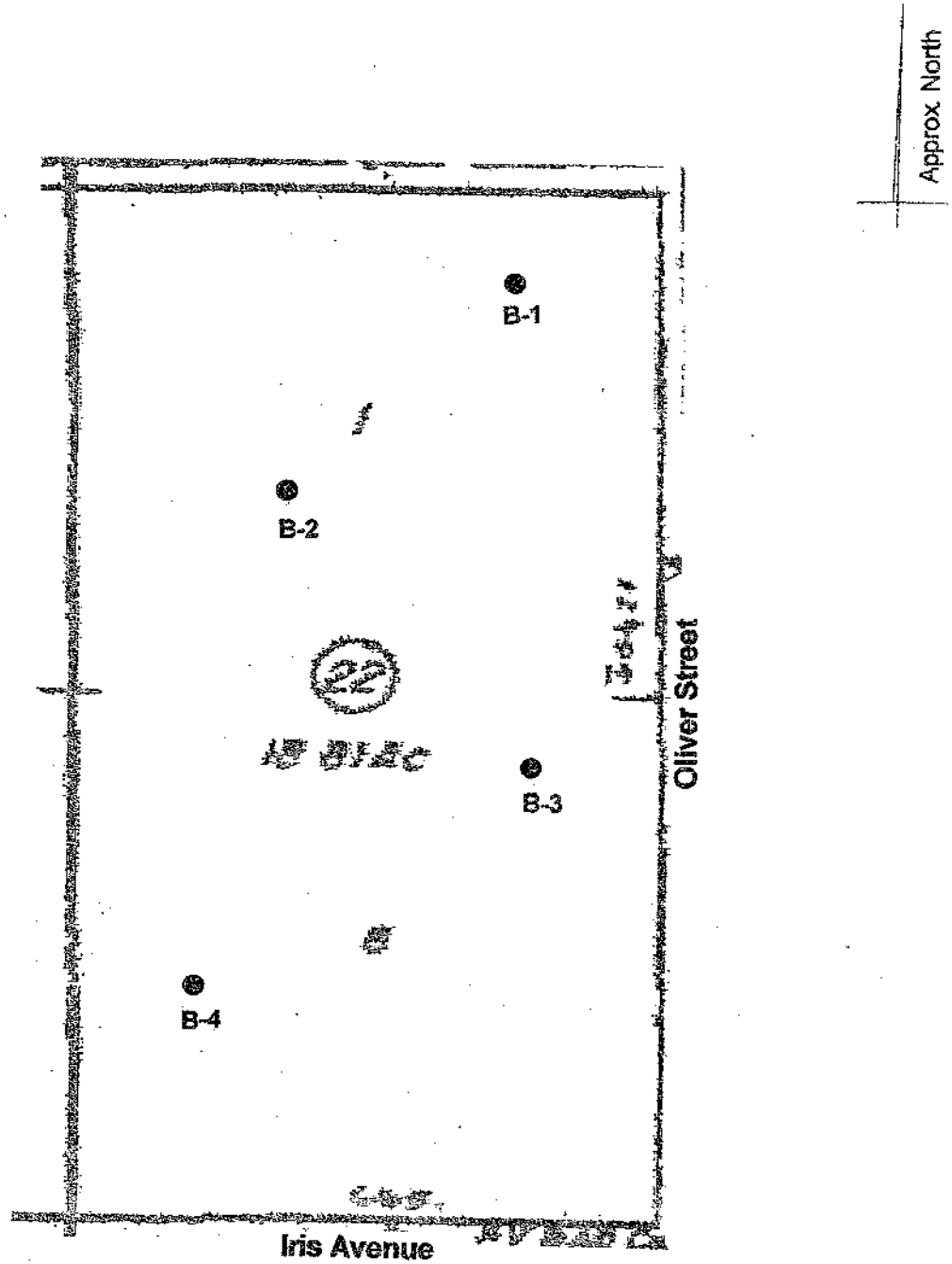
A pregrading meeting between grading contractor and soils engineer should be arranged, preferably at the site, to discuss the grading procedures to be implemented and other requirements described in this report to be fulfilled.

This report has been prepared exclusively for the use of the addressee for the project referenced in the context. It shall not be transferred or be used by other parties without a written consent by Soils Southwest, Inc. We cannot be responsible for use of this report by others without inspection and testing of grading operations by our personnel.

Should the project be delayed beyond one year after the date of this report; the recommendations presented shall be reviewed to consider any possible change in site conditions.

The recommendations presented are based on the assumption that the necessary geotechnical observations and testing during construction will be performed by a representative of this office. The field observations are considered a continuation of the geotechnical investigation performed. If another firm is retained for geotechnical observations and testing, our professional liability and responsibility shall be limited to the extent that Soils Southwest, Inc. would not be the geotechnical engineer of record.

### PLOT PLAN AND TEST LOCATIONS (Schematic, Not To Scale)



Attachment: Appendix E - Soils Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Legend: B-1 Approx. location of test borings

Plate 1

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## PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

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SUBJECT                    18.81 ACRES OF VACANT LAND  
 PROPERTY:                OLIVER STREET AND IRIS AVENUE  
                                   MORENO VALLEY, CALIFORNIA 92555

REPORT DATE:            SEPTEMBER 26, 2003

CLIENT:                    MR. GUY RONEY  
                                   K & S PROPERTY, LLC  
                                   3495 PONTIAC DRIVE  
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PREPARED FOR:         MR. GUY RONEY  
                                   K & S PROPERTY, LLC

WRITTEN AND REVIEWED BY:

*Martin Kasman*

MARTIN A. KASMAN  
 REGISTERED ENVIRONMENTAL ASSESSOR



P03301

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This report was prepared in conformance to meet or exceed the scope and limitations as set forth by the American Society for Testing & Materials (ASTM) Standard Practice E 1527-00. It is for the express use of the client, and its contents are considered to be privileged and confidential. Acceptance of this report constitutes an agreement by the client to assume full liability for information contained herein. This report is for the sole use and interpretation of the client, and it is not to be reproduced or distributed to outside parties. The information in this report is furnished in good faith and was obtained from sources and databases considered to be reliable; however, the accuracy of the information cannot be guaranteed. Our liability is limited to the fee charged.

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ORSWELL & KASMAN, INC.  
PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

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18.81 ACRES OF VACANT LAND  
OLIVER STREET AND IRIS AVENUE  
MORENO VALLEY, CALIFORNIA 92555

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## 1.0 SUMMARY

Based on a review of regulatory records, historical site information, and a visual inspection of the area, this assessment has revealed no *recognized environmental conditions* or *historical recognized environmental conditions* in connection with the Property. In addition, no offsite locations have been identified as potential risks or threats to the subject property. Based on the results of this assessment, no further environmental studies are recommended for the site.

## 2.0 INTRODUCTION

### 2.1 Purpose

The purpose of this Phase I Environmental Site Assessment is to determine if any *recognized environmental conditions* or *historical recognized environmental conditions* exist on or near the subject property. As defined by the ASTM Standard, a *recognized environmental condition* is the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

The ASTM Standard defines a *historical recognized environmental condition* as a condition which in the past would have been considered a *recognized environmental condition*, but which may or may not be considered a *recognized environmental condition* currently. If a past release of any hazardous substance or petroleum products has occurred in connection with the property and has been remediated, with such remediation accepted by the responsible regulatory agency, this condition shall be considered a *historical recognized environmental condition*.

### 2.2 Detailed Scope of Services

This report is based on a preliminary study into the past and current uses of the subject property and the surrounding area. The report includes a visual inspection of the property and adjacent sites, and a review of regulatory agency records, aerial photographs, and other historic record



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sources. Also included in this report are maps, diagrams, and photographs pertaining to this site.

### 2.3 Significant Assumptions

The information in this report is furnished in good faith and was obtained from sources and databases considered to be reliable; however, nothing in this report should be construed as a promise or guarantee that the subject property is free of environmental hazards. In many instances, this report relies on regulatory database information provided by federal, state and local governmental agencies. Although the database information used in this report consists of the most recently released records, it may not reflect the actual current status of the case.

### 2.4 Limitations and Exceptions

This report was prepared in conformance to meet or exceed the scope and practice as set forth by the American Society for Testing & Materials (ASTM) Standard Practice E 1527-00, "Standard Practice of Environmental Site Assessments: Phase I Environmental Site Assessment Process." No tests were conducted, and no samples of air, water, soil or building materials were taken.

### 2.5 Special Terms and Conditions

No special terms or conditions have been incorporated into the preparation of this report. There were also no limiting physical conditions such as rain or lack of electrical power, that had a limiting effect on the site inspection.

### 2.6 User Reliance

This report is prepared for the express use of the client, and its contents are considered to be privileged and confidential. Acceptance of this report constitutes an agreement by the client to assume full liability for information contained herein. This report is for the sole use and interpretation of the client, and it is not to be reproduced or distributed to outside parties.

## 3.0 SITE DESCRIPTION

### 3.1 Location and Legal Description

The subject property, Oliver Street and Iris Avenue, Moreno Valley, California, is located on the northwest corner of Oliver Street and Iris Avenue. The property is described as Riverside County Tax Assessor's Parcel Number (APN) 486-310-022.

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### 3.2 Site and Vicinity General Characteristics

The site consists of a large parcel of vacant, undeveloped land, located in a mixed commercial and residential area of Moreno Valley, California (see site plan). The site and surrounding area are gently sloping to the northwest, and the subject property is not connected to the municipal water and sewage systems. The electrical power in the area is supplied by underground utility lines, and no transformers were observed with signs indicating the presence of polychlorinated biphenyls (PCBs).

### 3.3 Current Use of Property

The subject property is approximately 18.81 acres of vacant, unimproved land.

### 3.4 Descriptions of Structures, Roads, Other Improvements On Site

The site is vacant, unimproved land with no structures, buildings, or roads. No evidence of previous buildings or structures was observed on the site.

### 3.5 Current Uses of the Adjoining Properties

North of the subject property is vacant land. East of the subject property is Oliver Street, and further east is a vacant lot which is in the process of being graded. Iris Avenue is to the south, and further south is a residential neighborhood. Vacant land is also to the west.

## 4.0 USER PROVIDED INFORMATION

### 4.1 Title Records

No recorded land title records were provided by the client for review.

### 4.2 Environmental Liens or Activity and Use Limitations

The client has not provided any information concerning environmental liens or activity and use limitations.

### 4.3 Specialized Knowledge

No specialized knowledge of *recognized environmental conditions* or *historical recognized environmental conditions* in connection with the subject property has been provided by the client.

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#### 4.4 Valuation Reduction for Environmental Issues

No information has been provided which indicates the subject property is being sold or purchased at a significantly reduced price due to outstanding environmental issues.

#### 4.5 Owner, Property Manager, and Occupant Information

Information provided by the owner, property manager, and/or occupants of the site are included in this report under Section 7.0, Interviews.

#### 4.6 Reasons for Performing Phase I Environmental Site Assessment

The reasons for performing this Phase I Environmental Site Assessment is to satisfy commercial real estate lending requirements, or provide due diligence information concerning the historical uses and current condition of the site.

#### 4.7 Other User Provided Information

No other information concerning the subject property has been provided by the client.

### 5.0 RECORDS REVIEW

#### 5.1 Standard Environmental Records Sources

#### FEDERAL AGENCY RECORDS

##### **United States Environmental Protection Agency (USEPA) National Priorities List**

The National Priorities List (NPL) identifies abandoned or uncontrolled hazardous waste sites which have been identified as possibly representing a long-term threat to the public health or environment. These sites have been identified as being highly contaminated with hazardous substances and represent the USEPA's target enforcement and cleanup efforts. Studies of individual sites are conducted by the USEPA to determine level of contamination, and the sites are then compared and ranked to other sites on the NPL.

*A review of the USEPA National Priorities List dated April 2003 indicates there are no proposed or final sites within one mile of the subject property.*

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**United States Environmental Protection Agency (USEPA)  
Federal Superfund Liens List**

The USEPA maintains a list of Superfund Lien sites that have been issued on properties throughout the United States. These sites have been remediated through the expenditures of Superfund monies; the purpose of the lien is to prevent the property owner from gaining a financial benefit from the federal government's cleanup and restoration activities.

*A review of the July 1993 Federal Superfund List revealed there are no Superfund Liens on or adjacent to the site.*

**United States Environmental Protection Agency (USEPA)  
Comprehensive Environmental Response, Compensation  
and Liability Information System (CERCLIS)**

The USEPA has developed a database known as CERCLIS which contains information on potential hazardous waste sites located throughout the United States. There are over 33,000 sites on the CERCLIS inventory. All sites are subjected to a preliminary assessment and thereafter are either placed on the National Priority List (NPL) or are placed in a category for those sites requiring no further Federal Superfund action.

*A review of the January 2003 CERCLIS report indicates there are no CERCLIS sites within a ½ mile radius of the subject property. In addition, there are no listed "No Further Remedial Action Planned" (NFRAP) sites on or adjacent to the subject property.*

**United States Environmental Protection Agency (USEPA)  
Resource Conservation and Recovery Act (RCRA)  
Treatment, Storage or Disposal Facilities (TSDF)**

The USEPA maintains a list of facilities which have been authorized to receive hazardous waste. These facilities have permits to treat, store, or dispose of the waste, as determined by the RCRA regulations. In addition, the USEPA publishes a list of those facilities who are subject to a corrective action, based on the facilities waste handling and storage procedures. The facilities which are subject to a corrective action are identified as CORRACTS sites.

*A review of the January 2001 RCRA TSDF list determined there are no CORRACTS facilities within a one mile radius of the subject property. In addition, there are no non-CORRACTS TSD facilities listed within a ½ mile radius.*

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**United States Environmental Protection Agency (USEPA)  
Resource Conservation and Recovery Act (RCRA)  
Hazardous Waste Generators**

The USEPA maintains a list of facilities which are identified as generators of large and small quantities of hazardous waste. These facilities have permits to generate, store and dispose of the waste, as determined by the RCRA regulations.

*A review of the January 2001 RCRA Hazardous Waste Generators list determined there are no large or small quantity hazardous waste generators on or adjacent to the subject property.*

**United States Environmental Protection Agency (USEPA)  
Office of Emergency and Remedial Response  
Emergency Response Notification System (ERNS)**

The USEPA maintains a list of locations which have reported a release of oil or hazardous substances to the federal government. Most of the data in this system is based on information that was received during the initial notification.

*A review of the ERNS list for 1999 determined there are no reported incidents on the subject property.*

**United States Department of Transportation  
United States Coast Guard  
National Response Center (NRC)**

The NRC is the national point of contact for reporting all oil, chemical, radiological, biological and etiological discharges into the environment anywhere in the United States and its territories. In addition to gathering and distributing spill data for Federal On-Scene Coordinators and serving as the communications and operations center for the National Response Team, the NRC maintains agreements with a variety of federal entities to make additional notifications regarding incidents meeting established trigger criteria.

*A review of the NRC list for 2002 determined there are no reported incidents on the subject property.*

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## STATE AGENCY RECORDS

**State of California**  
**Environmental Protection Agency (CAL-EPA)**  
**Department of Toxic Substances Control (DTSC)**

CAL-EPA is responsible for the regulation and enforcement of environmental health laws within the state of California, as set forth by the California Health and Safety Code. CAL-EPA is also designated by the USEPA to assist in enforcing federal environmental laws. CAL-EPA regulates companies involved in the generation, transportation, storage and disposal of hazardous substances. CAL-EPA records include the "CalSites" database, which is a listing of 7,800 known active, inactive and abandoned hazardous waste sites. These sites have previously been reported in the Abandoned Site Program Information System (ASPIS), Bond Expenditure Plan (BEP), and Cortese databases. CAL-EPA records also include an October 1990 listing of registered underground tanks and the California Integrated Waste Management Board's "Active" and "Closed and Inactive" landfills database.

*A review of the July 2003 CAL-EPA records determined there are no listed "CalSite" facilities within a 1/2 mile of the subject property. According to the records, there are no registered underground storage tanks on or adjacent to the subject property. In addition, there are no active, closed or inactive landfill facilities within a 1/2 mile radius of the subject property.*

**State of California**  
**Water Resources Control Board**  
**Regional Water Quality Control Board (RWQCB)**

The RWQCB is responsible for monitoring the quality and flow of the groundwater, and compiles lists of known leaking underground storage tanks. In addition, the RWQCB addresses other potential threats to the groundwater from surface spills and leaks. The RWQCB monitors the contamination problem, the investigation and any remedial action.

*A review of the April 2003 leaking underground storage tank records of the RWQCB determined the subject property is not listed as the source of a known leaking storage tank. According to the records, there are no known leaking underground tank sites within a 1/2 mile radius of the subject property. In addition, the subject property and adjacent sites were not identified on the RWQCB Spills, Leaks, Investigations and Cleanups (SLIC) list.*

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## 5.2 Additional Environmental Sources

### **South Coast Air Quality Management District (AQMD)**

The AQMD is responsible for the development and enforcement of regulations concerning air emissions and airborne hazards from stationary sources in the South Coast Air Basin. AQMD maintains a "Hot Spot" list of facilities whose air emissions pose as a risk to the surrounding community.

*A review of the AQMD records determined there are no "Hot Spot" facilities on or adjacent to the subject property.*

### **Riverside County Waste Resources Management Division (RCWRMD)**

RCWRMD maintains maps concerning the locations of active, inactive or future solid waste landfill sites in Riverside County.

*A review of RCWRMD's major waste systems map determined there are no active, inactive, or future landfill sites within a 1/2 mile radius of the subject property.*

### **County of Riverside Environmental Health Hazardous Materials Division (REH/HMD)**

REH/HMD maintains inspection and inventory records of companies involved in the storage and use of hazardous materials or petrochemicals. REH/HMD attempts to maintain a current record of the types of materials which are utilized at a particular site, and conducts periodic inspections for safety and compliance. REH/HMD also maintains records on underground storage tanks, issues installation and removal permits, and monitors the contamination cleanup process.

*According to REH/HMD records, there are no records of underground tanks or current hazardous material inventories for the subject or adjacent properties.*

### **Western Municipal Water District (WMWD) Cooperative Well Measuring Program**

The WMWD maintains data concerning the groundwater levels in the Riverside County Area Watershed areas, based on selected water well measurements.

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*A review of the water resources data indicates the nearest water well is located approximately 2 miles north of the subject property. The elevation at the well is 1,580 feet above sea level, and the groundwater is 172 feet below the surface. Based on the topography of the area, the groundwater flow is expected to be to the south, although this cannot be confirmed due to the lack of nearby wells.*

**State of California**  
**Department of Conservation**  
**Division of Mines and Geology (CDMG)**

The CDMG conducts studies, publishes maps, and provides information concerning the geological formations throughout the state of California. CDMG research information is combined with information from the United States Geological Survey and the ensuing geologic maps of the state are prepared. These geologic maps also illustrate the approximate locations of known earthquake faults:

*A review of the area map published by CDMG indicates the geologic area surrounding the subject property consists of a mix of Recent alluvium, which includes alluvial fan, flood-plain, and streambed deposits. The client may wish to refer to the enclosed geologic map.*

**State of California**  
**Department of Conservation**  
**Division of Oil and Gas (CDOG)**

The CDOG regulates the drilling, operation and abandonment of gas and oil wells throughout the state of California. If an active, idle or abandoned well is located on or adjacent to a proposed construction site, CDOG requires a site plan review prior to issuing a building permit. Abandoned oil wells must meet standards established in 1984.

*A review of the area map published by CDOG indicates there are no producing, idle or abandoned oil wells on or adjacent to the subject property. The client may wish to review the enclosed map.*

### 5.3 Physical Setting Sources

A United States Geological Survey (USGS) 7.5 Minute Topographical map of the subject property and surrounding area is included in the appendices of the report. The map shows the locations of the identified offsite environmental risks or threats described in the report.



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#### 5.4 Historical Use Information on the Property

##### **City of Moreno Valley Building Department**

No building or demolition permits were on file for the subject property.

##### **Historical Aerial Photographs**

A review of the August 1953, May 1967, September 1978, October 1986, February 1992, and September 1997 historical aerial photographs for the subject property determined the property has been vacant land for the past 50 years.

##### **Historic Sanborn Fire Insurance Maps**

Sanborn Fire Insurance Maps provide information on commercial and industrial properties, based on risk data gathered for the fire insurance companies. The maps show the number of buildings located on the property, and the type of construction. The maps also describe the various businesses located nearby, and show the locations of tanks, boilers, and other potential hazards.

*A review of the Sanborn Fire Insurance Map collections from 1867-1970, did not locate any maps for the subject property.*

Based on a review of historical aerial photos, the subject property has been vacant, undeveloped land for the past 50 years.

#### 5.5 Historical Use Information on the Adjoining Properties

##### **Historical Aerial Photographs**

A review of historical aerial photographs of the adjoining properties determined the following information:

<u>Date of Photo</u>	<u>Description</u>
August 1953	The area surrounding the subject property is vacant, undeveloped land, with no visible buildings or structures.
May 1967	The area surrounding the subject property appears to be about the same as the 1953 photograph.

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<u>Date of Photo</u>	<u>Description</u>
September 1978	The area surrounding the subject property is still vacant, undeveloped land.
October 1986	North and east of the subject property is vacant land. South of the subject property is Iris Avenue, and further south is vacant land. Vacant land is also to the west.
February 1992	North of the subject property is vacant land. East of the subject property is Oliver Street, and further east is vacant land. South of the subject property is Iris Avenue, and further south is vacant land. Vacant land is also to the west.
September 1997	The area surrounding the subject property appears to be about the same as the 1992 photograph.

### Historic Sanborn Fire Insurance Maps

Sanborn Fire Insurance Maps provide information on commercial and industrial properties, based on risk data gathered for the fire insurance companies. The maps show the number of buildings located on the property, and the type of construction. The maps also describe the various businesses located nearby, and show the locations of tanks, boilers, and other potential hazards.

*A review of the Sanborn Fire Insurance Map collections from 1867-1970, did not locate any maps for the area surrounding the subject property.*

Based on a review of historical aerial photos, the properties to the north, east, and west have been vacant land for the past 50 years. The residences to the south of Iris Avenue were constructed within the past five years, and the property was previously vacant land.

## 6.0 SITE RECONNAISSANCE

### 6.1 Methodology and Limiting Conditions

The site reconnaissance consisted of a walk through the entire property, and visually observing the structures, storage areas, and parking lots. No inspection was conducted under floors, above ceilings, or behind walls.

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## 6.2 General Site Setting

The site consists of a large parcel of vacant, undeveloped land, located in a mixed commercial and residential area of Moreno Valley, California (see site plan). The site and surrounding area are gently sloping to the northwest, and the subject property is not connected to the municipal water and sewage systems. The electrical power in the area is supplied by underground utility lines, and no transformers were observed with signs indicating the presence of polychlorinated biphenyls (PCBs).

## 6.3 Subject Property Observations

On September 15, 2003, an inspection of the site and surrounding area was conducted by Registered Environmental Assessor Marty Kasman. The subject property is approximately 18.81 acres of vacant, unimproved land (see photo #1 and #2). The property is covered with low grasses and weeds, with a few small bushes on the site. Small amounts of trash and non-hazardous debris were observed throughout the site, however, there were no signs of illegal disposal on the property. No evidence of previous buildings or structures was observed on the site. No large quantities of hazardous materials were observed being stored or used on the property, and there was no evidence of waste water clarifiers, sumps, pits or underground tanks. In addition, no evidence of wells or septic tanks was observed. No visible signs of illegal dumping or distressed vegetation were found on the property, and there was no indication of obvious contamination on the site.

## 6.4 Adjoining Property Observations

### Northern Border

North of the subject property is vacant land (see photo #3). There were no visible signs of spills or contamination on the adjacent property.

### Eastern Border

East of the subject property is Oliver Street, and further east is a vacant lot which is in the process of being graded (see photo #4). There were no visible signs of spills or contamination on the adjacent property.

### Southern Border

South of the subject property is Iris Avenue, and further south is a residential neighborhood (see photo #5). There were no visible signs of spills or contamination on the adjacent property.

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### Western Border

West of the subject property is a vacant land (see photo #6). There were no visible signs of spills or contamination on the adjacent property.

## 7.0 INTERVIEWS

### 7.1 Interview with Owner

The property is currently vacant land, and the owner was not present during the inspection.

### 7.2 Interview with Site Manager

The property is currently vacant land, and no property manager was present during the inspection.

### 7.3 Interviews with Occupants

The property is currently vacant land. There are no occupants.

### 7.4 Interviews with Local Government Officials

No interviews with local government officials were conducted.

### 7.5 Interview with Others

No interviews with other people were conducted concerning the subject property.

## 8.0 FINDINGS

### 8.1 Recognized Environmental Conditions

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Standard Practice E 1527-00 on the 18.81 acres of vacant land located at Oliver Street and Iris Avenue, Riverside, California, the Property. Any exceptions to, or deletions from the Standard Practice are described in Section 2.4 of this report. This assessment has revealed no evidence of *recognized environmental conditions* in connection with the Property. In addition, no offsite locations have been identified as potential risks or threats to the subject property.

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## 8.2 Historical Recognized Environmental Conditions

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Standard Practice E 1527-00 on the 18.81 acres of vacant land located at Oliver Street and Iris Avenue, Riverside, California, the Property. Any exceptions to, or deletions from the Standard Practice are described in Section 2.4 of this report. This assessment has revealed no evidence of *historical recognized environmental conditions* in connection with the Property.

## 9.0 OPINION

Based on a review of regulatory and historical records, and a visual inspection of the site, this assessment has found no evidence of *recognized environmental conditions* or *historical recognized environmental conditions* which are likely to impact the subject property.

## 10.0 CONCLUSIONS

Based on the results of this assessment, no further environmental studies are recommended for the site.

## 11.0 DEVIATIONS

This report was prepared in conformance to meet or exceed the scope and practice as set forth by the American Society for Testing & Materials (ASTM) Standard Practice E 1527-00, "Standard Practice of Environmental Site Assessments: Phase I Environmental Site Assessment Process." No significant deviations or deletions were made from this practice.

## 12.0 ADDITIONAL SERVICES

No additional services including a broader scope of services, liability/risk evaluations, or remedial activities are included in this report.

## 13.0 REFERENCES

All government records and maps were obtained directly from the regulatory agencies identified in this report. The fire insurance map information was obtained from Digital Sanborn Maps, 1867-1970, Ann Arbor, Michigan. The aerial photographs were obtained from Rupp Aerial Photography, Corona, California; the United States Geological Survey, Menlo Park, California; or the United States Department of Agriculture, Salt Lake City, Utah.

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## 14.0 APPENDICES

### 14.1 Qualifications of the Environmental Professionals

Attached to this report are the résumés of Jack Orswell and Marty Kasman, who conducted the site inspection, the records review, and prepared the report.

### 14.2 Site and Vicinity Map

A United States Geological Survey (USGS) 7.5 Minute Topographical map of the subject property and surrounding area is included in the appendices of the report. The map shows the locations of the identified offsite environmental risks or threats described in the report.

### 14.3 Site Plan

A site plan of the subject property is included in the appendices of the report. The site plan shows the general location of the structures on the property, and other items of interest which were identified in the description of the site.

### 14.4 Site and Vicinity Photographs

Photographs of the subject property and surrounding neighborhood are attached to this report. These photographs were taken at the time of the site inspection.

### 14.5 Historical Research Documentation

Building permit records were obtained directly from the regulatory agency identified in this report. The aerial photographs summarized in this report were obtained from Rupp Aerial Photography, Corona, California; the United States Geological Survey, Menlo Park, California; or the United States Department of Agriculture, Salt Lake City, Utah. The Sanborn Fire Insurance Map information was obtained from Digital Sanborn Maps, 1867-1970, Ann Arbor, Michigan.

### 14.6 Regulatory Records Documentation

All government records were obtained directly from the regulatory agencies identified in this report.

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#### 14.7 Interview and Research Documentation

All of the field notes and supporting information obtained from interviews and research concerning the subject property are maintained in the report file at the offices of Orswell & Kasman, Inc.

#### 14.8 Special Contractual Conditions between User and Environmental Professional

No special contractual conditions or agreements exist between the client and any of the employees of Orswell & Kasman, Inc., and Orswell & Kasman, Inc. does not have any financial interest in the subject property.

**APPENDIX**



## JACK ORSWELL

Jack Orswell, a principal of the company, is a Registered Environmental Assessor (#1263) and a licensed Private Investigator (#PI 14366) with the State of California. He is also a USEPA/AHERA accredited Asbestos Management Planner and California Certified Asbestos Consultant (#92-0869). He received his Bachelor of Science degree in Business Administration from the University of Southern California, and spent 15 years as a Special Agent with the Federal Bureau of Investigation in the Denver, San Francisco and Los Angeles offices. Mr. Orswell received specialized training from the United States Environmental Protection Agency (EPA), and he was one of the first FBI Agents to work with the EPA in investigating federal environmental crimes.

While with the FBI, Mr. Orswell worked with the EPA's National Enforcement Investigations Center (NEIC) in Denver, Colorado, and helped establish evidence control procedures for their laboratory personnel. As coordinator of environmental investigations for the FBI's Los Angeles office, Mr. Orswell gained extensive training and experience working with the California Department of Health Services and the Los Angeles County Sheriff's Department.

For the past twelve years, Mr. Orswell has been in private industry, conducting environmental assessments for several financial institutions, real estate companies and law firms. Mr. Orswell has conducted environmental investigations throughout the United States, locating and interviewing witnesses to determine how hazardous materials were handled in various manufacturing operations, and documenting the long term effects of improper disposal.

Mr. Orswell's extensive background in criminal environmental enforcement and civil litigation support make him uniquely qualified as an environmental assessor and investigator. He is a member of the California Hazardous Materials Investigators Association, the Society of Former Special Agents of the Federal Bureau of Investigation, the National Association of Environmental Professionals, the National Association of Government Guarantee Lenders, and the American Society for Testing of Materials (ASTM).

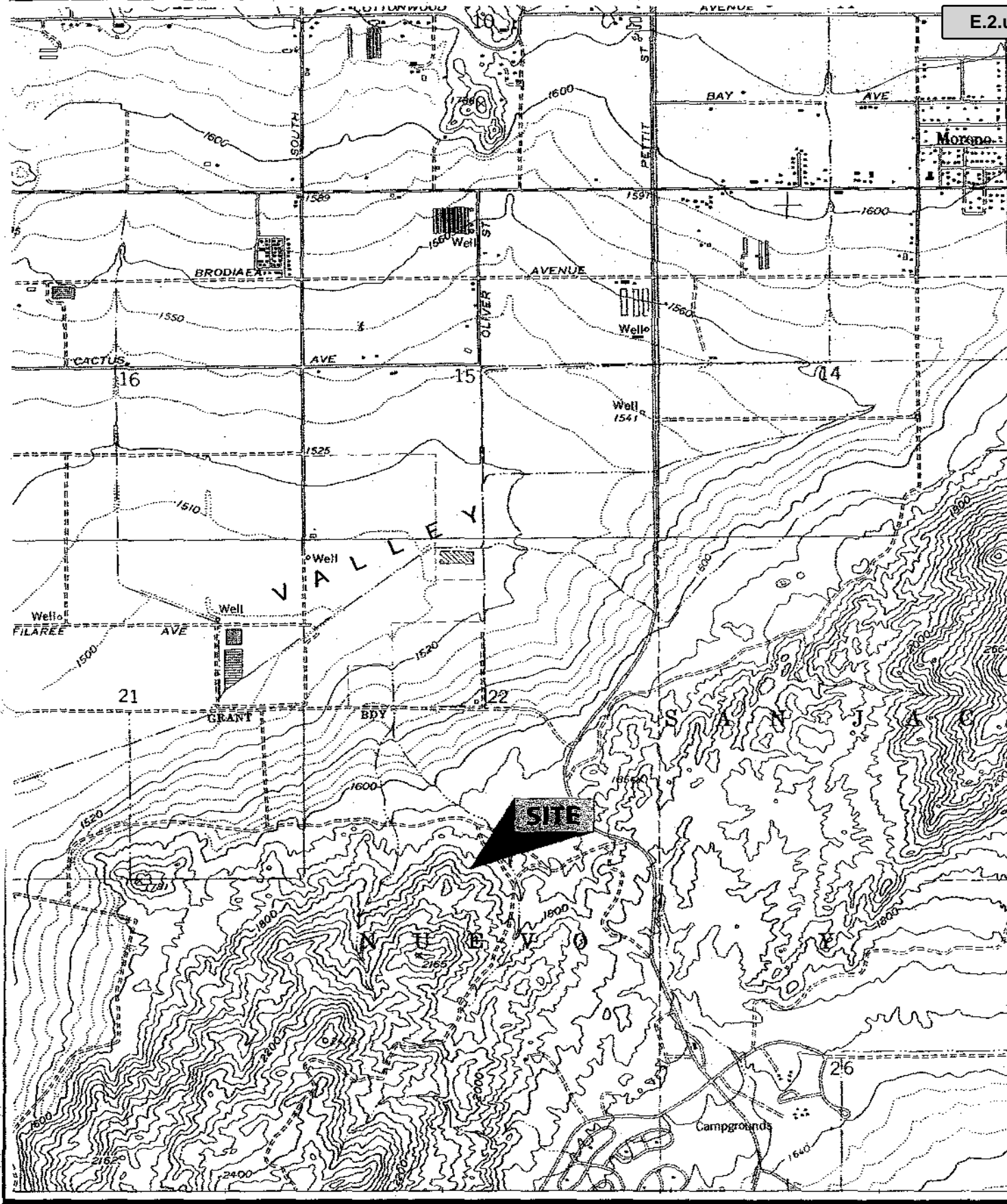
### MARTY KASMAN

Marty Kasman, a principal of the company, is a Registered Environmental Health Specialist (#4927) and a Registered Environmental Assessor (#4022) with the State of California. He is also a USEPA/AHERA accredited Asbestos Management Planner and California Certified Asbestos Consultant (#99-2553). He received his Bachelor of Science and Master of Science degrees in Environmental and Occupational Health Science from California State University at Northridge. He also has a Certificate in Hazardous Materials Management from the University of California at Los Angeles (UCLA). In addition, Mr. Kasman also received specialized hazardous materials training at the Federal Law Enforcement Training Center in Georgia.

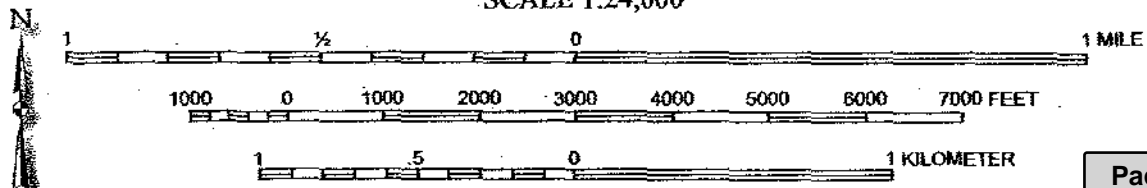
Mr. Kasman served 14 years with the Los Angeles County Fire Department, as a Supervising Hazardous Material Specialist and Deputy Health Officer. His responsibilities included field and laboratory work in hazardous materials management, conducting inspections of industrial plant operations, and monitoring cleanup activities. In addition, Mr. Kasman has investigated hundreds of abandoned waste sites and other cases involving the illegal dumping of hazardous materials throughout Los Angeles County.

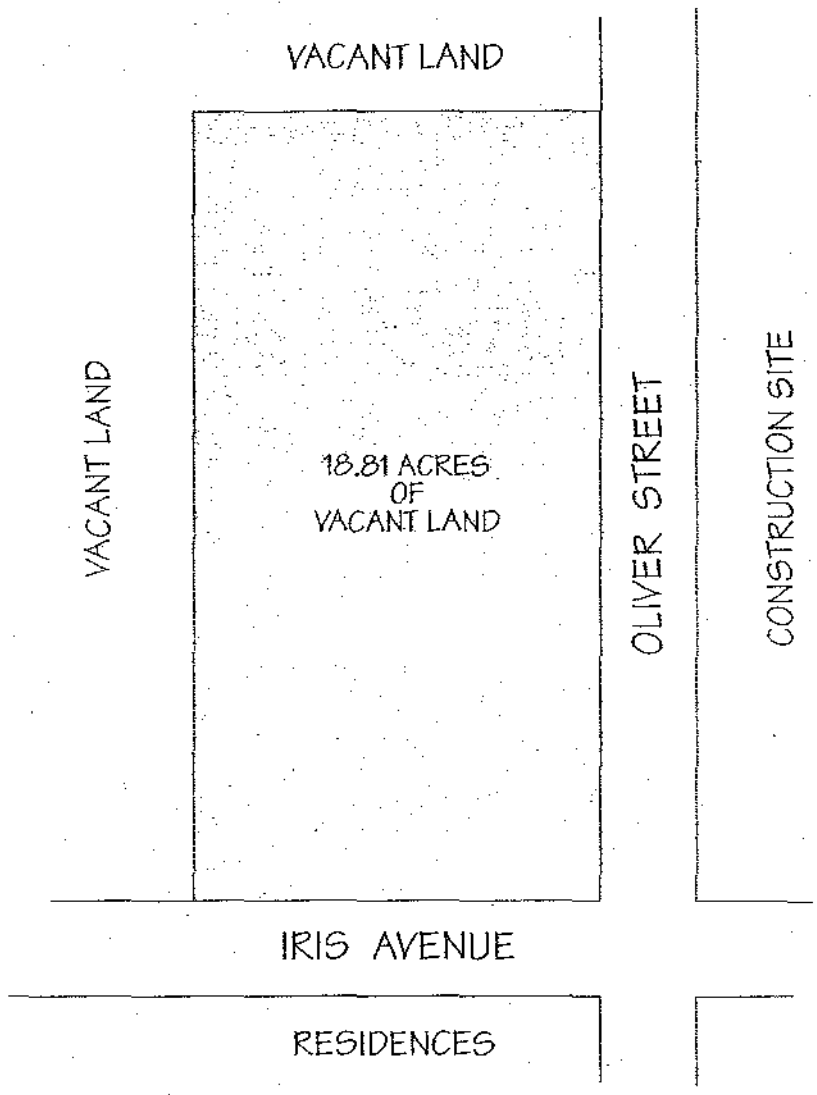
Mr. Kasman currently serves as an environmental consultant to industry management in the proper handling of hazardous materials and waste. He has taught courses in hazardous materials regulatory compliance and waste management at UCLA, California State University at Northridge, and the California Specialized Training Institute at San Luis Obispo. Mr. Kasman is also serving on the State of California Local Unified Program Implementation Committee (LUPIC) to develop a standardized hazardous materials contingency plan.

Mr. Kasman's extensive education, training, and experience in hazardous materials management make him fully qualified to conduct environmental assessments and investigations. He is the former president and director of the California Hazardous Materials Investigators Association. He is also a former director of the Local Environmental Enforcement Officers Association, and the Los Angeles County Association of Environmental Health Specialists. He is a member of California and National Environmental Health Associations, and the National Association of Government Guarantee Lenders.



SCALE 1:24,000





NOT TO SCALE - FOR ORIENTATION PURPOSES ONLY

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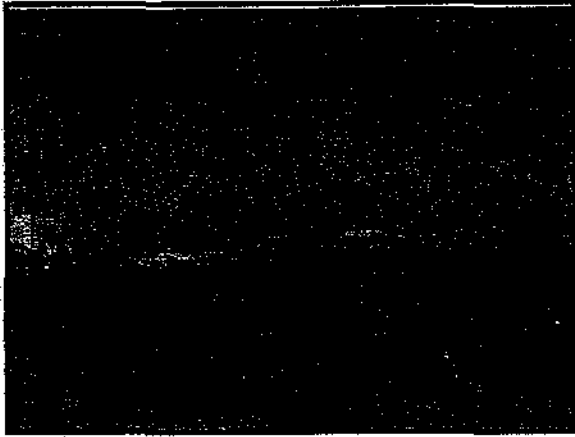


Photo 1

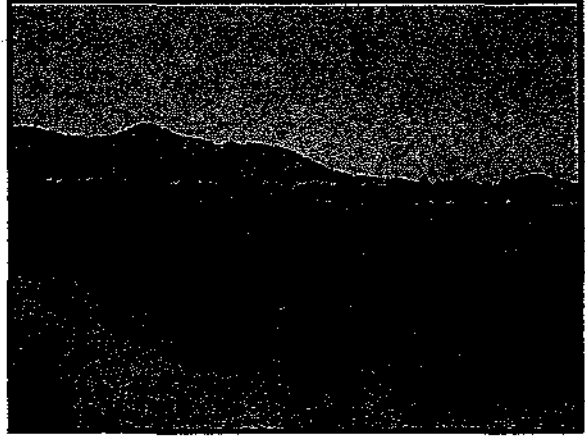


Photo 2

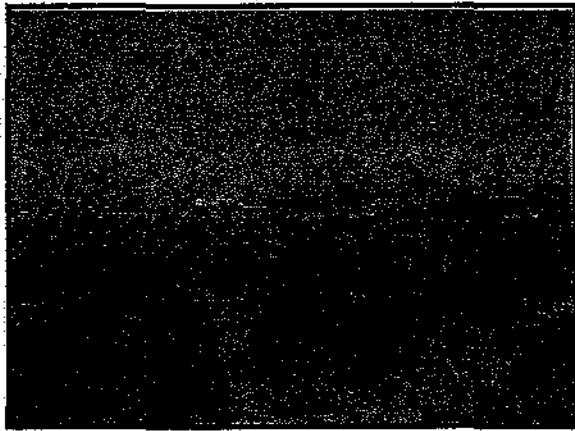


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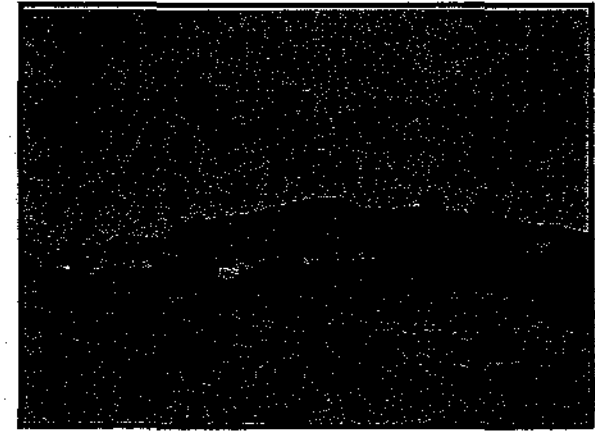


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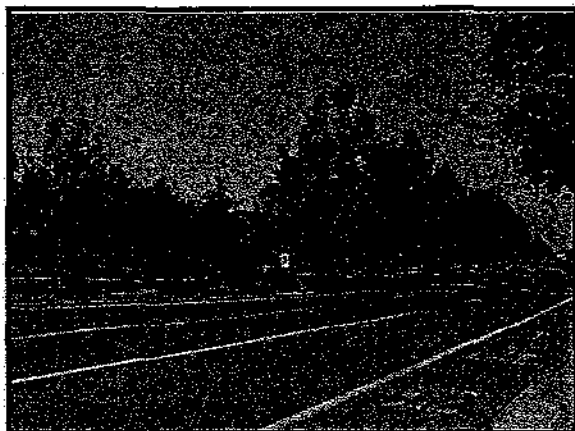
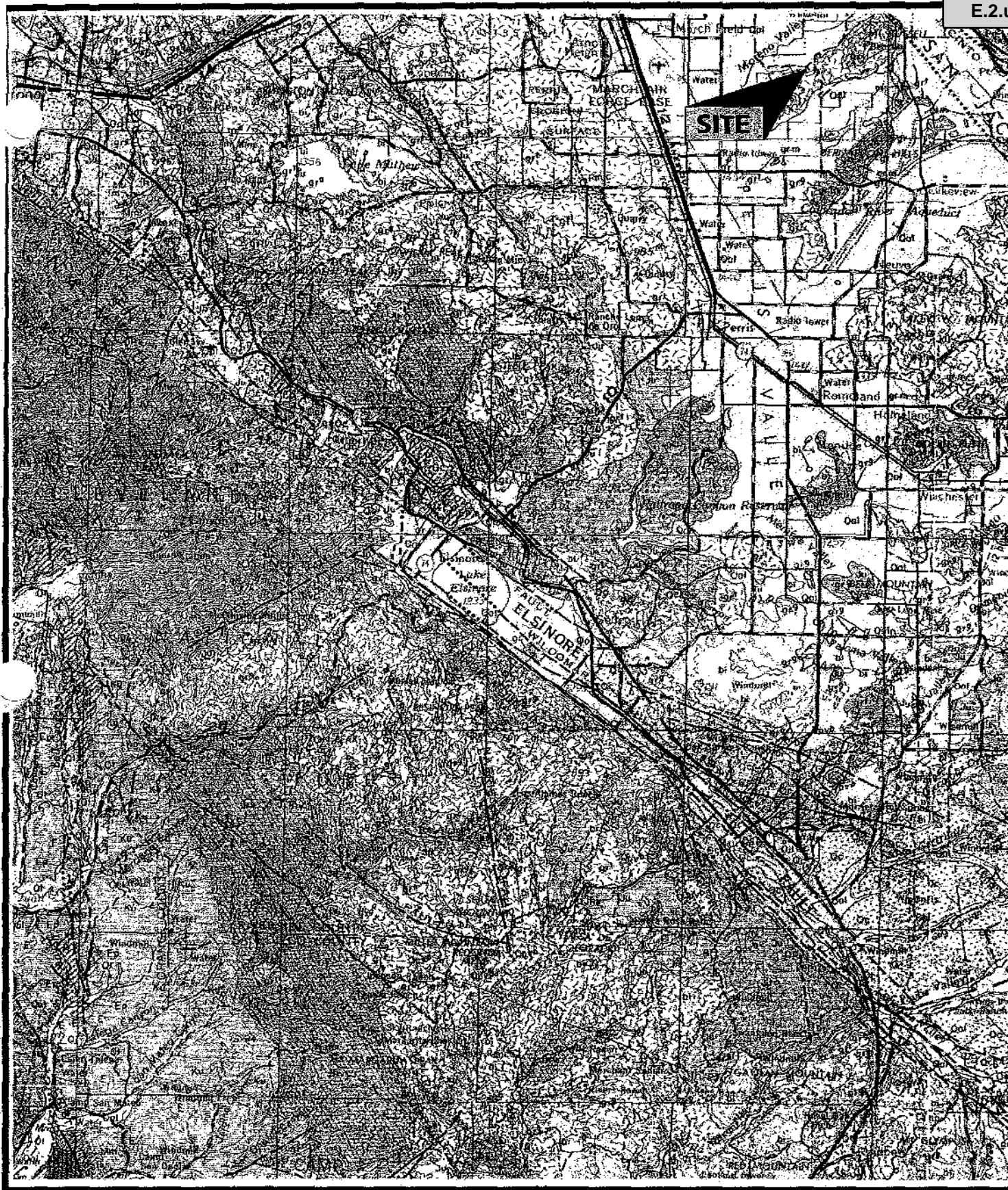


Photo 5



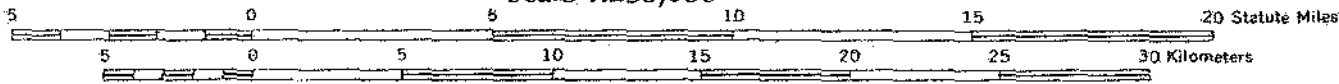
Photo 6

Attachment: Appendix F - Phase I Environmental Site Assessment (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



Attachment: Appendix F - Phase I Environmental Site Assessment (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Scale 1:250,000



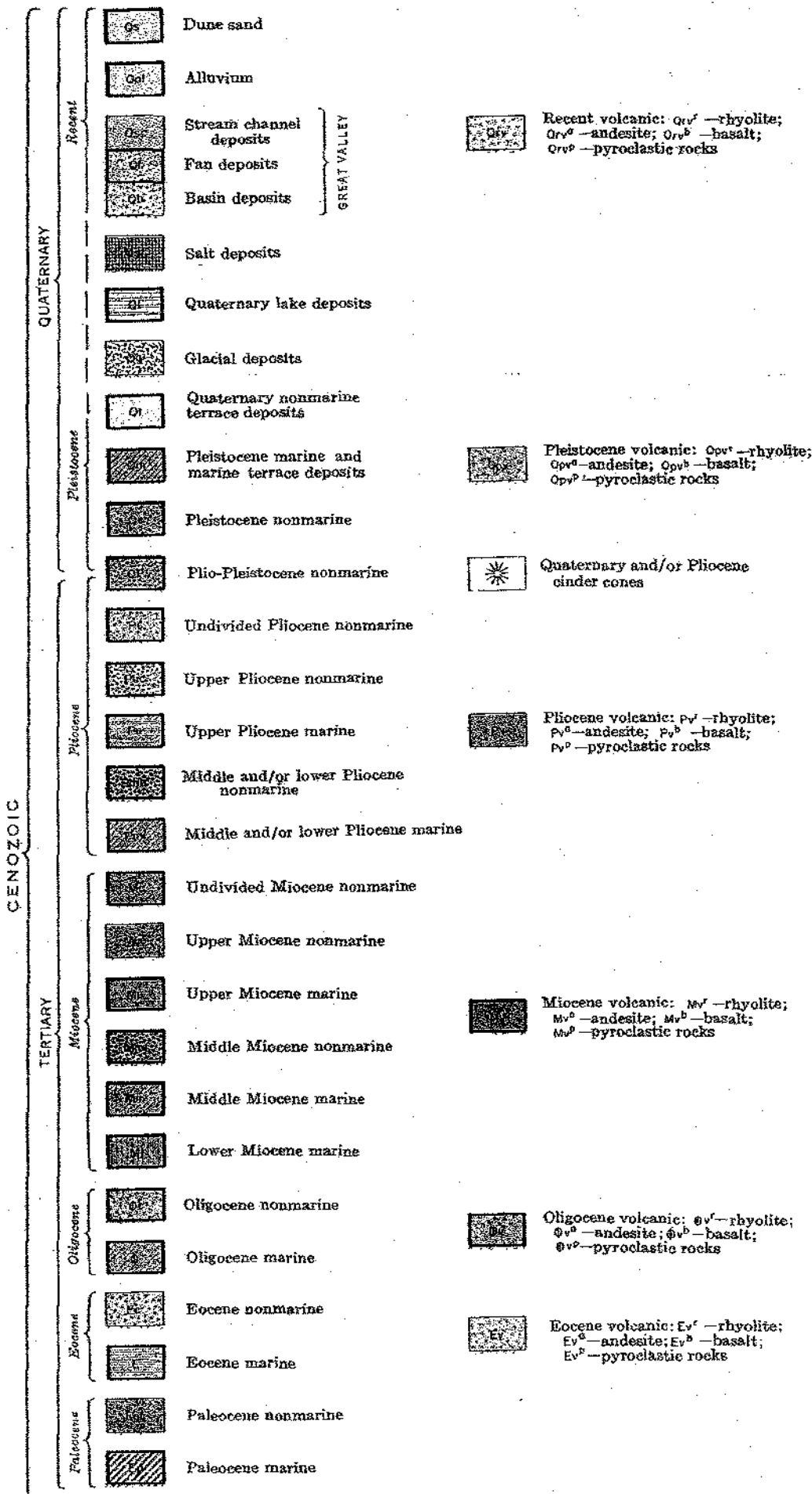
CONTOUR INTERVAL 200 FEET  
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INTERVALS

# GEOLOGIC MAP OF CALIFORNIA

# EXPLANATION

SEDIMENTARY AND METASEDIMENTARY ROCKS

IGNEOUS AND META-IGNEOUS ROCKS



Attachment: Appendix F - Phase I Environmental Site Assessment (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# REGIONAL WILDCAT MAP

SHOWING WELLS NOT ON  
DIVISION OF OIL & GAS FIELD MAPS  
STATE OF CALIFORNIA  
DEPARTMENT OF CONSERVATION  
DIVISION OF OIL & GAS



OCTOBER 7, 1989

## LEGEND

- |         |  |   |             |
|---------|--|---|-------------|
| •       | DRILLING   | ⊥ | BURIED IDLE |
| ◊       | DRILLING - IDLE  | ⊥ | OBSERVATION |
| ⊥       | PLUGGED AND ABANDONED-DRY HOLE<br>(showing year drilled and total depth) |   |             |
| •       | PRODUCING - OIL  |   |             |
| ⊥       | IDLE - OIL   |   |             |
| ⊥       | PLUGGED AND ABANDONED-OIL  |   |             |
| *       | PRODUCING - GAS  |   |             |
| *       | IDLE - GAS   |   |             |
| *       | PLUGGED AND ABANDONED-GAS  |   |             |
| ∇       | WATER SOURCE   |   |             |
| ⊙       | GAS INJECTION  |   |             |
| ⊙       | STEAM FLOOD  |   |             |
| ⊙       | WATER DISPOSAL   |   |             |
|         | BOUNDARY OF FIELD MAP COVERAGE   |   |             |
| /////// | FIELD BOUNDARY   |   |             |

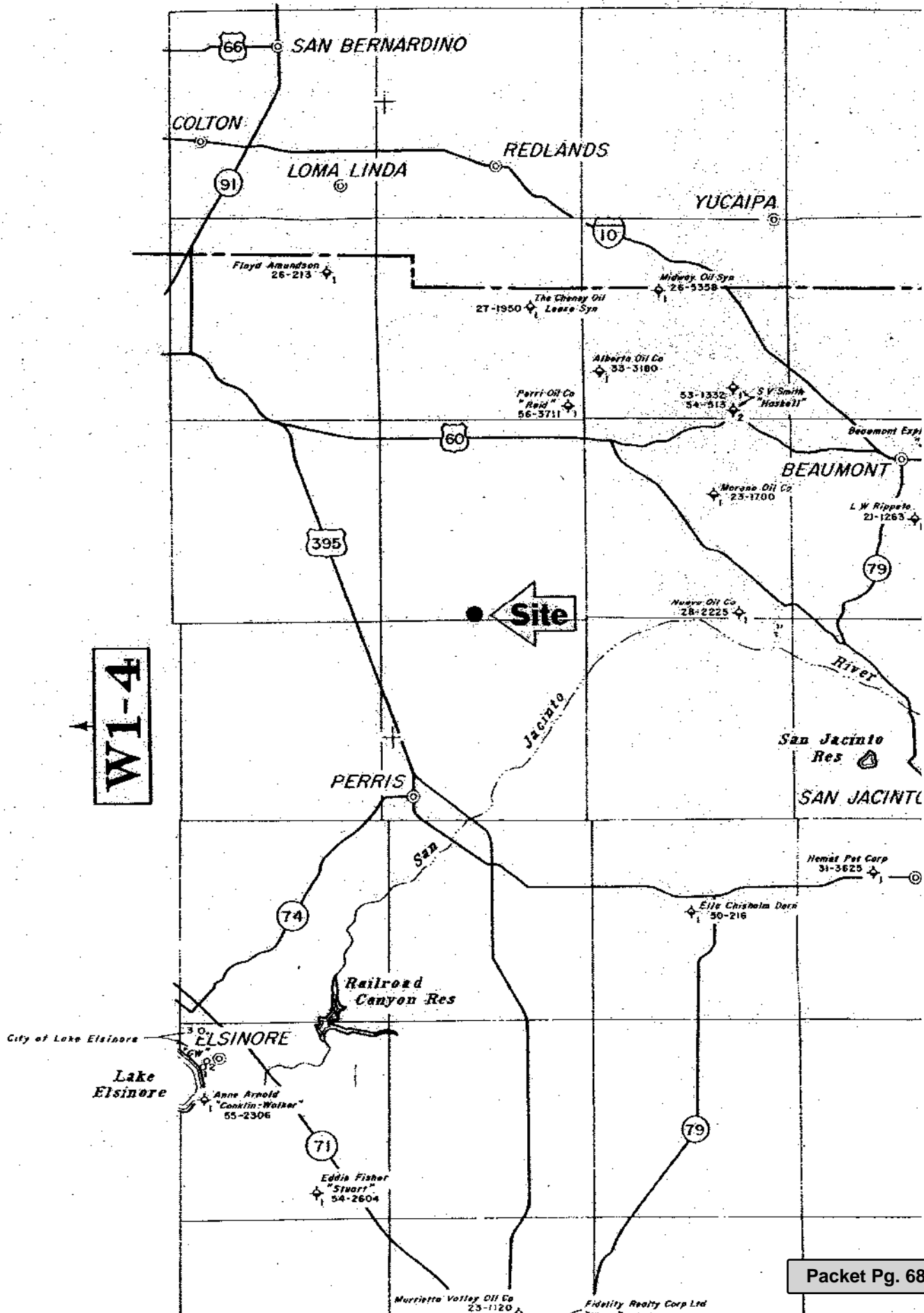
100,000-foot grid based on California coordinate system, zone 6

NOTE: WELLS WITH DIRECTIONAL SURVEYS ON FILE WITH THE DIVISION OF OIL AND GAS ARE INDICATED WITH A SHORT LINE UNDER THE WELL SYMBOL.

CURRENT WELL STATUS SHOULD BE CONFIRMED AT THE APPROPRIATE DIVISION OF OIL AND GAS DISTRICT OFFICE

DIVISION OF OIL AND GAS  
1416 9th STREET  
SACRAMENTO, CA. 95814





W1-4

Site

Attachment: Appendix F - Phase I Environmental Site Assessment (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# ORSWELL & KASMAN, INC.

## ENVIRONMENTAL RECORDS RESEARCH REPORT

*Property Information:*

**18.81 Acres of Vacant Land  
Oliver Street & Iris Avenue  
Moreno Valley, CA 92555**

*OKI Report #:*

**P03301**

*Report Date:*

**September 26, 2003**

*Prepared For:*

**Guy Roney  
K & S Property, LLC**



*Specializing  
in  
California*



*Prepared by:*

**Orswell & Kasman, Inc.  
2500 East Colorado Boulevard, Suite 330  
Pasadena, California 91107  
(626) 844 - 4150 \* FAX (626) 844 - 4155  
[www.orswell-kasman.com](http://www.orswell-kasman.com)**

The information provided herein is based upon research of public records listed on the "Reference to the Regulatory Agency Database" page of this report and not on a physical inspection of the property. By requesting this report, the client accepts the terms and conditions described on the "Response Notification Sheet" of this report. The client may want to obtain detailed subject property information from a qualified consultant or specialist to determine if any potential hazards exist on the property.

# RESPONSE NOTIFICATION SHEET

E.2.u

This report is in conformance with the ASTM standard for a Phase I Environmental Site Assessment government records check

	No Sites Within Specified Radius	Property & Adjacent	1/4 Mile Radius	1/2 Mile Radius	1 Mile Radius
National Priority List (NPL)	✓				
RCRA CORRACTS Facilities*	✓				
CERCLIS	✓				
CALSITES**	✓				
Leaking Underground Storage Tanks (LUSTIS)*	✓				
Active / Inactive Landfills	✓				
Treatment, Storage & Disposal (TSD)	✓				
Emergency Response Notification System (ERNS)	✓				
Generators (HWS)	✓				
Registered Underground Tanks	✓				
Superfund Leins	✓				
CERCLIS NFRAP	✓				

Sites reported as "Case Closed"\* or "NFA - No Further Action"\*\*\* may not be listed in this report

OKI Report #: P03301  
 Completion Date: 9/26/03

Property Information:  
 18.81 Acres of Vacant Land  
 Oliver Street & Iris Avenue  
 Moreno Valley, CA 92555

*Martin Kasman*  
 Martin A. Kasman  
 Registered Environmental Assessor



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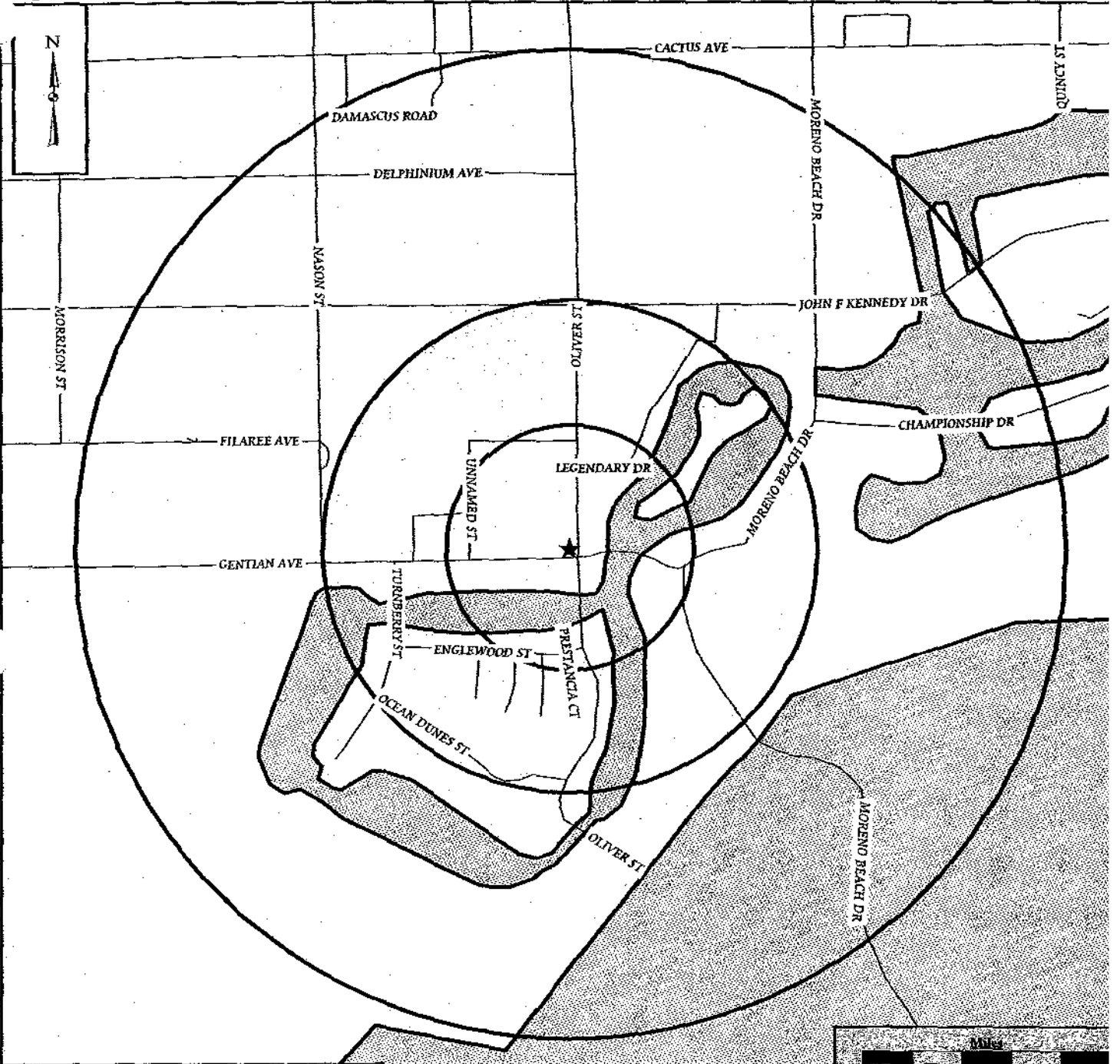
Attachment: Appendix F - Phase I Environmental Site Assessment (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# Orswell & Kasman, Inc.

Environmental  
Assessments & Consulting

Subject Property Location  
Oliver Street & Iris Avenue  
Moreno Valley, CA 92555

E.2.u



SUBJECT TO TERMS OF DISCLAIMER



### MAP LEGEND

- |  |                     |  |                      |
|--|---------------------|--|----------------------|
|  | One Mile Radius     |  | Parks & Golf Courses |
|  | Half Mile Radius    |  | Waterways            |
|  | Quarter Mile Radius |  | Railroads            |
|  | Subject Property    |  | Roads                |
|  | Airports            |  | Highways             |

### HAZARDOUS SITE SYMBOLS

- |  |                                   |  |  |
|--|-----------------------------------|--|--|
|  | National Priority List            |  | Treatment, Storage, & Disposal Facilities  |
|  | RCRA Corrects                     |  | Emergency Response Notification System     |
|  | CERCLIS                           |  | Generators                                 |
|  | CalSites                          |  | Registered Underground Tanks               |
|  | Leaking Underground Storage Tanks |  | Superfund Sites                            |
|  | Active / Inactive Landfills       |  | CERCLIS No Further Remedial Action Planned |

Attachment: Appendix F - Phase I Environmental Site Assessment (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

<u>SOURCE</u>	<u>DESCRIPTION</u>
<b>PL:</b> <i>1 mile search radius</i>	The National Priority List (NPL) identifies abandoned or uncontrolled hazardous waste sites, which have been identified as possibly representing a long-term threat to the public health or environment. These sites have been identified as being highly contaminated with hazardous substances and represent the USEPA's target enforcement and cleanup efforts. Studies of individual sites are conducted by the USEPA to determine the level of contamination, and the sites are then compared and ranked to other sites on the NPL.
<b>CORRACTS:</b> <i>1 mile search radius</i>	The USEPA maintains a list of facilities which have been authorized to receive hazardous waste. These facilities have permits to treat, store or dispose of the waste as determined by the RCRA regulations. In addition, the USEPA publishes a list of those facilities who are subject to a corrective action based on the facilities waste handling and storage procedures. The facilities, which are subject to a corrective action, are identified as CORRACTS sites.
<b>CERCLIS:</b> <i>1/2 mile search radius</i>	The USEPA has developed a database known as the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS), which contains information on potential hazardous waste sites located throughout the United States. There are over 33,000 sites on the CERCLIS inventory. All sites are subjected to a preliminary assessment and thereafter are either placed on the National Priority List (NPL) or are placed in a category for those sites requiring no further Federal Superfund action.
<b>CALST:</b> <i>1/2 mile search radius</i>	The State of California Environmental Protection Agency maintains the "CalSite" database, which is a listing of 7,800 known active, inactive and abandoned hazardous sites. These sites have previously been reported in the Abandoned Site Program Information System (ASPIS), Bond Expenditure Plan (BEP) and Cortese database.
<b>LUSTIS:</b> <i>1/2 mile search radius</i>	The State of California Water Resources Control Board is responsible for monitoring the quality of flow of the groundwater and compiles lists of known leaking underground storage tanks. The list is maintained as the Leaking Underground Storage Tank Information System (LUSTIS). The local Regional Water Quality Control Board (RWQCB) monitors the contamination problem, the investigation and any remedial activities.
<b>WIS:</b> <i>1/2 mile search radius</i>	The State of California Integrated Waste Management Board maintains a list of active and inactive landfill sites within California and provides information concerning the ownership and types of wastes brought to the landfills.
<b>TSD:</b> <i>1/2 mile search radius</i>	Treatment, Storage or Disposal Facilities (TSD) is a federal listing of facilities, which have been authorized to receive hazardous waste. These facilities have permits to treat, store or dispose of waste as determined by the RCRA regulations.
<b>ERNS:</b> <i>Property &amp; adjacent</i>	The Emergency Response Notification System (ERNS) is a list of locations which have reported a release of oil or hazardous substances to the USEPA Office of Emergency and Remedial Response. Most of the data in this system is based on information that was received during the initial notification.
<b>HWIS:</b> <i>Property &amp; adjacent</i>	The State of California Environmental Protection Agency maintains the Hazardous Waste Information System (HWIS) which includes a list of known hazardous waste generators in the state. A company on the list generates reportable quantities of hazardous waste, and the disposal and transportation of the waste is monitored through the use of a hazardous waste manifest.
<b>UTANK:</b> <i>Property &amp; adjacent</i>	The location and identity of registered underground tanks is maintained by the State of California Water Resources Control Board in the Hazardous Substance Storage Container Database. The list was compiled in 1991 and there are currently no plans to update the database at the present time.
<b>SFL:</b> <i>Property &amp; adjacent</i>	The USEPA maintains a list of Superfund Leins that have been issued on properties throughout the United States. These sites have been remediated through the expenditures of Superfund monies. The purpose of the lein is to prevent the property owner from gaining a financial benefit from the federal government's cleanup and restoration activities.

Attachment: Appendix F - Phase I Environmental Site Assessment (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

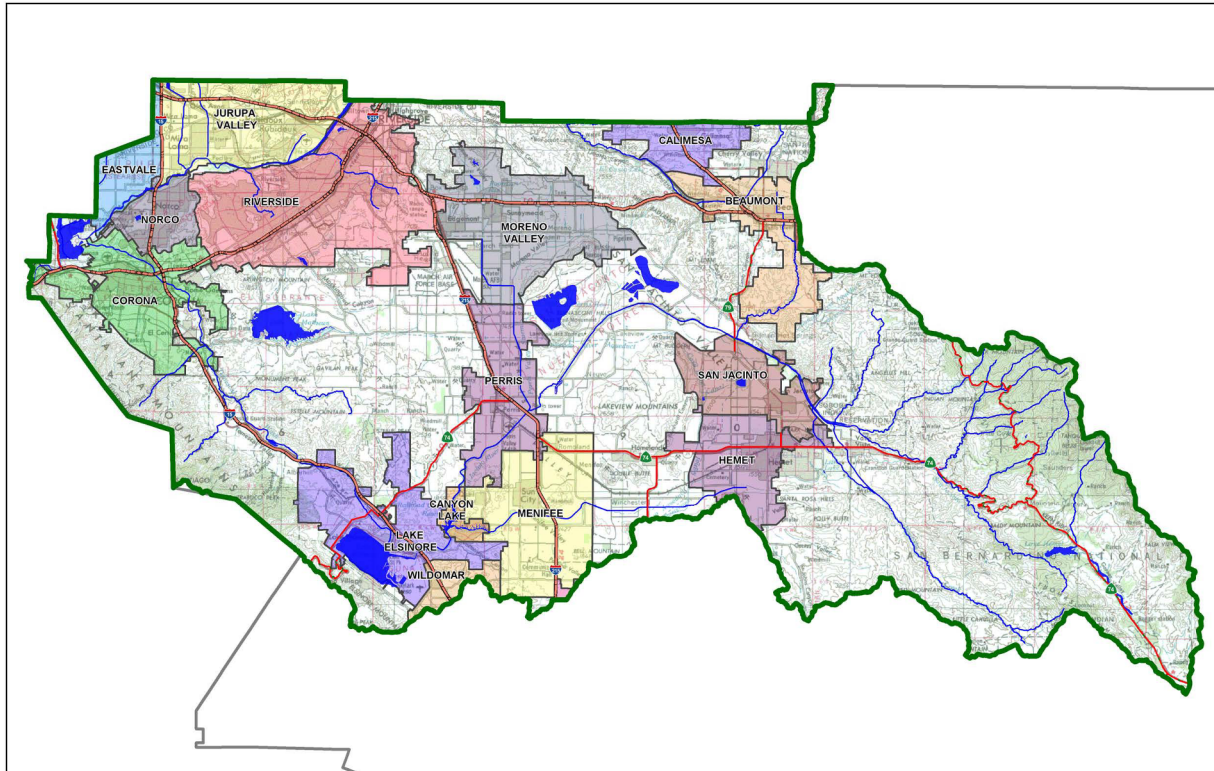
# Project Specific Water Quality Management Plan

A Template for Projects located within the **Santa Ana Watershed** Region of Riverside County

**Project Title:** Moreno Valley ARCO

**Development No:** Parcel 1 - Map no. 33361

**Design Review/Case No:** PEN18-0016 / LWQ18-0003



**Contact Information:**

**Prepared for:**

Sater Oil International, LLC  
683 Cliffside Drive  
San Dimas, CA 91773

**Prepared by:**

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BCE# 18501

Preliminary

Final

**Original Date Prepared:** January 18, 2018

**Revision Date(s):** April 2, 2018, August 6, 2018,

September 25, 2018, October 12, 2018

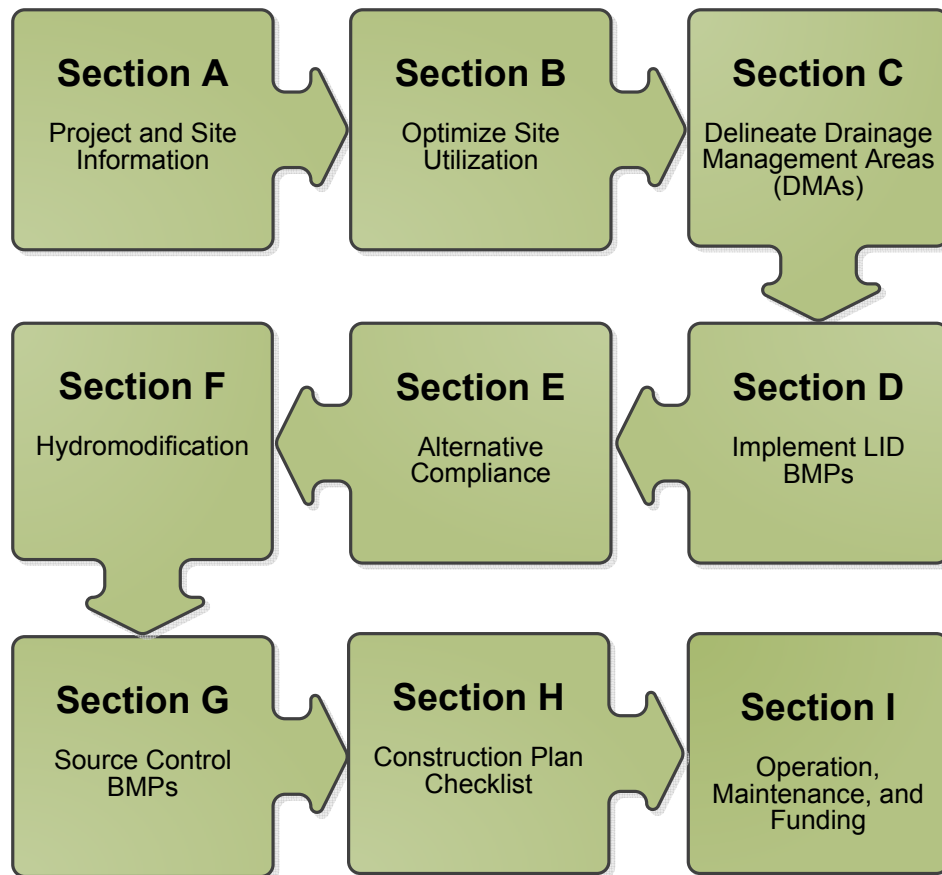
*Prepared for Compliance with*

*Regional Board Order No. **R8-2010-0033***

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

## A Brief Introduction

This Project-Specific WQMP Template for the **Santa Ana Region** has been prepared to help guide you in documenting compliance for your project. Because this document has been designed to specifically document compliance, you will need to utilize the WQMP Guidance Document as your “how-to” manual to help guide you through this process. Both the Template and Guidance Document go hand-in-hand, and will help facilitate a well prepared Project-Specific WQMP. Below is a flowchart for the layout of this Template that will provide the steps required to document compliance.



### OWNER'S CERTIFICATION

This Project-Specific Water Quality Management Plan (WQMP) has been prepared for Sater Oil by Barghausen Consulting Engineers, Inc. for the Moreno Valley ARCO ampm project.

This WQMP is intended to comply with the requirements of The City of Moreno Valley for Ordinance 827 which includes the requirement for the preparation and implementation of a Project-Specific WQMP.

The undersigned, while owning the property/project described in the preceding paragraph, shall be responsible for the implementation and funding of this WQMP and will ensure that this WQMP is amended as appropriate to reflect up-to-date conditions on the site. In addition, the property owner accepts responsibility for interim operation and maintenance of Stormwater BMPs until such time as this responsibility is formally transferred to a subsequent owner. This WQMP will be reviewed with the facility operator, facility supervisors, employees, tenants, maintenance and service contractors, or any other party (or parties) having responsibility for implementing portions of this WQMP. At least one copy of this WQMP will be maintained at the project site or project office in perpetuity. The undersigned is authorized to certify and to approve implementation of this WQMP. The undersigned is aware that implementation of this WQMP is enforceable under Moreno Valley Water Quality Ordinance (Municipal Code Section 8.10).

"I, the undersigned, certify under penalty of law that the provisions of this WQMP have been reviewed and accepted and that the WQMP will be transferred to future successors in interest."

\_\_\_\_\_  
Owner's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Owner's Printed Name

\_\_\_\_\_  
Owner's Title/Position

### PREPARER'S CERTIFICATION

"The selection, sizing and design of stormwater treatment and other stormwater quality and quantity control measures in this plan meet the requirements of Regional Water Quality Control Board Order No. **R8-2010-0033** and any subsequent amendments thereto."

\_\_\_\_\_  
Preparer's Signature

10/12/18  
\_\_\_\_\_  
Date

Hal P. Grubb, P.E.  
\_\_\_\_\_  
Preparer's Printed Name

Director of Engineering Services  
\_\_\_\_\_  
Preparer's Title/Position

Preparer's Licensure:



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## Section A: Project and Site Information

PROJECT INFORMATION	
Type of Project:	Commercial - Fuel Station, Car Wash and Convenience Store
Planning Area:	Reche Canyon/Badlands
Community Name:	Moreno Valley, CA
Development Name:	ARCO ampm
PROJECT LOCATION	
Latitude & Longitude (DMS): 33°53'45"N, 117°11'00"W	
Project Watershed and Sub-Watershed: Santa Ana Watershed / San Jacinto Sub-watershed	
APN(s): 486-310-038	
Map Book and Page No.: Book 239, Pages 30-32	
PROJECT CHARACTERISTICS	
Proposed or Potential Land Use(s)	Fuel Station and Convenience Store
Proposed or Potential SIC Code(s)	7542 and 5541
Area of Impervious Project Footprint (SF)	54,393
Total Area of <u>proposed</u> Impervious Surfaces within the Project Limits (SF)/or Replacement	54,393
Does the project consist of offsite road improvements?	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Does the project propose to construct unpaved roads?	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
Is the project part of a larger common plan of development (phased project)?	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
EXISTING SITE CHARACTERISTICS	
Total area of <u>existing</u> Impervious Surfaces within the project limits (SF)	0
Is the project located within any MSHCP Criteria Cell?	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
If so, identify the Cell number:	N/A
Are there any natural hydrologic features on the project site?	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
Is a Geotechnical Report attached?	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
If no Geotech. Report, list the NRCS soils type(s) present on the site (A, B, C and/or D)	Geo Report is Provided
What is the Water Quality Design Storm Depth for the project?	0.68 inches

### A.1 Maps and Site Plans

When completing your Project-Specific WQMP, include a map of the local vicinity and existing site. In addition, include all grading, drainage, landscape/plant palette and other pertinent construction plans in Appendix 2. At a **minimum**, your WQMP Site Plan should include the following:

- Drainage Management Areas
- Proposed Structural BMPs
- Drainage Path
- Drainage Infrastructure, Inlets, Overflows
- Source Control BMPs
- Buildings, Roof Lines, Downspouts
- Impervious Surfaces
- Standard Labeling

Use your discretion on whether or not you may need to create multiple sheets or can appropriately accommodate these features on one or two sheets. Keep in mind that the Co-Permittee plan reviewer must be able to easily analyze your project utilizing this template and its associated site plans and maps.

A WQMP Site Plan / Basin Map is included in Appendix 1 as Figure 6. Appendix 2 Contains Construction Plans that show the

## A.2 Identify Receiving Waters

Using Table A.1 below, list in order of upstream to downstream, the receiving waters that the project site is tributary to. Continue to fill each row with the Receiving Water's 303(d) listed impairments (if any), designated beneficial uses, and proximity, if any, to a RARE beneficial use. Include a map of the receiving waters in Appendix 1.

**Table A.1** Identification of Receiving Waters

Receiving Waters	EPA Approved 303(d) List Impairments	Designated Beneficial Uses	Proximity to RARE Beneficial Use
Line F Storm Drain	None	None	Not a water body classified as RARE
Kitching Street Channel Line N	None	None	Not a water body classified as RARE
Perris Valley Storm Drain (Channel)	None	None	Not a water body classified as RARE
San Jacinto River (Reach 3) (HU# 802.11)	None	AGR, GWR, REC1, REC2, WARM, WILD	Not a water body classified as RARE
San Jacinto River Reach 2, Canyon Lake (HU #802.11, 802.12)	Nutrients	MUN, AGR, GWR, REC1, REC2, WARM, WILD	Not a water body classified as RARE
San Jacinto River (Reach 1) (HU #802.31, 802.32)	None	AGR, GWR, MUN, REC1, REC2, WARM, WILD	Not a water body classified as RARE
Lake Elsinore (HU #802.31)	PCBs, Nutrients, Organic Enrichment (Low DO), DDT Toxicity	REC1, REC2, WARM, WILD	Not a water body classified as RARE

## A.3 Additional Permits/Approvals required for the Project:

**Table A.2** Other Applicable Permits

Agency	Permit Required	
State Department of Fish and Game, 1602 Streambed Alteration Agreement	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
State Water Resources Control Board, Clean Water Act (CWA) Section 401 Water Quality Cert.	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
US Army Corps of Engineers, CWA Section 404 Permit	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
US Fish and Wildlife, Endangered Species Act Section 7 Biological Opinion	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
Statewide Construction General Permit Coverage	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N
Statewide Industrial General Permit Coverage	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
Western Riverside MSHCP Consistency Approval (e.g., JPR, DBESP)	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
Other (please list in the space below as required) Grading Permit	<input checked="" type="checkbox"/> Y	<input type="checkbox"/> N

If yes is answered to any of the questions above, the Co-Permittee may require proof of approval/coverage from those agencies as applicable including documentation of any associated requirements that may affect this Project-Specific WQMP.

## Section B: Optimize Site Utilization (LID Principles)

Review of the information collected in Section 'A' will aid in identifying the principal constraints on site design and selection of LID BMPs as well as opportunities to reduce imperviousness and incorporate LID Principles into the site and landscape design. For example, **constraints** might include impermeable soils, high groundwater, groundwater pollution or contaminated soils, steep slopes, geotechnical instability, high-intensity land use, heavy pedestrian or vehicular traffic, utility locations or safety concerns. **Opportunities** might include existing natural areas, low areas, oddly configured or otherwise unbuildable parcels, easements and landscape amenities including open space and buffers (which can double as locations for bioretention BMPs), and differences in elevation (which can provide hydraulic head). Prepare a brief narrative for each of the site optimization strategies described below. This narrative will help you as you proceed with your LID design and explain your design decisions to others.

The 2010 Santa Ana MS4 Permit further requires that LID Retention BMPs (Infiltration Only or Harvest and Use) be used unless it can be shown that those BMPs are infeasible. Therefore, it is important that your narrative identify and justify if there are any constraints that would prevent the use of those categories of LID BMPs. Similarly, you should also note opportunities that exist which will be utilized during project design. Upon completion of identifying Constraints and Opportunities, include these on your WQMP Site plan in Appendix 1.

### Site Optimization

The following questions are based upon Section 3.2 of the WQMP Guidance Document. Review of the WQMP Guidance Document will help you determine how best to optimize your site and subsequently identify opportunities and/or constraints, and document compliance.

Did you identify and preserve existing drainage patterns? If so, how? If not, why?

*The existing site topography slopes down in a northwest direction. The project proposes to treat and convey into the right-of-way that then conveys into the same basin north of the site.*

Did you identify and protect existing vegetation? If so, how? If not, why?

*No, the site is currently undeveloped with sparse vegetation.*

Did you identify and preserve natural infiltration capacity? If so, how? If not, why?

*No, infiltration on site does not meet the required 1.6 inch/hour and infiltration will not be utilized for storm management.*

Did you identify and minimize impervious area? If so, how? If not, why?

*Yes, the impervious areas were minimized. Approximately 25% of the site will be pervious ground cover.*

Did you identify and disperse runoff to adjacent pervious areas? If so, how? If not, why?

*All on-site runoff will surface flow to proposed LID treatment facilities.*

## Section C: Delineate Drainage Management Areas (DMAs)

Utilizing the procedure in Section 3.3 of the WQMP Guidance Document which discusses the methods of delineating and mapping your project site into individual DMAs, complete Table C.1 below to appropriately categorize the types of classification (e.g., Type A, Type B, etc.) per DMA for your project site. Upon completion of this table, this information will then be used to populate and tabulate the corresponding tables for their respective DMA classifications.

**Table C.1 DMA Classifications**

DMA Name or ID	Surface Type(s) <sup>1</sup>	Area (Sq. Ft.)	DMA Type
1A	Concrete Or Asphalt	8341	D
1B	Roofs	2656	D
1C	Ornamental landscaping	1635	D
1D	Concrete Or Asphalt	5158	D
1E	Ornamental Landscaping	699	D
2A	Concrete Or Asphalt	3000	D
2B	Ornamental Landscaping	1080	D
3A	Concrete Or Asphalt	15897	D
3B	Concrete Or Asphalt	0	NA
3C	Roofs	4732	D
3D	Ornamental Landscaping	8298	D
3E (offsite)	Concrete Or Asphalt	3375	D
4A	Concrete Or Asphalt	2393	D
4B	Concrete Or Asphalt	4204	D
4C	Roofs	3205	D
4D	Ornamental Landscaping	423	D
LS-1	Self-Treating Landscaped Area	2149	A
LS-2	Self-Treating Landscaped Area	882	A
LS-3	Self-Treating Landscaped Area	1125	A
LS-4	Self-Treating Landscaped Area	1563	A
OS	Concrete or Asphalt	1432	NA

<sup>1</sup>Reference Table 2-1 in the WQMP Guidance Document to populate this column

**Table C.2 Type 'A', Self-Treating Areas**

DMA Name or ID	Area (Sq. Ft.)	Stabilization Type	Irrigation Type (if any)
LS-1	Ornamental Landscaping	2149	Drip Irrigation
LS-2	Ornamental Landscaping	882	Drip Irrigation
LS-3	Ornamental Landscaping	1125	Drip Irrigation

LS-4	Ornamental Landscaping	1563	Drip Irrigation
------	------------------------	------	-----------------

Table C.3 Type 'B', Self-Retaining Areas

Self-Retaining Area				Type 'C' DMAs that are draining to the Self-Retaining Area		
DMA Name/ ID	Post-project surface type	Area (square feet) [A]	Storm Depth (inches) [B]	DMA Name / ID	[C] from Table C.4 = [C] [C]	Required Retention Depth (inches) [D]

$$[D] = [B] + \frac{[B] \cdot [C]}{[A]}$$

Table C.4 Type 'C', Areas that Drain to Self-Retaining Areas

DMA					Receiving Self-Retaining DMA		
DMA Name/ ID	Area (square feet) [A]	Post-project surface type	Runoff factor [B]	Product [C] = [A] x [B]	DMA name /ID	Area (square feet) [D]	Ratio [C]/[D]
N/A					N/A		

Table C.5 Type 'D', Areas Draining to BMPs

DMA Name or ID	BMP Name or ID
----------------	----------------

DMA #1A, B, C, D, E	Bio-Retention #1
DMA #2A, B	Bio-Retention #2
DMA #3A, C, D, E	Bio-Retention #3
DMA #4A, B, C, D	Bio-Retention #4

*Note: More than one drainage management area can drain to a single LID BMP, however, one drainage management area may not drain to more than one BMP.*

## Section D: Implement LID BMPs

### D.1 Infiltration Applicability

Is there an approved downstream 'Highest and Best Use' for stormwater runoff (see discussion in Chapter 2.4.4 of the WQMP Guidance Document for further details)?  Y  N

If yes has been checked, Infiltration BMPs shall not be used for the site. If no, continue working through this section to implement your LID BMPs. It is recommended that you contact your Co-Permittee to verify whether or not your project discharges to an approved downstream 'Highest and Best Use' feature.

#### Geotechnical Report

A Geotechnical Report or Phase I Environmental Site Assessment may be required by the Copermitee to confirm present and past site characteristics that may affect the use of Infiltration BMPs. In addition, the Co-Permittee, at their discretion, may not require a geotechnical report for small projects as described in Chapter 2 of the WQMP Guidance Document. If a geotechnical report has been prepared, include it in Appendix 3. In addition, if a Phase I Environmental Site Assessment has been prepared, include it in Appendix 4.

Is this project classified as a small project consistent with the requirements of Chapter 2 of the WQMP Guidance Document?  Y  N

#### Infiltration Feasibility

Table D.1 below is meant to provide a simple means of assessing which DMAs on your site support Infiltration BMPs and is discussed in the WQMP Guidance Document in Chapter 2.4.5. Check the appropriate box for each question and then list affected DMAs as applicable. If additional space is needed, add a row below the corresponding answer.

**Table D.1** Infiltration Feasibility

Does the project site...	YES	NO
...have any DMAs with a seasonal high groundwater mark shallower than 10 feet? If Yes, list affected DMAs:		X
...have any DMAs located within 100 feet of a water supply well? If Yes, list affected DMAs:		X
...have any areas identified by the geotechnical report as posing a public safety risk where infiltration of stormwater could have a negative impact? If Yes, list affected DMAs:		X
...have measured in-situ infiltration rates of less than 1.6 inches / hour? If Yes, list affected DMAs: All DMAs	X	
...have significant cut and/or fill conditions that would preclude in-situ testing of infiltration rates at the final infiltration surface?		X



If Yes, list affected DMAs: None		
...geotechnical report identify other site-specific factors that would preclude effective and safe infiltration?		X
Describe here:		

If you answered “Yes” to any of the questions above for any DMA, Infiltration BMPs should not be used for those DMAs and you should proceed to the assessment for Harvest and Use below.

## D.2 Harvest and Use Assessment

Please check what applies:

- Reclaimed water will be used for the non-potable water demands for the project.
- Downstream water rights may be impacted by Harvest and Use as approved by the Regional Board (verify with the Copermittee).
- The Design Capture Volume will be addressed using Infiltration Only BMPs. In such a case, Harvest and Use BMPs are still encouraged, but it would not be required if the Design Capture Volume will be infiltrated or evapotranspired.

If any of the above boxes have been checked, Harvest and Use BMPs need not be assessed for the site. If neither of the above criteria applies, follow the steps below to assess the feasibility of irrigation use, toilet use and other non-potable uses (e.g., industrial use).

### Irrigation Use Feasibility

Complete the following steps to determine the feasibility of harvesting stormwater runoff for Irrigation Use BMPs on your site:

Step 1: Identify the total area of irrigated landscape on the site, and the type of landscaping used.

*Total Area of Irrigated Landscape: 0.41 Acres*

*Type of Landscaping (Conservation Design or Active Turf): Conservation Design*

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for irrigation use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

*Total Area of Impervious Surfaces: 1.25 Acres*

Step 3: Cross reference the Design Storm depth for the project site (see Exhibit A of the WQMP Guidance Document) with the left column of Table 2-3 in Chapter 2 to determine the minimum area of Effective Irrigated Area per Tributary Impervious Area (EIATIA).

*Enter your EIATIA factor: Conservative Design (KI=0.35): 1.21 (Interpolated)*

Step 4: Multiply the unit value obtained from Step 3 by the total of impervious areas from Step 2 to develop the minimum irrigated area that would be required.

*Minimum required irrigated area: 1.21 x 1.25 = 1.51 Acres*

Step 5: Determine if harvesting stormwater runoff for irrigation use is feasible for the project by comparing the total area of irrigated landscape (Step 1) to the minimum required irrigated area (Step 4).

Minimum required irrigated area (Step 4)	Available Irrigated Landscape (Step 1)
1.51	0.41

### Toilet Use Feasibility

Complete the following steps to determine the feasibility of harvesting stormwater runoff for toilet flushing uses on your site:

Step 1: Identify the projected total number of daily toilet users during the wet season, and account for any periodic shut downs or other lapses in occupancy:

*Projected Number of Daily Toilet Users: 96 (including customer use)*

*Project Type: Retail*

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for toilet use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

*Total Area of Impervious Surfaces: 1.25 Acres*

Step 3: Enter the Design Storm depth for the project site (see Exhibit A) into the left column of Table 2-1 in Chapter 2 to determine the minimum number of toilet users per tributary impervious acre (TUTIA).

*Enter your TUTIA factor: 146*

Step 4: Multiply the unit value obtained from Step 3 by the total of impervious areas from Step 2 to develop the minimum number of toilet users that would be required.

*Minimum number of toilet users: 183*

Step 5: Determine if harvesting stormwater runoff for toilet flushing use is feasible for the project by comparing the Number of Daily Toilet Users (Step 1) to the minimum required number of toilet users (Step 4).

Minimum required Toilet Users (Step 4)	Projected number of toilet users (Step 1)
183	96

### Other Non-Potable Use Feasibility

Are there other non-potable uses for stormwater runoff on the site (e.g. industrial use)? See Chapter 2 of the Guidance for further information. If yes, describe below. If no, write N/A.

N/A

Step 1: Identify the projected average daily non-potable demand, in gallons per day, during the wet season and accounting for any periodic shut downs or other lapses in occupancy or operation.

*Average Daily Demand:           gpd*

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for the identified non-potable use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

Total Area of Impervious Surfaces: Acres

Step 3: Enter the Design Storm depth for the project site (see Exhibit A) into the left column of Table 2-3 in Chapter 2 to determine the minimum demand for non-potable uses per tributary impervious acre.

Enter the factor from Table 2-3:

Step 4: Multiply the unit value obtained from Step 4 by the total of impervious areas from Step 3 to develop the minimum number of gallons per day of non-potable use that would be required.

Minimum required use: gpd

Step 5: Determine if harvesting stormwater runoff for other non-potable use is feasible for the project by comparing the Number of Daily Toilet Users (Step 1) to the minimum required number of toilet users (Step 4).

Minimum required non-potable use (Step 4)	Projected average daily use (Step 1)
N/A	N/A

If Irrigation, Toilet and Other Use feasibility anticipated demands are less than the applicable minimum values, Harvest and Use BMPs are not required and you should proceed to utilize LID Bioretention and Biotreatment, unless a site-specific analysis has been completed that demonstrates technical infeasibility as noted in D.3 below.

### D.3 Bioretention and Biotreatment Assessment

Other LID Bioretention and Biotreatment BMPs as described in Chapter 2.4.7 of the WQMP Guidance Document are feasible on nearly all development sites with sufficient advance planning.

Select one of the following:

LID Bioretention/Biotreatment BMPs will be used for some or all DMAs of the project as noted below in Section D.4 (note the requirements of Section 3.4.2 in the WQMP Guidance Document).

A site-specific analysis demonstrating the technical infeasibility of all LID BMPs has been performed and is included in Appendix 5. If you plan to submit an analysis demonstrating the technical infeasibility of LID BMPs, request a pre-submittal meeting with the Copermittee to discuss this option. Proceed to Section E to document your alternative compliance measures.

### D.4 Feasibility Assessment Summaries

From the Infiltration, Harvest and Use, Bioretention and Biotreatment Sections above, complete Table D.2 below to summarize which LID BMPs are technically feasible, and which are not, based upon the established hierarchy.

Table D.2 LID Prioritization Summary Matrix

DMA Name/ID	LID BMP Hierarchy				No LID (Alternative Compliance)
	1. Infiltration	2. Harvest and use	3. Bioretention	4. Biotreatment	
DMA #1A	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DMA #1B	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DMA #1C	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DMA #1D	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DMA #1E	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DMA #2A	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DMA #2B	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DMA #3A	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DMA #3C	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DMA #3D	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DMA #3E	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DMA #4A	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DMA#4B	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DMA#4C	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DMA#4D	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

For those DMAs where LID BMPs are not feasible, provide a brief narrative below summarizing why they are not feasible, include your technical infeasibility criteria in Appendix 5, and proceed to Section E below to document Alternative Compliance measures for those DMAs. Recall that each proposed DMA must pass through the LID BMP hierarchy before alternative compliance measures may be considered.

Each of the five (5) Drainage Management Areas on site drain to a corresponding Bioretention area that is to provide bioretention.

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

### D.5 LID BMP Sizing

Each LID BMP must be designed to ensure that the Design Capture Volume will be addressed by the selected BMPs. First, calculate the Design Capture Volume for each LID BMP using the V<sub>BMP</sub> worksheet in Appendix F of the LID BMP Design Handbook. Second, design the LID BMP to meet the required V<sub>BMP</sub> using a method approved by the Co-permittee. Utilize the worksheets found in the LID BMP Design Handbook or consult with your Co-permittee to assist you in correctly sizing your LID BMPs. Complete Table D.3 below to document the Design Capture Volume and the Proposed Volume for each LID BMP. Provide the completed design procedure sheets for each LID BMP in Appendix 6. You may add additional rows to the table below as needed.

Table D.3 DCV Calculations for LID BMPs

DMA Type/ID	DMA Area (square feet) [A]	Post-Project Surface Type	Effective Impervious Fraction, I <sub>f</sub> [B]	DMA Runoff Factor [C]	DMA Areas x Runoff Factor [A] x [C]	Enter BMP Name / Identifier Here								
1A	8341	Paving	1.0	0.89	7423	<table border="0"> <tr> <td><i>Design Storm Depth (in)</i></td> <td><i>Design Volume, (cubic feet)</i></td> <td><i>Capture V<sub>BMP</sub></i></td> <td><i>Proposed Volume on Plans (cubic feet)</i></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table>	<i>Design Storm Depth (in)</i>	<i>Design Volume, (cubic feet)</i>	<i>Capture V<sub>BMP</sub></i>	<i>Proposed Volume on Plans (cubic feet)</i>				
<i>Design Storm Depth (in)</i>	<i>Design Volume, (cubic feet)</i>	<i>Capture V<sub>BMP</sub></i>	<i>Proposed Volume on Plans (cubic feet)</i>											
1B	2656	Roofs	1.0	0.89	2364									
1C	1635	Ornamental LS	0.1	0.11	180									
1D	5158	Paving	1.0	0.89	4591									
1E	699	Ornamental LS	0.1	0.11	77									
A <sub>T</sub> =Σ[A]=18,489				Σ= [D]=14,635	[E]= 0.68	<table border="0"> <tr> <td>[F] = <math>\frac{[D] \times [E]}{12}</math></td> <td>[G]</td> </tr> <tr> <td>= 829 cf</td> <td>832</td> </tr> </table>	[F] = $\frac{[D] \times [E]}{12}$	[G]	= 829 cf	832				
[F] = $\frac{[D] \times [E]}{12}$	[G]													
= 829 cf	832													

Table D.4 DCV Calculations for LID BMPs

DMA Type/ID	DMA Area (square feet) [A]	Post-Project Surface Type	Effective Impervious Fraction, I <sub>f</sub> [B]	DMA Runoff Factor [C]	DMA Areas x Runoff Factor [A] x [C]	Enter BMP Name / Identifier Here								
2A	3000	Paving	1.0	0.89	2670	<table border="0"> <tr> <td><i>Design Storm Depth (in)</i></td> <td><i>Design Volume, (cubic feet)</i></td> <td><i>Capture V<sub>BMP</sub></i></td> <td><i>Proposed Volume on Plans (cubic feet)</i></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table>	<i>Design Storm Depth (in)</i>	<i>Design Volume, (cubic feet)</i>	<i>Capture V<sub>BMP</sub></i>	<i>Proposed Volume on Plans (cubic feet)</i>				
<i>Design Storm Depth (in)</i>	<i>Design Volume, (cubic feet)</i>	<i>Capture V<sub>BMP</sub></i>	<i>Proposed Volume on Plans (cubic feet)</i>											
2B	1080	Ornamental LS	0.1	0.11	119									
A <sub>T</sub> =Σ[A]=4,080				Σ= [D]=2,789	[E]= 0.68	<table border="0"> <tr> <td>[F] = <math>\frac{[D] \times [E]}{12}</math></td> <td>[G]</td> </tr> <tr> <td>= 158cf</td> <td>169</td> </tr> </table>	[F] = $\frac{[D] \times [E]}{12}$	[G]	= 158cf	169				
[F] = $\frac{[D] \times [E]}{12}$	[G]													
= 158cf	169													

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Table D.5 DCV Calculations for LID BMPs

DMA Type/ID	DMA Area (square feet) [A]	Post-Project Surface Type	Effective Impervious Fraction, I <sub>f</sub> [B]	DMA Runoff Factor [C]	DMA Areas x Runoff Factor [A] x [C]	Enter BMP Name / Identifier Here		
3A	15897	Paving	1.0	0.89	14148			
3B	0	Paving	0.1	0.89	0			
3C	4732	Roofs	1.0	0.89	4211			
3D	8298	Ornamental LS	0.1	0.11	913			
3E	3375	Paving	1.0	0.89	3004			
					Design Storm Depth (in)	Design Volume, (cubic feet)	Capture V <sub>BMP</sub>	Proposed Volume on Plans (cubic feet)
A <sub>T</sub> =Σ[A]=32,302					Σ= [D]=22,276	[E]= 0.68	[F] = $\frac{[D] \times [E]}{12}$ =1,262 cf	[G] 1345

Table D.6 DCV Calculations for LID BMPs

DMA Type/ID	DMA Area (square feet) [A]	Post-Project Surface Type	Effective Impervious Fraction, I <sub>f</sub> [B]	DMA Runoff Factor [C]	DMA Areas x Runoff Factor [A] x [C]	Enter BMP Name / Identifier Here		
4A	2393	Paving	1.0	0.89	2130			
4B	4204	Paving	1.0	0.89	3742			
4C	3205	Roofs	1.0	0.89	2852			
4D	423	Ornamental LS	0.1	0.11	47			
					Design Storm Depth (in)	Design Volume, (cubic feet)	Capture V <sub>BMP</sub>	Proposed Volume on Plans (cubic feet)
A <sub>T</sub> =Σ[A]=10,225					Σ= [D]=8790	[E]= 0.68	[F] = $\frac{[D] \times [E]}{12}$ =498 cf	[G] 504

[B], [C] is obtained as described in Section 2.3.1 of the WQMP Guidance Document

[E] is obtained from Exhibit A in the WQMP Guidance Document

[G] is obtained from a design procedure sheet, such as in LID BMP Design Handbook and placed in Appendix 6

## Section E: Alternative Compliance (LID Waiver Program)

LID BMPs are expected to be feasible on virtually all projects. Where LID BMPs have been demonstrated to be infeasible as documented in Section D, other Treatment Control BMPs must be used (subject to LID waiver approval by the Copermittee). Check one of the following Boxes:

LID Principles and LID BMPs have been incorporated into the site design to fully address all Drainage Management Areas. No alternative compliance measures are required for this project and thus this Section is not required to be completed.

- Or -

The following Drainage Management Areas are unable to be addressed using LID BMPs. A site-specific analysis demonstrating technical infeasibility of LID BMPs has been approved by the Co-Permittee and included in Appendix 5. Additionally, no downstream regional and/or sub-regional LID BMPs exist or are available for use by the project. The following alternative compliance measures on the following pages are being implemented to ensure that any pollutant loads expected to be discharged by not incorporating LID BMPs, are fully mitigated.



## E.1 Identify Pollutants of Concern

Utilizing Table A.1 from Section A above which noted your project’s receiving waters and their associated EPA approved 303(d) listed impairments, cross reference this information with that of your selected Priority Development Project Category in Table E.1 below. If the identified General Pollutant Categories are the same as those listed for your receiving waters, then these will be your Pollutants of Concern and the appropriate box or boxes will be checked on the last row. The purpose of this is to document compliance and to help you appropriately plan for mitigating your Pollutants of Concern in lieu of implementing LID BMPs.

Table E.1 Potential Pollutants by Land Use Type

Priority Development Project Categories and/or Project Features (check those that apply)	General Pollutant Categories								
	Bacterial Indicators	Metals	Nutrients	Pesticides	Toxic Organic Compounds	Sediments	Trash & Debris	Oil Grease	&
<input type="checkbox"/> Detached Residential Development	P	N	P	P	N	P	P	P	
<input type="checkbox"/> Attached Residential Development	P	N	P	P	N	P	P	P <sup>(2)</sup>	
<input type="checkbox"/> Commercial/Industrial Development	P <sup>(3)</sup>	P	P <sup>(1)</sup>	P <sup>(1)</sup>	P <sup>(5)</sup>	P <sup>(1)</sup>	P	P	
<input type="checkbox"/> Automotive Repair Shops	N	P	N	N	P <sup>(4, 5)</sup>	N	P	P	
<input type="checkbox"/> Restaurants (>5,000 ft <sup>2</sup> )	P	N	N	N	N	N	P	P	
<input type="checkbox"/> Hillside Development (>5,000 ft <sup>2</sup> )	P	N	P	P	N	P	P	P	
<input type="checkbox"/> Parking Lots (>5,000 ft <sup>2</sup> )	P <sup>(6)</sup>	P	P <sup>(1)</sup>	P <sup>(1)</sup>	P <sup>(4)</sup>	P <sup>(1)</sup>	P	P	
<input type="checkbox"/> Retail Gasoline Outlets	N	P	N	N	P	N	P	P	
<b>Project Priority Pollutant(s) of Concern</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

P = Potential

N = Not Potential

<sup>(1)</sup> A potential Pollutant if non-native landscaping exists or is proposed onsite; otherwise not expected

<sup>(2)</sup> A potential Pollutant if the project includes uncovered parking areas; otherwise not expected

<sup>(3)</sup> A potential Pollutant is land use involving animal waste

<sup>(4)</sup> Specifically petroleum hydrocarbons

<sup>(5)</sup> Specifically solvents

<sup>(6)</sup> Bacterial indicators are routinely detected in pavement runoff

## E.2 Stormwater Credits

Projects that cannot implement LID BMPs but nevertheless implement smart growth principles are potentially eligible for Stormwater Credits. Utilize Table 3-8 within the WQMP Guidance Document to identify your Project Category and its associated Water Quality Credit. If not applicable, write N/A.

Table E.2 Water Quality Credits

Qualifying Project Categories	Credit Percentage <sup>2</sup>
Total Credit Percentage <sup>1</sup>	

<sup>1</sup>Cannot Exceed 50%

<sup>2</sup>Obtain corresponding data from Table 3-8 in the WQMP Guidance Document

## E.3 Sizing Criteria

After you appropriately considered Stormwater Credits for your project, utilize Table E.3 below to appropriately size them to the DCV, or Design Flow Rate, as applicable. Please reference Chapter 3.5.2 of the WQMP Guidance Document for further information.

Table E.3 Treatment Control BMP Sizing

DMA Type/ID	DMA Area (square feet) [A]	Post-Project Surface Type	Effective Impervious Fraction, I <sub>f</sub> [B]	DMA Runoff Factor [C]	DMA Area x Runoff Factor [A] x [C]	Enter BMP Name / Identifier Here
						<p><i>Minimum Design Storm Depth (in)</i></p> <p><i>Design Storm Depth (in)</i></p> <p><i>Design Volume Rate (cubic feet or cfs)</i></p> <p><i>Design Capture Volume or Flow Rate (cubic feet or cfs)</i></p> <p><i>Total Storm Water Credit Reduction %</i></p> <p><i>Proposed Volume or Flow on Plans (cubic feet or cfs)</i></p>
$A_T = \sum[A]$		$\Sigma = [D]$		[E]	$[F] = \frac{[D] \times [E]}{[G]}$	$[F] \times (1-[H]) \quad [I]$

[B], [C] is obtained as described in Section 2.3.1 from the WQMP Guidance Document

[E] is obtained from Exhibit A in the WQMP Guidance Document

[G] is for Flow-Based Treatment Control BMPs [G] = 43,560, for Volume-Based Control Treatment BMPs, [G] = 12

[H] is from the Total Credit Percentage as Calculated from Table E.2 above

[I] as obtained from a design procedure sheet from the BMP manufacturer and should be included in Appendix 6

### E.4 Treatment Control BMP Selection

Treatment Control BMPs typically provide proprietary treatment mechanisms to treat potential pollutants in runoff, but do not sustain significant biological processes. Treatment Control BMPs must have a removal efficiency of a medium or high effectiveness as quantified below:

- **High:** equal to or greater than 80% removal efficiency
- **Medium:** between 40% and 80% removal efficiency

Such removal efficiency documentation (e.g., studies, reports, etc.) as further discussed in Chapter 3.5.2 of the WQMP Guidance Document, must be included in Appendix 6. In addition, ensure that proposed Treatment Control BMPs are properly identified on the WQMP Site Plan in Appendix 1.

Table E.4 Treatment Control BMP Selection

Selected Treatment Control BMP Name or ID <sup>1</sup>	Priority Pollutant(s) of Concern to Mitigate <sup>2</sup>	Removal Efficiency Percentage <sup>3</sup>

<sup>1</sup> Treatment Control BMPs must not be constructed within Receiving Waters. In addition, a proposed Treatment Control BMP may be listed more than once if they possess more than one qualifying pollutant removal efficiency.

<sup>2</sup> Cross Reference Table E.1 above to populate this column.

<sup>3</sup> As documented in a Co-Permittee Approved Study and provided in Appendix 6.

## Section F: Hydromodification

### F.1 Hydrologic Conditions of Concern (HCOC) Analysis

Once you have determined that the LID design is adequate to address water quality requirements, you will need to assess if the proposed LID Design may still create a HCOC. Review Chapters 2 and 3 (including Figure 3-7) of the WQMP Guidance Document to determine if your project must mitigate for Hydromodification impacts. If your project meets one of the following criteria which will be indicated by the check boxes below, you do not need to address Hydromodification at this time. However, if the project does not qualify for Exemptions 1, 2 or 3, then additional measures must be added to the design to comply with HCOC criteria. This is discussed in further detail below in Section F.2.

**HCOC EXEMPTION 1:** The Priority Development Project disturbs less than one acre. The Copermitttee has the discretion to require a Project-Specific WQMP to address HCOCs on projects less than one acre on a case by case basis. The disturbed area calculation should include all disturbances associated with larger common plans of development.

Does the project qualify for this HCOC Exemption?       Y     N

If Yes, HCOC criteria do not apply.

**HCOC EXEMPTION 2:** The volume and time of concentration<sup>1</sup> of storm water runoff for the post-development condition is not significantly different from the pre-development condition for a 2-year return frequency storm (a difference of 5% or less is considered insignificant) using one of the following methods to calculate:

- Riverside County Hydrology Manual
- Technical Release 55 (TR-55): Urban Hydrology for Small Watersheds (NRCS 1986), or derivatives thereof, such as the Santa Barbara Urban Hydrograph Method
- Other methods acceptable to the Co-Permittee

Does the project qualify for this HCOC Exemption?       Y     N

If Yes, report results in Table F.1 below and provide your substantiated hydrologic analysis in Appendix 7.

Table F.1 Hydrologic Conditions of Concern Summary

	2 year – 24 hour		
	Pre-condition	Post-condition	% Difference
<b>Time of Concentration</b>			
<b>Volume (Cubic Feet)</b>			

<sup>1</sup> Time of concentration is defined as the time after the beginning of the rainfall when all portions of the drainage basin are contributing to flow at the outlet.

**HCOC EXEMPTION 3:** All downstream conveyance channels to an adequate sump (for example, Prado Dam, Lake Elsinore, Canyon Lake, Santa Ana River, or other lake, reservoir or naturally erosion resistant feature) that will receive runoff from the project are engineered and regularly maintained to ensure design flow capacity; no sensitive stream habitat areas will be adversely affected; or are not identified on the Co-Permittees Hydromodification Sensitivity Maps.

Does the project qualify for this HCOC Exemption?  Y  N

If Yes, HCOC criteria do not apply and note below which adequate sump applies to this HCOC qualifier:

The proposed site will discharge into Canyon Lake.

## F.2 HCOC Mitigation

If none of the above HCOC Exemption Criteria are applicable, HCOC criteria is considered mitigated if they meet one of the following conditions:

- a. Additional LID BMPS are implemented onsite or offsite to mitigate potential erosion or habitat impacts as a result of HCOCs. This can be conducted by an evaluation of site-specific conditions utilizing accepted professional methodologies published by entities such as the California Stormwater Quality Association (CASQA), the Southern California Coastal Water Research Project (SCCRWP), or other Co-Permittee approved methodologies for site-specific HCOC analysis.
- b. The project is developed consistent with an approved Watershed Action Plan that addresses HCOC in Receiving Waters.
- c. Mimicking the pre-development hydrograph with the post-development hydrograph, for a 2-year return frequency storm. Generally, the hydrologic conditions of concern are not significant, if the post-development hydrograph is no more than 10% greater than pre-development hydrograph. In cases where excess volume cannot be infiltrated or captured and reused, discharge from the site must be limited to a flow rate no greater than 110% of the pre-development 2-year peak flow.

Be sure to include all pertinent documentation used in your analysis of the items a, b or c in Appendix 7.

## Section G: Source Control BMPs

Source control BMPs include permanent, structural features that may be required in your project plans — such as roofs over and berms around trash and recycling areas — and Operational BMPs, such as regular sweeping and “housekeeping”, that must be implemented by the site’s occupant or user. The MEP standard typically requires both types of BMPs. In general, Operational BMPs cannot be substituted for a feasible and effective permanent BMP. Using the Pollutant Sources/Source Control Checklist in Appendix 8, review the following procedure to specify Source Control BMPs for your site:

1. **Identify Pollutant Sources:** Review Column 1 in the Pollutant Sources/Source Control Checklist. Check off the potential sources of Pollutants that apply to your site.
2. **Note Locations on Project-Specific WQMP Exhibit:** Note the corresponding requirements listed in Column 2 of the Pollutant Sources/Source Control Checklist. Show the location of each Pollutant source and each permanent Source Control BMP in your Project-Specific WQMP Exhibit located in Appendix 1.
3. **Prepare a Table and Narrative:** Check off the corresponding requirements listed in Column 3 in the Pollutant Sources/Source Control Checklist. In the left column of Table G.1 below, list each potential source of runoff Pollutants on your site (from those that you checked in the Pollutant Sources/Source Control Checklist). In the middle column, list the corresponding permanent, Structural Source Control BMPs (from Columns 2 and 3 of the Pollutant Sources/Source Control Checklist) used to prevent Pollutants from entering runoff. **Add additional narrative** in this column that explains any special features, materials or methods of construction that will be used to implement these permanent, Structural Source Control BMPs.
4. **Identify Operational Source Control BMPs:** To complete your table, refer once again to the Pollutant Sources/Source Control Checklist. List in the right column of your table the Operational BMPs that should be implemented as long as the anticipated activities continue at the site. Copermittee stormwater ordinances require that applicable Source Control BMPs be implemented; the same BMPs may also be required as a condition of a use permit or other revocable Discretionary Approval for use of the site.

**Table G.1** Permanent and Operational Source Control Measures

Potential Sources of Runoff pollutants	Permanent Structural Source Control BMPs	Operational Source Control BMPs
A. On-site storm drain catch basins and grated inlets. Locations are shown on the PWQMP Exhibit in Appendix 1.	On-site storm drain signage will utilize language "No Dumping Drains to River," or equally approved text that is consistent with City of Moreno Valley's requirements. Landscape area drains surrounded by vegetation will not be signed. Catch Basin Markers may be available from the Riverside County Flood Control and Water	Maintain and periodically repaint or replace inlet markings.  Provide stormwater pollution prevention information to new site owners, lessees, or operators.  See applicable operational BMPs in Fact Sheet SC-44, "Drainage System Maintenance, " in Appendix 10 (CASQA Stormwater Quality

	Conservation District, call 951-955-1200 to verify.	Handbook at <a href="http://www.cabmphandbooks.com">www.cabmphandbooks.com</a> )
B. Interior floor drains	The interior floor drains will be plumbed to sanitary sewer	Inspect and maintain drains to prevent blockages and overflow.
D1. Need for indoor and outdoor pest control	Note building design features that discourage entry of pests.	Provide Integrated Pest Management information to owners, lessees, and operators.
D2. Landscape/Outdoor Pesticide Use	<p>The final landscape shall be designed to accomplish all of the following:</p> <p>Design landscape to minimize irrigation and runoff, to promote surface infiltration where appropriate and to minimize the use of fertilizers and pesticides that can contribute to stormwater pollution.</p> <p>Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions.</p> <p>Consider using pest-resistant plants, especially adjacent to hardscape.</p> <p>To insure successful establishments, select plants appropriate to site, soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.</p> <p>Pesticide usage should be at a necessary minimum and be consistent with the instructions contained on product labels and with the regulations administered by the State Department of Pesticide Regulation.</p> <p>Pesticides should be used at an absolute minimum or not at all in the retention/infiltration basin. If used, it should not be applied in close proximity to the rainy season.</p>	<p>Maintain landscaping using minimum or no pesticide.</p> <p>See applicable operational BMPs in "What you should know for... Landscape and Gardening" at <a href="http://rcflood.org/stormwater">http://rcflood.org/stormwater</a> and Appendix 10.</p> <p>Provide IPM information to new owners, lessees, and operators.</p> <p>Landscape maintenance should include mowing, weeding, trimming, removal of trash and debris, repair of erosion, re-vegetation, and removal of cut and dead vegetation.</p> <p>Irrigation maintenance should include the repair of leaky or broken sprinkler heads, the maintaining of timing apparatus accuracy, and the maintaining of shut off valves in good working order.</p>
F. Food Service	<p>For restaurants, grocery stores, and other food service operations, show location (indoors or in a covered area outdoors) of a floor sink or other area for cleaning floor mats, containers, and equipment.</p> <p>On the drawing, show a note that this drain will be connected to a grease interceptor before</p>	See the brochure, "The Food Service Industry Best Management Practices for: Restaurants, Grocery Stores, Delicatessens and Bakeries" in Appendix 10.

		discharging to the sanitary sewer.	
G.	Refuse Trash Storage Areas	<p>Trash container storage areas shall be paved with an impervious surface, designed not to allow run-on from adjoining areas, designed to divert drainage from adjoining roofs and pavements from the surrounding area, and screened or walled to prevent off-site transport of trash.</p> <p>Trash dumpsters (containers) shall be leak proof and have attached covers or lids.</p> <p>Trash enclosures shall be roofed per City Standards and the details on the PWQMP Exhibit in Appendix 1.</p> <p>Signs shall be posted on or near dumpsters with the words "Do not dump hazardous materials here" or similar.</p>	<p>Adequate number of receptacles shall be provided. Inspect receptacles regularly; repair or replace leaky receptacles. Keep receptacles covered.</p> <p>Prohibit /prevent dumping of liquid or hazardous wastes. Post "No hazardous materials" signs. Inspect and pick up litter daily and clean up spills immediately. Keep spill control materials available on site. See Fact Sheet SC-34, in Appendix 10, "Waste Handling and Disposal" in the CASQA Stormwater Quality Handbook at <a href="http://www.cabmphandbooks.com">www.cabmphandbooks.com</a></p>
J.	Vehicle and Equipment Cleaning	<p>Show on drawings as appropriate:</p> <p>(1) Commercial/industrial facilities having vehicle / equipment cleaning needs shall either provide a covered, bermed area for washing activities or discourage vehicle / equipment washing by removing hose bibs and installing signs prohibiting such uses.</p> <p>(2) Commercial car wash facilities shall be designed such that no runoff from the facility is discharged to the storm drain system. Wastewater from the facility shall discharge to the sanitary sewer, or a wastewater reclamation system shall be installed.</p>	<p>Washwater from vehicle and equipment washing operations shall not be discharged to the storm drain system.</p> <p>Refer to "Outdoor Cleaning Activities and Professional Mobile Service Providers" for many of the Potential Sources of Runoff Pollutants categories below. Brochure can be found at <a href="http://rcflood.org/stormwater/">http://rcflood.org/stormwater/</a></p>
L.	Fuel Dispensing Areas	<p>Fueling areas shall have impermeable floors (i.e., Portland cement concrete or equivalent smooth impervious surface) that are: a) graded at the minimum slope necessary to prevent ponding; and b) separated from the rest of the site by a grade break that prevents run-on of stormwater to the maximum extent practicable.</p> <p>Fueling areas shall be covered by a</p>	



	canopy that extends a minimum of ten feet in each direction from each pump. [Alternative: The fueling area must be covered and the cover's minimum dimensions must be equal to or greater than the area within the grade break or fuel dispensing area.] The canopy [or cover] shall not drain onto the fueling area.	
N. Fire Sprinkler Test Water	Provide a means to drain fire sprinkler test water to the sanitary sewer.	See the note in the Fact Sheet SC-41, in Appendix 10, "Building and Grounds Maintenance", in the CASQA Stormwater Quality Handbooks at <a href="http://www.cabmphandbooks.com">www.cabmphandbooks.com</a>
O. Miscellaneous Drain or Wash Water or Other Sources		
Condensate drain lines	Condensate drain lines may discharge to landscaped areas if the flow is small enough that runoff will not occur.	
Rooftop equipment	Condensate drain lines may not discharge to the storm drain system. Rooftop equipment with potential to produce pollutants shall be roofed and/or have secondary containment.	
Drainage sumps	Any drainage sumps on-site shall feature a sediment sump to reduce the quantity of sediment in pumped water.	
Roofing, gutters and trim	Avoid roofing, gutters and trim made of copper or other unprotected metals that may leach into runoff.	
Other sources	Include controls for other sources as specified by local reviewer.	
P. Plazas, sidewalks, and parking lots	Spill kits are to be kept on-site at all times per SC-11.	Sweep plazas, sidewalks, and parking lots regularly to prevent accumulation of litter and debris. Collect debris from pressure washing to prevent entry into the storm drain system. Collect washwater containing any cleaning agent or degreaser and discharge to the sanitary sewer not to a storm drain.



## Section H: Construction Plan Checklist

Populate Table H.1 below to assist the plan checker in an expeditious review of your project. The first two columns will contain information that was prepared in previous steps, while the last column will be populated with the corresponding plan sheets. This table is to be completed with the submittal of your final Project-Specific WQMP.

Table H.1 Construction Plan Cross-reference

BMP No. or ID	BMP Identifier and Description	Corresponding Plan Sheet(s)

Note that the updated table — or Construction Plan WQMP Checklist — is **only a reference tool** to facilitate an easy comparison of the construction plans to your Project-Specific WQMP. Co-Permittee staff can advise you regarding the process required to propose changes to the approved Project-Specific WQMP.

## Section I: Operation, Maintenance and Funding

The Copermittee will periodically verify that Stormwater BMPs on your site are maintained and continue to operate as designed. To make this possible, your Copermittee will require that you include in Appendix 9 of this Project-Specific WQMP:

1. A means to finance and implement facility maintenance in perpetuity, including replacement cost.
2. Acceptance of responsibility for maintenance from the time the BMPs are constructed until responsibility for operation and maintenance is legally transferred. A warranty covering a period following construction may also be required.
3. An outline of general maintenance requirements for the Stormwater BMPs you have selected.
4. Figures delineating and designating pervious and impervious areas, location, and type of Stormwater BMP, and tables of pervious and impervious areas served by each facility. Geo-locating the BMPs using a coordinate system of latitude and longitude is recommended to help facilitate a future statewide database system.
5. A separate list and location of self-retaining areas or areas addressed by LID Principles that do not require specialized O&M or inspections but will require typical landscape maintenance as noted in Chapter 5, pages 85-86, in the WQMP Guidance. Include a brief description of typical landscape maintenance for these areas.

Your local Co-Permittee will also require that you prepare and submit a detailed Stormwater BMP Operation and Maintenance Plan that sets forth a maintenance schedule for each of the Stormwater BMPs built on your site. An agreement assigning responsibility for maintenance and providing for inspections and certification may also be required.

Details of these requirements and instructions for preparing a Stormwater BMP Operation and Maintenance Plan are in Chapter 5 of the WQMP Guidance Document.

**Maintenance Mechanism:** WQMP Covenant and Agreement with the City of Moreno Valley. All funding will be provided by Sater Oil International. If at any time Sater Oil International sells the property, then the operation and maintenance responsibilities will be recorded against the property and will be responsibility of the new property owner.

Will the proposed BMPs be maintained by a Home Owners' Association (HOA) or Property Owners Association (POA)?

Y       N

Include your Operation and Maintenance Plan and Maintenance Mechanism in Appendix 9. Additionally, include all pertinent forms of educational materials for those personnel that will be maintaining the proposed BMPs within this Project-Specific WQMP in Appendix 10.

# Appendix 1: Maps and Site Plans

*Location Map, WQMP Site Plan and Receiving Waters Map*

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# Appendix 2: Construction Plans

*Grading and Drainage Plans*

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# Appendix 3: Soils Information

*Geotechnical Study and Other Infiltration Testing Data*

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# Appendix 4: Historical Site Conditions

*Phase I Environmental Site Assessment or Other Information on Past Site Use*

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



# Appendix 5: LID Infeasibility

*LID Technical Infeasibility Analysis*

**(N/A)**

**Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)**

# Appendix 6: BMP Design Details

*BMP Sizing, Design Details and other Supporting Documentation*

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# Appendix 7: Hydromodification

*Supporting Detail Relating to Hydrologic Conditions of Concern*

**"EXEMPT"**

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# Appendix 8: Source Control

*Pollutant Sources/Source Control Checklist*

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# Appendix 9: O&M

*Operation and Maintenance Plan and Documentation of Finance, Maintenance and Recording Mechanisms*

**"TO BE PROVIDED DURING FINAL WQMP"**

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# Appendix 10: Educational Materials

*BMP Fact Sheets, Maintenance Guidelines and Other End-User BMP Information*

**"TO BE PROVIDED DURING FINAL WQMP"**

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# Appendix 1: Maps and Site Plans


*Location Map, WQMP Site Plan and Receiving Waters Map*

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



REFERENCE: Rand McNally (2018)

Scale:  
 Horizontal: N.T.S.      Vertical: N/A



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 (425) 251-8782

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 SURVEYING, ENVIRONMENTAL SERVICES

For:  
**Sater ARCO  
 Moreno Valley, CA**

Title:  
**VICINITY MAP**

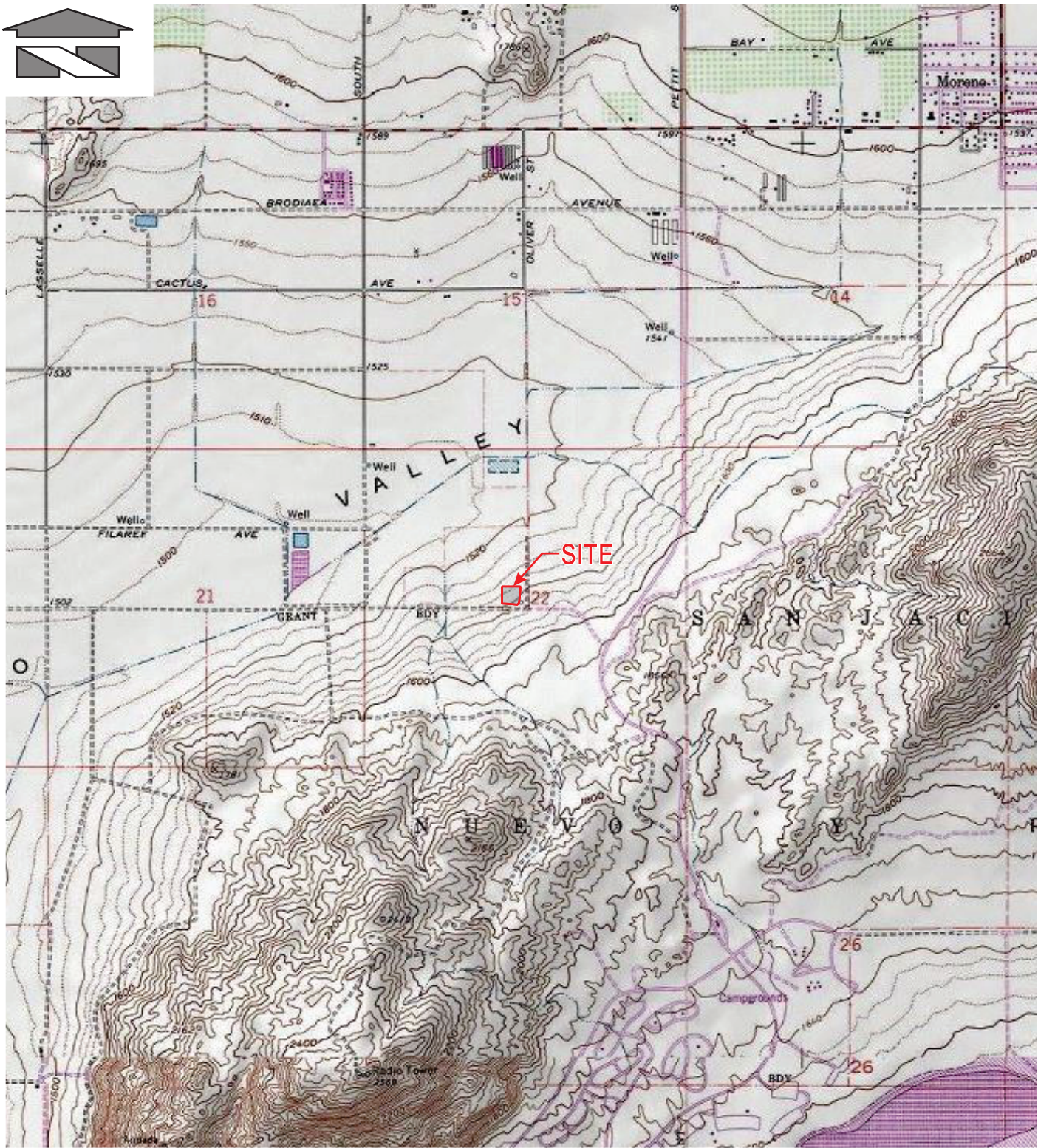
Job Number  
**18501**

Figure  
**1**

DATE: 01/15/18

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)





REFERENCE: ESRI/USGS

Scale:

Horizontal: N.T.S.

Vertical: N/A



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For:

Sater ARCO  
Moreno Valley, CA

Job Number

18501

Title:

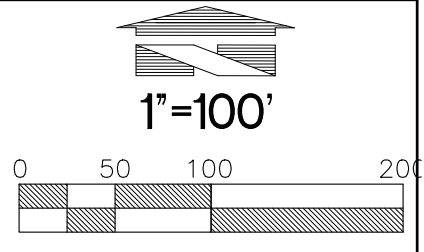
USGS TOPOGRAPHY  
MAP

Figure

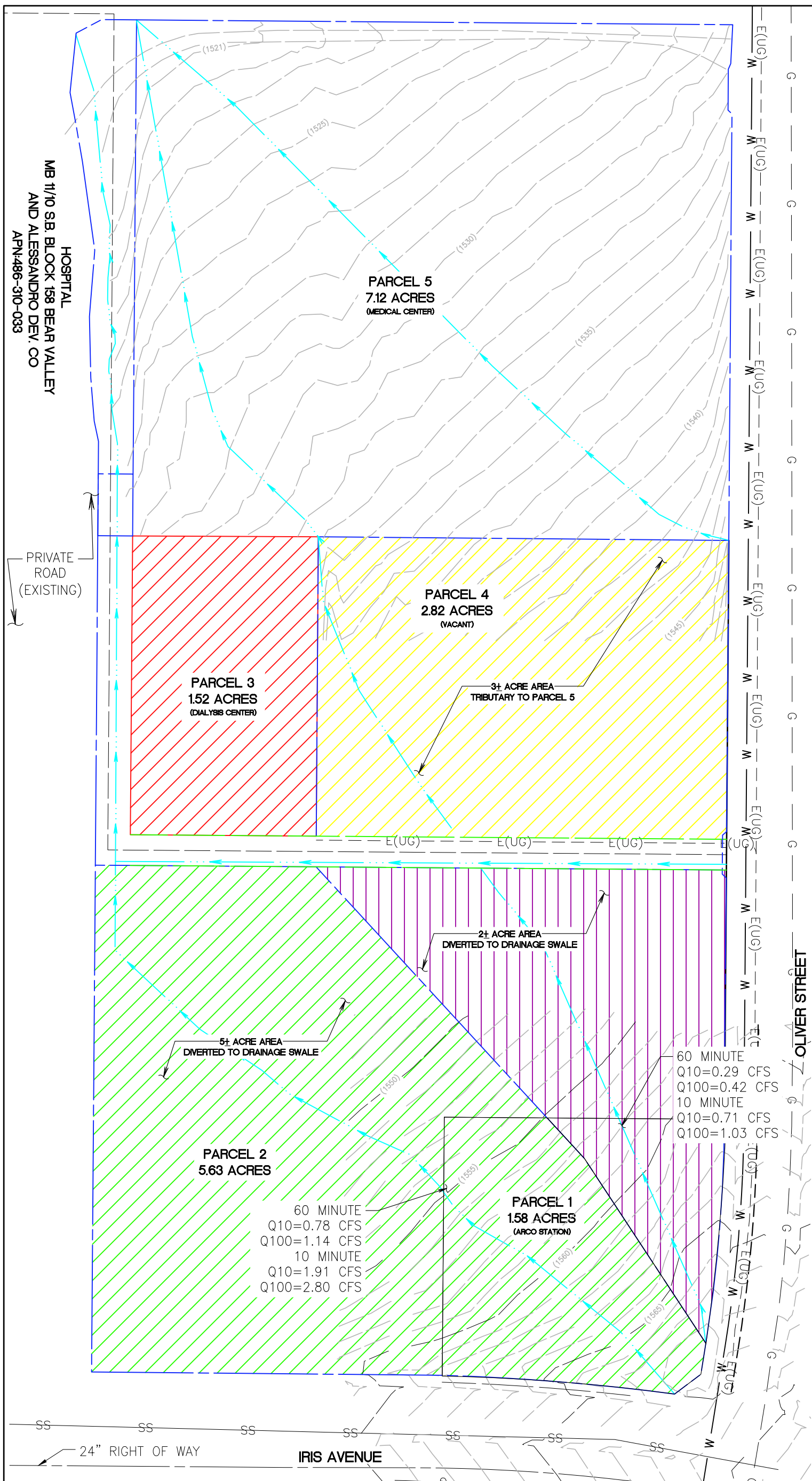
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DATE: 01/15/18

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

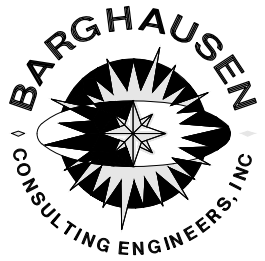


LEGEND	
	WATERSHED BOUNDRY
	DRAINAGE PATH
	EXISTING CONTOURS (1535)



60 MINUTE  
Q10=0.29 CFS  
Q100=0.42 CFS  
10 MINUTE  
Q10=0.71 CFS  
Q100=1.03 CFS

60 MINUTE  
Q10=0.78 CFS  
Q100=1.14 CFS  
10 MINUTE  
Q10=1.91 CFS  
Q100=2.80 CFS



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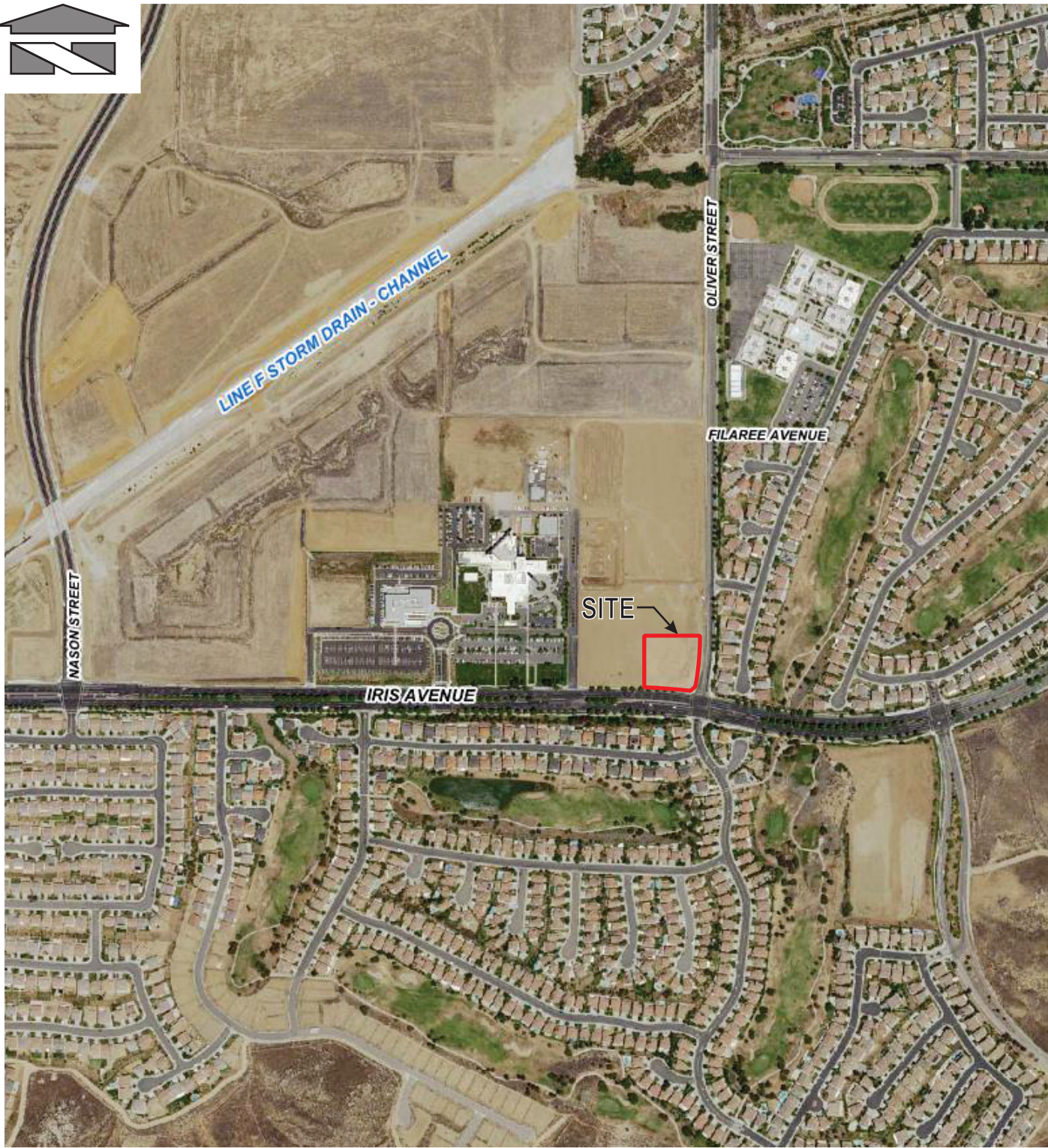
CIVIL ENGINEERING, LAND PLANNING,  
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SITE SOILS GROUP: B  
EXISTING CONDITION : UNDEVELOPED POOR COVER, C=78  
PROPOSED COMMERCIAL IMPERVIOUS SURFACES, C=90  
PROPOSED COMMERCIAL LANDSCAPING, C=56  
SEE SECTION 2.0 OF THIS DRAINAGE REPORT

**EXISTING DRAINAGE BASIN PLAN**

**FIGURE 2A**

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



REFERENCE: USDA-FSA Aerial Photography

Scale:

Horizontal: N.T.S.

Vertical: N/A



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Job Number

18501

Title:

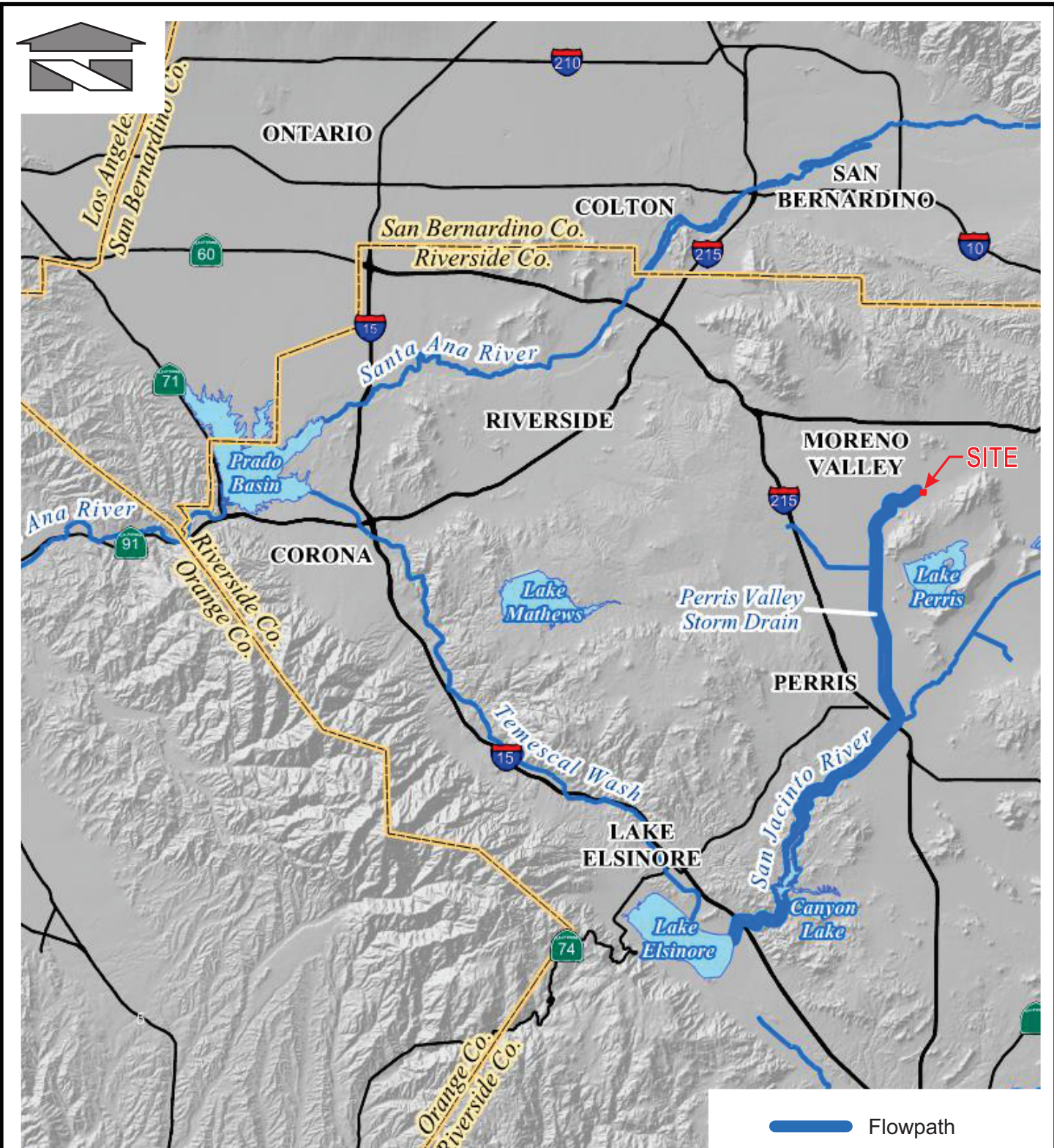
AERIAL PHOTOGRAPH

Figure

3

DATE: 01/15/18

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



REFERENCE: USGS

Scale:

Horizontal: N.T.S. Vertical: N/A



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For:

Sater ARCO  
Moreno Valley, CA

Title:

RECEIVING  
WATERBODIES

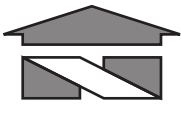
Job Number

18501

Figure

4

DATE: 01/15/18



REFERENCE: USDA, Natural Resources Conservation Service

LEGEND:

- HcC = Hanford coarse sandy loam, 2-8% slopes
- GIC = Gorgonio loamy sand, deep, 2-8% slopes

Scale:

Horizontal: N.T.S.      Vertical: N/A



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Sater ARCO  
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Job Number

18501

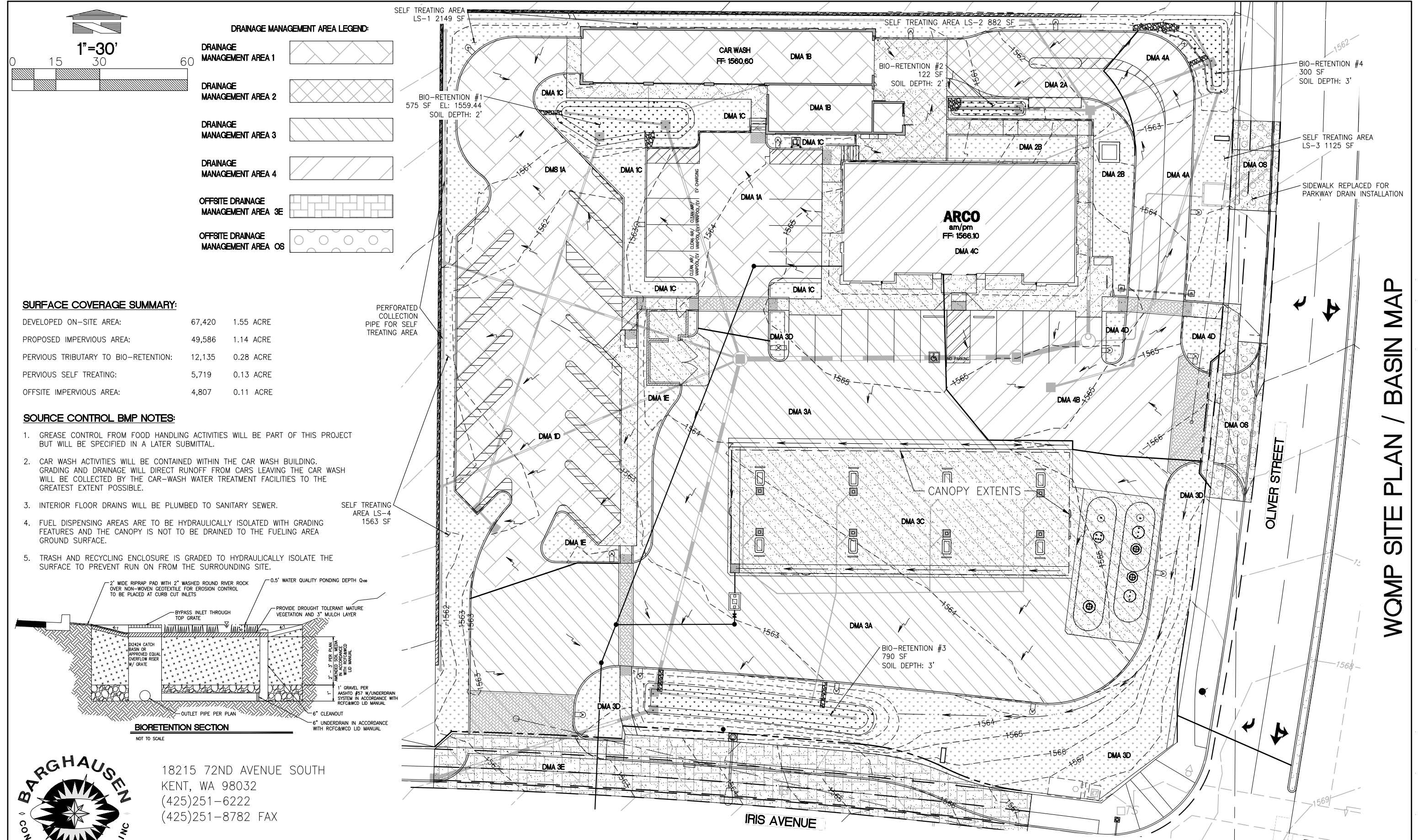
Title:

SOIL SURVEY MAP

Figure

5

DATE: 01/15/18



**DRAINAGE MANAGEMENT AREA LEGEND:**

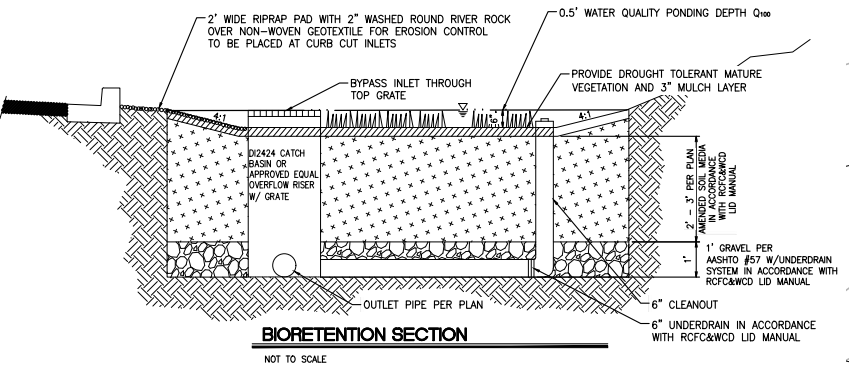
- DRAINAGE MANAGEMENT AREA 1
- DRAINAGE MANAGEMENT AREA 2
- DRAINAGE MANAGEMENT AREA 3
- DRAINAGE MANAGEMENT AREA 4
- OFFSITE DRAINAGE MANAGEMENT AREA 3E
- OFFSITE DRAINAGE MANAGEMENT AREA OS

**SURFACE COVERAGE SUMMARY:**

DEVELOPED ON-SITE AREA:	67,420	1.55 ACRE
PROPOSED IMPERVIOUS AREA:	49,586	1.14 ACRE
PERVIOUS TRIBUTARY TO BIO-RETENTION:	12,135	0.28 ACRE
PERVIOUS SELF TREATING:	5,719	0.13 ACRE
OFFSITE IMPERVIOUS AREA:	4,807	0.11 ACRE

**SOURCE CONTROL BMP NOTES:**

- GREASE CONTROL FROM FOOD HANDLING ACTIVITIES WILL BE PART OF THIS PROJECT BUT WILL BE SPECIFIED IN A LATER SUBMITTAL.
- CAR WASH ACTIVITIES WILL BE CONTAINED WITHIN THE CAR WASH BUILDING. GRADING AND DRAINAGE WILL DIRECT RUNOFF FROM CARS LEAVING THE CAR WASH WILL BE COLLECTED BY THE CAR-WASH WATER TREATMENT FACILITIES TO THE GREATEST EXTENT POSSIBLE.
- INTERIOR FLOOR DRAINS WILL BE PLUMBED TO SANITARY SEWER.
- FUEL DISPENSING AREAS ARE TO BE HYDRAULICALLY ISOLATED WITH GRADING FEATURES AND THE CANOPY IS NOT TO BE DRAINED TO THE FUELING AREA GROUND SURFACE.
- TRASH AND RECYCLING ENCLOSURE IS GRADED TO HYDRAULICALLY ISOLATE THE SURFACE TO PREVENT RUN ON FROM THE SURROUNDING SITE.



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**WQMP SITE PLAN / BASIN MAP**

FIGURE 6

**WQMP SITE PLAN / BASIN MAP**

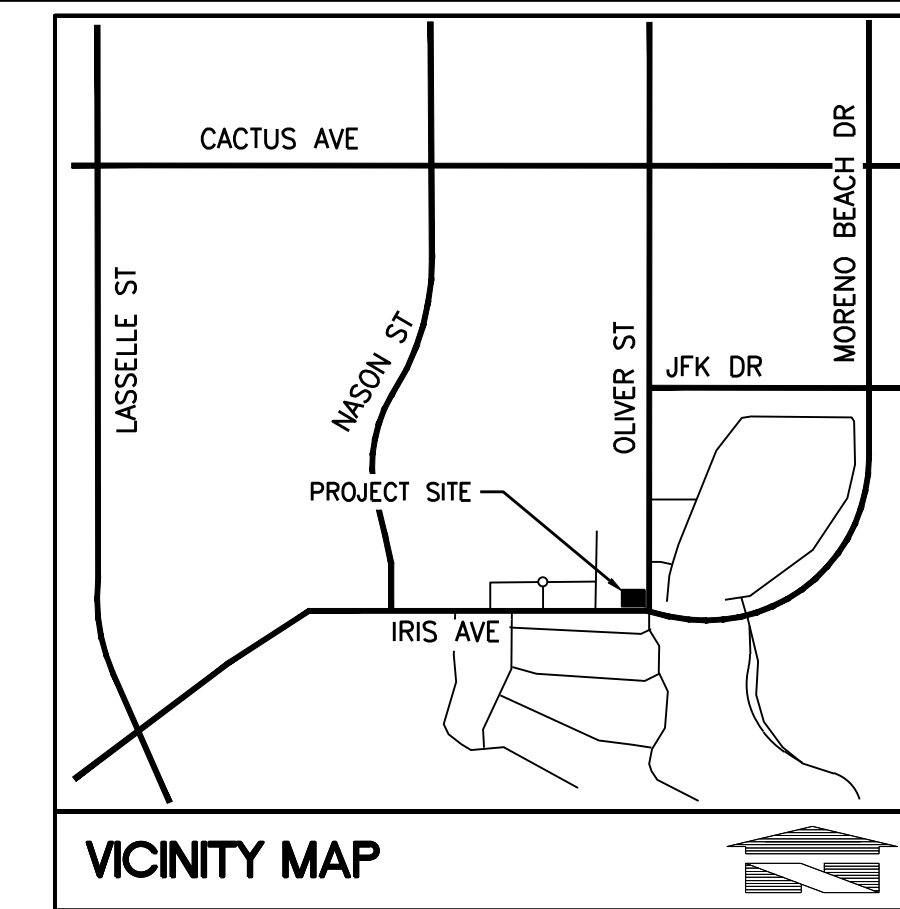
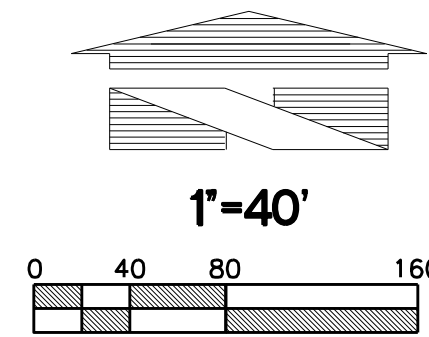
Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# Appendix 2: Construction Plans

*Grading and Drainage Plans*

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

PRELIMINARY GRADING COVER SHEET  
FOR  
**ARCO AM/PM**  
PTN OF SEC. 22,  
TWP. 3 S., RGE 3 WEST, S.B.M  
RIVERSIDE COUNTY STATE OF CALIFORNIA



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NO.	DATE	REVISION DESCRIPTION
1	3/20/18	CITY COMMENTS
2	6/01/18	CITY COMMENTS
3	8/07/18	CITY COMMENTS
4	9/26/18	CITY COMMENTS



SEAL:

9/25/2018  
DEVELOPMENT INFORMATION:  
**ARCO NTI**  
3000 am/pm  
FUEL CANOPY  
w/ 8 MPD's  
26'x100' CAR WASH  
SITE ADDRESS:  
**NWC IRIS AVE @ OLIVER ST**  
**MORENO VALLEY, CA**  
FACILITY # TBD

DESIGNED BY: ALLIANCE Z&M:  
CHECKED BY: JC BP REPM:  
DRAWN BY: ZJ ALLIANCE PM:  
VERSION: PROJECT NO:  
18501

DRAWING TITLE:  
**PRELIMINARY  
GRADING  
COVER SHEET**  
SHEET NO:

**C1.0**

**NOT FOR CONSTRUCTION**

**SURVEY INFORMATION:**

TOPO AND ALTA SURVEY PERFORMED BY SALEM ENGINEERING GROUP

SURVEY DATE:  
NOVEMBER, 2017

CALCULATED AREA:  
68,787± SQ. FT. (1.58± ACRES)

CALCULATED AREA AFTER DEDICATIONS OF ROW:  
67,376± SQ. FT. (1.55± ACRES)

APN: 486-310-038

PARCELS 1 AS SHOWN ON PARCEL MAP NO. 33361, RECORDED IN BOOK 239, PAGES 30-32 OF PARCEL MAPS, OFFICIAL RECORD OF RIVERSIDE COUNTY, CALIFORNIA, LYING WITHIN SECTION 22, TOWNSHIP 3 SOUTH, RANGE 3 WEST, S.B.M., CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

**BASIS OF BEARINGS**

NORTH 00°26'04" EAST, BEING THE BEARING OF THE CENTERLINE OF OLIVER STREET, AS SHOWN IN BOOK 239 OF PARCEL MAPS, AT PAGE 32, OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

**BENCHMARK**

RIVERSIDE COUNTY VERTICAL CONTROL POINT "M-32", BEING A 1" IRON PIPE AND COUNTY TAG STAMPED COUNTY SURVEYOR IN A HAND WELL, AT THE INTERSECTION PERRIS BOULEVARD AND IRIS AVENUE, 58.55 FEET SOUTHWEST OF A CHISELED "X" IN A 3" IRON CORNER POST, 40.89 FEET NORTHEAST OF NAIL AND TAG IN THE WEST SIDE POWER POLE #213136, 34.69 FEET NORTHWEST OF A NAIL AND TAG SET IN SOUTHWEST SIDE TELEPHONE POLE #15160, A

ELEVATION: 1503.53 (US SURVEY FEET)  
NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).

ALL ELEVATIONS SHOWN HEREON ARE (NAVD 88) NORTH AMERICAN VERTICAL DATUM 1988. TO TRANSLATE ELEVATIONS TO (NGVD 29) SUBTRACT -2.36' FROM ELEVATION SHOWN.

**FLOOD NOTE**

THE SUBJECT PROPERTY IS LOCATED WITHIN A ZONE "X" DESIGNATION PER FLOOD INSURANCE RATE MAP NO. 06065C0770C MAP EFFECTIVE DATE AUGUST 28, 2008. AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

**LEGAL DESCRIPTION:**

THE LAND IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, CALIFORNIA, DESCRIBED AS FOLLOWS:

PARCEL A:

PARCEL 1 OF PARCEL MAP NO. 33361, IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 239, PAGE 30 THROUGH 32 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

PARCEL B:

A NONEXCLUSIVE, PERMANENT SEWER AND ACCESS EASEMENT ON OVER AND ACROSS THAT CERTAIN PARCEL OF LAND SITUATED IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, BEING A PORTION OF LOT 7 AND LOT 8 IN BLOCK 151, OF BEAR VALLEY AND ALESSANDRO DEVELOPMENT CO. AS SHOWN BY MAP ON FILE IN BOOK 11 OF MAPS, PAGE 10, RECORDS OF SAN BERNARDINO COUNTY, CALIFORNIA, LYING WITHIN SECTION 22, TOWNSHIP 3 SOUTH, RANGE 3 WEST, S.B.M. MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF SAID LOT 7, SAID POINT ALSO BEING THE INTERSECTION OF THE CENTERLINE OF FILAREE AVENUE AND THE WEST LINE OF LOT 7 AS SHOWN ON MAP REFERENCED ABOVE AND THE TRUE POINT OF BEGINNING;

THENCE SOUTH 89° 33' 36" EAST, 694.50 FEET ALONG THE SOUTH LINE OF SAID LOT 7, SAID SOUTH LINE ALSO BEING THE CENTERLINE OF SAID FILAREE AVENUE, TO A POINT THAT LIES ON THE SOUTH LINE OF SAID LOT 8, SAID POINT BEING DISTANT 34.00 FEET FROM THE SOUTHWEST CORNER OF SAID LOT 8;

THENCE NORTH 00° 26' 02" EAST, 10.00 FEET TO A POINT THAT LIES ON A LINE THAT IS PARALLEL WITH AND 10.00 FEET NORTH OF SAID SOUTH LINE OF SAID LOT 8;

THENCE NORTH 89° 33' 36" WEST, 694.50 FEET ALONG SAID PARALLEL LINE TO A POINT ON THE WEST LINE OF SAID LOT 7, SAID PARALLEL LINE IS ALSO PARALLEL WITH THE SOUTH LINE OF SAID LOT 7;

THENCE SOUTH 00° 19' 23" WEST, 10.00 FEET ALONG SAID WEST LINE OF LOT 7 TO TRUE POINT OF BEGINNING, RECORDED SEPTEMBER 30, 2014 AS INSTRUMENT NO. 2014-0371036, OF OFFICIAL RECORDS, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.

**UTILITY AND SERVICE PURVEYORS:**

POWER: SOUTHERN CALIFORNIA EDISON  
GAS: THE GAS COMPANY  
PHONE: FRONTIER  
CABLE: FRONTIER  
WATER: EASTERN MUNICIPAL WATER DISTRICT  
SEWER: EASTERN MUNICIPAL WATER DISTRICT  
SCHOOL DISTRICT: MORENO VALLEY UNITED SCHOOL DISTRICT

**APPLICANT**

SATER OIL INTERNATIONAL, LLC  
683 CLIFFSIDE DRIVE  
SAN DIMAS, CA 91773  
PHONE (909) 293-7588  
CONTACT: ERIC LEVAUGHN

**ENGINEER**

BARGHAUSEN CONSULTING ENGINEERS, INC.  
18215 72ND AVE. SOUTH  
KENT, WA 98032  
TEL: (425) 251-6222  
FAX: (425) 251-8782  
CONTACT: HAL GRUBB, P.E.

**GEOTECHNICAL**

SALEM ENGINEERING GROUP, INC.  
11650 MISSION PARK DR., #108  
RANCHO CUCAMONGA, CA 91730  
TEL: (909) 980-6455  
FAX: (909) 980-6435

**ARCHITECT**

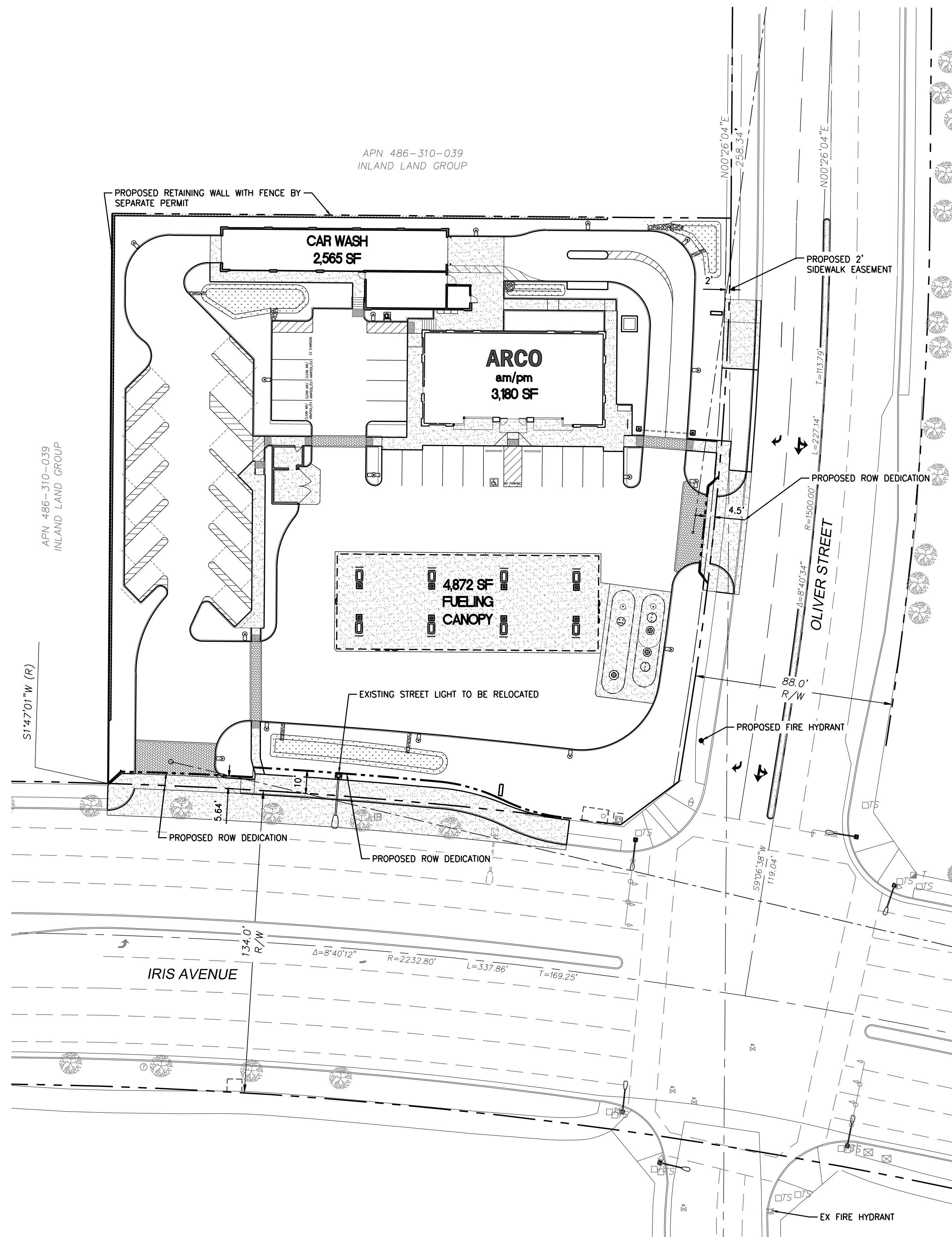
BARGHAUSEN CONSULTING ENGINEERS, INC.  
18215 72ND AVE. SOUTH  
KENT, WA 98032  
TEL: (425) 251-6222  
FAX: (425) 251-8782  
CONTACT: DAN GOALWIN

**LANDSCAPE ARCHITECT**

BARGHAUSEN CONSULTING ENGINEERS, INC.  
18215 72ND AVE. SOUTH  
KENT, WA 98032  
TEL: (425) 251-6222  
FAX: (425) 251-8782  
CONTACT: JEFF VARLEY, R.L.A.

**SURVEYOR**

SALEM ENGINEERING GROUP, INC.  
11650 MISSION PARK DRIVE,  
SUITE 108  
RANCHO CUCAMONGA CA 91730  
TEL: (909) 980-6455



**EASEMENTS:**

1. A NONEXCLUSIVE, PERMANENT SEWER AND ACCESS EASEMENT ON OVER AND ACROSS THAT CERTAIN PARCEL OF LAND SITUATED IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, BEING A PORTION OF LOT 7 AND LOT 8 IN BLOCK 151, OF BEAR VALLEY AND ALESSANDRO DEVELOPMENTS CO. AS SHOWN BY MAP ON FILE IN BOOK 11 OF MAPS, PAGE 10, RECORDS OF SAN BERNARDINO COUNTY, CALIFORNIA, LYING WITHIN SECTION 22, TOWNSHIP 3 SOUTH, RANGE 3 WEST, S.B.M.

PROPOSED		EXISTING	
CURB AND GUTTER		CURB	
BARRIER CURB		PAINT STRIPE	
CONCRETE		WATER	
ASPHALT		SANITARY	
SWALE		GAS	
SAWCUT		POWER OVERHEAD	
CONTOUR		POWER UNDERGROUND	
WATER		OH/UG TEL. LINE	
WATER METER		IRRIGATION CONTROL	
STORM		ELECTRICAL TRANSFORMER	
CONCRETE CONTROL JOINT		ELECTRICAL METER	
CONCRETE EXPANSION JOINT		LUMINAIRE (LUM.)	
SANITARY		WATER VALVE (WV)	
GAS		FIRE HYDRANT	
POWER		SS MANHOLE	
PAINT STRIPE		TREES	
NEW RETAINING WALL		TRAFFIC SWITCH	
TYPE 1 CATCH BASIN		TELEPHONE RISER	
TYPE 2 CATCH BASIN			
SANITARY SEWER CLEANOUT			
LOT LIGHT			
FIRE HYDRANT			

Preliminary Not For Construction

PEN18-0016



RETAINING WALL ELEVATIONS:

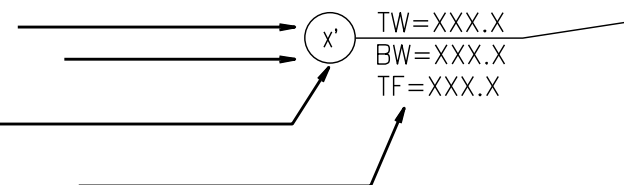
NOTE: WALLS ARE PER SEPARATE PERMIT

DIFFERENCE IN ELEVATIONS

PROPERTY LINE RETAINING WALL  
TW=TOP OF RETAINING WALL ELEVATION  
BW=FACE OF WALL AT FINISHED GRADE  
TF=XXX.X

DIFFERENCE BETWEEN TW AND BW

TF=TOP OF RETAINING WALL FOOTING



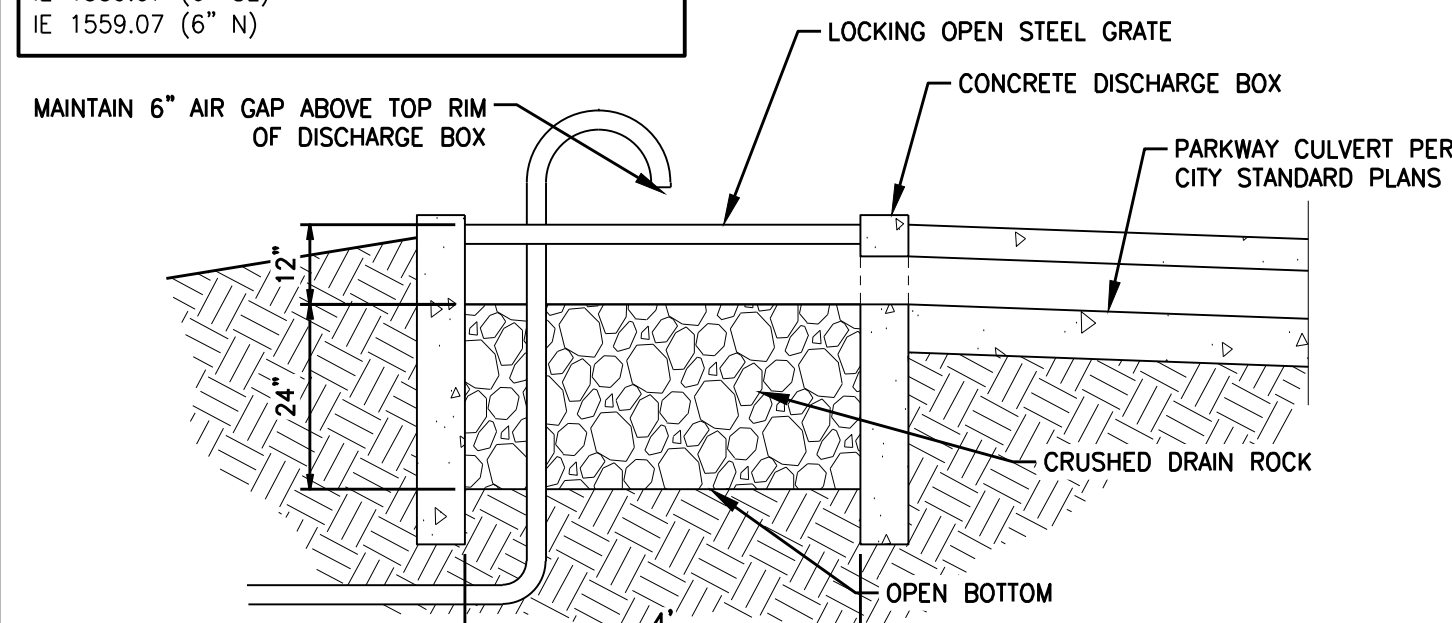
ESTIMATED EARTHWORK QUANTITIES:

CUT: 1000 CY  
FILL: 5000 CY  
NET: 4000 CY (FILL)  
AREA TO BE DISTURBED = 1.58 AC

EARTHWORK QUANTITIES ARE APPROXIMATE AND HIGHLY DEPENDANT ON SOIL CONDITIONS ENCOUNTERED DURING CONSTRUCTION. CONTRACTOR SHOULD PERFORM INDEPENDENT ESTIMATE FOR BIDDING.

STORM STRUCTURES:

Table listing storm structures CB#1 through CB#14, SDCO#1, and W/WEEP HOLES IN BASE with details like RIM, IE, and TF elevations.



STORM DISCHARGE BOX

NOT TO SCALE

SURFACE SLOPES:

- 3.1% PROPOSED PAVED SURFACE SLOPE
10.2% PROPOSED LANDSCAPE SLOPE
8.0% EXISTING SURFACE SLOPE

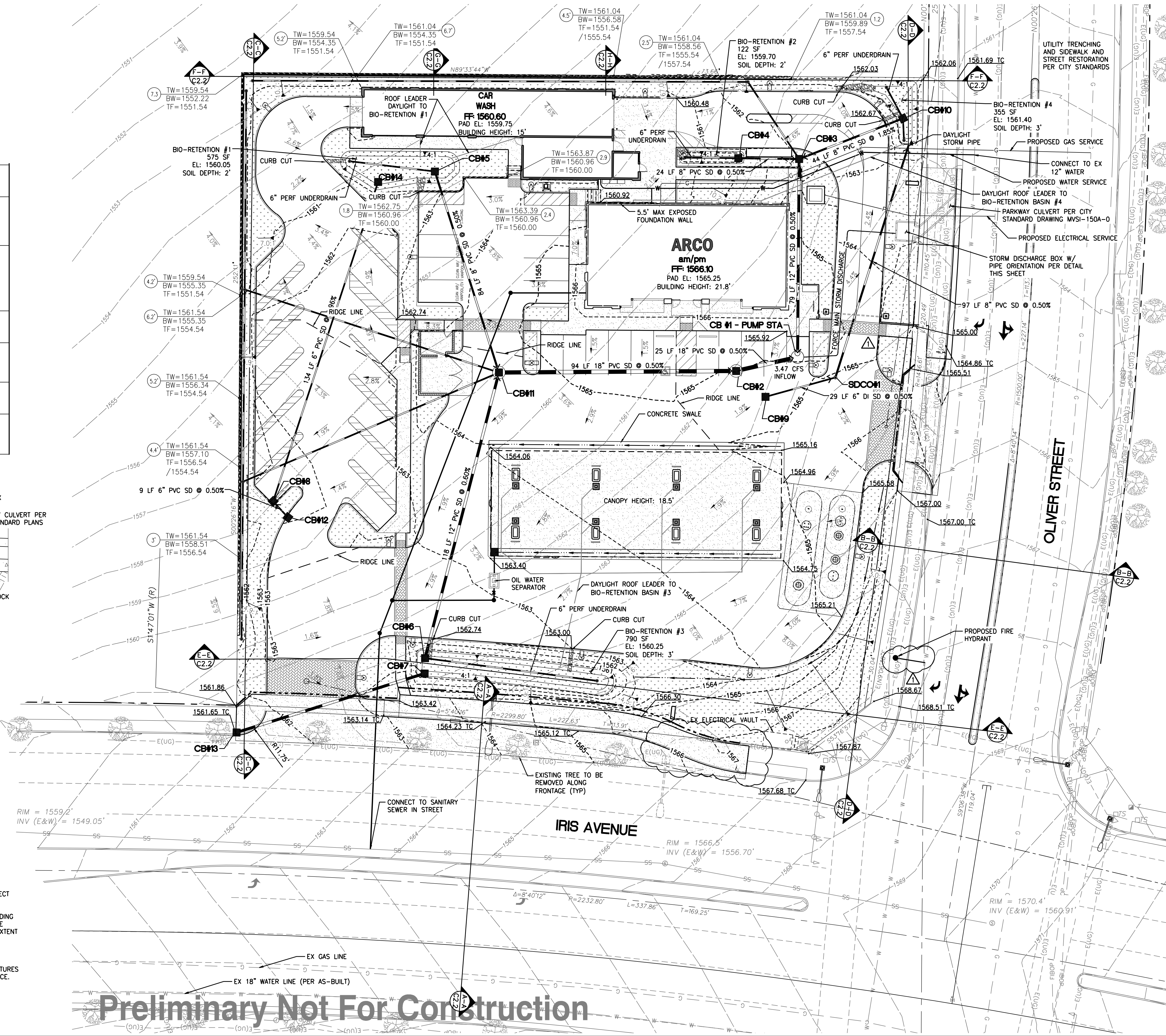
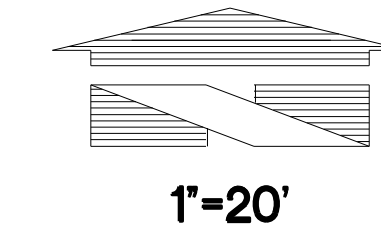
SURFACE COVERAGE SUMMARY:

Table showing surface coverage: DEVELOPED ON-SITE AREA (67,420 1.55 ACRE), PROPOSED IMPERVIOUS AREA (49,586 1.14 ACRE), etc.

SOURCE CONTROL BMP NOTES:

- 1. GREASE CONTROL FROM FOOD HANDLING ACTIVITIES WILL BE PART OF THIS PROJECT BUT WILL BE SPECIFIED IN A LATER SUBMITTAL.
2. CAR WASH ACTIVITIES WILL BE CONTAINED WITHIN THE CAR WASH BUILDING. GRADING AND DRAINAGE WILL DIRECT RUNOFF FROM CARS LEAVING THE CAR WASH WILL BE COLLECTED BY THE CAR-WASH WATER TREATMENT FACILITIES TO THE GREATEST EXTENT POSSIBLE.
3. INTERIOR FLOOR DRAINS WILL BE PLUMBED TO SANITARY SEWER.
4. FUEL DISPENSING AREAS ARE TO BE HYDRAULICALLY ISOLATED WITH GRADING FEATURES AND THE CANOPY IS NOT TO BE DRAINED TO THE FUELING AREA GROUND SURFACE.
5. TRASH AND RECYCLING ENCLOSURE IS GRADED TO HYDRAULICALLY ISOLATE THE SURFACE TO PREVENT RUN ON FROM THE SURROUNDING SITE.

PRELIMINARY GRADING PLAN FOR ARCO AM/PM PTN OF SEC. 22, TWP. 3 S., RGE 3 WEST, S.B.M RIVERSIDE COUNTY STATE OF CALIFORNIA



Preliminary Not For Construction



18215 72ND AVENUE SOUTH KENT, WA 98032 (425)251-6222 (425)251-8782 FAX

CIVIL ENGINEERING, LAND PLANNING, SURVEYING, ENVIRONMENTAL SERVICES

Revision table with columns: NO, DATE, REVISION DESCRIPTION

NOT FOR CONSTRUCTION

9/25/2018

DEVELOPMENT INFORMATION: ARCO NTI 3000 am/pm FUEL CANOPY w/ 8 MPD's 26'x100' CAR WASH

SITE ADDRESS: NWC IRIS AVE @ OLIVER ST MORENO VALLEY, CA

FACILITY # TBD

DESIGNED BY: ALLIANCE Z&M: JG
CHECKED BY: SP REPR: ZJ
DRAWN BY: ALLIANCE PM: ZJ
VERSION: PROJECT NO: 18501

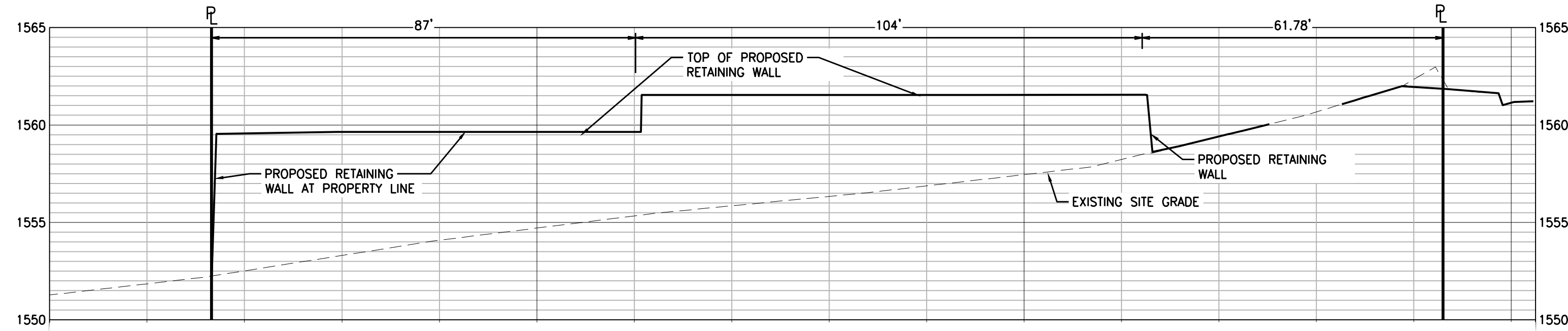
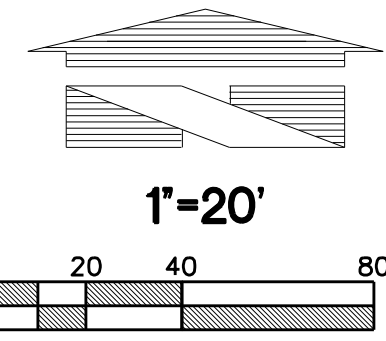
DRAWING TITLE: PRELIMINARY GRADING PLAN

SHEET NO:

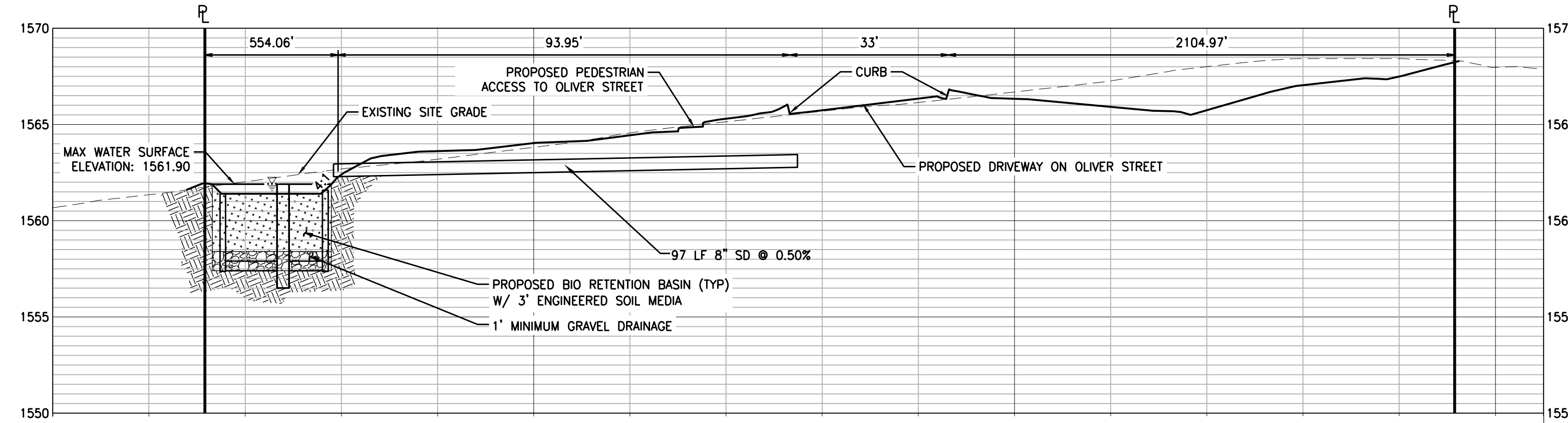
C2.1

PEN18-0016

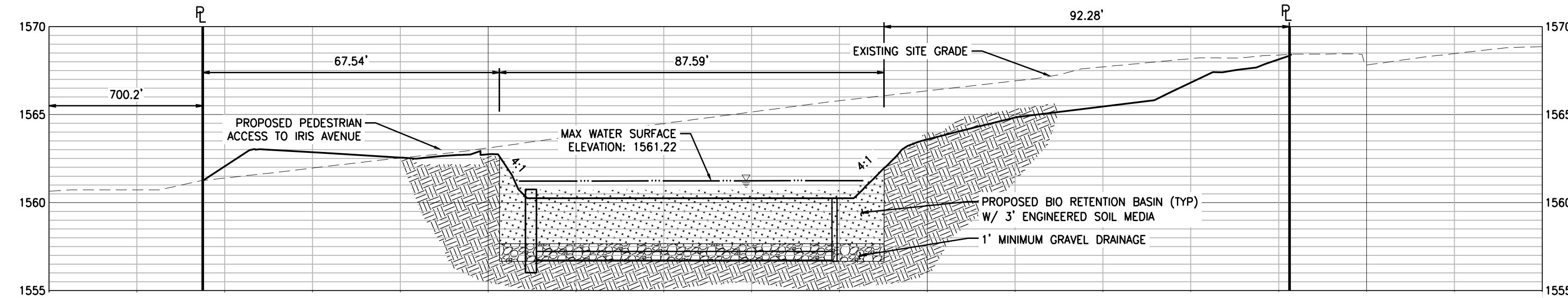
PRELIMINARY SITE CROSS SECTIONS  
FOR  
**ARCO AM/PM**  
PTN OF SEC. 22,  
TWP. 3 S., RGE 3 WEST, S.B.M  
RIVERSIDE COUNTY STATE OF CALIFORNIA



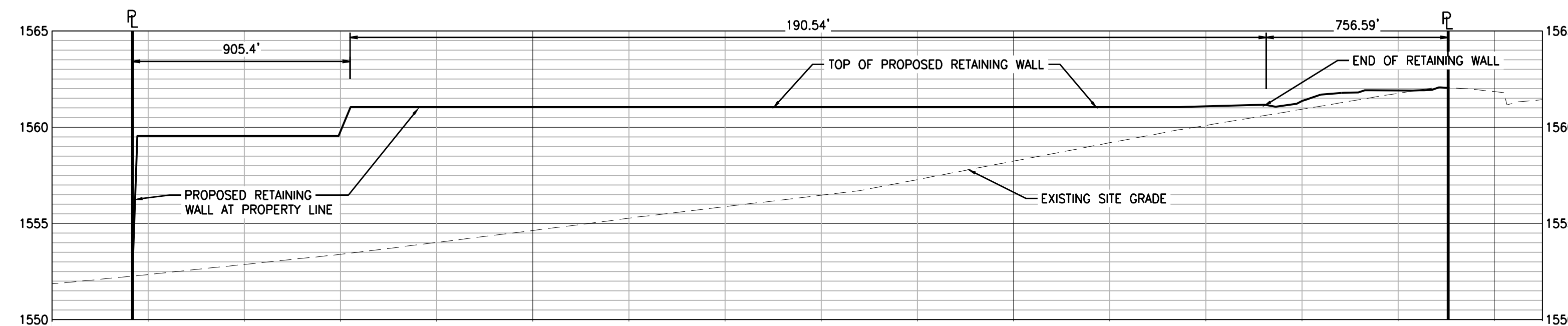
**C-C**  
WEST PROPERTY BOUNDARY N TO S  
SCALE: H: 1"=20' V: 1"=5'



**D-D**  
EAST PROPERTY BOUNDARY N TO S  
SCALE: H: 1"=20' V: 1"=5'

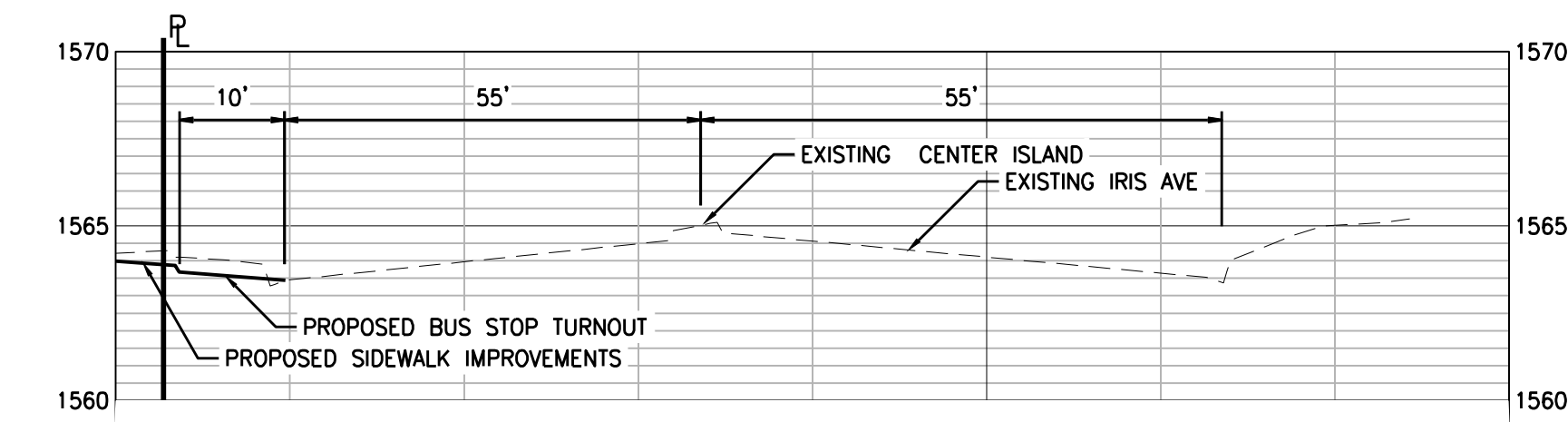


**E-E**  
SOUTH PROPERTY BOUNDARY W TO E  
SCALE: H: 1"=20' V: 1"=5'

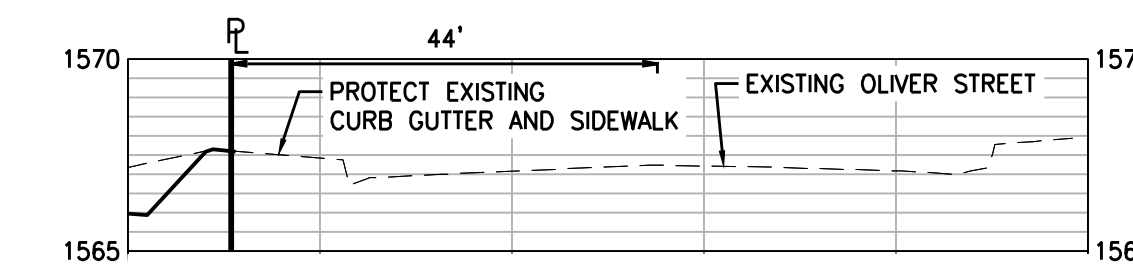


**F-F**  
NORTH PROPERTY BOUNDARY W TO E  
SCALE: H: 1"=20' V: 1"=5'

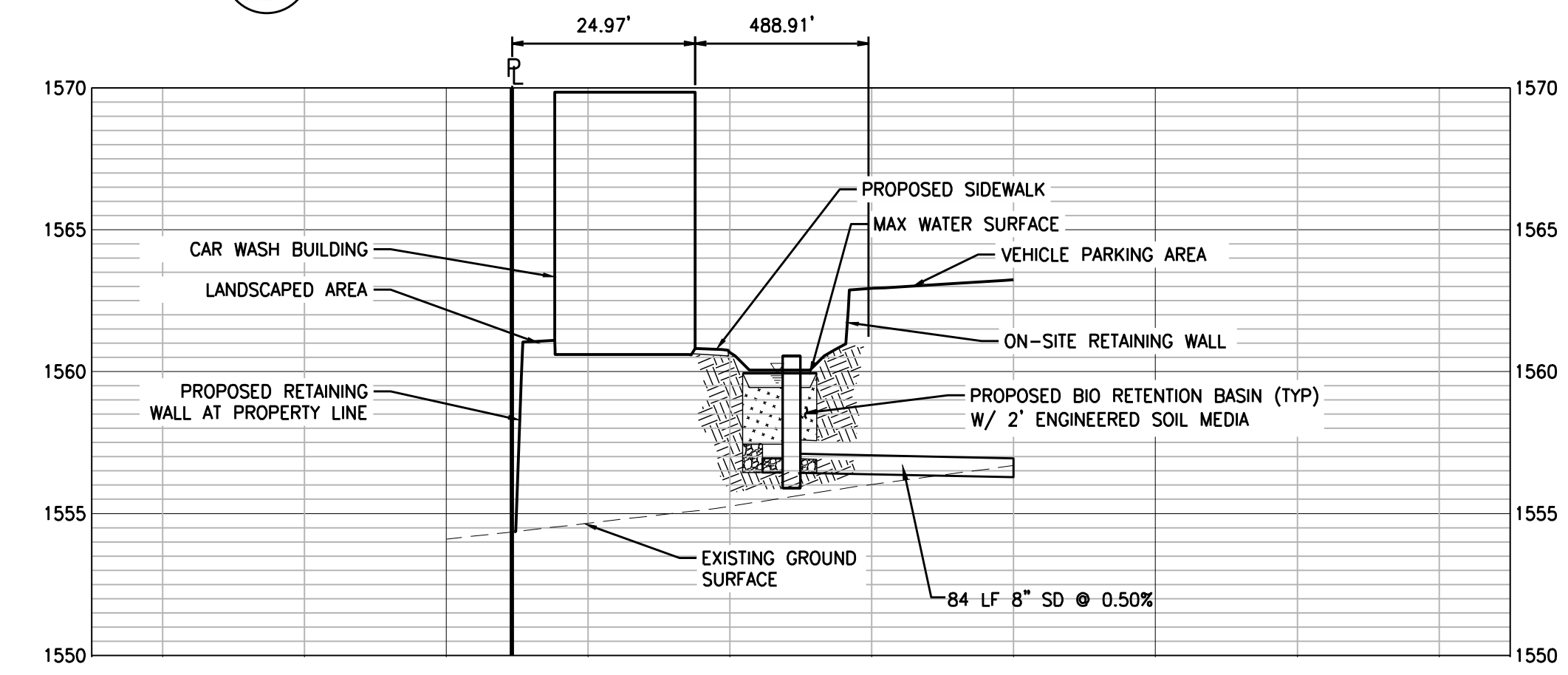
Preliminary Not For Construction



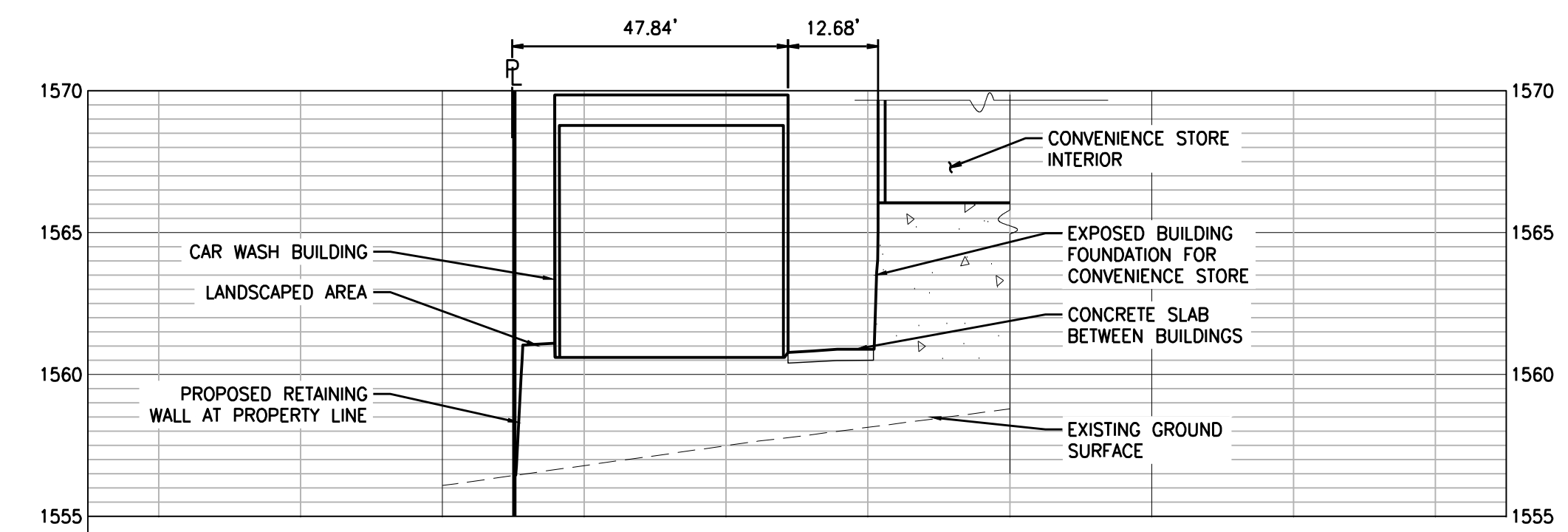
**A-A**  
IRIS AVE N TO S  
SCALE: H: 1"=20' V: 1"=5'



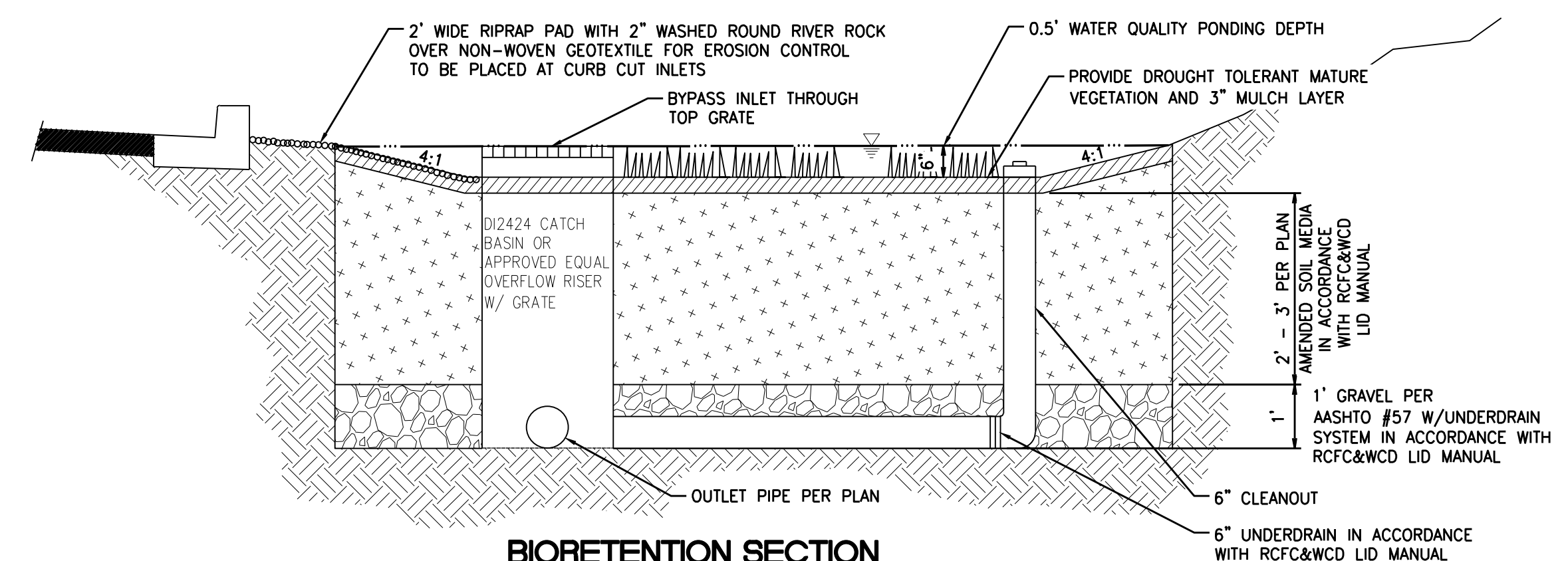
**B-B**  
OLIVER ST W TO E  
SCALE: H: 1"=20' V: 1"=5'



**G-G**  
NORTH PROPERTY BOUNDARY W TO E  
SCALE: H: 1"=20' V: 1"=5'

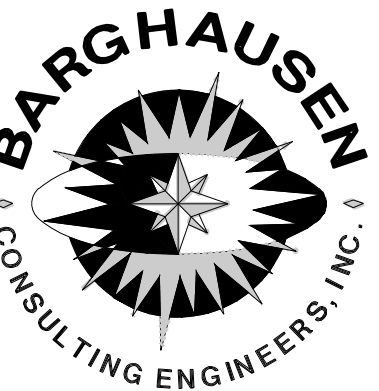


**H-H**  
NORTH PROPERTY BOUNDARY W TO E  
SCALE: H: 1"=20' V: 1"=5'



**BIORETENTION SECTION**  
NOT TO SCALE

NOT FOR CONSTRUCTION



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KENT, WA 98032  
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(425)251-8782 FAX  
CIVIL ENGINEERING, LAND PLANNING,  
SURVEYING, ENVIRONMENTAL SERVICES

NO.	DATE	REVISION DESCRIPTION
1	3/20/18	CITY COMMENTS
2	6/01/18	CITY COMMENTS
3	8/07/18	CITY COMMENTS
4	9/26/18	CITY COMMENTS

9/25/2018  
DEVELOPMENT INFORMATION:  
ARCO NTI  
3000 am/pm  
FUEL CANOPY  
w/ 8 MPD's  
26'x100' CAR WASH

SITE ADDRESS:  
NWC IRIS AVE @ OLIVER ST  
MORENO VALLEY, CA  
FACILITY # TBD

DESIGNED BY:	ALLIANCE Z&M:
CHECKED BY:	SP REPR:
DRAWN BY:	ALLIANCE PM:
VERSION:	PROJECT NO:
	18501

DRAWING TITLE:  
**PRELIMINARY  
SITE CROSS  
SECTIONS**

SHEET NO:

**C2.2**

PEN18-0016

# Appendix 3: Soils Information

*Geotechnical Study and Other Infiltration Testing Data*

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



## PRELIMINARY GEOTECHNICAL ENGINEERING INVESTIGATION

PROPOSED ARCO STATION  
NWC IRIS AVENUE AND OLIVER STREET  
MORENO VALLEY, CALIFORNIA

SALEM PROJECT NO. 3-217-1265  
NOVEMBER 30, 2017

*PREPARED FOR:*

MR. ERIC LEVAUGHN  
SATER OIL INTERNATIONAL, LLC  
683 CLIFFSIDE DRIVE  
SAN DIMAS, CA 91773

*PREPARED BY:*

SALEM ENGINEERING GROUP, INC.  
11650 MISSION PARK DR., #108  
RANCHO CUCAMONGA, CA 91730  
P: (909) 980-6455  
F: (909) 980-6435  
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11650 Mission Park Dr., #108  
 Rancho Cucamonga, CA 91730  
 Phone (909) 980-6455  
 Fax (909) 980-6435

November 30, 2017

Project No. 3-217-1265

Mr. Eric LeVaughn  
**Sater Oil International, LLC**  
 683 Cliffside Drive  
 San Dimas, CA 91773 85255

**SUBJECT: PRELIMINARY GEOTECHNICAL ENGINEERING INVESTIGATION  
 PROPOSED ARCO STATION  
 NWC IRIS AVENUE AND OLIVER STREET  
 MORENO VALLEY, CALIFORNIA**

Dear Mr. LeVaughn:

At your request and authorization, SALEM Engineering Group, Inc. (SALEM) has prepared this Preliminary Geotechnical Engineering Investigation report for the Proposed ARCO Station to be located at the subject site.

The accompanying report presents our findings, conclusions, and recommendations regarding the geotechnical aspects of designing and constructing the project as presently proposed. In our opinion, the proposed project is feasible from a geotechnical viewpoint provided our recommendations are incorporated into the design and construction of the project.

We appreciate the opportunity to assist you with this project. Should you have questions regarding this report or need additional information, please contact the undersigned at (909) 980-6455.

Respectfully Submitted,

**SALEM ENGINEERING GROUP, INC.**

Clarence Jiang, GE  
 Geotechnical Division Manager  
 RGE 2477



R. Sammy Salem, MS, PE, GE  
 Principal Engineer  
 RCE 52762 / RGE 2549



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Figure 1, Vicinity Map

Figure 2, Site Plan

**APPENDIX A – FIELD INVESTIGATION**

Figures A-1 through A-5, Logs of Exploratory Soil Borings B-1 through B-5

Percolation Testing Results, P-1 through P-4

**APPENDIX B – LABORATORY TESTING**

Consolidation Test Results

Direct Shear Test Results

Gradation Curves

Corrosivity Test Results

Maximum Density and Optimum Moisture Proctor Test Results

**APPENDIX C – EARTHWORK AND PAVEMENT SPECIFICATIONS**



11650 Mission Park Drive, Suite 108  
 Rancho Cucamonga, CA 91730  
 Phone (909) 980-6455  
 Fax (909) 980-6435

**PRELIMINARY GEOTECHNICAL ENGINEERING INVESTIGATION  
 PROPOSED ARCO STATION  
 NWC IRIS AVENUE AND OLIVER STREET  
 MORENO VALLEY, CALIFORNIA**

**1. PURPOSE AND SCOPE**

This report presents the results of our Preliminary Geotechnical Engineering Investigation for the site of the Proposed ARCO Station to be located near the intersection of NWC Iris Avenue and Oliver Street in Moreno Valley, California (see Figure 1, Vicinity Map).

The purpose of our geotechnical engineering investigation was to observe and sample the subsurface conditions encountered at the site, and provide conclusions and recommendations relative to the geotechnical aspects of constructing the project as presently proposed.

The scope of this investigation included a field exploration, percolation testing, laboratory testing, engineering analysis and the preparation of this report. Our field exploration was performed on November 14, 2017 and included the drilling of five (5) small-diameter soil borings to a maximum depth of 50 feet at the site. Additionally, four (4) percolation tests were performed at depths of approximately 8 and 10 feet below existing grade for the determination of the infiltration rate. The locations of the soil borings and percolation tests are depicted on Figure 2, Site Plan. A detailed discussion of our field investigation, percolation tests, and exploratory boring logs are presented in Appendix A.

Laboratory tests were performed on selected soil samples obtained during the investigation to evaluate pertinent physical properties for engineering analyses. Appendix B presents the laboratory test results in tabular and graphic format.

The recommendations presented herein are based on analysis of the data obtained during the investigation and our experience with similar soil and geologic conditions.

If project details vary significantly from those described herein, SALEM should be contacted to determine the necessity for review and possible revision of this report. Earthwork and Pavement Specifications are presented in Appendix C. If text of the report conflict with the specifications in Appendix C, the recommendations in the text of the report have precedence.

**2. PROJECT DESCRIPTION**

Based on the Site Plan provided to us, we understand that the proposed development will include construction of an ARCO station with an approximately 3,800 square-foot AM/PM convenience store, an 8-MPD's fuel canopy, a 24 feet by 100 feet car wash, and underground storage tanks. On-site parking and landscaping are planned to be associated with the development. Maximum wall load is expected to



be on the order of 3 kips per linear foot. Maximum column load is expected to be on the order of 70 kips. Floor slab soil bearing pressure is expected to be on the order of 150 psf.

A site grading plan was not available at the time of preparation of this report. As the existing project area is essentially level, we anticipate that cuts and fills during earthwork will be minimal and limited to providing a level pad and positive site drainage. In the event that changes occur in the nature or design of the project, the conclusions and recommendations contained in this report will not be considered valid unless the changes are reviewed and the conclusions of our report are modified. The site configuration and locations of proposed improvements are shown on the Site Plan, Figure 2.

### 3. SITE LOCATION AND DESCRIPTION

The subject site is located at the northwest corner of the intersection of Iris Avenue and Oliver Street, in the City of Moreno Valley, CA (see Vicinity Map, Figure 1). The subject site is rectangular in shape and encompasses approximately 1.31 acres.

At the time of SALEM's field exploration, the site was a vacant lot with sparse shrubs. The site is bounded by vacant lands to the north and west, Oliver Street to the east, and Iris Avenue to the south. The site area is gently sloping to the north with elevations ranging from approximately 1,566 to 1,555 feet above mean sea level based on google earth imagery.

### 4. FIELD EXPLORATION

Our field exploration consisted of site surface reconnaissance and subsurface exploration. The exploratory test borings (B-1 through B-5) were drilled on November 14, 2017 in the area shown on the Site Plan, Figure 2. The test borings were advanced with a 6-inch diameter hollow stem auger and a 4 inch diameter solid flight auger rotated by a truck-mounted CME 45C drill rig. The test borings were extended to a maximum depth of 50 feet below existing grade.

The materials encountered in the test borings were visually classified in the field, and logs were recorded by a field engineer and stratification lines were approximated on the basis of observations made at the time of drilling. Visual classification of the materials encountered in the test borings were generally made in accordance with the Unified Soil Classification System (ASTM D2487). A soil classification chart and key to sampling is presented on the Unified Soil Classification Chart, in Appendix "A." The logs of the test borings are presented in Appendix "A." The Boring Logs include the soil type, color, moisture content, dry density, and the applicable Unified Soil Classification System symbol.

The location of the test borings were determined by measuring from features shown on the Site Plan, provided to us. Hence, accuracy can be implied only to the degree that this method warrants. The actual boundaries between different soil types may be gradual and soil conditions may vary. For a more detailed description of the materials encountered, the Boring Logs in Appendix "A" should be consulted.

Soil samples were obtained from the test borings at the depths shown on the logs of borings. The MCS samples were recovered and capped at both ends to preserve the samples at their natural moisture content; SPT samples were recovered and placed in a sealed bag to preserve their natural moisture content. The borings were backfilled with soil cuttings after completion of the drilling.

## 5. LABORATORY TESTING

Laboratory tests were performed on selected soil samples to evaluate their physical characteristics and engineering properties. The laboratory-testing program was formulated with emphasis on the evaluation of natural moisture, in-situ density, shear strength, consolidation potential, maximum density and optimum moisture determination, and gradation of the materials encountered.

In addition, chemical tests were performed to evaluate the corrosivity of the soils to buried concrete and metal. Details of the laboratory test program and the results of laboratory test are summarized in Appendix "B." This information, along with the field observations, was used to prepare the final boring logs in Appendix "A."

## 6. GEOLOGIC SETTING

The subject site is located within the Peninsular Range Geomorphic Province, an area characterized by active northeast trending strike slip faults, including the San Jacinto to the northwest, and the Elsinore to the southwest. The project site is situated between the Santa Rosa Mountains and the San Jacinto Mountains to the east; and Santa Ana Mountains to the west and south. The near-surface deposits in the vicinity of the subject site are comprised of recent alluvium consisting of unconsolidated sands, silt, and clays derived from erosion of local mountain ranges. Deposits encountered on the subject site during exploratory drilling are discussed in detail in this report.

## 7. GEOLOGIC HAZARDS

### 7.1 Faulting and Seismicity

The Peninsular Range has historically been a province of relatively high seismic activity. The nearest faults to the project site are associated with the San Jacinto Fault system located approximately 4.1 miles from the site. There are no known active fault traces in the project vicinity. Based on mapping and historical seismicity, the seismicity of the Peninsular Range has been generally considered high by the scientific community.

The project area is not within an Alquist-Priolo Earthquake Fault (Special Studies) Zone and will not require a special site investigation by an Engineering Geologist. Soils on site are classified as Site Class D in accordance with Chapter 16 of the California Building Code. The proposed structures are determined to be in Seismic Design Category D.

To determine the distance of known active faults within 100 miles of the site, we used the United States Geological Survey (USGS) web-based application *2008 National Seismic Hazard Maps - Fault Parameters*. Site latitude is 33.8958° North; site longitude is 117.1833° West. The ten closest active faults are summarized below in Table 7.1.

**TABLE 7.1  
REGIONAL FAULT SUMMARY**

<b>Fault Name</b>	<b>Distance to Site (miles)</b>	<b>Max. Earthquake Magnitude, <math>M_w</math></b>
San Jacinto; SBV+SJV+A+CC+B+SM	4.1	7.9
San Jacinto; A+CC+B+SM	4.3	7.6
San Jacinto; SBV	8.9	7.1
S. San Andreas; PK+CH+CC+BB+NM+SM+NSB+SSB+BG+CO	15.1	8.2
S. San Andreas; PK+CH+CC+BB+NM+SM+NSB	17.7	8.0
Elsinore; W+GI+T+J+CM	18.2	7.9
S. San Andreas; BG+CO	22.3	7.4
Chino, alt 2	22.6	6.8
Elsinore; W	23.9	7.0

*The faults tabulated above and numerous other faults in the region are sources of potential ground motion. However, earthquakes that might occur on other faults throughout California are also potential generators of significant ground motion and could subject the site to intense ground shaking.*

## 7.2 Surface Fault Rupture

The site is not within a currently established State of California Earthquake Fault Zone for surface fault rupture hazards. No active faults with the potential for surface fault rupture are known to pass directly beneath the site. Therefore, the potential for surface rupture due to faulting occurring beneath the site during the design life of the proposed development is considered low.

## 7.3 Ground Shaking

We used the USGS web-based application *US Seismic Design Maps* to estimate the peak ground acceleration adjusted for site class effects ( $PGA_M$ ). Because of the proximity to the subject site and the maximum probable events for these faults, it appears that a maximum probable event along the fault zones could produce a peak horizontal acceleration of approximately 0.871g (2% probability of being exceeded in 50 years). While listing PGA is useful for comparison of potential effects of fault activity in a region, other considerations are important in seismic design, including frequency and duration of motion and soil conditions underlying the site.

## 7.4 Liquefaction

Soil liquefaction is a state of soil particles suspension caused by a complete loss of strength when the effective stress drops to zero. Liquefaction normally occurs under saturated conditions in soils such as sand in which the strength is purely frictional. Primary factors that trigger liquefaction are: moderate to strong ground shaking (seismic source), relatively clean, loose granular soils (primarily poorly graded sands and silty sands), and saturated soil conditions (shallow groundwater). Due to the increasing overburden pressure with depth, liquefaction of granular soils is generally limited to the upper 50 feet of a soil profile. However, liquefaction has occurred in soils other than clean sand.

The soils encountered within the depth of 50 feet on the project site consisted predominately of very loose to dense silty sand with various amounts of clay and gravel, and dense to very dense silty clayey sand. Low to very low cohesion strength is associated with the sandy soil. A seismic hazard, which could cause damage to the proposed development during seismic shaking, is the post-liquefaction settlement of the liquefied sands.

The site was evaluated for liquefaction potential. The liquefaction analysis indicated that the soils had a low potential for liquefaction under seismic conditions. Therefore, no mitigation measures are warranted. Detailed geotechnical engineering recommendations are presented in the remaining portions of the text. The recommendations are based on the properties of the materials identified during our investigation.

### **7.5 Lateral Spreading**

Lateral spreading is a phenomenon in which soils move laterally during seismic shaking and is often associated with liquefaction. The amount of movement depends on the soil strength, duration and intensity of seismic shaking, topography, and free face geometry. Due to the relatively flat site topography and low liquefaction potential, we judge the likelihood of lateral spreading to be low.

### **7.6 Landslides**

There are no known landslides at the site, nor is the site in the path of any known or potential landslides. We do not consider the potential for a landslide to be a hazard to this project.

### **7.7 Tsunamis and Seiches**

The site is not located within a coastal area. Therefore, tsunamis (seismic sea waves) are not considered a significant hazard at the site. Seiches are large waves generated in enclosed bodies of water in response to ground shaking. No major water-retaining structures are located immediately up gradient from the project site. Flooding from a seismically-induced seiche is considered unlikely.

## **8. SOIL AND GROUNDWATER CONDITIONS**

### **8.1 Subsurface Conditions**

The subsurface conditions encountered appear typical of those found in the geologic region of the site. In general, the soils within the depth of exploration consisted of alluvium deposits of very loose to dense silty sand with various amounts of clay and gravel, and dense to very dense silty clayey sand.

Fill soils maybe present on-site between our test boring locations. Verification of the extent of fill should be determined during site grading. Field and laboratory tests suggest that the deeper native soils are moderately strong and slightly compressible.

The soils were classified in the field during the drilling and sampling operations. The stratification lines were approximated by the field engineer on the basis of observations made at the time of drilling. The actual boundaries between different soil types may be gradual and soil conditions may vary. For a more detailed description of the materials encountered, the Boring Logs in Appendix "A" should be consulted.

The Boring Logs include the soil type, color, moisture content, dry density, and the applicable Unified Soil Classification System symbol. The locations of the test borings were determined by measuring from feature shown on the Site Plan, provided to us. Hence, accuracy can be implied only to the degree that this method warrants.

## 8.2 Groundwater

The test boring locations were checked for the presence of groundwater during and after the drilling operations. Free groundwater was not encountered during this investigation.

It should be recognized that water table elevations may fluctuate with time, being dependent upon seasonal precipitation, irrigation, land use, localized pumping, and climatic conditions as well as other factors. Therefore, water level observations at the time of the field investigation may vary from those encountered during the construction phase of the project. The evaluation of such factors is beyond the scope of this report.

## 8.3 Soil Corrosion Screening

Excessive sulfate in either the soil or native water may result in an adverse reaction between the cement in concrete and the soil. The 2011 Edition of ACI 318 (ACI 318) has established criteria for evaluation of sulfate and chloride levels and how they relate to cement reactivity with soil and/or water.

A soil sample was obtained from the project site and was tested for the evaluation of the potential for concrete deterioration or steel corrosion due to attack by soil-borne soluble salts and soluble chloride. The water-soluble sulfate concentration in the saturation extract from the soil sample was detected to be 50 mg/kg. ACI 318 Tables 4.2.1 and 4.3.1 outline exposure categories, classes, and concrete requirements by exposure class. ACI 318 requirements for site concrete based upon soluble sulfate are summarized in Table 8.3 below.

**TABLE 8.3  
WATER SOLUBLE SULFATE EXPOSURE REQUIREMENTS**

Water Soluble Sulfate (SO <sub>4</sub> ) in Soil, Percentage by Weight	Exposure Severity	Exposure Class	Maximum w/cm Ratio	Minimum Concrete Compressive Strength	Cementitious Materials Type
0.005	Not Applicable	S0	N/A	2,500 psi	No Restriction

The water-soluble chloride concentration detected in saturation extract from the soil samples was 21 mg/kg. This level of chloride concentration is not considered to be severely corrosive.

It is recommended that a qualified corrosion engineer be consulted regarding protection of buried steel or ductile iron piping and conduit or, at a minimum, applicable manufacturer's recommendations for corrosion protection of buried metal pipe be closely followed.

## 8.4 Percolation Testing

Four percolation tests (P-1 through P-4) were performed within assumed infiltration areas and were conducted in accordance with the guidelines established by the County of Riverside. The approximate locations of the percolation tests are shown on the attached Site Plan, Figure 2.

Four (4) 8-inch diameter boreholes were advanced to the depths shown on the percolation test worksheets. The holes were pre-saturated before percolation testing commenced. Percolation rates were measured by filling the test holes with clean water and measuring the water drops at a certain time interval.

The percolation rate data are presented in tabular format at the end of this Report. The difference in the percolation rates are reflected by the varied type of soil materials at the bottom of the test holes. The percolation rates were converted to infiltration rates using the "Porchet Method" according to County Design handbook. The test results are shown on the table below.

### PERCOLATION TEST RESULTS

Test No.	Depth (feet)	Measured Percolation Rate (min/inch)	Infiltration Rate* (inch/hour)	Soil Type
P-1	8	7.6	<b>1.43</b>	Silty SAND (SM)
P-2	10	25.0	<b>0.55</b>	Silty SAND (SM)
P-3	8	25.0	<b>0.51</b>	Silty SAND (SM)
P-4	10	7.6	<b>1.27</b>	Silty SAND (SM)

\* Tested infiltration Rate =  $(\Delta H 60 r) / (\Delta t(r + 2H_{avg}))$

The soil infiltration or percolation rates are based on tests conducted with clear water. The infiltration/percolation rates may vary with time as a result of soil clogging from water impurities. The infiltration/percolation rates will deteriorate over time due to the soil conditions.

The soils may also become less permeable to impermeable if the soil is compacted. Thus, periodic maintenance consisting of clearing the bottom of the drainage system of clogged soils should be expected. The infiltration/percolation rate may become slower if the surrounding soil is wet or saturated due to prolonged rainfalls. Additional percolation tests may be conducted at bottom of the drainage system during construction to verify the infiltration/percolation rate. Groundwater, if closer to the bottom of the drainage system, will also reduce the infiltration/percolation rate.

The scope of our services did not include a groundwater study and was limited to the performance of percolation testing and soil profile description, and the submitted data only. Our services did not include those associated with septic system design. Neither did services include an Environmental Site Assessment for the presence or absence of hazardous and/or toxic materials in the soil, groundwater, or atmosphere; or the presence of wetlands.

Any statements, or absence of statements, in this report or on any boring logs regarding odors, unusual or suspicious items, or conditions observed, are strictly for descriptive purposes and are not intended to convey engineering judgment regarding potential hazardous and/or toxic assessment.

The geotechnical engineering information presented herein is based upon professional interpretation utilizing standard engineering practices. The work conducted through the course of this investigation, including the preparation of this report, has been performed in accordance with the generally accepted standards of geotechnical engineering practice, which existed in the geographic area at the time the report was written. No other warranty, express or implied, is made.

Please be advised that when performing percolation testing services in relatively small diameter borings, that the testing may not fully model the actual full scale long term performance of a given site. This is particularly true where percolation test data is to be used in the design of large infiltration system such as may be proposed for the site. The measured percolation rate includes dispersion of the water at the sidewalls of the boring as well as into the underlying soils. Subsurface conditions, including percolation rates, can change over time as fine-grained soils migrate. It is not warranted that such information and interpretation cannot be superseded by future geotechnical engineering developments. We emphasize that this report is valid for the project outlined above and should not be used for any other sites.

## 9. CONCLUSIONS AND RECOMMENDATIONS

### 9.1 General

- 9.1.1 Based upon the data collected during this investigation, and from a geotechnical engineering standpoint, it is our opinion that the site is suitable for the proposed construction of improvements at the site as planned, provided the recommendations contained in this report are incorporated into the project design and construction. Conclusions and recommendations provided in this report are based on our review of available literature, analysis of data obtained from our field exploration and laboratory testing program, and our understanding of the proposed development at this time.
- 9.1.2 The primary geotechnical constraints identified in our investigation is the presence of loose and potentially compressible material at the site. Recommendations to mitigate the effects of these soils are provided in this report.
- 9.1.3 Fill soils may be present on-site between our test boring locations. Undocumented fill materials are not suitable to support any future structures and should be replaced with Engineered Fill. Prior to fill placement, Salem Engineering Group, Inc. should inspect the bottom of the excavation to verify the fill condition.
- 9.1.4 Site demolition activities shall include removal of all surface obstructions not intended to be incorporated into final site design. In addition, underground buried structures and/or utility lines encountered during demolition and construction should be properly removed and the resulting excavations backfilled with Engineered Fill. It is suspected that possible demolition activities of the existing structures may disturb the upper soils. After demolition activities, it is recommended that disturbed soils be removed and/or recompacted.

- 9.1.5 The near-surface onsite soils are moisture-sensitive and are moderately to highly compressible (collapsible soil) under saturated conditions. Structures within the project vicinity have experienced excessive post-construction settlement, when the foundation soils become near saturated. The collapsible or weak soils should be removed and recompacted according to the recommendations in the Grading section of this report (Section 9.5).
- 9.1.6 Based on the subsurface conditions at the site and the anticipated structural loading, we anticipate that the proposed building may be supported using conventional shallow foundations provided that the recommendations presented herein are incorporated in the design and construction of the project.
- 9.1.7 Provided the site is graded in accordance with the recommendations of this report and foundations constructed as described herein, we estimate that total settlement due to static loads utilizing conventional shallow foundations for the proposed building will be within 1 inch and corresponding differential settlement will be less than ½ inch.
- 9.1.8 All references to relative compaction and optimum moisture content in this report are based on ASTM D 1557 (latest edition).
- 9.1.9 SALEM shall review the project grading and foundation plans prior to final design submittal to assess whether our recommendations have been properly implemented and evaluate if additional analysis and/or recommendations are required. If SALEM is not provided plans and specifications for review, we cannot assume any responsibility for the future performance of the project.
- 9.1.10 SALEM shall be present at the site during site demolition and preparation to observe site clearing/demolition, preparation of exposed surfaces after clearing, and placement, treatment and compaction of fill material.
- 9.1.11 SALEM's observations should be supplemented with periodic compaction tests to establish substantial conformance with these recommendations. Moisture content of footings and slab subgrade should be tested immediately prior to concrete placement. SALEM should observe foundation excavations prior to placement of reinforcing steel or concrete to assess whether the actual bearing conditions are compatible with the conditions anticipated during the preparation of this report.

## 9.2 Seismic Design Criteria

- 9.2.1 For seismic design of the structures, and in accordance with the seismic provisions of the 2016 CBC, our recommended parameters are shown below. These parameters are based on Probabilistic Ground Motion of 2% Probability of Exceedance in 50 years. The Site Class was determined based on the results of our field exploration.



**TABLE 9.2.1  
SEISMIC DESIGN PARAMETERS**

Seismic Item	Symbol	Value	2016 CBC Reference
Site Coordinates (Datum = NAD 83)		33.8958 Lat -117.1833 Lon	
Site Class	--	D	ASCE 7 Table 20.3
Soil Profile Name	--	Stiff Soil	ASCE 7 Table 20.3
Risk Category	--	II	CBC Table 1604.5
Site Coefficient for PGA	$F_{PGA}$	1.200	ASCE 7 Table 11.8-1
Peak Ground Acceleration (adjusted for Site Class effects)	$PGA_M$	0.871 g	ASCE 7 Equation 11.8-1
Seismic Design Category	SDC	D	ASCE 7 Table 11.6-1 & 2
Mapped Spectral Acceleration (Short period - 0.2 sec)	$S_S$	1.715 g	CBC Figure 1613.3.1(1-6)
Mapped Spectral Acceleration (1.0 sec. period)	$S_1$	0.670 g	CBC Figure 1613.3.1(1-6)
Site Class Modified Site Coefficient	$F_a$	1.200	CBC Table 1613.3.3(1)
Site Class Modified Site Coefficient	$F_v$	1.700	CBC Table 1613.3.3(2)
MCE Spectral Response Acceleration (Short period - 0.2 sec) $S_{MS} = F_a S_S$	$S_{MS}$	2.058 g	CBC Equation 16-37
MCE Spectral Response Acceleration (1.0 sec. period) $S_{M1} = F_v S_1$	$S_{M1}$	1.139 g	CBC Equation 16-38
Design Spectral Response Acceleration $S_{DS} = \frac{2}{3} S_{MS}$ (short period - 0.2 sec)	$S_{DS}$	1.372 g	CBC Equation 16-39
Design Spectral Response Acceleration $S_{D1} = \frac{2}{3} S_{M1}$ (1.0 sec. period)	$S_{D1}$	0.759 g	CBC Equation 16-40

9.2.2 Conformance to the criteria in the above table for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

### 9.3 Soil and Excavation Characteristics

9.3.1 Based on the soil conditions encountered in our soil borings, the onsite soils can be excavated with moderate to laborious effort using conventional heavy-duty or special excavation and earthmoving equipment.

9.3.2 It is the responsibility of the contractor to ensure that all excavations and trenches are properly shored and maintained in accordance with applicable Occupational Safety and Health Administration (OSHA) rules and regulations to maintain safety and maintain the stability of adjacent existing improvements. Temporary excavations are further discussed in a later Section of this report.

- 9.3.3 The upper soils within the project site are identified primarily as silty sands and clayey sands. The sandy soils are moisture-sensitive and moderately collapsible under saturated conditions. These soils, in their present condition, possess moderate risk to construction in terms of possible post-construction movement of the foundations and floor systems if no mitigation measures are employed. Accordingly, measures are considered necessary to reduce anticipated expansion and collapse potential.

As recommended in Section 9.5, the collapsible soils should be removed and replaced with properly moisture conditioned and compacted Engineered Fill. Mitigation measures will not eliminate post-construction soil movement, but will reduce the soil movement. Success of the mitigation measures will depend on the thoroughness of the contractor in dealing with the soil conditions.

- 9.3.4 The near surface soils identified as part of our investigation are, generally, slightly moist to moist due to the absorption characteristics of the soil. Earthwork operations may encounter very moist unstable soils which may require removal to a stable bottom. Exposed native soils exposed as part of site grading operations shall not be allowed to dry out and should be kept continuously moist prior to placement of subsequent fill.

#### 9.4 Materials for Fill

- 9.4.1 Excavated soils generated from cut operations at the site are suitable for use as general Engineered Fill in structural areas, provided they do not contain deleterious matter, organic material, or rock material larger than 3 inches in maximum dimension.
- 9.4.2 The preferred materials specified for Engineered Fill are suitable for most applications with the exception of exposure to erosion. Project site winterization and protection of exposed soils during the construction phase should be the sole responsibility of the Contractor, since they have complete control of the project site.
- 9.4.3 Import soil shall be well-graded, slightly cohesive silty fine sand or sandy silt, with relatively impervious characteristics when compacted. A clean sand or very sandy soil is not acceptable for this purpose. This material should be approved by the Engineer prior to use and should typically possess the soil characteristics summarized below in Table 9.4.3.

**TABLE 9.4.3  
IMPORT FILL REQUIREMENTS**

Minimum Percent Passing No. 200 Sieve	20
Maximum Percent Passing No. 200 Sieve	50
Minimum Percent Passing No. 4 Sieve	80
Maximum Particle Size	3"
Maximum Plasticity Index	10
Maximum CBC Expansion Index	15

- 9.4.4 Environmental characteristics and corrosion potential of import soil materials should also be considered.
- 9.4.5 Proposed import materials should be sampled, tested, and approved by SALEM prior to its transportation to the site.

## 9.5 Grading

- 9.5.1 A representative of our firm should be present during all site clearing and grading operations to test and observe earthwork construction. This testing and observation is an integral part of our service as acceptance of earthwork construction is dependent upon compaction of the material and the stability of the material. The Geotechnical Engineer may reject any material that does not meet compaction and stability requirements. Further recommendations of this report are predicated upon the assumption that earthwork construction will conform to recommendations set forth in this section as well as other portions of this report.
- 9.5.2 A preconstruction conference should be held at the site prior to the beginning of grading operations with the owner, contractor, civil engineer and geotechnical engineer in attendance.
- 9.5.3 Site preparation should begin with removal of existing surface/subsurface structures, underground utilities (as required), any existing uncertified fill, and debris. Excavations or depressions resulting from site clearing operations, or other existing excavations or depressions, should be restored with Engineered Fill in accordance with the recommendations of this report.
- 9.5.4 Surface vegetation consisting of grasses and other similar vegetation should be removed by stripping to a sufficient depth to remove organic-rich topsoil. The upper 2 to 4 inches of the soils containing, vegetation, roots and other objectionable organic matter encountered at the time of grading should be stripped and removed from the surface. Deeper stripping may be required in localized areas. In addition, existing concrete and asphalt materials shall be removed from areas of proposed improvements and stockpiled separately from excavated soil material. The stripped vegetation, asphalt and concrete materials will not be suitable for use as Engineered Fill or within 5 feet of building pads or within pavement areas. However, stripped topsoil may be stockpiled and reused in landscape or non-structural areas or exported from the site.
- 9.5.5 Structural building pad areas should be considered as areas extending a minimum of 5 feet horizontally beyond the outside dimensions of building, including footings and non-cantilevered overhangs carrying structural loads.
- 9.5.6 To minimize post-construction soil movement and provide uniform support for the proposed building, overexcavation and recompaction within the proposed building areas should be performed to a minimum depth of **five (5) feet** below existing grade or **three (3) feet** below proposed footing bottom, whichever is deeper. The overexcavation and recompaction should also extend laterally to a minimum of 5 feet beyond the outer edges of the proposed footings.
- 9.5.7 Within pavement areas, it is recommended that overexcavation and recompaction be performed to a minimum depth of **1.5 feet** below existing grade or proposed grade, whichever is deeper. Deeper overexcavation may be required in some local areas to removal all unsuitable materials.

The overexcavation and recompaction should also extend laterally to a minimum of 2 feet beyond the outer edges of the proposed pavement.

- 9.5.8 Any fill or disturbed soils encountered during grading should be removed and replaced with engineered fill. The actual depth of the overexcavation and recompaction should be determined by our field representative during construction.
- 9.5.9 Prior to placement of fill soils, the upper 8 to 10 inches of native subgrade soils should be scarified, moisture-conditioned to no less than the optimum moisture content and recompacted to a minimum of 95 percent of the maximum dry density based on ASTM D1557 Test Method latest edition.
- 9.5.10 All Engineered Fill (including scarified ground surfaces and backfill) should be placed in thin lifts which will allow for adequate bonding and compaction (typically 6 to 8 inches in loose thickness).
- 9.5.11 Engineered Fill soils should be placed, moisture conditioned to near optimum moisture content, and compacted to at least 95% relative compaction.
- 9.5.12 An integral part of satisfactory fill placement is the stability of the placed lift of soil. If placed materials exhibit excessive instability as determined by a SALEM field representative, the lift will be considered unacceptable and shall be remedied prior to placement of additional fill material. Additional lifts should not be placed if the previous lift did not meet the required dry density or if soil conditions are not stable.
- 9.5.13 Final pavement subgrade should be finished to a smooth, unyielding surface. We further recommend proof-rolling the subgrade with a loaded water truck (or similar equipment with high contact pressure) to verify the stability of the subgrade prior to placing aggregate base.
- 9.5.14 The most effective site preparation alternatives will depend on site conditions prior to grading. We should evaluate site conditions and provide supplemental recommendations immediately prior to grading, if necessary.
- 9.5.15 We do not anticipate groundwater or seepage to adversely affect construction if conducted during the drier months of the year (typically summer and fall). However, groundwater and soil moisture conditions could be significantly different during the wet season (typically winter and spring) as surface soil becomes wet; perched groundwater conditions may develop. Grading during this time period will likely encounter wet materials resulting in possible excavation and fill placement difficulties. Project site winterization consisting of placement of aggregate base and protecting exposed soils during construction should be performed. If the construction schedule requires grading operations during the wet season, we can provide additional recommendations as conditions warrant.
- 9.5.16 Typical remedial measures include: discing and aerating the soil during dry weather; mixing the soil with dryer materials; removing and replacing the soil with an approved fill material or placement of crushed rocks or aggregate base material; or mixing the soil with an approved lime or cement product.

The most common remedial measure of stabilizing the bottom of the excavation due to wet soil condition is to reduce the moisture of the soil to near the optimum moisture content by having the subgrade soils scarified and aerated or mixed with drier soils prior to compacting. However, the drying process may require an extended period of time and delay the construction operation.

To expedite the stabilizing process, crushed rock may be utilized for stabilization provided this method is approved by the owner for the cost purpose.

If the use of crushed rock is considered, it is recommended that the upper soft and wet soils be replaced by 6 to 24 inches of ¾-inch to 1-inch crushed rocks. The thickness of the rock layer depends on the severity of the soil instability. The recommended 6 to 24 inches of crushed rock material will provide a stable platform. It is further recommended that lighter compaction equipment be utilized for compacting the crushed rock. A layer of geofabric is recommended to be placed on top of the compacted crushed rock to minimize migration of soil particles into the voids of the crushed rock, resulting in soil movement.

Although it is not required, the use of geogrid (e.g. Tensar TX 140) below the crushed rock will enhance stability and reduce the required thickness of crushed rock necessary for stabilization. Our firm should be consulted prior to implementing remedial measures to provide appropriate recommendations.

## 9.6 Shallow Foundations

- 9.6.1 The site is suitable for use of conventional shallow foundations consisting of continuous footings and isolated pad footings bearing in properly compacted Engineered Fill.
- 9.6.2 The bearing wall footings considered for the structure should be continuous with a minimum width of 15 inches and extend to a minimum depth of 18 inches below the lowest adjacent grade. Isolated column footings should have a minimum width of 24 inches and extend a minimum depth of 18 inches below the lowest adjacent grade.
- 9.6.3 The bottom of footing excavations should be maintained free of loose and disturbed soil. Footing concrete should be placed into a neat excavation.
- 9.6.4 For design purposes, total settlement due to static loading on the order of 1 inch may be assumed for shallow footings. Differential settlement due to static loading, along a 20-foot exterior wall footing or between adjoining column footings, should be ½ inch, producing an angular distortion of 0.002. Most of the settlement is expected to occur during construction as the loads are applied. However, additional post-construction settlement may occur if the foundation soils are flooded or saturated. The footing excavations should not be allowed to dry out any time prior to pouring concrete.

- 9.6.5 Footings proportioned as recommended above may be designed for the maximum allowable soil bearing pressures shown in the table below.

Loading Condition	Allowable Bearing
Dead Load Only	2,000 psf
Dead-Plus-Live Load	2,500 psf
Total Load, Including Wind or Seismic Loads	3,325 psf

- 9.6.6 Resistance to lateral footing displacement can be computed using an allowable coefficient of friction factor of 0.40 acting between the base of foundations and the supporting subgrade.
- 9.6.7 Lateral resistance for footings can alternatively be developed using an allowable equivalent fluid passive pressure of 400 pounds per cubic foot acting against the appropriate vertical native footing faces. The frictional and passive resistance of the soil may be combined without reduction in determining the total lateral resistance. An increase of one-third is permitted when using the alternate load combination in Section 1605.3.2 of the 2015 IBC/2016 CBC that includes wind or earthquake loads.
- 9.6.8 Underground utilities running parallel to footings should not be constructed in the zone of influence of footings. The zone of influence may be taken to be the area beneath the footing and within a 1:1 plane extending out and down from the bottom edge of the footing.
- 9.6.9 The foundation subgrade should be sprinkled as necessary to maintain a moist condition without significant shrinkage cracks as would be expected in any concrete placement. Prior to placing rebar reinforcement, foundation excavations should be evaluated by a representative of SALEM for appropriate support characteristics and moisture content. Moisture conditioning may be required for the materials exposed at footing bottom, particularly if foundation excavations are left open for an extended period.

## 9.7 Concrete Slabs-on-Grade

- 9.7.1 Slab thickness and reinforcement should be determined by the structural engineer based on the anticipated loading. We recommend that non-structural slabs-on-grade be at least 4 inches thick and underlain by six (6) inches of compacted granular aggregate subbase material compacted to at least 95% relative compaction.
- 9.7.2 Granular aggregate subbase material shall conform to ASTM D-2940, Latest Edition (Table 1, bases) with at least 95 percent passing a 1½-inch sieve and not more than 8% passing a No. 200 sieve or its approved equivalent to prevent capillary moisture rise.
- 9.7.3 We recommend reinforcing slabs, at a minimum, with No. 3 reinforcing bars placed 18 inches on center, each way.

- 9.7.4 Slabs subject to structural loading may be designed utilizing a modulus of subgrade reaction K of 180 pounds per square inch per inch. The K value was approximated based on inter-relationship of soil classification and bearing values (Portland Cement Association, Rocky Mountain Northwest).
- 9.7.5 The spacing of crack control joints should be designed by the project structural engineer. In order to regulate cracking of the slabs, we recommend that full depth construction joints or control joints be provided at a maximum spacing of 15 feet in each direction for 5-inch thick slabs and 12 feet for 4-inch thick slabs.
- 9.7.6 Crack control joints should extend a minimum depth of one-fourth the slab thickness and should be constructed using saw-cuts or other methods as soon as practical after concrete placement. The exterior floors should be poured separately in order to act independently of the walls and foundation system.
- 9.7.7 It is recommended that the utility trenches within the structure be compacted, as specified in our report, to minimize the transmission of moisture through the utility trench backfill. Special attention to the immediate drainage and irrigation around the structures is recommended.
- 9.7.8 Moisture within the structure may be derived from water vapors, which were transformed from the moisture within the soils. This moisture vapor penetration can affect floor coverings and produce mold and mildew in the structure. To minimize moisture vapor intrusion, it is recommended that a vapor retarder be installed in accordance with manufacturer's recommendations and/or ASTM guidelines, whichever is more stringent. In addition, ventilation of the structure is recommended to reduce the accumulation of interior moisture.
- 9.7.9 In areas where it is desired to reduce floor dampness where moisture-sensitive coverings are anticipated, construction should have a suitable waterproof vapor retarder (a minimum of 15 mils thick polyethylene vapor retarder sheeting, Raven Industries "VaporBlock 15, Stego Industries 15 mil "StegoWrap" or W.R. Meadows Sealtight 15 mil "Perminator") incorporated into the floor slab design. The water vapor retarder should be decay resistant material complying with ASTM E96 not exceeding 0.04 perms, ASTM E154 and ASTM E1745 Class A. The vapor barrier should be placed between the concrete slab and the compacted granular aggregate subbase material. The water vapor retarder (vapor barrier) should be installed in accordance with ASTM Specification E 1643-94.
- 9.7.10 The concrete maybe placed directly on vapor retarder. The vapor retarder should be inspected prior to concrete placement. Cut or punctured retarder should be repaired using vapor retarder material lapped 6 inches beyond damaged areas and taped.
- 9.7.11 The recommendations of this report are intended to reduce the potential for cracking of slabs due to soil movement. However, even with the incorporation of the recommendations presented herein, foundations, stucco walls, and slabs-on-grade may exhibit some cracking due to soil movement. This is common for project areas that contain expansive soils since designing to eliminate potential soil movement is cost prohibitive. The occurrence of concrete shrinkage cracks is independent of the supporting soil characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of the concrete, proper concrete placement and curing,

and by the placement of crack control joints at periodic intervals, in particular, where re-entrant slab corners occur.

- 9.7.12 Proper finishing and curing should be performed in accordance with the latest guidelines provided by the American Concrete Institute, Portland Cement Association, and ASTM.

## 9.8 Caisson Foundations

- 9.8.1 It is recommended that the caisson foundation should have a minimum depth of 12 feet below the lowest adjacent grade.
- 9.8.2 The caissons may be designed using an allowable sidewall friction of 160 psf. This value is for dead-plus-live loads. An allowable end bearing capacity of 3,000 psf may be used provided that the bottom of the caisson is cleaned with the use of a clean-out bucket or equivalent and inspected by our representative prior to placement of reinforcement and concrete. An increase of one-third is permitted when using the alternate load combination in Section 1605.3.2 of the CBC that includes wind or earthquake loads.
- 9.8.3 Uplift loads can be resisted by caissons using an allowable sidewall friction of 120 psf of the surface area and the weight of the caisson.
- 9.8.4 The total static settlement of the caisson footing is not expected to exceed 1 inches. Differential settlement should be less than ½ inch. Most of the settlement is expected to occur during construction as the loads are applied.
- 9.8.5 Lateral loads for caissons may be designed utilizing the Isolated Pole Formula and Specifications shown on Table 1804.2, Sections 1804.3.1 and 1808.2.2 of the California Building Code. The drilled caissons may be designed for a lateral capacity of 400 pounds per square foot per foot of depth below the lowest adjacent grade to a maximum of 6,000 psf.
- 9.8.6 The top one-foot of adjacent subgrade should be deleted from the passive pressure computation.
- 9.8.7 These values may be increased by one-third when using the alternative load combinations in Section 1605.3.2 of the IBC that include wind or earthquake loads. These values should not be doubled since the values given herein are higher than the tabular values shown on the Table 1804.2. The lateral loading criteria is based on the assumption that the load application is applied at the ground level, flexible cap connections applied and a minimum embedment depth of 10 feet.
- 9.8.8 Sandy soils were encountered at the site. Casing will be required during drilling of the caisson footings.



## 9.9 Lateral Earth Pressures and Frictional Resistance

9.9.1 Active, at-rest and passive unit lateral earth pressures against footings and walls are summarized in the table below:

Lateral Pressure Level Backfill and Drained Conditions	Equivalent Fluid Pressure, pcf
Active Pressure	35
At-Rest Pressure	55
Passive Pressure	400
Related Parameters	
Allowable Coefficient of Friction	0.40
In-Place Soil Density (lbs/ft <sup>3</sup> )	120

9.9.2 Active pressure applies to walls, which are free to rotate. At-rest pressure applies to walls, which are restrained against rotation. The preceding lateral earth pressures assume sufficient drainage behind retaining walls to prevent the build-up of hydrostatic pressure.

9.9.3 The top one-foot of adjacent subgrade should be deleted from the passive pressure computation.

9.9.4 A safety factor consistent with the design conditions should be included when using the values in the above table.

9.9.5 For stability against lateral sliding, which is resisted solely by the passive pressure, we recommend a minimum safety factor of 1.5.

9.9.6 For stability against lateral sliding, which is resisted by the combined passive and frictional resistance, a minimum safety factor of 2.0 is recommended.

9.9.7 For lateral stability against seismic loading conditions, we recommend a minimum safety factor of 1.1.

9.9.8 For dynamic seismic lateral loading the following equation shall be used:

Dynamic Seismic Lateral Loading Equation
Dynamic Seismic Lateral Load = $\frac{3}{8}\gamma K_h H^2$
Where: $\gamma$ = In-Place Soil Density
$K_h$ = Horizontal Acceleration = $\frac{2}{3}PGA_M$
H = Wall Height

## 9.10 Retaining Walls

- 9.10.1 Retaining and/or below grade walls should be drained with either perforated pipe encased in free-draining gravel or a prefabricated drainage system. The gravel zone should have a minimum width of 12 inches wide and should extend upward to within 12 inches of the top of the wall. The upper 12 inches of backfill should consist of native soils, concrete, asphaltic-concrete or other suitable backfill to minimize surface drainage into the wall drain system. The gravel should conform to Class II permeable materials graded in accordance with the current CalTrans Standard Specifications.
- 9.10.2 Prefabricated drainage systems, such as Miradrain®, Enkadrain®, or an equivalent substitute, are acceptable alternatives in lieu of gravel provided they are installed in accordance with the manufacturer’s recommendations. If a prefabricated drainage system is proposed, our firm should review the system for final acceptance prior to installation.
- 9.10.3 Drainage pipes should be placed with perforations down and should discharge in a non-erosive manner away from foundations and other improvements. The top of the perforated pipe should be placed at or below the bottom of the adjacent floor slab or pavements. The pipe should be placed in the center line of the drainage blanket and should have a minimum diameter of 4 inches. Slots should be no wider than 1/8-inch in diameter, while perforations should be no more than ¼-inch in diameter.
- 9.10.4 If retaining walls are less than 5 feet in height, the perforated pipe may be omitted in lieu of weep holes on 4 feet maximum spacing. The weep holes should consist of 2-inch minimum diameter holes (concrete walls) or unmortared head joints (masonry walls) and placed no higher than 18 inches above the lowest adjacent grade. Two 8-inch square overlapping patches of geotextile fabric (conforming to the CalTrans Standard Specifications for "edge drains") should be affixed to the rear wall opening of each weep hole to retard soil piping.
- 9.10.5 During grading and backfilling operations adjacent to any walls, heavy equipment should not be allowed to operate within a lateral distance of 5 feet from the wall, or within a lateral distance equal to the wall height, whichever is greater, to avoid developing excessive lateral pressures. Within this zone, only hand operated equipment ("whackers," vibratory plates, or pneumatic compactors) should be used to compact the backfill soils.

## 9.11 Temporary Excavations

- 9.11.1 We anticipate that the majority of the sandy site soils will be classified as Cal-OSHA “Type C” soil when encountered in excavations during site development and construction. Excavation sloping, benching, the use of trench shields, and the placement of trench spoils should conform to the latest applicable Cal-OSHA standards. The contractor should have a Cal-OSHA-approved “competent person” onsite during excavation to evaluate trench conditions and make appropriate recommendations where necessary.
- 9.11.2 It is the contractor’s responsibility to provide sufficient and safe excavation support as well as protecting nearby utilities, structures, and other improvements which may be damaged by earth movements. All onsite excavations must be conducted in such a manner that potential surcharges

from existing structures, construction equipment, and vehicle loads are resisted. The surcharge area may be defined by a 1:1 projection down and away from the bottom of an existing foundation or vehicle load.

- 9.11.3 Temporary excavations and slope faces should be protected from rainfall and erosion. Surface runoff should be directed away from excavations and slopes.
- 9.11.4 Open, unbraced excavations in undisturbed soils should be made according to the slopes presented in the following table:

#### RECOMMENDED EXCAVATION SLOPES

Depth of Excavation (ft)	Slope (Horizontal : Vertical)
0-5	1:1
5-10	2:1

- 9.11.5 If, due to space limitation, excavations near property lines or existing structures are performed in a vertical position, slot cuts, braced shorings or shields may be used for supporting vertical excavations. Therefore, in order to comply with the local and state safety regulations, a properly designed and installed shoring system would be required to accomplish planned excavations and installation. A Specialty Shoring Contractor should be responsible for the design and installation of such a shoring system during construction.
- 9.11.6 Braced shorings should be designed for a maximum pressure distribution of 30H, (where H is the depth of the excavation in feet). The foregoing does not include excess hydrostatic pressure or surcharge loading. Fifty percent of any surcharge load, such as construction equipment weight, should be added to the lateral load given herein. Equipment traffic should concurrently be limited to an area at least 3 feet from the shoring face or edge of the slope.
- 9.11.7 The excavation and shoring recommendations provided herein are based on soil characteristics derived from the borings within the area. Variations in soil conditions will likely be encountered during the excavations. SALEM Engineering Group, Inc. should be afforded the opportunity to provide field review to evaluate the actual conditions and account for field condition variations not otherwise anticipated in the preparation of this recommendation. Slope height, slope inclination, or excavation depth should in no case exceed those specified in local, state, or federal safety regulation, (e.g. OSHA) standards for excavations, 29 CFR part 1926, or Assessor's regulations.

## 9.12 Underground Utilities

- 9.12.1 Underground utility trenches should be backfilled with properly compacted material. The material excavated from the trenches should be adequate for use as backfill provided it does not contain deleterious matter, vegetation or rock larger than 3 inches in maximum dimension. Trench backfill should be placed in loose lifts not exceeding 8 inches and compacted to at least 95% relative compaction at or above optimum moisture content.

- 9.12.2 Bedding and pipe zone backfill typically extends from the bottom of the trench excavations to approximately 6 to 12 inches above the crown of the pipe. Pipe bedding and backfill material should conform to the requirements of the governing utility agency.
- 9.12.3 It is suggested that underground utilities crossing beneath new or existing structures be plugged at entry and exit locations to the buildings or structures to prevent water migration. Trench plugs can consist of on-site clay soils, if available, or sand cement slurry. The trench plugs should extend 2 feet beyond each side of individual perimeter foundations.
- 9.12.4 The contractor is responsible for removing all water-sensitive soils from the trench regardless of the backfill location and compaction requirements. The contractor should use appropriate equipment and methods to avoid damage to the utilities and/or structures during fill placement and compaction.

### **9.13 Surface Drainage**

- 9.13.1 Proper surface drainage is critical to the future performance of the project. Uncontrolled infiltration of irrigation excess and storm runoff into the soils can adversely affect the performance of the planned improvements. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change to important engineering properties. Proper drainage should be maintained at all times.
- 9.13.2 The ground immediately adjacent to the foundation shall be sloped away from the building at a slope of not less than 5 percent for a minimum distance of 10 feet.
- 9.13.3 Impervious surfaces within 10 feet of the building foundation shall be sloped a minimum of 2 percent away from the building and drainage gradients maintained to carry all surface water to collection facilities and off site. These grades should be maintained for the life of the project. Ponding of water should not be allowed adjacent to the structure. Over-irrigation within landscaped areas adjacent to the structure should not be performed.
- 9.13.4 Roof drains should be installed with appropriate downspout extensions out-falling on splash blocks so as to direct water a minimum of 5 feet away from the structures or be connected to the storm drain system for the development.

### **9.14 Pavement Design**

- 9.14.1 Based on site soil conditions, an R-value of 40 was used for the preliminary flexible asphaltic concrete pavement design. The R-value may be verified during grading of the pavement areas.
- 9.14.2 The pavement design recommendations provided herein are based on the State of California Department of Transportation (CALTRANS) design manual. The asphaltic concrete (flexible pavement) is based on a 20-year pavement life utilizing 1200 passenger vehicles, 10 single unit trucks, and 2 multi-unit trucks. The following table shows the recommended pavement sections for various traffic indices.

**TABLE 9.14.2  
ASPHALT CONCRETE PAVEMENT THICKNESSES**

Traffic Index	Asphaltic Concrete	Class II Aggregate Base*	Compacted Subgrade*
5.0 (Parking and Vehicle Drive Areas)	2.5"	5.0"	18.0"
6.0 (Heavy Truck Areas)	3.0"	6.0"	18.0"

*\*95% compaction based on ASTM D1557-07 Test Method or Cal 216*

9.14.3 The following recommendations are for light-duty and heavy-duty Portland Cement Concrete pavement sections.

**TABLE 9.14.3  
PORTLAND CEMENT CONCRETE PAVEMENT THICKNESSES**

Traffic Index	Portland Cement Concrete*	Class II Aggregate Base**	Compacted Subgrade**
5.0 (Light Duty)	5.0"	5.0"	18.0"
6.0 (Heavy Duty)	6.0"	5.0"	18.0"

*\* Minimum Compressive Strength of 4,000 psi  
\*\* 95% compaction based on ASTM D1557-07 Test Method or Cal 216*

**10. PLAN REVIEW, CONSTRUCTION OBSERVATION AND TESTING**

**10.1 Plan and Specification Review**

10.1.1 SALEM should review the project plans and specifications prior to final design submittal to assess whether our recommendations have been properly implemented and evaluate if additional analysis and/or recommendations are required.

**10.2 Construction Observation and Testing Services**

10.2.1 The recommendations provided in this report are based on the assumption that we will continue as Geotechnical Engineer of Record throughout the construction phase. It is important to maintain continuity of geotechnical interpretation and confirm that field conditions encountered are similar to those anticipated during design. If we are not retained for these services, we cannot assume any responsibility for others interpretation of our recommendations, and therefore the future performance of the project.

10.2.2 SALEM should be present at the site during site preparation to observe site clearing, preparation of exposed surfaces after clearing, and placement, treatment and compaction of fill material.

10.2.3 SALEM's observations should be supplemented with periodic compaction tests to establish substantial conformance with these recommendations. Moisture content of footings and slab

subgrade should be tested immediately prior to concrete placement. SALEM should observe foundation excavations prior to placement of reinforcing steel or concrete to assess whether the actual bearing conditions are compatible with the conditions anticipated during the preparation of this report.

## 11. LIMITATIONS AND CHANGED CONDITIONS

The analyses and recommendations submitted in this report are based upon the data obtained from the test borings drilled at the approximate locations shown on the Site Plan, Figure 2. The report does not reflect variations which may occur between borings. The nature and extent of such variations may not become evident until construction is initiated.

If variations then appear, a re-evaluation of the recommendations of this report will be necessary after performing on-site observations during the excavation period and noting the characteristics of such variations. The findings and recommendations presented in this report are valid as of the present and for the proposed construction. If site conditions change due to natural processes or human intervention on the property or adjacent to the site, or changes occur in the nature or design of the project, or if there is a substantial time lapse between the submission of this report and the start of the work at the site, the conclusions and recommendations contained in our report will not be considered valid unless the changes are reviewed by SALEM and the conclusions of our report are modified or verified in writing.

The validity of the recommendations contained in this report is also dependent upon an adequate testing and observations program during the construction phase. Our firm assumes no responsibility for construction compliance with the design concepts or recommendations unless we have been retained to perform the on-site testing and review during construction. SALEM has prepared this report for the exclusive use of the owner and project design consultants.

SALEM does not practice in the field of corrosion engineering. It is recommended that a qualified corrosion engineer be consulted regarding protection of buried steel or ductile iron piping and conduit or, at a minimum, that manufacturer's recommendations for corrosion protection be closely followed. Further, a corrosion engineer may be needed to incorporate the necessary precautions to avoid premature corrosion of concrete slabs and foundations in direct contact with native soil.

The importation of soil and or aggregate materials to the site should be screened to determine the potential for corrosion to concrete and buried metal piping. The report has been prepared in accordance with generally accepted geotechnical engineering practices in the area. No other warranties, either express or implied, are made as to the professional advice provided under the terms of our agreement and included in this report.

If you have any questions, or if we may be of further assistance, please do not hesitate to contact our office at (909) 980-6455.

Respectfully Submitted,

**SALEM ENGINEERING GROUP, INC.**



Ibrahim Ibrahim, MS, PE  
Geotechnical Staff Engineer  
RCE 86724



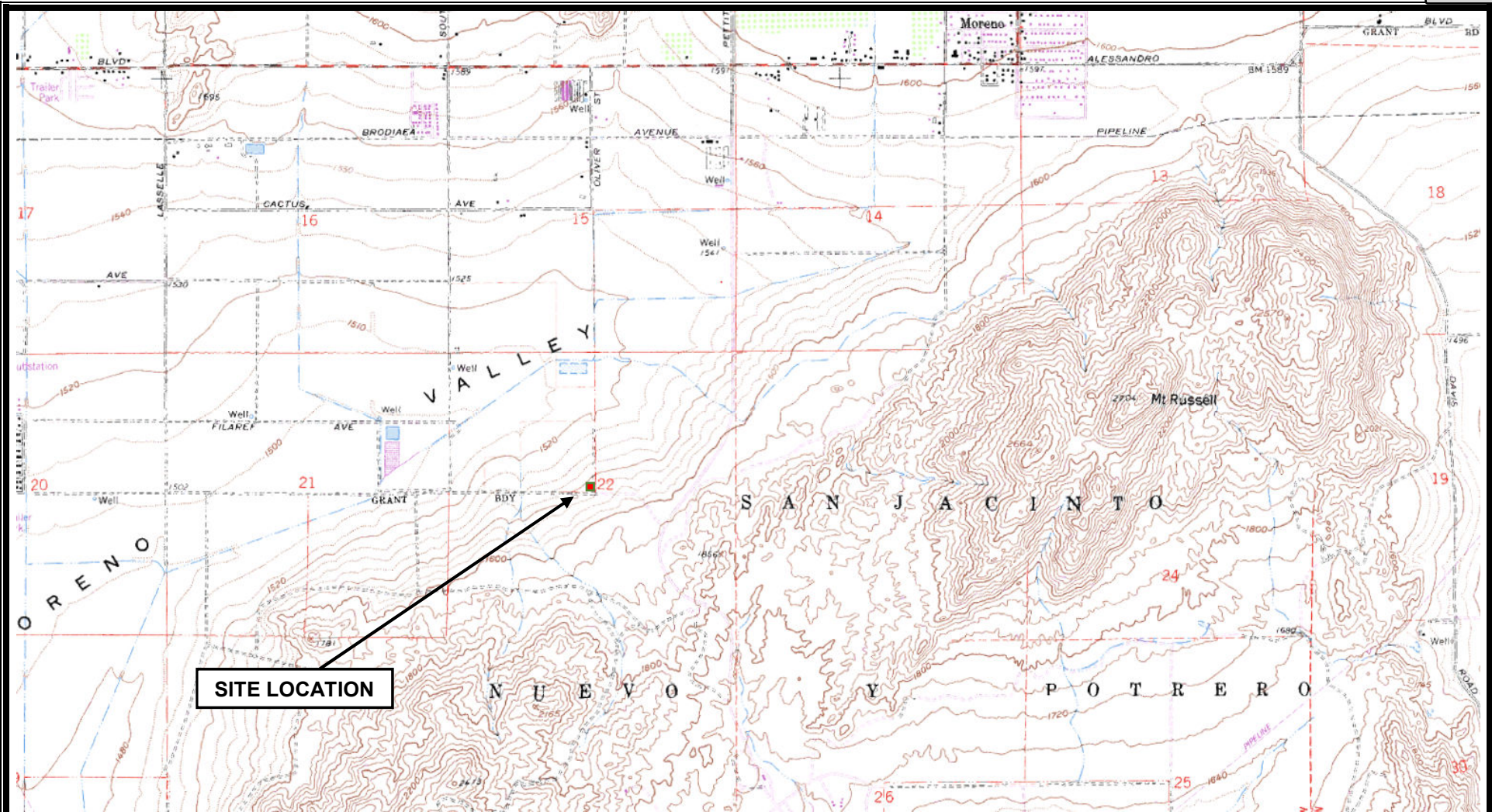
Clarence Jiang, GE  
Senior Geotechnical Engineer  
RGE 2477



R. Sammy Salem, MS, PE, GE  
Principal Engineer  
RCE 52762 / RGE 2549



Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



Source Image: U.S. Geological Survey, Sunnymead, Calif. 7.5' Quadrangle, 1967 (Photo Revised 1980)



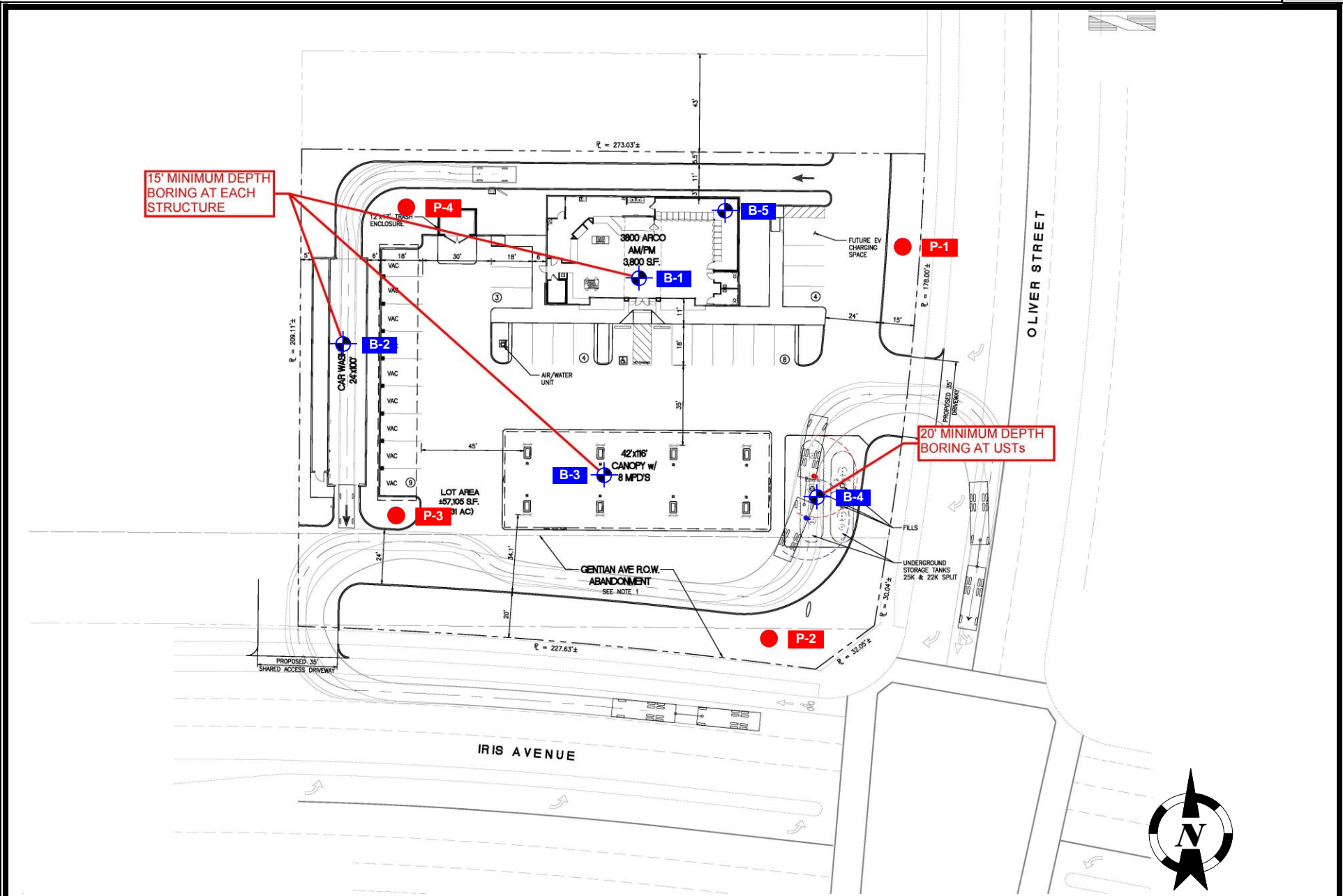
**VICINITY MAP**  
**GEOTECHNICAL ENGINEERING INVESTIGATION**  
**Proposed Arco Station**  
**NWC Iris Avenue & Oliver Street**  
**Moreno Valley, California**

SCALE:  
 NOT TO SCALE  
 DRAWN BY:  
 II  
 PROJECT NO.  
 3-217-1265

DATE:  
 11/2017  
 APPROVED BY:  
 CJ  
 FIGURE NO.  
 1







**SITE PLAN**  
**GEOTECHNICAL ENGINEERING INVESTIGATION**  
 Proposed Arco Station  
 NWC Iris Avenue & Oliver Street  
 Moreno Valley, California

SCALE:  
 NOT TO SCALE  
 DRAWN BY:  
 II  
 PROJECT NO.  
 3-217-1265

DATE:  
 11/2017  
 APPROVED BY:  
 CJ  
 FIGURE NO.  
 2

LEGEND:  
 B-1 Soil Boring Location  
 P-1 Percolation Location  
 All Locations Approximate



APPENDIX

A

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)


















## APPENDIX A FIELD EXPLORATION

Fieldwork for our investigation (drilling) was conducted on November 14, 2017 and included a site visit, subsurface exploration, and soil sampling. Percolation tests were performed on November 15, 2017. The locations of the exploratory borings and percolation tests are shown on the Site Plan, Figure 2. Boring logs for our exploration are presented in figures following the text in this appendix. Borings were located in the field using existing reference points. Therefore, actual boring locations may deviate slightly.

In general, our borings were performed using a truck-mounted CME 45C drill rig equipped with an 8-inch and a 6-inch hollow-stem augers and a 4-inch diameter solid flight auger. Sampling in the borings was accomplished using a hydraulic 140-pound hammer with a 30-inch drop. Samples were obtained with a 3-inch outside-diameter (OD), split spoon (California Modified) sampler, and a 2-inch OD, Standard Penetration Test (SPT) sampler. The number of blows required to drive the sampler the last 12 inches (or fraction thereof) of the 18-inch sampling interval were recorded on the boring logs. The blow counts shown on the boring logs should not be interpreted as standard SPT “N” values; corrections have not been applied. Upon completion, the borings were backfilled with soil cuttings.

Subsurface conditions encountered in the exploratory borings were visually examined, classified and logged in general accordance with the American Society for Testing and Materials (ASTM) Practice for Description and Identification of Soils (Visual-Manual Procedure D2488). This system uses the Unified Soil Classification System (USCS) for soil designations. The logs depict soil and geologic conditions encountered and depths at which samples were obtained. The logs also include our interpretation of the conditions between sampling intervals. Therefore, the logs contain both observed and interpreted data. We determined the lines designating the interface between soil materials on the logs using visual observations, drill rig penetration rates, excavation characteristics and other factors. The transition between materials may be abrupt or gradual. Where applicable, the field logs were revised based on subsequent laboratory testing.

## Unified Soil Classification System

Major Divisions			Letter	Symbol	Description	
<b>Coarse-grained Soils</b> More than ½ retained on the No. 200 Sieve	<b>Gravels</b> More than ½ coarse fraction retained on the No. 4 sieve	Clean Gravels	GW		Well-graded gravels and gravel-sand mixtures, little or no fines.	
		Gravels	GP		Poorly-graded gravels and gravel-sand mixtures, little or no fines.	
		Gravels With Fines	GM		Silty gravels, gravel-sand-silt mixtures.	
			GC		Clayey gravels, gravel-sand-clay mixtures.	
	<b>Sands</b> More than ½ passing through the No. 200 sieve	Clean Sands	SW		Well-graded sands and gravelly sands, little or no fines.	
			SP		Poorly-graded sands and gravelly sands, little or no fines.	
		Sands With Fines	SM		Silty sands, sand-silt mixtures	
			SC		Clayey sands, sandy-clay mixtures.	
			<b>Silts and Clays</b> Liquid Limit less than 50%	ML		Inorganic silts, very fine sands, rock flour, silty or clayey fine sands.
				CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
OL		Organic clays of medium to high plasticity.				
<b>Silts and Clays</b> Liquid Limit greater than 50%	MH		Inorganic silts, micaceous or diatomaceous fines sands or silts, elastic silts.			
	CH		Inorganic clays of high plasticity, fat clays.			
	OH		Organic clays of medium to high plasticity.			
<b>Highly Organic Soils</b>			PT		Peat, muck, and other highly organic soils.	
<b>Consistency Classification</b>						
<i>Granular Soils</i>			<i>Cohesive Soils</i>			
Description - Blows Per Foot (Corrected)			Description - Blows Per Foot (Corrected)			
Very loose	<u>MCS</u> <5	<u>SPT</u> <4	Very soft	<u>MCS</u> <3	<u>SPT</u> <2	
Loose	5 - 15	4 - 10	Soft	3 - 5	2 - 4	
Medium dense	16 - 40	11 - 30	Firm	6 - 10	5 - 8	
Dense	41 - 65	31 - 50	Stiff	11 - 20	9 - 15	
Very dense	>65	>50	Very Stiff	21 - 40	16 - 30	
			Hard	>40	>30	
MCS = Modified California Sampler			SPT = Standard Penetration Test Sampler			

# Boring No. B-1

**Project:** Proposed Arco Station  
**Client:** Sater Oil International, LLC  
**Location:** NWC Iris Avenue & Oliver Street, Moreno Valley, CA  
**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No.:** 3-217-1265  
**Figure No.:** A-1  
**Logged By:** JH  
**Initial:** None  
**At Completion:** None

Depth to Water >

SUBSURFACE PROFILE			SAMPLE					Penetration Test				Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	20	40	60	80	
0		Ground Surface										
		<b>Silty SAND (SM)</b> Loose; brown; moist; fine to medium-grained.	82.4	10.5	MCS		6					
5		Grades as above.	111.2	3.1	MCS		11					
10		Grades as above; medium dense.	109.1	4.6	MCS		22					
15		<b>Silty Clayey SAND (SC)</b> Dense; brown-orange; moist; fine to medium-grained; low plasticity.	--	9.6	SPT		48					
20		<b>Silty SAND (SM)</b> Medium dense; brown; moist; fine to medium-grained.	--	4.2	SPT		23					
25		Grades as above.	--	4.9	SPT		28					

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 45C  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 2

**Drill Date:** 11/14/2017  
**Borehole Size:** 6 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs./30 in.



Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# Boring No. B-1

**Project:** Proposed Arco Station

**Client:** Sater Oil International, LLC

**Location:** NWC Iris Avenue & Oliver Street, Moreno Valley, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No.:** 3-217-1265

**Figure No.:** A-1

**Logged By:** JH

**Initial:** None

**At Completion:** None

Depth to Water >

SUBSURFACE PROFILE			SAMPLE					Penetration Test 20 40 60 80	Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count		
30		Grades as above; dense.	-	5.6	SPT	■	37		
35		Grades as above; medium dense.	-	4.9	SPT	■	25		
40		Grades as above; with trace of clay.	--	5.9	SPT	■	29		
45		Grades as above.	--	5.9	SPT	■	25		
50		Grades as above.							
		End of Borehole							

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 45C  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 2 of 2

**Drill Date:** 11/14/2017  
**Borehole Size:** 6 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs./30 in.











Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

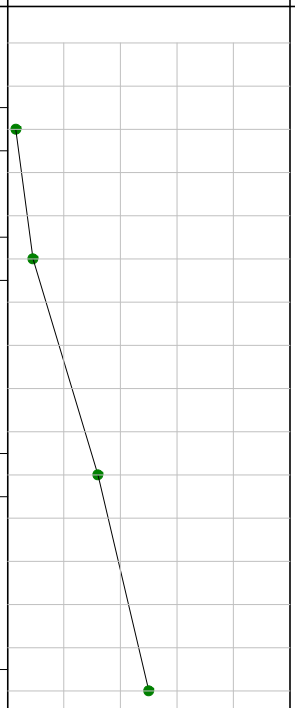
## Boring No. B-2

**Project:** Proposed Arco Station  
**Client:** Sater Oil International, LLC  
**Location:** NWC Iris Avenue & Oliver Street, Moreno Valley, CA  
**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 3-217-1265  
**Figure No.:** A-2  
**Logged By:** JH  
**Initial:** None  
**At Completion:** None

Depth to Water >

SUBSURFACE PROFILE			SAMPLE					Penetration Test				Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	20	40	60	80	
0		Ground Surface										
		<b>Silty SAND (SM) with trace of Gravel</b> Very loose; brown; moist; fine to coarse-grained.	104.0	4.8	MCS		3					
		<b>Silty SAND (SM)</b> Loose; brown; moist; fine to medium-grained.	108.8	5.4	MCS		9					
		Grades as above; medium dense.	109.8	4.1	MCS		32					
		<b>Silty Clayey SAND (SC)</b> Very dense; brown; moist; fine to medium-grained.	--	8.4	SPT		50					
		End of Borehole										
20												
25												



**Drill Method:** Solid Flight Auger  
**Drill Rig:** CME 45C  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 11/14/2017  
**Borehole Size:** 4 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

## Boring No. B-3

**Project:** Proposed Arco Station  
**Client:** Sater Oil International, LLC  
**Location:** NWC Iris Avenue & Oliver Street, Moreno Valley, CA  
**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No.:** 3-217-1265  
**Figure No.:** A-3  
**Logged By:** JH  
**Initial:** None  
**At Completion:** None

Depth to Water >

SUBSURFACE PROFILE			SAMPLE					Penetration Test				Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	20	40	60	80	
0		Ground Surface										
		<b>Silty SAND (SM)</b> Medium dense; brown; moist; fine to medium-grained.	107.2	2.2	MCS		19					
5		Grades as above; loose.	104.4	2.0	MCS		11					
10		Grades as above; medium dense.	108.9	4.5	MCS		17					
		<b>Silty Clayey SAND (SC)</b> Dense; brown; moist; fine to medium-grained.										
15			--	8.6	SPT		48					
		End of Borehole										
20												
25												

**Drill Method:** Solid Flight Auger  
**Drill Rig:** CME 45C  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 11/14/2017  
**Borehole Size:** 4 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



## Boring No. B-4

**Project:** Proposed Arco Station  
**Client:** Sater Oil International, LLC  
**Location:** NWC Iris Avenue & Oliver Street, Moreno Valley, CA  
**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 3-217-1265  
**Figure No.:** A-4  
**Logged By:** JH  
**Initial:** None  
**At Completion:** None

Depth to Water >

SUBSURFACE PROFILE			SAMPLE					Penetration Test				Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	20	40	60	80	
0		Ground Surface										
	[Symbol]	<b>Silty SAND (SM)</b> Loose; brown; moist; fine to medium-grained.	111.7	4.0	MCS	[Blue Box]	7					
5		Grades as above.	106.3	5.2	MCS	[Blue Box]	7					
10		Grades as above; medium dense.	112.5	2.5	MCS	[Blue Box]	22					
15	[Symbol]	<b>Silty Clayey SAND (SC)</b> Dense; brown; moist; fine to medium-grained.	--	9.2	SPT	[Blue Box]	32					
20	[Symbol]	<b>Silty SAND (SM)</b> Dense; brown; moist; fine to medium-grained.	--	6.4	SPT	[Blue Box]	36					
25		Grades as above.	--	5.4	SPT	[Blue Box]	39					
		End of Borehole										

**Drill Method:** Solid Flight Auger  
**Drill Rig:** CME 45C  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 11/14/2017  
**Borehole Size:** 4 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

## Boring No. B-5

**Project:** Proposed Arco Station  
**Client:** Sater Oil International, LLC  
**Location:** NWC Iris Avenue & Oliver Street, Moreno Valley, CA  
**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No.:** 3-217-1265  
**Figure No.:** A-5  
**Logged By:** JH  
**Initial:** None  
**At Completion:** None

Depth to Water >

SUBSURFACE PROFILE			SAMPLE					Penetration Test				Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	20	40	60	80	
0		Ground Surface										
	[Symbol]	<b>Silty SAND (SM)</b> Loose; brown; moist; fine to medium-grained.	105.7	2.0	MCS	[Blue Box]	11					●
5		Grades as above.	105.8	2.0	MCS	[Blue Box]	12					●
10		Grades as above; medium dense.	114.6	4.4	MCS	[Blue Box]	23					●
15		Grades as above; with clay.	--	7.9	SPT	[Blue Box]	19					●
		End of Borehole										
20												
25												

**Drill Method:** Solid Flight Auger  
**Drill Rig:** CME 45C  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 11/14/2017  
**Borehole Size:** 4 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

### Percolation Test Worksheet

**Project: Proposed Arco Station**  
**NWC Iris Ave & Oliver Street**  
**Moreno Valley, CA**

**Job No.: 3-217-1265**  
**Date Drilled: 11/14/2017**  
**Soil Classification: Silty SAND (SM)**

Hole Radius: 4 in.

Pipe Dia.: 3 in.

Total Depth of Hole: 96 in.

**Test Hole No.: P-1**

**Presoaking Date: 11/14/2017**

**Tested by: JH**

**Test Date: 11/15/2017**

**Drilled Hole Depth: 8 ft.**

**Stick Up 0 ft**

Time Start	Time Finish	Depth of Test Hole (ft) <sup>#</sup>	Refill- Yes or No	Elapsed Time (hrs:min)	Initial Water Level <sup>#</sup> (ft)	Final Water Level <sup>#</sup> (ft)	Δ Water Level (in.)	Δ Min.	Meas. Perc Rate (min/in)	Initial Height of Water (in)	Final Height of Water (in)	Average Height of Water (in)	Infiltration Rate, It (in/hr)
11:21	11:46	8.0	Y	0:25	6.15	6.75	7.20	25	3.5	22.2	15.0	18.6	1.68
11:47	12:12	8.0	Y	0:25	6.22	6.77	6.60	25	3.8	21.4	14.8	18.1	1.58
12:14	12:24	8.0	Y	0:10	6.41	6.62	2.52	10	4.0	19.1	16.6	17.8	1.53
12:24	12:34	8.0	N	0:10	6.62	6.80	2.16	10	4.6	16.6	14.4	15.5	1.48
12:34	12:44	8.0	N	0:10	6.80	6.96	1.92	10	5.2	14.4	12.5	13.4	1.49
12:44	12:54	8.0	N	0:10	6.96	7.10	1.68	10	6.0	12.5	10.8	11.6	1.48
12:54	13:04	8.0	N	0:10	7.10	7.22	1.44	10	6.9	10.8	9.4	10.1	1.43
13:04	13:14	8.0	N	0:10	7.22	7.33	1.32	10	7.6	9.4	8.0	8.7	1.48
<b>Recommended for Design:</b>										<b>Infiltration Rate</b>		<b>1.43</b>	

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016



## Percolation Test Worksheet

**Project:** Proposed Arco Station  
 NWC Iris Ave & Oliver Street  
 Moreno Valley, CA

**Job No.:** 3-217-1265  
**Date Drilled:** 11/14/2017  
**Soil Classification:** Silty SAND (SM)

Hole Radius: 4 in.

Pipe Dia.: 3 in.

Total Depth of Hole: 120 in.

**Test Hole No.:** P-2

**Presoaking Date:** 11/14/2017

**Tested by:** JH

**Test Date:** 11/15/2017

**Drilled Hole Depth:** 10 ft.

Stick Up 0 ft

Time Start	Time Finish	Depth of Test Hole (ft) <sup>#</sup>	Refill- Yes or No	Elapsed Time (hrs:min)	Initial Water Level <sup>#</sup> (ft)	Final Water Level <sup>#</sup> (ft)	Δ Water Level (in.)	Δ Min.	Meas. Perc Rate (min/in)	Initial Height of Water (in)	Final Height of Water (in)	Average Height of Water (in)	Infiltration Rate, It (in/hr)
11:13	11:43	10.0	Y	0:30	6.25	6.91	7.92	30	3.8	45.0	37.1	41.0	0.74
11:43	12:13	10.0	N	0:30	6.91	7.41	6.00	30	5.0	37.1	31.1	34.1	0.67
12:13	12:43	10.0	N	0:30	7.41	7.82	4.92	30	6.1	31.1	26.2	28.6	0.64
12:43	13:13	10.0	N	0:30	7.82	8.15	3.96	30	7.6	26.2	22.2	24.2	0.61
13:13	13:43	10.0	N	0:30	8.15	8.42	3.24	30	9.3	22.2	19.0	20.6	0.57
13:43	14:13	10.0	N	0:30	8.42	8.65	2.76	30	10.9	19.0	16.2	17.6	0.56
14:13	14:43	10.0	N	0:30	8.65	8.85	2.40	30	12.5	16.2	13.8	15.0	0.56
14:43	15:13	10.0	N	0:30	8.85	9.02	2.04	30	14.7	13.8	11.8	12.8	0.55
15:13	15:43	10.0	N	0:30	9.02	9.17	1.80	30	16.7	11.8	10.0	10.9	0.56
15:43	16:13	10.0	N	0:30	9.17	9.30	1.56	30	19.2	10.0	8.4	9.2	0.56
16:13	16:43	10.0	N	0:30	9.30	9.42	1.44	30	20.8	8.4	7.0	7.7	0.60
16:43	17:13	10.0	N	0:30	9.42	9.52	1.20	30	25.0	7.0	5.8	6.4	0.57
<b>Recommended for Design:</b>										<b>Infiltration Rate</b>		<b>0.55</b>	

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016



### Percolation Test Worksheet

**Project:** Proposed Arco Station  
 NWC Iris Ave & Oliver Street  
 Moreno Valley, CA

**Job No.:** 3-217-1265  
**Date Drilled:** 11/14/2017  
**Soil Classification:** Silty SAND (SM)

Hole Radius: 4 in.  
 Pipe Dia.: 3 in.  
 Total Depth of Hole: 96 in.

**Test Hole No.:** P-3  
**Tested by:** JH  
**Drilled Hole Depth:** 8 ft.

**Presoaking Date:** 11/14/2017  
**Test Date:** 11/15/2017

Stick Up 0 ft

Time Start	Time Finish	Depth of Test Hole (ft) <sup>#</sup>	Refill- Yes or No	Elapsed Time (hrs:min)	Initial Water Level <sup>#</sup> (ft)	Final Water Level <sup>#</sup> (ft)	Δ Water Level (in.)	Δ Min.	Meas. Perc Rate (min/in)	Initial Height of Water (in)	Final Height of Water (in)	Average Height of Water (in)	Infiltration Rate, It (in/hr)
11:15	11:45	8.0	Y	0:30	4.52	5.11	7.08	30	4.2	41.8	34.7	38.2	0.70
11:45	12:15	8.0	N	0:30	5.11	5.54	5.16	30	5.8	34.7	29.5	32.1	0.61
12:15	12:45	8.0	N	0:30	5.54	5.88	4.08	30	7.4	29.5	25.4	27.5	0.55
12:45	13:15	8.0	N	0:30	5.88	6.16	3.36	30	8.9	25.4	22.1	23.8	0.52
13:15	13:45	8.0	N	0:30	6.16	6.40	2.88	30	10.4	22.1	19.2	20.6	0.51
13:45	14:15	8.0	N	0:30	6.40	6.61	2.52	30	11.9	19.2	16.7	17.9	0.51
14:15	14:45	8.0	N	0:30	6.61	6.80	2.28	30	13.2	16.7	14.4	15.5	0.52
14:45	15:15	8.0	N	0:30	6.80	6.97	2.04	30	14.7	14.4	12.4	13.4	0.53
15:15	15:45	8.0	N	0:30	6.97	7.12	1.80	30	16.7	12.4	10.6	11.5	0.53
15:45	16:15	8.0	N	0:30	7.12	7.25	1.56	30	19.2	10.6	9.0	9.8	0.53
16:15	16:45	8.0	N	0:30	7.25	7.36	1.32	30	22.7	9.0	7.7	8.3	0.51
16:45	17:15	8.0	N	0:30	7.36	7.46	1.20	30	25.0	7.7	6.5	7.1	0.53
<b>Recommended for Design:</b>										<b>Infiltration Rate</b>			<b>0.51</b>

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016



### Percolation Test Worksheet

**Project:** Proposed Arco Station  
 NWC Iris Ave & Oliver Street  
 Moreno Valley, CA

**Job No.:** 3-217-1265  
**Date Drilled:** 11/14/2017  
**Soil Classification:** Silty SAND (SM)

Hole Radius: 4 in.

Pipe Dia.: 3 in.

Total Depth of Hole: 120 in.

**Test Hole No.:** P-4

**Presoaking Date:** 11/14/2017

**Tested by:** JH

**Test Date:** 11/15/2017

**Drilled Hole Depth:** 10 ft.

Stick Up 0 ft

Time Start	Time Finish	Depth of Test Hole (ft) <sup>#</sup>	Refill- Yes or No	Elapsed Time (hrs:min)	Initial Water Level <sup>#</sup> (ft)	Final Water Level <sup>#</sup> (ft)	Δ Water Level (in.)	Δ Min.	Meas. Perc Rate (min/in)	Initial Height of Water (in)	Final Height of Water (in)	Average Height of Water (in)	Infiltration Rate, It (in/hr)
11:23	11:48	10.0	Y	0:25	8.00	8.57	6.84	25	3.7	24.0	17.2	20.6	1.45
11:49	12:14	10.0	Y	0:25	8.11	8.62	6.12	25	4.1	22.7	16.6	19.6	1.36
12:16	12:26	10.0	Y	0:10	8.36	8.55	2.28	10	4.4	19.7	17.4	18.5	1.33
12:26	12:36	10.0	N	0:10	8.55	8.72	2.04	10	4.9	17.4	15.4	16.4	1.33
12:36	12:46	10.0	N	0:10	8.72	8.87	1.80	10	5.6	15.4	13.6	14.5	1.31
12:46	12:56	10.0	N	0:10	8.87	9.00	1.56	10	6.4	13.6	12.0	12.8	1.27
12:56	13:06	10.0	N	0:10	9.00	9.12	1.44	10	6.9	12.0	10.6	11.3	1.30
13:06	13:16	10.0	N	0:10	9.12	9.23	1.32	10	7.6	10.6	9.2	9.9	1.33
<b>Recommended for Design:</b>										<b>Infiltration Rate</b>		<b>1.27</b>	

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016



APPENDIX

B

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

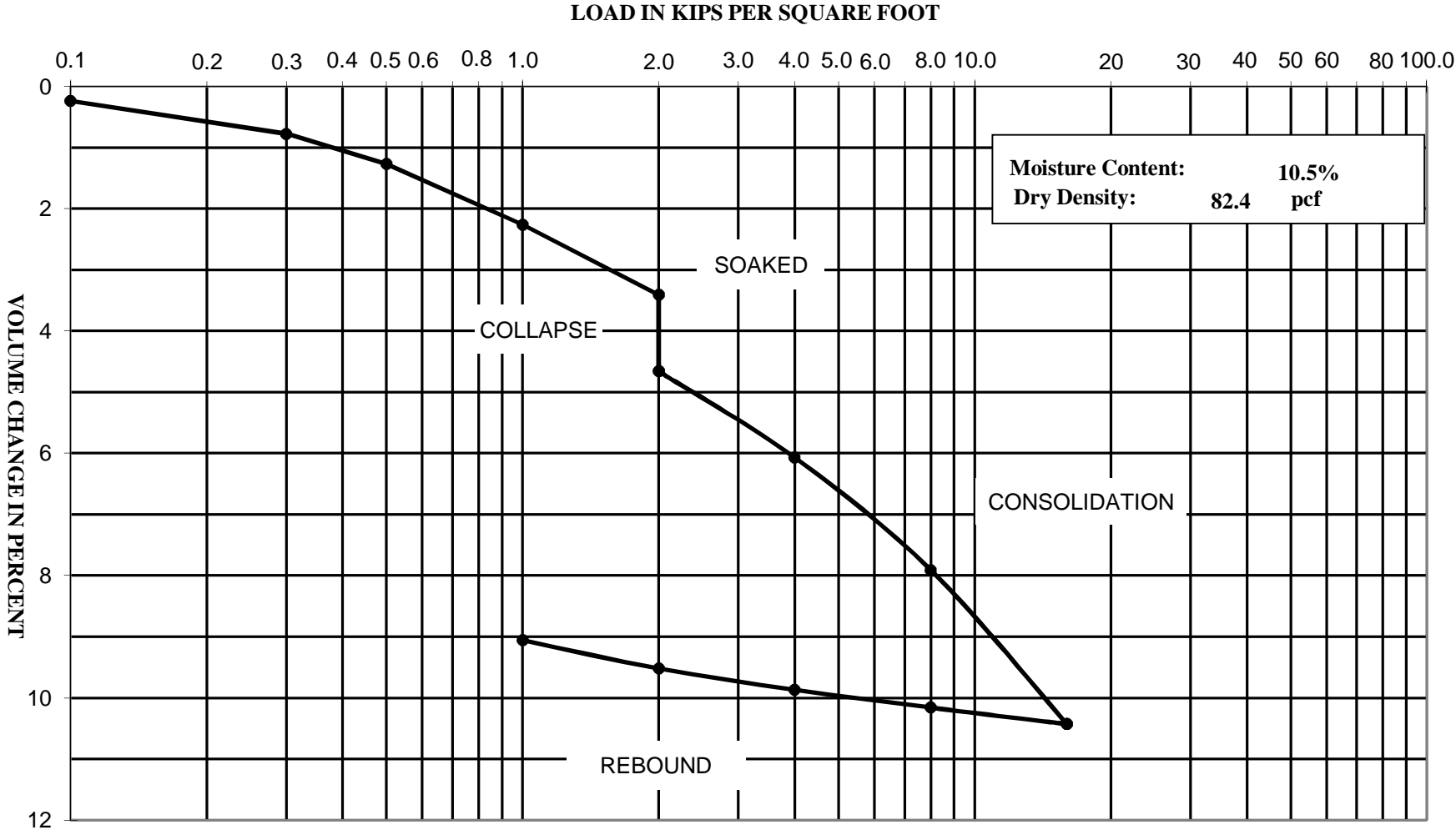


## APPENDIX B LABORATORY TESTING

Laboratory tests were performed in accordance with generally accepted test methods of the American Society for Testing and Materials (ASTM), Caltrans, or other suggested procedures. Selected samples were tested for in-situ dry density and moisture content, corrosivity, consolidation, shear strength, maximum density and optimum moisture content, and grain size distribution. The results of the laboratory tests are summarized in the following figures.



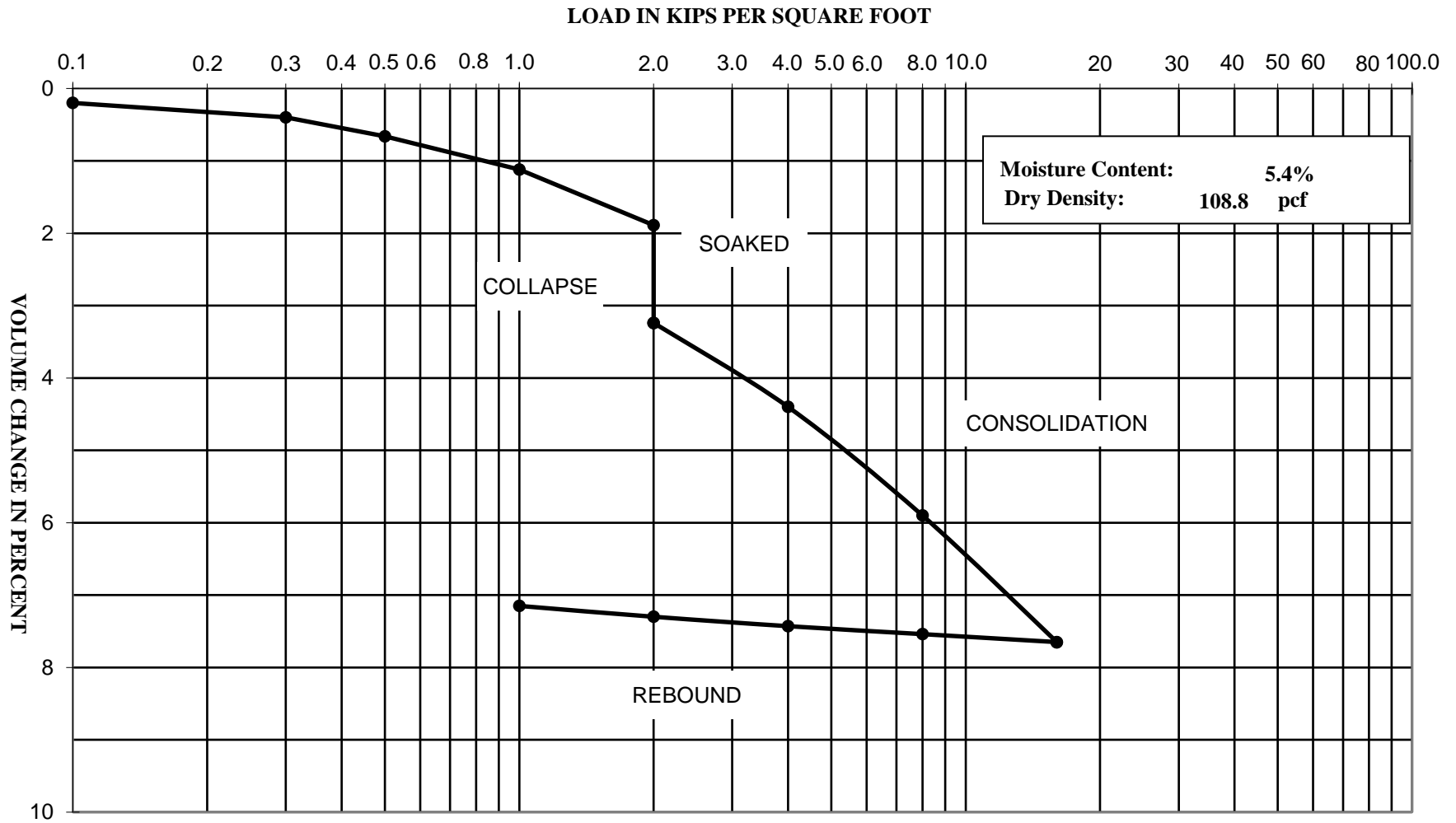
### CONSOLIDATION - PRESSURE TEST DATA ASTM D 2435



Prop. Arco Station - Moreno Valley, CA  
Project Number: 3-217-1265  
Boring: B-1 @ 2'



# CONSOLIDATION - PRESSURE TEST DATA ASTM D 2435



Prop. Arco Station - Moreno Valley, CA

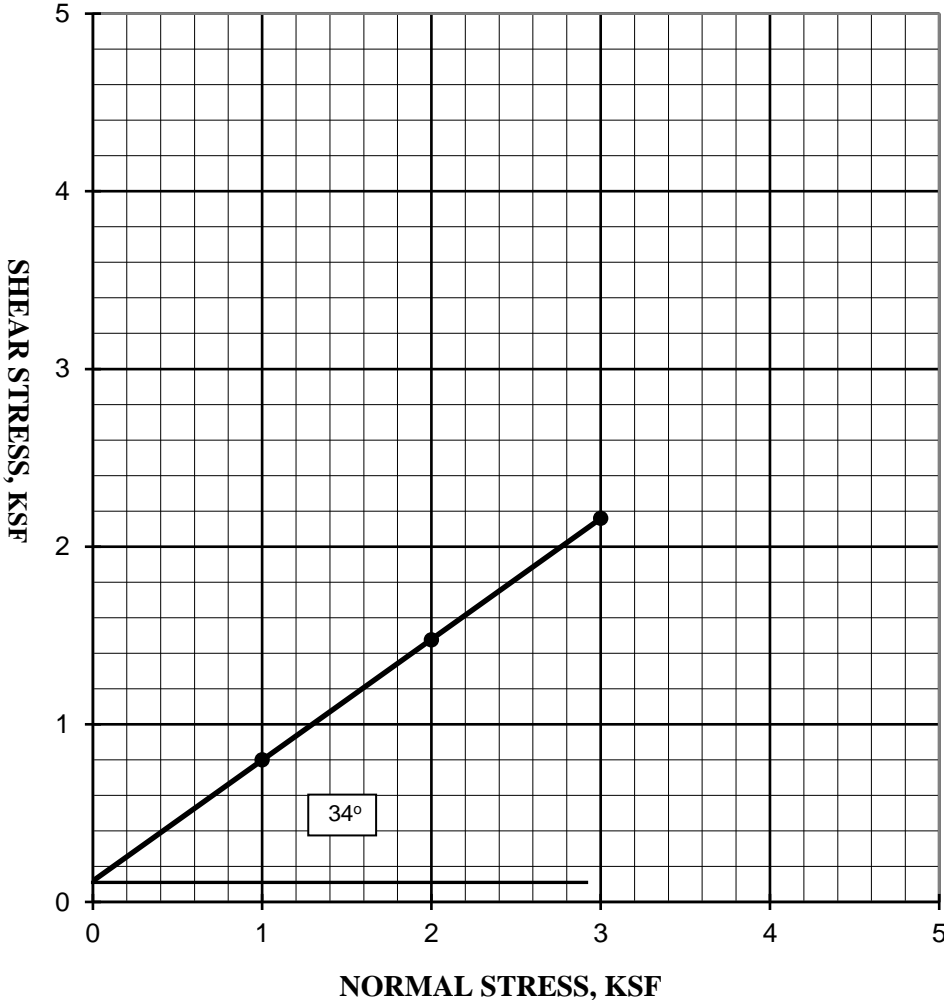
Project Number: 3-217-1265

Boring: B-2 @ 5'





# SHEAR STRENGTH DIAGRAM (DIRECT SHEAR) ASTM D - 3080



**Prop. Arco Station - Moreno Valley, CA**

**Project Number: 3-217-1265**

**Boring: B-1 @ 5'**  
**Soil Type: Silty SAND (SM)**

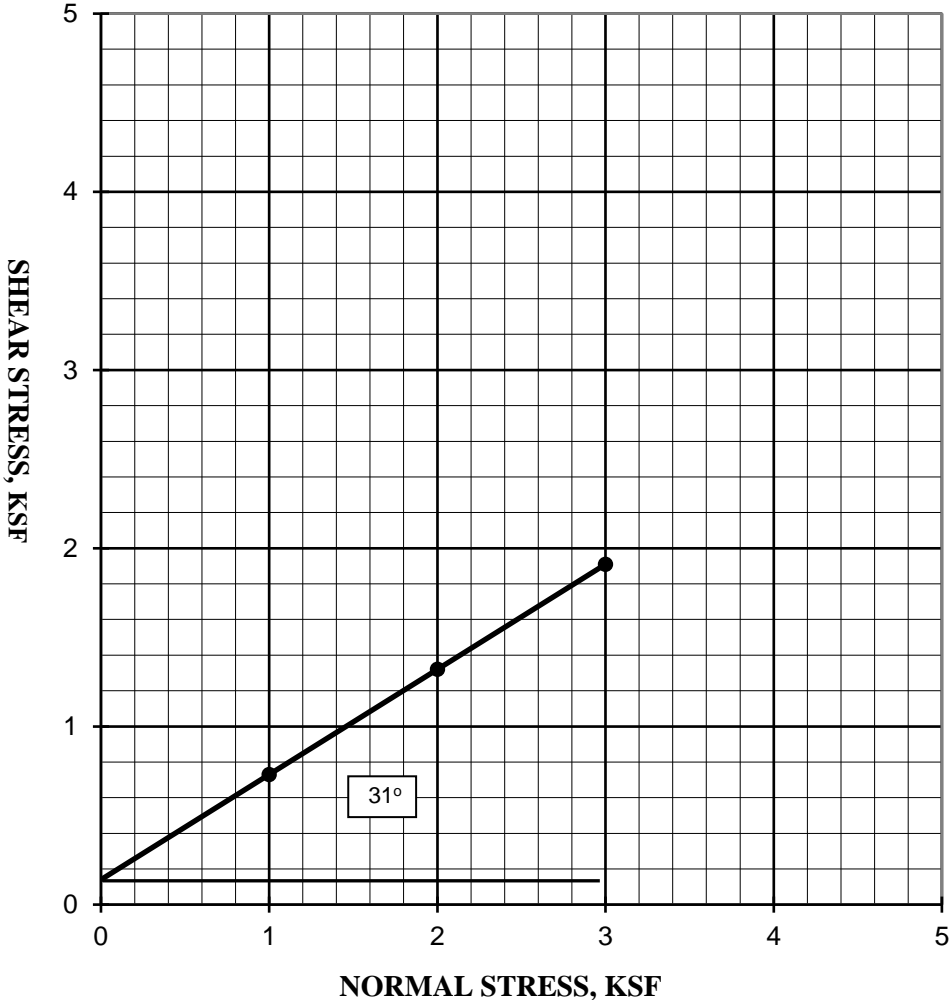
**Friction Angle: 34 degrees**  
**Cohesion: 120 psf**

**Moisture Content 3.1%**  
**Dry Density 111.2 pcf**



Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016

# SHEAR STRENGTH DIAGRAM (DIRECT SHEAR) ASTM D - 3080



Prop. Arco Station - Moreno Valley, CA

Project Number: 3-217-1265

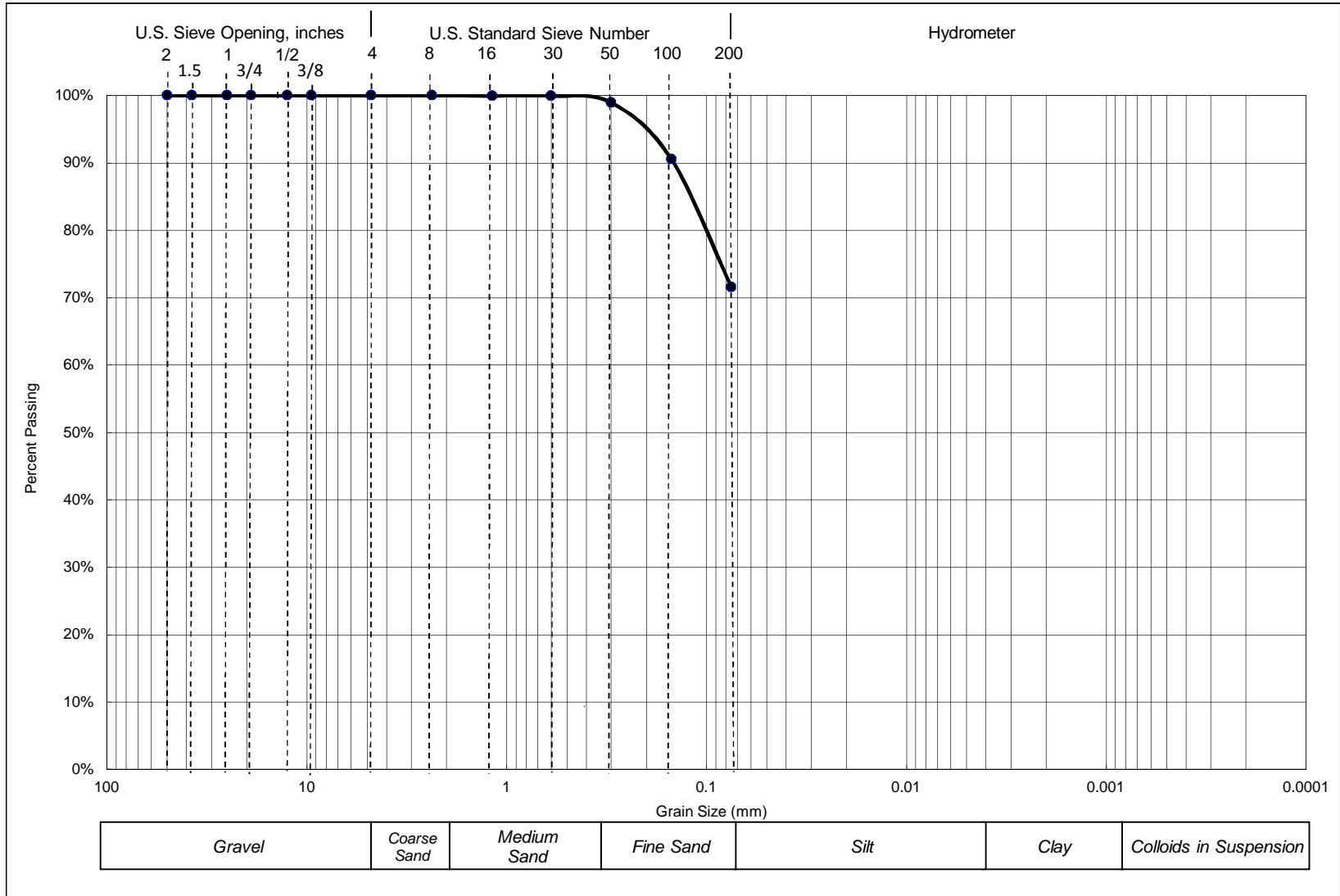
Boring: B-2 @ 2'  
Soil Type: Silty SAND (SM)

Friction Angle: 31 degrees  
Cohesion: 140 psf

Moisture Content 4.8%  
Dry Density 104.0 pcf



### PARTICLE SIZE DISTRIBUTION DIAGRAM GRADATION TEST - ASTM C136



**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-1 @ 2'**



Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016

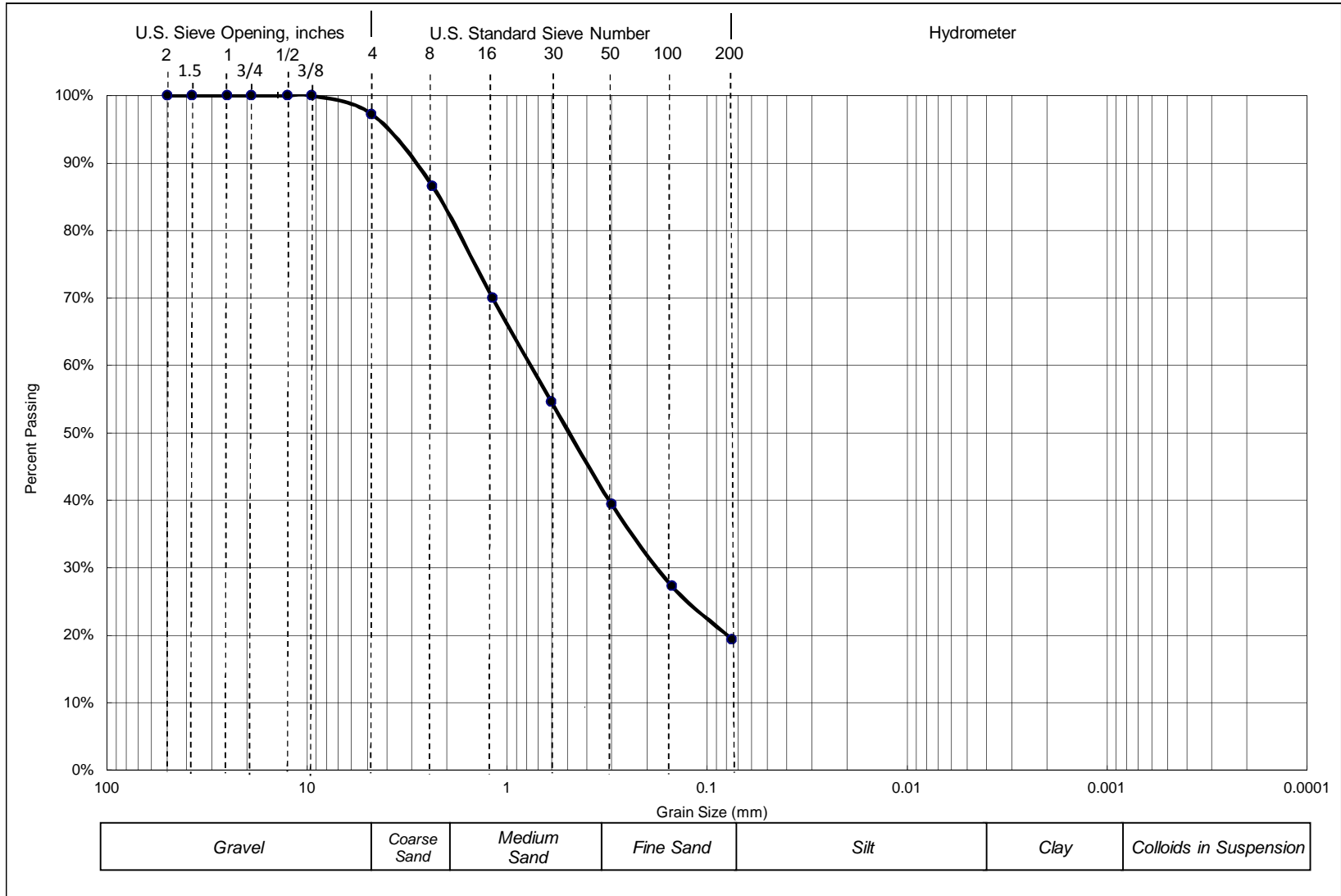
**DRY SIEVE ANALYSIS**  
**ASTM C136 (without Hydrometer)**

Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	100.0%
No. 8	2.36	100.0%
No. 16	1.18	100.0%
No. 30	0.6	100.0%
No. 50	0.3	99.0%
No. 100	0.15	90.6%
No. 200	0.075	71.59%

**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-1 @ 2'**



### PARTICLE SIZE DISTRIBUTION DIAGRAM GRADATION TEST - ASTM C136



Prop. Arco Station - Moreno Valley, CA  
Project Number: 3-217-1265  
Boring: B-1 @ 5'



Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016



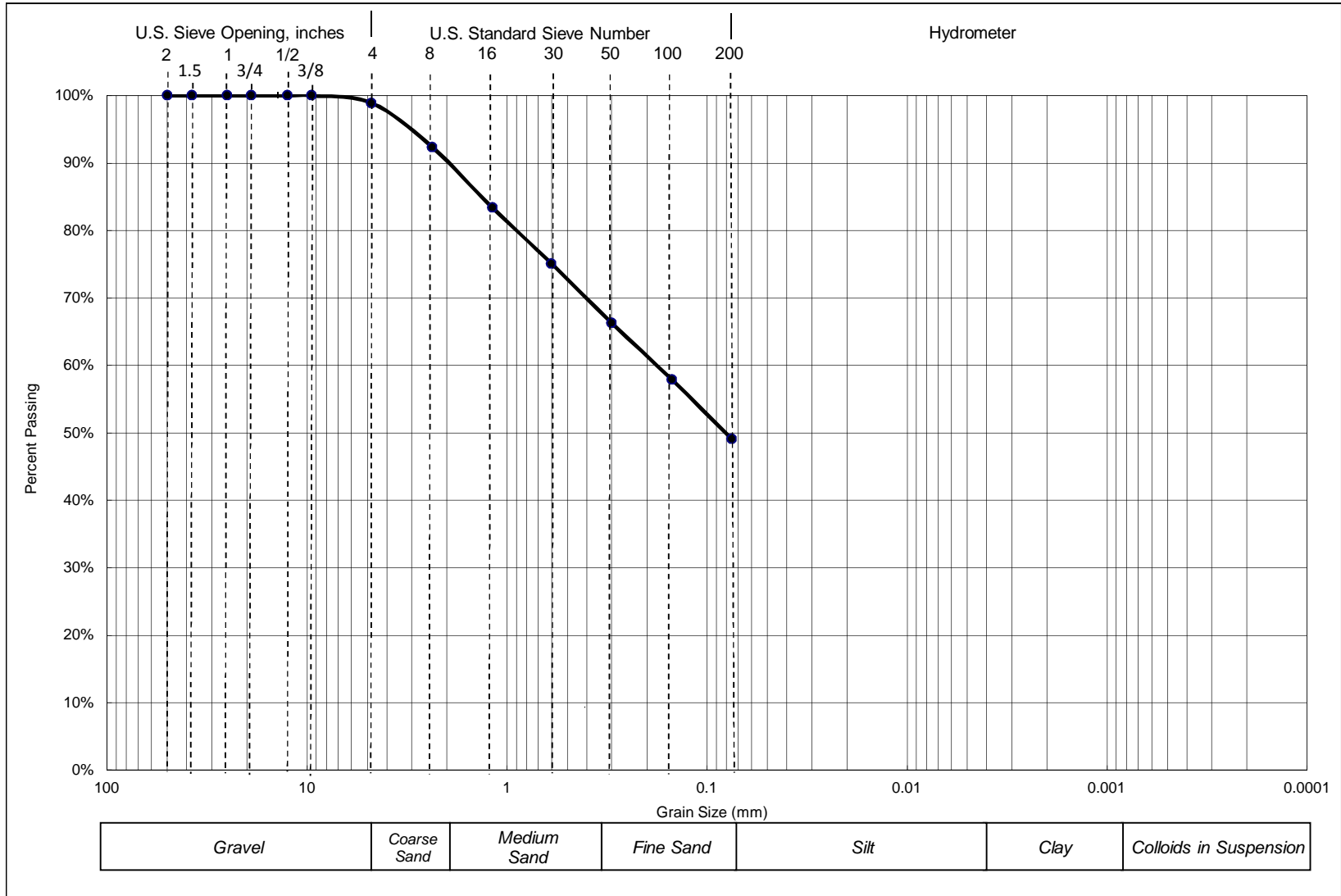
**DRY SIEVE ANALYSIS**  
**ASTM C136 (without Hydrometer)**

Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	97.2%
No. 8	2.36	86.6%
No. 16	1.18	70.0%
No. 30	0.6	54.6%
No. 50	0.3	39.4%
No. 100	0.15	27.3%
No. 200	0.075	19.36%

**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-1 @ 5'**



### PARTICLE SIZE DISTRIBUTION DIAGRAM GRADATION TEST - ASTM C136



**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-1 @ 15'**



Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016

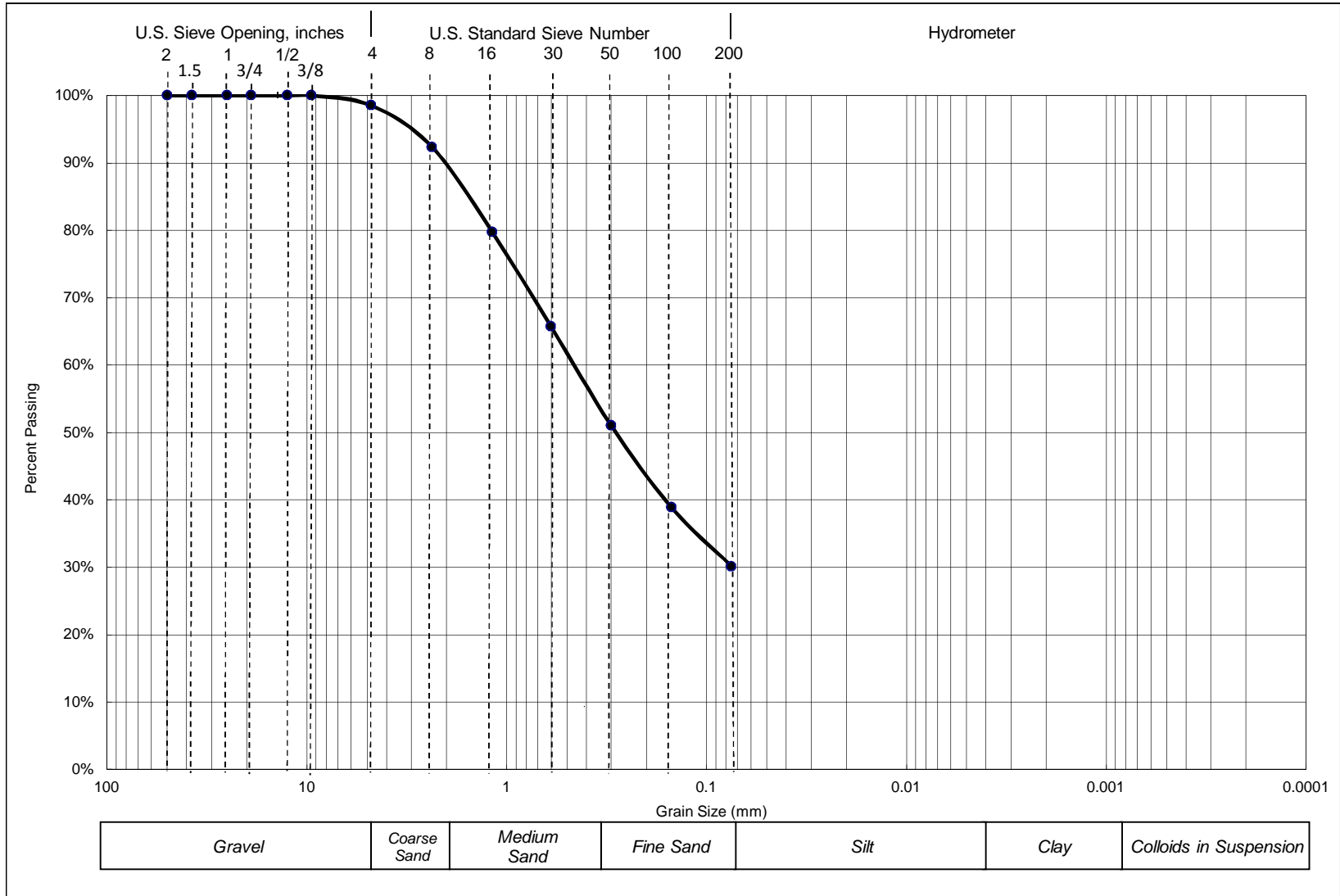
**DRY SIEVE ANALYSIS**  
**ASTM C136 (without Hydrometer)**

Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	98.9%
No. 8	2.36	92.3%
No. 16	1.18	83.4%
No. 30	0.6	75.1%
No. 50	0.3	66.3%
No. 100	0.15	57.9%
No. 200	0.075	49.05%

**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-1 @ 15'**



### PARTICLE SIZE DISTRIBUTION DIAGRAM GRADATION TEST - ASTM C136



**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-1 @ 30'**



Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016

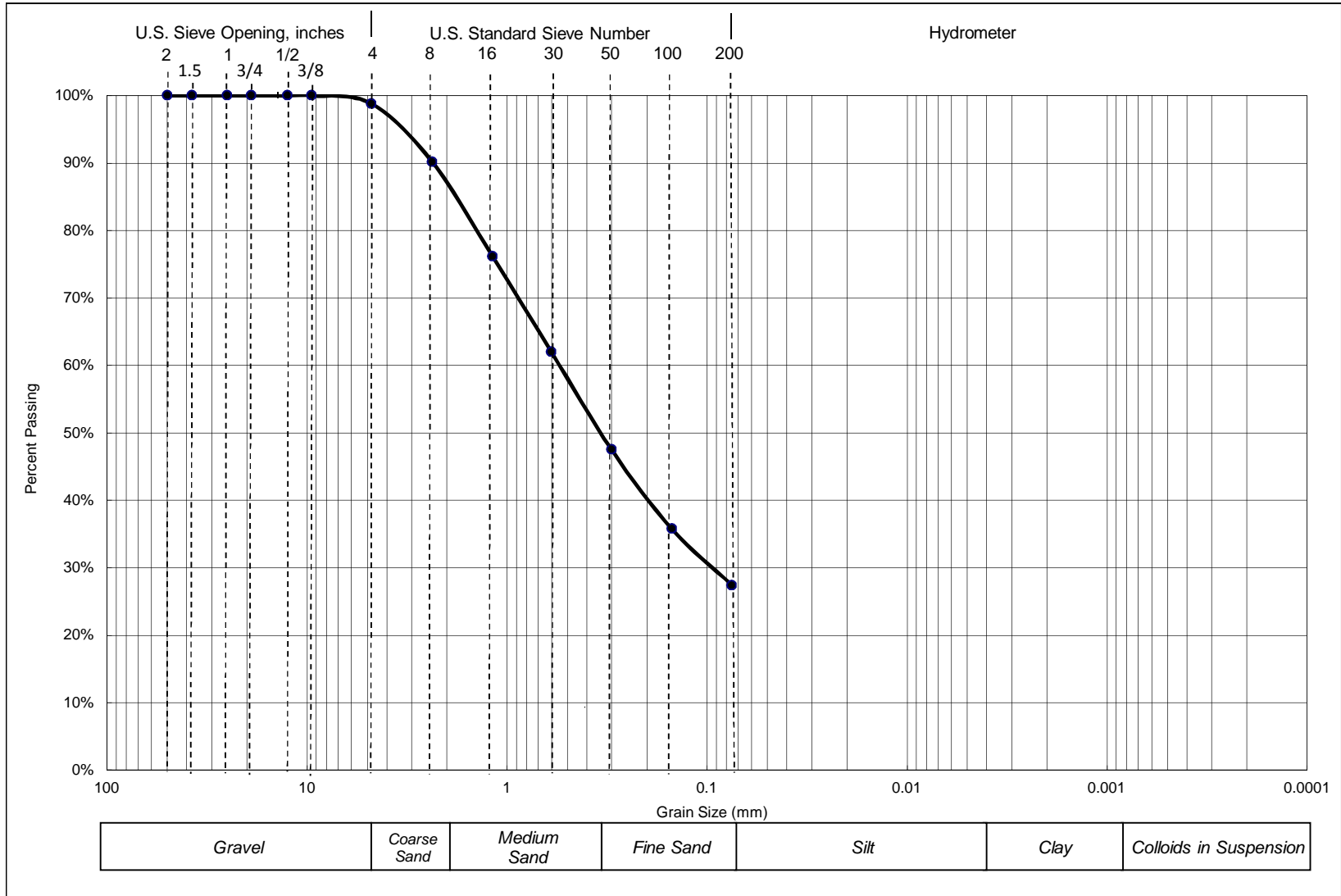
**DRY SIEVE ANALYSIS**  
**ASTM C136 (without Hydrometer)**

Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	98.5%
No. 8	2.36	92.3%
No. 16	1.18	79.7%
No. 30	0.6	65.7%
No. 50	0.3	51.0%
No. 100	0.15	38.9%
No. 200	0.075	30.13%

**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-1 @ 30'**



### PARTICLE SIZE DISTRIBUTION DIAGRAM GRADATION TEST - ASTM C136



**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-1 @ 40'**



Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016

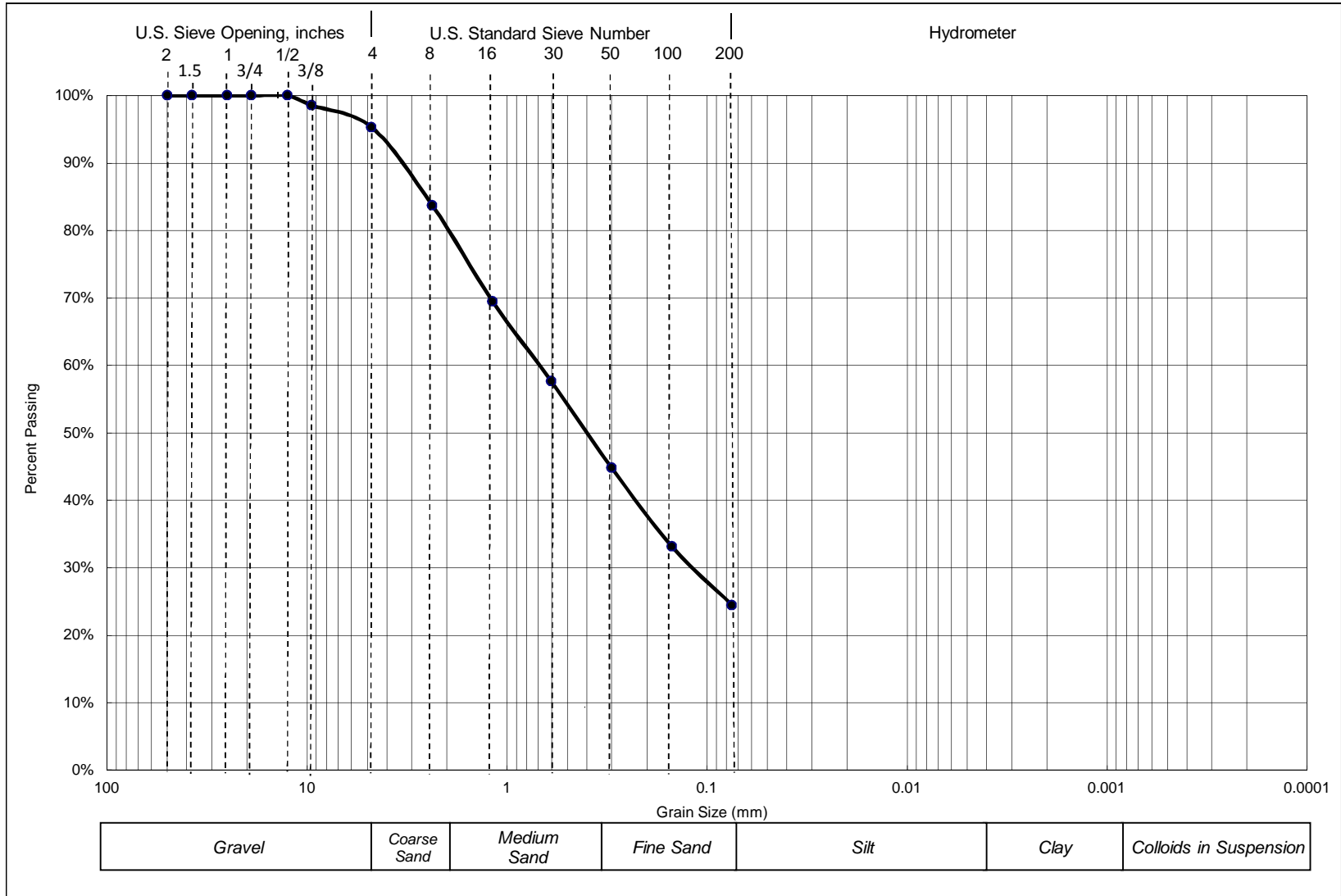
**DRY SIEVE ANALYSIS**  
**ASTM C136 (without Hydrometer)**

Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	98.8%
No. 8	2.36	90.1%
No. 16	1.18	76.1%
No. 30	0.6	62.0%
No. 50	0.3	47.5%
No. 100	0.15	35.7%
No. 200	0.075	27.40%

**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-1 @ 40'**



### PARTICLE SIZE DISTRIBUTION DIAGRAM GRADATION TEST - ASTM C136



**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-2 @ 2'**



Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016



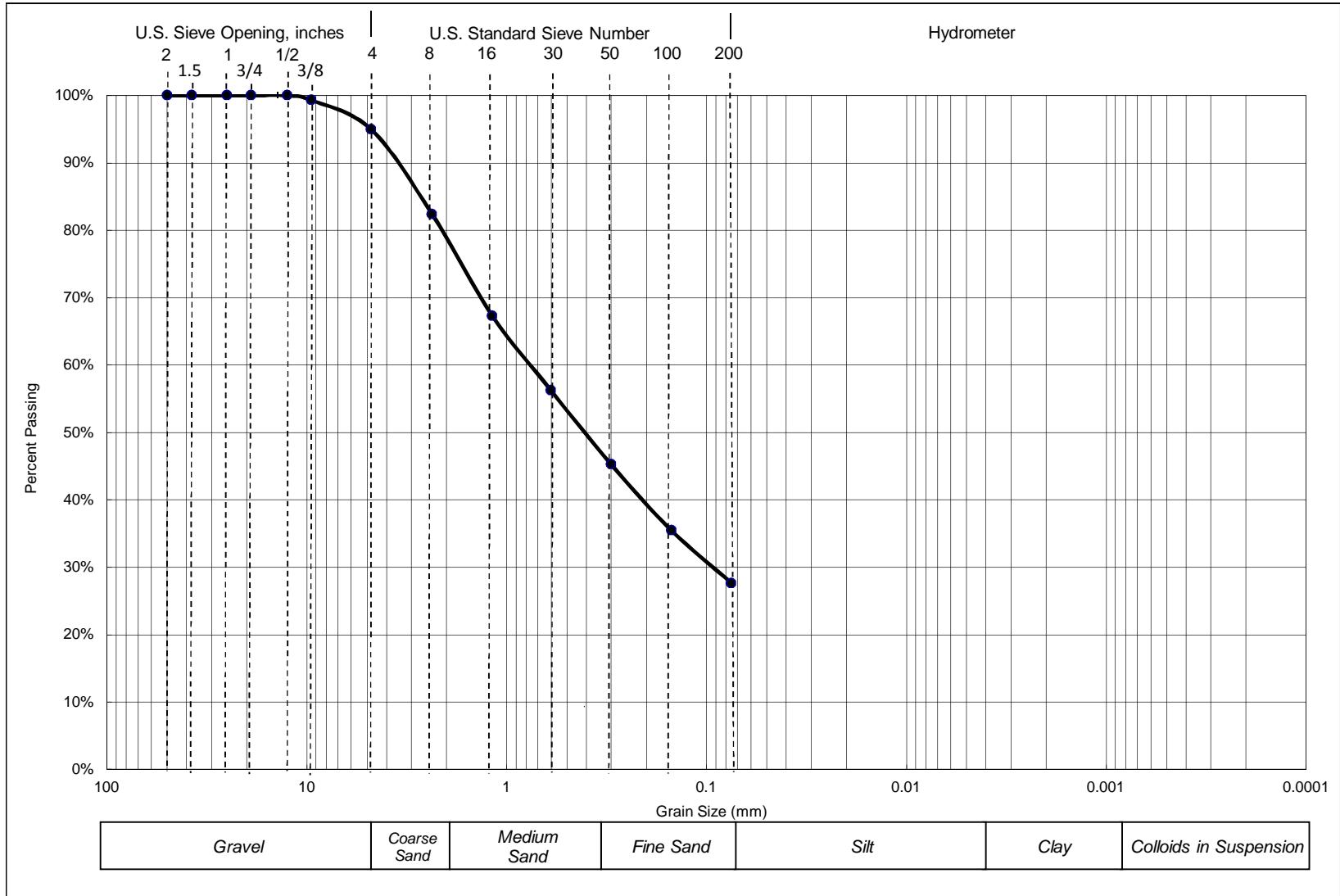
**DRY SIEVE ANALYSIS**  
**ASTM C136 (without Hydrometer)**

Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	98.6%
No. 4	4.75	95.3%
No. 8	2.36	83.7%
No. 16	1.18	69.5%
No. 30	0.6	57.6%
No. 50	0.3	44.8%
No. 100	0.15	33.2%
No. 200	0.075	24.46%

**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-2 @ 2'**



### PARTICLE SIZE DISTRIBUTION DIAGRAM GRADATION TEST - ASTM C136



**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-2 @ 5'**



Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016

**DRY SIEVE ANALYSIS**  
**ASTM C136 (without Hydrometer)**

Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	99.3%
No. 4	4.75	95.0%
No. 8	2.36	82.4%
No. 16	1.18	67.3%
No. 30	0.6	56.2%
No. 50	0.3	45.2%
No. 100	0.15	35.5%
No. 200	0.075	27.65%

**Prop. Arco Station - Moreno Valley, CA**  
**Project Number: 3-217-1265**  
**Boring: B-2 @ 5'**



## CHEMICAL ANALYSIS

### SO<sub>4</sub> - Modified Caltrans 417 & Cl - Modified Caltrans 417/422

Prop. Arco Station - Moreno Valley, CA

Project Number: 3-217-1265

Date: 11/17/17

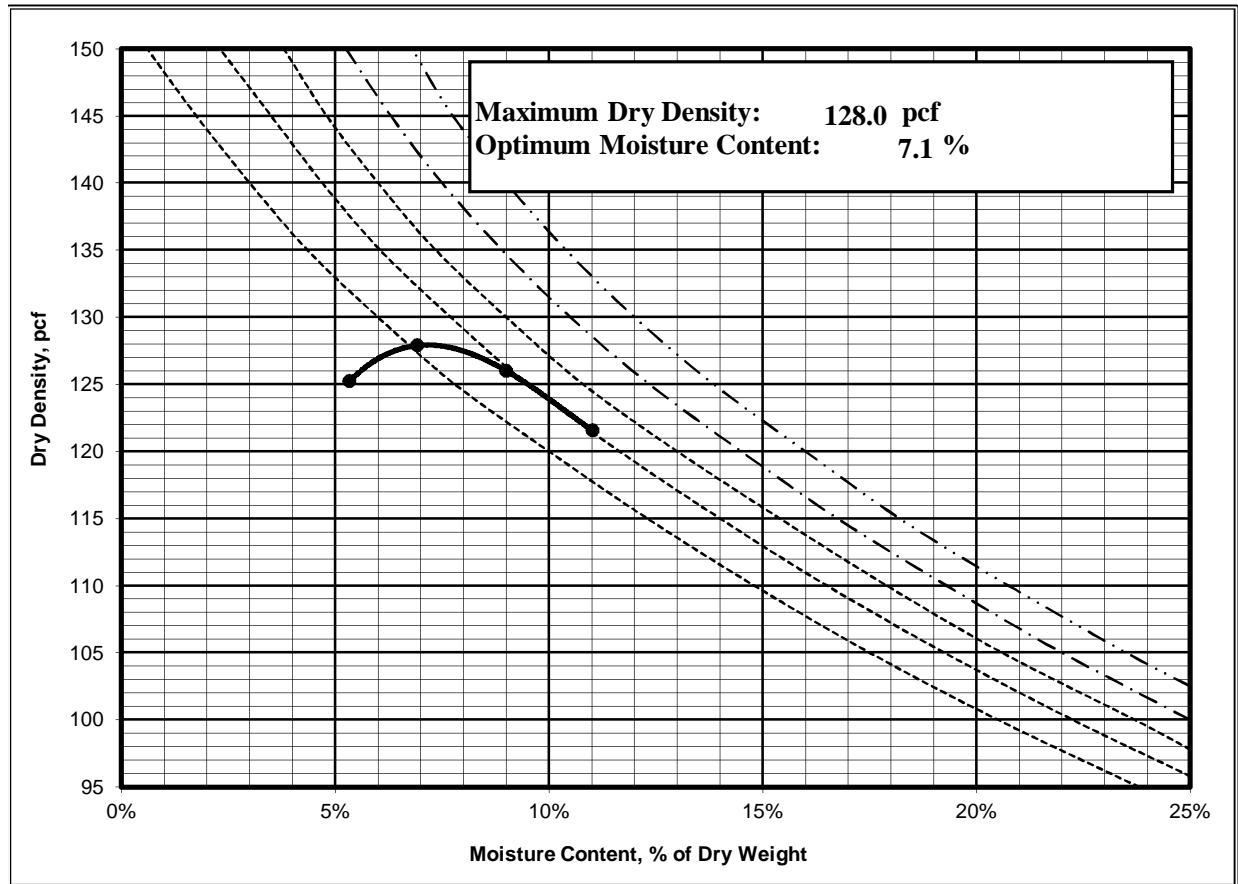
Soil Classification: Silty SAND (SM)

Sample Number	Sample Location	Soluble Sulfate SO <sub>4</sub> -S	Soluble Chloride Cl	pH
1a.	B-1 @ 0 - 3'	50 mg/kg	21 mg/kg	7.0
1b.	B-1 @ 0 - 3'	50 mg/kg	20 mg/kg	7.0
1c.	B-1 @ 0 - 3'	50 mg/kg	21 mg/kg	7.0
<b>Average:</b>		<b>50 mg/kg</b>	<b>21 mg/kg</b>	<b>7.0</b>

## Laboratory Compaction Curve ASTM D1557

Prop. Arco Station - Moreno Valley, CA  
 Project Number: 3-217-1265  
 Date Tested: 11/17/17  
 Sample Location: B-1 @ 0 - 3'  
 Soil Classification: Silty Sand, Brown, Non-Cohesive  
 Sample/Curve Number: 1  
 Test Method: 1557 A

	1	2	3	4
Weight of Moist Specimen & Mold, (g)	3991.6	4064.2	4073.2	4037.0
Weight of Compaction Mold, (g)	1998.9	1998.9	1998.9	1998.9
Weight of Moist Specimen, (g)	1992.7	2065.3	2074.3	2038.1
Volume of mold, (ft <sup>3</sup> )	0.0333	0.0333	0.0333	0.0333
Wet Density, (pcf)	131.9	136.7	137.3	134.9
Weight of Wet (Moisture) Sample, (g)	341.2	341.2	341.2	341.2
Weight of Dry (Moisture) Sample, (g)	323.9	319.1	313.0	307.3
Moisture Content, (%)	5.3%	6.9%	9.0%	11.0%
Dry Density, (pcf)	125.2	127.9	126.0	121.5



Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

APPENDIX

C



## APPENDIX C GENERAL EARTHWORK AND PAVEMENT SPECIFICATIONS

When the text of the report conflicts with the general specifications in this appendix, the recommendations in the report have precedence.

**1.0 SCOPE OF WORK:** These specifications and applicable plans pertain to and include all earthwork associated with the site rough grading, including, but not limited to, the furnishing of all labor, tools and equipment necessary for site clearing and grubbing, stripping, preparation of foundation materials for receiving fill, excavation, processing, placement and compaction of fill and backfill materials to the lines and grades shown on the project grading plans and disposal of excess materials.

**2.0 PERFORMANCE:** The Contractor shall be responsible for the satisfactory completion of all earthwork in accordance with the project plans and specifications. This work shall be inspected and tested by a representative of SALEM Engineering Group, Incorporated, hereinafter referred to as the Soils Engineer and/or Testing Agency. Attainment of design grades, when achieved, shall be certified by the project Civil Engineer. Both the Soils Engineer and the Civil Engineer are the Owner's representatives. If the Contractor should fail to meet the technical or design requirements embodied in this document and on the applicable plans, he shall make the necessary adjustments until all work is deemed satisfactory as determined by both the Soils Engineer and the Civil Engineer. No deviation from these specifications shall be made except upon written approval of the Soils Engineer, Civil Engineer, or project Architect.

No earthwork shall be performed without the physical presence or approval of the Soils Engineer. The Contractor shall notify the Soils Engineer at least 2 working days prior to the commencement of any aspect of the site earthwork.

The Contractor shall assume sole and complete responsibility for job site conditions during the course of construction of this project, including safety of all persons and property; that this requirement shall apply continuously and not be limited to normal working hours; and that the Contractor shall defend, indemnify and hold the Owner and the Engineers harmless from any and all liability, real or alleged, in connection with the performance of work on this project, except for liability arising from the sole negligence of the Owner or the Engineers.

**3.0 TECHNICAL REQUIREMENTS:** All compacted materials shall be densified to no less than 95 percent of relative compaction (90 percent for cohesive soils) based on ASTM D1557 Test Method (latest edition), UBC or CAL-216, or as specified in the technical portion of the Soil Engineer's report. The location and frequency of field density tests shall be determined by the Soils Engineer. The results of these tests and compliance with these specifications shall be the basis upon which satisfactory completion of work will be judged by the Soils Engineer.

**4.0 SOILS AND FOUNDATION CONDITIONS:** The Contractor is presumed to have visited the site and to have familiarized himself with existing site conditions and the contents of the data presented in the Geotechnical Engineering Report. The Contractor shall make his own interpretation of the data contained in the Geotechnical Engineering Report and the Contractor shall not be relieved of liability for any loss sustained as a result of any variance between conditions indicated by or deduced from said report and the actual conditions encountered during the progress of the work.

**5.0 DUST CONTROL:** The work includes dust control as required for the alleviation or prevention of any dust nuisance on or about the site or the borrow area, or off-site if caused by the Contractor's operation either during the performance of the earthwork or resulting from the conditions in which the Contractor leaves the site. The Contractor shall assume all liability, including court costs of codefendants, for all claims related to dust or wind-blown materials attributable to his work. Site preparation shall consist of site clearing and grubbing and preparation of foundation materials for receiving fill.

**6.0 CLEARING AND GRUBBING:** The Contractor shall accept the site in this present condition and shall demolish and/or remove from the area of designated project earthwork all structures, both surface and subsurface, trees, brush, roots, debris, organic matter and all other matter determined by the Soils Engineer to be deleterious. Such materials shall become the property of the Contractor and shall be removed from the site.

Tree root systems in proposed improvement areas should be removed to a minimum depth of 3 feet and to such an extent which would permit removal of all roots greater than 1 inch in diameter. Tree roots removed in parking areas may be limited to the upper 1½ feet of the ground surface. Backfill of tree root excavations is not permitted until all exposed surfaces have been inspected and the Soils Engineer is present for the proper control of backfill placement and compaction. Burning in areas which are to receive fill materials shall not be permitted.

**7.0 SUBGRADE PREPARATION:** Surfaces to receive Engineered Fill and/or building or slab loads shall be prepared as outlined above, scarified to a minimum of 12 inches, moisture-conditioned as necessary, and recompacted to 95 percent relative compaction (90 percent for cohesive soils).

Loose soil areas and/or areas of disturbed soil shall be moisture-conditioned as necessary and recompacted to 95 percent relative compaction (90 percent for cohesive soils). All ruts, hummocks, or other uneven surface features shall be removed by surface grading prior to placement of any fill materials. All areas which are to receive fill materials shall be approved by the Soils Engineer prior to the placement of any fill material.

**8.0 EXCAVATION:** All excavation shall be accomplished to the tolerance normally defined by the Civil Engineer as shown on the project grading plans. All over-excavation below the grades specified shall be backfilled at the Contractor's expense and shall be compacted in accordance with the applicable technical requirements.

**9.0 FILL AND BACKFILL MATERIAL:** No material shall be moved or compacted without the presence or approval of the Soils Engineer. Material from the required site excavation may be utilized for construction site fills, provided prior approval is given by the Soils Engineer. All materials utilized for constructing site fills shall be free from vegetation or other deleterious matter as determined by the Soils Engineer.

**10.0 PLACEMENT, SPREADING AND COMPACTION:** The placement and spreading of approved fill materials and the processing and compaction of approved fill and native materials shall be the responsibility of the Contractor. Compaction of fill materials by flooding, ponding, or jetting shall not be permitted unless specifically approved by local code, as well as the Soils Engineer. Both cut and fill shall be surface-compacted to the satisfaction of the Soils Engineer prior to final acceptance.



**11.0 SEASONAL LIMITS:** No fill material shall be placed, spread, or rolled while it is frozen or thawing, or during unfavorable wet weather conditions. When the work is interrupted by heavy rains, fill operations shall not be resumed until the Soils Engineer indicates that the moisture content and density of previously placed fill is as specified.

**12.0 DEFINITIONS** - The term "pavement" shall include asphaltic concrete surfacing, untreated aggregate base, and aggregate subbase. The term "subgrade" is that portion of the area on which surfacing, base, or subbase is to be placed.

The term "Standard Specifications": hereinafter referred to, is the most recent edition of the Standard Specifications of the State of California, Department of Transportation. The term "relative compaction" refers to the field density expressed as a percentage of the maximum laboratory density as determined by ASTM D1557 Test Method (latest edition) or California Test Method 216 (CAL-216), as applicable.

**13.0 PREPARATION OF THE SUBGRADE** - The Contractor shall prepare the surface of the various subgrades receiving subsequent pavement courses to the lines, grades, and dimensions given on the plans. The upper 12 inches of the soil subgrade beneath the pavement section shall be compacted to a minimum relative compaction of 95 percent based upon ASTM D1557. The finished subgrades shall be tested and approved by the Soils Engineer prior to the placement of additional pavement courses.

**14.0 AGGREGATE BASE** - The aggregate base material shall be spread and compacted on the prepared subgrade in conformity with the lines, grades, and dimensions shown on the plans. The aggregate base material shall conform to the requirements of Section 26 of the Standard Specifications for Class II material, ¾-inch or 1½-inches maximum size. The aggregate base material shall be compacted to a minimum relative compaction of 95 percent based upon CAL-216. The aggregate base material shall be spread in layers not exceeding 6 inches and each layer of aggregate material course shall be tested and approved by the Soils Engineer prior to the placement of successive layers.

**15.0 AGGREGATE SUBBASE** - The aggregate subbase shall be spread and compacted on the prepared subgrade in conformity with the lines, grades, and dimensions shown on the plans. The aggregate subbase material shall conform to the requirements of Section 25 of the Standard Specifications for Class II Subbase material. The aggregate subbase material shall be compacted to a minimum relative compaction of 95 percent based upon CAL-216, and it shall be spread and compacted in accordance with the Standard Specifications. Each layer of aggregate subbase shall be tested and approved by the Soils Engineer prior to the placement of successive layers.

**16.0 ASPHALTIC CONCRETE SURFACING** - Asphaltic concrete surfacing shall consist of a mixture of mineral aggregate and paving grade asphalt, mixed at a central mixing plant and spread and compacted on a prepared base in conformity with the lines, grades, and dimensions shown on the plans. The viscosity grade of the asphalt shall be PG 64-10, unless otherwise stipulated or local conditions warrant more stringent grade. The mineral aggregate shall be Type A or B, ½ inch maximum size, medium grading, and shall conform to the requirements set forth in Section 39 of the Standard Specifications. The drying, proportioning, and mixing of the materials shall conform to Section 39. The prime coat, spreading and compacting equipment, and spreading and compacting the mixture shall conform to the applicable chapters of Section 39, with the exception that no surface course shall be placed when the atmospheric temperature is below 50 degrees F. The surfacing shall be rolled with a combination steel-wheel and pneumatic rollers, as described in the Standard Specifications. The surface course shall be placed with an approved self-propelled mechanical spreading and finishing machine.

# Appendix 4: Historical Site Conditions

*Phase I Environmental Site Assessment or Other Information on Past Site Use*

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

**SCHEDULE A**

1. Commitment Date: December 29, 2017 at 7:30 A.M.

2. Policy or Policies to be issued:	Amount
(A) ALTA Standard Owner Policy	\$1,600,000.00

Proposed Insured:

Mike Sater, a married man as his sole and separate property

(B) ALTA Extended Loan Policy	\$To Be Determined
-------------------------------	--------------------

Proposed Insured:

To Be Determined

3. (A) The estate or interest in the land described in this Commitment is:

Fee as to Parcel A, an easement as to Parcel B

(B) [Title to said estate or interest at the date hereof is vested in:](#)

Inland Land Group, LLC, a California limited liability company

4. The land referred to in this Commitment is situated in the City of Moreno Valley, County of Riverside, State of California, and is described as follows:

PARCEL A:

PARCEL 1 OF PARCEL MAP NO. 33361, IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS PER MAP RECORDED IN [BOOK 239, PAGE 30 THROUGH 32](#) OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

PARCEL B:

A NONEXCLUSIVE, PERMANENT SEWER AND ACCESS EASEMENT ON OVER AND ACROSS THAT CERTAIN PARCEL OF LAND SITUATED IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, BEING A PORTION OF LOT 7 AND LOT 8 IN BLOCK 151, OF BEAR VALLEY AND ALESSANDRO DEVELOPMENT CO. AS SHOWN BY MAP ON FILE IN [BOOK 11 OF MAPS, PAGE 10](#), RECORDS OF SAN BERNARDINO COUNTY, CALIFORNIA, LYING WITHIN SECTION 22, TOWNSHIP 3 SOUTH, RANGE 3 WEST, S.B.M. MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF SAID LOT 7, SAID POINT ALSO BEING THE INTERSECTION OF THE CENTERLINE OF FILAREE AVENUE AND THE WEST LINE OF LOT 7 AS SHOWN ON MAP REFERENCED ABOVE AND THE TRUE POINT OF BEGINNING;

THENCE SOUTH 89° 33' 36" EAST, 694.50 FEET ALONG THE SOUTH LINE OF SAID LOT 7, SAID SOUTH LINE ALSO BEING THE CENTERLINE OF SAID FILAREE AVENUE, TO A POINT THAT LIES ON THE SOUTH LINE OF SAID LOT 8, SAID POINT BEING DISTANT 34.00 FEET FROM TH

SOUTHWEST CORNER OF SAID LOT 8;

THENCE NORTH 00° 26' 02" EAST, 10.00 FEET TO A POINT THAT LIES ON A LINE THAT IS PARALLEL WITH AND 10.00 FEET NORTH OF SAID SOUTH LINE OF SAID LOT 8;

THENCE NORTH 89° 33' 36" WEST, 694.50 FEET ALONG SAID PARALLEL LINE TO A POINT ON THE WEST LINE OF SAID LOT 7, SAID PARALLEL LINE IS ALSO PARALLEL WITH THE SOUTH LINE OF SAID LOT 7;

THENCE SOUTH 00° 19' 23" WEST, 10.00 FEET ALONG SAID WEST LINE OF LOT 7 TO TRUE POINT OF BEGINNING, RECORDED SEPTEMBER 30, 2014 AS INSTRUMENT NO. [2014-0371036](#), OF OFFICIAL RECORDS, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.

APN: 486-310-038-3

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

## SCHEDULE B

### SECTION TWO

#### EXCEPTIONS

Any policy we issue will have the following exceptions unless they are taken care of to our satisfaction. The printed exceptions and exclusions from the coverage of the policy or policies are set forth in Exhibit A attached. Copies of the policy forms should be read. They are available from the office which issued this Commitment.

A. General and special taxes and assessments for the fiscal year 2018-2019, a lien not yet due or payable.

1. General and special taxes and assessments for the fiscal year 2017-2018.

First Installment:	\$1,362.70, PAID
Penalty:	\$0.00
Second Installment:	\$1,362.70, OPEN
Penalty:	\$0.00
Tax Rate Area:	021-411
A. P. No.:	486-310-038-3

2. The lien of supplemental taxes, if any, assessed pursuant to Chapter 3.5 commencing with Section 75 of the California Revenue and Taxation Code.

3. A right of way over, under, through and upon said land and every part thereof, for all necessary pipelines, ditches and flumes; also, the right to enter upon said land, at any and all times, to lay, construct and repair said pipelines, ditches and flumes, together with the right to conduct water in and through same, as reserved to the Bear Valley and Alessandro Development Company.

The location of the easement cannot be determined from record information.

4. An easement for conduits and incidental purposes, recorded March 04, 1955 in [Book 1702, Page 467](#) of Official Records.

In Favor of:	Eastern Municipal District
Affects:	As described therein

The location of the easement cannot be determined from record information.

5. An easement for construction, access, maintenance and incidental purposes, recorded April 03, 1987 as Instrument No. [93091](#) of Official Records.

In Favor of:	The Robert P. Warmington Company
Affects:	As described therein

6. The effect of a Resolution recorded January 22, 1990 as Instrument No. [90-24337](#) of Official Records of Riverside County, California, which recites among other things that said land lies within Improvement District No. U-22 of the Eastern Municipal Water District.

7. An easement for ingress, egress, golf cart path, storm drain facilities and incidental purposes, recorded December 30, 1991 as Instrument No. [449424](#) of Official Records.  
In Favor of: Atsugi Kokusan Kanko (U.S.A), Inc.  
Affects: As described therein
8. The terms, provisions and easement(s) contained in the document entitled "Hold Harmless Agreement For Water" recorded July 09, 2014 as Instrument No. [2014-0255170](#) of Official Records.
9. The terms, provisions and easement(s) contained in the document entitled "Resolution No. 2014-091" recorded July 11, 2014 as Instrument No. [2014-0258025](#) of Official Records.
10. The terms, provisions and easement(s) contained in the document entitled "Hold Harmless Agreement Remote Sewer Service Connection And Private Onsite Sewer System" recorded September 25, 2014 as Instrument No. [2014-0364824](#) of Official Records.
11. The terms, provisions and easement(s) contained in the document entitled "Hold Harmless Agreement For Water" recorded December 04, 2014 as Instrument No. [2014-0462962](#) of Official Records.
12. The terms, provisions and easement(s) contained in the document entitled "Storm Water Treatment Device And Control Measure Access And Maintenance Covenant" recorded January 21, 2015 as Instrument No. [2015-0024272](#) of Official Records.  
  
The location of the easement cannot be determined from record information.
13. This item has been intentionally deleted.
14. This item has been intentionally deleted.
15. Abutter's rights of ingress and egress to or from Iris Avenue, except the general easement of travel, have been dedicated or relinquished on the map of Parcel Map No. 33361 on file in [book 239, page 30 through 32](#), of Parcel Maps.
16. An easement shown or dedicated on the map of Parcel Map No. 33361 recorded August 10, 2015 and on file in [Book 239, Page 30 through 32](#), of Parcel Maps.  
For: Public utility (P.U.E.) and incidental purposes.  
  
The location of the easement cannot be determined from record information.
17. The terms and provisions contained in the document entitled "Agreement for Public Improvements for Project No. PA05-0034 (PM 33361)" recorded August 31, 2015 as Instrument No. [2015-0386586](#) of Official Records.
18. Water rights, claims or title to water, whether or not shown by the public records.
19. Rights of parties in possession.
20. The terms, provisions and easement(s) contained in the document entitled "Declaration of Covenants, Conditions and Restrictions and Reservation of Easements" recorded December 05, 2016 as Instrument No. [2016-0540617](#) of Official Records.

Document re-recorded December 28, 2016 as Instrument No. [2016-0579235](#) of Official Records.

21. Any lien, assessment, and /or violation or enforcement of any law, ordinance, permit or governmental regulation arising from the document entitled Notice of Code Violation Non Compliance recorded December 29, 2017 as Instrument No. [2017-0546995](#) of Official Records.

# Appendix 5: LID Infeasibility

*LID Technical Infeasibility Analysis*

**(N/A)**

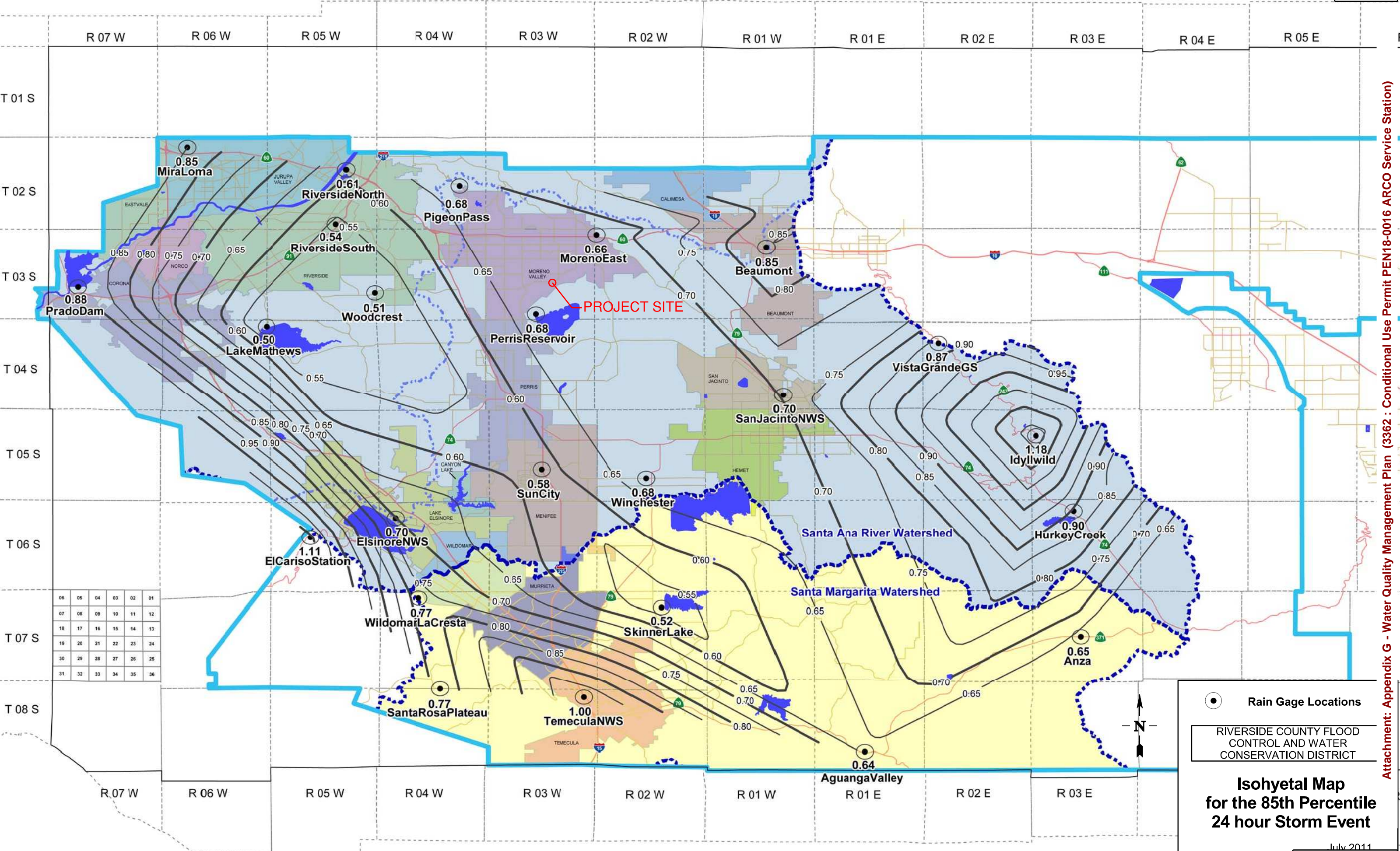
**Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)**



# Appendix 6: BMP Design Details

*BMP Sizing, Design Details and other Supporting Documentation*

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



● Rain Gage Locations

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

**Isohyetal Map for the 85th Percentile 24 hour Storm Event**

July 2011

Packet Pg. 818

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Bioretention Facility - Design Procedure (Rev. 06-2014)		BMP ID bio ret #1	Legend:	Required Entries
Company Name: Barghuasen Consulting Engineers, Inc.		Date: 9/21/2018		
Designed by: Zereck Jones		County/City Case No.: PEN18-0016LST18		
Design Volume				
Enter the area tributary to this feature		$A_{\text{TRIB}} =$	0.34	acres
Enter $V_{\text{BMP}}$ determined from Section 4.3 of this Handbook		$V_{\text{BMP}} =$	832	ft <sup>3</sup>
Type of Bioretention Facility Design				
<input checked="" type="radio"/> Side slopes required (parallel to parking spaces or adjacent to walkways) <input type="radio"/> No side slopes required (perpendicular to parking space or Planter Boxes)				
Bioretention Facility Surface Area				
Depth of Soil Filter Media Layer		$d_s =$	2.0	ft
Top Width of Bioretention Facility, excluding curb		$w_T =$	9.0	ft
Total Effective Depth, $d_E$ $d_E = (0.3) \times d_s + (0.4) \times 1 - (0.7/w_T) + 0.5$		$d_E =$	1.42	ft
Minimum Surface Area, $A_m$ $A_M (\text{ft}^2) = \frac{V_{\text{BMP}} (\text{ft}^3)}{d_E (\text{ft})}$		$A_M =$	585	ft <sup>2</sup>
Proposed Surface Area		$A =$	585	ft <sup>2</sup>
Bioretention Facility Properties				
Side Slopes in Bioretention Facility		$z =$	832	:1
Diameter of Underdrain			6	inches
Longitudinal Slope of Site (3% maximum)			0.5	%
6" Check Dam Spacing			0	feet
Describe Landscaping: _____				
Notes: The bio-retention basin is to provide treatment for surface runoff for the gas station parking and maneuvering areas and fueling canopy roof.				

**Santa Ana Watershed - BMP Design Volume,  $V_{BMP}$**  Legend:  Required Entries  
 Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name **Barghausen Consulting Engineers, Inc.** Date **9/21/2018**  
 Designed by **Zereck Jones** Case No **PEN18-0016LST18**  
 Company Project Number/Name **Moreno Valley ARCO Station BCE#18501**

**BMP Identification**

BMP NAME / ID **DMA #1 North end of site paving and all vacuum area paving with associated landscaping**  
*Must match Name/ID used on BMP Design Calculation Sheet*

**Design Rainfall Depth**

85th Percentile, 24-hour Rainfall Depth,  $D_{85} =$  **0.68** inches  
 from the Isohyetal Map in Handbook Appendix E

**Drainage Management Area Tabulation**

*Insert additional rows if needed to accommodate all DMAs draining to the BMP*

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, $I_f$	DMA Runoff Factor	DMA Areas x Runoff Factor	Design Storm Depth (in)	Design Capture Volume, $V_{BMP}$ (cubic feet)	Proposed Volume on Plans (cubic feet)	
1A	8341	Concrete or Asphalt	1	0.89	7440.2				
1B	2656	Roofs	1	0.892	2369.2				
1C	1635	Ornamental Landscaping	0.1	0.110458	180.6				
1D	5158	Concrete or Asphalt	1	0.892	4600.9				
1E	699	Ornamental Landscaping	0.1	0.110458	77.2				
<b>18489</b>					<i>Total</i>	<b>14668.1</b>	<b>0.68</b>	<b>831.2</b>	<b>832</b>

Notes:

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Bioretention Facility - Design Procedure (Rev. 06-2014)		BMP ID bio ret #2	Legend:	Required Entries
Company Name: Barghuasen Consulting Engineers, Inc.		Date: 9/21/2018		
Designed by: Zereck Jones		County/City Case No.: PEN18-0016LST18		
Design Volume				
Enter the area tributary to this feature		$A_{\text{TRIB}} =$	0.07	acres
Enter $V_{\text{BMP}}$ determined from Section 4.3 of this Handbook		$V_{\text{BMP}} =$	159	ft <sup>3</sup>
Type of Bioretention Facility Design				
<input checked="" type="radio"/> Side slopes required (parallel to parking spaces or adjacent to walkways) <input type="radio"/> No side slopes required (perpendicular to parking space or Planter Boxes)				
Bioretention Facility Surface Area				
Depth of Soil Filter Media Layer		$d_s =$	2.0	ft
Top Width of Bioretention Facility, excluding curb		$w_T =$	6.0	ft
Total Effective Depth, $d_E$ $d_E = (0.3) \times d_s + (0.4) \times 1 - (0.7/w_T) + 0.5$		$d_E =$	1.38	ft
Minimum Surface Area, $A_m$ $A_M (\text{ft}^2) = \frac{V_{\text{BMP}} (\text{ft}^3)}{d_E (\text{ft})}$		$A_M =$	115	ft <sup>2</sup>
Proposed Surface Area		$A =$	122	ft <sup>2</sup>
Bioretention Facility Properties				
Side Slopes in Bioretention Facility		$z =$	4	:1
Diameter of Underdrain			6	inches
Longitudinal Slope of Site (3% maximum)			0.5	%
6" Check Dam Spacing			0	feet
Describe Landscaping:				
Notes: The bio-retention basin is to provide treatment for surface runoff from the back drive isle to the car wash and the ped ramp and conc pad in front of the car wash office				

**Santa Ana Watershed - BMP Design Volume,  $V_{BMP}$**

Legend:  Required Entries  
 Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name **Barghausen Consulting Engineers, Inc.** Date **9/21/2018**  
 Designed by **Zereck Jones** Case No **PEN18-0016LST18**  
 Company Project Number/Name **Moreno Valley ARCO Station BCE#18501**

**BMP Identification**

BMP NAME / ID **DMA #2 Car Wash driveway and back walkway and carwash office pad**  
*Must match Name/ID used on BMP Design Calculation Sheet*

**Design Rainfall Depth**

85th Percentile, 24-hour Rainfall Depth,  $D_{85}$  = **0.68** inches  
 from the Isohyetal Map in Handbook Appendix E

**Drainage Management Area Tabulation**

*Insert additional rows if needed to accommodate all DMAs draining to the BMP*

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, $I_f$	DMA Runoff Factor	DMA Areas x Runoff Factor	Design Storm Depth (in)	Design Capture Volume, $V_{BMP}$ (cubic feet)	Proposed Volume on Plans (cubic feet)
2A	3000	Concrete or Asphalt	1	0.89	2676			
2B	1080	Ornamental Landscaping	0.1	0.110458	119.3			
<b>4080</b>		<b>Total</b>			<b>2795.3</b>	<b>0.68</b>	<b>158.4</b>	<b>169</b>

Notes:

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Bioretention Facility - Design Procedure (Rev. 06-2014)		BMP ID bio ret #3	Legend:	Required Entries
Company Name: Barghuasen Consulting Engineers, Inc.		Date: 9/25/2018		
Designed by: Zereck Jones		County/City Case No.: PEN18-0016LST18		
Design Volume				
Enter the area tributary to this feature		$A_{\text{TRIB}} =$	0.74	acres
Enter $V_{\text{BMP}}$ determined from Section 4.3 of this Handbook		$V_{\text{BMP}} =$	1,266	ft <sup>3</sup>
Type of Bioretention Facility Design				
<input checked="" type="radio"/> Side slopes required (parallel to parking spaces or adjacent to walkways) <input type="radio"/> No side slopes required (perpendicular to parking space or Planter Boxes)				
Bioretention Facility Surface Area				
Depth of Soil Filter Media Layer		$d_s =$	3.0	ft
Top Width of Bioretention Facility, excluding curb		$w_T =$	11.0	ft
Total Effective Depth, $d_E$ $d_E = (0.3) \times d_s + (0.4) \times 1 - (0.7/w_T) + 0.5$		$d_E =$	1.74	ft
Minimum Surface Area, $A_m$ $A_M (\text{ft}^2) = \frac{V_{\text{BMP}} (\text{ft}^3)}{d_E (\text{ft})}$		$A_M =$	730	ft <sup>2</sup>
Proposed Surface Area		$A =$	776	ft <sup>2</sup>
Bioretention Facility Properties				
Side Slopes in Bioretention Facility		$z =$	4	:1
Diameter of Underdrain			6	inches
Longitudinal Slope of Site (3% maximum)			0	%
6" Check Dam Spacing			0	feet
Describe Landscaping:				
Notes: The bio-retention basin is to provide treatment for surface runoff for the gas station parking and maneuvering areas and fueling canopy roof. This area will also include the collected impervious area in the				

# Santa Ana Watershed - BMP Design Volume, V<sub>BMP</sub>

Legend:  Required Entries  
 Calculated Cells

*(Note this worksheet shall only be used in conjunction with BMP designs from the LID BMP Design Handbook.)*

Company Name Barghausen Consulting Engineers, Inc. Date 9/21/2018  
Designed by Zereck Jones Case No PEN18-0016LST18  
Company Project Number/Name Moreno Valley ARCO Station BCE#18501

## BMP Identification

BMP NAME / ID DMA #3 South end of site paving and south vacuum area paving and canopy  
*Must match Name/ID used on BMP Design Calculation Sheet*

## Design Rainfall Depth

85th Percentile, 24-hour Rainfall Depth, D<sub>85</sub> = 0.68 inches  
from the Isohyetal Map in Handbook Appendix E

## Drainage Management Area Tabulation

*Insert additional rows if needed to accommodate all DMAs draining to the BMP*

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I <sub>f</sub>	DMA Runoff Factor	DMA Areas x Runoff Factor	Design Storm Depth (in)	Design Capture Volume, V <sub>BMP</sub> (cubic feet)	Proposed Volume on Plans (cubic feet)
3A	15897	Concrete or Asphalt	1	0.89	14180.1			
3B	0	Concrete or Asphalt	1	0.892	0			
3C	4732	Roofs	1	0.892	4220.9			
3D	8298	Ornamental Landscaping	0.1	0.110458	916.6			
3E	3375	Concrete or Asphalt	1	0.892	3010.5			
<b>32302</b>		<i>Total</i>			<b>22328.1</b>	<b>0.68</b>	<b>1265.3</b>	<b>1345</b>

Notes:



Bioretention Facility - Design Procedure (Rev. 06-2014)		BMP ID bio ret #4	Legend:	Required Entries
Company Name: Barghuasen Consulting Engineers, Inc.		Date: 9/21/2018		
Designed by: Zereck Jones		County/City Case No.: PEN18-0016LST18		
Design Volume				
Enter the area tributary to this feature		$A_{\text{TRIB}} =$	0.23	acres
Enter $V_{\text{BMP}}$ determined from Section 4.3 of this Handbook		$V_{\text{BMP}} =$	499	ft <sup>3</sup>
Type of Bioretention Facility Design				
<input checked="" type="radio"/> Side slopes required (parallel to parking spaces or adjacent to walkways) <input type="radio"/> No side slopes required (perpendicular to parking space or Planter Boxes)				
Bioretention Facility Surface Area				
Depth of Soil Filter Media Layer		$d_s =$	3.0	ft
Top Width of Bioretention Facility, excluding curb		$w_T =$	6.0	ft
Total Effective Depth, $d_E$ $d_E = (0.3) \times d_s + (0.4) \times 1 - (0.7/w_T) + 0.5$		$d_E =$	1.68	ft
Minimum Surface Area, $A_m$ $A_M (\text{ft}^2) = \frac{V_{\text{BMP}} (\text{ft}^3)}{d_E (\text{ft})}$		$A_M =$	297	ft <sup>2</sup>
Proposed Surface Area		$A =$	300	ft <sup>2</sup>
Bioretention Facility Properties				
Side Slopes in Bioretention Facility		$z =$	4	:1
Diameter of Underdrain			6	inches
Longitudinal Slope of Site (3% maximum)			0.5	%
6" Check Dam Spacing			0	feet
Describe Landscaping:				
Notes: The bio-retention basin is to provide treatment for surface runoff from the east drive isle to the car wash and the east half of the store frontage and parking/maneuvering area via catch basin and pipe conveyance and the C-store Roof				

**Santa Ana Watershed - BMP Design Volume,  $V_{BMP}$**

Legend:  Required Entries  
 Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name **Barghausen Consulting Engineers, Inc.** Date **9/21/2018**  
 Designed by **Zereck Jones** Case No **PEN18-0016LST18**  
 Company Project Number/Name **Moreno Valley ARCO Station BCE#18501**

**BMP Identification**

BMP NAME / ID **DMA #4 Car Wash driveway and east side of store frontage**  
*Must match Name/ID used on BMP Design Calculation Sheet*

**Design Rainfall Depth**

85th Percentile, 24-hour Rainfall Depth, from the Isohyetal Map in Handbook Appendix E  $D_{85} =$  **0.68** inches

**Drainage Management Area Tabulation**

*Insert additional rows if needed to accommodate all DMAs draining to the BMP*

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, $I_f$	DMA Runoff Factor	DMA Areas x Runoff Factor	Design Storm Depth (in)	Design Capture Volume, $V_{BMP}$ (cubic feet)	Proposed Volume on Plans (cubic feet)
4A	2393	Concrete or Asphalt	1	0.89	2134.6			
4B	4204	Concrete or Asphalt	1	0.892	3750			
4C	3205	Roofs	1	0.892	2858.9			
4D	423	Ornamental Landscaping	0.1	0.110458	46.7			
<b>10225</b>		<b>Total</b>			<b>8790.2</b>	<b>0.68</b>	<b>498.1</b>	<b>504</b>

Notes:

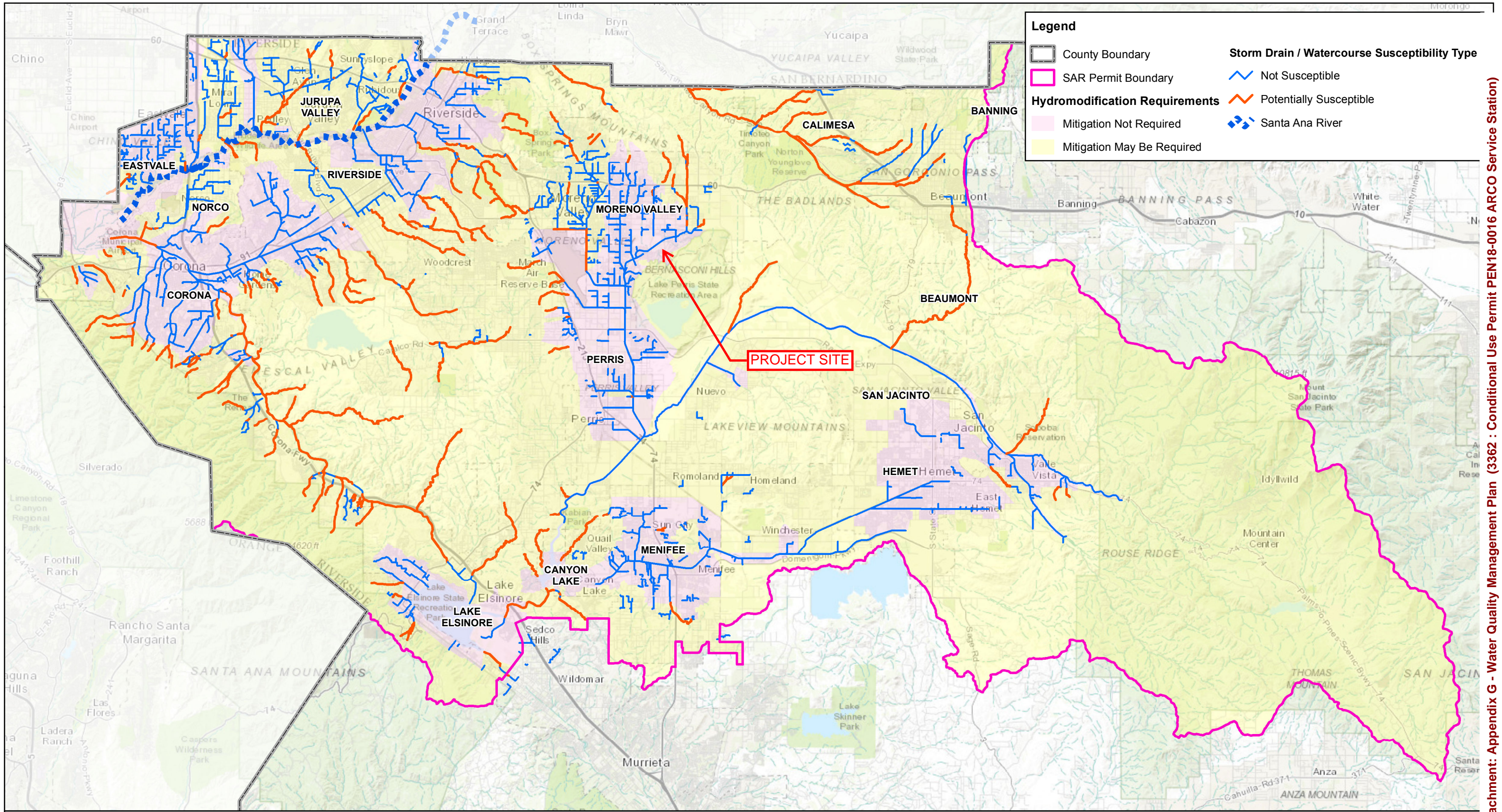
Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# Appendix 7: Hydromodification

*Supporting Detail Relating to Hydrologic Conditions of Concern*

**"EXEMPT"**

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)




**Legend**

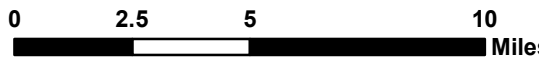
- County Boundary
- SAR Permit Boundary
- Mitigation Not Required
- Mitigation May Be Required

**Storm Drain / Watercourse Susceptibility Type**

- ~ Not Susceptible
- ~ Potentially Susceptible
- ~ Santa Ana River



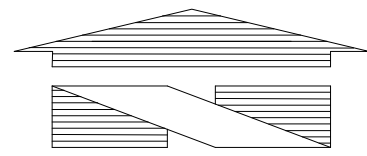
N



Updated February 2017

**HCOC Applicability Map  
SAR Permittees**

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NTS

Legend	
	County Boundary
	SAR Permit Boundary
	Mitigation Not Required
	Mitigation May Be Required
	Storm Drain / Watercourse Susceptibility Type
	Not Susceptible
	Potentially Susceptible
	Santa Ana River



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### HCOC APPLICABILITY MAP EXCERPT

APPENDIX 7B

# Appendix 8: Source Control

*Pollutant Sources/Source Control Checklist*

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

How to use this worksheet (also see instructions in Section G of the WQMP Template):

1. Review Column 1 and identify which of these potential sources of stormwater pollutants apply to your site. Check each box that applies.
2. Review Column 2 and incorporate all of the corresponding applicable BMPs in your WQMP Exhibit.
3. Review Columns 3 and 4 and incorporate all of the corresponding applicable permanent controls and operational BMPs in your WQMP. Use the format shown in Table G.1 on page 23 of this WQMP Template. Describe your specific BMPs in an accompanying narrative, and explain any special conditions or situations that required omitting BMPs or substituting alternative BMPs for those shown here.

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
<input checked="" type="checkbox"/> A. On-site storm drain inlets	<input checked="" type="checkbox"/> Locations of inlets.	<input checked="" type="checkbox"/> Mark all inlets with the words “Only Rain Down the Storm Drain” or similar. Catch Basin Markers may be available from the Riverside County Flood Control and Water Conservation District, call 951.955.1200 to verify.	<input checked="" type="checkbox"/> Maintain and periodically repaint or replace inlet markings. <input checked="" type="checkbox"/> Provide stormwater pollution prevention information to new site owners, lessees, or operators. <input checked="" type="checkbox"/> See applicable operational BMPs in Fact Sheet SC-44, “Drainage System Maintenance,” in the CASQA Stormwater Quality Handbooks at <a href="http://www.cabmphandbooks.com">www.cabmphandbooks.com</a> <input checked="" type="checkbox"/> Include the following in lease agreements: “Tenant shall not allow anyone to discharge anything to storm drains or to store or deposit materials so as to create a potential discharge to storm drains.”
<input checked="" type="checkbox"/> B. Interior floor drains and elevator shaft sump pumps		<input checked="" type="checkbox"/> State that interior floor drains and elevator shaft sump pumps will be plumbed to sanitary sewer.	<input checked="" type="checkbox"/> Inspect and maintain drains to prevent blockages and overflow.
<input type="checkbox"/> C. Interior parking garages		<input type="checkbox"/> State that parking garage floor drains will be plumbed to the sanitary sewer.	<input type="checkbox"/> Inspect and maintain drains to prevent blockages and overflow.

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STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
<p><input checked="" type="checkbox"/> D1. Need for future indoor &amp; structural pest control</p>		<p><input checked="" type="checkbox"/> Note building design features that discourage entry of pests.</p>	<p><input checked="" type="checkbox"/> Provide Integrated Pest Management information to owners, lessees, and operators.</p>
<p><input checked="" type="checkbox"/> D2. Landscape/ Outdoor Pesticide Use</p>	<p><input type="checkbox"/> Show locations of native trees or areas of shrubs and ground cover to be undisturbed and retained.</p> <p><input checked="" type="checkbox"/> Show self-retaining landscape areas, if any.</p> <p><input checked="" type="checkbox"/> Show stormwater treatment and hydrograph modification management BMPs. (See instructions in Chapter 3, Step 5 and guidance in Chapter 5.)</p>	<p>State that final landscape plans will accomplish all of the following.</p> <p><input checked="" type="checkbox"/> Preserve existing native trees, shrubs, and ground cover to the maximum extent possible.</p> <p><input checked="" type="checkbox"/> Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to stormwater pollution.</p> <p><input checked="" type="checkbox"/> Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions.</p> <p><input checked="" type="checkbox"/> Consider using pest-resistant plants, especially adjacent to hardscape.</p> <p>To insure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.</p>	<p><input checked="" type="checkbox"/> Maintain landscaping using minimum or no pesticides.</p> <p><input checked="" type="checkbox"/> See applicable operational BMPs in “What you should know for.....Landscape and Gardening” at <a href="http://rcflood.org/stormwater/Error!">http://rcflood.org/stormwater/Error!</a> <small>Hyperlink reference not valid.</small></p> <p><input checked="" type="checkbox"/> Provide IPM information to new owners, lessees and operators.</p>

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STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
<input type="checkbox"/> E. Pools, spas, ponds, decorative fountains, and other water features.	<input type="checkbox"/> Show location of water feature and a sanitary sewer cleanout in an accessible area within 10 feet. (Exception: Public pools must be plumbed according to County Department of Environmental Health Guidelines.)	<p>If the Co-Permittee requires pools to be plumbed to the sanitary sewer, place a note on the plans and state in the narrative that this connection will be made according to local requirements.</p>	<input type="checkbox"/> See applicable operational BMPs in “Guidelines for Maintaining Your Swimming Pool, Jacuzzi and Garden Fountain” at <a href="http://rcflood.org/stormwater/">http://rcflood.org/stormwater/</a>
<input checked="" type="checkbox"/> F. Food service	<input checked="" type="checkbox"/> For restaurants, grocery stores, and other food service operations, show location (indoors or in a covered area outdoors) of a floor sink or other area for cleaning floor mats, containers, and equipment.  <input checked="" type="checkbox"/> On the drawing, show a note that this drain will be connected to a grease interceptor before discharging to the sanitary sewer.	<input checked="" type="checkbox"/> Describe the location and features of the designated cleaning area.  <input checked="" type="checkbox"/> Describe the items to be cleaned in this facility and how it has been sized to insure that the largest items can be accommodated.	<input checked="" type="checkbox"/> See the brochure, “The Food Service Industry Best Management Practices for: Restaurants, Grocery Stores, Delicatessens and Bakeries” at <a href="http://rcflood.org/stormwater/">http://rcflood.org/stormwater/</a>  Provide this brochure to new site owners, lessees, and operators.
<input checked="" type="checkbox"/> G. Refuse areas	<input checked="" type="checkbox"/> Show where site refuse and recycled materials will be handled and stored for pickup. See local municipal requirements for sizes and other details of refuse areas.  <input checked="" type="checkbox"/> If dumpsters or other receptacles are outdoors, show how the designated area will be covered, graded, and paved to prevent run-on and show locations of berms to prevent runoff from the area.  <input checked="" type="checkbox"/> Any drains from dumpsters, compactors, and tallow bin areas shall be connected to a grease removal device before discharge to sanitary sewer.	<input checked="" type="checkbox"/> State how site refuse will be handled and provide supporting detail to what is shown on plans.  <input checked="" type="checkbox"/> State that signs will be posted on or near dumpsters with the words “Do not dump hazardous materials here” or similar.	<input checked="" type="checkbox"/> State how the following will be implemented:  Provide adequate number of receptacles. Inspect receptacles regularly; repair or replace leaky receptacles. Keep receptacles covered. Prohibit/prevent dumping of liquid or hazardous wastes. Post “no hazardous materials” signs. Inspect and pick up litter daily and clean up spills immediately. Keep spill control materials available on-site. See Fact Sheet SC-34, “Waste Handling and Disposal” in the CASQA Stormwater Quality Handbooks at <a href="http://www.cabmphandbooks.com">www.cabmphandbooks.com</a>

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STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
<input type="checkbox"/> H. Industrial processes.	<input type="checkbox"/> Show process area.	<input type="checkbox"/> If industrial processes are to be located on site, state: “All process activities to be performed indoors. No processes to drain to exterior or to storm drain system.”	<input type="checkbox"/> See Fact Sheet SC-10, “Non-Stormwater Discharges” in the CASQA Stormwater Quality Handbooks at <a href="http://www.cabmphandbooks.com">www.cabmphandbooks.com</a>  See the brochure “Industrial & Commercial Facilities Best Management Practices for: Industrial, Commercial Facilities” at <a href="http://rcflood.org/stormwater/">http://rcflood.org/stormwater/</a>

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STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
<p><input type="checkbox"/> I. Outdoor storage of equipment or materials. (See rows J and K for source control measures for vehicle cleaning, repair, and maintenance.)</p>	<p><input type="checkbox"/> Show any outdoor storage areas, including how materials will be covered. Show how areas will be graded and bermed to prevent run-on or run-off from area.</p> <p><input type="checkbox"/> Storage of non-hazardous liquids shall be covered by a roof and/or drain to the sanitary sewer system, and be contained by berms, dikes, liners, or vaults.</p> <p><input type="checkbox"/> Storage of hazardous materials and wastes must be in compliance with the local hazardous materials ordinance and a Hazardous Materials Management Plan for the site.</p>	<p>Include a detailed description of materials to be stored, storage areas, and structural features to prevent pollutants from entering storm drains.</p> <p>Where appropriate, reference documentation of compliance with the requirements of Hazardous Materials Programs for:</p> <ul style="list-style-type: none"> <li>▪ Hazardous Waste Generation</li> <li>▪ Hazardous Materials Release Response and Inventory</li> <li>▪ California Accidental Release (CalARP)</li> <li>▪ Aboveground Storage Tank</li> <li>▪ Uniform Fire Code Article 80 Section 103(b) &amp; (c) 1991</li> <li>▪ Underground Storage Tank</li> </ul> <p><a href="http://www.cchealth.org/groups/hazmat/">www.cchealth.org/groups/hazmat/</a></p>	<p><input type="checkbox"/> See the Fact Sheets SC-31, “Outdoor Liquid Container Storage” and SC-33, “Outdoor Storage of Raw Materials ” in the CASQA Stormwater Quality Handbooks at <a href="http://www.cabmphandbooks.com">www.cabmphandbooks.com</a></p>

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STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
<p><input checked="" type="checkbox"/> J. Vehicle and Equipment Cleaning</p>	<p><input checked="" type="checkbox"/> Show on drawings as appropriate:</p> <p>(1) Commercial/industrial facilities having vehicle/equipment cleaning needs shall either provide a covered, bermed area for washing activities or discourage vehicle/equipment washing by removing hose bibs and installing signs prohibiting such uses.</p> <p>(2) Multi-dwelling complexes shall have a paved, bermed, and covered car wash area (unless car washing is prohibited on-site and hoses are provided with an automatic shut-off to discourage such use).</p> <p>(3) Washing areas for cars, vehicles, and equipment shall be paved, designed to prevent run-on to or runoff from the area, and plumbed to drain to the sanitary sewer.</p> <p>(4) Commercial car wash facilities shall be designed such that no runoff from the facility is discharged to the storm drain system. Wastewater from the facility shall discharge to the sanitary sewer, or a wastewater reclamation system shall be installed.</p>	<p><input type="checkbox"/> If a car wash area is not provided, describe any measures taken to discourage on-site car washing and explain how these will be enforced.</p>	<p>Describe operational measures to implement the following (if applicable):</p> <p><input checked="" type="checkbox"/> Washwater from vehicle and equipment washing operations shall not be discharged to the storm drain system. Refer to “Outdoor Cleaning Activities and Professional Mobile Service Providers” for many of the Potential Sources of Runoff Pollutants categories below. Brochure can be found at <a href="http://rcflood.org/stormwater/">http://rcflood.org/stormwater/</a></p> <p><input type="checkbox"/> Car dealerships and similar may rinse cars with water only.</p>

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STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
<p><input type="checkbox"/> K. Vehicle/Equipment Repair and Maintenance</p>	<p><input type="checkbox"/> Accommodate all vehicle equipment repair and maintenance indoors. Or designate an outdoor work area and design the area to prevent run-on and runoff of stormwater.</p> <p><input type="checkbox"/> Show secondary containment for exterior work areas where motor oil, brake fluid, gasoline, diesel fuel, radiator fluid, acid-containing batteries or other hazardous materials or hazardous wastes are used or stored. Drains shall not be installed within the secondary containment areas.</p> <p><input type="checkbox"/> Add a note on the plans that states either (1) there are no floor drains, or (2) floor drains are connected to wastewater pretreatment systems prior to discharge to the sanitary sewer and an industrial waste discharge permit will be obtained.</p>	<p><input type="checkbox"/> State that no vehicle repair or maintenance will be done outdoors, or else describe the required features of the outdoor work area.</p> <p><input type="checkbox"/> State that there are no floor drains or if there are floor drains, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency’s requirements.</p> <p><input type="checkbox"/> State that there are no tanks, containers or sinks to be used for parts cleaning or rinsing or, if there are, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency’s requirements.</p>	<p>In the Stormwater Control Plan, note that all of the following restrictions apply to use the site:</p> <p><input type="checkbox"/> No person shall dispose of, nor permit the disposal, directly or indirectly of vehicle fluids, hazardous materials, or rinsewater from parts cleaning into storm drains.</p> <p><input type="checkbox"/> No vehicle fluid removal shall be performed outside a building, nor on asphalt or ground surfaces, whether inside or outside a building, except in such a manner as to ensure that any spilled fluid will be in an area of secondary containment. Leaking vehicle fluids shall be contained or drained from the vehicle immediately.</p> <p><input type="checkbox"/> No person shall leave unattended drip parts or other open containers containing vehicle fluid, unless such containers are in use or in an area of secondary containment.</p> <p>Refer to “Automotive Maintenance &amp; Care Best Management Practices for Auto Body Shops, Auto Repair Shops, Car Dealerships, Gas Stations and Fleet Service Operations”. Brochure can be found at <a href="http://rcflood.org/stormwater/">http://rcflood.org/stormwater/</a></p> <p>Refer to Outdoor Cleaning Activities and Professional Mobile Service Providers for many of the Potential Sources of Runoff Pollutants categories below. Brochure can be found at <a href="http://rcflood.org/stormwater/">http://rcflood.org/stormwater/</a></p>

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
<p><input checked="" type="checkbox"/> L. Fuel Dispensing Areas</p>	<p><input checked="" type="checkbox"/> Fueling areas<sup>6</sup> shall have impermeable floors (i.e., portland cement concrete or equivalent smooth impervious surface) that are: a) graded at the minimum slope necessary to prevent ponding; and b) separated from the rest of the site by a grade break that prevents run-on of stormwater to the maximum extent practicable.</p> <p><input checked="" type="checkbox"/> Fueling areas shall be covered by a canopy that extends a minimum of ten feet in each direction from each pump. [Alternative: The fueling area must be covered and the cover's minimum dimensions must be equal to or greater than the area within the grade break or fuel dispensing area<sup>1</sup>.] The canopy [or cover] shall not drain onto the fueling area.</p>		<p><input checked="" type="checkbox"/> The property owner shall dry sweep the fueling area routinely.</p> <p><input checked="" type="checkbox"/> See the Fact Sheet SD-30 , “Fueling Areas” in the CASQA Stormwater Quality Handbooks at <a href="http://www.cabmphandbooks.com">www.cabmphandbooks.com</a></p>

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016

<sup>6</sup> The fueling area shall be defined as the area extending a minimum of 6.5 feet from the corner of each fuel dispenser or the length at which the hose and nozzle assembly may be operated plus a minimum of one foot, whichever is greater.

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
<input type="checkbox"/> M. Loading Docks	<input type="checkbox"/> Show a preliminary design for the loading dock area, including roofing and drainage. Loading docks shall be covered and/or graded to minimize run-on to and runoff from the loading area. Roof downspouts shall be positioned to direct stormwater away from the loading area. Water from loading dock areas shall be drained to the sanitary sewer, or diverted and collected for ultimate discharge to the sanitary sewer.  <input type="checkbox"/> Loading dock areas draining directly to the sanitary sewer shall be equipped with a spill control valve or equivalent device, which shall be kept closed during periods of operation.  <input type="checkbox"/> Provide a roof overhang over the loading area or install door skirts (cowling) at each bay that enclose the end of the trailer.		<input type="checkbox"/> Move loaded and unloaded items indoors as soon as possible.  <input type="checkbox"/> See Fact Sheet SC-30, “Outdoor Loading and Unloading,” in the CASQA Stormwater Quality Handbooks at <a href="http://www.cabmphandbooks.com">www.cabmphandbooks.com</a>

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
<input type="checkbox"/> N. Fire Sprinkler Test Water		<input type="checkbox"/> Provide a means to drain fire sprinkler test water to the sanitary sewer.	<input type="checkbox"/> See the note in Fact Sheet SC-41, “Building and Grounds Maintenance,” in the CASQA Stormwater Quality Handbooks at <a href="http://www.cabmphandbooks.com">www.cabmphandbooks.com</a>
<p>O. Miscellaneous Drain or Wash Water or Other Sources</p> <input type="checkbox"/> Boiler drain lines <input checked="" type="checkbox"/> Condensate drain lines <input type="checkbox"/> Rooftop equipment <input type="checkbox"/> Drainage sumps <input checked="" type="checkbox"/> Roofing, gutters, and trim. <input type="checkbox"/> Other sources		<input type="checkbox"/> Boiler drain lines shall be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain system. <input checked="" type="checkbox"/> Condensate drain lines may discharge to landscaped areas if the flow is small enough that runoff will not occur. Condensate drain lines may not discharge to the storm drain system. Rooftop equipment with potential to produce pollutants shall be roofed and/or have secondary containment. <input type="checkbox"/> Any drainage sumps on-site shall feature a sediment sump to reduce the quantity of sediment in pumped water. <input checked="" type="checkbox"/> Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff. Include controls for other sources as specified by local reviewer.	

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016



STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
<input checked="" type="checkbox"/> P. Plazas, sidewalks, and parking lots.			<input checked="" type="checkbox"/> Sweep plazas, sidewalks, and parking lots regularly to prevent accumulation of litter and debris. Collect debris from pressure washing to prevent entry into the storm drain system. Collect washwater containing any cleaning agent or degreaser and discharge to the sanitary sewer not to a storm drain

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016

# Appendix 9: O&M

*Operation and Maintenance Plan and Documentation of Finance, Maintenance and Recording Mechanisms*

**"TO BE PROVIDED DURING FINAL WQMP"**

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# Appendix 10: Educational Materials

*BMP Fact Sheets, Maintenance Guidelines and Other End-User BMP Information*

**"TO BE PROVIDED DURING FINAL WQMP"**

Attachment: Appendix G - Water Quality Management Plan (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# PRELIMINARY DRAINAGE REPORT

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**Moreno Valley ARCO Fuel Station**  
 NWC of Iris Avenue and Oliver Street  
 Moreno Valley, CA 92555

City of Moreno Valley Case Number PEN18-0016, LST-18

Prepared for:  
 Sater Oil International, LLC  
 683 Cliffside Drive  
 San Dimas, CA 91773

Prepared by:  
 Barghausen Consulting Engineers, Inc.  
 18215 72nd Avenue South  
 Kent, WA 98032  
 (425) 251-6222  
 Hal G. Grubb, P.E.

Revised September 25, 2018  
 Revised August 7, 2018  
 Revised April 2, 2018  
 January 18, 2017  
 Our Job No. 18501

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



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# Tab 1.0

## 1.0 SUMMARY

### 1.1 PURPOSE

The purpose of this report is to document the hydrologic and hydraulic analyses performed in support of the proposed ARCO Fuel Facility and Convenience Store. The project is situated in Section 22, Township 3 South, Range 3 West, San Bernardino Meridian in the City of Moreno Valley, Riverside County, California. Please see Figure 1 for the Vicinity Map, for a more accurate depiction of the location of the site.

The project site is located northwest of the intersection of Oliver Street to the east and Iris Avenue to the south. The project proposes to build a new fueling station, convenience store, car wash, queuing lanes, parking, and associated vehicle maneuvering area on the approximately 1.58-acre site. The proposed project will make some dedication of right-of-way for driveway entrances and a new bus stop turnout, reducing the site area to approximately 1.55 acres. This report will summarize the hydrology and hydraulic analyses that were completed in order to determine the necessary drainage improvements required to provide flood protection for the proposed buildings and to effectively convey runoff from the site.

The scope of this report will include the following:

- Determine the peak 100-year and 10-year flow rates for the developed condition using the Riverside County Flood Control and Water Conservation District (RCFC & WCD) Rational Method.
- Determine the 2-year, 5-year, 10-year, 1-hour, 3-hour, 6-hour, 24-hour peak flow rates and flood volumes for the existing and developed conditions using the Riverside County Flood Control and Water Conservation District (RCFC & WCD) Unit Hydrograph Method.

### 1.2 EXISTING SITE CONDITIONS

The project site is a vacant parcel of 1.58 acres. Existing elevations across the site vary from 1568 at the southeast corner to 1552 at the northwest corner (NAVD88 datum). The existing site is currently undeveloped pasture with grass cover. The site currently slopes from southeast to northwest at 3.5 to 7.5 percent. The existing drainage for the site sheet flows overland following the topography from southeast to northwest, which conveys runoff produced from storm events on to the adjacent lot along the north and west property lines. The runoff that does not infiltrate in the adjacent vacant lot will make its way to the south side of the existing Fresenius Dialysis Center, where a curb cut has been constructed to allow water to outflow into the private drive fronting the Dialysis Center. The private drive continues sloping to the north where provisions are currently under consideration for better conveyance to the watershed. The adjacent Iris Avenue slopes away to the west and Oliver Street slopes away to the north. See Figure 2 for the Topography Map and Figure 3 for the Aerial Photograph of site. The subject site is located within a zone "X" designation per Flood Insurance Rate Map No. 06065C0770G, with an effective date of August 28, 2008. A zone "X" designation indicates that the site is outside of the 0.2 percent annual chance floodplain.

### 1.3 WATERSHED DESCRIPTION

The project is located within the Moreno Master Drainage Plan watershed area. The drainage enters the Line F channel further north of the Fresenius Dialysis Center, which contributes to the Kitching Street Channel, to the Perris Valley Storm Drain which contributes to the San Jacinto River, and finally reaches Canyon Lake. See Figure 4 for the Watershed Map.

## 1.4 PROPOSED CONDITIONS

The proposed project is located at the northwest corner of Iris Avenue and Oliver Street. The proposed project primarily entails the development of a vacant property south of the existing Fresenius Kidney Care Center. There is an additional vacant property separating the subject site and the Kidney Center.

Specifically, the project includes the installation of an ARCO fuel facility, including the construction of a convenience store, a pump island canopy with multi-product dispensers, a car wash, underground storage tanks for fuel, new on-site curb, sidewalk, asphalt pavement, storm drainage improvements including LID BMPs and conveyance, landscaping, lot lights, and utility connections. Frontage improvements along Iris Avenue will include reconstruction of the sidewalk for a bus turnout.

Stormwater generated from the proposed impervious areas will be conveyed to one of four bio-retention basins in order to provide water quality treatment. Bio-retention basins will then be collected via an under-drain or overflow structure and conveyed to an on-site pump station to discharge along the Oliver street side of the site. Stormwater will then be pumped to an outlet spreader and allowed to flow via a parkway drain under the sidewalk and into the Oliver Street gutter. Stormwater detention will not be provided.

No mitigation will be performed for an increase in runoff for the 1-, 3-, 6-, and 24-hour duration events for the 2-, 5-, and 10-year return frequencies. The outlet flow rate from the proposed on-site pump station will instead discharge in a cycle that will be governed by the pump flow rate.

## 1.5 HYDROLOGY AND HYDRAULICS

Hydrologic calculations were performed in accordance with the RCFC & WCD Hydrology Manual dated April 1978. Peak flow rates for the 10-year and 100-year storm were calculated using the Rational Method. Calculations are included in Appendix A.

The parameters applied to the calculations, including soil types and rainfall data were gathered from the RCFC & WCD Hydrology Manual. The Design Handbook for LID BMPs for RCFC & WCD provided guidance to size the four on-site water quality treatment bio-retention basins using spreadsheets that are downloaded from RCFC & WCD's web site. The water quality storm is sized per the volume of runoff generated from an 85th percentile, 24-hour storm event. Details regarding the bio-retention design are located in the Project Specific WQMP.

Rational Method calculations were performed at the direction of the RCFC & WCD Hydrology Manual and input into Microsoft Excel for ease of calculation and updating for site changes. The Rational Method was utilized to calculate the peak discharge flow rates to size the pipe and pump station, to convey site stormwater from the overflow structure at each of the bio-retention basins to the proposed discharge point at the edge of the right-of-way. Calculations are included in Appendix A-1.

The Unit Hydrograph Method was used to determine the peak flow rates and volumes associated with the 1-, 3-, 6-, and 24-hour duration events for the 2-, 5-, and 10-year storms for the site. Calculations were performed using the Hydraulic Engineering Center (HEC), HEC-HMS software provided by the Army Corps of Engineers. Inputs were derived from the RCFC & WCD Preprocessor, found at <http://rcflood.org/hechms/>. Calculation are included in Appendix A-5.




# Figure 1

## Site Vicinity Map



REFERENCE: Rand McNally (2018)

Scale:  
 Horizontal: N.T.S.      Vertical: N/A



18215 72ND AVENUE SOUTH  
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CIVIL ENGINEERING, LAND PLANNING,  
 SURVEYING, ENVIRONMENTAL SERVICES

For:  
**Sater ARCO  
 Moreno Valley, CA**

Title:  
**VICINITY MAP**

Job Number  
**18501**

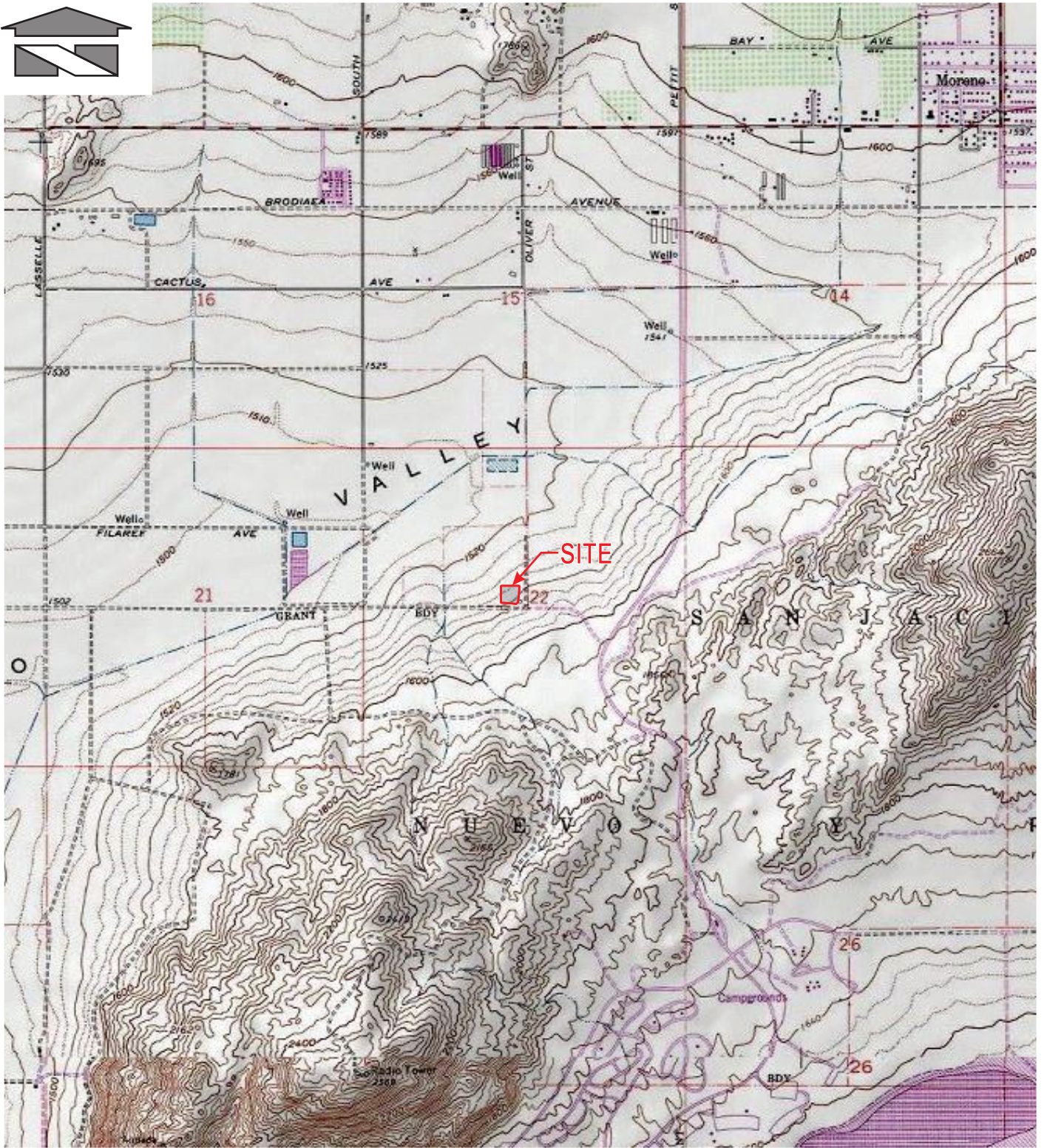
Figure  
**1**

DATE: 01/15/18

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# Figure 2

## Topography Map



REFERENCE: ESRI/USGS

Scale:

Horizontal: N.T.S.

Vertical: N/A



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SURVEYING, ENVIRONMENTAL SERVICES

For:

Sater ARCO  
Moreno Valley, CA

Job Number

18501

Title:

USGS TOPOGRAPHY  
MAP

Figure

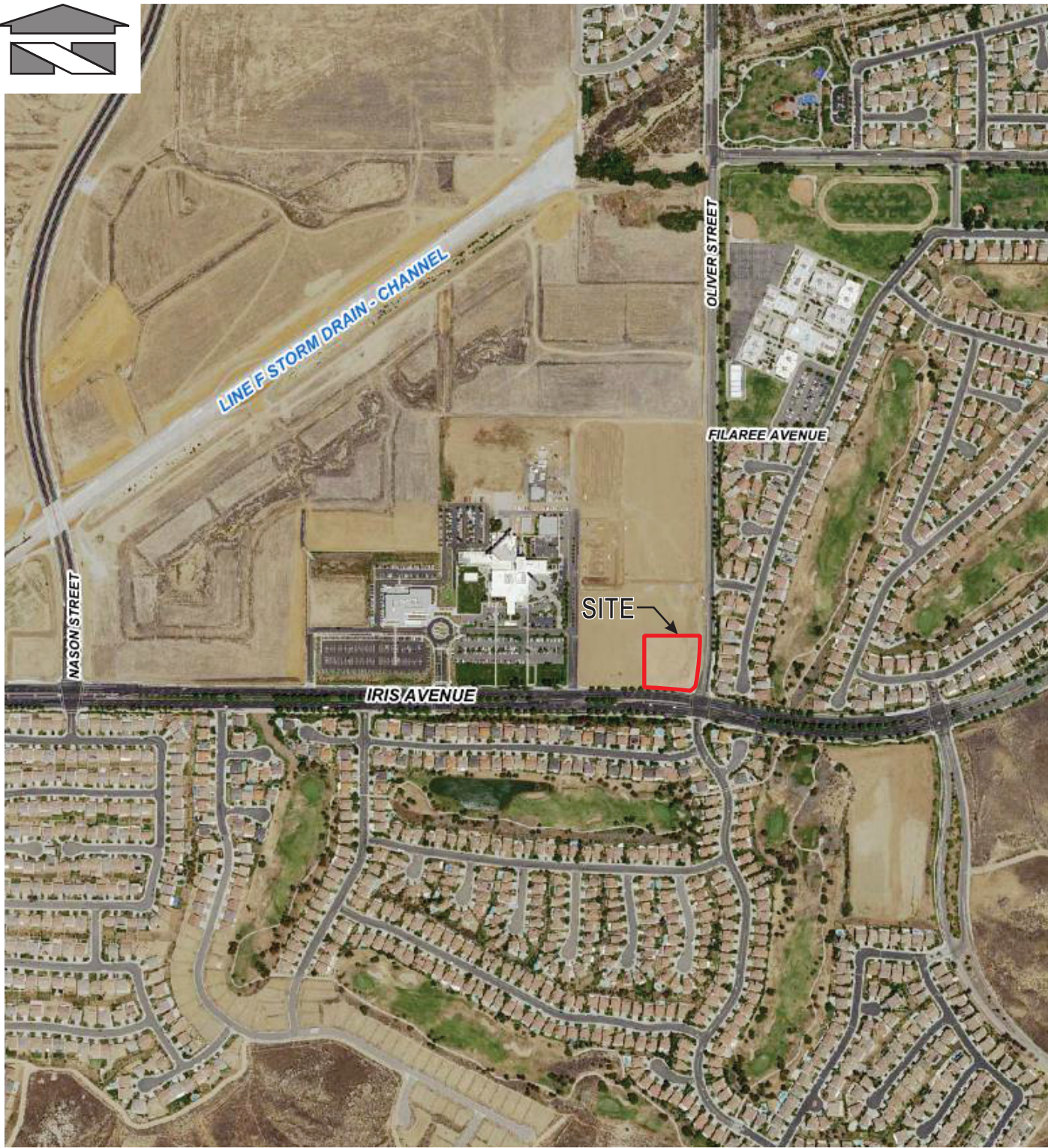
2

DATE: 01/15/18

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# Figure 3

## Aerial Map



REFERENCE: USDA-FSA Aerial Photography

Scale:

Horizontal: N.T.S.

Vertical: N/A



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SURVEYING, ENVIRONMENTAL SERVICES

For:

Sater ARCO  
Moreno Valley, CA

Job Number

18501

Title:

AERIAL PHOTOGRAPH

Figure

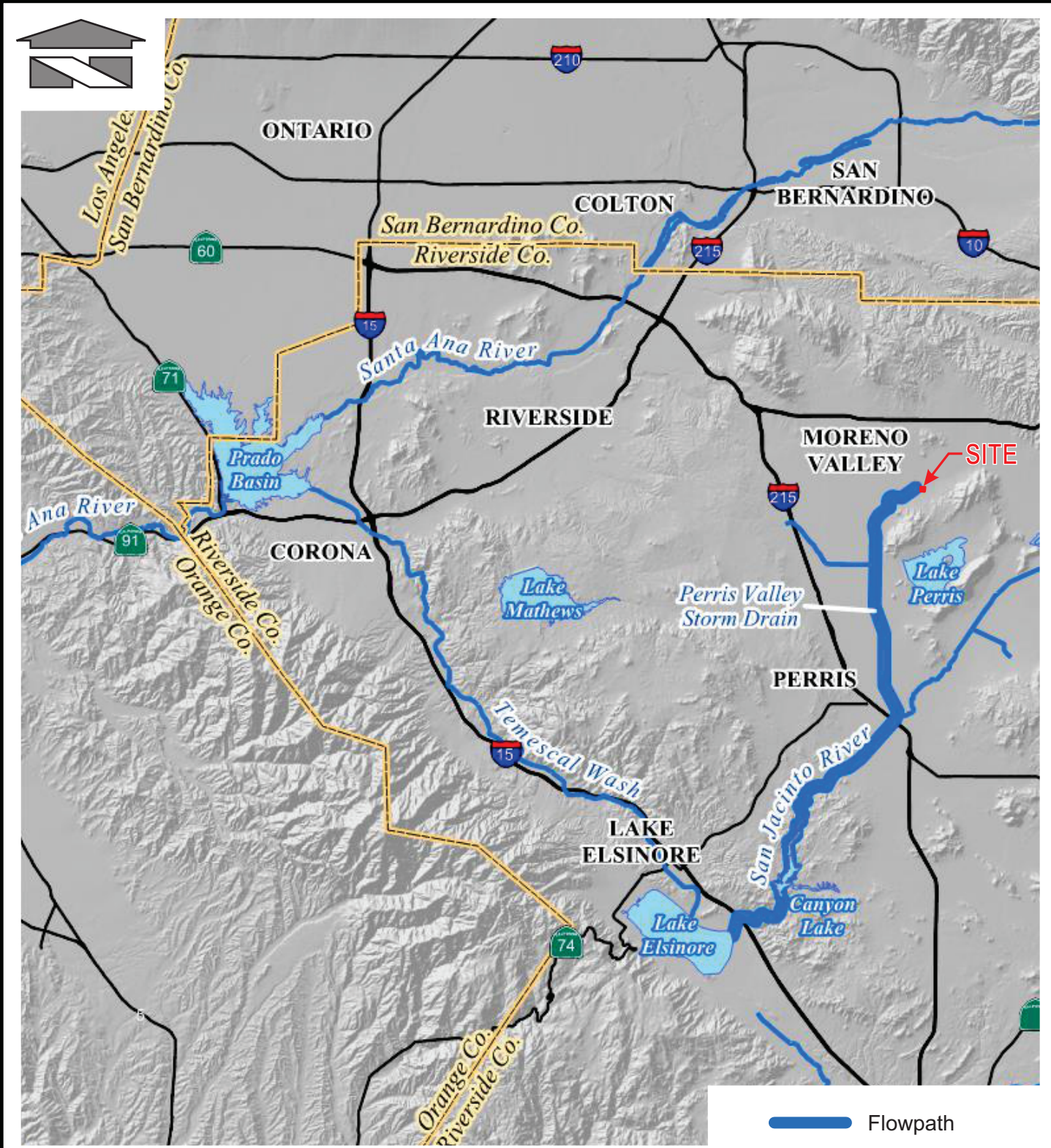
3

DATE: 01/15/18

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# Figure 4

## Watershed Map



REFERENCE: USGS

Scale:  
 Horizontal: N.T.S.      Vertical: N/A



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 (425) 251-8782

CIVIL ENGINEERING, LAND PLANNING,  
 SURVEYING, ENVIRONMENTAL SERVICES

For:  
**Sater ARCO**  
 Moreno Valley, CA

Title:  
**RECEIVING WATERBODIES**

Job Number  
**18501**

Figure  
**4**

DATE: 01/15/18

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# Tab 2.0

## 2.0 HYDROLOGY ANALYSIS - RATIONAL METHOD

The RCFC&WCD Hydrology Manual was used to determine several hydrological parameters.

Storm Event	Duration 1-Hour (inches)
10-Year	0.82
100-Year	1.2

Table 1- Precipitation Values

The precipitation values and value for slope of intensity, 0.50, are listed on Plate D-4.1 (6 of 6). The plate is included in Appendix A-2.

Based on Plate C1.17 of the RCFC & WCD Manual, the project is primarily located within an area classified at Type B. (Appendix A-3)

The ground cover type for design procedure is selected from Plate D-5.5 (Appendix A-4):

Cover Type	Soil Group A	Soil Group B	Soil Group C	Soil Group D	% Of Impervious Cover
Undeveloped Poor Cover	67	78	86	89	0
Developed-Commercial Landscaping	32	56	69	75	74

Table 2- Ground Cover Types

## 2.1 ON-SITE RATIONAL METHOD HYDROLOGY

The rational method was implemented to calculate peak flows to size the proposed subsurface conveyance including drains, piping, pump station, and discharge facility. The site was divided into four Drainage Management Areas based on topography and each area surface flows to one of four associated bio-retention facilities. The car wash building, fueling canopy, and convenience store are also directed to one of the four bio-retention facilities. Two of the four Drainage Management Areas are sub-divided due to topographical limitations and require the use of a catch basin that will flow to one of the bio-retention facilities underground. This condition exists in Drainage Management Area Nos. 1, 3 and 4. DMA No. 4 has enough fall that the inlet pipe is above the rim of the bio-retention basin. DMA Nos. 1 and 3 will utilize a bubble-up structure with its rim placed at the same elevation as the overflow outlet structure. See Figure 5 for the Basin Map. Conveyance Infrastructure on site is designed to convey the following Rational Method Peak Flows. Calculations are included in Appendix A-1 for flow generation and pipe conveyance. It should be noted that Drainage Management Area 3 also includes tributary from off-site improvements. Runoff from the right-of-way is to be collected at the gutter flow line with a curb inlet catch basin. Water will be conveyed to treatment via a submerged bubble-up structure.

			10 yr	100 yr	
<b>DMA 1</b>					
Pre-Developed	10 min	Q=	0.77	1.12	cfs
	60 min	Q=	0.31	0.46	cfs
Developed	10 min	Q=	0.75	1.09	cfs
	60 min	Q=	0.30	0.45	cfs
<b>DMA 2</b>					
Pre-Developed	10 min	Q=	0.18	0.26	cfs
	60 min	Q=	0.07	0.11	cfs
Developed	10 min	Q=	0.15	0.22	cfs
	60 min	Q=	0.06	0.09	cfs
<b>DMA 3</b>					
Pre-Developed	10 min	Q=	1.18	1.73	cfs
	60 min	Q=	0.48	0.71	cfs
Developed	10 min	Q=	1.21	1.77	cfs
	60 min	Q=	0.49	0.72	cfs
<b>DMA 4</b>					
Pre-Developed	10 min	Q=	0.49	0.72	cfs
	60 min	Q=	0.20	0.29	cfs
Developed	10 min	Q=	0.50	0.73	cfs
	60 min	Q=	0.20	0.30	cfs

Table 3- Rational Method Basin Peak Outlet Flows

**2.2 ON-SITE UNIT HYDROGRAPH HYDROLOGY**

The unit hydrograph method was used to determine the peak flow rates and volumes as required by the RCFC and WCD. A unit hydrograph was performed for the drainage area contributing to site runoff. Unit hydrographs were performed for both the existing condition and developed condition. The following table summarizes the results of the unit hydrograph analysis. Calculations are included in Appendix B for flow unit hydrograph calculations.

Storm Event	Existing Condition			Proposed Condition		
	Volume (AC-ft)	Volume (in)	Peak Flow (cfs)	Volume (AC-ft)	Volume (in)	Peak Flow (cfs)
2 yr 1 hr	0.1	0.42	1.7	0.1	0.49	1.6
2 yr 3 hr	0.1	0.85	1.2	0.1	0.84	1.1
2 yr 6 hr	0.2	1.22	1.1	0.2	1.21	1.1
2 yr 24 hr	0.3	2.04	0.4	0.3	2.04	0.4
5 yr 1 hr	0.1	0.58	2.3	0.1	0.57	2.2
5 yr 3 hr	0.1	1.11	1.5	0.1	1.1	1.5
5 yr 6 hr	0.2	1.57	1.4	0.2	1.56	1.4
5 yr 24 hr	0.4	2.79	0.6	0.4	2.79	0.6
10 yr 1 hr	0.1	0.71	2.8	0.1	0.69	2.8
10 yr 3 hr	0.2	1.32	1.8	0.2	1.31	1.8
10 yr 6 hr	0.2	1.86	1.7	0.2	1.85	1.7
10 yr 24 hr	0.4	3.31	0.7	0.4	3.31	0.7

**2.3 OFF-SITE HYDROLOGY**

Off-site stormwater flows calculations include a combination of the four proposed on-site Drainage Management Areas and one off-site DMA that will discharge at a point along the east site frontage into the gutter flow line.

			10 yr	100 yr	
Pre-Developed	10 min	Q=	2.62	3.83	cfs
Combined Peak Flow	60 min	Q=	1.07	1.56	cfs

Combined Peak Flow	10 min	Q=	2.61	3.81	cfs
	60 min	Q=	1.06	1.56	cfs

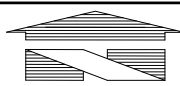
**Pre-Developed and Proposed Condition Comparison**

The pre-developed site condition consists of Undeveloped Poor Cover grass land on a slope of 4 to 8%. With the on-site soil group B, the runoff coefficient is expected to be 78. The proposed conditions will consist of buildings, paved impervious surfaces and landscaping areas. The intermixing of areas, impervious and landscaping will result in a proportioned runoff coefficient that corresponds to each drainage basin. Combined with the plateauing of the site by implementing retaining walls along the north and west sides of the lot, the runoff flows calculated by the rational method in some cases result in decreased flows for the developed condition.

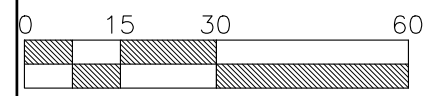
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# Figure 5

## Basin Map



1"=30'



DEVELOPED STORM FLOW SUMMARY:

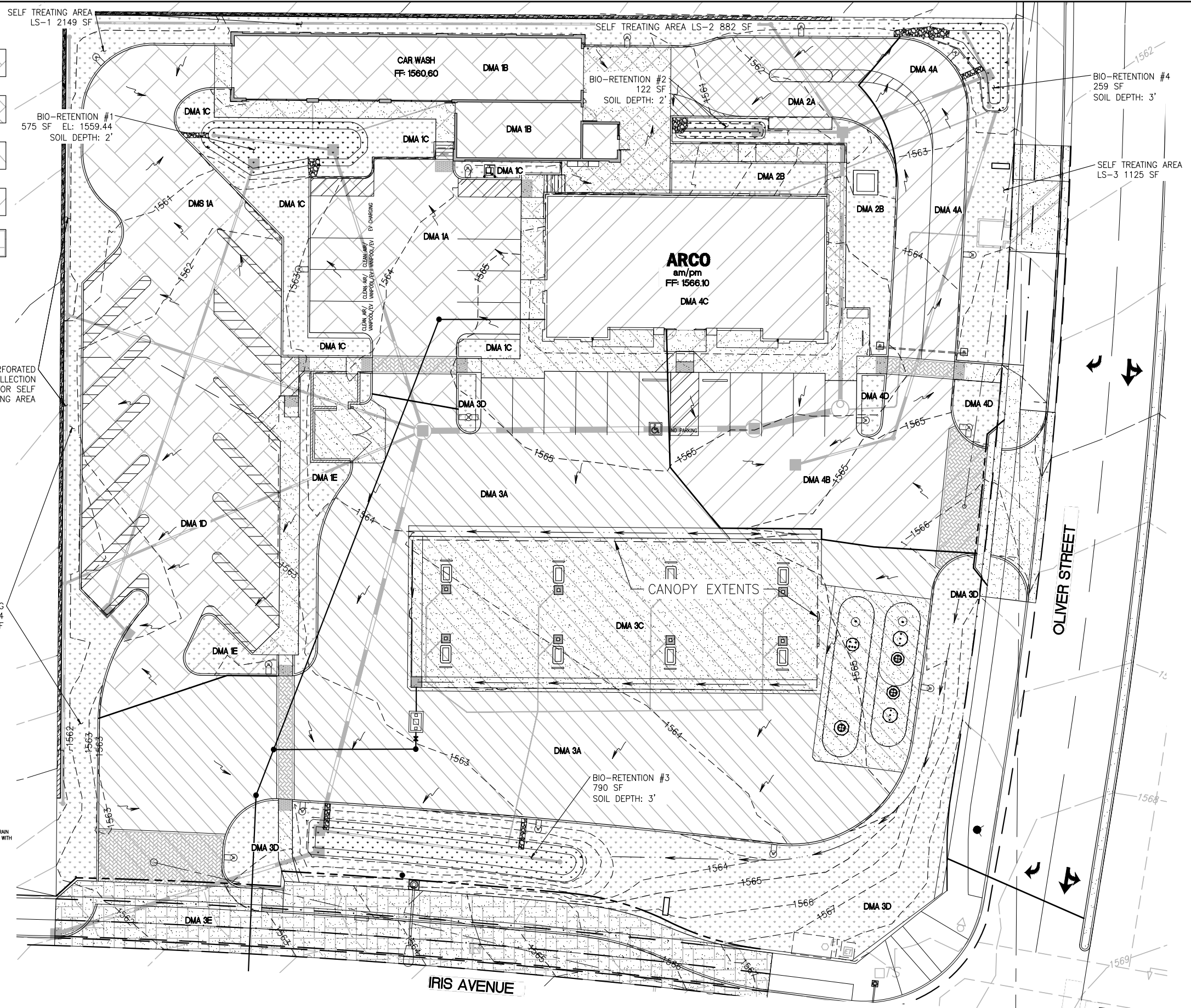
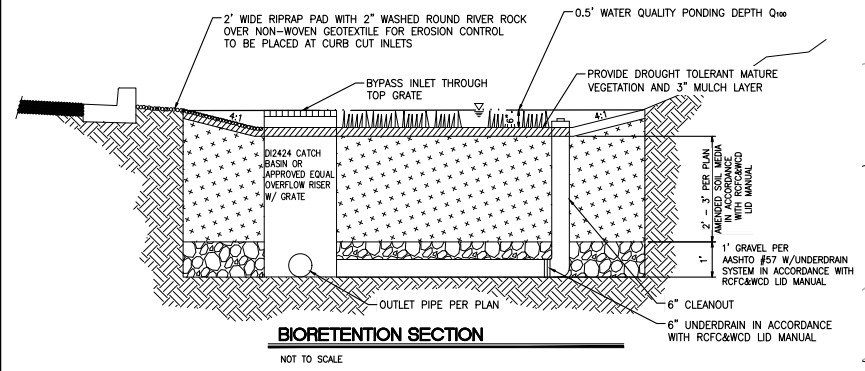
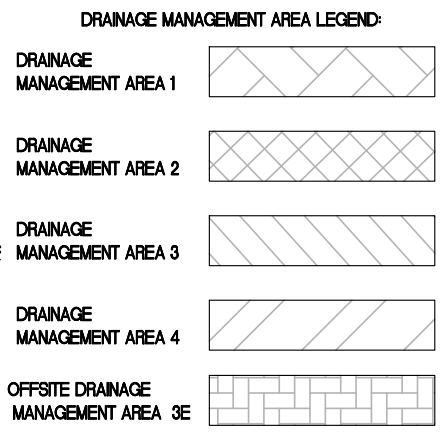
DMA	10 min	Q=	10 yr		100 yr	
			Q=	cfs	Q=	cfs
DMA 1	10 min	Q=	0.75	1.09	cfs	
	60 min	Q=	0.30	0.45	cfs	
DMA 2	10 min	Q=	0.15	0.22	cfs	
	60 min	Q=	0.06	0.09	cfs	
DMA 3	10 min	Q=	1.21	1.77	cfs	
	60 min	Q=	0.49	0.72	cfs	
DMA 4	10 min	Q=	0.50	0.73	cfs	
	60 min	Q=	0.20	0.30	cfs	
Combined PeakFlow	10 min	Q=	2.61	3.81	cfs	
	60 min	Q=	1.06	1.56	cfs	

SURFACE COVERAGE SUMMARY:

DEVELOPED SITE AREA:	67,420	1.55	ACRE
PROPOSED IMPERVIOUS AREA:	49,586	1.14	ACRE
PERVIOUS TRIBUTARY TO BIO-RETENTION:	12,115	0.28	ACRE
PERVIOUS SELF TREATING AREA:	5,719	0.13	ACRE
OFFSITE IMPERVIOUS AREA:	5799	0.13	ACRE

SOURCE CONTROL BMP NOTES:

- GREASE CONTROL FROM FOOD HANDLING ACTIVITIES WILL BE PART OF THIS PROJECT BUT WILL BE SPECIFIED IN A LATER SUBMITTAL.
- CAR WASH ACTIVITIES WILL BE CONTAINED WITHIN THE CAR WASH BUILDING. GRADING AND DRAINAGE WILL DIRECT RUNOFF FROM CARS LEAVING THE CAR WASH WILL BE COLLECTED BY THE CAR-WASH WATER TREATMENT FACILITIES TO THE GREATEST EXTENT POSSIBLE.
- INTERIOR FLOOR DRAINS WILL BE PLUMBED TO SANITARY SEWER.
- FUEL DISPENSING AREAS ARE TO BE HYDRAULICALLY ISOLATED WITH GRADING FEATURES AND THE CANOPY IS NOT TO BE DRAINED TO THE FUELING AREA GROUND SURFACE.
- TRASH AND RECYCLING ENCLOSURE IS GRADED TO HYDRAULICALLY ISOLATE THE SURFACE TO PREVENT RUN ON FROM THE SURROUNDING SITE.



18215 72ND AVENUE SOUTH  
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(425)251-6222  
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SURVEYING, ENVIRONMENTAL SERVICES

# DRAINAGE MANAGEMENT AREA SITE PLAN

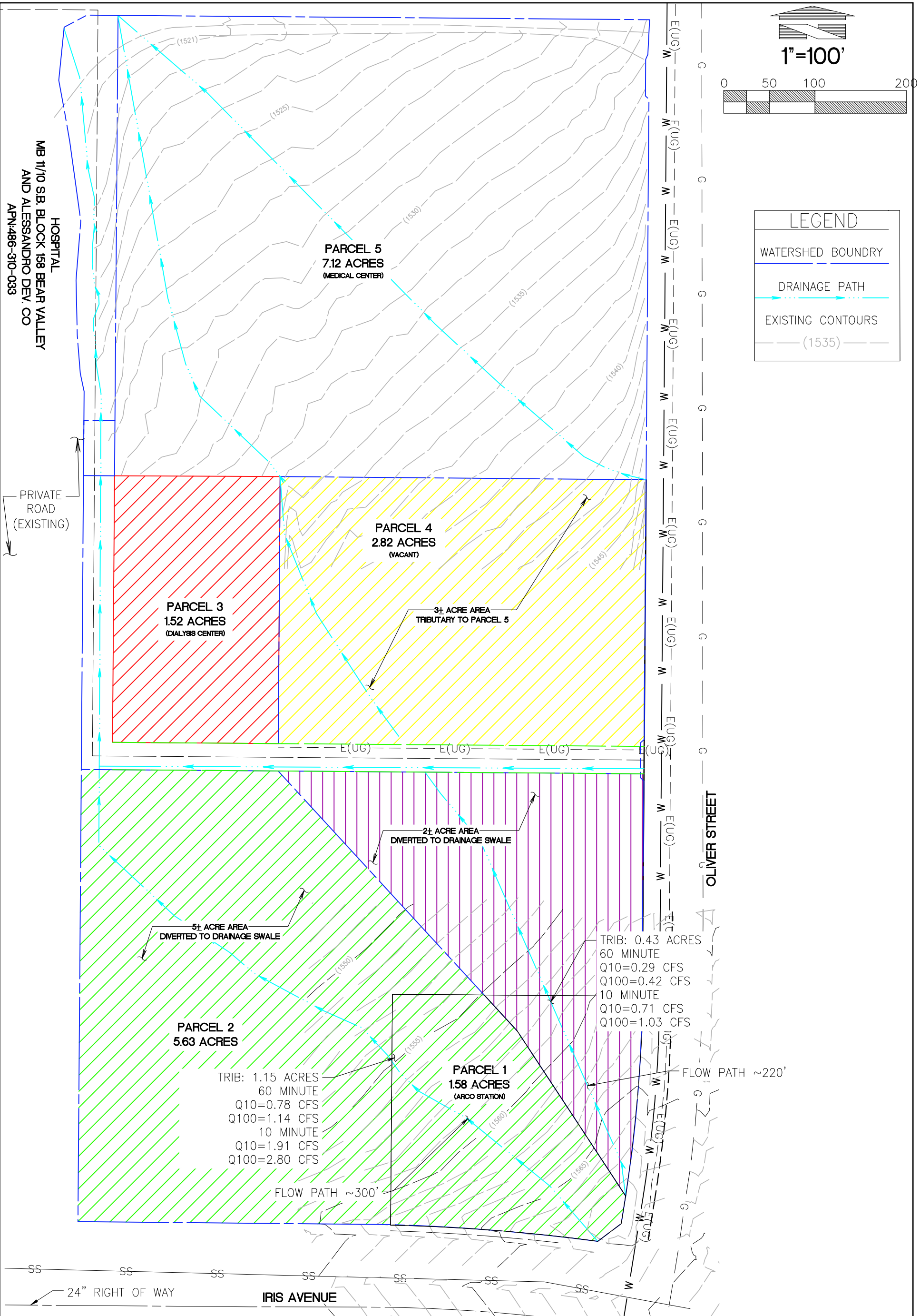
FIGURE 5

DRAINAGE MANAGEMENT AREA SITE PLAN

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# Figure 6

## Existing Drainage Basin Site Plan



Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



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SITE SOILS GROUP: B  
 EXISTING CONDITION : UNDEVELOPED POOR COVER, C=78  
 PROPOSED COMMERCIAL IMPERVIOUS SURFACES, C=90  
 PROPOSED COMMERCIAL LANDSCAPING, C=56  
 SEE SECTION 2.0 OF THIS DRAINAGE REPORT

**EXISTING DRAINAGE BASIN PLAN** **FIGURE 2A**

File: P:\180000\18501\exhibit\18501 DMA EX BASIN MAP FIG 2A AND 6.dwg Date/Time: 9/26/2018 9:07 AM 7:00PM



# Tab 3.0

### 3.0 CONCLUSION

Based on the analyses and results of this report, the following conclusions can be made:

1. The proposed bio-retention will collect surface stormwater runoff and convey through the amended soil as specified by the RCFC & WCD LID Manual. The water quality design storm will be collected by underdrains in the bio-retention basins and conveyed to the point of discharge.
2. The proposed on-site drainage improvements will adequately convey flow from proposed impervious and pervious surfaces for the 100-year storm to the point of off-site discharge. Bio-retention is to be bypassed during storm events via an overflow drain within each of the bio-retention basins. Thus, the project site is flood protected for the 100-year design storm event.
3. The proposed project will not impact site runoff conditions for sites upstream or downstream of it.
4. Due to the high runoff coefficient of the existing pasture condition, overall site discharge will be similar to that of the existing condition. The offsite discharge will, however, be concentrated to the flow line at the Oliver Street frontage.
5. Runoff from the proposed frontage improvements on Iris Avenue will be brought on site for treatment and discharged along with the on-site stormwater.
6. There will be very similar peak flows leaving the site in the proposed condition as in the existing condition due to conversion of sloped poor grassland to a flatter mix of impervious and landscaped surfaces.

# Appendices

# Appendix A-1

## Rational Method Calculations



Bioretention Facility - Design Procedure (Rev. 06-2014)		BMP ID bio ret #1	Legend:	Required Entries
				Calculated Cells
Company Name:	Barghuasen Consulting Engineers, Inc.		Date: 9/21/2018	
Designed by:	Zereck Jones	County/City Case No.: PEN18-0016LST18		
Design Volume				
Enter the area tributary to this feature			$A_{TRIB} =$	0.34 acres
Enter $V_{BMP}$ determined from Section 4.3 of this Handbook			$V_{BMP} =$	832 ft <sup>3</sup>
Type of Bioretention Facility Design				
<input checked="" type="radio"/> Side slopes required (parallel to parking spaces or adjacent to walkways) <input type="radio"/> No side slopes required (perpendicular to parking space or Planter Boxes)				
Bioretention Facility Surface Area				
Depth of Soil Filter Media Layer			$d_S =$	2.0 ft
Top Width of Bioretention Facility, excluding curb			$w_T =$	9.0 ft
Total Effective Depth, $d_E$ $d_E = (0.3) \times d_S + (0.4) \times 1 - (0.7/w_T) + 0.5$			$d_E =$	1.42 ft
Minimum Surface Area, $A_m$ $A_M (ft^2) = \frac{V_{BMP} (ft^3)}{d_E (ft)}$			$A_M =$	585 ft <sup>2</sup>
Proposed Surface Area			$A =$	585 ft <sup>2</sup>
Bioretention Facility Properties				
Side Slopes in Bioretention Facility			$z =$	832 :1
Diameter of Underdrain				6 inches
Longitudinal Slope of Site (3% maximum)				0.5 %
6" Check Dam Spacing				0 feet
Describe Landscaping: <span style="background-color: #e0ffff; display: inline-block; width: 200px; height: 15px;"></span>				
Notes: The bio-retention basin is to provide treatment for surface runoff for the gas station parking and maneuvering areas and fueling canopy roof.				

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

**Santa Ana Watershed - BMP Design Volume,  $V_{BMP}$**  Legend:  Required Entries  
 Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*  
 Company Name **Barghausen Consulting Engineers, Inc.** Date **9/21/2018**  
 Designed by **Zereck Jones** Case No **PEN18-0016LST18**  
 Company Project Number/Name **Moreno Valley ARCO Station BCE#18501**

**BMP Identification**

BMP NAME / ID **DMA #2 Car Wash driveway and back walkway and carwash office pad**  
*Must match Name/ID used on BMP Design Calculation Sheet*

**Design Rainfall Depth**

85th Percentile, 24-hour Rainfall Depth,  $D_{85} =$  **0.68** inches  
 from the Isohyetal Map in Handbook Appendix E

**Drainage Management Area Tabulation**

*Insert additional rows if needed to accommodate all DMAs draining to the BMP*

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, $I_f$	DMA Runoff Factor	DMA Areas x Runoff Factor	Design Storm Depth (in)	Design Capture Volume, $V_{BMP}$ (cubic feet)	Proposed Volume on Plans (cubic feet)
2A	3000	Concrete or Asphalt	1	0.89	2676			
2B	1080	Ornamental Landscaping	0.1	0.110458	119.3			
<b>4080</b>		<b>Total</b>			<b>2795.3</b>	<b>0.68</b>	<b>158.4</b>	<b>169</b>

Notes:

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Bioretention Facility - Design Procedure (Rev. 06-2014)		BMP ID bio ret #2	Legend:	Required Entries
				Calculated Cells
Company Name:	Barghuasen Consulting Engineers, Inc.		Date: 9/21/2018	
Designed by:	Zereck Jones	County/City Case No.: PEN18-0016LST18		
<b>Design Volume</b>				
Enter the area tributary to this feature			$A_{TRIB} =$	0.07 acres
Enter $V_{BMP}$ determined from Section 4.3 of this Handbook			$V_{BMP} =$	159 ft <sup>3</sup>
<b>Type of Bioretention Facility Design</b>				
<input checked="" type="radio"/> Side slopes required (parallel to parking spaces or adjacent to walkways) <input type="radio"/> No side slopes required (perpendicular to parking space or Planter Boxes)				
<b>Bioretention Facility Surface Area</b>				
Depth of Soil Filter Media Layer			$d_S =$	2.0 ft
Top Width of Bioretention Facility, excluding curb			$w_T =$	6.0 ft
Total Effective Depth, $d_E$ $d_E = (0.3) \times d_S + (0.4) \times 1 - (0.7/w_T) + 0.5$			$d_E =$	1.38 ft
Minimum Surface Area, $A_M$ $A_M (ft^2) = \frac{V_{BMP} (ft^3)}{d_E (ft)}$			$A_M =$	115 ft <sup>2</sup>
Proposed Surface Area			$A =$	122 ft <sup>2</sup>
<b>Bioretention Facility Properties</b>				
Side Slopes in Bioretention Facility			$z =$	4 :1
Diameter of Underdrain				6 inches
Longitudinal Slope of Site (3% maximum)				0.5 %
6" Check Dam Spacing				0 feet
Describe Landscaping: _____				
Notes: The bio-retention basin is to provide treatment for surface runoff from the back drive isle to the car wash and the ped ramp and conc pad in front of the car wash office				

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



**Santa Ana Watershed - BMP Design Volume,  $V_{BMP}$**  Legend:  Required Entries  
 Calculated Cells

*(Note this worksheet shall only be used in conjunction with BMP designs from the LID BMP Design Handbook)*  
 Company Name **Barghausen Consulting Engineers, Inc.** Date **9/21/2018**  
 Designed by **Zereck Jones** Case No **PEN18-0016LST18**  
 Company Project Number/Name **Moreno Valley ARCO Station BCE#18501**

**BMP Identification**

BMP NAME / ID **DMA #3 South end of site paving and south vacuum area paving and canopy**  
*Must match Name/ID used on BMP Design Calculation Sheet*

**Design Rainfall Depth**

85th Percentile, 24-hour Rainfall Depth,  $D_{85} =$  **0.68** inches  
 from the Isohyetal Map in Handbook Appendix E

**Drainage Management Area Tabulation**

*Insert additional rows if needed to accommodate all DMAs draining to the BMP*

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, $I_f$	DMA Runoff Factor	DMA Areas x Runoff Factor	Design Storm Depth (in)	Design Capture Volume, $V_{BMP}$ (cubic feet)	Proposed Volume on Plans (cubic feet)
3A	15897	Concrete or Asphalt	1	0.89	14180.1			
3B	0	Concrete or Asphalt	1	0.892	0			
3C	4732	Roofs	1	0.892	4220.9			
3D	8298	Ornamental Landscaping	0.1	0.110458	916.6			
3E	3375	Concrete or Asphalt	1	0.892	3010.5			
<b>32302</b>		<b>Total</b>			<b>22328.1</b>			

Notes:

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Bioretention Facility - Design Procedure (Rev. 06-2014)		BMP ID bio ret #3	Legend:	Required Entries
				Calculated Cells
Company Name:	Barghuasen Consulting Engineers, Inc.		Date: 9/25/2018	
Designed by:	Zereck Jones	County/City Case No.: PEN18-0016LST18		
<b>Design Volume</b>				
Enter the area tributary to this feature			$A_{TRIB} =$	0.74 acres
Enter $V_{BMP}$ determined from Section 4.3 of this Handbook			$V_{BMP} =$	1,266 ft <sup>3</sup>
<b>Type of Bioretention Facility Design</b>				
<input checked="" type="radio"/> Side slopes required (parallel to parking spaces or adjacent to walkways) <input type="radio"/> No side slopes required (perpendicular to parking space or Planter Boxes)				
<b>Bioretention Facility Surface Area</b>				
Depth of Soil Filter Media Layer			$d_S =$	3.0 ft
Top Width of Bioretention Facility, excluding curb			$w_T =$	11.0 ft
Total Effective Depth, $d_E$ $d_E = (0.3) \times d_S + (0.4) \times 1 - (0.7/w_T) + 0.5$			$d_E =$	1.74 ft
Minimum Surface Area, $A_m$ $A_M (ft^2) = \frac{V_{BMP} (ft^3)}{d_E (ft)}$			$A_M =$	730 ft <sup>2</sup>
Proposed Surface Area			$A =$	776 ft <sup>2</sup>
<b>Bioretention Facility Properties</b>				
Side Slopes in Bioretention Facility			$z =$	4 :1
Diameter of Underdrain				6 inches
Longitudinal Slope of Site (3% maximum)				0 %
6" Check Dam Spacing				0 feet
Describe Landscaping: <span style="background-color: #e0ffff; display: inline-block; width: 200px; height: 15px;"></span>				
Notes: The bio-retention basin is to provide treatment for surface runoff for the gas station parking and maneuvering areas and fueling canopy roof. This area will also include the collected impervious area in the				

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

**Santa Ana Watershed - BMP Design Volume,  $V_{BMP}$**

Legend:  Required Entries  
 Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name **Barghausen Consulting Engineers, Inc.** Date **9/21/2018**  
 Designed by **Zereck Jones** Case No **PEN18-0016LST18**  
 Company Project Number/Name **Moreno Valley ARCO Station BCE#18501**

**BMP Identification**

BMP NAME / ID **DMA #4 Car Wash driveway and east side of store frontage**  
*Must match Name/ID used on BMP Design Calculation Sheet*

**Design Rainfall Depth**

85th Percentile, 24-hour Rainfall Depth,  $D_{85}$  = **0.68** inches  
 from the Isohyetal Map in Handbook Appendix E

**Drainage Management Area Tabulation**

*Insert additional rows if needed to accommodate all DMAs draining to the BMP*

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, $I_f$	DMA Runoff Factor	DMA Areas x Runoff Factor	Design Storm Depth (in)	Design Capture Volume, $V_{BMP}$ (cubic feet)	Proposed Volume on Plans (cubic feet)
4A	2393	Concrete or Asphalt	1	0.89	2134.6			
4B	4204	Concrete or Asphalt	1	0.892	3750			
4C	3205	Roofs	1	0.892	2858.9			
4D	423	Ornamental Landscaping	0.1	0.110458	46.7			
<b>10225</b>		<b>Total</b>			<b>8790.2</b>			

Notes:

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Bioretention Facility - Design Procedure (Rev. 06-2014)		BMP ID bio ret #4	Legend:	Required Entries
				Calculated Cells
Company Name:	Barghuasen Consulting Engineers, Inc.		Date: 9/21/2018	
Designed by:	Zereck Jones	County/City Case No.: PEN18-0016LST18		
<b>Design Volume</b>				
Enter the area tributary to this feature			$A_{TRIB} =$	0.23 acres
Enter $V_{BMP}$ determined from Section 4.3 of this Handbook			$V_{BMP} =$	499 ft <sup>3</sup>
<b>Type of Bioretention Facility Design</b>				
<input checked="" type="radio"/> Side slopes required (parallel to parking spaces or adjacent to walkways) <input type="radio"/> No side slopes required (perpendicular to parking space or Planter Boxes)				
<b>Bioretention Facility Surface Area</b>				
Depth of Soil Filter Media Layer			$d_S =$	3.0 ft
Top Width of Bioretention Facility, excluding curb			$w_T =$	6.0 ft
Total Effective Depth, $d_E$ $d_E = (0.3) \times d_S + (0.4) \times 1 - (0.7/w_T) + 0.5$			$d_E =$	1.68 ft
Minimum Surface Area, $A_M$ $A_M (ft^2) = \frac{V_{BMP} (ft^3)}{d_E (ft)}$			$A_M =$	297 ft <sup>2</sup>
Proposed Surface Area			$A =$	300 ft <sup>2</sup>
<b>Bioretention Facility Properties</b>				
Side Slopes in Bioretention Facility			$z =$	4 :1
Diameter of Underdrain				6 inches
Longitudinal Slope of Site (3% maximum)				0.5 %
6" Check Dam Spacing				0 feet
Describe Landscaping:				
Notes: The bio-retention basin is to provide treatment for surface runoff from the east drive isle to the car wash and the east half of the store frontage and parking/manuevering area via catch basin and pipe conveyance and the C-store Roof				

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Company Name: **Barghausen Consulting Engineers, Inc.**  
 Project Name/# **Moreno Valley ARCO BCE#18501**  
 Case # **PEN18-0016LST18** Date: **9/21/2018**

Designer: **ZTJ**

DMA#	1
------	---

The Site Area of Approximately 1.55 Acres Shall utilize the Rational Method per RCFD&WCD Hydrology Manual.

Rational Method:  $Q=C \times I \times A$

Storm Interval	10 yr	100 yr
----------------	-------	--------

Enter Intensity:

10 MINUTE	"I" =	2.01	2.94	inch/hr	Per Plate
60 MINUTE	"I" =	0.82	1.2	inch/hr	D-4.1 (6 of 6)

Areas: "A" =

	SQ FT	Acre	Runoff Index	Plate D-5.5
Total Basin	21267	0.49	Commercial	0.9
Buildings	2656	0.06	Urban Cover- Commercial Landscape	0.56
Paving	13499	0.31		
Pervious Trib	2963	0.07	Existing Pasture/ Dryland	0.78
Self Retaining Area	2149	0.05		
Total Tributary Area	19118	0.44		

Assume Soil Group:

B
0.85

Avg Developed Runoff Coeff: "C"=

			10 yr	100 yr	
Pre-Developed	10 min	Q=	0.77	1.12	cfs
	60 min	Q=	0.31	0.46	cfs
Developed	10 min	Q=	0.75	1.09	cfs
	60 min	Q=	0.30	0.45	cfs

Note: Self Retaining area is a landscaped area that is topographically isolated or sloped in such a way that runoff cannot be collected and conveyed to treatment. It therefore will not be conveyed to bio-retention and collected by conveyance.

Company Name: **Barghausen Consulting Engineers, Inc.**  
 Project Name/# **Moreno Valley ARCO BCE#18501**  
 Case # **PEN18-0016LST18** Date: **3/14/2018**

Designer: **ZTJ**

DMA #	2
-------	---

The Site Area of Approximately 1.55 Acres Shall utilize the Rational Method per RCFD&WCD Hydrology Manual.

Rational Method:  $Q=C \times I \times A$

Storm Interval	10 yr	100 yr
----------------	-------	--------

Enter Intensity:

10 MINUTE	"I" =	2.01	2.94	inch/hr	Per Plate
60 MINUTE	"I" =	0.82	1.2	inch/hr	D-4.1 (6 of 6)

Areas: "A" =

	SQ FT	Acre	Runoff Index	Plate D-5.5
Total Basin	4962	0.11	Commercial	0.9
Buildings	0	0.00	Urban Cover- Commercial Landscape	0.56
Paving	3000	0.07		
Pervious Trib	1080	0.02	Existing Pasture/ Dryland	0.78
Self Retaining Area	882	0.02		
Total Tributary Area	4080	0.09		

Assume Soil Group:

B
0.81

Avg Developed Runoff Coeff: "C"=

			10 yr	100 yr	
Pre-Developed	10 min	Q=	0.18	0.26	cfs
	60 min	Q=	0.07	0.11	cfs
Developed	10 min	Q=	0.15	0.22	cfs
	60 min	Q=	0.06	0.09	cfs

Note: Self Retaing area is a landscaped area that is topographically isolated or sloped in such a way that runoff cannot be collected and conveyed to treatment. It therefore will not be conveyed to bio-retention and collected by conveyance.

Company Name: **Barghausen Consulting Engineers, Inc.**  
 Project Name/# **Moreno Valley ARCO BCE#18501**  
 Case # **PEN18-0016LST18** Date: **9/21/2018**

Designer: **ZTJ**

DMA #	3
-------	---

The Site Area of Approximately 1.55 Acres Shall utilize the Rational Method per RCFD&WCD Hydrology Manual.

Rational Method:  $Q=C \times I \times A$

Storm Interval	10 yr	100 yr
----------------	-------	--------

Enter Intensity:

10 MINUTE	"I" =	2.01	2.94	inch/hr	Per Plate
60 MINUTE	"I" =	0.82	1.2	inch/hr	D-4.1 (6 of 6)

Areas: "A" =

	SQ FT	Acre	Runoff Index	Plate D-5.5
Total Basin	32837	0.75	Commercial	0.9
Buildings	4732	0.11	Urban Cover- Commercial Landscape	0.56
Paving	19272	0.44		
Pervious Trib	8298	0.19	Existing Pasture/ Dryland	0.78
Self Retaining Area	535	0.01		
Total Tributary Area	32302	0.74		

Assume Soil Group:

B
0.81

Avg Developed Runoff Coeff: "C"=

			10 yr	100 yr	
Pre-Developed	10 min	Q=	1.18	1.73	cfs
	60 min	Q=	0.48	0.71	cfs
Developed	10 min	Q=	1.21	1.77	cfs
	60 min	Q=	0.49	0.72	cfs

Note: Self Retaing area is a landscaped area that is topographically isolated or sloped in such a way that runoff cannot be collected and conveyed to treatment. It therefore will not be conveyed to bio-retention and collected by conveyance.

Company Name: **Barghausen Consulting Engineers, Inc.**  
 Project Name/# **Moreno Valley ARCO BCE#18501**  
 Case # **PEN18-0016LST18** Date: **3/14/2018**

Designer: **ZTJ**

DMA #	4
-------	---

The Site Area of Approximately 1.55 Acres Shall utilize the Rational Method per RCFD&WCD Hydrology Manual.

Rational Method:  $Q=C \times I \times A$

Storm Interval	10 yr	100 yr
----------------	-------	--------

Enter Intensity:

10 MINUTE	"I" =	2.01	2.94	inch/hr	Per Plate
60 MINUTE	"I" =	0.82	1.2	inch/hr	D-4.1 (6 of 6)

Areas: "A" =

	SQ FT	Acre	Runoff Index	Plate D-5.5
Total Basin	13676	0.31	Commercial	0.9
Buildings	3205	0.07	Urban Cover- Commercial Landscape	0.56
Paving	8485	0.19		
Pervious Trib	423	0.01	Existing Pasture/ Dryland	0.78
Self Retaining Area	1563	0.04		
Total Tributary Area	12113	0.28		

Assume Soil Group:

B
0.89

Avg Developed Runoff Coeff: "C"=

			10 yr	100 yr	
Pre-Developed	10 min	Q=	0.49	0.72	cfs
	60 min	Q=	0.20	0.29	cfs
Developed	10 min	Q=	0.50	0.73	cfs
	60 min	Q=	0.20	0.30	cfs

Note: Self Retaining area is a landscaped area that is topographically isolated or sloped in such a way that runoff cannot be collected and conveyed to treatment. It therefore will not be conveyed to bio-retention and collected by conveyance.



Company Name: **Barghausen Consulting Engineers, Inc.** Designer: **ZTJ**  
 Project Name/# **Moreno Valley ARCO BCE#18501**  
 Case # **PEN18-0016LST18** Date: **9/21/2018**

**DMA #** **Off-Site Iris Additional runoff collection**

This Calculation is for storm Conveyance of off-site tributary that will not be treated it is incidental storm water collected in association with the existing pavement on Iris Ave that must be collected due to requirements of city catch basin location.

Rational Method:  $Q=C \times I \times A$   
 Storm Interval 

10 yr	100 yr
-------	--------

Enter Intensity:  
 10 MINUTE "I" = 

2.01	2.94
------	------

 inch/hr Per Plate  
 60 MINUTE "I" = 

0.82	1.2
------	-----

 inch/hr D-4.1 (6 of 6)

Areas: "A" =

	SQ FT	Acre	Runoff Index	Plate D-5.5
Total Basin	22000	0.51	Commercial	0.9
Buildings	0	0.00	Urban Cover- Commercial Landscape	0.56
Paving	22000	0.51	Existing Pasture/ Dryland	0.78
Pervious Trib	0	0.00		
Self Retaining Area	0	0.00		
Total Tributary Area	22000	0.51		

Assume Soil Group: 

B
---

  
 Avg Developed Runoff Coeff: "C"= 

0.90
------

		10 yr		100 yr	
Pre-Developed	10 min	Q=	0.79	1.16	cfs
	60 min	Q=	0.32	0.47	cfs
Developed	10 min	Q=	0.91	1.34	cfs
	60 min	Q=	0.37	0.55	cfs

Note: Self Retaing area is a landscaped area that is topographically isolated or sloped in such a way that runoff cannot be collected and conveyed to treatment. It therefore will not be conveyed to bio-retention and collected by conveyance.

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

BARGHAUSEN CONSULTING ENGINEERS - PIPE FLOW CALCULATOR  
using Manning Formula

JOB NAME Moreno Valley ARCO  
JOB#: 18501  
Date : 9/26/2018

**NOTE: ENTER DEFAULTS AND STORM DATA BEFORE BEGINNING**  
DEFAULTS C= 1 n= 0.009  
d= 8 Tc= 5

A= Contributing Area (Ac) Qd= Design Flow (cfs)  
C= Runoff Coefficient Qf= Full Capacity Flow (cfs)  
Tc= Time of Concentration (min) Vd= Velocity at Design Flow (fps)  
I= Intensity at Tc (in/hr) Vf= Velocity at Full Flow (fps)  
d= Diameter of Pipe (in) s= Slope of pipe (%)  
L= Length of Pipe (ft) n= Manning Roughness Coefficient  
D= Water Depth at Qd (in) Tt= Travel Time at Vd (min)

Notes:  
1. C has already been accounted for in sheet flow conveyance to Bio-Retention Facilities  
2. Qd has been entered Manually from the peak flow derived from the Rational Method Calculations based on the tributaries to each of the Bio-Retention Facilities.  
3. Tc has been accounted for for surface flow to the bio-retention facilities in the previous Rational Method

	FROM	TO	A	s	L	d	Tc	n	C	SUM A	A*C	SUM A*C	I	Qd	Qf	Qd/Qf	X	D/d	D	Vf	Vd	
TRUE	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
FALSE	CB#5	CB#11	0.96	84	8	5.0	0.009	1	0	0.00	0.00	0.00	0.00	1.09	1.71	0.638	0.580	0.586	4.69	4.90	5.21	
TRUE	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
FALSE	CB#13	CB#6	0.50	118	12	5.3	0.009	1	0	0.00	0.00	0.00	0.00	1.34	3.64	0.368	0.420	0.419	5.03	4.64	4.28	
FALSE	CB#6	CB#11	0.50	118	12	5.0	0.009	1	0	0.00	0.00	0.00	0.00	1.77	3.64	0.487	0.480	0.492	5.91	4.64	4.63	
FALSE	CB#11	CB#2	0.50	94	18	5.0	0.009	1	0	0.00	0.00	0.00	0.00	4.20	10.73	0.392	0.420	0.434	7.82	6.07	5.71	
FALSE	CB#2	PUMP STA	0.50	12	18	5.0	0.009	1	0	0.00	0.00	0.00	0.00	4.20	10.73	0.392	0.420	0.434	7.82	6.07	5.71	
TRUE	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
FALSE	CB#10	CB#3	1.85	44	8	5.0	0.009	1	0	0.00	0.00	0.00	0.00	0.73	2.37	0.308	0.380	0.378	3.02	6.80	5.97	
TRUE	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
FALSE	CB#4	CB#3	0.50	24	8	5.0	0.009	1	0	0.00	0.00	0.00	0.00	0.22	1.23	0.178	0.280	0.283	2.26	3.54	2.66	
FALSE	CB#3	CB#1	0.50	94	12	5.0	0.009	1	0	0.00	0.00	0.00	0.00	0.95	3.64	0.261	0.340	0.349	4.19	4.64	3.90	
FALSE	CB#1	PUMP STA	0.50	132	12	5.0	0.009	1	0	0.00	0.00	0.00	0.00	0.95	3.64	0.261	0.340	0.349	4.19	4.64	3.90	

Q<sub>100</sub> Total Flow: 5.15 cfs

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO

## Appendix A-2

### Plate 4.1 (6 of 6) Standard Intensity - Duration Curves Date

# RAINFALL INTENSITY—INCHES PER HOUR

**RCFC & WCD**  
 HYDROLOGY MANUAL

STANDARD  
 INTENSITY—DURATION  
 CURVES DATA

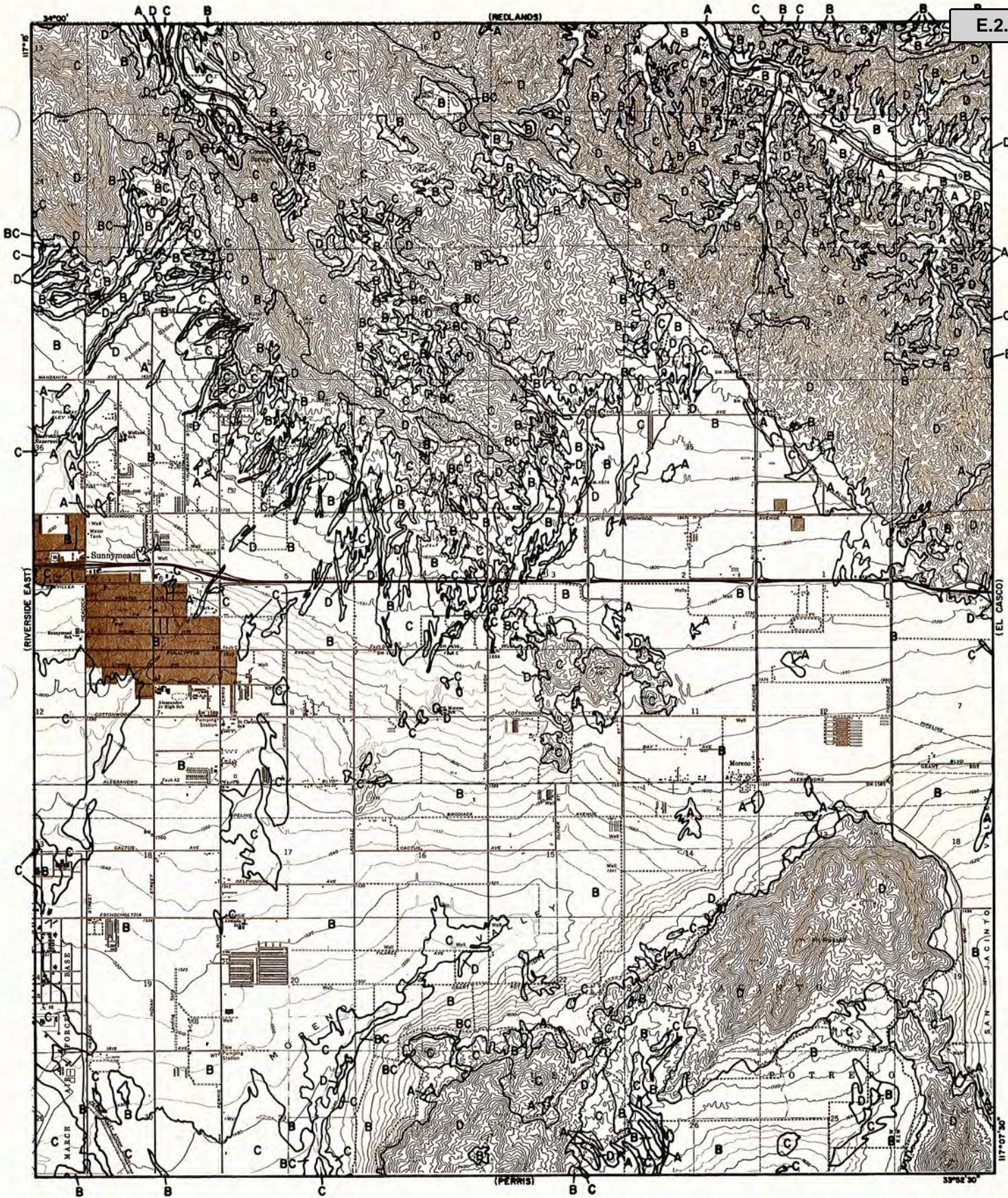
SUNNYMEAD - MORENO			WOODCREST		
DURATION MINUTES	FREQUENCY		DURATION MINUTES	FREQUENCY	
	10 YEAR	100 YEAR		10 YEAR	100 YEAR
5	2.84	4.16	5	3.37	5.30
6	2.59	3.79	6	3.05	4.79
7	2.40	3.51	7	2.80	4.40
8	2.25	3.29	8	2.60	4.09
9	2.12	3.10	9	2.44	3.83
10	2.01	2.94	10	2.30	3.62
11	1.92	2.80	11	2.19	3.43
12	1.83	2.68	12	2.08	3.27
13	1.76	2.58	13	1.99	3.13
14	1.70	2.48	14	1.91	3.01
15	1.64	2.40	15	1.84	2.89
16	1.59	2.32	16	1.78	2.79
17	1.54	2.25	17	1.72	2.70
18	1.50	2.19	18	1.67	2.62
19	1.46	2.13	19	1.62	2.54
20	1.42	2.08	20	1.57	2.47
22	1.35	1.98	22	1.49	2.34
24	1.30	1.90	24	1.42	2.23
26	1.25	1.82	26	1.36	2.14
28	1.20	1.76	28	1.31	2.05
30	1.16	1.70	30	1.26	1.98
32	1.12	1.64	32	1.22	1.91
34	1.09	1.59	34	1.18	1.85
36	1.06	1.55	36	1.14	1.79
38	1.03	1.51	38	1.11	1.74
40	1.00	1.47	40	1.07	1.69
45	.95	1.39	45	1.01	1.58
50	.90	1.31	50	.95	1.49
55	.86	1.25	55	.90	1.42
60	.82	1.20	60	.86	1.35
65	.79	1.15	65	.82	1.29
70	.76	1.11	70	.79	1.24
75	.73	1.07	75	.76	1.19
80	.71	1.04	80	.73	1.15
85	.69	1.01	85	.71	1.11

SLOPE = .500

SLOPE = .550

Appendix A-3

Plate C-1.17



Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

**LEGEND**

— SOILS GROUP BOUNDARY  
 A SOILS GROUP DESIGNATION

**RCFC & WCD**  
 Hydrology Manual

0 FEET 5000

**HYDROLOGIC SOILS GROUP MAP**  
**FOR**  
**SUNNYMEAD**

Appendix A-4

Plate D-5.5

## RUNOFF INDEX NUMBERS OF HYDROLOGIC SOIL-COVER COMPLEXES FOR PERVIOUS AREAS-AMC II

Cover Type (3)	Quality of Cover (2)	Soil Group			
		A	B	C	D
<u>NATURAL COVERS -</u>					
Barren (Rockland, eroded and graded land)		78	86	91	93
Chaparrel, Broadleaf (Manzonita, ceanothus and scrub oak)	Poor	53	70	80	85
	Fair	40	63	75	81
	Good	31	57	71	78
Chaparrel, Narrowleaf (Chamise and redshank)	Poor	71	82	88	91
	Fair	55	72	81	86
Grass, Annual or Perennial	Poor	67	78	86	89
	Fair	50	69	79	84
	Good	38	61	74	80
Meadows or Cienegas (Areas with seasonally high water table, principal vegetation is sod forming grass)	Poor	63	77	85	88
	Fair	51	70	80	84
	Good	30	58	72	78
Open Brush (Soft wood shrubs - buckwheat, sage, etc.)	Poor	62	76	84	88
	Fair	46	66	77	83
	Good	41	63	75	81
Woodland (Coniferous or broadleaf trees predominate. Canopy density is at least 50 percent)	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	28	55	70	77
Woodland, Grass (Coniferous or broadleaf trees with canopy density from 20 to 50 percent)	Poor	57	73	82	86
	Fair	44	65	77	82
	Good	33	58	72	79
<u>URBAN COVERS -</u>					
Residential or Commercial Landscaping (Lawn, shrubs, etc.)	Good	32	56	69	75
Turf (Irrigated and mowed grass)	Poor	58	74	83	87
	Fair	44	65	77	82
	Good	33	58	72	79
<u>AGRICULTURAL COVERS -</u>					
Fallow (Land plowed but not tilled or seeded)		76	85	90	92

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HYDROLOGY MANUAL

**RUNOFF INDEX NUMBERS  
FOR  
PERVIOUS AREA**

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



RUNOFF INDEX NUMBERS OF HYDROLOGIC SOIL-COVER COMPLEXES FOR PERVIOUS AREAS-AMC II

Cover Type (3)	Quality of Cover (2)	Soil Group			
		A	B	C	D
<u>AGRICULTURAL COVERS</u> (cont.) -					
Legumes, Close Seeded (Alfalfa, sweetclover, timothy, etc.)	Poor	66	77	85	89
	Good	58	72	81	85
Orchards, Deciduous (Apples, apricots, pears, walnuts, etc.)		See Note 4			
Orchards, Evergreen (Citrus, avocados, etc.)	Poor	57	73	82	86
	Fair	44	65	77	82
	Good	33	58	72	79
Pasture, Dryland (Annual grasses)	Poor	67	78	86	89
	Fair	50	69	79	84
	Good	38	61	74	80
Pasture, Irrigated (Legumes and perennial grass)	Poor	58	74	83	87
	Fair	44	65	77	82
	Good	33	58	72	79
Row Crops (Field crops - tomatoes, sugar beets, etc.)	Poor	72	81	88	91
	Good	67	78	85	89
Small Grain (Wheat, oats, barley, etc.)	Poor	65	76	84	88
	Good	63	75	83	87
Vineyard		See Note 4			

Notes:

1. All runoff index (RI) numbers are for Antecedent Moisture Condition (AMC) II.
2. Quality of cover definitions:  
 Poor-Heavily grazed or regularly burned areas. Less than 50 percent of the ground surface is protected by plant cover or brush and tree canopy.  
 Fair-Moderate cover with 50 percent to 75 percent of the ground surface protected.  
 Good-Heavy or dense cover with more than 75 percent of the ground surface protected.
3. See Plate C-2 for a detailed description of cover types.
4. Use runoff index numbers based on ground cover type. See discussion under "Cover Type Descriptions" on Plate C-2.
5. Reference Bibliography item 17.

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HYDROLOGY MANUAL

**RUNOFF INDEX NUMBERS  
FOR  
PERVIOUS AREA**

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

**Santa Ana Watershed - BMP Design Volume, V<sub>BMP</sub>**

Legend:  Required Entries  
 Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name **Barghausen Consulting Engineers, Inc.** Date **9/21/2018**  
 Designed by **Zereck Jones** Case No **PEN18-0016LST18**  
 Company Project Number/Name **Moreno Valley ARCO Station BCE#18501**

**BMP Identification**

BMP NAME / ID **DMA #1 North end of site paving and all vacuum area paving with associated landscaping**  
*Must match Name/ID used on BMP Design Calculation Sheet*

**Design Rainfall Depth**

85th Percentile, 24-hour Rainfall Depth, from the Isohyetal Map in Handbook Appendix E  $D_{85} =$  **0.68** inches

**Drainage Management Area Tabulation**

*Insert additional rows if needed to accommodate all DMAs draining to the BMP*

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I <sub>f</sub>	DMA Runoff Factor	DMA Areas x Runoff Factor	Design Storm Depth (in)	Design Capture Volume, V <sub>BMP</sub> (cubic feet)	Proposed Volume on Plans (cubic feet)	
1A	8341	Concrete or Asphalt	1	0.89	7440.2				
1B	2656	Roofs	1	0.892	2369.2				
1C	1635	Ornamental Landscaping	0.1	0.110458	180.6				
1D	5158	Concrete or Asphalt	1	0.892	4600.9				
1E	699	Ornamental Landscaping	0.1	0.110458	77.2				
<b>18489</b>					<b>Total</b>	<b>14668.1</b>	<b>0.68</b>	<b>831.2</b>	<b>832</b>

Notes:

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

**Santa Ana Watershed - BMP Design Volume,  $V_{BMP}$**

Legend:  Required Entries  
 Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name **Barghausen Consulting Engineers, Inc.** Date **9/21/2018**  
 Designed by **Zereck Jones** Case No **PEN18-0016LST18**  
 Company Project Number/Name **Moreno Valley ARCO Station BCE#18501**

**BMP Identification**

BMP NAME / ID **DMA #2 Car Wash driveway and back walkway and carwash office pad**  
*Must match Name/ID used on BMP Design Calculation Sheet*

**Design Rainfall Depth**

85th Percentile, 24-hour Rainfall Depth,  $D_{85}$  = **0.68** inches  
 from the Isohyetal Map in Handbook Appendix E

**Drainage Management Area Tabulation**

*Insert additional rows if needed to accommodate all DMAs draining to the BMP*

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, $I_f$	DMA Runoff Factor	DMA Areas x Runoff Factor	Design Storm Depth (in)	Design Capture Volume, $V_{BMP}$ (cubic feet)	Proposed Volume on Plans (cubic feet)
2A	3000	Concrete or Asphalt	1	0.89	2676			
2B	1080	Ornamental Landscaping	0.1	0.110458	119.3			
<b>4080</b>		<b>Total</b>			<b>2795.3</b>	<b>0.68</b>	<b>158.4</b>	<b>169</b>

Notes:

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

**Santa Ana Watershed - BMP Design Volume,  $V_{BMP}$**

Legend:  Required Entries  
 Calculated Cells

*(Note this worksheet shall only be used in conjunction with BMP designs from the LID BMP Design Handbook.)*  
 Company Name **Barghausen Consulting Engineers, Inc.** Date **9/21/2018**  
 Designed by **Zereck Jones** Case No **PEN18-0016LST18**  
 Company Project Number/Name **Moreno Valley ARCO Station BCE#18501**

**BMP Identification**

BMP NAME / ID **DMA #3 South end of site paving and south vacuum area paving and canopy**  
*Must match Name/ID used on BMP Design Calculation Sheet*

**Design Rainfall Depth**

85th Percentile, 24-hour Rainfall Depth, from the Isohyetal Map in Handbook Appendix E  $D_{85} =$  **0.68** inches

**Drainage Management Area Tabulation**

*Insert additional rows if needed to accommodate all DMAs draining to the BMP*

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, $I_f$	DMA Runoff Factor	DMA Areas x Runoff Factor	Design Storm Depth (in)	Design Capture Volume, $V_{BMP}$ (cubic feet)	Proposed Volume on Plans (cubic feet)
3A	15897	Concrete or Asphalt	1	0.89	14180.1			
3B	0	Concrete or Asphalt	1	0.892	0			
3C	4732	Roofs	1	0.892	4220.9			
3D	8298	Ornamental Landscaping	0.1	0.110458	916.6			
3E	3375	Concrete or Asphalt	1	0.892	3010.5			
	<b>32302</b>		<b>Total</b>		<b>22328.1</b>	<b>0.68</b>	<b>1265.3</b>	<b>1345</b>

Notes:

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

**Santa Ana Watershed - BMP Design Volume,  $V_{BMP}$**  Legend:  Required Entries  
 Calculated Cells

*(Note this worksheet shall only be used in conjunction with BMP designs from the LID BMP Design Handbook.)*

Company Name **Barghausen Consulting Engineers, Inc.** Date **9/21/2018**  
 Designed by **Zereck Jones** Case No **PEN18-0016LST18**  
 Company Project Number/Name **Moreno Valley ARCO Station BCE#18501**

**BMP Identification**

BMP NAME / ID **DMA #4 Car Wash driveway and east side of store frontage**  
*Must match Name/ID used on BMP Design Calculation Sheet*

**Design Rainfall Depth**

85th Percentile, 24-hour Rainfall Depth, from the Isohyetal Map in Handbook Appendix E  $D_{85} =$  **0.68** inches

**Drainage Management Area Tabulation**

*Insert additional rows if needed to accommodate all DMAs draining to the BMP*

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, $I_f$	DMA Runoff Factor	DMA Areas x Runoff Factor	Design Storm Depth (in)	Design Capture Volume, $V_{BMP}$ (cubic feet)	Proposed Volume on Plans (cubic feet)
4A	2393	Concrete or Asphalt	1	0.89	2134.6			
4B	4204	Concrete or Asphalt	1	0.892	3750			
4C	3205	Roofs	1	0.892	2858.9			
4D	423	Ornamental Landscaping	0.1	0.110458	46.7			
	<b>10225</b>				<b>8790.2</b>	<b>0.68</b>	<b>498.1</b>	<b>504</b>
		<b>Total</b>						

Notes:

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



Bioretention Facility - Design Procedure (Rev. 06-2014)	BMP ID bio ret #3	Legend:	Required Entries Calculated Cells
Company Name: Barghuasen Consulting Engineers, Inc.		Date: 3/9/2018	
Designed by: Zereck Jones		County/City Case No.: PEN18-0016LST18	
Design Volume			
Enter the area tributary to this feature		$A_{TRIB} = 0.59$ acres	
Enter $V_{BMP}$ determined from Section 4.3 of this Handbook		$V_{BMP} = 1,360$ ft <sup>3</sup>	
Type of Bioretention Facility Design			
<input checked="" type="radio"/> Side slopes required (parallel to parking spaces or adjacent to walkways) <input type="radio"/> No side slopes required (perpendicular to parking space or Planter Boxes)			
Bioretention Facility Surface Area			
Depth of Soil Filter Media Layer		$d_S = 3.0$ ft	
Top Width of Bioretention Facility, excluding curb		$w_T = 9.0$ ft	
Total Effective Depth, $d_E$ $d_E = (0.3) \times d_S + (0.4) \times 1 - (0.7/w_T) + 0.5$		$d_E = 1.72$ ft	
Minimum Surface Area, $A_m$ $A_M (ft^2) = \frac{V_{BMP} (ft^3)}{d_E (ft)}$		$A_M = 790$ ft <sup>2</sup>	
Proposed Surface Area		$A = 790$ ft <sup>2</sup>	
Bioretention Facility Properties			
Side Slopes in Bioretention Facility		$z = 4 : 1$	
Diameter of Underdrain		$6$ inches	
Longitudinal Slope of Site (3% maximum)		$0.5$ %	
6" Check Dam Spacing		$0$ feet	
Describe Landscaping:			
Notes: The bio-retention basin is to provide treatment for surface runoff for the gas station parking and maneuvering areas and fueling canopy roof.			

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

**Santa Ana Watershed - BMP Design Volume,  $V_{BMP}$**  Legend:   Required Entries  
  Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*  
 Company Name **Barghausen Consulting Engineers, Inc.** Date **3/9/2018**  
 Designed by **Zereck Jones** Case No **PEN18-0016LST18**  
 Company Project Number/Name **Moreno Valley ARCO Station BCE#18501**

**BMP Identification**

BMP NAME / ID **DMA #4 Car Wash driveway and east side of store frontage**  
*Must match Name/ID used on BMP Design Calculation Sheet*

**Design Rainfall Depth**

85th Percentile, 24-hour Rainfall Depth,  $D_{85} =$  **0.68** inches  
 from the Isohyetal Map in Handbook Appendix E

**Drainage Management Area Tabulation**

*Insert additional rows if needed to accommodate all DMAs draining to the BMP*

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, $I_f$	DMA Runoff Factor	DMA Areas x Runoff Factor	Design Storm Depth (in)	Design Capture Volume, $V_{BMP}$ (cubic feet)	Proposed Volume on Plans (cubic feet)
4A	2393	Concrete or Asphalt	1	0.89	2134.6			
4B	4204	Concrete or Asphalt	1	0.892	3750			
4C	3205	Roofs	1	0.892	2858.9			
4D	423	Ornamental Landscaping	0.1	0.110458	46.7			
<b>10225</b>		<b>Total</b>			<b>8790.2</b>			

Notes:

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



Bioretention Facility - Design Procedure (Rev. 06-2014)	BMP ID bio ret #4	Legend:	Required Entries Calculated Cells
Company Name: Barghuasen Consulting Engineers, Inc.		Date: 3/9/2018	
Designed by: Zereck Jones		County/City Case No.: PEN18-0016LST18	
Design Volume			
Enter the area tributary to this feature		$A_{TRIB} = 0.15$ acres	
Enter $V_{BMP}$ determined from Section 4.3 of this Handbook		$V_{BMP} = 499$ ft <sup>3</sup>	
Type of Bioretention Facility Design			
<input checked="" type="radio"/> Side slopes required (parallel to parking spaces or adjacent to walkways) <input type="radio"/> No side slopes required (perpendicular to parking space or Planter Boxes)			
Bioretention Facility Surface Area			
Depth of Soil Filter Media Layer		$d_S = 3.0$ ft	
Top Width of Bioretention Facility, excluding curb		$w_T = 6.0$ ft	
Total Effective Depth, $d_E$ $d_E = (0.3) \times d_S + (0.4) \times 1 - (0.7/w_T) + 0.5$		$d_E = 1.68$ ft	
Minimum Surface Area, $A_M$ $A_M (ft^2) = \frac{V_{BMP} (ft^3)}{d_E (ft)}$		$A_M = 297$ ft <sup>2</sup>	
Proposed Surface Area		$A = 297$ ft <sup>2</sup>	
Bioretention Facility Properties			
Side Slopes in Bioretention Facility		$z = 4 : 1$	
Diameter of Underdrain		$6$ inches	
Longitudinal Slope of Site (3% maximum)		$0.5$ %	
6" Check Dam Spacing		$0$ feet	
Describe Landscaping:			
Notes: The bio-retention basin is to provide treatment for surface runoff from the east drive isle to the car wash and the east half of the store frontage and parking/manuevering area via catch basin and pipe conveyance and the C-store Roof			

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

**Santa Ana Watershed - BMP Design Volume,  $V_{BMP}$**

Legend:  Required Entries  
 Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name **Barghausen Consulting Engineers, Inc.** Date **8/6/2018**  
 Designed by **Zereck Jones** Case No **PEN18-0016LST18**  
 Company Project Number/Name **Moreno Valley ARCO Station BCE#18501**

**BMP Identification**

BMP NAME / ID **DMA #OS Frontage improvements**  
*Must match Name/ID used on BMP Design Calculation Sheet*

**Design Rainfall Depth**

85th Percentile, 24-hour Rainfall Depth,  $D_{85} =$  **0.68** inches  
 from the Isohyetal Map in Handbook Appendix E

**Drainage Management Area Tabulation**

*Insert additional rows if needed to accommodate all DMAs draining to the BMP*

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, $I_f$	DMA Runoff Factor	DMA Areas x Runoff Factor	Design Storm Depth (in)	Design Capture Volume, $V_{BMP}$ (cubic feet)	Proposed Volume on Plans (cubic feet)
OS-1	963	Concrete or Asphalt	1	0.89	859			
OS-2A	3875	Concrete or Asphalt	1	0.892	3456.5			
OS-2B	563	Ornamental Landscaping	0.1	0.110458	62.2			
<b>5401</b>		<b>Total</b>			<b>4377.7</b>	<b>0.68</b>	<b>248.1</b>	<b>255</b>

Notes:

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Bioretention Facility - Design Procedure (Rev. 06-2014)		BMP ID bio ret # OS	Legend:	Required Entries
Company Name: Barghuasen Consulting Engineers, Inc.		Date: 8/6/2018		
Designed by: Zereck Jones		County/City Case No.: PEN18-0016LST18		
Design Volume				
Enter the area tributary to this feature		$A_{\text{TRIB}} =$	0.15	acres
Enter $V_{\text{BMP}}$ determined from Section 4.3 of this Handbook		$V_{\text{BMP}} =$	248	ft <sup>3</sup>
Type of Bioretention Facility Design				
<input checked="" type="radio"/> Side slopes required (parallel to parking spaces or adjacent to walkways) <input type="radio"/> No side slopes required (perpendicular to parking space or Planter Boxes)				
Bioretention Facility Surface Area				
Depth of Soil Filter Media Layer		$d_s =$	2.0	ft
Top Width of Bioretention Facility, excluding curb		$w_T =$	6.0	ft
Total Effective Depth, $d_E$ $d_E = (0.3) \times d_s + (0.4) \times 1 - (0.7/w_T) + 0.5$		$d_E =$	1.38	ft
Minimum Surface Area, $A_m$ $A_M (\text{ft}^2) = \frac{V_{\text{BMP}} (\text{ft}^3)}{d_E (\text{ft})}$		$A_M =$	180	ft <sup>2</sup>
Proposed Surface Area		$A =$	184	ft <sup>2</sup>
Bioretention Facility Properties				
Side Slopes in Bioretention Facility		$z =$	4	:1
Diameter of Underdrain			6	inches
Longitudinal Slope of Site (3% maximum)			0.5	%
6" Check Dam Spacing			0	feet
Describe Landscaping:				
Notes: The bio-retention basin is to provide treatment for surface runoff from the east drive isle to the car wash and the east half of the store frontage and parking/maneuvering area via catch basin and pipe conveyance and the C-store Roof				

Company Name: **Barghausen Consulting Engineers, Inc.**  
 Project Name/# **Moreno Valley ARCO BCE#18501**  
 Case # **PEN18-0016LST18** Date: **3/14/2018**

Designer: **ZTJ**

DMA#	1
------	---

The Site Area of Approximately 1.55 Acres Shall utilize the Rational Method per RCFD&WCD Hydrology Manual.

Rational Method:  $Q=C \times I \times A$

Storm Interval	10 yr	100 yr
----------------	-------	--------

Enter Intensity:

10 MINUTE	"I" =	2.01	2.94	inch/hr	Per Plate
60 MINUTE	"I" =	0.82	1.2	inch/hr	D-4.1 (6 of 6)

Areas: "A" =

	SQ FT	Acre	Runoff Index	Plate D-5.5
Total Basin	14781	0.34	Commercial	0.9
Buildings	2656	0.06	Urban Cover- Commercial Landscape	0.56
Paving	8341	0.19		
Pervious Trib	1635	0.04	Existing Pasture/ Dryland	0.78
Self Retaining Area	2149	0.05		
Total Tributary Area	12632	0.29		

Assume Soil Group:

B
0.86

Avg Developed Runoff Coeff: "C"=

			10 yr	100 yr	
Pre-Developed	10 min	Q=	0.53	0.78	cfs
	60 min	Q=	0.22	0.32	cfs
Developed	10 min	Q=	0.50	0.73	cfs
	60 min	Q=	0.20	0.30	cfs

Note: Self Retaing area is a landscaped area that is topographically isolated or sloped in such a way that runoff cannot be collected and conveyed to treatment. It therefore will not be conveyed to bio-retention and collected by conveyance.

Company Name: **Barghausen Consulting Engineers, Inc.**  
 Project Name/# **Moreno Valley ARCO BCE#18501**  
 Case # **PEN18-0016LST18** Date: **3/14/2018**

Designer: **ZTJ**

DMA #	2
-------	---

The Site Area of Approximately 1.55 Acres Shall utilize the Rational Method per RCFD&WCD Hydrology Manual.

Rational Method:  $Q=C \times I \times A$

Storm Interval	10 yr	100 yr
----------------	-------	--------

Enter Intensity:

10 MINUTE	"I" =	2.01	2.94	inch/hr	Per Plate
60 MINUTE	"I" =	0.82	1.2	inch/hr	D-4.1 (6 of 6)

Areas: "A" =

	SQ FT	Acre	Runoff Index	Plate D-5.5
Total Basin	4962	0.11	Commercial	0.9
Buildings	0	0.00	Urban Cover- Commercial Landscape	0.56
Paving	3000	0.07		
Pervious Trib	1080	0.02	Existing Pasture/ Dryland	0.78
Self Retaining Area	882	0.02		
Total Tributary Area	4080	0.09		

Assume Soil Group:

B
0.81

Avg Developed Runoff Coeff: "C"=

			10 yr	100 yr	
Pre-Developed	10 min	Q=	0.18	0.26	cfs
	60 min	Q=	0.07	0.11	cfs
Developed	10 min	Q=	0.15	0.22	cfs
	60 min	Q=	0.06	0.09	cfs

Note: Self Retaing area is a landscaped area that is topographically isolated or sloped in such a way that runoff cannot be collected and conveyed to treatment. It therefore will not be conveyed to bio-retention and collected by conveyance.

Company Name: **Barghausen Consulting Engineers, Inc.**  
 Project Name/# **Moreno Valley ARCO BCE#18501**  
 Case # **PEN18-0016LST18** Date: **3/14/2018**

Designer: **ZTJ**

DMA #	3
-------	---

The Site Area of Approximately 1.55 Acres Shall utilize the Rational Method per RCFD&WCD Hydrology Manual.

Rational Method:  $Q=C \times I \times A$

Storm Interval	10 yr	100 yr
----------------	-------	--------

Enter Intensity:

10 MINUTE	"I" =	2.01	2.94	inch/hr	Per Plate
60 MINUTE	"I" =	0.82	1.2	inch/hr	D-4.1 (6 of 6)

Areas: "A" =

	SQ FT	Acre	Runoff Index	Plate D-5.5
Total Basin	35889	0.82	Commercial	0.9
Buildings	4732	0.11	Urban Cover- Commercial Landscape	0.56
Paving	21055	0.48		
Pervious Trib	8977	0.21	Existing Pasture/ Dryland	0.78
Self Retaining Area	1125	0.03		
Total Tributary Area	34764	0.80		

Assume Soil Group:

B
0.81

Avg Developed Runoff Coeff: "C"=

		10 yr	100 yr	
Pre-Developed	10 min	Q= 1.29	1.89	cfs
	60 min	Q= 0.53	0.77	cfs
Developed	10 min	Q= 1.30	1.91	cfs
	60 min	Q= 0.53	0.78	cfs

Note: Self Retainig area is a landscaped area that is topographically isolated or sloped in such a way that runoff cannot be collected and conveyed to treatment. It therefore will not be conveyed to bio-retention and collected by conveyance.

Company Name: **Barghausen Consulting Engineers, Inc.**  
 Project Name/# **Moreno Valley ARCO BCE#18501**  
 Case # **PEN18-0016LST18** Date: **3/14/2018**

Designer: **ZTJ**

DMA #	4
-------	---

The Site Area of Approximately 1.55 Acres Shall utilize the Rational Method per RCFD&WCD Hydrology Manual.

Rational Method:  $Q=C \times I \times A$

Storm Interval	10 yr	100 yr
----------------	-------	--------

Enter Intensity:

10 MINUTE	"I" =	2.01	2.94	inch/hr	Per Plate
60 MINUTE	"I" =	0.82	1.2	inch/hr	D-4.1 (6 of 6)

Areas: "A" =

	SQ FT	Acre	Runoff Index	Plate D-5.5
Total Basin	11788	0.27	Commercial	0.9
Buildings	3205	0.07	Urban Cover- Commercial Landscape	0.56
Paving	6597	0.15		
Pervious Trib	423	0.01	Existing Pasture/ Dryland	0.78
Self Retaining Area	1563	0.04		
Total Tributary Area	10225	0.23		

Assume Soil Group:

B
0.89

Avg Developed Runoff Coeff: "C"=

			10 yr	100 yr	
Pre-Developed	10 min	Q=	0.42	0.62	cfs
	60 min	Q=	0.17	0.25	cfs
Developed	10 min	Q=	0.42	0.61	cfs
	60 min	Q=	0.17	0.25	cfs

Note: Self Retaining area is a landscaped area that is topographically isolated or sloped in such a way that runoff cannot be collected and conveyed to treatment. It therefore will not be conveyed to bio-retention and collected by conveyance.

Company Name: **Barghausen Consulting Engineers, Inc.**  
 Project Name/# **Moreno Valley ARCO BCE#18501**  
 Case # **PEN18-0016LST18** Date: **8/7/2018**

Designer: **ZTJ**

DMA #	OS
-------	----

The Site Area of Approximately 1.55 Acres Shall utilize the Rational Method per RCFD&WCD Hydrology Manual.

Rational Method:  $Q=C \times I \times A$

Storm Interval	10 yr	100 yr
----------------	-------	--------

Enter Intensity:

10 MINUTE	"I" =	2.01	2.94	inch/hr	Per Plate
60 MINUTE	"I" =	0.82	1.2	inch/hr	D-4.1 (6 of 6)

Areas: "A" =

	SQ FT	Acre	Runoff Index	Plate D-5.5
Total Basin	5401	0.12	Commercial	0.9
Buildings	0	0.00	Urban Cover- Commercial	0.56
Paving	4838	0.11	Landscape	
Pervious Trib	563	0.01	Existing Pasture/ Dryland	0.78
Self Retaining Area	0	0.00		
Total Tributary Area	5401	0.12		

Assume Soil Group:

B
---

Avg Developed Runoff Coeff: "C"=

0.86
------

Q=

			10 yr	100 yr	
Pre-Developed	10 min	Q=	0.19	0.28	cfs
	60 min	Q=	0.08	0.12	cfs
Developed	10 min	Q=	0.22	0.32	cfs
	60 min	Q=	0.09	0.13	cfs

Note: Self Retaing area is a landscaped area that is topographically isolated or sloped in such a way that runoff cannot be collected and conveyed to treatment. It therefore will not be conveyed to bio-retention and collected by conveyance.



BARGHAUSEN CONSULTING ENGINEERS - PIPE FLOW CALCULATOR  
using Manning Formula

JOB NAME Moreno Valley ARCO  
JOB#: 18501  
Date : 3/19/2018

**NOTE: ENTER DEFAULTS AND STORM DATA BEFORE BEGINNING**

DEFAULTS C= 1 n= 0.009  
d= 8 Tc= 5

Notes:

1. C has already been accounted for in sheet flow conveyance to Bio-Retention Facilities
2. Qd has been entered Manually from the peak flow derived from the Rational Method Calculations based on the tributaries to each of the Bio-Retention Facilities.
3. Tc has been accounted for for surface flow to the bio-retention facilities in the previous Rational Method

A= Contributing Area (Ac) Qd= Design Flow (cfs)  
C= Runoff Coefficient Qf= Full Capacity Flow (cfs)  
Tc= Time of Concentration (min) Vd= Velocity at Design Flow (fps)  
I= Intensity at Tc (in/hr) Vf= Velocity at Full Flow (fps)  
d= Diameter of Pipe (in) s= Slope of pipe (%)  
L= Length of Pipe (ft) n= Manning Roughness Coefficient  
D= Water Depth at Qd (in) Tt= Travel Time at Vd (min)

	FROM	TO	A	s	L	d	Tc	n	C	SUM A	A*C	SUM A*C	I	Qd	Qf	Qd/Qf	X	D/d	D	Vf	Vd	
TRUE																						
FALSE	CB#5	CB#11		0.96	84	8	5.0	0.009	1	0	0.00	0.00	0.00	0.73	1.71	0.427	0.460	0.458	3.67	4.90	4.75	
TRUE																						
FALSE	CB#6	CB#11		0.50	118	12	5.0	0.009	1	0	0.00	0.00	0.00	1.91	3.64	0.525	0.500	0.514	6.17	4.64	4.69	
FALSE	CB#11	CB#2		0.50	94	12	5.0	0.009	1	0	0.00	0.00	0.00	2.64	3.64	0.726	0.620	0.632	7.58	4.64	5.06	
FALSE	CB#2	PUMP STA		0.50	12	12	5.0	0.009	1	0	0.00	0.00	0.00	2.64	3.64	0.726	0.620	0.632	7.58	4.64	5.06	
TRUE																						
FALSE	CB#10	CB#3		1.85	44	8	5.0	0.009	1	0	0.00	0.00	0.00	0.61	2.37	0.257	0.340	0.346	2.76	6.80	5.70	
TRUE																						
FALSE	CB#4	CB#3		0.50	24	8	5.0	0.009	1	0	0.00	0.00	0.00	0.22	1.23	0.178	0.280	0.283	2.26	3.54	2.66	
FALSE	CB#3	CB#1		0.50	94	12	5.0	0.009	1	0	0.00	0.00	0.00	0.83	3.64	0.228	0.320	0.323	3.87	4.64	3.75	
FALSE	CB#1	PUMP STA		0.50	132	12	5.0	0.009	1	0	0.00	0.00	0.00	0.83	3.64	0.228	0.320	0.323	3.87	4.64	3.75	
										Q <sub>100</sub>	Total Flow:		3.47	cfs								

## Appendix A-2

### Plate 4.1 (6 of 6) Standard Intensity - Duration Curves Date

# RAINFALL INTENSITY—INCHES PER HOUR

**RCFC & WCD**  
 HYDROLOGY MANUAL

STANDARD  
 INTENSITY - DURATION  
 CURVES DATA

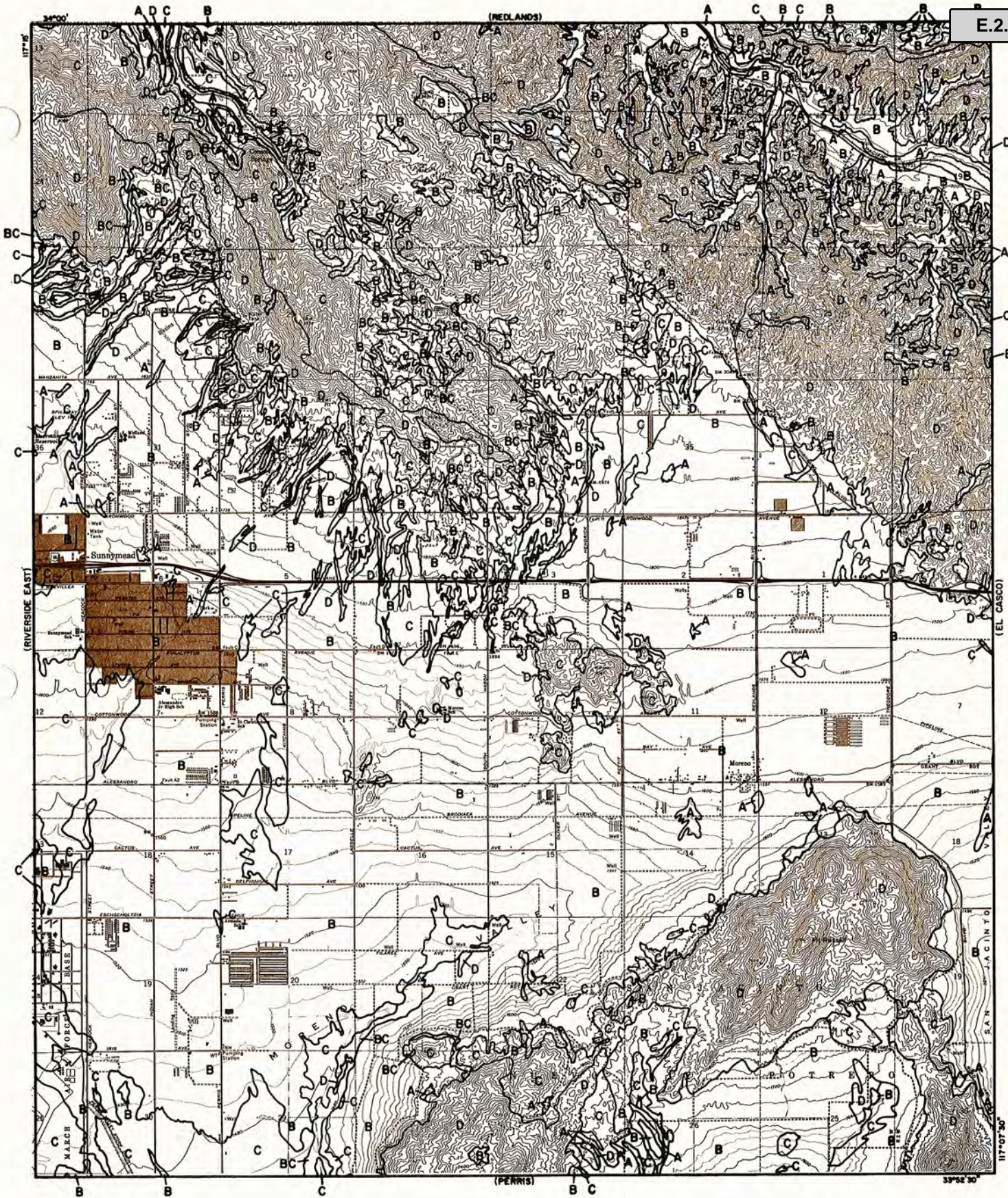
SUNNYMEAD - MORENO			WOODCREST		
DURATION MINUTES	FREQUENCY		DURATION MINUTES	FREQUENCY	
	10 YEAR	100 YEAR		10 YEAR	100 YEAR
5	2.84	4.16	5	3.37	5.30
6	2.59	3.79	6	3.05	4.79
7	2.40	3.51	7	2.80	4.40
8	2.25	3.29	8	2.60	4.09
9	2.12	3.10	9	2.44	3.83
10	2.01	2.94	10	2.30	3.62
11	1.92	2.80	11	2.19	3.43
12	1.83	2.68	12	2.08	3.27
13	1.76	2.58	13	1.99	3.13
14	1.70	2.48	14	1.91	3.01
15	1.64	2.40	15	1.84	2.89
16	1.59	2.32	16	1.78	2.79
17	1.54	2.25	17	1.72	2.70
18	1.50	2.19	18	1.67	2.62
19	1.46	2.13	19	1.62	2.54
20	1.42	2.08	20	1.57	2.47
22	1.35	1.98	22	1.49	2.34
24	1.30	1.90	24	1.42	2.23
26	1.25	1.82	26	1.36	2.14
28	1.20	1.76	28	1.31	2.05
30	1.16	1.70	30	1.26	1.98
32	1.12	1.64	32	1.22	1.91
34	1.09	1.59	34	1.18	1.85
36	1.06	1.55	36	1.14	1.79
38	1.03	1.51	38	1.11	1.74
40	1.00	1.47	40	1.07	1.69
45	.95	1.39	45	1.01	1.58
50	.90	1.31	50	.95	1.49
55	.86	1.25	55	.90	1.42
60	.82	1.20	60	.86	1.35
65	.79	1.15	65	.82	1.29
70	.76	1.11	70	.79	1.24
75	.73	1.07	75	.76	1.19
80	.71	1.04	80	.73	1.15
85	.69	1.01	85	.71	1.11

SLOPE = .500

SLOPE = .550

Appendix A-3

Plate C-1.17



Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

**LEGEND**

— SOILS GROUP BOUNDARY  
 A SOILS GROUP DESIGNATION

**RCFC & WCD**  
 Hydrology Manual

0 FEET 5000

**HYDROLOGIC SOILS GROUP MAP**  
 FOR  
**SUNNYMEAD**

Appendix A-4

Plate D-5.5

RUNOFF INDEX NUMBERS OF HYDROLOGIC SOIL-COVER COMPLEXES FOR PERVIOUS AREAS-AMC II

Cover Type (3)	Quality of Cover (2)	Soil Group			
		A	B	C	D
<u>NATURAL COVERS -</u>					
Barren (Rockland, eroded and graded land)		78	86	91	93
Chaparrel, Broadleaf (Manzonita, ceanothus and scrub oak)	Poor	53	70	80	85
	Fair	40	63	75	81
	Good	31	57	71	78
Chaparrel, Narrowleaf (Chamise and redshank)	Poor	71	82	88	91
	Fair	55	72	81	86
Grass, Annual or Perennial	Poor	67	78	86	89
	Fair	50	69	79	84
	Good	38	61	74	80
Meadows or Cienegas (Areas with seasonally high water table, principal vegetation is sod forming grass)	Poor	63	77	85	88
	Fair	51	70	80	84
	Good	30	58	72	78
Open Brush (Soft wood shrubs - buckwheat, sage, etc.)	Poor	62	76	84	88
	Fair	46	66	77	83
	Good	41	63	75	81
Woodland (Coniferous or broadleaf trees predominate. Canopy density is at least 50 percent)	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	28	55	70	77
Woodland, Grass (Coniferous or broadleaf trees with canopy density from 20 to 50 percent)	Poor	57	73	82	86
	Fair	44	65	77	82
	Good	33	58	72	79
<u>URBAN COVERS -</u>					
Residential or Commercial Landscaping (Lawn, shrubs, etc.)	Good	32	56	69	75
Turf (Irrigated and mowed grass)	Poor	58	74	83	87
	Fair	44	65	77	82
	Good	33	58	72	79
<u>AGRICULTURAL COVERS -</u>					
Fallow (Land plowed but not tilled or seeded)		76	85	90	92

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

**RCFC & WCD**  
HYDROLOGY MANUAL

**RUNOFF INDEX NUMBERS  
FOR  
PERVIOUS AREA**

RUNOFF INDEX NUMBERS OF HYDROLOGIC SOIL-COVER COMPLEXES FOR PERVIOUS AREAS-AMC II

Cover Type (3)	Quality of Cover (2)	Soil Group			
		A	B	C	D
<u>AGRICULTURAL COVERS</u> (cont.) -					
Legumes, Close Seeded (Alfalfa, sweetclover, timothy, etc.)	Poor	66	77	85	89
	Good	58	72	81	85
Orchards, Deciduous (Apples, apricots, pears, walnuts, etc.)	See Note 4				
Orchards, Evergreen (Citrus, avocados, etc.)	Poor	57	73	82	86
	Fair	44	65	77	82
	Good	33	58	72	79
Pasture, Dryland (Annual grasses)	Poor	67	78	86	89
	Fair	50	69	79	84
	Good	38	61	74	80
Pasture, Irrigated (Legumes and perennial grass)	Poor	58	74	83	87
	Fair	44	65	77	82
	Good	33	58	72	79
Row Crops (Field crops - tomatoes, sugar beets, etc.)	Poor	72	81	88	91
	Good	67	78	85	89
Small Grain (Wheat, oats, barley, etc.)	Poor	65	76	84	88
	Good	63	75	83	87
Vineyard	See Note 4				

Notes:

1. All runoff index (RI) numbers are for Antecedent Moisture Condition (AMC) II.
2. Quality of cover definitions:  
 Poor-Heavily grazed or regularly burned areas. Less than 50 percent of the ground surface is protected by plant cover or brush and tree canopy.  
 Fair-Moderate cover with 50 percent to 75 percent of the ground surface protected.  
 Good-Heavy or dense cover with more than 75 percent of the ground surface protected.
3. See Plate C-2 for a detailed description of cover types.
4. Use runoff index numbers based on ground cover type. See discussion under "Cover Type Descriptions" on Plate C-2.
5. Reference Bibliography item 17.

**RCFC & WCD**  
HYDROLOGY MANUAL

**RUNOFF INDEX NUMBERS  
FOR  
PERVIOUS AREA**

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



## Appendix A-5

# HEC-HMS Synthetic Unit Hydrograph Method Calculations

Calculation Inputs for  
HEC-HMS 4.2.1:  
Using Synthetic Unit Hydrograph Method

Select location

1) Manually:

a) By location (decimal degrees, use "-" for S and W): Latitude:  Longitude:

b) By station (list of CA stations):

c) By address

2) Use map (If ESRI interactive map is not loading, try adding the host: <https://js.arcgis.com/> to the firewall, or contact us at [hdsr.questions@noaa.gov](mailto:hdsr.questions@noaa.gov).)

**a) Select location**  
Move crosshair or double click

**b) Click on station icon**  
 Show stations on map


**Location information:**  
Name: Moreno Valley, California, USA\*  
Latitude: 33.8956°  
Longitude: -117.1850°  
Elevation: 1553.7 ft\*\*


\* Source: ESRI Maps  
\*\* Source: USGS

**POINT PRECIPITATION FREQUENCY (PF) ESTIMATES**  
WITH 90% CONFIDENCE INTERVALS AND SUPPLEMENTARY INFORMATION  
NOAA Atlas 14, Volume 6, Version 2

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Inputs from HEC-HMS Preprocessor (RCFC&WCD):


**NOAA Atlas 14, Volume 6, Version 2**  
 Location name: **Moreno Valley, California, USA\***  
 Latitude: **33.8956°**, Longitude: **-117.185°**  
 Elevation: **1553.7 ft\*\***  
 \* source: ESRI Maps  
 \*\* source: USGS



**POINT PRECIPITATION FREQUENCY ESTIMATES**

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitania, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Triggakis, Daisi Urzua, Fenglin Yan, Michael Yacobi, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan


NOAA, National Weather Service, Silver Spring, Maryland  
[PF\\_tabular](#) | [PF\\_graphical](#) | [Maps\\_&\\_aerials](#)

**PF tabular**

<b>PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)<sup>1</sup></b>										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
60-min	0.356 (0.297-0.430)	0.493 (0.411-0.597)	0.673 (0.560-0.818)	0.822 (0.678-1.01)	1.03 (0.817-1.30)	1.18 (0.922-1.54)	1.35 (1.02-1.79)	1.52 (1.12-2.07)	1.75 (1.23-2.50)	1.93 (1.31-2.86)
3-hr	0.667 (0.557-0.806)	0.869 (0.725-1.05)	1.14 (0.944-1.38)	1.35 (1.11-1.66)	1.65 (1.31-2.09)	1.87 (1.46-2.43)	2.10 (1.60-2.80)	2.34 (1.73-3.20)	2.66 (1.88-3.80)	2.91 (1.99-4.31)
6-hr	0.939 (0.764-1.14)	1.22 (1.01-1.47)	1.58 (1.31-1.92)	1.87 (1.54-2.29)	2.27 (1.80-2.87)	2.57 (2.00-3.33)	2.87 (2.18-3.82)	3.19 (2.35-4.36)	3.61 (2.55-5.16)	3.94 (2.69-5.84)
24-hr	1.50 (1.33-1.73)	2.05 (1.81-2.37)	2.77 (2.44-3.20)	3.34 (2.92-3.89)	4.10 (3.47-4.94)	4.67 (3.88-5.75)	5.25 (4.25-6.61)	5.84 (4.60-7.55)	6.62 (5.01-8.91)	7.21 (5.28-10.0)

<sup>1</sup> Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



## HEC-HMS Preprocessor

User Manual  
Contact Project Planning (951) 955-1200

Watershed Area  sq mi

**1 Hour Storm**

Point Precipitation  in.

Areal Adjustment Factor  %

Adjusted Point Precipitation 0.49

Slope of Rainfall Intensity - Duration Curve

**3 Hour Storm**

Point Precipitation  in.

Areal Adjustment Factor  %

Adjusted Point Precipitation 0.87

**6 Hour Storm**

Point Precipitation  in.

Areal Adjustment Factor  %

Adjusted Point Precipitation 1.22

**24 Hour Storm**

Point Precipitation  in.

Areal Adjustment Factor  %

Adjusted Point Precipitation 2.05

Refer to Plate E-5.8

**Lag Time Calculator**

Basin Factor - n

Length along longest watercourse - L  ft

Length along longest watercourse measured upstream to a point opposite the centroid of the area - Lca  ft

Elevation Difference  ft

**Lag Time** **0.011** hr

40% Lag Time 0.3 min

[Loss Rate Data](#) | [Effective Rainfall](#) | [S-Graphs](#)

Average Adjusted Loss Rate Calculator (Plate E-2.1)
  Average Adjusted Loss Rate (Manual Entry)

Add Loss Rate Values										
AMC Condition: <input type="text" value="II"/>										
Soil Group / Cover Type <a href="#">View Chart</a>	RI Number	Perv. Area Infiltrn Rate (in/hr)	Land Use	Imp. Area Decimal %	Adj. Infiltrn Rate (in/hr)	Area (acres)				
-							<input type="button" value="Add"/>			
Soil Group / Cover Type	RI Number	Perv. Area Infiltrn Rate (in/hr)	Land Use	Imp. Area Decimal %	Adj. Infiltrn Rate (in/hr)	Area (acres)	Area/ Total Area	Ave. Adj. Rate (in/hr)		
Pasture, Dryland Poor B	78	0.26800	0	0	0.268	1.55	1	0.268	X	
Total area =						1.55				
								Average Soil Loss =	0.268	

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Pre-Developed Site Storm Calculations  
 Calculations Per HEC-HMS 4.2.1:  
 Inputs from HEC-HMS Preprocessor (RCFC&WCD)

Precipitation  
 Hyd ID (inches)

2 yr 1 hr	0.493
2 yr 3 hr	0.869
2 yr 6 hr	1.22
2 yr 24 hr	2.05
5 yr 1 hr	0.673
5 yr 3 hr	1.14
5 yr 6 hr	1.58
5 yr 24 hr	2.77
10 yr 1 hr	0.822
10 yr 3 hr	1.35
10 yr 6 hr	1.87
10 yr 24 hr	3.34

Point Precipitation Frequency Estimates  
 Per NOAA Atlas 14, Volume 6, Version 2

2-year 1-hour storm for Developed Site:

Project: Moreno Valley BCE 18501 Simulation Run: 2yr 1hr Subbasin: Site A Start of Run: 01Jan2016, 00:00 Basin Model: Watershed A End of Run: 01Jan2016, 01:00 Meteorologic Model: 02y 01hr Compute Time: 28Mar2018, 15:36:33 Control Specifications: 01 Volume Units: <input checked="" type="radio"/> IN <input type="radio"/> AC-FT	Project: Moreno Valley BCE 18501 Simulation Run: 2yr 1hr Subbasin: Site A Start of Run: 01Jan2016, 00:00 Basin Model: Watershed A End of Run: 01Jan2016, 01:00 Meteorologic Model: 02y 01hr Compute Time: 28Mar2018, 15:36:33 Control Specifications: 01 Volume Units: <input type="radio"/> IN <input checked="" type="radio"/> AC-FT
<b>Computed Results</b> Peak Discharge: 1.7 (CFS) Date/Time of Peak Discharge: 01Jan2016, 00:55 Precipitation Volume: 0.49 (IN) Direct Runoff Volume: 0.42 (IN) Loss Volume: 0.00 (IN) Baseflow Volume: 0.00 (IN) Excess Volume: 0.49 (IN) Discharge Volume: 0.42 (IN)	<b>Computed Results</b> Peak Discharge: 1.7 (CFS) Date/Time of Peak Discharge: 01Jan2016, 00:55 Precipitation Volume: 0.1 (AC-FT) Direct Runoff Volume: 0.1 (AC-FT) Loss Volume: 0.0 (AC-FT) Baseflow Volume: 0.0 (AC-FT) Excess Volume: 0.1 (AC-FT) Discharge Volume: 0.1 (AC-FT)

Date	Time	Precip (IN)	Loss (IN)	Excess (IN)	Direct Flow (CFS)	Baseflow (CFS)	Total Flow (CFS)
1-Jan-16	0:00				0	0	0
1-Jan-16	0:05	0.02	0	0.02	0.1	0	0.1
1-Jan-16	0:10	0.02	0	0.02	0.3	0	0.3
1-Jan-16	0:15	0.03	0	0.03	0.4	0	0.4
1-Jan-16	0:20	0.03	0	0.03	0.4	0	0.4
1-Jan-16	0:25	0.03	0	0.03	0.5	0	0.5
1-Jan-16	0:30	0.03	0	0.03	0.5	0	0.5
1-Jan-16	0:35	0.04	0	0.04	0.6	0	0.6
1-Jan-16	0:40	0.04	0	0.04	0.7	0	0.7
1-Jan-16	0:45	0.06	0	0.06	0.9	0	0.9
1-Jan-16	0:50	0.14	0	0.14	1.5	0	1.5
1-Jan-16	0:55	0.04	0	0.04	1.7	0	1.7
1-Jan-16	1:00	0.02	0	0.02	0.9	0	0.9

2-year 3-hour storm for Pre-Developed Site:

Project: Moreno Valley BCE 18501 Simulation Run: 2yr 3hr Subbasin: Site A Start of Run: 01Jan2016, 00:00 Basin Model: Watershed A End of Run: 01Jan2016, 03:00 Meteorologic Model: 02y 03hr Compute Time: 28Mar2018, 15:36:39 Control Specifications: 03 Volume Units: <input checked="" type="radio"/> IN <input type="radio"/> AC-FT	Project: Moreno Valley BCE 18501 Simulation Run: 2yr 3hr Subbasin: Site A Start of Run: 01Jan2016, 00:00 Basin Model: Watershed A End of Run: 01Jan2016, 03:00 Meteorologic Model: 02y 03hr Compute Time: 28Mar2018, 15:36:39 Control Specifications: 03 Volume Units: <input type="radio"/> IN <input checked="" type="radio"/> AC-FT
<b>Computed Results</b> Peak Discharge: 1.2 (CFS) Date/Time of Peak Discharge: 01Jan2016, 02:40 Precipitation Volume: 0.87 (IN) Direct Runoff Volume: 0.85 (IN) Loss Volume: 0.00 (IN) Baseflow Volume: 0.00 (IN) Excess Volume: 0.87 (IN) Discharge Volume: 0.85 (IN)	<b>Computed Results</b> Peak Discharge: 1.2 (CFS) Date/Time of Peak Discharge: 01Jan2016, 02:40 Precipitation Volume: 0.1 (AC-FT) Direct Runoff Volume: 0.1 (AC-FT) Loss Volume: 0.0 (AC-FT) Baseflow Volume: 0.0 (AC-FT) Excess Volume: 0.1 (AC-FT) Discharge Volume: 0.1 (AC-FT)

Date	Time	Precip (IN)	Loss (IN)	Excess (IN)	Direct Flow (CFS)	Baseflow (CFS)	Total Flow (CFS)
1-Jan-16	0:00				0	0	0
1-Jan-16	0:05	0.01	0	0.01	0.1	0	0.1

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

1-Jan-16	0:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:25	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:30	0.02	0	0.02	0.3	0	0.3
1-Jan-16	0:35	0.01	0	0.01	0.3	0	0.3
1-Jan-16	0:40	0.02	0	0.02	0.3	0	0.3
1-Jan-16	0:45	0.02	0	0.02	0.3	0	0.3
1-Jan-16	0:50	0.01	0	0.01	0.3	0	0.3
1-Jan-16	0:55	0.01	0	0.01	0.3	0	0.3
1-Jan-16	1:00	0.02	0	0.02	0.3	0	0.3
1-Jan-16	1:05	0.02	0	0.02	0.3	0	0.3
1-Jan-16	1:10	0.02	0	0.02	0.3	0	0.3
1-Jan-16	1:15	0.02	0	0.02	0.3	0	0.3
1-Jan-16	1:20	0.02	0	0.02	0.3	0	0.3
1-Jan-16	1:25	0.02	0	0.02	0.4	0	0.4
1-Jan-16	1:30	0.02	0	0.02	0.4	0	0.4
1-Jan-16	1:35	0.02	0	0.02	0.4	0	0.4
1-Jan-16	1:40	0.02	0	0.02	0.4	0	0.4
1-Jan-16	1:45	0.03	0	0.03	0.5	0	0.5
1-Jan-16	1:50	0.03	0	0.03	0.5	0	0.5
1-Jan-16	1:55	0.03	0	0.03	0.5	0	0.5
1-Jan-16	2:00	0.03	0	0.03	0.5	0	0.5
1-Jan-16	2:05	0.03	0	0.03	0.5	0	0.5
1-Jan-16	2:10	0.04	0	0.04	0.5	0	0.5
1-Jan-16	2:15	0.04	0	0.04	0.7	0	0.7
1-Jan-16	2:20	0.03	0	0.03	0.7	0	0.7
1-Jan-16	2:25	0.06	0	0.06	0.8	0	0.8
1-Jan-16	2:30	0.06	0	0.06	1	0	1
1-Jan-16	2:35	0.07	0	0.07	1.2	0	1.2
1-Jan-16	2:40	0.05	0	0.05	1.2	0	1.2
1-Jan-16	2:45	0.02	0	0.02	0.8	0	0.8
1-Jan-16	2:50	0.02	0	0.02	0.5	0	0.5
1-Jan-16	2:55	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:00	0.01	0	0.01	0.3	0	0.3

2-year 6-hour storm for Pre-Developed Site:

Project: Moreno Valley BCE 18501 Simulation Run: 2yr 6hr Subbasin: Site A				Project: Moreno Valley BCE 18501 Simulation Run: 2yr 6hr Subbasin: Site A			
Start of Run: 01Jan2016, 00:00		Basin Model: Watershed A		Start of Run: 01Jan2016, 00:00		Basin Model: Watershed A	
End of Run: 01Jan2016, 06:00		Meteorologic Model: 02y 06hr		End of Run: 01Jan2016, 06:00		Meteorologic Model: 02y 06hr	
Compute Time: 28Mar2018, 15:36:44		Control Specifications: 06		Compute Time: 28Mar2018, 15:36:44		Control Specifications: 06	
Volume Units: <input checked="" type="radio"/> IN <input type="radio"/> AC-FT				Volume Units: <input type="radio"/> IN <input checked="" type="radio"/> AC-FT			
<b>Computed Results</b>				<b>Computed Results</b>			
Peak Discharge: 1.1 (CFS)		Date/Time of Peak Discharge: 01Jan2016, 05:30		Peak Discharge: 1.1 (CFS)		Date/Time of Peak Discharge: 01Jan2016, 05:30	
Precipitation Volume: 1.22 (IN)		Direct Runoff Volume: 1.22 (IN)		Precipitation Volume: 0.2 (AC-FT)		Direct Runoff Volume: 0.2 (AC-FT)	
Loss Volume: 0.00 (IN)		Baseflow Volume: 0.00 (IN)		Loss Volume: 0.0 (AC-FT)		Baseflow Volume: 0.0 (AC-FT)	
Excess Volume: 1.22 (IN)		Discharge Volume: 1.22 (IN)		Excess Volume: 0.2 (AC-FT)		Discharge Volume: 0.2 (AC-FT)	

Date	Time	Precip (IN)	Loss (IN)	Excess (IN)	Direct Flow (CFS)	Baseflow (CFS)	Total Flow (CFS)
1-Jan-16	0:00				0	0	0
1-Jan-16	0:05	0.01	0	0.01	0	0	0
1-Jan-16	0:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	0:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	0:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	0:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	0:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	0:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:05	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:25	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:30	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:05	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:25	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:30	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	3:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	3:05	0.01	0	0.01	0.2	0	0.2

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1-Jan-16	3:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	3:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	3:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	3:25	0.01	0	0.01	0.3	0	0.3
1-Jan-16	3:30	0.02	0	0.02	0.3	0	0.3
1-Jan-16	3:35	0.02	0	0.02	0.3	0	0.3
1-Jan-16	3:40	0.02	0	0.02	0.3	0	0.3
1-Jan-16	3:45	0.02	0	0.02	0.3	0	0.3
1-Jan-16	3:50	0.02	0	0.02	0.3	0	0.3
1-Jan-16	3:55	0.02	0	0.02	0.3	0	0.3
1-Jan-16	4:00	0.02	0	0.02	0.4	0	0.4
1-Jan-16	4:05	0.02	0	0.02	0.4	0	0.4
1-Jan-16	4:10	0.02	0	0.02	0.4	0	0.4
1-Jan-16	4:15	0.02	0	0.02	0.4	0	0.4
1-Jan-16	4:20	0.02	0	0.02	0.4	0	0.4
1-Jan-16	4:25	0.03	0	0.03	0.5	0	0.5
1-Jan-16	4:30	0.03	0	0.03	0.5	0	0.5
1-Jan-16	4:35	0.03	0	0.03	0.5	0	0.5
1-Jan-16	4:40	0.03	0	0.03	0.5	0	0.5
1-Jan-16	4:45	0.03	0	0.03	0.5	0	0.5
1-Jan-16	4:50	0.03	0	0.03	0.5	0	0.5
1-Jan-16	4:55	0.03	0	0.03	0.5	0	0.5
1-Jan-16	5:00	0.03	0	0.03	0.6	0	0.6
1-Jan-16	5:05	0.04	0	0.04	0.6	0	0.6
1-Jan-16	5:10	0.04	0	0.04	0.7	0	0.7
1-Jan-16	5:15	0.05	0	0.05	0.8	0	0.8
1-Jan-16	5:20	0.05	0	0.05	0.9	0	0.9
1-Jan-16	5:25	0.06	0	0.06	1	0	1
1-Jan-16	5:30	0.07	0	0.07	1.1	0	1.1
1-Jan-16	5:35	0.02	0	0.02	1	0	1
1-Jan-16	5:40	0.01	0	0.01	0.5	0	0.5
1-Jan-16	5:45	0.01	0	0.01	0.3	0	0.3
1-Jan-16	5:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	5:55	0	0	0	0.1	0	0.1
1-Jan-16	6:00	0	0	0	0.1	0	0.1

2-year 24-hour storm for Pre-Developed Site:

Project: Moreno Valley BCE 18501 Simulation Run: 2yr 24hr Subbasin: Site A		Project: Moreno Valley BCE 18501 Simulation Run: 2yr 24hr Subbasin: Site A	
Start of Run: 01Jan2016, 00:00	Basin Model: Watershed A	Start of Run: 01Jan2016, 00:00	Basin Model: Watershed A
End of Run: 02Jan2016, 00:00	Meteorologic Model: 02y 24hr	End of Run: 02Jan2016, 00:00	Meteorologic Model: 02y 24hr
Compute Time: 28Mar2018, 15:36:36	Control Specifications: 24	Compute Time: 28Mar2018, 15:36:36	Control Specifications: 24
Volume Units: <input checked="" type="radio"/> IN <input type="radio"/> AC-FT		Volume Units: <input type="radio"/> IN <input checked="" type="radio"/> AC-FT	
Computed Results		Computed Results	
Peak Discharge: 0.4 (CFS)	Date/Time of Peak Discharge: 01Jan2016, 13:25	Peak Discharge: 0.4 (CFS)	Date/Time of Peak Discharge: 01Jan2016, 13:25
Precipitation Volume: 2.04 (IN)	Direct Runoff Volume: 2.04 (IN)	Precipitation Volume: 0.3 (AC-FT)	Direct Runoff Volume: 0.3 (AC-FT)
Loss Volume: 0.00 (IN)	Baseflow Volume: 0.00 (IN)	Loss Volume: 0.0 (AC-FT)	Baseflow Volume: 0.0 (AC-FT)
Excess Volume: 2.04 (IN)	Discharge Volume: 2.04 (IN)	Excess Volume: 0.3 (AC-FT)	Discharge Volume: 0.3 (AC-FT)

Date	Time	Precip (IN)	Loss (IN)	Excess (IN)	Direct Flow (CFS)	Baseflow (CFS)	Total Flow (CFS)
1-Jan-16	0:00	0	0	0	0	0	0
1-Jan-16	0:05	0	0	0	0	0	0
1-Jan-16	0:10	0	0	0	0	0	0
1-Jan-16	0:15	0	0	0	0	0	0
1-Jan-16	0:20	0	0	0	0	0	0
1-Jan-16	0:25	0	0	0	0	0	0
1-Jan-16	0:30	0	0	0	0	0	0
1-Jan-16	0:35	0	0	0	0	0	0
1-Jan-16	0:40	0	0	0	0	0	0
1-Jan-16	0:45	0	0	0	0	0	0
1-Jan-16	0:50	0	0	0	0.1	0	0.1
1-Jan-16	0:55	0	0	0	0.1	0	0.1
1-Jan-16	1:00	0	0	0	0.1	0	0.1
1-Jan-16	1:05	0	0	0	0	0	0
1-Jan-16	1:10	0	0	0	0	0	0
1-Jan-16	1:15	0	0	0	0	0	0
1-Jan-16	1:20	0	0	0	0	0	0
1-Jan-16	1:25	0	0	0	0	0	0
1-Jan-16	1:30	0	0	0	0	0	0
1-Jan-16	1:35	0	0	0	0	0	0
1-Jan-16	1:40	0	0	0	0	0	0
1-Jan-16	1:45	0	0	0	0	0	0
1-Jan-16	1:50	0	0	0	0.1	0	0.1
1-Jan-16	1:55	0	0	0	0.1	0	0.1
1-Jan-16	2:00	0	0	0	0.1	0	0.1
1-Jan-16	2:05	0	0	0	0.1	0	0.1
1-Jan-16	2:10	0	0	0	0.1	0	0.1
1-Jan-16	2:15	0	0	0	0.1	0	0.1
1-Jan-16	2:20	0	0	0	0.1	0	0.1
1-Jan-16	2:25	0	0	0	0.1	0	0.1
1-Jan-16	2:30	0	0	0	0.1	0	0.1
1-Jan-16	2:35	0	0	0	0.1	0	0.1
1-Jan-16	2:40	0	0	0	0.1	0	0.1
1-Jan-16	2:45	0	0	0	0.1	0	0.1
1-Jan-16	2:50	0	0	0	0.1	0	0.1
1-Jan-16	2:55	0	0	0	0.1	0	0.1

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1-Jan-16	3:00	0	0	0	0.1	0	0.1
1-Jan-16	3:05	0	0	0	0.1	0	0.1
1-Jan-16	3:10	0	0	0	0.1	0	0.1
1-Jan-16	3:15	0	0	0	0.1	0	0.1
1-Jan-16	3:20	0	0	0	0.1	0	0.1
1-Jan-16	3:25	0	0	0	0.1	0	0.1
1-Jan-16	3:30	0	0	0	0.1	0	0.1
1-Jan-16	3:35	0	0	0	0.1	0	0.1
1-Jan-16	3:40	0	0	0	0.1	0	0.1
1-Jan-16	3:45	0	0	0	0.1	0	0.1
1-Jan-16	3:50	0	0	0	0.1	0	0.1
1-Jan-16	3:55	0	0	0	0.1	0	0.1
1-Jan-16	4:00	0	0	0	0.1	0	0.1
1-Jan-16	4:05	0	0	0	0.1	0	0.1
1-Jan-16	4:10	0	0	0	0.1	0	0.1
1-Jan-16	4:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:45	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:50	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:55	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:00	0	0	0	0.1	0	0.1
1-Jan-16	5:05	0	0	0	0.1	0	0.1
1-Jan-16	5:10	0	0	0	0.1	0	0.1
1-Jan-16	5:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:45	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:50	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:55	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:00	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:05	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:45	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:50	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:55	0.01	0	0.01	0.1	0	0.1
1-Jan-16	7:00	0.01	0	0.01	0.1	0	0.1
1-Jan-16	7:05	0.01	0	0.01	0.1	0	0.1
1-Jan-16	7:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	7:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	7:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	7:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	7:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	7:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	7:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	7:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:05	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:25	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:30	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	9:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	9:05	0.01	0	0.01	0.2	0	0.2
1-Jan-16	9:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	9:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	9:20	0.01	0	0.01	0.3	0	0.3
1-Jan-16	9:25	0.01	0	0.01	0.3	0	0.3
1-Jan-16	9:30	0.01	0	0.01	0.3	0	0.3
1-Jan-16	9:35	0.01	0	0.01	0.3	0	0.3
1-Jan-16	9:40	0.01	0	0.01	0.3	0	0.3
1-Jan-16	9:45	0.01	0	0.01	0.3	0	0.3
1-Jan-16	9:50	0.01	0	0.01	0.3	0	0.3
1-Jan-16	9:55	0.01	0	0.01	0.3	0	0.3
1-Jan-16	10:00	0.01	0	0.01	0.3	0	0.3
1-Jan-16	10:05	0.01	0	0.01	0.2	0	0.2
1-Jan-16	10:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	10:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	10:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	10:25	0.01	0	0.01	0.2	0	0.2

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



1-Jan-16	10:30	0.01	0	0.01	0.2	0	0.2
1-Jan-16	10:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	10:40	0.01	0	0.01	0.3	0	0.3
1-Jan-16	10:45	0.01	0	0.01	0.3	0	0.3
1-Jan-16	10:50	0.01	0	0.01	0.3	0	0.3
1-Jan-16	10:55	0.01	0	0.01	0.3	0	0.3
1-Jan-16	11:00	0.01	0	0.01	0.3	0	0.3
1-Jan-16	11:05	0.01	0	0.01	0.2	0	0.2
1-Jan-16	11:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	11:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	11:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	11:25	0.01	0	0.01	0.2	0	0.2
1-Jan-16	11:30	0.01	0	0.01	0.2	0	0.2
1-Jan-16	11:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	11:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	11:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	11:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	11:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	12:00	0.02	0	0.02	0.3	0	0.3
1-Jan-16	12:05	0.02	0	0.02	0.3	0	0.3
1-Jan-16	12:10	0.02	0	0.02	0.3	0	0.3
1-Jan-16	12:15	0.02	0	0.02	0.3	0	0.3
1-Jan-16	12:20	0.02	0	0.02	0.3	0	0.3
1-Jan-16	12:25	0.02	0	0.02	0.3	0	0.3
1-Jan-16	12:30	0.02	0	0.02	0.3	0	0.3
1-Jan-16	12:35	0.02	0	0.02	0.4	0	0.4
1-Jan-16	12:40	0.02	0	0.02	0.4	0	0.4
1-Jan-16	12:45	0.02	0	0.02	0.4	0	0.4
1-Jan-16	12:50	0.02	0	0.02	0.4	0	0.4
1-Jan-16	12:55	0.02	0	0.02	0.4	0	0.4
1-Jan-16	13:00	0.02	0	0.02	0.4	0	0.4
1-Jan-16	13:05	0.02	0	0.02	0.4	0	0.4
1-Jan-16	13:10	0.02	0	0.02	0.4	0	0.4
1-Jan-16	13:15	0.02	0	0.02	0.4	0	0.4
1-Jan-16	13:20	0.02	0	0.02	0.4	0	0.4
1-Jan-16	13:25	0.02	0	0.02	0.4	0	0.4
1-Jan-16	13:30	0.02	0	0.02	0.4	0	0.4
1-Jan-16	13:35	0.02	0	0.02	0.3	0	0.3
1-Jan-16	13:40	0.02	0	0.02	0.3	0	0.3
1-Jan-16	13:45	0.02	0	0.02	0.3	0	0.3
1-Jan-16	13:50	0.02	0	0.02	0.3	0	0.3
1-Jan-16	13:55	0.02	0	0.02	0.3	0	0.3
1-Jan-16	14:00	0.02	0	0.02	0.3	0	0.3
1-Jan-16	14:05	0.02	0	0.02	0.3	0	0.3
1-Jan-16	14:10	0.02	0	0.02	0.3	0	0.3
1-Jan-16	14:15	0.02	0	0.02	0.3	0	0.3
1-Jan-16	14:20	0.02	0	0.02	0.3	0	0.3
1-Jan-16	14:25	0.02	0	0.02	0.3	0	0.3
1-Jan-16	14:30	0.02	0	0.02	0.3	0	0.3
1-Jan-16	14:35	0.02	0	0.02	0.3	0	0.3
1-Jan-16	14:40	0.02	0	0.02	0.3	0	0.3
1-Jan-16	14:45	0.02	0	0.02	0.3	0	0.3
1-Jan-16	14:50	0.02	0	0.02	0.3	0	0.3
1-Jan-16	14:55	0.02	0	0.02	0.3	0	0.3
1-Jan-16	15:00	0.02	0	0.02	0.3	0	0.3
1-Jan-16	15:05	0.02	0	0.02	0.3	0	0.3
1-Jan-16	15:10	0.02	0	0.02	0.3	0	0.3
1-Jan-16	15:15	0.02	0	0.02	0.3	0	0.3
1-Jan-16	15:20	0.02	0	0.02	0.3	0	0.3
1-Jan-16	15:25	0.02	0	0.02	0.3	0	0.3
1-Jan-16	15:30	0.01	0	0.01	0.3	0	0.3
1-Jan-16	15:35	0.01	0	0.01	0.3	0	0.3
1-Jan-16	15:40	0.01	0	0.01	0.3	0	0.3
1-Jan-16	15:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	15:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	15:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	16:00	0	0	0	0.2	0	0.2
1-Jan-16	16:05	0	0	0	0.1	0	0.1
1-Jan-16	16:10	0	0	0	0.1	0	0.1
1-Jan-16	16:15	0	0	0	0.1	0	0.1
1-Jan-16	16:20	0	0	0	0.1	0	0.1
1-Jan-16	16:25	0	0	0	0.1	0	0.1
1-Jan-16	16:30	0	0	0	0.1	0	0.1
1-Jan-16	16:35	0	0	0	0	0	0
1-Jan-16	16:40	0	0	0	0	0	0
1-Jan-16	16:45	0	0	0	0	0	0
1-Jan-16	16:50	0	0	0	0	0	0
1-Jan-16	16:55	0	0	0	0	0	0
1-Jan-16	17:00	0	0	0	0	0	0
1-Jan-16	17:05	0	0	0	0.1	0	0.1
1-Jan-16	17:10	0	0	0	0.1	0	0.1
1-Jan-16	17:15	0	0	0	0.1	0	0.1
1-Jan-16	17:20	0	0	0	0.1	0	0.1
1-Jan-16	17:25	0	0	0	0.1	0	0.1
1-Jan-16	17:30	0	0	0	0.1	0	0.1
1-Jan-16	17:35	0	0	0	0.1	0	0.1
1-Jan-16	17:40	0	0	0	0.1	0	0.1
1-Jan-16	17:45	0	0	0	0.1	0	0.1
1-Jan-16	17:50	0	0	0	0.1	0	0.1
1-Jan-16	17:55	0	0	0	0.1	0	0.1

1-Jan-16	18:00	0	0	0	0.1	0	0.1
1-Jan-16	18:05	0	0	0	0.1	0	0.1
1-Jan-16	18:10	0	0	0	0.1	0	0.1
1-Jan-16	18:15	0	0	0	0.1	0	0.1
1-Jan-16	18:20	0	0	0	0.1	0	0.1
1-Jan-16	18:25	0	0	0	0.1	0	0.1
1-Jan-16	18:30	0	0	0	0.1	0	0.1
1-Jan-16	18:35	0	0	0	0	0	0
1-Jan-16	18:40	0	0	0	0	0	0
1-Jan-16	18:45	0	0	0	0	0	0
1-Jan-16	18:50	0	0	0	0	0	0
1-Jan-16	18:55	0	0	0	0	0	0
1-Jan-16	19:00	0	0	0	0	0	0
1-Jan-16	19:05	0	0	0	0	0	0
1-Jan-16	19:10	0	0	0	0	0	0
1-Jan-16	19:15	0	0	0	0	0	0
1-Jan-16	19:20	0	0	0	0.1	0	0.1
1-Jan-16	19:25	0	0	0	0.1	0	0.1
1-Jan-16	19:30	0	0	0	0.1	0	0.1
1-Jan-16	19:35	0	0	0	0	0	0
1-Jan-16	19:40	0	0	0	0	0	0
1-Jan-16	19:45	0	0	0	0	0	0
1-Jan-16	19:50	0	0	0	0	0	0
1-Jan-16	19:55	0	0	0	0	0	0
1-Jan-16	20:00	0	0	0	0	0	0
1-Jan-16	20:05	0	0	0	0	0	0
1-Jan-16	20:10	0	0	0	0	0	0
1-Jan-16	20:15	0	0	0	0	0	0
1-Jan-16	20:20	0	0	0	0	0	0
1-Jan-16	20:25	0	0	0	0	0	0
1-Jan-16	20:30	0	0	0	0	0	0
1-Jan-16	20:35	0	0	0	0	0	0
1-Jan-16	20:40	0	0	0	0	0	0
1-Jan-16	20:45	0	0	0	0	0	0
1-Jan-16	20:50	0	0	0	0	0	0
1-Jan-16	20:55	0	0	0	0	0	0
1-Jan-16	21:00	0	0	0	0	0	0
1-Jan-16	21:05	0	0	0	0	0	0
1-Jan-16	21:10	0	0	0	0	0	0
1-Jan-16	21:15	0	0	0	0	0	0
1-Jan-16	21:20	0	0	0	0	0	0
1-Jan-16	21:25	0	0	0	0	0	0
1-Jan-16	21:30	0	0	0	0	0	0
1-Jan-16	21:35	0	0	0	0	0	0
1-Jan-16	21:40	0	0	0	0	0	0
1-Jan-16	21:45	0	0	0	0	0	0
1-Jan-16	21:50	0	0	0	0	0	0
1-Jan-16	21:55	0	0	0	0	0	0
1-Jan-16	22:00	0	0	0	0	0	0
1-Jan-16	22:05	0	0	0	0	0	0
1-Jan-16	22:10	0	0	0	0	0	0
1-Jan-16	22:15	0	0	0	0	0	0
1-Jan-16	22:20	0	0	0	0	0	0
1-Jan-16	22:25	0	0	0	0	0	0
1-Jan-16	22:30	0	0	0	0	0	0
1-Jan-16	22:35	0	0	0	0	0	0
1-Jan-16	22:40	0	0	0	0	0	0
1-Jan-16	22:45	0	0	0	0	0	0
1-Jan-16	22:50	0	0	0	0	0	0
1-Jan-16	22:55	0	0	0	0	0	0
1-Jan-16	23:00	0	0	0	0	0	0
1-Jan-16	23:05	0	0	0	0	0	0
1-Jan-16	23:10	0	0	0	0	0	0
1-Jan-16	23:15	0	0	0	0	0	0
1-Jan-16	23:20	0	0	0	0	0	0
1-Jan-16	23:25	0	0	0	0	0	0
1-Jan-16	23:30	0	0	0	0	0	0
1-Jan-16	23:35	0	0	0	0	0	0
1-Jan-16	23:40	0	0	0	0	0	0
1-Jan-16	23:45	0	0	0	0	0	0
1-Jan-16	23:50	0	0	0	0	0	0
1-Jan-16	23:55	0	0	0	0	0	0
2-Jan-16	0:00	0	0	0	0	0	0

5-year 1-hour storm for Pre-Developed Site:

Project: Moreno Valley BCE 18501 Simulation Run: 5yr 1hr Subbasin: Site A				Project: Moreno Valley BCE 18501 Simulation Run: 5yr 1hr Subbasin: Site A			
Start of Run: 01Jan2016, 00:00		Basin Model: Watershed A		Start of Run: 01Jan2016, 00:00		Basin Model: Watershed A	
End of Run: 01Jan2016, 01:00		Meteorologic Model: 05y 01hr		End of Run: 01Jan2016, 01:00		Meteorologic Model: 05y 01hr	
Compute Time: 28Mar2018, 15:36:47		Control Specifications: 01		Compute Time: 28Mar2018, 15:36:47		Control Specifications: 01	
Volume Units: <input checked="" type="radio"/> IN <input type="radio"/> AC-FT				Volume Units: <input type="radio"/> IN <input checked="" type="radio"/> AC-FT			
<b>Computed Results</b>				<b>Computed Results</b>			
Peak Discharge:	2.3 (CFS)	Date/Time of Peak Discharge:	01Jan2016, 00:55	Peak Discharge:	2.3 (CFS)	Date/Time of Peak Discharge:	01Jan2016, 00:55
Precipitation Volume:	0.67 (IN)	Direct Runoff Volume:	0.58 (IN)	Precipitation Volume:	0.1 (AC-FT)	Direct Runoff Volume:	0.1 (AC-FT)
Loss Volume:	0.00 (IN)	Baseflow Volume:	0.00 (IN)	Loss Volume:	0.0 (AC-FT)	Baseflow Volume:	0.0 (AC-FT)
Excess Volume:	0.67 (IN)	Discharge Volume:	0.58 (IN)	Excess Volume:	0.1 (AC-FT)	Discharge Volume:	0.1 (AC-FT)

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Date	Time	Precip (IN)	Loss (IN)	Excess (IN)	Direct Flow (CFS)	Baseflow (CFS)	Total Flow (CFS)
1-Jan-16	0:00				0	0	0
1-Jan-16	0:05	0.03	0	0.03	0.2	0	0.2
1-Jan-16	0:10	0.03	0	0.03	0.4	0	0.4
1-Jan-16	0:15	0.03	0	0.03	0.5	0	0.5
1-Jan-16	0:20	0.03	0	0.03	0.6	0	0.6
1-Jan-16	0:25	0.04	0	0.04	0.6	0	0.6
1-Jan-16	0:30	0.04	0	0.04	0.7	0	0.7
1-Jan-16	0:35	0.05	0	0.05	0.8	0	0.8
1-Jan-16	0:40	0.06	0	0.06	1	0	1
1-Jan-16	0:45	0.08	0	0.08	1.2	0	1.2
1-Jan-16	0:50	0.19	0	0.19	2	0	2
1-Jan-16	0:55	0.05	0	0.05	2.3	0	2.3
1-Jan-16	1:00	0.03	0	0.03	1.2	0	1.2

5-year 3-hour storm for Pre-Developed Site:

Project: Moreno Valley BCE 18501 Simulation Run: 5yr 3hr Subbasin: Site A Start of Run: 01Jan2016, 00:00 Basin Model: Watershed A End of Run: 01Jan2016, 03:00 Meteorologic Model: 05y 03hr Compute Time: 28Mar2018, 15:36:54 Control Specifications: 03				Project: Moreno Valley BCE 18501 Simulation Run: 5yr 3hr Subbasin: Site A Start of Run: 01Jan2016, 00:00 Basin Model: Watershed A End of Run: 01Jan2016, 03:00 Meteorologic Model: 05y 03hr Compute Time: 28Mar2018, 15:36:54 Control Specifications: 03			
Volume Units: <input checked="" type="radio"/> IN <input type="radio"/> AC-FT				Volume Units: <input type="radio"/> IN <input checked="" type="radio"/> AC-FT			
<b>Computed Results</b> Peak Discharge: 1.5 (CFS) Date/Time of Peak Discharge: 01Jan2016, 02:40 Precipitation Volume: 1.14 (IN) Direct Runoff Volume: 1.11 (IN) Loss Volume: 0.00 (IN) Baseflow Volume: 0.00 (IN) Excess Volume: 1.14 (IN) Discharge Volume: 1.11 (IN)				<b>Computed Results</b> Peak Discharge: 1.5 (CFS) Date/Time of Peak Discharge: 01Jan2016, 02:40 Precipitation Volume: 0.1 (AC-FT) Direct Runoff Volume: 0.1 (AC-FT) Loss Volume: 0.0 (AC-FT) Baseflow Volume: 0.0 (AC-FT) Excess Volume: 0.1 (AC-FT) Discharge Volume: 0.1 (AC-FT)			

Date	Time	Precip (IN)	Loss (IN)	Excess (IN)	Direct Flow (CFS)	Baseflow (CFS)	Total Flow (CFS)
1-Jan-16	0:00				0	0	0
1-Jan-16	0:05	0.01	0	0.01	0.1	0	0.1
1-Jan-16	0:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:20	0.02	0	0.02	0.3	0	0.3
1-Jan-16	0:25	0.02	0	0.02	0.3	0	0.3
1-Jan-16	0:30	0.02	0	0.02	0.3	0	0.3
1-Jan-16	0:35	0.02	0	0.02	0.3	0	0.3
1-Jan-16	0:40	0.02	0	0.02	0.3	0	0.3
1-Jan-16	0:45	0.02	0	0.02	0.4	0	0.4
1-Jan-16	0:50	0.02	0	0.02	0.4	0	0.4
1-Jan-16	0:55	0.02	0	0.02	0.3	0	0.3
1-Jan-16	1:00	0.02	0	0.02	0.3	0	0.3
1-Jan-16	1:05	0.03	0	0.03	0.4	0	0.4
1-Jan-16	1:10	0.03	0	0.03	0.4	0	0.4
1-Jan-16	1:15	0.03	0	0.03	0.5	0	0.5
1-Jan-16	1:20	0.02	0	0.02	0.5	0	0.5
1-Jan-16	1:25	0.03	0	0.03	0.5	0	0.5
1-Jan-16	1:30	0.03	0	0.03	0.5	0	0.5
1-Jan-16	1:35	0.03	0	0.03	0.5	0	0.5
1-Jan-16	1:40	0.03	0	0.03	0.5	0	0.5
1-Jan-16	1:45	0.04	0	0.04	0.6	0	0.6
1-Jan-16	1:50	0.04	0	0.04	0.7	0	0.7
1-Jan-16	1:55	0.03	0	0.03	0.6	0	0.6
1-Jan-16	2:00	0.03	0	0.03	0.6	0	0.6
1-Jan-16	2:05	0.04	0	0.04	0.6	0	0.6
1-Jan-16	2:10	0.05	0	0.05	0.7	0	0.7
1-Jan-16	2:15	0.06	0	0.06	0.9	0	0.9
1-Jan-16	2:20	0.04	0	0.04	0.9	0	0.9
1-Jan-16	2:25	0.08	0	0.08	1	0	1
1-Jan-16	2:30	0.08	0	0.08	1.3	0	1.3
1-Jan-16	2:35	0.09	0	0.09	1.5	0	1.5
1-Jan-16	2:40	0.07	0	0.07	1.5	0	1.5
1-Jan-16	2:45	0.02	0	0.02	1.1	0	1.1
1-Jan-16	2:50	0.02	0	0.02	0.7	0	0.7
1-Jan-16	2:55	0.02	0	0.02	0.5	0	0.5
1-Jan-16	3:00	0.01	0	0.01	0.4	0	0.4

5-year 6-hour storm for Pre-Developed Site:

Project: Moreno Valley BCE 18501 Simulation Run: 5yr 6hr Subbasin: Site A Start of Run: 01Jan2016, 00:00 Basin Model: Watershed A End of Run: 01Jan2016, 06:00 Meteorologic Model: 05y 06hr Compute Time: 28Mar2018, 15:36:59 Control Specifications: 06				Project: Moreno Valley BCE 18501 Simulation Run: 5yr 6hr Subbasin: Site A Start of Run: 01Jan2016, 00:00 Basin Model: Watershed A End of Run: 01Jan2016, 06:00 Meteorologic Model: 05y 06hr Compute Time: 28Mar2018, 15:36:59 Control Specifications: 06			
Volume Units: <input checked="" type="radio"/> IN <input type="radio"/> AC-FT				Volume Units: <input type="radio"/> IN <input checked="" type="radio"/> AC-FT			
<b>Computed Results</b> Peak Discharge: 1.4 (CFS) Date/Time of Peak Discharge: 01Jan2016, 05:30 Precipitation Volume: 1.58 (IN) Direct Runoff Volume: 1.57 (IN) Loss Volume: 0.00 (IN) Baseflow Volume: 0.00 (IN) Excess Volume: 1.58 (IN) Discharge Volume: 1.57 (IN)				<b>Computed Results</b> Peak Discharge: 1.4 (CFS) Date/Time of Peak Discharge: 01Jan2016, 05:30 Precipitation Volume: 0.2 (AC-FT) Direct Runoff Volume: 0.2 (AC-FT) Loss Volume: 0.0 (AC-FT) Baseflow Volume: 0.0 (AC-FT) Excess Volume: 0.2 (AC-FT) Discharge Volume: 0.2 (AC-FT)			

Date	Time	Precip (IN)	Loss (IN)	Excess (IN)	Direct Flow (CFS)	Baseflow (CFS)	Total Flow (CFS)
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Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

1-Jan-16	0:00				0	0	0
1-Jan-16	0:05	0.01	0	0.01	0	0	0
1-Jan-16	0:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	0:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	0:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:25	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:30	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:05	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:25	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:30	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:05	0.01	0	0.01	0.3	0	0.3
1-Jan-16	2:10	0.01	0	0.01	0.3	0	0.3
1-Jan-16	2:15	0.01	0	0.01	0.3	0	0.3
1-Jan-16	2:20	0.01	0	0.01	0.3	0	0.3
1-Jan-16	2:25	0.01	0	0.01	0.3	0	0.3
1-Jan-16	2:30	0.01	0	0.01	0.3	0	0.3
1-Jan-16	2:35	0.01	0	0.01	0.3	0	0.3
1-Jan-16	2:40	0.01	0	0.01	0.3	0	0.3
1-Jan-16	2:45	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:50	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:55	0.02	0	0.02	0.3	0	0.3
1-Jan-16	3:00	0.02	0	0.02	0.3	0	0.3
1-Jan-16	3:05	0.02	0	0.02	0.3	0	0.3
1-Jan-16	3:10	0.02	0	0.02	0.3	0	0.3
1-Jan-16	3:15	0.02	0	0.02	0.3	0	0.3
1-Jan-16	3:20	0.02	0	0.02	0.3	0	0.3
1-Jan-16	3:25	0.02	0	0.02	0.3	0	0.3
1-Jan-16	3:30	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:35	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:40	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:45	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:50	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:55	0.03	0	0.03	0.5	0	0.5
1-Jan-16	4:00	0.03	0	0.03	0.5	0	0.5
1-Jan-16	4:05	0.03	0	0.03	0.5	0	0.5
1-Jan-16	4:10	0.03	0	0.03	0.5	0	0.5
1-Jan-16	4:15	0.03	0	0.03	0.5	0	0.5
1-Jan-16	4:20	0.03	0	0.03	0.6	0	0.6
1-Jan-16	4:25	0.03	0	0.03	0.6	0	0.6
1-Jan-16	4:30	0.03	0	0.03	0.6	0	0.6
1-Jan-16	4:35	0.04	0	0.04	0.6	0	0.6
1-Jan-16	4:40	0.04	0	0.04	0.7	0	0.7
1-Jan-16	4:45	0.04	0	0.04	0.7	0	0.7
1-Jan-16	4:50	0.04	0	0.04	0.7	0	0.7
1-Jan-16	4:55	0.04	0	0.04	0.7	0	0.7
1-Jan-16	5:00	0.04	0	0.04	0.7	0	0.7
1-Jan-16	5:05	0.05	0	0.05	0.8	0	0.8
1-Jan-16	5:10	0.06	0	0.06	0.9	0	0.9
1-Jan-16	5:15	0.06	0	0.06	1	0	1
1-Jan-16	5:20	0.07	0	0.07	1.1	0	1.1
1-Jan-16	5:25	0.07	0	0.07	1.2	0	1.2
1-Jan-16	5:30	0.09	0	0.09	1.4	0	1.4
1-Jan-16	5:35	0.03	0	0.03	1.3	0	1.3
1-Jan-16	5:40	0.01	0	0.01	0.7	0	0.7
1-Jan-16	5:45	0.01	0	0.01	0.4	0	0.4
1-Jan-16	5:50	0.01	0	0.01	0.3	0	0.3
1-Jan-16	5:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:00	0	0	0	0.1	0	0.1

5-year 24-hour storm for Pre-Developed Site:

Project: Moreno Valley BCE 18501 Simulation Run: 5yr 24hr Subbasin: Site A				Project: Moreno Valley BCE 18501 Simulation Run: 5yr 24hr Subbasin: Site A			
Start of Run: 01Jan2016, 00:00 End of Run: 02Jan2016, 00:00 Compute Time: 28Mar2018, 15:36:51		Basin Model: Watershed A Meteorologic Model: 05y 24hr Control Specifications: 24		Start of Run: 01Jan2016, 00:00 End of Run: 02Jan2016, 00:00 Compute Time: 28Mar2018, 15:36:51		Basin Model: Watershed A Meteorologic Model: 05y 24hr Control Specifications: 24	
Volume Units: <input checked="" type="radio"/> IN <input type="radio"/> AC-FT				Volume Units: <input type="radio"/> IN <input checked="" type="radio"/> AC-FT			
<b>Computed Results</b> Peak Discharge: 0.6 (CFS) Date/Time of Peak Discharge: 01Jan2016, 13:25 Precipitation Volume: 2.79 (IN) Direct Runoff Volume: 2.79 (IN) Loss Volume: 0.00 (IN) Baseflow Volume: 0.00 (IN) Excess Volume: 2.79 (IN) Discharge Volume: 2.79 (IN)				<b>Computed Results</b> Peak Discharge: 0.6 (CFS) Date/Time of Peak Discharge: 01Jan2016, 13:25 Precipitation Volume: 0.4 (AC-FT) Direct Runoff Volume: 0.4 (AC-FT) Loss Volume: 0.0 (AC-FT) Baseflow Volume: 0.0 (AC-FT) Excess Volume: 0.4 (AC-FT) Discharge Volume: 0.4 (AC-FT)			

Date	Time	Precip (IN)	Loss (IN)	Excess (IN)	Direct Flow (CFS)	Baseflow (CFS)	Total Flow (CFS)
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Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

1-Jan-16	0:00				0	0	0
1-Jan-16	0:05	0	0	0	0	0	0
1-Jan-16	0:10	0	0	0	0	0	0
1-Jan-16	0:15	0	0	0	0	0	0
1-Jan-16	0:20	0	0	0	0	0	0
1-Jan-16	0:25	0	0	0	0.1	0	0.1
1-Jan-16	0:30	0	0	0	0.1	0	0.1
1-Jan-16	0:35	0	0	0	0.1	0	0.1
1-Jan-16	0:40	0	0	0	0.1	0	0.1
1-Jan-16	0:45	0	0	0	0.1	0	0.1
1-Jan-16	0:50	0	0	0	0.1	0	0.1
1-Jan-16	0:55	0	0	0	0.1	0	0.1
1-Jan-16	1:00	0	0	0	0.1	0	0.1
1-Jan-16	1:05	0	0	0	0.1	0	0.1
1-Jan-16	1:10	0	0	0	0.1	0	0.1
1-Jan-16	1:15	0	0	0	0.1	0	0.1
1-Jan-16	1:20	0	0	0	0.1	0	0.1
1-Jan-16	1:25	0	0	0	0.1	0	0.1
1-Jan-16	1:30	0	0	0	0.1	0	0.1
1-Jan-16	1:35	0	0	0	0.1	0	0.1
1-Jan-16	1:40	0	0	0	0.1	0	0.1
1-Jan-16	1:45	0	0	0	0.1	0	0.1
1-Jan-16	1:50	0	0	0	0.1	0	0.1
1-Jan-16	1:55	0	0	0	0.1	0	0.1
1-Jan-16	2:00	0	0	0	0.1	0	0.1
1-Jan-16	2:05	0	0	0	0.1	0	0.1
1-Jan-16	2:10	0	0	0	0.1	0	0.1
1-Jan-16	2:15	0	0	0	0.1	0	0.1
1-Jan-16	2:20	0	0	0	0.1	0	0.1
1-Jan-16	2:25	0	0	0	0.1	0	0.1
1-Jan-16	2:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	2:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	2:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	2:45	0.01	0	0.01	0.1	0	0.1
1-Jan-16	2:50	0.01	0	0.01	0.1	0	0.1
1-Jan-16	2:55	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:00	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:05	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:45	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:50	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:55	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:00	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:05	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:45	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:50	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:55	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:00	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:05	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:45	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:50	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:55	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:00	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:05	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:30	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:05	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:25	0.01	0	0.01	0.2	0	0.2

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

1-Jan-16	7:30	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:05	0.01	0	0.01	0.3	0	0.3
1-Jan-16	8:10	0.01	0	0.01	0.3	0	0.3
1-Jan-16	8:15	0.01	0	0.01	0.3	0	0.3
1-Jan-16	8:20	0.01	0	0.01	0.3	0	0.3
1-Jan-16	8:25	0.01	0	0.01	0.3	0	0.3
1-Jan-16	8:30	0.01	0	0.01	0.3	0	0.3
1-Jan-16	8:35	0.01	0	0.01	0.3	0	0.3
1-Jan-16	8:40	0.01	0	0.01	0.3	0	0.3
1-Jan-16	8:45	0.02	0	0.02	0.3	0	0.3
1-Jan-16	8:50	0.02	0	0.02	0.3	0	0.3
1-Jan-16	8:55	0.02	0	0.02	0.3	0	0.3
1-Jan-16	9:00	0.02	0	0.02	0.3	0	0.3
1-Jan-16	9:05	0.02	0	0.02	0.3	0	0.3
1-Jan-16	9:10	0.02	0	0.02	0.3	0	0.3
1-Jan-16	9:15	0.02	0	0.02	0.3	0	0.3
1-Jan-16	9:20	0.02	0	0.02	0.3	0	0.3
1-Jan-16	9:25	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:30	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:35	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:40	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:45	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:50	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:55	0.02	0	0.02	0.4	0	0.4
1-Jan-16	10:00	0.01	0	0.01	0.3	0	0.3
1-Jan-16	10:05	0.01	0	0.01	0.3	0	0.3
1-Jan-16	10:10	0.01	0	0.01	0.3	0	0.3
1-Jan-16	10:15	0.01	0	0.01	0.3	0	0.3
1-Jan-16	10:20	0.01	0	0.01	0.3	0	0.3
1-Jan-16	10:25	0.01	0	0.01	0.3	0	0.3
1-Jan-16	10:30	0.02	0	0.02	0.3	0	0.3
1-Jan-16	10:35	0.02	0	0.02	0.3	0	0.3
1-Jan-16	10:40	0.02	0	0.02	0.3	0	0.3
1-Jan-16	10:45	0.02	0	0.02	0.4	0	0.4
1-Jan-16	10:50	0.02	0	0.02	0.4	0	0.4
1-Jan-16	10:55	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:00	0.02	0	0.02	0.3	0	0.3
1-Jan-16	11:05	0.02	0	0.02	0.3	0	0.3
1-Jan-16	11:10	0.02	0	0.02	0.3	0	0.3
1-Jan-16	11:15	0.02	0	0.02	0.3	0	0.3
1-Jan-16	11:20	0.02	0	0.02	0.3	0	0.3
1-Jan-16	11:25	0.02	0	0.02	0.3	0	0.3
1-Jan-16	11:30	0.02	0	0.02	0.3	0	0.3
1-Jan-16	11:35	0.02	0	0.02	0.3	0	0.3
1-Jan-16	11:40	0.02	0	0.02	0.3	0	0.3
1-Jan-16	11:45	0.02	0	0.02	0.3	0	0.3
1-Jan-16	11:50	0.02	0	0.02	0.3	0	0.3
1-Jan-16	11:55	0.02	0	0.02	0.3	0	0.3
1-Jan-16	12:00	0.02	0	0.02	0.3	0	0.3
1-Jan-16	12:05	0.02	0	0.02	0.4	0	0.4
1-Jan-16	12:10	0.02	0	0.02	0.4	0	0.4
1-Jan-16	12:15	0.02	0	0.02	0.4	0	0.4
1-Jan-16	12:20	0.02	0	0.02	0.4	0	0.4
1-Jan-16	12:25	0.02	0	0.02	0.4	0	0.4
1-Jan-16	12:30	0.03	0	0.03	0.5	0	0.5
1-Jan-16	12:35	0.03	0	0.03	0.5	0	0.5
1-Jan-16	12:40	0.03	0	0.03	0.5	0	0.5
1-Jan-16	12:45	0.03	0	0.03	0.5	0	0.5
1-Jan-16	12:50	0.03	0	0.03	0.5	0	0.5
1-Jan-16	12:55	0.03	0	0.03	0.5	0	0.5
1-Jan-16	13:00	0.03	0	0.03	0.5	0	0.5
1-Jan-16	13:05	0.03	0	0.03	0.6	0	0.6
1-Jan-16	13:10	0.03	0	0.03	0.6	0	0.6
1-Jan-16	13:15	0.03	0	0.03	0.6	0	0.6
1-Jan-16	13:20	0.03	0	0.03	0.6	0	0.6
1-Jan-16	13:25	0.03	0	0.03	0.6	0	0.6
1-Jan-16	13:30	0.02	0	0.02	0.5	0	0.5
1-Jan-16	13:35	0.02	0	0.02	0.4	0	0.4
1-Jan-16	13:40	0.02	0	0.02	0.4	0	0.4
1-Jan-16	13:45	0.02	0	0.02	0.4	0	0.4
1-Jan-16	13:50	0.02	0	0.02	0.4	0	0.4
1-Jan-16	13:55	0.02	0	0.02	0.4	0	0.4
1-Jan-16	14:00	0.03	0	0.03	0.4	0	0.4
1-Jan-16	14:05	0.03	0	0.03	0.5	0	0.5
1-Jan-16	14:10	0.03	0	0.03	0.5	0	0.5
1-Jan-16	14:15	0.02	0	0.02	0.5	0	0.5
1-Jan-16	14:20	0.02	0	0.02	0.5	0	0.5
1-Jan-16	14:25	0.02	0	0.02	0.5	0	0.5
1-Jan-16	14:30	0.02	0	0.02	0.5	0	0.5
1-Jan-16	14:35	0.02	0	0.02	0.5	0	0.5
1-Jan-16	14:40	0.02	0	0.02	0.5	0	0.5
1-Jan-16	14:45	0.02	0	0.02	0.4	0	0.4
1-Jan-16	14:50	0.02	0	0.02	0.4	0	0.4
1-Jan-16	14:55	0.02	0	0.02	0.4	0	0.4

1-Jan-16	15:00	0.02	0	0.02	0.4	0	0.4
1-Jan-16	15:05	0.02	0	0.02	0.4	0	0.4
1-Jan-16	15:10	0.02	0	0.02	0.4	0	0.4
1-Jan-16	15:15	0.02	0	0.02	0.4	0	0.4
1-Jan-16	15:20	0.02	0	0.02	0.4	0	0.4
1-Jan-16	15:25	0.02	0	0.02	0.4	0	0.4
1-Jan-16	15:30	0.02	0	0.02	0.4	0	0.4
1-Jan-16	15:35	0.02	0	0.02	0.3	0	0.3
1-Jan-16	15:40	0.02	0	0.02	0.3	0	0.3
1-Jan-16	15:45	0.02	0	0.02	0.3	0	0.3
1-Jan-16	15:50	0.02	0	0.02	0.3	0	0.3
1-Jan-16	15:55	0.02	0	0.02	0.3	0	0.3
1-Jan-16	16:00	0	0	0	0.3	0	0.3
1-Jan-16	16:05	0	0	0	0.1	0	0.1
1-Jan-16	16:10	0	0	0	0.1	0	0.1
1-Jan-16	16:15	0	0	0	0.1	0	0.1
1-Jan-16	16:20	0	0	0	0.1	0	0.1
1-Jan-16	16:25	0	0	0	0.1	0	0.1
1-Jan-16	16:30	0	0	0	0.1	0	0.1
1-Jan-16	16:35	0	0	0	0.1	0	0.1
1-Jan-16	16:40	0	0	0	0.1	0	0.1
1-Jan-16	16:45	0	0	0	0.1	0	0.1
1-Jan-16	16:50	0	0	0	0.1	0	0.1
1-Jan-16	16:55	0	0	0	0.1	0	0.1
1-Jan-16	17:00	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:05	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:45	0	0	0	0.1	0	0.1
1-Jan-16	17:50	0	0	0	0.1	0	0.1
1-Jan-16	17:55	0	0	0	0.1	0	0.1
1-Jan-16	18:00	0	0	0	0.1	0	0.1
1-Jan-16	18:05	0	0	0	0.1	0	0.1
1-Jan-16	18:10	0	0	0	0.1	0	0.1
1-Jan-16	18:15	0	0	0	0.1	0	0.1
1-Jan-16	18:20	0	0	0	0.1	0	0.1
1-Jan-16	18:25	0	0	0	0.1	0	0.1
1-Jan-16	18:30	0	0	0	0.1	0	0.1
1-Jan-16	18:35	0	0	0	0.1	0	0.1
1-Jan-16	18:40	0	0	0	0.1	0	0.1
1-Jan-16	18:45	0	0	0	0.1	0	0.1
1-Jan-16	18:50	0	0	0	0	0	0
1-Jan-16	18:55	0	0	0	0	0	0
1-Jan-16	19:00	0	0	0	0	0	0
1-Jan-16	19:05	0	0	0	0.1	0	0.1
1-Jan-16	19:10	0	0	0	0.1	0	0.1
1-Jan-16	19:15	0	0	0	0.1	0	0.1
1-Jan-16	19:20	0	0	0	0.1	0	0.1
1-Jan-16	19:25	0	0	0	0.1	0	0.1
1-Jan-16	19:30	0	0	0	0.1	0	0.1
1-Jan-16	19:35	0	0	0	0.1	0	0.1
1-Jan-16	19:40	0	0	0	0.1	0	0.1
1-Jan-16	19:45	0	0	0	0.1	0	0.1
1-Jan-16	19:50	0	0	0	0	0	0
1-Jan-16	19:55	0	0	0	0	0	0
1-Jan-16	20:00	0	0	0	0	0	0
1-Jan-16	20:05	0	0	0	0.1	0	0.1
1-Jan-16	20:10	0	0	0	0.1	0	0.1
1-Jan-16	20:15	0	0	0	0.1	0	0.1
1-Jan-16	20:20	0	0	0	0.1	0	0.1
1-Jan-16	20:25	0	0	0	0.1	0	0.1
1-Jan-16	20:30	0	0	0	0.1	0	0.1
1-Jan-16	20:35	0	0	0	0.1	0	0.1
1-Jan-16	20:40	0	0	0	0.1	0	0.1
1-Jan-16	20:45	0	0	0	0.1	0	0.1
1-Jan-16	20:50	0	0	0	0	0	0
1-Jan-16	20:55	0	0	0	0	0	0
1-Jan-16	21:00	0	0	0	0	0	0
1-Jan-16	21:05	0	0	0	0.1	0	0.1
1-Jan-16	21:10	0	0	0	0.1	0	0.1
1-Jan-16	21:15	0	0	0	0.1	0	0.1
1-Jan-16	21:20	0	0	0	0	0	0
1-Jan-16	21:25	0	0	0	0	0	0
1-Jan-16	21:30	0	0	0	0	0	0
1-Jan-16	21:35	0	0	0	0.1	0	0.1
1-Jan-16	21:40	0	0	0	0.1	0	0.1
1-Jan-16	21:45	0	0	0	0.1	0	0.1
1-Jan-16	21:50	0	0	0	0	0	0
1-Jan-16	21:55	0	0	0	0	0	0
1-Jan-16	22:00	0	0	0	0	0	0
1-Jan-16	22:05	0	0	0	0.1	0	0.1
1-Jan-16	22:10	0	0	0	0.1	0	0.1
1-Jan-16	22:15	0	0	0	0.1	0	0.1
1-Jan-16	22:20	0	0	0	0	0	0
1-Jan-16	22:25	0	0	0	0	0	0

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

1-Jan-16	22:30	0	0	0	0	0	0
1-Jan-16	22:35	0	0	0	0	0	0
1-Jan-16	22:40	0	0	0	0	0	0
1-Jan-16	22:45	0	0	0	0	0	0
1-Jan-16	22:50	0	0	0	0	0	0
1-Jan-16	22:55	0	0	0	0	0	0
1-Jan-16	23:00	0	0	0	0	0	0
1-Jan-16	23:05	0	0	0	0	0	0
1-Jan-16	23:10	0	0	0	0	0	0
1-Jan-16	23:15	0	0	0	0	0	0
1-Jan-16	23:20	0	0	0	0	0	0
1-Jan-16	23:25	0	0	0	0	0	0
1-Jan-16	23:30	0	0	0	0	0	0
1-Jan-16	23:35	0	0	0	0	0	0
1-Jan-16	23:40	0	0	0	0	0	0
1-Jan-16	23:45	0	0	0	0	0	0
1-Jan-16	23:50	0	0	0	0	0	0
1-Jan-16	23:55	0	0	0	0	0	0
2-Jan-16	0:00	0	0	0	0	0	0

10-year 1-hour storm for Pre-Developed Site:

Project: Moreno Valley BCE 18501 Simulation Run: 10yr 1hr Subbasin: Site A Start of Run: 01Jan2016, 00:00 Basin Model: Watershed A End of Run: 01Jan2016, 01:00 Meteorologic Model: 10y 01hr Compute Time: 28Mar2018, 15:36:19 Control Specifications: 01 Volume Units: <input checked="" type="radio"/> IN <input type="radio"/> AC-FT				Project: Moreno Valley BCE 18501 Simulation Run: 10yr 1hr Subbasin: Site A Start of Run: 01Jan2016, 00:00 Basin Model: Watershed A End of Run: 01Jan2016, 01:00 Meteorologic Model: 10y 01hr Compute Time: 28Mar2018, 15:36:19 Control Specifications: 01 Volume Units: <input type="radio"/> IN <input checked="" type="radio"/> AC-FT			
<b>Computed Results</b> Peak Discharge: 2.8 (CFS) Date/Time of Peak Discharge: 01Jan2016, 00:55 Precipitation Volume: 0.82 (IN) Direct Runoff Volume: 0.71 (IN) Loss Volume: 0.00 (IN) Baseflow Volume: 0.00 (IN) Excess Volume: 0.82 (IN) Discharge Volume: 0.71 (IN)				<b>Computed Results</b> Peak Discharge: 2.8 (CFS) Date/Time of Peak Discharge: 01Jan2016, 00:55 Precipitation Volume: 0.1 (AC-FT) Direct Runoff Volume: 0.1 (AC-FT) Loss Volume: 0.0 (AC-FT) Baseflow Volume: 0.0 (AC-FT) Excess Volume: 0.1 (AC-FT) Discharge Volume: 0.1 (AC-FT)			

Date	Time	Precip (IN)	Loss (IN)	Excess (IN)	Direct Flow (CFS)	Baseflow (CFS)	Total Flow (CFS)
1-Jan-16	0:00				0	0	0
1-Jan-16	0:05	0.03	0	0.03	0.2	0	0.2
1-Jan-16	0:10	0.04	0	0.04	0.5	0	0.5
1-Jan-16	0:15	0.04	0	0.04	0.6	0	0.6
1-Jan-16	0:20	0.04	0	0.04	0.7	0	0.7
1-Jan-16	0:25	0.04	0	0.04	0.8	0	0.8
1-Jan-16	0:30	0.05	0	0.05	0.9	0	0.9
1-Jan-16	0:35	0.06	0	0.06	1	0	1
1-Jan-16	0:40	0.07	0	0.07	1.1	0	1.1
1-Jan-16	0:45	0.1	0	0.1	1.4	0	1.4
1-Jan-16	0:50	0.23	0	0.23	2.4	0	2.4
1-Jan-16	0:55	0.06	0	0.06	2.8	0	2.8
1-Jan-16	1:00	0.04	0	0.04	1.5	0	1.5

10-year 3-hour storm for Pre-Developed Site:

Project: Moreno Valley BCE 18501 Simulation Run: 10yr 3hr Subbasin: Site A Start of Run: 01Jan2016, 00:00 Basin Model: Watershed A End of Run: 01Jan2016, 03:00 Meteorologic Model: 10y 03h Compute Time: 28Mar2018, 15:36:27 Control Specifications: 03 Volume Units: <input checked="" type="radio"/> IN <input type="radio"/> AC-FT				Project: Moreno Valley BCE 18501 Simulation Run: 10yr 3hr Subbasin: Site A Start of Run: 01Jan2016, 00:00 Basin Model: Watershed A End of Run: 01Jan2016, 03:00 Meteorologic Model: 10y 03h Compute Time: 28Mar2018, 15:36:27 Control Specifications: 03 Volume Units: <input type="radio"/> IN <input checked="" type="radio"/> AC-FT			
<b>Computed Results</b> Peak Discharge: 1.8 (CFS) Date/Time of Peak Discharge: 01Jan2016, 02:40 Precipitation Volume: 1.35 (IN) Direct Runoff Volume: 1.32 (IN) Loss Volume: 0.00 (IN) Baseflow Volume: 0.00 (IN) Excess Volume: 1.35 (IN) Discharge Volume: 1.32 (IN)				<b>Computed Results</b> Peak Discharge: 1.8 (CFS) Date/Time of Peak Discharge: 01Jan2016, 02:40 Precipitation Volume: 0.2 (AC-FT) Direct Runoff Volume: 0.2 (AC-FT) Loss Volume: 0.0 (AC-FT) Baseflow Volume: 0.0 (AC-FT) Excess Volume: 0.2 (AC-FT) Discharge Volume: 0.2 (AC-FT)			

Date	Time	Precip (IN)	Loss (IN)	Excess (IN)	Direct Flow (CFS)	Baseflow (CFS)	Total Flow (CFS)
1-Jan-16	0:00				0	0	0
1-Jan-16	0:05	0.02	0	0.02	0.1	0	0.1
1-Jan-16	0:10	0.02	0	0.02	0.3	0	0.3
1-Jan-16	0:15	0.01	0	0.01	0.3	0	0.3
1-Jan-16	0:20	0.02	0	0.02	0.3	0	0.3
1-Jan-16	0:25	0.02	0	0.02	0.4	0	0.4
1-Jan-16	0:30	0.02	0	0.02	0.4	0	0.4
1-Jan-16	0:35	0.02	0	0.02	0.4	0	0.4
1-Jan-16	0:40	0.02	0	0.02	0.4	0	0.4
1-Jan-16	0:45	0.02	0	0.02	0.4	0	0.4
1-Jan-16	0:50	0.02	0	0.02	0.4	0	0.4
1-Jan-16	0:55	0.02	0	0.02	0.4	0	0.4
1-Jan-16	1:00	0.02	0	0.02	0.4	0	0.4
1-Jan-16	1:05	0.03	0	0.03	0.5	0	0.5
1-Jan-16	1:10	0.03	0	0.03	0.5	0	0.5
1-Jan-16	1:15	0.03	0	0.03	0.5	0	0.5
1-Jan-16	1:20	0.03	0	0.03	0.5	0	0.5
1-Jan-16	1:25	0.04	0	0.04	0.6	0	0.6
1-Jan-16	1:30	0.04	0	0.04	0.6	0	0.6
1-Jan-16	1:35	0.03	0	0.03	0.6	0	0.6
1-Jan-16	1:40	0.04	0	0.04	0.6	0	0.6
1-Jan-16	1:45	0.04	0	0.04	0.7	0	0.7



1-Jan-16	1:50	0.04	0	0.04	0.8	0	0.8
1-Jan-16	1:55	0.04	0	0.04	0.8	0	0.8
1-Jan-16	2:00	0.04	0	0.04	0.7	0	0.7
1-Jan-16	2:05	0.04	0	0.04	0.8	0	0.8
1-Jan-16	2:10	0.06	0	0.06	0.9	0	0.9
1-Jan-16	2:15	0.07	0	0.07	1	0	1
1-Jan-16	2:20	0.05	0	0.05	1.1	0	1.1
1-Jan-16	2:25	0.09	0	0.09	1.2	0	1.2
1-Jan-16	2:30	0.1	0	0.1	1.6	0	1.6
1-Jan-16	2:35	0.11	0	0.11	1.8	0	1.8
1-Jan-16	2:40	0.08	0	0.08	1.8	0	1.8
1-Jan-16	2:45	0.03	0	0.03	1.3	0	1.3
1-Jan-16	2:50	0.02	0	0.02	0.8	0	0.8
1-Jan-16	2:55	0.02	0	0.02	0.6	0	0.6
1-Jan-16	3:00	0.01	0	0.01	0.4	0	0.4

10-year 6-hour storm for Pre-Developed Site:

Project: Moreno Valley BCE 18501 Subbasin: Site A		Simulation Run: 10yr 6hr		Project: Moreno Valley BCE 18501 Subbasin: Site A		Simulation Run: 10yr 6hr	
Start of Run: 01Jan2016, 00:00	Basin Model: Watershed A	Start of Run: 01Jan2016, 00:00	Basin Model: Watershed A	End of Run: 01Jan2016, 06:00	Meteorologic Model: 10y 06h	End of Run: 01Jan2016, 06:00	Meteorologic Model: 10y 06h
Compute Time: 28Mar2018, 15:36:30	Control Specifications: 06	Compute Time: 28Mar2018, 15:36:30	Control Specifications: 06	Compute Time: 28Mar2018, 15:36:30	Control Specifications: 06	Compute Time: 28Mar2018, 15:36:30	Control Specifications: 06
Volume Units: <input checked="" type="radio"/> IN <input type="radio"/> AC-FT				Volume Units: <input type="radio"/> IN <input checked="" type="radio"/> AC-FT			
<b>Computed Results</b> Peak Discharge: 1.7 (CFS)    Date/Time of Peak Discharge: 01Jan2016, 05:30 Precipitation Volume: 1.87 (IN)    Direct Runoff Volume: 1.86 (IN) Loss Volume: 0.00 (IN)    Baseflow Volume: 0.00 (IN) Excess Volume: 1.87 (IN)    Discharge Volume: 1.86 (IN)				<b>Computed Results</b> Peak Discharge: 1.7 (CFS)    Date/Time of Peak Discharge: 01Jan2016, 05:30 Precipitation Volume: 0.2 (AC-FT)    Direct Runoff Volume: 0.2 (AC-FT) Loss Volume: 0.0 (AC-FT)    Baseflow Volume: 0.0 (AC-FT) Excess Volume: 0.2 (AC-FT)    Discharge Volume: 0.2 (AC-FT)			

Date	Time	Precip (IN)	Loss (IN)	Excess (IN)	Direct Flow (CFS)	Baseflow (CFS)	Total Flow (CFS)
1-Jan-16	0:00				0	0	0
1-Jan-16	0:05	0.01	0	0.01	0	0	0
1-Jan-16	0:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	0:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:25	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:30	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:05	0.01	0	0.01	0.3	0	0.3
1-Jan-16	1:10	0.01	0	0.01	0.3	0	0.3
1-Jan-16	1:15	0.01	0	0.01	0.3	0	0.3
1-Jan-16	1:20	0.01	0	0.01	0.3	0	0.3
1-Jan-16	1:25	0.01	0	0.01	0.3	0	0.3
1-Jan-16	1:30	0.01	0	0.01	0.3	0	0.3
1-Jan-16	1:35	0.01	0	0.01	0.3	0	0.3
1-Jan-16	1:40	0.01	0	0.01	0.3	0	0.3
1-Jan-16	1:45	0.01	0	0.01	0.3	0	0.3
1-Jan-16	1:50	0.01	0	0.01	0.3	0	0.3
1-Jan-16	1:55	0.01	0	0.01	0.3	0	0.3
1-Jan-16	2:00	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:05	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:10	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:15	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:20	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:25	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:30	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:35	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:40	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:45	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:50	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:55	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:00	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:05	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:10	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:15	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:20	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:25	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:30	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:35	0.03	0	0.03	0.4	0	0.4
1-Jan-16	3:40	0.03	0	0.03	0.5	0	0.5
1-Jan-16	3:45	0.03	0	0.03	0.5	0	0.5
1-Jan-16	3:50	0.03	0	0.03	0.5	0	0.5
1-Jan-16	3:55	0.03	0	0.03	0.5	0	0.5
1-Jan-16	4:00	0.03	0	0.03	0.6	0	0.6
1-Jan-16	4:05	0.03	0	0.03	0.6	0	0.6
1-Jan-16	4:10	0.03	0	0.03	0.6	0	0.6
1-Jan-16	4:15	0.04	0	0.04	0.6	0	0.6
1-Jan-16	4:20	0.04	0	0.04	0.7	0	0.7
1-Jan-16	4:25	0.04	0	0.04	0.7	0	0.7
1-Jan-16	4:30	0.04	0	0.04	0.7	0	0.7
1-Jan-16	4:35	0.04	0	0.04	0.7	0	0.7
1-Jan-16	4:40	0.04	0	0.04	0.8	0	0.8

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

1-Jan-16	4:45	0.04	0	0.04	0.8	0	0.8
1-Jan-16	4:50	0.04	0	0.04	0.8	0	0.8
1-Jan-16	4:55	0.05	0	0.05	0.8	0	0.8
1-Jan-16	5:00	0.05	0	0.05	0.9	0	0.9
1-Jan-16	5:05	0.06	0	0.06	1	0	1
1-Jan-16	5:10	0.07	0	0.07	1.1	0	1.1
1-Jan-16	5:15	0.07	0	0.07	1.2	0	1.2
1-Jan-16	5:20	0.08	0	0.08	1.3	0	1.3
1-Jan-16	5:25	0.09	0	0.09	1.5	0	1.5
1-Jan-16	5:30	0.1	0	0.1	1.7	0	1.7
1-Jan-16	5:35	0.04	0	0.04	1.5	0	1.5
1-Jan-16	5:40	0.02	0	0.02	0.8	0	0.8
1-Jan-16	5:45	0.01	0	0.01	0.5	0	0.5
1-Jan-16	5:50	0.01	0	0.01	0.3	0	0.3
1-Jan-16	5:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:00	0	0	0	0.1	0	0.1

10-year 24-hour storm for Pre-Developed Site:

Project: Moreno Valley BCE 18501    Simulation Run: 10yr 24hr Subbasin: Site A		Project: Moreno Valley BCE 18501    Simulation Run: 10yr 24hr Subbasin: Site A	
Start of Run: 01Jan2016, 00:00 End of Run: 02Jan2016, 00:00 Compute Time: 28Mar2018, 15:36:24	Basin Model: Watershed A Meteorologic Model: 10y 24h Control Specifications: 24	Start of Run: 01Jan2016, 00:00 End of Run: 02Jan2016, 00:00 Compute Time: 28Mar2018, 15:36:24	Basin Model: Watershed A Meteorologic Model: 10y 24h Control Specifications: 24
Volume Units: <input checked="" type="radio"/> IN <input type="radio"/> AC-FT		Volume Units: <input type="radio"/> IN <input checked="" type="radio"/> AC-FT	
<b>Computed Results</b> Peak Discharge: 0.7 (CFS)    Date/Time of Peak Discharge: 01Jan2016, 13:30 Precipitation Volume: 3.31 (IN)    Direct Runoff Volume: 3.31 (IN) Loss Volume: 0.00 (IN)    Baseflow Volume: 0.00 (IN) Excess Volume: 3.31 (IN)    Discharge Volume: 3.31 (IN)		<b>Computed Results</b> Peak Discharge: 0.7 (CFS)    Date/Time of Peak Discharge: 01Jan2016, 13:30 Precipitation Volume: 0.4 (AC-FT)    Direct Runoff Volume: 0.4 (AC-FT) Loss Volume: 0.0 (AC-FT)    Baseflow Volume: 0.0 (AC-FT) Excess Volume: 0.4 (AC-FT)    Discharge Volume: 0.4 (AC-FT)	

Date	Time	Precip (IN)	Loss (IN)	Excess (IN)	Direct Flow (CFS)	Baseflow (CFS)	Total Flow (CFS)
1-Jan-16	0:00				0	0	0
1-Jan-16	0:05	0	0	0	0	0	0
1-Jan-16	0:10	0	0	0	0	0	0
1-Jan-16	0:15	0	0	0	0	0	0
1-Jan-16	0:20	0	0	0	0	0	0
1-Jan-16	0:25	0	0	0	0.1	0	0.1
1-Jan-16	0:30	0	0	0	0.1	0	0.1
1-Jan-16	0:35	0	0	0	0.1	0	0.1
1-Jan-16	0:40	0	0	0	0.1	0	0.1
1-Jan-16	0:45	0	0	0	0.1	0	0.1
1-Jan-16	0:50	0	0	0	0.1	0	0.1
1-Jan-16	0:55	0	0	0	0.1	0	0.1
1-Jan-16	1:00	0	0	0	0.1	0	0.1
1-Jan-16	1:05	0	0	0	0.1	0	0.1
1-Jan-16	1:10	0	0	0	0.1	0	0.1
1-Jan-16	1:15	0	0	0	0.1	0	0.1
1-Jan-16	1:20	0	0	0	0.1	0	0.1
1-Jan-16	1:25	0	0	0	0.1	0	0.1
1-Jan-16	1:30	0	0	0	0.1	0	0.1
1-Jan-16	1:35	0	0	0	0.1	0	0.1
1-Jan-16	1:40	0	0	0	0.1	0	0.1
1-Jan-16	1:45	0	0	0	0.1	0	0.1
1-Jan-16	1:50	0	0	0	0.1	0	0.1
1-Jan-16	1:55	0	0	0	0.1	0	0.1
1-Jan-16	2:00	0	0	0	0.1	0	0.1
1-Jan-16	2:05	0	0	0	0.1	0	0.1
1-Jan-16	2:10	0	0	0	0.1	0	0.1
1-Jan-16	2:15	0	0	0	0.1	0	0.1
1-Jan-16	2:20	0	0	0	0.1	0	0.1
1-Jan-16	2:25	0	0	0	0.1	0	0.1
1-Jan-16	2:30	0	0	0	0.1	0	0.1
1-Jan-16	2:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	2:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	2:45	0.01	0	0.01	0.1	0	0.1
1-Jan-16	2:50	0.01	0	0.01	0.1	0	0.1
1-Jan-16	2:55	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:00	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:05	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:45	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:50	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:55	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:00	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:05	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:25	0.01	0	0.01	0.1	0	0.1

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

1-Jan-16	4:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:45	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	4:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	5:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	5:05	0.01	0	0.01	0.2	0	0.2
1-Jan-16	5:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	5:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	5:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	5:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	5:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:05	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:25	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:30	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:05	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:25	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:30	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:55	0.01	0	0.01	0.3	0	0.3
1-Jan-16	8:00	0.01	0	0.01	0.3	0	0.3
1-Jan-16	8:05	0.02	0	0.02	0.3	0	0.3
1-Jan-16	8:10	0.02	0	0.02	0.3	0	0.3
1-Jan-16	8:15	0.02	0	0.02	0.3	0	0.3
1-Jan-16	8:20	0.02	0	0.02	0.3	0	0.3
1-Jan-16	8:25	0.02	0	0.02	0.3	0	0.3
1-Jan-16	8:30	0.02	0	0.02	0.3	0	0.3
1-Jan-16	8:35	0.02	0	0.02	0.3	0	0.3
1-Jan-16	8:40	0.02	0	0.02	0.3	0	0.3
1-Jan-16	8:45	0.02	0	0.02	0.3	0	0.3
1-Jan-16	8:50	0.02	0	0.02	0.3	0	0.3
1-Jan-16	8:55	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:00	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:05	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:10	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:15	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:20	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:25	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:30	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:35	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:40	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:45	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:50	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:55	0.02	0	0.02	0.4	0	0.4
1-Jan-16	10:00	0.02	0	0.02	0.4	0	0.4
1-Jan-16	10:05	0.02	0	0.02	0.4	0	0.4
1-Jan-16	10:10	0.02	0	0.02	0.4	0	0.4
1-Jan-16	10:15	0.02	0	0.02	0.3	0	0.3
1-Jan-16	10:20	0.02	0	0.02	0.3	0	0.3
1-Jan-16	10:25	0.02	0	0.02	0.3	0	0.3
1-Jan-16	10:30	0.02	0	0.02	0.3	0	0.3
1-Jan-16	10:35	0.02	0	0.02	0.3	0	0.3
1-Jan-16	10:40	0.02	0	0.02	0.4	0	0.4
1-Jan-16	10:45	0.02	0	0.02	0.4	0	0.4
1-Jan-16	10:50	0.02	0	0.02	0.4	0	0.4
1-Jan-16	10:55	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:00	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:05	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:10	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:15	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:20	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:25	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:30	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:35	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:40	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:45	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:50	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:55	0.02	0	0.02	0.4	0	0.4

1-Jan-16	12:00	0.02	0	0.02	0.4	0	0.4
1-Jan-16	12:05	0.03	0	0.03	0.4	0	0.4
1-Jan-16	12:10	0.03	0	0.03	0.5	0	0.5
1-Jan-16	12:15	0.03	0	0.03	0.5	0	0.5
1-Jan-16	12:20	0.03	0	0.03	0.5	0	0.5
1-Jan-16	12:25	0.03	0	0.03	0.5	0	0.5
1-Jan-16	12:30	0.03	0	0.03	0.5	0	0.5
1-Jan-16	12:35	0.03	0	0.03	0.6	0	0.6
1-Jan-16	12:40	0.03	0	0.03	0.6	0	0.6
1-Jan-16	12:45	0.03	0	0.03	0.6	0	0.6
1-Jan-16	12:50	0.03	0	0.03	0.6	0	0.6
1-Jan-16	12:55	0.03	0	0.03	0.6	0	0.6
1-Jan-16	13:00	0.03	0	0.03	0.6	0	0.6
1-Jan-16	13:05	0.04	0	0.04	0.6	0	0.6
1-Jan-16	13:10	0.04	0	0.04	0.7	0	0.7
1-Jan-16	13:15	0.04	0	0.04	0.7	0	0.7
1-Jan-16	13:20	0.04	0	0.04	0.7	0	0.7
1-Jan-16	13:25	0.04	0	0.04	0.7	0	0.7
1-Jan-16	13:30	0.04	0	0.04	0.7	0	0.7
1-Jan-16	13:35	0.03	0	0.03	0.6	0	0.6
1-Jan-16	13:40	0.03	0	0.03	0.5	0	0.5
1-Jan-16	13:45	0.03	0	0.03	0.5	0	0.5
1-Jan-16	13:50	0.03	0	0.03	0.5	0	0.5
1-Jan-16	13:55	0.03	0	0.03	0.5	0	0.5
1-Jan-16	14:00	0.03	0	0.03	0.5	0	0.5
1-Jan-16	14:05	0.03	0	0.03	0.5	0	0.5
1-Jan-16	14:10	0.03	0	0.03	0.5	0	0.5
1-Jan-16	14:15	0.03	0	0.03	0.6	0	0.6
1-Jan-16	14:20	0.03	0	0.03	0.6	0	0.6
1-Jan-16	14:25	0.03	0	0.03	0.5	0	0.5
1-Jan-16	14:30	0.03	0	0.03	0.5	0	0.5
1-Jan-16	14:35	0.03	0	0.03	0.5	0	0.5
1-Jan-16	14:40	0.03	0	0.03	0.5	0	0.5
1-Jan-16	14:45	0.03	0	0.03	0.5	0	0.5
1-Jan-16	14:50	0.03	0	0.03	0.5	0	0.5
1-Jan-16	14:55	0.03	0	0.03	0.5	0	0.5
1-Jan-16	15:00	0.03	0	0.03	0.5	0	0.5
1-Jan-16	15:05	0.03	0	0.03	0.5	0	0.5
1-Jan-16	15:10	0.03	0	0.03	0.5	0	0.5
1-Jan-16	15:15	0.03	0	0.03	0.5	0	0.5
1-Jan-16	15:20	0.03	0	0.03	0.5	0	0.5
1-Jan-16	15:25	0.03	0	0.03	0.5	0	0.5
1-Jan-16	15:30	0.03	0	0.03	0.5	0	0.5
1-Jan-16	15:35	0.02	0	0.02	0.5	0	0.5
1-Jan-16	15:40	0.02	0	0.02	0.4	0	0.4
1-Jan-16	15:45	0.02	0	0.02	0.4	0	0.4
1-Jan-16	15:50	0.02	0	0.02	0.4	0	0.4
1-Jan-16	15:55	0.02	0	0.02	0.4	0	0.4
1-Jan-16	16:00	0.02	0	0.02	0.4	0	0.4
1-Jan-16	16:05	0	0	0	0.3	0	0.3
1-Jan-16	16:10	0	0	0	0.2	0	0.2
1-Jan-16	16:15	0	0	0	0.1	0	0.1
1-Jan-16	16:20	0	0	0	0.1	0	0.1
1-Jan-16	16:25	0	0	0	0.1	0	0.1
1-Jan-16	16:30	0	0	0	0.1	0	0.1
1-Jan-16	16:35	0	0	0	0.1	0	0.1
1-Jan-16	16:40	0	0	0	0.1	0	0.1
1-Jan-16	16:45	0	0	0	0.1	0	0.1
1-Jan-16	16:50	0	0	0	0.1	0	0.1
1-Jan-16	16:55	0	0	0	0.1	0	0.1
1-Jan-16	17:00	0	0	0	0.1	0	0.1
1-Jan-16	17:05	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:45	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:50	0	0	0	0.1	0	0.1
1-Jan-16	17:55	0	0	0	0.1	0	0.1
1-Jan-16	18:00	0	0	0	0.1	0	0.1
1-Jan-16	18:05	0	0	0	0.1	0	0.1
1-Jan-16	18:10	0	0	0	0.1	0	0.1
1-Jan-16	18:15	0	0	0	0.1	0	0.1
1-Jan-16	18:20	0	0	0	0.1	0	0.1
1-Jan-16	18:25	0	0	0	0.1	0	0.1
1-Jan-16	18:30	0	0	0	0.1	0	0.1
1-Jan-16	18:35	0	0	0	0.1	0	0.1
1-Jan-16	18:40	0	0	0	0.1	0	0.1
1-Jan-16	18:45	0	0	0	0.1	0	0.1
1-Jan-16	18:50	0	0	0	0.1	0	0.1
1-Jan-16	18:55	0	0	0	0	0	0
1-Jan-16	19:00	0	0	0	0	0	0
1-Jan-16	19:05	0	0	0	0	0	0
1-Jan-16	19:10	0	0	0	0.1	0	0.1
1-Jan-16	19:15	0	0	0	0.1	0	0.1
1-Jan-16	19:20	0	0	0	0.1	0	0.1
1-Jan-16	19:25	0	0	0	0.1	0	0.1

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

1-Jan-16	19:30	0	0	0	0.1	0	0.1
1-Jan-16	19:35	0	0	0	0.1	0	0.1
1-Jan-16	19:40	0	0	0	0.1	0	0.1
1-Jan-16	19:45	0	0	0	0.1	0	0.1
1-Jan-16	19:50	0	0	0	0.1	0	0.1
1-Jan-16	19:55	0	0	0	0	0	0
1-Jan-16	20:00	0	0	0	0	0	0
1-Jan-16	20:05	0	0	0	0	0	0
1-Jan-16	20:10	0	0	0	0.1	0	0.1
1-Jan-16	20:15	0	0	0	0.1	0	0.1
1-Jan-16	20:20	0	0	0	0.1	0	0.1
1-Jan-16	20:25	0	0	0	0.1	0	0.1
1-Jan-16	20:30	0	0	0	0.1	0	0.1
1-Jan-16	20:35	0	0	0	0.1	0	0.1
1-Jan-16	20:40	0	0	0	0.1	0	0.1
1-Jan-16	20:45	0	0	0	0.1	0	0.1
1-Jan-16	20:50	0	0	0	0.1	0	0.1
1-Jan-16	20:55	0	0	0	0	0	0
1-Jan-16	21:00	0	0	0	0	0	0
1-Jan-16	21:05	0	0	0	0	0	0
1-Jan-16	21:10	0	0	0	0.1	0	0.1
1-Jan-16	21:15	0	0	0	0.1	0	0.1
1-Jan-16	21:20	0	0	0	0.1	0	0.1
1-Jan-16	21:25	0	0	0	0	0	0
1-Jan-16	21:30	0	0	0	0	0	0
1-Jan-16	21:35	0	0	0	0	0	0
1-Jan-16	21:40	0	0	0	0.1	0	0.1
1-Jan-16	21:45	0	0	0	0.1	0	0.1
1-Jan-16	21:50	0	0	0	0.1	0	0.1
1-Jan-16	21:55	0	0	0	0	0	0
1-Jan-16	22:00	0	0	0	0	0	0
1-Jan-16	22:05	0	0	0	0	0	0
1-Jan-16	22:10	0	0	0	0.1	0	0.1
1-Jan-16	22:15	0	0	0	0.1	0	0.1
1-Jan-16	22:20	0	0	0	0.1	0	0.1
1-Jan-16	22:25	0	0	0	0	0	0
1-Jan-16	22:30	0	0	0	0	0	0
1-Jan-16	22:35	0	0	0	0	0	0
1-Jan-16	22:40	0	0	0	0	0	0
1-Jan-16	22:45	0	0	0	0	0	0
1-Jan-16	22:50	0	0	0	0	0	0
1-Jan-16	22:55	0	0	0	0	0	0
1-Jan-16	23:00	0	0	0	0	0	0
1-Jan-16	23:05	0	0	0	0	0	0
1-Jan-16	23:10	0	0	0	0	0	0
1-Jan-16	23:15	0	0	0	0	0	0
1-Jan-16	23:20	0	0	0	0	0	0
1-Jan-16	23:25	0	0	0	0	0	0
1-Jan-16	23:30	0	0	0	0	0	0
1-Jan-16	23:35	0	0	0	0	0	0
1-Jan-16	23:40	0	0	0	0	0	0
1-Jan-16	23:45	0	0	0	0	0	0
1-Jan-16	23:50	0	0	0	0	0	0
1-Jan-16	23:55	0	0	0	0	0	0
2-Jan-16	0:00	0	0	0	0	0	0

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Developed Site Storm Calculations  
 Calculations Per HEC-HMS 4.2.1:  
 Inputs from HEC-HMS Preprocessor (RCFC&WCD)

Precipitation  
 Hyd ID (inches)

2 yr 1 hr	0.493
2 yr 3 hr	0.869
2 yr 6 hr	1.22
2 yr 24 hr	2.05
5 yr 1 hr	0.673
5 yr 3 hr	1.14
5 yr 6 hr	1.58
5 yr 24 hr	2.77
10 yr 1 hr	0.822
10 yr 3 hr	1.35
10 yr 6 hr	1.87
10 yr 24 hr	3.34

Point Precipitation Frequency Estimates  
 Per NOAA Atlas 14, Volume 6, Version 2

Project: Moreno Valley BCE 18501    Simulation Run: Dev 2yr 1hr Subbasin: Developed Basin Start of Run: 01Jan2016, 00:00    Basin Model: Developed 1 End of Run: 01Jan2016, 01:00    Meteorologic Model: dev 02y 01hr Compute Time: 28Mar2018, 14:30:17    Control Specifications: 01 Volume Units: <input checked="" type="radio"/> IN <input type="radio"/> AC-FT	Project: Moreno Valley BCE 18501    Simulation Run: Dev 2yr 1hr Subbasin: Developed Basin Start of Run: 01Jan2016, 00:00    Basin Model: Developed 1 End of Run: 01Jan2016, 01:00    Meteorologic Model: dev 02y 01hr Compute Time: 28Mar2018, 14:30:17    Control Specifications: 01 Volume Units: <input type="radio"/> IN <input checked="" type="radio"/> AC-FT
<b>Computed Results</b> Peak Discharge: 1.6 (CFS)    Date/Time of Peak Discharge: 01Jan2016, 00:50 Precipitation Volume: 0.49 (IN)    Direct Runoff Volume: 0.41 (IN) Loss Volume: 0.00 (IN)    Baseflow Volume: 0.00 (IN) Excess Volume: 0.49 (IN)    Discharge Volume: 0.41 (IN)	<b>Computed Results</b> Peak Discharge: 1.6 (CFS)    Date/Time of Peak Discharge: 01Jan2016, 00:50 Precipitation Volume: 0.1 (AC-FT)    Direct Runoff Volume: 0.1 (AC-FT) Loss Volume: 0.0 (AC-FT)    Baseflow Volume: 0.0 (AC-FT) Excess Volume: 0.1 (AC-FT)    Discharge Volume: 0.1 (AC-FT)

2-year 1-hour storm for Developed Site:

Date	Time	Precip (IN)	Loss (IN)	Excess (IN)	Direct Flow (CFS)	Baseflow (CFS)	Total Flow (CFS)
1-Jan-16	0:00				0	0	0
1-Jan-16	0:05	0.02	0	0.02	0.2	0	0.2
1-Jan-16	0:10	0.02	0	0.02	0.3	0	0.3
1-Jan-16	0:15	0.03	0	0.03	0.4	0	0.4
1-Jan-16	0:20	0.03	0	0.03	0.4	0	0.4
1-Jan-16	0:25	0.03	0	0.03	0.5	0	0.5
1-Jan-16	0:30	0.03	0	0.03	0.5	0	0.5
1-Jan-16	0:35	0.04	0	0.04	0.6	0	0.6
1-Jan-16	0:40	0.04	0	0.04	0.7	0	0.7
1-Jan-16	0:45	0.06	0	0.06	0.9	0	0.9
1-Jan-16	0:50	0.14	0	0.14	1.6	0	1.6
1-Jan-16	0:55	0.04	0	0.04	1.4	0	1.4
1-Jan-16	1:00	0.02	0	0.02	0.8	0	0.8

2-year 3-hour storm for Developed Site:

Project: Moreno Valley BCE 18501    Simulation Run: Dev 2yr 3hr Subbasin: Developed Basin Start of Run: 01Jan2016, 00:00    Basin Model: Developed 1 End of Run: 01Jan2016, 03:00    Meteorologic Model: dev 02y 03hr Compute Time: 28Mar2018, 14:30:23    Control Specifications: 03 Volume Units: <input checked="" type="radio"/> IN <input type="radio"/> AC-FT	Project: Moreno Valley BCE 18501    Simulation Run: Dev 2yr 3hr Subbasin: Developed Basin Start of Run: 01Jan2016, 00:00    Basin Model: Developed 1 End of Run: 01Jan2016, 03:00    Meteorologic Model: dev 02y 03hr Compute Time: 28Mar2018, 14:30:23    Control Specifications: 03 Volume Units: <input type="radio"/> IN <input checked="" type="radio"/> AC-FT
<b>Computed Results</b> Peak Discharge: 1.1 (CFS)    Date/Time of Peak Discharge: 01Jan2016, 02:35 Precipitation Volume: 0.87 (IN)    Direct Runoff Volume: 0.84 (IN) Loss Volume: 0.00 (IN)    Baseflow Volume: 0.00 (IN) Excess Volume: 0.87 (IN)    Discharge Volume: 0.84 (IN)	<b>Computed Results</b> Peak Discharge: 1.1 (CFS)    Date/Time of Peak Discharge: 01Jan2016, 02:35 Precipitation Volume: 0.1 (AC-FT)    Direct Runoff Volume: 0.1 (AC-FT) Loss Volume: 0.0 (AC-FT)    Baseflow Volume: 0.0 (AC-FT) Excess Volume: 0.1 (AC-FT)    Discharge Volume: 0.1 (AC-FT)

Date	Time	Precip (IN)	Loss (IN)	Excess (IN)	Direct Flow (CFS)	Baseflow (CFS)	Total Flow (CFS)
1-Jan-16	0:00				0	0	0
1-Jan-16	0:05	0.01	0	0.01	0.1	0	0.1
1-Jan-16	0:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	0:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:25	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:30	0.02	0	0.02	0.3	0	0.3
1-Jan-16	0:35	0.01	0	0.01	0.3	0	0.3

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1-Jan-16	0:40	0.02	0	0.02	0.3	0	0.3
1-Jan-16	0:45	0.02	0	0.02	0.3	0	0.3
1-Jan-16	0:50	0.01	0	0.01	0.3	0	0.3
1-Jan-16	0:55	0.01	0	0.01	0.3	0	0.3
1-Jan-16	1:00	0.02	0	0.02	0.3	0	0.3
1-Jan-16	1:05	0.02	0	0.02	0.3	0	0.3
1-Jan-16	1:10	0.02	0	0.02	0.3	0	0.3
1-Jan-16	1:15	0.02	0	0.02	0.3	0	0.3
1-Jan-16	1:20	0.02	0	0.02	0.3	0	0.3
1-Jan-16	1:25	0.02	0	0.02	0.4	0	0.4
1-Jan-16	1:30	0.02	0	0.02	0.4	0	0.4
1-Jan-16	1:35	0.02	0	0.02	0.4	0	0.4
1-Jan-16	1:40	0.02	0	0.02	0.4	0	0.4
1-Jan-16	1:45	0.03	0	0.03	0.5	0	0.5
1-Jan-16	1:50	0.03	0	0.03	0.5	0	0.5
1-Jan-16	1:55	0.03	0	0.03	0.5	0	0.5
1-Jan-16	2:00	0.03	0	0.03	0.5	0	0.5
1-Jan-16	2:05	0.03	0	0.03	0.5	0	0.5
1-Jan-16	2:10	0.04	0	0.04	0.6	0	0.6
1-Jan-16	2:15	0.04	0	0.04	0.7	0	0.7
1-Jan-16	2:20	0.03	0	0.03	0.6	0	0.6
1-Jan-16	2:25	0.06	0	0.06	0.8	0	0.8
1-Jan-16	2:30	0.06	0	0.06	1	0	1
1-Jan-16	2:35	0.07	0	0.07	1.1	0	1.1
1-Jan-16	2:40	0.05	0	0.05	1.1	0	1.1
1-Jan-16	2:45	0.02	0	0.02	0.8	0	0.8
1-Jan-16	2:50	0.02	0	0.02	0.5	0	0.5
1-Jan-16	2:55	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:00	0.01	0	0.01	0.3	0	0.3

2-year 6-hour storm for Developed Site:

Project: Moreno Valley BCE 18501 Simulation Run: Dev 2yr 6hr Subbasin: Developed Basin		Project: Moreno Valley BCE 18501 Simulation Run: Dev 2yr 6hr Subbasin: Developed Basin	
Start of Run: 01Jan2016, 00:00	Basin Model: Developed 1	Start of Run: 01Jan2016, 00:00	Basin Model: Developed 1
End of Run: 01Jan2016, 06:00	Meteorologic Model: dev 02y 06hr	End of Run: 01Jan2016, 06:00	Meteorologic Model: dev 02y 06hr
Compute Time:28Mar2018, 14:30:26	Control Specifications:06	Compute Time:28Mar2018, 14:30:26	Control Specifications:06
Volume Units: <input type="radio"/> IN <input checked="" type="radio"/> AC-FT		Volume Units: <input type="radio"/> IN <input checked="" type="radio"/> AC-FT	
<b>Computed Results</b> Peak Discharge: 1.1 (CFS) Date/Time of Peak Discharge:01Jan2016, 05:30 Precipitation Volume:1.22 (IN) Direct Runoff Volume: 1.21 (IN) Loss Volume: 0.00 (IN) Baseflow Volume: 0.00 (IN) Excess Volume: 1.22 (IN) Discharge Volume: 1.21 (IN)		<b>Computed Results</b> Peak Discharge: 1.1 (CFS) Date/Time of Peak Discharge:01Jan2016, 05:30 Precipitation Volume:0.2 (AC-FT) Direct Runoff Volume: 0.2 (AC-FT) Loss Volume: 0.0 (AC-FT) Baseflow Volume: 0.0 (AC-FT) Excess Volume: 0.2 (AC-FT) Discharge Volume: 0.2 (AC-FT)	

Date	Time	Precip (IN)	Loss (IN)	Excess (IN)	Direct Flow (CFS)	Baseflow (CFS)	Total Flow (CFS)
1-Jan-16	0:00				0	0	0
1-Jan-16	0:05	0.01	0	0.01	0	0	0
1-Jan-16	0:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	0:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	0:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	0:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	0:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	0:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:05	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:25	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:30	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:05	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:25	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:30	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	3:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	3:05	0.01	0	0.01	0.2	0	0.2
1-Jan-16	3:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	3:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	3:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	3:25	0.01	0	0.01	0.3	0	0.3
1-Jan-16	3:30	0.02	0	0.02	0.3	0	0.3
1-Jan-16	3:35	0.02	0	0.02	0.3	0	0.3
1-Jan-16	3:40	0.02	0	0.02	0.3	0	0.3
1-Jan-16	3:45	0.02	0	0.02	0.3	0	0.3
1-Jan-16	3:50	0.02	0	0.02	0.3	0	0.3
1-Jan-16	3:55	0.02	0	0.02	0.3	0	0.3
1-Jan-16	4:00	0.02	0	0.02	0.4	0	0.4
1-Jan-16	4:05	0.02	0	0.02	0.4	0	0.4

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1-Jan-16	4:10	0.02	0	0.02	0.4	0	0.4
1-Jan-16	4:15	0.02	0	0.02	0.4	0	0.4
1-Jan-16	4:20	0.02	0	0.02	0.4	0	0.4
1-Jan-16	4:25	0.03	0	0.03	0.5	0	0.5
1-Jan-16	4:30	0.03	0	0.03	0.5	0	0.5
1-Jan-16	4:35	0.03	0	0.03	0.5	0	0.5
1-Jan-16	4:40	0.03	0	0.03	0.5	0	0.5
1-Jan-16	4:45	0.03	0	0.03	0.5	0	0.5
1-Jan-16	4:50	0.03	0	0.03	0.5	0	0.5
1-Jan-16	4:55	0.03	0	0.03	0.5	0	0.5
1-Jan-16	5:00	0.03	0	0.03	0.6	0	0.6
1-Jan-16	5:05	0.04	0	0.04	0.6	0	0.6
1-Jan-16	5:10	0.04	0	0.04	0.7	0	0.7
1-Jan-16	5:15	0.05	0	0.05	0.8	0	0.8
1-Jan-16	5:20	0.05	0	0.05	0.9	0	0.9
1-Jan-16	5:25	0.06	0	0.06	1	0	1
1-Jan-16	5:30	0.07	0	0.07	1.1	0	1.1
1-Jan-16	5:35	0.02	0	0.02	0.9	0	0.9
1-Jan-16	5:40	0.01	0	0.01	0.5	0	0.5
1-Jan-16	5:45	0.01	0	0.01	0.3	0	0.3
1-Jan-16	5:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	5:55	0	0	0	0.2	0	0.2
1-Jan-16	6:00	0	0	0	0.1	0	0.1

2-year 24-hour storm for Developed Site:

Project: Moreno Valley BCE 18501    Simulation Run: Dev 2yr 24hr Subbasin: Developed Basin Start of Run: 01Jan2016, 00:00    Basin Model: Developed 1 End of Run: 02Jan2016, 00:00    Meteorologic Model: dev 02y 24h Compute Time: 28Mar2018, 14:30:20    Control Specifications: 24 Volume Units: <input checked="" type="radio"/> IN <input type="radio"/> AC-FT	Project: Moreno Valley BCE 18501    Simulation Run: Dev 2yr 24hr Subbasin: Developed Basin Start of Run: 01Jan2016, 00:00    Basin Model: Developed 1 End of Run: 02Jan2016, 00:00    Meteorologic Model: dev 02y 24h Compute Time: 28Mar2018, 14:30:20    Control Specifications: 24 Volume Units: <input type="radio"/> IN <input checked="" type="radio"/> AC-FT
<b>Computed Results</b> Peak Discharge: 0.4 (CFS)    Date/Time of Peak Discharge: 01Jan2016, 13:25 Precipitation Volume: 2.04 (IN)    Direct Runoff Volume: 2.04 (IN) Loss Volume: 0.00 (IN)    Baseflow Volume: 0.00 (IN) Excess Volume: 2.04 (IN)    Discharge Volume: 2.04 (IN)	<b>Computed Results</b> Peak Discharge: 0.4 (CFS)    Date/Time of Peak Discharge: 01Jan2016, 13:25 Precipitation Volume: 0.3 (AC-FT)    Direct Runoff Volume: 0.3 (AC-FT) Loss Volume: 0.0 (AC-FT)    Baseflow Volume: 0.0 (AC-FT) Excess Volume: 0.3 (AC-FT)    Discharge Volume: 0.3 (AC-FT)

Date	Time	Precip (IN)	Loss (IN)	Excess (IN)	Direct Flow (CFS)	Baseflow (CFS)	Total Flow (CFS)
1-Jan-16	0:00				0	0	0
1-Jan-16	0:05	0	0	0	0	0	0
1-Jan-16	0:10	0	0	0	0	0	0
1-Jan-16	0:15	0	0	0	0	0	0
1-Jan-16	0:20	0	0	0	0	0	0
1-Jan-16	0:25	0	0	0	0	0	0
1-Jan-16	0:30	0	0	0	0	0	0
1-Jan-16	0:35	0	0	0	0	0	0
1-Jan-16	0:40	0	0	0	0	0	0
1-Jan-16	0:45	0	0	0	0	0	0
1-Jan-16	0:50	0	0	0	0.1	0	0.1
1-Jan-16	0:55	0	0	0	0.1	0	0.1
1-Jan-16	1:00	0	0	0	0	0	0
1-Jan-16	1:05	0	0	0	0	0	0
1-Jan-16	1:10	0	0	0	0	0	0
1-Jan-16	1:15	0	0	0	0	0	0
1-Jan-16	1:20	0	0	0	0	0	0
1-Jan-16	1:25	0	0	0	0	0	0
1-Jan-16	1:30	0	0	0	0	0	0
1-Jan-16	1:35	0	0	0	0	0	0
1-Jan-16	1:40	0	0	0	0	0	0
1-Jan-16	1:45	0	0	0	0	0	0
1-Jan-16	1:50	0	0	0	0.1	0	0.1
1-Jan-16	1:55	0	0	0	0.1	0	0.1
1-Jan-16	2:00	0	0	0	0.1	0	0.1
1-Jan-16	2:05	0	0	0	0.1	0	0.1
1-Jan-16	2:10	0	0	0	0.1	0	0.1
1-Jan-16	2:15	0	0	0	0.1	0	0.1
1-Jan-16	2:20	0	0	0	0.1	0	0.1
1-Jan-16	2:25	0	0	0	0.1	0	0.1
1-Jan-16	2:30	0	0	0	0.1	0	0.1
1-Jan-16	2:35	0	0	0	0.1	0	0.1
1-Jan-16	2:40	0	0	0	0.1	0	0.1
1-Jan-16	2:45	0	0	0	0.1	0	0.1
1-Jan-16	2:50	0	0	0	0.1	0	0.1
1-Jan-16	2:55	0	0	0	0.1	0	0.1
1-Jan-16	3:00	0	0	0	0.1	0	0.1
1-Jan-16	3:05	0	0	0	0.1	0	0.1
1-Jan-16	3:10	0	0	0	0.1	0	0.1
1-Jan-16	3:15	0	0	0	0.1	0	0.1
1-Jan-16	3:20	0	0	0	0.1	0	0.1
1-Jan-16	3:25	0	0	0	0.1	0	0.1
1-Jan-16	3:30	0	0	0	0.1	0	0.1
1-Jan-16	3:35	0	0	0	0.1	0	0.1
1-Jan-16	3:40	0	0	0	0.1	0	0.1
1-Jan-16	3:45	0	0	0	0.1	0	0.1
1-Jan-16	3:50	0	0	0	0.1	0	0.1
1-Jan-16	3:55	0	0	0	0.1	0	0.1
1-Jan-16	4:00	0	0	0	0.1	0	0.1
1-Jan-16	4:05	0	0	0	0.1	0	0.1
1-Jan-16	4:10	0	0	0	0.1	0	0.1
1-Jan-16	4:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:25	0.01	0	0.01	0.1	0	0.1

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



1-Jan-16	4:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:45	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:50	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:55	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:00	0	0	0	0.1	0	0.1
1-Jan-16	5:05	0	0	0	0.1	0	0.1
1-Jan-16	5:10	0	0	0	0.1	0	0.1
1-Jan-16	5:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:45	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:50	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:55	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:00	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:05	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:45	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:50	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:55	0.01	0	0.01	0.1	0	0.1
1-Jan-16	7:00	0.01	0	0.01	0.1	0	0.1
1-Jan-16	7:05	0.01	0	0.01	0.1	0	0.1
1-Jan-16	7:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	7:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	7:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	7:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	7:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	7:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	7:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	7:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:05	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:25	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:30	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	9:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	9:05	0.01	0	0.01	0.2	0	0.2
1-Jan-16	9:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	9:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	9:20	0.01	0	0.01	0.3	0	0.3
1-Jan-16	9:25	0.01	0	0.01	0.3	0	0.3
1-Jan-16	9:30	0.01	0	0.01	0.3	0	0.3
1-Jan-16	9:35	0.01	0	0.01	0.3	0	0.3
1-Jan-16	9:40	0.01	0	0.01	0.3	0	0.3
1-Jan-16	9:45	0.01	0	0.01	0.3	0	0.3
1-Jan-16	9:50	0.01	0	0.01	0.3	0	0.3
1-Jan-16	9:55	0.01	0	0.01	0.3	0	0.3
1-Jan-16	10:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	10:05	0.01	0	0.01	0.2	0	0.2
1-Jan-16	10:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	10:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	10:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	10:25	0.01	0	0.01	0.2	0	0.2
1-Jan-16	10:30	0.01	0	0.01	0.2	0	0.2
1-Jan-16	10:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	10:40	0.01	0	0.01	0.3	0	0.3
1-Jan-16	10:45	0.01	0	0.01	0.3	0	0.3
1-Jan-16	10:50	0.01	0	0.01	0.3	0	0.3
1-Jan-16	10:55	0.01	0	0.01	0.3	0	0.3
1-Jan-16	11:00	0.01	0	0.01	0.3	0	0.3
1-Jan-16	11:05	0.01	0	0.01	0.2	0	0.2
1-Jan-16	11:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	11:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	11:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	11:25	0.01	0	0.01	0.2	0	0.2
1-Jan-16	11:30	0.01	0	0.01	0.2	0	0.2
1-Jan-16	11:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	11:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	11:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	11:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	11:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	12:00	0.02	0	0.02	0.3	0	0.3
1-Jan-16	12:05	0.02	0	0.02	0.3	0	0.3
1-Jan-16	12:10	0.02	0	0.02	0.3	0	0.3
1-Jan-16	12:15	0.02	0	0.02	0.3	0	0.3
1-Jan-16	12:20	0.02	0	0.02	0.3	0	0.3
1-Jan-16	12:25	0.02	0	0.02	0.3	0	0.3

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1-Jan-16	12:30	0.02	0	0.02	0.3	0	0.3
1-Jan-16	12:35	0.02	0	0.02	0.3	0	0.3
1-Jan-16	12:40	0.02	0	0.02	0.4	0	0.4
1-Jan-16	12:45	0.02	0	0.02	0.4	0	0.4
1-Jan-16	12:50	0.02	0	0.02	0.4	0	0.4
1-Jan-16	12:55	0.02	0	0.02	0.4	0	0.4
1-Jan-16	13:00	0.02	0	0.02	0.4	0	0.4
1-Jan-16	13:05	0.02	0	0.02	0.4	0	0.4
1-Jan-16	13:10	0.02	0	0.02	0.4	0	0.4
1-Jan-16	13:15	0.02	0	0.02	0.4	0	0.4
1-Jan-16	13:20	0.02	0	0.02	0.4	0	0.4
1-Jan-16	13:25	0.02	0	0.02	0.4	0	0.4
1-Jan-16	13:30	0.02	0	0.02	0.4	0	0.4
1-Jan-16	13:35	0.02	0	0.02	0.3	0	0.3
1-Jan-16	13:40	0.02	0	0.02	0.3	0	0.3
1-Jan-16	13:45	0.02	0	0.02	0.3	0	0.3
1-Jan-16	13:50	0.02	0	0.02	0.3	0	0.3
1-Jan-16	13:55	0.02	0	0.02	0.3	0	0.3
1-Jan-16	14:00	0.02	0	0.02	0.3	0	0.3
1-Jan-16	14:05	0.02	0	0.02	0.3	0	0.3
1-Jan-16	14:10	0.02	0	0.02	0.3	0	0.3
1-Jan-16	14:15	0.02	0	0.02	0.3	0	0.3
1-Jan-16	14:20	0.02	0	0.02	0.3	0	0.3
1-Jan-16	14:25	0.02	0	0.02	0.3	0	0.3
1-Jan-16	14:30	0.02	0	0.02	0.3	0	0.3
1-Jan-16	14:35	0.02	0	0.02	0.3	0	0.3
1-Jan-16	14:40	0.02	0	0.02	0.3	0	0.3
1-Jan-16	14:45	0.02	0	0.02	0.3	0	0.3
1-Jan-16	14:50	0.02	0	0.02	0.3	0	0.3
1-Jan-16	14:55	0.02	0	0.02	0.3	0	0.3
1-Jan-16	15:00	0.02	0	0.02	0.3	0	0.3
1-Jan-16	15:05	0.02	0	0.02	0.3	0	0.3
1-Jan-16	15:10	0.02	0	0.02	0.3	0	0.3
1-Jan-16	15:15	0.02	0	0.02	0.3	0	0.3
1-Jan-16	15:20	0.02	0	0.02	0.3	0	0.3
1-Jan-16	15:25	0.02	0	0.02	0.3	0	0.3
1-Jan-16	15:30	0.01	0	0.01	0.3	0	0.3
1-Jan-16	15:35	0.01	0	0.01	0.3	0	0.3
1-Jan-16	15:40	0.01	0	0.01	0.3	0	0.3
1-Jan-16	15:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	15:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	15:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	16:00	0	0	0	0.2	0	0.2
1-Jan-16	16:05	0	0	0	0.1	0	0.1
1-Jan-16	16:10	0	0	0	0.1	0	0.1
1-Jan-16	16:15	0	0	0	0.1	0	0.1
1-Jan-16	16:20	0	0	0	0.1	0	0.1
1-Jan-16	16:25	0	0	0	0.1	0	0.1
1-Jan-16	16:30	0	0	0	0.1	0	0.1
1-Jan-16	16:35	0	0	0	0	0	0
1-Jan-16	16:40	0	0	0	0	0	0
1-Jan-16	16:45	0	0	0	0	0	0
1-Jan-16	16:50	0	0	0	0	0	0
1-Jan-16	16:55	0	0	0	0	0	0
1-Jan-16	17:00	0	0	0	0	0	0
1-Jan-16	17:05	0	0	0	0.1	0	0.1
1-Jan-16	17:10	0	0	0	0.1	0	0.1
1-Jan-16	17:15	0	0	0	0.1	0	0.1
1-Jan-16	17:20	0	0	0	0.1	0	0.1
1-Jan-16	17:25	0	0	0	0.1	0	0.1
1-Jan-16	17:30	0	0	0	0.1	0	0.1
1-Jan-16	17:35	0	0	0	0.1	0	0.1
1-Jan-16	17:40	0	0	0	0.1	0	0.1
1-Jan-16	17:45	0	0	0	0.1	0	0.1
1-Jan-16	17:50	0	0	0	0.1	0	0.1
1-Jan-16	17:55	0	0	0	0.1	0	0.1
1-Jan-16	18:00	0	0	0	0.1	0	0.1
1-Jan-16	18:05	0	0	0	0.1	0	0.1
1-Jan-16	18:10	0	0	0	0.1	0	0.1
1-Jan-16	18:15	0	0	0	0.1	0	0.1
1-Jan-16	18:20	0	0	0	0.1	0	0.1
1-Jan-16	18:25	0	0	0	0.1	0	0.1
1-Jan-16	18:30	0	0	0	0	0	0
1-Jan-16	18:35	0	0	0	0	0	0
1-Jan-16	18:40	0	0	0	0	0	0
1-Jan-16	18:45	0	0	0	0	0	0
1-Jan-16	18:50	0	0	0	0	0	0
1-Jan-16	18:55	0	0	0	0	0	0
1-Jan-16	19:00	0	0	0	0	0	0
1-Jan-16	19:05	0	0	0	0	0	0
1-Jan-16	19:10	0	0	0	0	0	0
1-Jan-16	19:15	0	0	0	0	0	0
1-Jan-16	19:20	0	0	0	0.1	0	0.1
1-Jan-16	19:25	0	0	0	0.1	0	0.1
1-Jan-16	19:30	0	0	0	0	0	0
1-Jan-16	19:35	0	0	0	0	0	0
1-Jan-16	19:40	0	0	0	0	0	0
1-Jan-16	19:45	0	0	0	0	0	0
1-Jan-16	19:50	0	0	0	0	0	0
1-Jan-16	19:55	0	0	0	0	0	0
1-Jan-16	20:00	0	0	0	0	0	0
1-Jan-16	20:05	0	0	0	0	0	0
1-Jan-16	20:10	0	0	0	0	0	0
1-Jan-16	20:15	0	0	0	0	0	0
1-Jan-16	20:20	0	0	0	0	0	0
1-Jan-16	20:25	0	0	0	0	0	0

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1-Jan-16	20:30	0	0	0	0	0	0
1-Jan-16	20:35	0	0	0	0	0	0
1-Jan-16	20:40	0	0	0	0	0	0
1-Jan-16	20:45	0	0	0	0	0	0
1-Jan-16	20:50	0	0	0	0	0	0
1-Jan-16	20:55	0	0	0	0	0	0
1-Jan-16	21:00	0	0	0	0	0	0
1-Jan-16	21:05	0	0	0	0	0	0
1-Jan-16	21:10	0	0	0	0	0	0
1-Jan-16	21:15	0	0	0	0	0	0
1-Jan-16	21:20	0	0	0	0	0	0
1-Jan-16	21:25	0	0	0	0	0	0
1-Jan-16	21:30	0	0	0	0	0	0
1-Jan-16	21:35	0	0	0	0	0	0
1-Jan-16	21:40	0	0	0	0	0	0
1-Jan-16	21:45	0	0	0	0	0	0
1-Jan-16	21:50	0	0	0	0	0	0
1-Jan-16	21:55	0	0	0	0	0	0
1-Jan-16	22:00	0	0	0	0	0	0
1-Jan-16	22:05	0	0	0	0	0	0
1-Jan-16	22:10	0	0	0	0	0	0
1-Jan-16	22:15	0	0	0	0	0	0
1-Jan-16	22:20	0	0	0	0	0	0
1-Jan-16	22:25	0	0	0	0	0	0
1-Jan-16	22:30	0	0	0	0	0	0
1-Jan-16	22:35	0	0	0	0	0	0
1-Jan-16	22:40	0	0	0	0	0	0
1-Jan-16	22:45	0	0	0	0	0	0
1-Jan-16	22:50	0	0	0	0	0	0
1-Jan-16	22:55	0	0	0	0	0	0
1-Jan-16	23:00	0	0	0	0	0	0
1-Jan-16	23:05	0	0	0	0	0	0
1-Jan-16	23:10	0	0	0	0	0	0
1-Jan-16	23:15	0	0	0	0	0	0
1-Jan-16	23:20	0	0	0	0	0	0
1-Jan-16	23:25	0	0	0	0	0	0
1-Jan-16	23:30	0	0	0	0	0	0
1-Jan-16	23:35	0	0	0	0	0	0
1-Jan-16	23:40	0	0	0	0	0	0
1-Jan-16	23:45	0	0	0	0	0	0
1-Jan-16	23:50	0	0	0	0	0	0
1-Jan-16	23:55	0	0	0	0	0	0
2-Jan-16	0:00	0	0	0	0	0	0

5-year 1-hour storm for Developed Site:

<p>Project: Moreno Valley BCE 18501    Simulation Run: Dev 5yr 1hr Subbasin: Developed Basin</p> <p>Start of Run: 01Jan2016, 00:00    Basin Model: Developed 1 End of Run: 01Jan2016, 01:00    Meteorologic Model: dev 05y 01hr Compute Time: 28Mar2018, 14:30:29    Control Specifications: 01</p> <p>Volume Units: <input checked="" type="radio"/> IN    <input type="radio"/> AC-FT</p> <p><b>Computed Results</b></p> <p>Peak Discharge: 2.2 (CFS)    Date/Time of Peak Discharge: 01Jan2016, 00:50 Precipitation Volume: 0.67 (IN)    Direct Runoff Volume: 0.57 (IN) Loss Volume: 0.00 (IN)    Baseflow Volume: 0.00 (IN) Excess Volume: 0.67 (IN)    Discharge Volume: 0.57 (IN)</p>	<p>Project: Moreno Valley BCE 18501    Simulation Run: Dev 5yr 1hr Subbasin: Developed Basin</p> <p>Start of Run: 01Jan2016, 00:00    Basin Model: Developed 1 End of Run: 01Jan2016, 01:00    Meteorologic Model: dev 05y 01hr Compute Time: 28Mar2018, 14:30:29    Control Specifications: 01</p> <p>Volume Units: <input type="radio"/> IN    <input checked="" type="radio"/> AC-FT</p> <p><b>Computed Results</b></p> <p>Peak Discharge: 2.2 (CFS)    Date/Time of Peak Discharge: 01Jan2016, 00:50 Precipitation Volume: 0.1 (AC-FT)    Direct Runoff Volume: 0.1 (AC-FT) Loss Volume: 0.0 (AC-FT)    Baseflow Volume: 0.0 (AC-FT) Excess Volume: 0.1 (AC-FT)    Discharge Volume: 0.1 (AC-FT)</p>
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Date	Time	Precip (IN)	Loss (IN)	Excess (IN)	Direct Flow (CFS)	Baseflow (CFS)	Total Flow (CFS)
1-Jan-16	0:00	0	0	0	0	0	0
1-Jan-16	0:05	0.03	0	0.03	0.2	0	0.2
1-Jan-16	0:10	0.03	0	0.03	0.4	0	0.4
1-Jan-16	0:15	0.03	0	0.03	0.5	0	0.5
1-Jan-16	0:20	0.03	0	0.03	0.5	0	0.5
1-Jan-16	0:25	0.04	0	0.04	0.6	0	0.6
1-Jan-16	0:30	0.04	0	0.04	0.7	0	0.7
1-Jan-16	0:35	0.05	0	0.05	0.8	0	0.8
1-Jan-16	0:40	0.06	0	0.06	1	0	1
1-Jan-16	0:45	0.08	0	0.08	1.2	0	1.2
1-Jan-16	0:50	0.19	0	0.19	2.2	0	2.2
1-Jan-16	0:55	0.05	0	0.05	1.9	0	1.9
1-Jan-16	1:00	0.03	0	0.03	1.1	0	1.1

5-year 3-hour storm for Developed Site:

<p>Project: Moreno Valley BCE 18501    Simulation Run: Dev 5yr 3hr Subbasin: Developed Basin</p> <p>Start of Run: 01Jan2016, 00:00    Basin Model: Developed 1 End of Run: 01Jan2016, 03:00    Meteorologic Model: dev 05y 03hr Compute Time: 28Mar2018, 14:32:03    Control Specifications: 03</p> <p>Volume Units: <input checked="" type="radio"/> IN    <input type="radio"/> AC-FT</p> <p><b>Computed Results</b></p> <p>Peak Discharge: 1.5 (CFS)    Date/Time of Peak Discharge: 01Jan2016, 02:35 Precipitation Volume: 1.14 (IN)    Direct Runoff Volume: 1.10 (IN) Loss Volume: 0.00 (IN)    Baseflow Volume: 0.00 (IN) Excess Volume: 1.14 (IN)    Discharge Volume: 1.10 (IN)</p>	<p>Project: Moreno Valley BCE 18501    Simulation Run: Dev 5yr 3hr Subbasin: Developed Basin</p> <p>Start of Run: 01Jan2016, 00:00    Basin Model: Developed 1 End of Run: 01Jan2016, 03:00    Meteorologic Model: dev 05y 03hr Compute Time: 28Mar2018, 14:32:03    Control Specifications: 03</p> <p>Volume Units: <input type="radio"/> IN    <input checked="" type="radio"/> AC-FT</p> <p><b>Computed Results</b></p> <p>Peak Discharge: 1.5 (CFS)    Date/Time of Peak Discharge: 01Jan2016, 02:35 Precipitation Volume: 0.1 (AC-FT)    Direct Runoff Volume: 0.1 (AC-FT) Loss Volume: 0.0 (AC-FT)    Baseflow Volume: 0.0 (AC-FT) Excess Volume: 0.1 (AC-FT)    Discharge Volume: 0.1 (AC-FT)</p>
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Date	Time	Precip (IN)	Loss (IN)	Excess (IN)	Direct Flow (CFS)	Baseflow (CFS)	Total Flow (CFS)
1-Jan-16	0:00	0	0	0	0	0	0
1-Jan-16	0:05	0.01	0	0.01	0.1	0	0.1
1-Jan-16	0:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:15	0.01	0	0.01	0.2	0	0.2

1-Jan-16	0:20	0.02	0	0.02	0.3	0	0.3
1-Jan-16	0:25	0.02	0	0.02	0.3	0	0.3
1-Jan-16	0:30	0.02	0	0.02	0.3	0	0.3
1-Jan-16	0:35	0.02	0	0.02	0.3	0	0.3
1-Jan-16	0:40	0.02	0	0.02	0.3	0	0.3
1-Jan-16	0:45	0.02	0	0.02	0.4	0	0.4
1-Jan-16	0:50	0.02	0	0.02	0.3	0	0.3
1-Jan-16	0:55	0.02	0	0.02	0.3	0	0.3
1-Jan-16	1:00	0.02	0	0.02	0.4	0	0.4
1-Jan-16	1:05	0.03	0	0.03	0.4	0	0.4
1-Jan-16	1:10	0.03	0	0.03	0.4	0	0.4
1-Jan-16	1:15	0.03	0	0.03	0.5	0	0.5
1-Jan-16	1:20	0.02	0	0.02	0.4	0	0.4
1-Jan-16	1:25	0.03	0	0.03	0.5	0	0.5
1-Jan-16	1:30	0.03	0	0.03	0.5	0	0.5
1-Jan-16	1:35	0.03	0	0.03	0.5	0	0.5
1-Jan-16	1:40	0.03	0	0.03	0.5	0	0.5
1-Jan-16	1:45	0.04	0	0.04	0.6	0	0.6
1-Jan-16	1:50	0.04	0	0.04	0.6	0	0.6
1-Jan-16	1:55	0.03	0	0.03	0.6	0	0.6
1-Jan-16	2:00	0.03	0	0.03	0.6	0	0.6
1-Jan-16	2:05	0.04	0	0.04	0.6	0	0.6
1-Jan-16	2:10	0.05	0	0.05	0.7	0	0.7
1-Jan-16	2:15	0.06	0	0.06	0.9	0	0.9
1-Jan-16	2:20	0.04	0	0.04	0.9	0	0.9
1-Jan-16	2:25	0.08	0	0.08	1.1	0	1.1
1-Jan-16	2:30	0.08	0	0.08	1.3	0	1.3
1-Jan-16	2:35	0.09	0	0.09	1.5	0	1.5
1-Jan-16	2:40	0.07	0	0.07	1.4	0	1.4
1-Jan-16	2:45	0.02	0	0.02	1	0	1
1-Jan-16	2:50	0.02	0	0.02	0.7	0	0.7
1-Jan-16	2:55	0.02	0	0.02	0.5	0	0.5
1-Jan-16	3:00	0.01	0	0.01	0.4	0	0.4

5-year 6-hour storm for Developed Site:

Project: Moreno Valley BCE 18501    Simulation Run: Dev 5yr 6hr Subbasin: Developed Basin				Project: Moreno Valley BCE 18501    Simulation Run: Dev 5yr 6hr Subbasin: Developed Basin			
Start of Run: 01Jan2016, 00:00 End of Run: 01Jan2016, 06:00 Compute Time: 28Mar2018, 14:30:44		Basin Model: Developed 1 Meteorologic Model: dev 05y 06h Control Specifications: 06		Start of Run: 01Jan2016, 00:00 End of Run: 01Jan2016, 06:00 Compute Time: 28Mar2018, 14:30:44		Basin Model: Developed 1 Meteorologic Model: dev 05y 06h Control Specifications: 06	
Volume Units: <input checked="" type="radio"/> IN <input type="radio"/> AC-FT				Volume Units: <input type="radio"/> IN <input checked="" type="radio"/> AC-FT			
<b>Computed Results</b> Peak Discharge: 1.4 (CFS)    Date/Time of Peak Discharge: 01Jan2016, 05:30 Precipitation Volume: 1.58 (IN)    Direct Runoff Volume: 1.56 (IN) Loss Volume: 0.00 (IN)    Baseflow Volume: 0.00 (IN) Excess Volume: 1.58 (IN)    Discharge Volume: 1.56 (IN)				<b>Computed Results</b> Peak Discharge: 1.4 (CFS)    Date/Time of Peak Discharge: 01Jan2016, 05:30 Precipitation Volume: 0.2 (AC-FT)    Direct Runoff Volume: 0.2 (AC-FT) Loss Volume: 0.0 (AC-FT)    Baseflow Volume: 0.0 (AC-FT) Excess Volume: 0.2 (AC-FT)    Discharge Volume: 0.2 (AC-FT)			

Date	Time	Precip (IN)	Loss (IN)	Excess (IN)	Direct Flow (CFS)	Baseflow (CFS)	Total Flow (CFS)
1-Jan-16	0:00				0	0	0
1-Jan-16	0:05	0.01	0	0.01	0.1	0	0.1
1-Jan-16	0:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	0:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	0:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:25	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:30	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:05	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:25	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:30	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	2:00	0.01	0	0.01	0.3	0	0.3
1-Jan-16	2:05	0.01	0	0.01	0.3	0	0.3
1-Jan-16	2:10	0.01	0	0.01	0.3	0	0.3
1-Jan-16	2:15	0.01	0	0.01	0.3	0	0.3
1-Jan-16	2:20	0.01	0	0.01	0.3	0	0.3
1-Jan-16	2:25	0.01	0	0.01	0.3	0	0.3
1-Jan-16	2:30	0.01	0	0.01	0.3	0	0.3
1-Jan-16	2:35	0.01	0	0.01	0.3	0	0.3
1-Jan-16	2:40	0.01	0	0.01	0.3	0	0.3
1-Jan-16	2:45	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:50	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:55	0.02	0	0.02	0.3	0	0.3
1-Jan-16	3:00	0.02	0	0.02	0.3	0	0.3
1-Jan-16	3:05	0.02	0	0.02	0.3	0	0.3
1-Jan-16	3:10	0.02	0	0.02	0.3	0	0.3
1-Jan-16	3:15	0.02	0	0.02	0.3	0	0.3
1-Jan-16	3:20	0.02	0	0.02	0.3	0	0.3
1-Jan-16	3:25	0.02	0	0.02	0.3	0	0.3
1-Jan-16	3:30	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:35	0.02	0	0.02	0.4	0	0.4

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

1-Jan-16	3:40	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:45	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:50	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:55	0.03	0	0.03	0.4	0	0.4
1-Jan-16	4:00	0.03	0	0.03	0.5	0	0.5
1-Jan-16	4:05	0.03	0	0.03	0.5	0	0.5
1-Jan-16	4:10	0.03	0	0.03	0.5	0	0.5
1-Jan-16	4:15	0.03	0	0.03	0.5	0	0.5
1-Jan-16	4:20	0.03	0	0.03	0.6	0	0.6
1-Jan-16	4:25	0.03	0	0.03	0.6	0	0.6
1-Jan-16	4:30	0.03	0	0.03	0.6	0	0.6
1-Jan-16	4:35	0.04	0	0.04	0.6	0	0.6
1-Jan-16	4:40	0.04	0	0.04	0.6	0	0.6
1-Jan-16	4:45	0.04	0	0.04	0.7	0	0.7
1-Jan-16	4:50	0.04	0	0.04	0.7	0	0.7
1-Jan-16	4:55	0.04	0	0.04	0.7	0	0.7
1-Jan-16	5:00	0.04	0	0.04	0.7	0	0.7
1-Jan-16	5:05	0.05	0	0.05	0.8	0	0.8
1-Jan-16	5:10	0.06	0	0.06	0.9	0	0.9
1-Jan-16	5:15	0.06	0	0.06	1	0	1
1-Jan-16	5:20	0.07	0	0.07	1.1	0	1.1
1-Jan-16	5:25	0.07	0	0.07	1.2	0	1.2
1-Jan-16	5:30	0.09	0	0.09	1.4	0	1.4
1-Jan-16	5:35	0.03	0	0.03	1.1	0	1.1
1-Jan-16	5:40	0.01	0	0.01	0.7	0	0.7
1-Jan-16	5:45	0.01	0	0.01	0.4	0	0.4
1-Jan-16	5:50	0.01	0	0.01	0.3	0	0.3
1-Jan-16	5:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:00	0	0	0	0.2	0	0.2

5-year 24-hour storm for Developed Site:

Project: Moreno Valley BCE 18501 Subbasin: Developed Basin Start of Run: 01Jan2016, 00:00 End of Run: 02Jan2016, 00:00 Compute Time: 28Mar2018, 14:32:53 Basin Model: Developed 1 Meteorologic Model: dev 05y 24h Control Specifications: 24 Volume Units: <input checked="" type="radio"/> IN <input type="radio"/> AC-FT	Project: Moreno Valley BCE 18501 Subbasin: Developed Basin Start of Run: 01Jan2016, 00:00 End of Run: 02Jan2016, 00:00 Compute Time: 28Mar2018, 14:32:53 Basin Model: Developed 1 Meteorologic Model: dev 05y 24h Control Specifications: 24 Volume Units: <input type="radio"/> IN <input checked="" type="radio"/> AC-FT
<b>Computed Results</b> Peak Discharge: 0.6 (CFS) Precipitation Volume: 2.79 (IN) Loss Volume: 0.00 (IN) Excess Volume: 2.79 (IN) Date/Time of Peak Discharge: 01Jan2016, 13:25 Direct Runoff Volume: 2.79 (IN) Baseflow Volume: 0.00 (IN) Discharge Volume: 2.79 (IN)	<b>Computed Results</b> Peak Discharge: 0.6 (CFS) Precipitation Volume: 0.4 (AC-FT) Loss Volume: 0.0 (AC-FT) Excess Volume: 0.4 (AC-FT) Date/Time of Peak Discharge: 01Jan2016, 13:25 Direct Runoff Volume: 0.4 (AC-FT) Baseflow Volume: 0.0 (AC-FT) Discharge Volume: 0.4 (AC-FT)

Date	Time	Precip (IN)	Loss (IN)	Excess (IN)	Direct Flow (CFS)	Baseflow (CFS)	Total Flow (CFS)
1-Jan-16	0:00	0	0	0	0	0	0
1-Jan-16	0:05	0	0	0	0	0	0
1-Jan-16	0:10	0	0	0	0	0	0
1-Jan-16	0:15	0	0	0	0	0	0
1-Jan-16	0:20	0	0	0	0	0	0
1-Jan-16	0:25	0	0	0	0.1	0	0.1
1-Jan-16	0:30	0	0	0	0.1	0	0.1
1-Jan-16	0:35	0	0	0	0.1	0	0.1
1-Jan-16	0:40	0	0	0	0.1	0	0.1
1-Jan-16	0:45	0	0	0	0.1	0	0.1
1-Jan-16	0:50	0	0	0	0.1	0	0.1
1-Jan-16	0:55	0	0	0	0.1	0	0.1
1-Jan-16	1:00	0	0	0	0.1	0	0.1
1-Jan-16	1:05	0	0	0	0.1	0	0.1
1-Jan-16	1:10	0	0	0	0.1	0	0.1
1-Jan-16	1:15	0	0	0	0.1	0	0.1
1-Jan-16	1:20	0	0	0	0.1	0	0.1
1-Jan-16	1:25	0	0	0	0.1	0	0.1
1-Jan-16	1:30	0	0	0	0.1	0	0.1
1-Jan-16	1:35	0	0	0	0.1	0	0.1
1-Jan-16	1:40	0	0	0	0.1	0	0.1
1-Jan-16	1:45	0	0	0	0.1	0	0.1
1-Jan-16	1:50	0	0	0	0.1	0	0.1
1-Jan-16	1:55	0	0	0	0.1	0	0.1
1-Jan-16	2:00	0	0	0	0.1	0	0.1
1-Jan-16	2:05	0	0	0	0.1	0	0.1
1-Jan-16	2:10	0	0	0	0.1	0	0.1
1-Jan-16	2:15	0	0	0	0.1	0	0.1
1-Jan-16	2:20	0	0	0	0.1	0	0.1
1-Jan-16	2:25	0	0	0	0.1	0	0.1
1-Jan-16	2:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	2:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	2:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	2:45	0.01	0	0.01	0.1	0	0.1
1-Jan-16	2:50	0.01	0	0.01	0.1	0	0.1
1-Jan-16	2:55	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:00	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:05	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:45	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:50	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:55	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:00	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:05	0.01	0	0.01	0.1	0	0.1

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

1-Jan-16	4:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:45	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:50	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:55	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:00	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:05	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:45	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:50	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:55	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:00	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:05	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	6:30	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:05	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:25	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:30	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	8:05	0.01	0	0.01	0.3	0	0.3
1-Jan-16	8:10	0.01	0	0.01	0.3	0	0.3
1-Jan-16	8:15	0.01	0	0.01	0.3	0	0.3
1-Jan-16	8:20	0.01	0	0.01	0.3	0	0.3
1-Jan-16	8:25	0.01	0	0.01	0.3	0	0.3
1-Jan-16	8:30	0.01	0	0.01	0.3	0	0.3
1-Jan-16	8:35	0.01	0	0.01	0.3	0	0.3
1-Jan-16	8:40	0.01	0	0.01	0.3	0	0.3
1-Jan-16	8:45	0.02	0	0.02	0.3	0	0.3
1-Jan-16	8:50	0.02	0	0.02	0.3	0	0.3
1-Jan-16	8:55	0.02	0	0.02	0.3	0	0.3
1-Jan-16	9:00	0.02	0	0.02	0.3	0	0.3
1-Jan-16	9:05	0.02	0	0.02	0.3	0	0.3
1-Jan-16	9:10	0.02	0	0.02	0.3	0	0.3
1-Jan-16	9:15	0.02	0	0.02	0.3	0	0.3
1-Jan-16	9:20	0.02	0	0.02	0.3	0	0.3
1-Jan-16	9:25	0.02	0	0.02	0.3	0	0.3
1-Jan-16	9:30	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:35	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:40	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:45	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:50	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:55	0.02	0	0.02	0.4	0	0.4
1-Jan-16	10:00	0.01	0	0.01	0.3	0	0.3
1-Jan-16	10:05	0.01	0	0.01	0.3	0	0.3
1-Jan-16	10:10	0.01	0	0.01	0.3	0	0.3
1-Jan-16	10:15	0.01	0	0.01	0.3	0	0.3
1-Jan-16	10:20	0.01	0	0.01	0.3	0	0.3
1-Jan-16	10:25	0.01	0	0.01	0.3	0	0.3
1-Jan-16	10:30	0.02	0	0.02	0.3	0	0.3
1-Jan-16	10:35	0.02	0	0.02	0.3	0	0.3
1-Jan-16	10:40	0.02	0	0.02	0.3	0	0.3
1-Jan-16	10:45	0.02	0	0.02	0.3	0	0.3
1-Jan-16	10:50	0.02	0	0.02	0.4	0	0.4
1-Jan-16	10:55	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:00	0.02	0	0.02	0.3	0	0.3
1-Jan-16	11:05	0.02	0	0.02	0.3	0	0.3
1-Jan-16	11:10	0.02	0	0.02	0.3	0	0.3
1-Jan-16	11:15	0.02	0	0.02	0.3	0	0.3
1-Jan-16	11:20	0.02	0	0.02	0.3	0	0.3
1-Jan-16	11:25	0.02	0	0.02	0.3	0	0.3
1-Jan-16	11:30	0.02	0	0.02	0.3	0	0.3
1-Jan-16	11:35	0.02	0	0.02	0.3	0	0.3
1-Jan-16	11:40	0.02	0	0.02	0.3	0	0.3
1-Jan-16	11:45	0.02	0	0.02	0.3	0	0.3
1-Jan-16	11:50	0.02	0	0.02	0.3	0	0.3
1-Jan-16	11:55	0.02	0	0.02	0.3	0	0.3
1-Jan-16	12:00	0.02	0	0.02	0.4	0	0.4
1-Jan-16	12:05	0.02	0	0.02	0.4	0	0.4

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

1-Jan-16	12:10	0.02	0	0.02	0.4	0	0.4
1-Jan-16	12:15	0.02	0	0.02	0.4	0	0.4
1-Jan-16	12:20	0.02	0	0.02	0.4	0	0.4
1-Jan-16	12:25	0.02	0	0.02	0.4	0	0.4
1-Jan-16	12:30	0.03	0	0.03	0.5	0	0.5
1-Jan-16	12:35	0.03	0	0.03	0.5	0	0.5
1-Jan-16	12:40	0.03	0	0.03	0.5	0	0.5
1-Jan-16	12:45	0.03	0	0.03	0.5	0	0.5
1-Jan-16	12:50	0.03	0	0.03	0.5	0	0.5
1-Jan-16	12:55	0.03	0	0.03	0.5	0	0.5
1-Jan-16	13:00	0.03	0	0.03	0.5	0	0.5
1-Jan-16	13:05	0.03	0	0.03	0.6	0	0.6
1-Jan-16	13:10	0.03	0	0.03	0.6	0	0.6
1-Jan-16	13:15	0.03	0	0.03	0.6	0	0.6
1-Jan-16	13:20	0.03	0	0.03	0.6	0	0.6
1-Jan-16	13:25	0.03	0	0.03	0.6	0	0.6
1-Jan-16	13:30	0.02	0	0.02	0.5	0	0.5
1-Jan-16	13:35	0.02	0	0.02	0.4	0	0.4
1-Jan-16	13:40	0.02	0	0.02	0.4	0	0.4
1-Jan-16	13:45	0.02	0	0.02	0.4	0	0.4
1-Jan-16	13:50	0.02	0	0.02	0.4	0	0.4
1-Jan-16	13:55	0.02	0	0.02	0.4	0	0.4
1-Jan-16	14:00	0.03	0	0.03	0.4	0	0.4
1-Jan-16	14:05	0.03	0	0.03	0.4	0	0.4
1-Jan-16	14:10	0.03	0	0.03	0.5	0	0.5
1-Jan-16	14:15	0.02	0	0.02	0.5	0	0.5
1-Jan-16	14:20	0.02	0	0.02	0.5	0	0.5
1-Jan-16	14:25	0.02	0	0.02	0.5	0	0.5
1-Jan-16	14:30	0.02	0	0.02	0.5	0	0.5
1-Jan-16	14:35	0.02	0	0.02	0.5	0	0.5
1-Jan-16	14:40	0.02	0	0.02	0.5	0	0.5
1-Jan-16	14:45	0.02	0	0.02	0.4	0	0.4
1-Jan-16	14:50	0.02	0	0.02	0.4	0	0.4
1-Jan-16	14:55	0.02	0	0.02	0.4	0	0.4
1-Jan-16	15:00	0.02	0	0.02	0.4	0	0.4
1-Jan-16	15:05	0.02	0	0.02	0.4	0	0.4
1-Jan-16	15:10	0.02	0	0.02	0.4	0	0.4
1-Jan-16	15:15	0.02	0	0.02	0.4	0	0.4
1-Jan-16	15:20	0.02	0	0.02	0.4	0	0.4
1-Jan-16	15:25	0.02	0	0.02	0.4	0	0.4
1-Jan-16	15:30	0.02	0	0.02	0.4	0	0.4
1-Jan-16	15:35	0.02	0	0.02	0.3	0	0.3
1-Jan-16	15:40	0.02	0	0.02	0.3	0	0.3
1-Jan-16	15:45	0.02	0	0.02	0.3	0	0.3
1-Jan-16	15:50	0.02	0	0.02	0.3	0	0.3
1-Jan-16	15:55	0.02	0	0.02	0.3	0	0.3
1-Jan-16	16:00	0	0	0	0.2	0	0.2
1-Jan-16	16:05	0	0	0	0.1	0	0.1
1-Jan-16	16:10	0	0	0	0.1	0	0.1
1-Jan-16	16:15	0	0	0	0.1	0	0.1
1-Jan-16	16:20	0	0	0	0.1	0	0.1
1-Jan-16	16:25	0	0	0	0.1	0	0.1
1-Jan-16	16:30	0	0	0	0.1	0	0.1
1-Jan-16	16:35	0	0	0	0.1	0	0.1
1-Jan-16	16:40	0	0	0	0.1	0	0.1
1-Jan-16	16:45	0	0	0	0.1	0	0.1
1-Jan-16	16:50	0	0	0	0.1	0	0.1
1-Jan-16	16:55	0	0	0	0.1	0	0.1
1-Jan-16	17:00	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:05	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:45	0	0	0	0.1	0	0.1
1-Jan-16	17:50	0	0	0	0.1	0	0.1
1-Jan-16	17:55	0	0	0	0.1	0	0.1
1-Jan-16	18:00	0	0	0	0.1	0	0.1
1-Jan-16	18:05	0	0	0	0.1	0	0.1
1-Jan-16	18:10	0	0	0	0.1	0	0.1
1-Jan-16	18:15	0	0	0	0.1	0	0.1
1-Jan-16	18:20	0	0	0	0.1	0	0.1
1-Jan-16	18:25	0	0	0	0.1	0	0.1
1-Jan-16	18:30	0	0	0	0.1	0	0.1
1-Jan-16	18:35	0	0	0	0.1	0	0.1
1-Jan-16	18:40	0	0	0	0.1	0	0.1
1-Jan-16	18:45	0	0	0	0.1	0	0.1
1-Jan-16	18:50	0	0	0	0	0	0
1-Jan-16	18:55	0	0	0	0	0	0
1-Jan-16	19:00	0	0	0	0	0	0
1-Jan-16	19:05	0	0	0	0.1	0	0.1
1-Jan-16	19:10	0	0	0	0.1	0	0.1
1-Jan-16	19:15	0	0	0	0.1	0	0.1
1-Jan-16	19:20	0	0	0	0.1	0	0.1
1-Jan-16	19:25	0	0	0	0.1	0	0.1
1-Jan-16	19:30	0	0	0	0.1	0	0.1
1-Jan-16	19:35	0	0	0	0.1	0	0.1
1-Jan-16	19:40	0	0	0	0.1	0	0.1
1-Jan-16	19:45	0	0	0	0.1	0	0.1
1-Jan-16	19:50	0	0	0	0	0	0
1-Jan-16	19:55	0	0	0	0	0	0
1-Jan-16	20:00	0	0	0	0	0	0
1-Jan-16	20:05	0	0	0	0.1	0	0.1

1-Jan-16	20:10	0	0	0	0.1	0	0.1
1-Jan-16	20:15	0	0	0	0.1	0	0.1
1-Jan-16	20:20	0	0	0	0.1	0	0.1
1-Jan-16	20:25	0	0	0	0.1	0	0.1
1-Jan-16	20:30	0	0	0	0.1	0	0.1
1-Jan-16	20:35	0	0	0	0.1	0	0.1
1-Jan-16	20:40	0	0	0	0.1	0	0.1
1-Jan-16	20:45	0	0	0	0	0	0
1-Jan-16	20:50	0	0	0	0	0	0
1-Jan-16	20:55	0	0	0	0	0	0
1-Jan-16	21:00	0	0	0	0	0	0
1-Jan-16	21:05	0	0	0	0.1	0	0.1
1-Jan-16	21:10	0	0	0	0.1	0	0.1
1-Jan-16	21:15	0	0	0	0	0	0
1-Jan-16	21:20	0	0	0	0	0	0
1-Jan-16	21:25	0	0	0	0	0	0
1-Jan-16	21:30	0	0	0	0	0	0
1-Jan-16	21:35	0	0	0	0.1	0	0.1
1-Jan-16	21:40	0	0	0	0.1	0	0.1
1-Jan-16	21:45	0	0	0	0	0	0
1-Jan-16	21:50	0	0	0	0	0	0
1-Jan-16	21:55	0	0	0	0	0	0
1-Jan-16	22:00	0	0	0	0	0	0
1-Jan-16	22:05	0	0	0	0.1	0	0.1
1-Jan-16	22:10	0	0	0	0.1	0	0.1
1-Jan-16	22:15	0	0	0	0	0	0
1-Jan-16	22:20	0	0	0	0	0	0
1-Jan-16	22:25	0	0	0	0	0	0
1-Jan-16	22:30	0	0	0	0	0	0
1-Jan-16	22:35	0	0	0	0	0	0
1-Jan-16	22:40	0	0	0	0	0	0
1-Jan-16	22:45	0	0	0	0	0	0
1-Jan-16	22:50	0	0	0	0	0	0
1-Jan-16	22:55	0	0	0	0	0	0
1-Jan-16	23:00	0	0	0	0	0	0
1-Jan-16	23:05	0	0	0	0	0	0
1-Jan-16	23:10	0	0	0	0	0	0
1-Jan-16	23:15	0	0	0	0	0	0
1-Jan-16	23:20	0	0	0	0	0	0
1-Jan-16	23:25	0	0	0	0	0	0
1-Jan-16	23:30	0	0	0	0	0	0
1-Jan-16	23:35	0	0	0	0	0	0
1-Jan-16	23:40	0	0	0	0	0	0
1-Jan-16	23:45	0	0	0	0	0	0
1-Jan-16	23:50	0	0	0	0	0	0
1-Jan-16	23:55	0	0	0	0	0	0
2-Jan-16	0:00	0	0	0	0	0	0

10-year 1-hour storm for Developed Site:

Project: Moreno Valley BCE 18501 Subbasin: Developed Basin				Simulation Run: Dev 10yr 1hr				Project: Moreno Valley BCE 18501 Subbasin: Site A				Simulation Run: 10yr 1hr			
Start of Run: 01Jan2016, 00:00				Basin Model: Developed 1				Start of Run: 01Jan2016, 00:00				Basin Model: Watershed A			
End of Run: 01Jan2016, 01:00				Meteorologic Model: dev 10y 01h				End of Run: 01Jan2016, 01:00				Meteorologic Model: 10y 01hr			
Compute Time: 28Mar2018, 14:30:04				Control Specifications: 01				Compute Time: 28Mar2018, 15:36:19				Control Specifications: 01			
Volume Units: <input checked="" type="radio"/> IN <input type="radio"/> AC-FT								Volume Units: <input type="radio"/> IN <input checked="" type="radio"/> AC-FT							
<b>Computed Results</b> Peak Discharge: 2.6 (CFS)    Date/Time of Peak Discharge: 01Jan2016, 00:50 Precipitation Volume: 0.82 (IN)    Direct Runoff Volume: 0.69 (IN) Loss Volume: 0.00 (IN)    Baseflow Volume: 0.00 (IN) Excess Volume: 0.82 (IN)    Discharge Volume: 0.69 (IN)								<b>Computed Results</b> Peak Discharge: 2.8 (CFS)    Date/Time of Peak Discharge: 01Jan2016, 00:55 Precipitation Volume: 0.1 (AC-FT)    Direct Runoff Volume: 0.1 (AC-FT) Loss Volume: 0.0 (AC-FT)    Baseflow Volume: 0.0 (AC-FT) Excess Volume: 0.1 (AC-FT)    Discharge Volume: 0.1 (AC-FT)							

Date	Time	Precip (IN)	Loss (IN)	Excess (IN)	Direct Flow (CFS)	Baseflow (CFS)	Total Flow (CFS)
1-Jan-16	0:00				0	0	0
1-Jan-16	0:05	0.03	0	0.03	0.2	0	0.2
1-Jan-16	0:10	0.04	0	0.04	0.5	0	0.5
1-Jan-16	0:15	0.04	0	0.04	0.6	0	0.6
1-Jan-16	0:20	0.04	0	0.04	0.7	0	0.7
1-Jan-16	0:25	0.04	0	0.04	0.8	0	0.8
1-Jan-16	0:30	0.05	0	0.05	0.9	0	0.9
1-Jan-16	0:35	0.06	0	0.06	1	0	1
1-Jan-16	0:40	0.07	0	0.07	1.1	0	1.1
1-Jan-16	0:45	0.1	0	0.1	1.5	0	1.5
1-Jan-16	0:50	0.23	0	0.23	2.6	0	2.6
1-Jan-16	0:55	0.06	0	0.06	2.3	0	2.3
1-Jan-16	1:00	0.04	0	0.04	1.4	0	1.4

10-year 3-hour storm for Developed Site:

Project: Moreno Valley BCE 18501 Subbasin: Developed Basin				Simulation Run: Dev 10yr 3hr				Project: Moreno Valley BCE 18501 Subbasin: Site A				Simulation Run: 10yr 3hr			
Start of Run: 01Jan2016, 00:00				Basin Model: Developed 1				Start of Run: 01Jan2016, 00:00				Basin Model: Watershed A			
End of Run: 01Jan2016, 03:00				Meteorologic Model: dev 10y 03h				End of Run: 01Jan2016, 03:00				Meteorologic Model: 10y 03hr			
Compute Time: 28Mar2018, 14:30:11				Control Specifications: 03				Compute Time: 28Mar2018, 15:36:27				Control Specifications: 03			
Volume Units: <input checked="" type="radio"/> IN <input type="radio"/> AC-FT								Volume Units: <input type="radio"/> IN <input checked="" type="radio"/> AC-FT							
<b>Computed Results</b> Peak Discharge: 1.8 (CFS)    Date/Time of Peak Discharge: 01Jan2016, 02:35 Precipitation Volume: 1.35 (IN)    Direct Runoff Volume: 1.31 (IN) Loss Volume: 0.00 (IN)    Baseflow Volume: 0.00 (IN) Excess Volume: 1.35 (IN)    Discharge Volume: 1.31 (IN)								<b>Computed Results</b> Peak Discharge: 1.8 (CFS)    Date/Time of Peak Discharge: 01Jan2016, 02:40 Precipitation Volume: 0.2 (AC-FT)    Direct Runoff Volume: 0.2 (AC-FT) Loss Volume: 0.0 (AC-FT)    Baseflow Volume: 0.0 (AC-FT) Excess Volume: 0.2 (AC-FT)    Discharge Volume: 0.2 (AC-FT)							

Date	Time	Precip (IN)	Loss (IN)	Excess (IN)	Direct Flow (CFS)	Baseflow (CFS)	Total Flow (CFS)
1-Jan-16	0:00				0	0	0

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



1-Jan-16	0:05	0.02	0	0.02	0.1	0	0.1
1-Jan-16	0:10	0.02	0	0.02	0.2	0	0.2
1-Jan-16	0:15	0.01	0	0.01	0.3	0	0.3
1-Jan-16	0:20	0.02	0	0.02	0.3	0	0.3
1-Jan-16	0:25	0.02	0	0.02	0.3	0	0.3
1-Jan-16	0:30	0.02	0	0.02	0.4	0	0.4
1-Jan-16	0:35	0.02	0	0.02	0.4	0	0.4
1-Jan-16	0:40	0.02	0	0.02	0.4	0	0.4
1-Jan-16	0:45	0.02	0	0.02	0.4	0	0.4
1-Jan-16	0:50	0.02	0	0.02	0.4	0	0.4
1-Jan-16	0:55	0.02	0	0.02	0.4	0	0.4
1-Jan-16	1:00	0.02	0	0.02	0.4	0	0.4
1-Jan-16	1:05	0.03	0	0.03	0.5	0	0.5
1-Jan-16	1:10	0.03	0	0.03	0.5	0	0.5
1-Jan-16	1:15	0.03	0	0.03	0.5	0	0.5
1-Jan-16	1:20	0.03	0	0.03	0.5	0	0.5
1-Jan-16	1:25	0.04	0	0.04	0.6	0	0.6
1-Jan-16	1:30	0.04	0	0.04	0.6	0	0.6
1-Jan-16	1:35	0.03	0	0.03	0.6	0	0.6
1-Jan-16	1:40	0.04	0	0.04	0.6	0	0.6
1-Jan-16	1:45	0.04	0	0.04	0.7	0	0.7
1-Jan-16	1:50	0.04	0	0.04	0.8	0	0.8
1-Jan-16	1:55	0.04	0	0.04	0.7	0	0.7
1-Jan-16	2:00	0.04	0	0.04	0.7	0	0.7
1-Jan-16	2:05	0.04	0	0.04	0.8	0	0.8
1-Jan-16	2:10	0.06	0	0.06	0.9	0	0.9
1-Jan-16	2:15	0.07	0	0.07	1.1	0	1.1
1-Jan-16	2:20	0.05	0	0.05	1	0	1
1-Jan-16	2:25	0.09	0	0.09	1.3	0	1.3
1-Jan-16	2:30	0.1	0	0.1	1.6	0	1.6
1-Jan-16	2:35	0.11	0	0.11	1.8	0	1.8
1-Jan-16	2:40	0.08	0	0.08	1.7	0	1.7
1-Jan-16	2:45	0.03	0	0.03	1.2	0	1.2
1-Jan-16	2:50	0.02	0	0.02	0.8	0	0.8
1-Jan-16	2:55	0.02	0	0.02	0.6	0	0.6
1-Jan-16	3:00	0.01	0	0.01	0.5	0	0.5

10-year 6-hour storm for Developed Site:

Project: Moreno Valley BCE 18501    Simulation Run: Dev 10yr 6hr Subbasin: Developed Basin		Project: Moreno Valley BCE 18501    Simulation Run: 10yr 6hr Subbasin: Site A	
Start of Run: 01Jan2016, 00:00 End of Run: 01Jan2016, 06:00 Compute Time: 28Mar2018, 14:30:14	Basin Model: Developed 1 Meteorologic Model: dev 10y 06h Control Specifications: 06	Start of Run: 01Jan2016, 00:00 End of Run: 01Jan2016, 06:00 Compute Time: 28Mar2018, 15:36:30	Basin Model: Watershed A Meteorologic Model: 10y 06h Control Specifications: 06
Volume Units: <input checked="" type="radio"/> IN <input type="radio"/> AC-FT		Volume Units: <input type="radio"/> IN <input checked="" type="radio"/> AC-FT	
<b>Computed Results</b> Peak Discharge: 1.7 (CFS)    Date/Time of Peak Discharge: 01Jan2016, 05:30 Precipitation Volume: 1.87 (IN)    Direct Runoff Volume: 1.85 (IN) Loss Volume: 0.00 (IN)    Baseflow Volume: 0.00 (IN) Excess Volume: 1.87 (IN)    Discharge Volume: 1.85 (IN)		<b>Computed Results</b> Peak Discharge: 1.7 (CFS)    Date/Time of Peak Discharge: 01Jan2016, 05:30 Precipitation Volume: 0.2 (AC-FT)    Direct Runoff Volume: 0.2 (AC-FT) Loss Volume: 0.0 (AC-FT)    Baseflow Volume: 0.0 (AC-FT) Excess Volume: 0.2 (AC-FT)    Discharge Volume: 0.2 (AC-FT)	

Date	Time	Precip (IN)	Loss (IN)	Excess (IN)	Direct Flow (CFS)	Baseflow (CFS)	Total Flow (CFS)
1-Jan-16	0:00				0	0	0
1-Jan-16	0:05	0.01	0	0.01	0.1	0	0.1
1-Jan-16	0:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	0:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:25	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:30	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	0:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	1:05	0.01	0	0.01	0.3	0	0.3
1-Jan-16	1:10	0.01	0	0.01	0.3	0	0.3
1-Jan-16	1:15	0.01	0	0.01	0.3	0	0.3
1-Jan-16	1:20	0.01	0	0.01	0.3	0	0.3
1-Jan-16	1:25	0.01	0	0.01	0.3	0	0.3
1-Jan-16	1:30	0.01	0	0.01	0.3	0	0.3
1-Jan-16	1:35	0.01	0	0.01	0.3	0	0.3
1-Jan-16	1:40	0.01	0	0.01	0.3	0	0.3
1-Jan-16	1:45	0.01	0	0.01	0.3	0	0.3
1-Jan-16	1:50	0.01	0	0.01	0.3	0	0.3
1-Jan-16	1:55	0.01	0	0.01	0.3	0	0.3
1-Jan-16	2:00	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:05	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:10	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:15	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:20	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:25	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:30	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:35	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:40	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:45	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:50	0.02	0	0.02	0.3	0	0.3
1-Jan-16	2:55	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:00	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:05	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:10	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:15	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:20	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:25	0.02	0	0.02	0.4	0	0.4

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

1-Jan-16	3:30	0.02	0	0.02	0.4	0	0.4
1-Jan-16	3:35	0.03	0	0.03	0.4	0	0.4
1-Jan-16	3:40	0.03	0	0.03	0.5	0	0.5
1-Jan-16	3:45	0.03	0	0.03	0.5	0	0.5
1-Jan-16	3:50	0.03	0	0.03	0.5	0	0.5
1-Jan-16	3:55	0.03	0	0.03	0.5	0	0.5
1-Jan-16	4:00	0.03	0	0.03	0.5	0	0.5
1-Jan-16	4:05	0.03	0	0.03	0.6	0	0.6
1-Jan-16	4:10	0.03	0	0.03	0.6	0	0.6
1-Jan-16	4:15	0.04	0	0.04	0.6	0	0.6
1-Jan-16	4:20	0.04	0	0.04	0.7	0	0.7
1-Jan-16	4:25	0.04	0	0.04	0.7	0	0.7
1-Jan-16	4:30	0.04	0	0.04	0.7	0	0.7
1-Jan-16	4:35	0.04	0	0.04	0.7	0	0.7
1-Jan-16	4:40	0.04	0	0.04	0.8	0	0.8
1-Jan-16	4:45	0.04	0	0.04	0.8	0	0.8
1-Jan-16	4:50	0.04	0	0.04	0.8	0	0.8
1-Jan-16	4:55	0.05	0	0.05	0.8	0	0.8
1-Jan-16	5:00	0.05	0	0.05	0.9	0	0.9
1-Jan-16	5:05	0.06	0	0.06	1	0	1
1-Jan-16	5:10	0.07	0	0.07	1.1	0	1.1
1-Jan-16	5:15	0.07	0	0.07	1.2	0	1.2
1-Jan-16	5:20	0.08	0	0.08	1.3	0	1.3
1-Jan-16	5:25	0.09	0	0.09	1.5	0	1.5
1-Jan-16	5:30	0.1	0	0.1	1.7	0	1.7
1-Jan-16	5:35	0.04	0	0.04	1.3	0	1.3
1-Jan-16	5:40	0.02	0	0.02	0.8	0	0.8
1-Jan-16	5:45	0.01	0	0.01	0.5	0	0.5
1-Jan-16	5:50	0.01	0	0.01	0.4	0	0.4
1-Jan-16	5:55	0.01	0	0.01	0.3	0	0.3
1-Jan-16	6:00	0	0	0	0.2	0	0.2

10-year 24-hour storm for Developed Site:

Project: Moreno Valley BCE 18501		Simulation Run: Dev 10yr 24hr		Project: Moreno Valley BCE 18501		Simulation Run: 10yr 24hr	
Subbasin: Developed Basin				Subbasin: Site A			
Start of Run: 01Jan2016, 00:00	Basin Model: Developed 1	End of Run: 02Jan2016, 00:00	Meteorologic Model: dev 10y 24h	Start of Run: 01Jan2016, 00:00	Basin Model: Watershed A	End of Run: 02Jan2016, 00:00	Meteorologic Model: 10y 24h
Compute Time: 28Mar2018, 14:30:08	Control Specifications: 24	Compute Time: 28Mar2018, 15:36:24	Control Specifications: 24	Compute Time: 28Mar2018, 15:36:24	Control Specifications: 24	Compute Time: 28Mar2018, 15:36:24	Control Specifications: 24
Volume Units: <input checked="" type="radio"/> IN <input type="radio"/> AC-FT				Volume Units: <input type="radio"/> IN <input checked="" type="radio"/> AC-FT			
<b>Computed Results</b>				<b>Computed Results</b>			
Peak Discharge: 0.7 (CFS)	Date/Time of Peak Discharge: 01Jan2016, 13:30	Peak Discharge: 0.7 (CFS)	Date/Time of Peak Discharge: 01Jan2016, 13:30	Peak Discharge: 0.4 (AC-FT)	Date/Time of Peak Discharge: 01Jan2016, 13:30	Peak Discharge: 0.4 (AC-FT)	Date/Time of Peak Discharge: 01Jan2016, 13:30
Precipitation Volume: 3.31 (IN)	Direct Runoff Volume: 3.31 (IN)	Precipitation Volume: 0.4 (AC-FT)	Direct Runoff Volume: 0.4 (AC-FT)	Precipitation Volume: 0.4 (AC-FT)	Direct Runoff Volume: 0.4 (AC-FT)	Precipitation Volume: 0.4 (AC-FT)	Direct Runoff Volume: 0.4 (AC-FT)
Loss Volume: 0.00 (IN)	Baseflow Volume: 0.00 (IN)	Loss Volume: 0.0 (AC-FT)	Baseflow Volume: 0.0 (AC-FT)	Loss Volume: 0.0 (AC-FT)	Baseflow Volume: 0.0 (AC-FT)	Loss Volume: 0.0 (AC-FT)	Baseflow Volume: 0.0 (AC-FT)
Excess Volume: 3.31 (IN)	Discharge Volume: 3.31 (IN)	Excess Volume: 0.4 (AC-FT)	Discharge Volume: 0.4 (AC-FT)	Excess Volume: 0.4 (AC-FT)	Discharge Volume: 0.4 (AC-FT)	Excess Volume: 0.4 (AC-FT)	Discharge Volume: 0.4 (AC-FT)

Date	Time	Precip (IN)	Loss (IN)	Excess (IN)	Direct Flow (CFS)	Baseflow (CFS)	Total Flow (CFS)
1-Jan-16	0:00				0	0	0
1-Jan-16	0:05	0	0	0	0	0	0
1-Jan-16	0:10	0	0	0	0	0	0
1-Jan-16	0:15	0	0	0	0	0	0
1-Jan-16	0:20	0	0	0	0	0	0
1-Jan-16	0:25	0	0	0	0	0	0
1-Jan-16	0:30	0	0	0	0.1	0	0.1
1-Jan-16	0:35	0	0	0	0.1	0	0.1
1-Jan-16	0:40	0	0	0	0.1	0	0.1
1-Jan-16	0:45	0	0	0	0.1	0	0.1
1-Jan-16	0:50	0	0	0	0.1	0	0.1
1-Jan-16	0:55	0	0	0	0.1	0	0.1
1-Jan-16	1:00	0	0	0	0.1	0	0.1
1-Jan-16	1:05	0	0	0	0.1	0	0.1
1-Jan-16	1:10	0	0	0	0.1	0	0.1
1-Jan-16	1:15	0	0	0	0.1	0	0.1
1-Jan-16	1:20	0	0	0	0.1	0	0.1
1-Jan-16	1:25	0	0	0	0.1	0	0.1
1-Jan-16	1:30	0	0	0	0.1	0	0.1
1-Jan-16	1:35	0	0	0	0.1	0	0.1
1-Jan-16	1:40	0	0	0	0.1	0	0.1
1-Jan-16	1:45	0	0	0	0.1	0	0.1
1-Jan-16	1:50	0	0	0	0.1	0	0.1
1-Jan-16	1:55	0	0	0	0.1	0	0.1
1-Jan-16	2:00	0	0	0	0.1	0	0.1
1-Jan-16	2:05	0	0	0	0.1	0	0.1
1-Jan-16	2:10	0	0	0	0.1	0	0.1
1-Jan-16	2:15	0	0	0	0.1	0	0.1
1-Jan-16	2:20	0	0	0	0.1	0	0.1
1-Jan-16	2:25	0	0	0	0.1	0	0.1
1-Jan-16	2:30	0	0	0	0.1	0	0.1
1-Jan-16	2:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	2:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	2:45	0.01	0	0.01	0.1	0	0.1
1-Jan-16	2:50	0.01	0	0.01	0.1	0	0.1
1-Jan-16	2:55	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:00	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:05	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:40	0.01	0	0.01	0.1	0	0.1

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1-Jan-16	3:45	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:50	0.01	0	0.01	0.1	0	0.1
1-Jan-16	3:55	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:00	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:05	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:45	0.01	0	0.01	0.1	0	0.1
1-Jan-16	4:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	4:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	5:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	5:05	0.01	0	0.01	0.2	0	0.2
1-Jan-16	5:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	5:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	5:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	5:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	5:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	5:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:05	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:25	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:30	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	6:55	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:00	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:05	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:10	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:15	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:20	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:25	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:30	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:35	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:40	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:45	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:50	0.01	0	0.01	0.2	0	0.2
1-Jan-16	7:55	0.01	0	0.01	0.3	0	0.3
1-Jan-16	8:00	0.01	0	0.01	0.3	0	0.3
1-Jan-16	8:05	0.02	0	0.02	0.3	0	0.3
1-Jan-16	8:10	0.02	0	0.02	0.3	0	0.3
1-Jan-16	8:15	0.02	0	0.02	0.3	0	0.3
1-Jan-16	8:20	0.02	0	0.02	0.3	0	0.3
1-Jan-16	8:25	0.02	0	0.02	0.3	0	0.3
1-Jan-16	8:30	0.02	0	0.02	0.3	0	0.3
1-Jan-16	8:35	0.02	0	0.02	0.3	0	0.3
1-Jan-16	8:40	0.02	0	0.02	0.3	0	0.3
1-Jan-16	8:45	0.02	0	0.02	0.3	0	0.3
1-Jan-16	8:50	0.02	0	0.02	0.3	0	0.3
1-Jan-16	8:55	0.02	0	0.02	0.3	0	0.3
1-Jan-16	9:00	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:05	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:10	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:15	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:20	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:25	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:30	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:35	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:40	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:45	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:50	0.02	0	0.02	0.4	0	0.4
1-Jan-16	9:55	0.02	0	0.02	0.4	0	0.4
1-Jan-16	10:00	0.02	0	0.02	0.4	0	0.4
1-Jan-16	10:05	0.02	0	0.02	0.4	0	0.4
1-Jan-16	10:10	0.02	0	0.02	0.4	0	0.4
1-Jan-16	10:15	0.02	0	0.02	0.3	0	0.3
1-Jan-16	10:20	0.02	0	0.02	0.3	0	0.3
1-Jan-16	10:25	0.02	0	0.02	0.3	0	0.3
1-Jan-16	10:30	0.02	0	0.02	0.3	0	0.3
1-Jan-16	10:35	0.02	0	0.02	0.4	0	0.4
1-Jan-16	10:40	0.02	0	0.02	0.4	0	0.4
1-Jan-16	10:45	0.02	0	0.02	0.4	0	0.4
1-Jan-16	10:50	0.02	0	0.02	0.4	0	0.4
1-Jan-16	10:55	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:00	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:05	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:10	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:15	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:20	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:25	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:30	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:35	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:40	0.02	0	0.02	0.4	0	0.4

Attachment: Appendix H - Preliminary Drainage Report (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

1-Jan-16	11:45	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:50	0.02	0	0.02	0.4	0	0.4
1-Jan-16	11:55	0.02	0	0.02	0.4	0	0.4
1-Jan-16	12:00	0.02	0	0.02	0.4	0	0.4
1-Jan-16	12:05	0.03	0	0.03	0.4	0	0.4
1-Jan-16	12:10	0.03	0	0.03	0.5	0	0.5
1-Jan-16	12:15	0.03	0	0.03	0.5	0	0.5
1-Jan-16	12:20	0.03	0	0.03	0.5	0	0.5
1-Jan-16	12:25	0.03	0	0.03	0.5	0	0.5
1-Jan-16	12:30	0.03	0	0.03	0.5	0	0.5
1-Jan-16	12:35	0.03	0	0.03	0.6	0	0.6
1-Jan-16	12:40	0.03	0	0.03	0.6	0	0.6
1-Jan-16	12:45	0.03	0	0.03	0.6	0	0.6
1-Jan-16	12:50	0.03	0	0.03	0.6	0	0.6
1-Jan-16	12:55	0.03	0	0.03	0.6	0	0.6
1-Jan-16	13:00	0.03	0	0.03	0.6	0	0.6
1-Jan-16	13:05	0.04	0	0.04	0.6	0	0.6
1-Jan-16	13:10	0.04	0	0.04	0.7	0	0.7
1-Jan-16	13:15	0.04	0	0.04	0.7	0	0.7
1-Jan-16	13:20	0.04	0	0.04	0.7	0	0.7
1-Jan-16	13:25	0.04	0	0.04	0.7	0	0.7
1-Jan-16	13:30	0.04	0	0.04	0.7	0	0.7
1-Jan-16	13:35	0.03	0	0.03	0.6	0	0.6
1-Jan-16	13:40	0.03	0	0.03	0.5	0	0.5
1-Jan-16	13:45	0.03	0	0.03	0.5	0	0.5
1-Jan-16	13:50	0.03	0	0.03	0.5	0	0.5
1-Jan-16	13:55	0.03	0	0.03	0.5	0	0.5
1-Jan-16	14:00	0.03	0	0.03	0.5	0	0.5
1-Jan-16	14:05	0.03	0	0.03	0.5	0	0.5
1-Jan-16	14:10	0.03	0	0.03	0.5	0	0.5
1-Jan-16	14:15	0.03	0	0.03	0.6	0	0.6
1-Jan-16	14:20	0.03	0	0.03	0.5	0	0.5
1-Jan-16	14:25	0.03	0	0.03	0.5	0	0.5
1-Jan-16	14:30	0.03	0	0.03	0.5	0	0.5
1-Jan-16	14:35	0.03	0	0.03	0.5	0	0.5
1-Jan-16	14:40	0.03	0	0.03	0.5	0	0.5
1-Jan-16	14:45	0.03	0	0.03	0.5	0	0.5
1-Jan-16	14:50	0.03	0	0.03	0.5	0	0.5
1-Jan-16	14:55	0.03	0	0.03	0.5	0	0.5
1-Jan-16	15:00	0.03	0	0.03	0.5	0	0.5
1-Jan-16	15:05	0.03	0	0.03	0.5	0	0.5
1-Jan-16	15:10	0.03	0	0.03	0.5	0	0.5
1-Jan-16	15:15	0.03	0	0.03	0.5	0	0.5
1-Jan-16	15:20	0.03	0	0.03	0.5	0	0.5
1-Jan-16	15:25	0.03	0	0.03	0.5	0	0.5
1-Jan-16	15:30	0.03	0	0.03	0.5	0	0.5
1-Jan-16	15:35	0.02	0	0.02	0.5	0	0.5
1-Jan-16	15:40	0.02	0	0.02	0.4	0	0.4
1-Jan-16	15:45	0.02	0	0.02	0.4	0	0.4
1-Jan-16	15:50	0.02	0	0.02	0.4	0	0.4
1-Jan-16	15:55	0.02	0	0.02	0.4	0	0.4
1-Jan-16	16:00	0.02	0	0.02	0.4	0	0.4
1-Jan-16	16:05	0	0	0	0.3	0	0.3
1-Jan-16	16:10	0	0	0	0.2	0	0.2
1-Jan-16	16:15	0	0	0	0.1	0	0.1
1-Jan-16	16:20	0	0	0	0.1	0	0.1
1-Jan-16	16:25	0	0	0	0.1	0	0.1
1-Jan-16	16:30	0	0	0	0.1	0	0.1
1-Jan-16	16:35	0	0	0	0.1	0	0.1
1-Jan-16	16:40	0	0	0	0.1	0	0.1
1-Jan-16	16:45	0	0	0	0.1	0	0.1
1-Jan-16	16:50	0	0	0	0.1	0	0.1
1-Jan-16	16:55	0	0	0	0.1	0	0.1
1-Jan-16	17:00	0	0	0	0.1	0	0.1
1-Jan-16	17:05	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:10	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:15	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:20	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:25	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:30	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:35	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:40	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:45	0.01	0	0.01	0.1	0	0.1
1-Jan-16	17:50	0	0	0	0.1	0	0.1
1-Jan-16	17:55	0	0	0	0.1	0	0.1
1-Jan-16	18:00	0	0	0	0.1	0	0.1
1-Jan-16	18:05	0	0	0	0.1	0	0.1
1-Jan-16	18:10	0	0	0	0.1	0	0.1
1-Jan-16	18:15	0	0	0	0.1	0	0.1
1-Jan-16	18:20	0	0	0	0.1	0	0.1
1-Jan-16	18:25	0	0	0	0.1	0	0.1
1-Jan-16	18:30	0	0	0	0.1	0	0.1
1-Jan-16	18:35	0	0	0	0.1	0	0.1
1-Jan-16	18:40	0	0	0	0.1	0	0.1
1-Jan-16	18:45	0	0	0	0.1	0	0.1
1-Jan-16	18:50	0	0	0	0.1	0	0.1
1-Jan-16	18:55	0	0	0	0	0	0
1-Jan-16	19:00	0	0	0	0	0	0
1-Jan-16	19:05	0	0	0	0	0	0
1-Jan-16	19:10	0	0	0	0.1	0	0.1
1-Jan-16	19:15	0	0	0	0.1	0	0.1
1-Jan-16	19:20	0	0	0	0.1	0	0.1
1-Jan-16	19:25	0	0	0	0.1	0	0.1
1-Jan-16	19:30	0	0	0	0.1	0	0.1
1-Jan-16	19:35	0	0	0	0.1	0	0.1
1-Jan-16	19:40	0	0	0	0.1	0	0.1

1-Jan-16	19:45	0	0	0	0.1	0	0.1
1-Jan-16	19:50	0	0	0	0.1	0	0.1
1-Jan-16	19:55	0	0	0	0	0	0
1-Jan-16	20:00	0	0	0	0	0	0
1-Jan-16	20:05	0	0	0	0	0	0
1-Jan-16	20:10	0	0	0	0.1	0	0.1
1-Jan-16	20:15	0	0	0	0.1	0	0.1
1-Jan-16	20:20	0	0	0	0.1	0	0.1
1-Jan-16	20:25	0	0	0	0.1	0	0.1
1-Jan-16	20:30	0	0	0	0.1	0	0.1
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1-Jan-16	20:55	0	0	0	0	0	0
1-Jan-16	21:00	0	0	0	0	0	0
1-Jan-16	21:05	0	0	0	0	0	0
1-Jan-16	21:10	0	0	0	0.1	0	0.1
1-Jan-16	21:15	0	0	0	0.1	0	0.1
1-Jan-16	21:20	0	0	0	0	0	0
1-Jan-16	21:25	0	0	0	0	0	0
1-Jan-16	21:30	0	0	0	0	0	0
1-Jan-16	21:35	0	0	0	0	0	0
1-Jan-16	21:40	0	0	0	0.1	0	0.1
1-Jan-16	21:45	0	0	0	0.1	0	0.1
1-Jan-16	21:50	0	0	0	0	0	0
1-Jan-16	21:55	0	0	0	0	0	0
1-Jan-16	22:00	0	0	0	0	0	0
1-Jan-16	22:05	0	0	0	0	0	0
1-Jan-16	22:10	0	0	0	0.1	0	0.1
1-Jan-16	22:15	0	0	0	0.1	0	0.1
1-Jan-16	22:20	0	0	0	0	0	0
1-Jan-16	22:25	0	0	0	0	0	0
1-Jan-16	22:30	0	0	0	0	0	0
1-Jan-16	22:35	0	0	0	0	0	0
1-Jan-16	22:40	0	0	0	0	0	0
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1-Jan-16	23:00	0	0	0	0	0	0
1-Jan-16	23:05	0	0	0	0	0	0
1-Jan-16	23:10	0	0	0	0	0	0
1-Jan-16	23:15	0	0	0	0	0	0
1-Jan-16	23:20	0	0	0	0	0	0
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1-Jan-16	23:35	0	0	0	0	0	0
1-Jan-16	23:40	0	0	0	0	0	0
1-Jan-16	23:45	0	0	0	0	0	0
1-Jan-16	23:50	0	0	0	0	0	0
1-Jan-16	23:55	0	0	0	0	0	0
2-Jan-16	0:00	0	0	0	0	0	0

# NOISE AND VIBRATION IMPACT ANALYSIS

AM/PM GASOLINE SERVICE STATION  
CITY OF MORENO VALLEY, RIVERSIDE COUNTY, CALIFORNIA



November 2017

# NOISE AND VIBRATION IMPACT ANALYSIS

## AM/PM GASOLINE SERVICE STATION CITY OF MORENO VALLEY, RIVERSIDE COUNTY, CALIFORNIA

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Project No. SAT1701



November 2017

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## LIST OF ABBREVIATIONS AND ACRONYMS

$\mu\text{in}/\text{sec}$	microinches per second
APN	Accessor's Parcel Number
ADT	average daily traffic
CEQA	California Environmental Quality Act
City	City of Moreno Valley
CNEL	Community Noise Equivalent Level
dB	decibels
dba	A-weighted decibels
FHWA	Federal Highway Administration
ft	foot/feet
FTA	Federal Transit Administration
HP	horsepower
HVAC	heating, ventilation, and air conditioning
Hz	Hertz
in/sec	inches per second
kVA	kilovolt-amperes
$L_{dn}$	day-night average noise level
$L_{eq}$	equivalent continuous sound level
$L_{max}$	maximum instantaneous noise level
$L_{min}$	minimum instantaneous noise level
LSA	LSA Associates, Inc.
$L_v$	velocity in decibels
MPDs	multiple product dispensers
PPV	peak particle velocity
project	Sater ARCO AM/PM Gas Station
RCNM	Roadway Construction Noise Model
RIV	March Air Force Base
RMS	root-mean-square (velocity)
sf	square feet
Spec.	specification
U.S. EPA	U.S. Environmental Protection Agency
VdB	vibration velocity decibels
VMS	variable message sign
$V_{ref}$	reference velocity amplitude

## INTRODUCTION

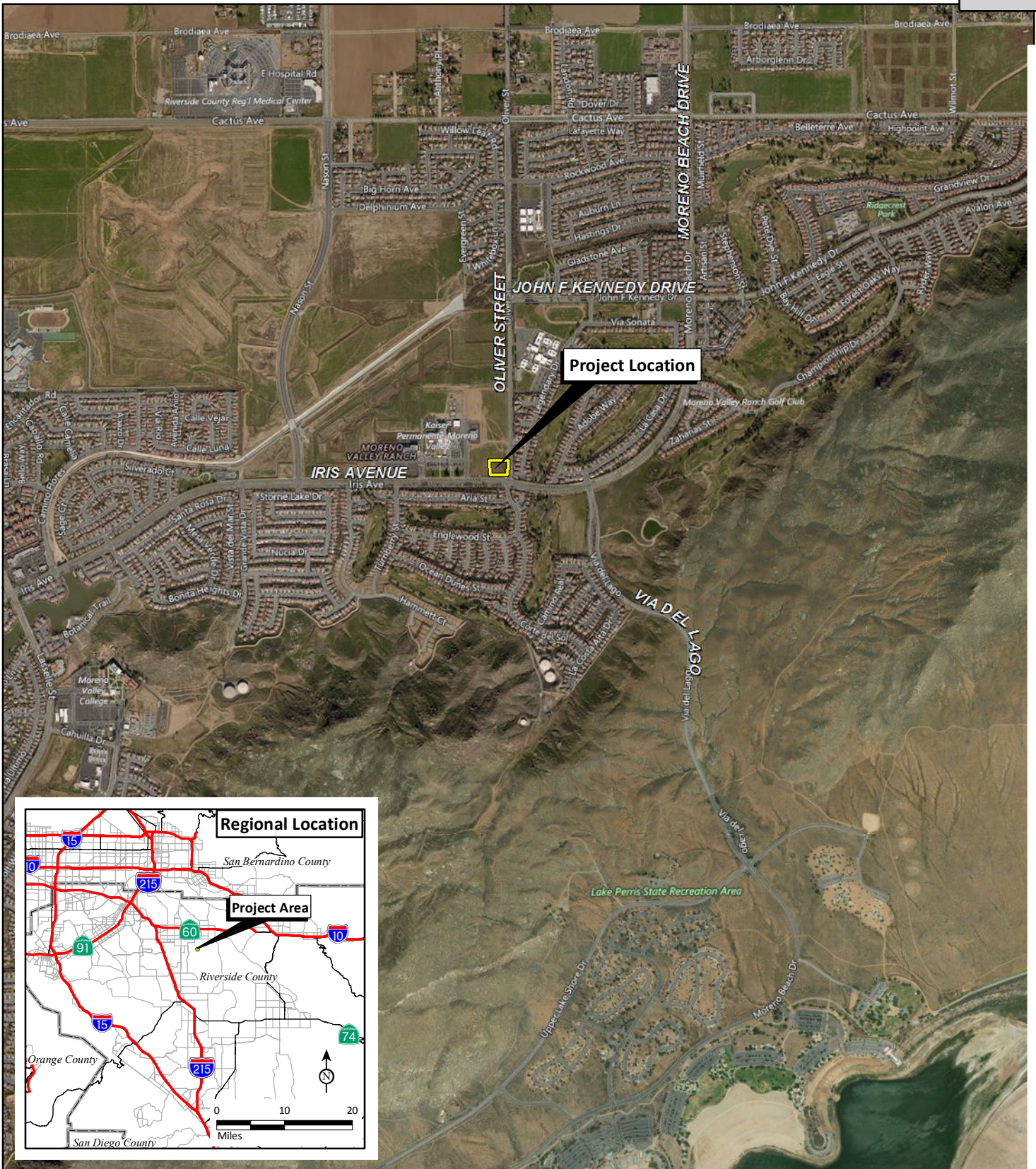
LSA Associates, Inc. (LSA) has completed a Noise Impact Analysis for the proposed Sater ARCO AM/PM Gas Station (project) in the City of Moreno Valley (City), Riverside County, California. This Noise Impact Analysis examines potential impacts from noise sources in the project vicinity, including local roadways, through noise monitoring and analysis. Noise modeling was conducted using the Federal Highway Administration (FHWA) highway traffic noise prediction model (FHWA RD-77-108) to assess the existing roadway traffic noise levels in the project vicinity. Construction and operational noise levels were analyzed. Once operational, the project would generate noise through stationary sources, such as heating, ventilation, and air conditioning (HVAC) equipment and parking lot activities.

## REGIONAL PROJECT LOCATION

The project site is 1.58 acres of undeveloped land located on the northwest corner of Iris Avenue and Oliver Street in the southern part of the City. The project site is approximately 3 miles south of State Route 60 (SR-60) and approximately 5.2 miles east of Interstate 215 (I-215). In addition, the Upland Game Hunting Area is located approximately 0.4 miles south of the project site. Figure 1 shows the Regional and Project Location while Figure 2 shows the Conceptual Site Plan. The project site is located within a commercial land use zone, while land uses surrounding the area are commercial and office zones to the west and north, and residential uses to the east and south. The project's accessor's parcel number (APN) is 486-310-038.

## PROJECT DESCRIPTION

The proposed project would include a 3,800-square-foot (sf) AM/PM convenience store with 19 parking spaces. The project would also include a 42-foot by 116-foot canopy with eight multiple product dispensers (MPDs), two underground storage tanks between the fuel island and Oliver street, and a 24-foot by 100-foot drive-through car wash building with nine outdoor vacuum stalls. The car wash will be located on the western side of the project site operating from north to south with the exit facing Iris Avenue. The project proposes two 35-foot-wide access driveways. The centerline of one driveway would be located on the western border of the project site on Iris Avenue, approximately 261 feet west of Oliver Street, and would be a shared access driveway. The centerline of the second driveway would be on Oliver Street, approximately 138 feet north of Iris Avenue. For the purpose of this analysis, these access driveways will be referred to as Driveway 1 and Driveway 2, respectively, as shown in Figure 2.



LSA

LEGEND

 Project Boundary



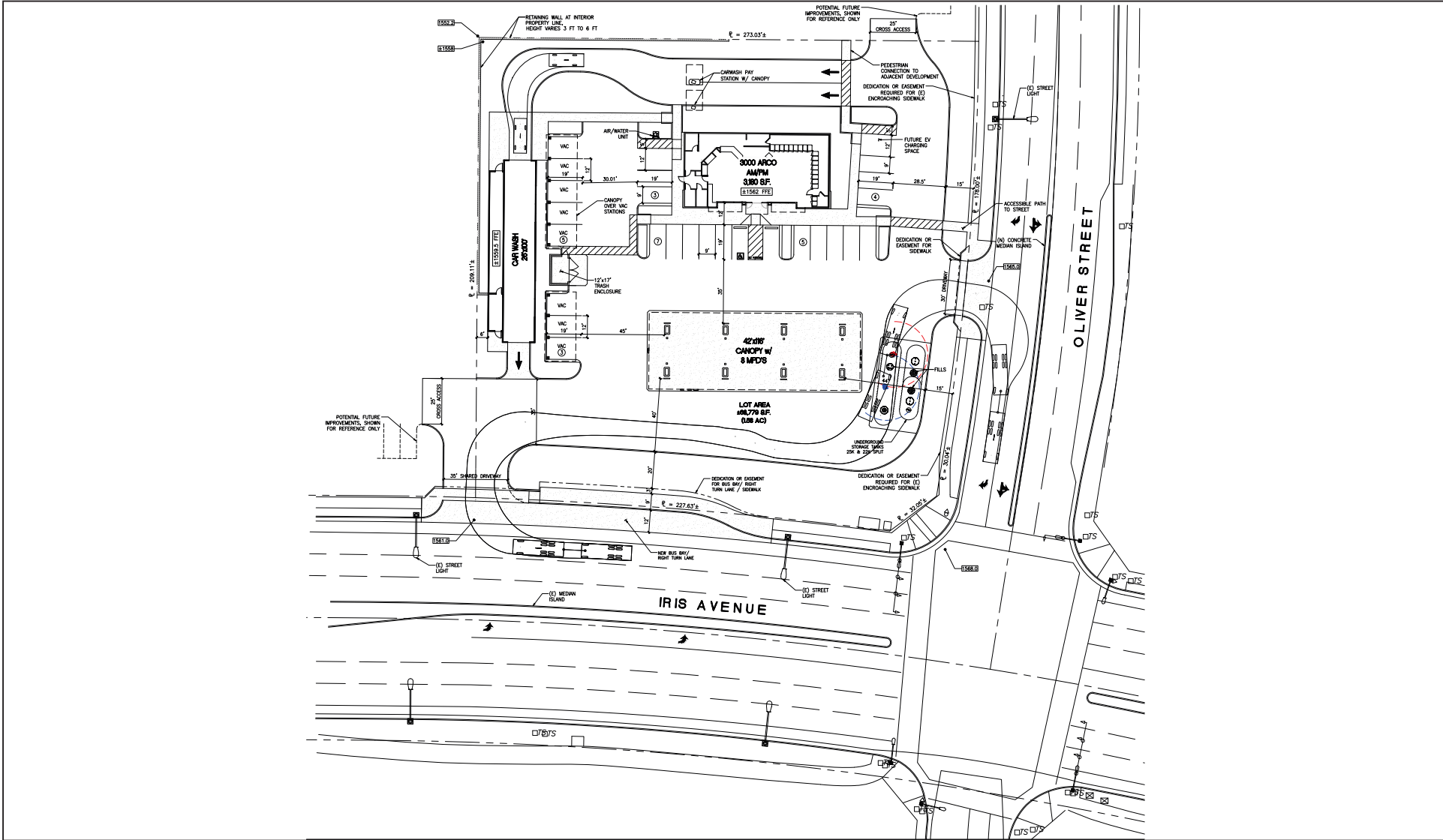
0 1000 2000  
FEET

SOURCE: Bing Aerial, 2015; Riverside County, 2015.

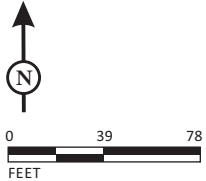
I:\SAT1701\Reports\IS\fig1\_RegLoc.mxd (8/31/2017)

FIGURE :

ARCO Iris and Olive  
Moreno Valle,  
Regional and Project Location



LSA



SOURCE: Barghausen Consulting Engineers, 2017.

I:\SAT1701\Reports\IS\fig4\_SitePlan.cdr (12/05/2017)

FIGURE 4

ARCO Iris and Oliver  
Moreno Valley  
Conceptual Site Plan

Attachment: Appendix I - Noise and Vibration Impact Analysis Study (3362 : Conditional Use Permit

## CHARACTERISTICS OF SOUND

Sound is increasing to such disagreeable levels in the environment that it can threaten quality of life. Noise is usually defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, and sleep.

To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is generally an annoyance, while loudness can affect the ability to hear. Pitch is the number of complete vibrations, or cycles per second, of a wave resulting in the tone's range from high to low. Loudness is the strength of a sound that describes a noisy or quiet environment and is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the human ear. Sound intensity refers to how hard the sound wave strikes an object, which in turn produces the sound's effect. This characteristic of sound can be precisely measured with instruments. The analysis of a project defines the noise environment of the project area in terms of sound intensity and its effect on adjacent sensitive land uses.

### Measurement of Sound

Sound intensity is measured through the A-weighted scale to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies. Unlike linear units (e.g., inches or pounds), decibels are measured on a logarithmic scale representing points on a sharply rising curve.

For example, 10 decibels (dB) is 10 times more intense than 1 dB, 20 dB is 100 times more intense than 1 dB, and 30 dB is 1,000 times more intense than 1 dB. Thirty decibels (30 dB) represents a 1,000 times as much acoustic energy as 1 dB. The decibel scale increases on a logarithmic scale, representing the sound pressure energy. A sound as soft as human breathing is about 10 times greater than 0 dB. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. A 10 dB increase in sound level is perceived by the human ear as only a doubling of the loudness of the sound. Ambient sounds generally range from 30 dB (very quiet) to 100 dB (very loud).

Sound levels are generated from a source, and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with increasing distance from the noise source. For a single point source, sound levels decrease approximately 6 dB for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by stationary equipment. If noise is produced by a line source (e.g., highway traffic or railroad operations) the sound decreases 3 dB for each doubling of distance in a hard site environment. Line source (noise in a relatively flat environment with absorptive vegetation) decreases 4.5 dB for each doubling of distance.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. The equivalent continuous sound level ( $L_{eq}$ ) is the total sound energy of time-varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the  $L_{eq}$  and

Community Noise Equivalent Level (CNEL) or the day-night average noise level ( $L_{dn}$ ) based on A-weighted decibels (dBA). CNEL is the time-varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly  $L_{eq}$  for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours), and a 10 dBA weighting factor applied to noises occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours).  $L_{dn}$  is similar to the CNEL scale but without the adjustment for events occurring during the evening hours. CNEL and  $L_{dn}$  are within 1 dBA of each other and are normally interchangeable. The City uses the CNEL noise scale for long-term noise impact assessment.

Other noise rating scales of importance when assessing the annoyance factor include the maximum instantaneous noise level ( $L_{max}$ ), which is the highest exponential time-averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis for short-term noise impacts are specified in terms of maximum levels denoted by  $L_{max}$ , which reflects peak operating conditions and addresses the annoying aspects of intermittent noise. It is often used together with another noise scale, or noise standards in terms of percentile noise levels, in noise ordinances for enforcement purposes. For example, the  $L_{10}$  noise level represents the noise level exceeded 10 percent of the time during a stated period. The  $L_{50}$  noise level represents the median noise level. Half the time the noise level exceeds this level, and half the time it is less than this level. The  $L_{90}$  noise level represents the noise level exceeded 90 percent of the time and is considered the background noise level during a monitoring period. For a relatively constant noise source, the  $L_{eq}$  and  $L_{50}$  are approximately the same.

Noise impacts can be described in three categories. The first category includes audible impacts that refer to increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3 dB or greater because this level has been found to be barely perceptible in exterior environments. The second category, potentially audible, refers to a change in the noise level between 1 dB and 3 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category includes changes in noise levels of less than 1 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

### Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects the entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure and functions of the heart and the nervous system. In comparison, extended periods of noise exposure above 90 dBA would result in permanent cell damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear, even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by the feeling of pain in the ear (the threshold of pain). A sound level of 160–165 dBA will result in dizziness or loss of equilibrium. The ambient or background noise problem is widespread and generally more concentrated in urban areas than in outlying, less developed area. Table A lists definitions of acoustical terms, and Table B shows common sound levels and their sources.

**Table A: Definitions of Acoustical Terms**

Term	Definitions
Decibel, dB	A unit of measurement that denotes the ratio between two quantities that are proportional to power; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, Hz	Of a function periodic in time, the number of times that the quantity repeats itself in 1 second (i.e., number of cycles per second).
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter deemphasizes the very low- and very high-frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. (All sound levels in this report are A-weighted, unless reported otherwise.)
$L_{01}$ , $L_{10}$ , $L_{50}$ , $L_{90}$	The fast A-weighted noise levels that are equaled or exceeded by a fluctuating sound level 1%, 10%, 50%, and 90% of a stated time period.
Equivalent Continuous Noise Level, $L_{eq}$	The level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time-varying sound.
Community Noise Equivalent Level, CNEL	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 dBA to sound levels occurring in the evening from 7:00 PM to 10:00 PM and after the addition of 10 dBA to sound levels occurring in the night between 10:00 PM and 7:00 AM.
Day/Night Noise Level, $L_{dn}$	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 dBA to sound levels occurring in the night between 10:00 PM and 7:00 AM.
$L_{max}$ , $L_{min}$	The maximum and minimum A-weighted sound levels measured on a sound level meter, during a designated time interval, using fast time averaging.
Ambient Noise Level	The all-encompassing noise associated with a given environment at a specified time; usually a composite of sound from many sources at many directions, near and far; no particular sound is dominant.
Intrusive	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content, as well as the prevailing ambient noise level.

Source: *Handbook of Acoustical Measurements and Noise Control* (Harris 1991).

## CHARACTERISTICS OF GROUND-BORNE VIBRATION

Vibrating objects in contact with the ground radiate vibration waves through various soil and rock strata to the foundations of nearby buildings. As the vibration propagates from the foundation throughout the remainder of the building, the vibration of floors and walls may be perceptible from the rattling of windows or a rumbling noise. The rumbling sound caused by the vibration of room surfaces is called ground-borne noise. When assessing annoyance from ground-borne noise, vibration is typically expressed as root mean square (rms) velocity in units of decibels of 1 micro-inch per second.

To distinguish vibration levels from noise levels, the unit is written as "VdB." Human perception to vibration starts at levels as low as 67 VdB and sometimes lower. Annoyances due to vibration in residential settings starts at approximately 70 VdB. Ground-borne vibrations are almost never annoying to people who are outdoors. Although the motion of the ground may be perceived,



without the effects associated with the shaking of the building, the motion does not provoke the same adverse human reaction.

**Table B: Common Sound Levels and Their Noise Sources**

Noise Source	A-Weighted Sound Level in Decibels	Noise Environments	Subjective Evaluations
Near Jet Engine	140	Deafening	128 times as loud
Civil Defense Siren	130	Threshold of Pain	64 times as loud
Hard Rock Band	120	Threshold of Feeling	32 times as loud
Accelerating Motorcycle at a Few Feet Away	110	Very Loud	16 times as loud
Pile Driver; Noisy Urban Street/Heavy City Traffic	100	Very Loud	8 times as loud
Ambulance Siren; Food Blender	95	Very Loud	—
Garbage Disposal	90	Very Loud	4 times as loud
Freight Cars; Living Room Music	85	Loud	—
Pneumatic Drill; Vacuum Cleaner	80	Loud	2 times as loud
Busy Restaurant	75	Moderately Loud	—
Near Freeway Auto Traffic	70	Moderately Loud	—
Average Office	60	Quiet	One-half as loud
Suburban Street	55	Quiet	—
Light Traffic; Soft Radio Music in Apartment	50	Quiet	One-quarter as loud
Large Transformer	45	Quiet	—
Average Residence without Stereo Playing	40	Faint	One-eighth as loud
Soft Whisper	30	Faint	—
Rustling Leaves	20	Very Faint	—
Human Breathing	10	Very Faint	Threshold of Hearing
—	0	Very Faint	—

Source: Compiled by LSA (2015).

Common sources of ground-borne vibration include trains and construction activities such as blasting, pile driving and operating heavy earthmoving equipment. Typical vibration source levels from construction equipment are shown in Table C. Although the table gives one level for each piece of equipment, it should be noted that there is a considerable variation in reported ground vibration levels from construction activities. The data provides a reasonable estimate for a wide range of soil conditions. In extreme cases, excessive ground-borne vibration has the potential to cause structural damage to buildings. For buildings considered of particular historical significance or that are particularly fragile structures, the damage threshold is approximately 96 VdB; the damage threshold for other structures is 100 VdB.<sup>1</sup>

<sup>1</sup> Harris, C.M., 1998. *Handbook of Acoustical Measurements and Noise Control*.

## REGULATORY FRAMEWORK

### Federal Regulations

The federal, State, and local framework for noise standards is outlined below. The City of Moreno Valley has established standards in the General Plan and in the Municipal Code for land use projects that could potentially expose sensitive receptors to excessive noise levels.

#### U.S. Environmental Protection Agency

In 1972 Congress enacted the Noise Control Act. This act authorized the U.S. Environmental Protection Agency (U.S. EPA) to publish descriptive data on the effects of noise and establish levels of sound requisite to protect the public welfare with an adequate margin of safety. These levels are separated into health (hearing loss levels) and welfare (annoyance levels), as shown in Table D. The U.S. EPA cautions that these identified levels are not standards because they do not take into account the cost or feasibility of the levels.

For protection against hearing loss, 96 percent of the population would be protected if sound levels are less than or equal to an  $L_{eq(24)}$  of 70 dBA. The "(24)" signifies an  $L_{eq}$  duration of 24 hours. The U.S. EPA activity and interference guidelines are designed to ensure reliable speech communication at about 5 feet in the outdoor environment. For outdoor and indoor environments, interference with activity and annoyance should not occur if levels are below 55 dBA and 45 dBA, respectively.

The noise effects associated with an outdoor  $L_{dn}$  of 55 dBA are summarized in Table E. At 55 dBA  $L_{dn}$ , 95 percent sentence clarity (intelligibility) may be expected at 11 feet, and no community reaction. However, 1 percent of the population may complain about noise at this level and 17 percent may indicate annoyance.

**Table C: Typical Vibration Source Levels for Construction Equipment**

Equipment		PPV at 25 feet (in/sec)	Approximate VdB at 25 feet
Pile Driver (impact)	Upper range	1.518	112
	Typical	0.644	104
Pile Driver (sonic)	Upper range	0.734	105
	Typical	0.170	93
Clam shovel drop (slurry wall)		0.202	94
Hydromill (slurry wall)	In soil	0.008	66
	In rock	0.017	75
Vibratory roller		0.210	94
Hoe ram		0.089	87
Large bulldozer		0.089	87
Caisson drilling		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79
Small bulldozer		0.003	58

Source: Federal Transit Administration, 2006. *Transit Noise and Vibration Impact Assessment*. May.

Notes: PPV= peak particle velocity; in/sec= inches per second

**Table D: Summary of U.S. EPA Noise Levels**

Effect	Level	Area
Hearing loss	$L_{eq}(24) < 70$ dB	All areas.
Outdoor activity interference and annoyance	$L_{dn} \leq 55$ dB	Outdoors in residential areas and farms and other outdoor areas where people spend widely varying amounts of time and other places in which quiet is a basis for use.
	$L_{eq}(24) \leq 55$ dB	Outdoor areas where people spend limited amounts of time, such as school yards, playgrounds, etc.
Indoor activity interference and annoyance	$L_{eq} \leq 45$ dB	Indoor residential areas.
	$L_{eq}(24) \leq 45$ dB	Other indoor areas with human activities such as schools, etc.

Source: U.S. Environmental Protection Agency, 1974. *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*. March.

## State of California

The State of California has established regulations that help prevent adverse impacts to occupants of buildings located near noise sources. Referred to as the *State Noise Insulation Standard*, it requires buildings to meet performance standards through design and/or building materials that would offset any noise source in the vicinity of the receptor. State regulations include requirements for the construction of new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings that are intended to limit the extent of noise transmitted into habitable spaces. These requirements are found in the California Code of Regulations, Title 24 (known as the Building Standards Administrative Code), Part 2 (known as the California Building Code), Appendix Chapters 12 and 12A. For limiting noise transmitted between adjacent dwelling units, the noise insulation standards specify the extent to which walls, doors, and floor ceiling assemblies must block or absorb sound. For limiting noise from exterior noise sources, the noise insulation standards set an interior standard of 45 dBA CNEL in any habitable room with all doors and windows closed. In addition, the standards require preparation of an acoustical analysis demonstrating the manner in which dwelling units have been designed to meet this interior standard, where such units are proposed in an area with exterior noise levels greater than 60 dBA CNEL. The State has also established land use compatibility guidelines for determining acceptable noise levels for specified land uses, as shown in Table F.

**Table E: Summary of Human Effects in Areas Exposed to 55 dBA  $L_{dn}$**

Type of Effects	Magnitude of Effect
Speech – Indoors	100 percent sentence intelligibility (average) with a 5 dB margin of safety
Speech – Outdoors	100 percent sentence intelligibility (average) at 1.4 feet 99 percent sentence intelligibility (average) at 3.2 feet 95 percent sentence intelligibility (average) at 11.5 feet
Average Community Reaction	None evident; 7 dB below level of significant complaints and threats of legal action and at least 16 dB below “vigorous action”
Complaints	1 percent dependent on attitude and other non-level related factors
Annoyance	17 percent dependent on attitude and other non-level related factors
Attitude Towards Area	Noise essentially the least important of various factors

Source: U.S. Environmental Protection Agency, 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. March.

**Table F: Community Noise Exposure  $L_{dn}$  or CNEL, dB**

	55	60	65	70	75	80
Residential – Low Density Single Family, Duplex, Mobile Homes	[Noise exposure chart showing shaded regions for residential low density]					
Residential – Multi-family	[Noise exposure chart showing shaded regions for residential multi-family]					
Transient Lodging – Motels, Hotels	[Noise exposure chart showing shaded regions for transient lodging]					
Schools, Libraries, Churches, Hospitals, Nursing Homes	[Noise exposure chart showing shaded regions for schools and hospitals]					
Auditoriums, Concerts, Halls, Amphitheaters	[Noise exposure chart showing shaded regions for auditoriums]					
Sports Area, Outdoor Spectator Sports	[Noise exposure chart showing shaded regions for sports areas]					
Playgrounds, Neighborhood Parks	[Noise exposure chart showing shaded regions for playgrounds]					
Golf Courses, Riding Stables, Water Recreation, Cemeteries	[Noise exposure chart showing shaded regions for golf courses]					
Office Buildings, Businesses Commercial and Professional	[Noise exposure chart showing shaded regions for office buildings]					
Industrial, Manufacturing Utilities, Agriculture	[Noise exposure chart showing shaded regions for industrial areas]					

Normally Acceptable	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with windows closed and fresh air supply systems or air conditioning will normally suffice.
Normally Unacceptable	New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Clearly Unacceptable	New construction or development should generally not be undertaken.

Source: Office of Planning and Research, 2003.

## Local Regulations

### *City of Moreno General Plan*

The City of Moreno Valley addresses noise in the City's Safety Element of the General Plan.<sup>2</sup> The goals, objectives, and policies in the City's General Plan are designed to provide noise compatible land use relationships by establishing noise standards utilized for design and siting purposes and minimize noise impacts from significant noise generators. The following policies are applicable to the proposed project:

- Policy 6.4.1: Site, landscape and architectural design features shall be encouraged to mitigate noise impacts for new developments, with a preference for noise barriers that avoid freeway sound barrier walls.
- Policy 6.4.2: Construction activities shall be operated in a manner that limits noise impacts on surrounding uses.
- Policy 6.5.1: New commercial and industrial activities (including the placement of mechanical equipment) shall be evaluated and designed to mitigate noise impacts on adjacent uses.

### *City of Moreno Valley Municipal Code*

The City of Moreno Valley addresses stationary and construction noise in chapter 11.80 of the Municipal Code.<sup>3</sup>

**General Sound Level Standards.** Section 11.80 of the City's Municipal Code defines and regulates noise standards for public health and safety. No person shall create any sound, or allow the creation of any sound, on any property that causes a disturbance on another property or may cause permanent hearing loss. Table G shows the City's maximum sound levels for source land uses. No person shall create a non-impulsive sound exceeding the limits shown in Table G when the source is on public right-of-way, public space, or other publicly owned property. If the source occurs on privately owned property, the sound emitted may not exceed the limits in Table G when measured 200 feet from the real property line of the source of the sound.

**Table G: Maximum Sound Levels for Source Land Uses**

Residential		Commercial	
Daytime	Nighttime	Daytime	Nighttime
60 dBA	55 dBA	65 dBA	60 dBA

Source: City of Moreno Valley, *Municipal Code Chapter 11.80.030*, September 2017  
dBA = A-weighted decibels

<sup>2</sup> Moreno Valley, City of, 2006. *Moreno Valley General Plan*. July 11.

<sup>3</sup> City of Moreno Valley municipal codes are accessible via their website: [qcode.us/codes/morenovalley](http://qcode.us/codes/morenovalley), accessed September 2017.

**Construction Hours.** Section 11.80.030(D)(9) of the City’s Municipal Code limits construction and demolition activities to between the hours of 7:00 a.m. and 8:00 p.m. every day. No person shall operate or allow the operation of any electrical, mechanical, or gasoline motor driven power tool during night time hours to prevent noise disturbances across residential properties.

## THRESHOLDS OF SIGNIFICANCE

Based on *Guidelines for the Implementation of the California Environmental Quality Act (CEQA)*, Appendix G, Public Resource Code Sections 15000–15387, a project will normally have a significant effect on the environment related to noise if it will substantially increase the ambient noise levels for adjoining areas or conflict with adopted environmental plans and the goals of the community in which it is located. The applicable noise standards governing the project site are the criteria in the Noise Element of the Moreno Valley General Plan and Chapter 11.80 of the City’s Municipal Code.

## OVERVIEW OF THE EXISTING NOISE ENVIRONMENT

In Moreno Valley, vehicle traffic is the primary source of noise. Other significant local noise sources include railroad noise, airport noise, industrial noise, construction noise, mechanical equipment noise, portable power noise, and amplified sound.

This section describes the existing noise environment in the project site vicinity. Noise monitoring, traffic modeling, and noise modeling were used to quantify existing and future noise levels at the project site.

### Ambient Noise Levels

To assess existing noise levels, LSA conducted four short-term noise measurements on and around the project site on October 10, 2017. The short-term (20-minute) noise measurements were recorded at different locations between 10:16 a.m. and 12:04 p.m.. Noise measurements at these times show the typical baseline ambient noise level. Noise measurement data collected during the short-term noise monitoring is summarized in Table H.

**Table H: Ambient Noise Monitoring Results, dBA**

Location Number	Location Description	Start Time	L <sub>eq</sub> <sup>a</sup>	L <sub>max</sub> <sup>b</sup>	L <sub>min</sub> <sup>c</sup>	Primary Noise Sources
ST-1	South side of project site. Northeast of bus stop.	11:13 a.m.	59.9	87.2	37.4	Traffic on Iris Avenue.
ST-2	East edge of project site.	11:44 a.m.	53.9	71.5	37.4	Traffic on Iris Avenue and Oliver Street.
ST-3	Next to backyards of 15465 Legendary Drive and 15455 Legendary Drive. Northeast of intersection of Iris Avenue and Oliver Street.	10:45 a.m.	60.0	76.9	34.6	Traffic on Iris Avenue and Oliver Street.
ST-4	Southeast of intersection of Iris Avenue and Oliver Street. North of backyard of 15555 Oliver Street.	10:16 a.m.	61.8	75.6	36.4	Traffic on Iris Avenue.

<sup>a</sup> L<sub>eq</sub> represents the average of the sound energy occurring over the measurement time period for the short-term noise measurements.

<sup>b</sup> L<sub>max</sub> is the highest sound level measured during the measurement time period.

<sup>c</sup> L<sub>min</sub> is the lowest sound level measured during the measurement time period.

Source: LSA, October 2017.

As shown in Table H, the short-term noise measurements indicate that ambient noise in the project site vicinity ranges from approximately 53.9 dBA to 61.8 dBA  $L_{eq}$ . Traffic on Iris Avenue and Oliver Street was reported as the primary noise source. The meteorological conditions at the time of the noise monitoring are shown in Table I.

**Table I: Meteorological Conditions During Ambient Noise Monitoring**

Location Number	Maximum Wind Speed (mph)	Average Wind Speed (mph)	Temperature (°F)	Relative Humidity (%)	Sky Conditions
ST-1	6.2	2.2	81.4	5.1	Sunny and clear
ST-2	10.2	2.6	88.4	6.8	Sunny and clear
ST-3	2.6	0.6	81.6	7.9	Sunny and clear
ST-4	5.6	1.2	80.8	7.9	Sunny and clear

Source: LSA, October 2017.

### Sensitive Receptors

Certain land uses are considered more sensitive to noise than others. Examples of these include residential areas, educational facilities, hospitals, childcare facilities, and senior housing. The project site is located within a commercial zone adjacent to offices. The nearest sensitive receptors are single family residences located approximately 85 feet east of the project site across Oliver Street and the single family residences located approximately 150 feet south of the project site across Iris Avenue. The residences to the east are bordered by a concrete fence and the residences to the south are either raised in elevation or bordered by a concrete fence, reducing potential noise exposure. In addition, Kaiser Permanente, a medical center, is located approximately 700 feet to the northwest, and Landmark Middle School is approximately a quarter mile to the north on Oliver Street.

### Aircraft Noise

Airport related noise levels are primarily associated with aircraft engine noise made while aircraft are taking off, landing, or running their engines while still on the ground. The closest airport to the proposed project site is March Air Force Base (RIV) located approximately 3.5 miles west of the program's site. Aircraft noise is rarely audible at the project site; and, no portion of the project site lies within the 55 dBA CNEL noise contours of the airport.

### Vehicular Traffic Noise

Motor vehicles with their distinctive noise characteristics are a major source of noise in the city of Moreno Valley. The amount of noise varies according to many factors, such as volume of traffic, vehicle mix (percentage of cars and trucks), average traffic speed, and distance from the observer. Major contributing roadway noise sources in the project vicinity include Iris Avenue and Oliver Street, as well as other arterial and collector roadways throughout the City.

Existing roadway traffic noise levels in the project vicinity were assessed using the FHWA highway traffic noise prediction model (FHWA RD-77-108). This model uses a typical vehicle mix for urban/suburban areas in California and requires parameters, including traffic volumes, vehicle

speed, and roadway geometry, to compute typical equivalent noise levels during daytime, evening, and nighttime hours. The resultant noise levels are weighted and summed over 24-hour periods to determine the CNEL values. Existing traffic noise contours along modeled roadway segments are shown in Table J. These noise levels represent the worst-case scenario, which assumes that no shielding is provided between the traffic and the location where the noise contours are drawn. Appendix A provides the specific assumptions used in developing these noise levels and model printouts.

**Table J: Existing Traffic Noise Levels Without Project**

Roadway Segment	ADT	Centerline to 70 dBA CNEL (feet)	Centerline to 65 dBA CNEL (feet)	Centerline to 60 dBA CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane
<b>Oliver Street</b> - John F. Kennedy Drive to Project Driveway 2	2,700	< 50	< 50	< 50	57.4
<b>Oliver Street</b> - Driveway 2 to Iris Avenue	2,700	< 50	< 50	< 50	57.4
<b>Iris Avenue</b> - Nason Street to Kaiser Hospital Entrance	20,300	75	146	307	68.9
<b>Iris Avenue</b> - Kaiser Hospital Entrance to Project Driveway 1	17,000	69	131	274	68.1
<b>Iris Avenue</b> - Project Driveway 1 to Oliver Street	17,000	69	131	274	68.1
<b>Iris Avenue</b> - Oliver Street to Via Del Lago	14,200	63	117	243	67.3

Source: LSA, October 2017.

Notes: Traffic noise within 50 feet of the roadway centerline should be evaluated with site-specific information.

Shaded cells indicate road segments directly adjacent to the project.

ADT rounded to nearest hundred.

ADT = average daily traffic

CNEL = Community Noise Equivalent Level

dBA = A-weighted decibels

## IMPACTS

### Short-Term Construction Noise Impacts

Construction activities associated with the proposed project could result in substantial temporary or periodic increases in ambient noise levels. Maximum construction noise would be short-term, generally intermittent depending on the construction phase, and variable depending on receiver distance from the active construction zone. The duration of noise impacts generally would be from one day to several days depending on the phase of construction. The level and types of noise impacts that would occur during construction are described below.

Short-term noise impacts would occur during grading and site preparation activities. Table K lists typical construction equipment noise levels ( $L_{max}$ ) recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a noise receptor, obtained from the FHWA Roadway Construction Noise Model. Construction-related short-term noise levels would be higher than existing ambient noise levels currently in the project area but would no longer occur once construction of the project is completed.



**Table K: Noise Emission Reference Levels and Usage Factors**

Equipment Description	Acoustical Usage Factor <sup>1</sup>	Predicted L <sub>max</sub> at 50 feet (dBA, slow) <sup>2</sup>	Actual Measured L <sub>max</sub> at 50 feet (dBA, slow) <sup>3</sup>
All Other Equipment > 5 HP	50	85	N/A <sup>4</sup>
Auger Drill Rig	20	85	84
Backhoe	40	80	78
Boring Jack Power Unit	50	80	83
Chain Saw	20	85	84
Clam Shovel (dropping)	20	93	87
Compactor (ground)	20	80	83
Compressor (air)	40	80	78
Concrete Batch Plant	15	83	N/A
Concrete Mixer Truck	40	85	79
Concrete Pump Truck	20	82	81
Concrete Saw	20	90	90
Crane	16	85	81
Dozer	40	85	82
Drill Rig Truck	20	84	79
Dump Truck	40	84	76
Excavator	40	85	81
Flat Bed Truck	40	84	74
Front-End Loader	40	80	79
Generator	50	82	81
Grader	40	85	N/A
Grapple (on backhoe)	40	85	87
Jackhammer	20	85	89
Man Lift	20	85	75
Mounted Impact Hammer (hoe ram)	20	90	90
Pavement Scarifier	20	85	90
Paver	50	85	77
Pickup Truck	40	55	75
Pneumatic Tools	50	85	85
Pumps	50	77	81
Roller	20	85	80
Scraper	40	85	84
Sheers (on backhoe)	40	85	96
Soil Mix Drill Rig	50	80	N/A
Tractor	40	84	N/A
Vacuum Excavator (Vac-Truck)	40	85	85
Vacuum Street Sweeper	10	80	82
Vibratory Concrete Mixer	20	80	80
Vibratory Pile Driver	20	95	101
Warning Horn	5	85	83
Welder/Torch	40	73	74

Source: FHWA Highway Construction Noise Handbook, Table 9.1, FHWA 2006.

Note: Noise levels reported in this table are rounded to the nearest whole number.

<sup>1</sup> Usage factor is the percentage of time during a construction noise operation that a piece of construction equipment is operating at full power.

<sup>2</sup> Maximum noise levels were developed based on Specification (Spec.) 721.560 from the Central Artery/Tunnel (CA/T) program to be consistent with the City of Boston's Noise Code for the "Big Dig" project.

<sup>3</sup> The maximum noise level was developed based on the average noise level measured for each piece of equipment during the CA/T program in Boston, Massachusetts.

<sup>4</sup> Since the maximum noise level based on the average noise level measured for this piece of equipment was not available, the maximum noise level developed based on Spec 721.560 would be used.

dBA = A-weighted decibels; HP = horsepower; L<sub>max</sub> = maximum instantaneous noise level; kVA = kilovolt-amperes; N/A = not applicable; RCNM = Roadway Construction Noise Model ; VMS = variable message sign

Two types of short-term noise impacts could occur during construction of the proposed project. The first type involves construction crew commutes and the transport of construction equipment and materials (using trucks) to the site for the proposed project, which would incrementally increase noise levels on roads leading to the site. As shown in Table K, there would be a relatively high single-event noise exposure potential at a maximum level of 84 dBA  $L_{max}$  with trucks passing at 50 feet.

The second type of short-term noise impact is related to noise generated during excavation, grading, and construction on the project site. Construction is performed in discrete steps, or phases, each with its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase.

Typical maximum noise levels range up to 86 dBA  $L_{max}$  at 50 feet during the noisiest construction phases. The site preparation phase, including excavation and grading of the site, tends to generate the highest noise levels because earthmoving machinery is the noisiest construction equipment. Earthmoving equipment includes excavating machinery such as back fillers, bulldozers, draglines, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full-power operation followed by 3 or 4 minutes at lower power settings.

The nearest sensitive receptors that may be subject to construction noise include the single family residences located approximately 85 feet east of the project site across Oliver Street. At 85 feet, noise levels would attenuate approximately 5 dBA from the increased distance compared to the noise level measured at 50 feet from the active construction area. In addition to distance damping, for a conservative analysis, the current concrete fence bordering the residents to the east may reduce noise exposure by 5 to 10 dBA. Therefore, the closest sensitive receptors may be subject to short-term construction noise reaching 76 dBA  $L_{max}$  when construction occurs at the project site boundary. However, when LSA conducted ambient noise monitoring for the project on site, at location ST-3, which was monitored on the outer border of the residences to the east, LSA measured an  $L_{max}$  of 76.9 dBA. Therefore, the closest sensitive receptor would not be exposed to a temporary increase in noise levels. In addition, construction noise is permitted by the City when activities occur between the hours of 7:00 a.m. and 8:00 p.m. daily, however mitigation measures should be implemented to reduce impacts to the extent feasible.

As discussed above, construction noise would result in a temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. Implementation of best management practices for project construction, as identified as Mitigation Measure NOISE-1 below, would reduce potential construction period noise impacts for the indicated sensitive receptors.

### Short-Term Construction Vibration Impacts

Vibration refers to ground-borne noise and perceptible motion. Ground-borne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors. Vibration energy propagates from a source, through intervening soil and rock layers, to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by the occupants as the motion of building surfaces, rattling of items on shelves or hanging on walls, or as a low-frequency rumbling noise. The rumbling noise is caused by the vibrating walls, floors, and ceilings radiating sound waves. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by 10 dB or less. This is an order of magnitude below the damage threshold for normal buildings.

Typical sources of ground-borne vibration are construction activities (e.g., pavement breaking and operating heavy-duty earthmoving equipment), and occasional traffic on rough roads. In general, ground-borne vibration from standard construction practices is only a potential issue when it occurs within 25 feet of sensitive uses. Ground-borne vibration levels from construction activities very rarely reach levels that can damage structures; however, these levels are perceptible near the active construction site. With the exception of old buildings built prior to the 1950s or buildings of historic significance, potential structural damage from heavy construction activities rarely occurs. When roadways are smooth, vibration from traffic (even heavy trucks) is rarely perceptible.

The nearest sensitive receptors that may be subject to vibration impacts during construction include the single family residences located approximately 85 feet east of the project site across Oliver Street. Vibration levels calculated in RMS are best for characterizing human response to building vibration, while vibration levels in PPV are best used to characterize potential for building damage. Therefore, this construction vibration impact analysis discusses the level of human annoyance using vibration levels in VdB and will assess the potential for building damages using vibration levels in PPV (in/sec). The Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment*<sup>4</sup> guidelines indicate that a vibration level up to 102 VdB (an equivalent to 0.5 in/sec in PPV) is considered safe for buildings consisting of reinforced concrete, steel, or timber (no plaster), and would not result in any construction vibration damage. For a non-engineered timber and masonry building, the construction vibration damage criterion is 94 VdB (0.2 in/sec in PPV).

Table L shows the PPV and VdB values at 25 feet from a construction vibration source. As shown in Table L, bulldozers and other heavy-tracked construction equipment (except for pile drivers and vibratory rollers) generate approximately 87 VdB of ground-borne vibration when measured at 25 feet, based on the Transit Noise and Vibration Impact Assessment. At this level, ground-borne vibration would result in potential annoyance to residences and workers, but would not cause any damage to the buildings. Construction vibration, similar to vibration from other sources, would not have any significant effects on outdoor activities (e.g., those outside of residences and commercial/office buildings in the project vicinity). Outdoor site preparation for the project is expected to use a bulldozer and loaded truck. The greatest levels of vibration are anticipated to occur during the site preparation phase. All other phases are expected to result in lower vibration levels. The distance to the nearest buildings for vibration impact analysis is measured between the nearest off-site

<sup>4</sup> Federal Transit Administration, 2006. Office of Planning and Environment. *Transit Noise and Vibration Impact Assessment*. FTA-VA-90-1003-06. May.

buildings and the project boundary (assuming the construction equipment would be used at or near the project boundary) because vibration impacts occur normally within the buildings. The formula for vibration transmission is provided below, where D is the distance between the vibration source and receiver.

$$L_v\text{dB} (D) = L_v\text{dB} (25 \text{ ft}) - 30 \text{ Log} (D/25)$$

$$\text{PPV}_{\text{equip}} = \text{PPV}_{\text{ref}} \times (25/D)^{1.5}$$

**Table L: Vibration Source Amplitudes for Construction Equipment**

Equipment	Reference PPV/ $L_v$ at 25 feet	
	PPV (in/sec)	$L_v$ (VdB) <sup>1</sup>
Pile Driver (Impact), Typical	0.644	104
Pile Driver (Sonic), Typical	0.170	93
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
<b>Large Bulldozer<sup>2</sup></b>	<b>0.089</b>	<b>87</b>
Caisson Drilling	0.089	87
<b>Loaded Trucks</b>	<b>0.076</b>	<b>86</b>
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Sources: *Transit Noise and Vibration Impact Assessment* (FTA 2006).

<sup>1</sup> RMS vibration velocity in decibels (VdB) is 1  $\mu\text{in}/\text{sec}$ .

<sup>2</sup> Equipment shown in **bold** is expected to be used on site.

$\mu\text{in}/\text{sec}$  = micro-inches per second      PPV = peak particle velocity

FTA = Federal Transit Administration      RMS = root-mean-square

in/sec = inches per second      VdB = vibration velocity decibels

$L_v$  = velocity in decibels

For typical construction activity, the equipment with the highest vibration generation potential is the large bulldozer, which would generate 87 VdB at 25 feet. The closest residential structures are located 85 feet from the project construction boundary. Based on distance attenuation, the closest residences would experience vibration levels of up to 71 VdB (0.014 PPV [in/sec]). This vibration level at the closest residential structures from construction equipment would not exceed the FTA threshold of 94 VdB (0.2 in/sec PPV) for building damage. This level is also below the FTA's "barely perceptible" human response criteria of 0.04 PPV for transient sources of vibration events. Therefore, ground-borne vibration impacts from project-related construction activities would be considered less-than-significant.

### Long-Term Noise Impacts

The proposed project would include a convenience store, fueling stations, and a car wash in a developed area of the City. Operational noise can be categorized as mobile source noise and stationary source noise. Mobile source noise would be attributable to the additional trips that would be a result of the proposed project. Stationary source noise includes noise generated by the proposed project, such as parking lot activities and the car wash.

### *Long-Term Traffic Noise Impacts*

To assess traffic noise impacts, the traffic noise levels along major roadway segments within the project vicinity were projected using FHWA modeling to predict traffic noise level conditions with and without the proposed project. FHWA modeling was based on existing traffic conditions, FHWA modeling results are summarized in Table M and Table N below. The table includes projected traffic noise levels as measured at 50 feet from the centerline of the outermost traveled lane along the modeled roadway segments. The model does not account for existing sound walls or terrain features that could reduce traffic noise levels at adjacent land uses, but rather assumes a reasonable worst-case direct line-of-sight over hard surface to the modeled traffic noise sources. Appendix A provides the specific assumptions used in developing these noise levels and model printouts.

Tables M and N show a minor change in the traffic noise levels associated with the implementation of the proposed project. The largest increase in traffic-related noise as a result of the project would occur on the east side of the project site on Oliver Street between Driveway 2 and Iris Avenue. This increase in traffic would occur due to the addition of an AM/PM convenience store, eight fueling stations, and a drive through car wash adjacent to residences. Oliver Street could result in an up to 1.2 dBA increase over existing conditions. This noise level would not exceed the 3 dBA increase considered to be perceptible by the human ear in an outdoor environment. The resulting noise level along Oliver Street would be approximately 58.6 dBA CNEL, which would be lower than existing noise associated with other surrounding roadways (i.e. Iris Avenue) and would be in the normally acceptable range for residential and commercial land uses. Noise along the southern border of the project site adjacent to Iris Avenue would result in an increase of 0.2 dBA from baseline conditions. This noise level increase is less than the 3 dBA increase considered to be perceptible by the human ear in an outdoor environment and the resulting noise level would be 68.3 dBA CNEL, which would remain conditionally acceptable for residential land uses and normally acceptable for commercial land uses. Therefore, no significant traffic noise impacts would occur for off-site land uses. As a result, no mitigation is required to address traffic-related noise.



**Table M: Existing Traffic Noise Levels Without and With Project (2017)**

Roadway Segment	Existing Traffic Volumes (2017)											
	Without Project					With Project						
	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane	ADT	Increase in ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane	Increase from Baseline Conditions
<b>Oliver Street</b> - John F. Kennedy Drive to Project Driveway 2	2,700	< 50	< 50	< 50	57.4	2,900	200	< 50	< 50	< 50	57.7	0.3
<b>Oliver Street</b> - Driveway 2 to Iris Avenue	2,700	< 50	< 50	< 50	57.4	3,500	800	< 50	< 50	56	58.6	1.2
<b>Iris Avenue</b> - Nason Street to Kaiser Hospital Entrance	20,300	75	146	307	68.9	21,100	800	77	150	315	69.1	0.2
<b>Iris Avenue</b> - Kaiser Hospital Entrance to Project Driveway 1	17,000	69	131	274	68.1	17,800	800	70	135	282	68.3	0.2
<b>Iris Avenue</b> - Project Driveway 1 to Oliver Street	17,000	69	131	274	68.1	17,800	800	70	135	282	68.3	0.2
<b>Iris Avenue</b> - Oliver Street to Via Del Lago	14,200	63	117	243	67.3	14,900	700	65	121	251	67.5	0.2

Source: LSA, October 2017.

Notes: Traffic noise within 50 feet of the roadway centerline should be evaluated with site-specific information.

Shaded cells indicate road segments directly adjacent to the project.

ADT rounded to nearest hundred.

ADT = average daily traffic

CNEL = Community Noise Equivalent Level

dBA = A-weighted decibels

**Table N: Future Traffic Noise Levels Without and With Project (2022)**

Roadway Segment	Opening Year Traffic Volumes (2022)											
	Without Project					With Project						
	ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane	ADT	Increase in ADT	Centerline to 70 CNEL (feet)	Centerline to 65 CNEL (feet)	Centerline to 60 CNEL (feet)	CNEL (dBA) 50 feet from Centerline of Outermost Lane	Increase from Baseline Conditions
<b>Oliver Street</b> - John F. Kennedy Drive to Project Driveway 2	3,000	< 50	< 50	< 50	57.9	3,200	200	< 50	< 50	< 50	58.2	0.3
<b>Oliver Street</b> - Driveway 2 to Iris Avenue	3,000	< 50	< 50	< 50	57.9	3,800	800	< 50	< 50	58	58.9	1.0
<b>Iris Avenue</b> - Nason Street to Kaiser Hospital Entrance	22,400	79	156	328	69.3	23,200	800	80	159	336	69.5	0.2
<b>Iris Avenue</b> - Kaiser Hospital Entrance to Project Driveway 1	18,800	72	139	292	68.6	19,600	800	74	143	300	68.7	0.1
<b>Iris Avenue</b> - Project Driveway 1 to Oliver Street	18,800	72	139	292	68.6	19,600	800	74	143	300	68.7	0.1
<b>Iris Avenue</b> - Oliver Street to Via Del Lago	15,600	66	124	259	67.7	16,400	800	67	128	267	68.0	0.3

Source: LSA, October 2017.

Note: Traffic noise within 50 feet of the roadway centerline should be evaluated with site-specific information.

Shaded cells indicate road segments directly adjacent to the project.

ADT rounded to nearest hundred.

ADT = average daily traffic

CNEL = Community Noise Equivalent Level

dBA = A-weighted decibels

Attachment: Appendix I - Noise and Vibration Impact Analysis Study (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

### Long-Term Stationary Noise Impacts

The Moreno Valley Municipal Code establishes permissible noise levels from stationary sources measured 200 feet from the real property line of the source of the sound. The daytime (8:00 a.m. to 10:00 p.m.) standard is 60 dBA  $L_{max}$  and the nighttime (10:00 p.m. to 8:00 a.m.) standard is 55 dBA  $L_{max}$  at receiving residential land uses. The proposed project would generate stationary noise associated with parking lot activity and the car wash.

### Parking Lot Activity

Parking lot noise, including engine sounds, car doors slamming, car alarms, loud music, and people conversing, would occur as a result of the proposed project at the project site and on nearby streets. Typical parking lot activities, such as people conversing or doors slamming, generates approximately 60 dBA to 70 dBA  $L_{max}$  at 50 feet.

The nearest sensitive receptors that may be affected by parking lot activity are the single family residences located approximately 85 feet east of the project boundary. Based on current project plans, the nearest proposed parking and fueling station would be located approximately 120 feet from the existing sensitive receptors. Therefore, adjusted for a distance of 120 feet, the nearest sensitive receptors would be exposed to a noise level of 52 to 62 dBA  $L_{max}$  generated by parking lot activities. This noise level could exceed the City's maximum sound level at residential land uses of 60 dBA during the daytime (8:00 a.m. to 10:00 p.m.) and 55 dBA during the nighttime (10:00 p.m. to 8:00 a.m.). However, LSA conducted ambient noise monitoring for the project at location ST-3, located adjacent to the residences east of the project site, an  $L_{max}$  of 76.9 dBA was measured. Therefore, the closest sensitive receptor would not be exposed to a maximum level in excess of the existing noise environment. In addition, due to the intermittent nature of parking activity, when averaged over a 24-hour period, this noise level would not cause an increase in noise levels of more than 3 dBA. Also, the nearest residential receptors would be surrounded by a solid concrete fence, acting also as a noise barrier. Based on LSA's previous experience and calculations, this concrete fence may reduce noise levels by approximately 5 to 10 dBA. Therefore, parking lot noise associated with the proposed project would not be expected to substantially increase noise levels, and therefore, the proposed project would not result in significant parking lot noise.

### Car Wash Noise

The proposed car wash is located near the western border of the project site. Typical car wash noises include the sprayers and blowers within the washing building and the vacuum stations located outside. Car wash noise levels near the exit of the blower area could reach up to 101 dBA  $L_{max}$ .<sup>5</sup> Shop vacuum cleaners can produce noise levels approximately 65 dBA  $L_{max}$ .<sup>6</sup> The car wash equipment is enclosed providing additional noise attenuation barriers. The car wash exit would be located approximately 195 feet from the property line of the closest sensitive receptor. At this distance, the combined car wash noise, including both the car wash and the vacuum noise, would be approximately 69 dBA  $L_{max}$  at the nearest receiving sensitive receptor. This noise exposure would exceed the City's maximum sound level at residential land uses of 60 dBA during the daytime

<sup>5</sup> Tommy Car Wash Systems, 2008. *Tommy Car Wash Blower System Noise Study*.

<sup>6</sup> Tommy Car Wash Systems, 2008. *Tommy Vacuum System Manual*.

(8:00 a.m. to 10:00 p.m.). However, the closest sensitive receptors to the car wash have either a bordering concrete wall and/or the property is raised in elevation when compared to the car wash exit. The existing noise barrier in place would reduce noise by approximately 5-10 dBA, resulting in a 59-64 dBA noise exposure from the car wash. In addition, LSA's traffic study models existing noise conditions to be 68.1 dBA along Iris Avenue between the car wash exit and the adjacent receptors. The resulting noise level from the car wash would be lower than the existing noise associated with traffic on Iris Avenue. The addition of a noise level of 64 dBA under 68.1 dBA CNEL conditions would not result in a substantial increase in noise. The resulting noise level would not exceed the 3 dBA increase considered to be perceptible by the human ear in an outdoor environment. The car wash would not operate during nighttime hours and therefore would not exceed the nighttime standard of 55 dBA (10:00 p.m. to 8:00 a.m.). In addition, because the drying cycle is a small part of the overall wash, the dryers along with the vacuums would be anticipated to operate no more than 30 minutes in any hour. The calculated hourly  $L_{eq}$  from the car wash given a usage factor of 0.5 would be approximately 68 dBA during operating hours before any noise reduction, therefore the car wash would be operating within existing noise conditions. Therefore, no mitigation measures would be required.

### Long-Term Vibration Impacts

The streets surrounding the project area are paved, smooth, and unlikely to cause significant ground-borne vibration. In addition, the rubber tires and suspension systems of buses and other on-road vehicles make it unusual for on-road vehicles to cause ground-borne noise or vibration problems. It is, therefore, assumed that no such vehicular vibration impacts would occur and, therefore, no vibration impact analysis of on-road vehicles is necessary. Additionally, once constructed, the proposed project would not contain uses that would generate ground-borne vibration.

### Land Use Compatibility

The dominant source of noise in the project vicinity is traffic on Iris Avenue and Oliver Street. As shown in Table M, the traffic noise levels range from 58.6 dBA to 68.3 dBA CNEL on the project site, 50 feet from the centerline of the outermost lane on the adjacent roads to the project. The State sets forth normally acceptable noise level standards for land use compatibility and outdoor exposure of new development. The normally acceptable exterior noise level for commercial land uses is up to 70 dBA CNEL. Noise levels of 62.5 dBA to 77.5 dBA CNEL are considered conditionally acceptable when a detailed analysis of noise reduction requirements and noise insulation features are included in the design to meet the interior noise standard. As identified above, the traffic noise analysis indicates noise levels would reach up to 68.3 dBA CNEL, which indicates noise levels on the site would be below 70 dBA CNEL. Therefore, the project noise environment is consistent with the City's noise standards.

### Excessive Airport Noise

The proposed project is approximately 3.7 miles from the nearest airport. Aircraft noise is rarely audible at the project site; however, no portion of the project site lies within the 55 dBA CNEL noise contours of any public airport nor does any portion of the project site lie within 2 miles of any



private airfield or heliport. Therefore, no noise impacts from aircraft noise would occur and no mitigation measures are required.

## MITIGATION MEASURES

The following mitigation measures would apply to the project and will help to reduce and avoid potential impacts related to noise.

**Mitigation Measure NOISE-1:** The project contractor shall implement the following best management practice measures during construction of the project:

- Equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.
- Place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the active project site.
- Locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and noise-sensitive receptors nearest the active project site during all project construction.
- Prohibit extended idling time of internal combustion engines.
- All noise producing construction activities shall be limited to the hours of 7:00 a.m. and 8:00 p.m.
- Designate a "disturbance coordinator" who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler) and would determine and implement reasonable measures warranted to correct the problem.

### Level of Significance after Mitigation

Implementation of mitigation measures for construction noise would result in a less-than--significant impact.



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Attachment: Appendix I - Noise and Vibration Impact Analysis Study (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

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## APPENDIX A

# FHWA HIGHWAY TRAFFIC NOISE MODEL PRINTOUTS

Volumes-01  
TABLE Existing Peak Hour Traffic  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/24/2017  
ROADWAY SEGMENT: Olive Street - John F. Kennedy Drive to Project Driveway 2  
NOTES: Arco Gas Station - Existing Peak Hour Traffic Volumes

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 2700      SPEED (MPH): 35      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	EVENING -----	NIGHT -----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 18      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 57.43

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL -----	65 CNEL -----	60 CNEL -----	55 CNEL -----
0.0	0.0	0.0	96.9

Volumes-02  
TABLE Existing Peak Hour Traffic  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/24/2017  
ROADWAY SEGMENT: Olive Street - Driveway 2 to Iris Avenue  
NOTES: Arco Gas Station - Existing Peak Hour Traffic Volumes

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 2700      SPEED (MPH): 35      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	EVENING -----	NIGHT -----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 18      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 57.43

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL -----	65 CNEL -----	60 CNEL -----	55 CNEL -----
0.0	0.0	0.0	96.9

Volumes-03  
TABLE Existing Peak Hour Traffic  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/24/2017  
ROADWAY SEGMENT: Iris Avenue - Nason Street to Kaiser Hospital Entrance  
NOTES: Arco Gas Station - Existing Peak Hour Traffic Volumes

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 20300      SPEED (MPH): 50      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	EVENING -----	NIGHT -----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.89

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL -----	65 CNEL -----	60 CNEL -----	55 CNEL -----
75.0	146.2	307.4	658.6

Volumes-04  
TABLE Existing Peak Hour Traffic  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/24/2017  
ROADWAY SEGMENT: Iris Avenue - Kaiser Hospital Entrance to  
Project Driveway 1  
NOTES: Arco Gas Station - Existing Peak Hour Traffic Volumes

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 17000      SPEED (MPH): 50      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	EVENING -----	NIGHT -----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.12

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL -----	65 CNEL -----	60 CNEL -----	55 CNEL -----
68.7	131.0	273.6	585.4

Volumes-05  
TABLE Existing Peak Hour Traffic  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/24/2017  
ROADWAY SEGMENT: Iris Avenue - Project Driveway 1 to Oliver Street  
NOTES: Arco Gas Station - Existing Peak Hour Traffic Volumes

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 17000      SPEED (MPH): 50      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	EVENING -----	NIGHT -----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.12

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL -----	65 CNEL -----	60 CNEL -----	55 CNEL -----
68.7	131.0	273.6	585.4



Volumes-06  
TABLE Existing Peak Hour Traffic  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/24/2017  
ROADWAY SEGMENT: Iris Avenue - Oliver Street to Via Del Lago  
NOTES: Arco Gas Station - Existing Peak Hour Traffic Volumes

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 14200      SPEED (MPH): 50      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	EVENING -----	NIGHT -----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.33

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL -----	65 CNEL -----	60 CNEL -----	55 CNEL -----
63.1	117.4	243.3	519.5

TABLE Existing Plus Project Peak  
Traffic Volumes-01  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/24/2017  
ROADWAY SEGMENT: Olive Street - John F. Kennedy Drive to Project Driveway 2  
NOTES: Arco Gas Station - Existing Plus Project Peak Traffic Volumes

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 2900      SPEED (MPH): 35      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES  
DAY                  EVENING                  NIGHT  
---                  -----                  -----

AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 18      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 57.74

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	101.5

TABLE Existing Plus Project Peak  
Traffic Volumes-02  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/24/2017  
ROADWAY SEGMENT: Olive Street - Driveway 2 to Iris Avenue  
NOTES: Arco Gas Station - Existing Plus Project Peak Traffic  
Volumes

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 3500      SPEED (MPH): 35      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	EVENING -----	NIGHT -----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 18      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 58.56

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL -----	65 CNEL -----	60 CNEL -----	55 CNEL -----
0.0	0.0	55.5	114.6

TABLE Existing Plus Project Peak  
Traffic Volumes-03  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/24/2017  
ROADWAY SEGMENT: Iris Avenue - Nason Street to Kaiser Hospital  
Entrance  
NOTES: Arco Gas Station - Existing Plus Project Peak Traffic  
Volumes

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 21100      SPEED (MPH): 50      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES  
DAY                  EVENING                  NIGHT  
---                  -----                  -----

AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.05

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
76.5	149.8	315.3	675.8

TABLE Existing Plus Project Peak  
Traffic Volumes-04  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/24/2017  
ROADWAY SEGMENT: Iris Avenue - Kaiser Hospital Entrance to  
Project Driveway 1  
NOTES: Arco Gas Station - Existing Plus Project Peak Traffic  
Volumes

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 17800      SPEED (MPH): 50      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES  
DAY                      EVENING                      NIGHT  
---                      -----                      -----

AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.31

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
70.2	134.7	282.0	603.6

TABLE Existing Plus Project Peak  
Traffic Volumes-05  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/24/2017  
ROADWAY SEGMENT: Iris Avenue - Project Driveway 1 to Oliver Street  
NOTES: Arco Gas Station - Existing Plus Project Peak Traffic Volumes

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 17800      SPEED (MPH): 50      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES  
DAY                  EVENING                  NIGHT  
---                  -----                  -----

AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.31

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
70.2	134.7	282.0	603.6

TABLE Existing Plus Project Peak  
Traffic Volumes-06  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/24/2017  
ROADWAY SEGMENT: Iris Avenue - Oliver Street to Via Del Lago  
NOTES: Arco Gas Station - Existing Plus Project Peak Traffic Volumes

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 14900      SPEED (MPH): 50      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	EVENING -----	NIGHT -----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.54

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL -----	65 CNEL -----	60 CNEL -----	55 CNEL -----
64.5	120.8	251.0	536.3

Volumes-01  
TABLE Opening Year Peak Hour Traffic  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/24/2017  
ROADWAY SEGMENT: Olive Street - John F. Kennedy Drive to Project Driveway 2  
NOTES: Arco Gas Station - Opening Year Peak Hour Traffic Volumes

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 3000      SPEED (MPH): 35      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	EVENING -----	NIGHT -----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 18      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 57.89

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL -----	65 CNEL -----	60 CNEL -----	55 CNEL -----
0.0	0.0	0.0	103.7



Volumes-02  
TABLE Opening Year Peak Hour Traffic  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/24/2017  
ROADWAY SEGMENT: Olive Street - Driveway 2 to Iris Avenue  
NOTES: Arco Gas Station - Opening Year Peak Hour Traffic Volumes

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 3000      SPEED (MPH): 35      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	EVENING -----	NIGHT -----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 18      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 57.89

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL -----	65 CNEL -----	60 CNEL -----	55 CNEL -----
0.0	0.0	0.0	103.7

Attachment: Appendix I - Noise and Vibration Impact Analysis Study (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Volumes-03  
TABLE Opening Year Peak Hour Traffic  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/24/2017  
ROADWAY SEGMENT: Iris Avenue - Nason Street to Kaiser Hospital Entrance  
NOTES: Arco Gas Station - Opening Year Peak Hour Traffic Volumes

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 22400      SPEED (MPH): 50      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	EVENING -----	NIGHT -----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.31

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL -----	65 CNEL -----	60 CNEL -----	55 CNEL -----
78.9	155.6	328.0	703.2

Volumes-04  
TABLE Opening Year Peak Hour Traffic  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/24/2017  
ROADWAY SEGMENT: Iris Avenue - Kaiser Hospital Entrance to  
Project Driveway 1  
NOTES: Arco Gas Station - Opening Year Peak Hour Traffic Volumes

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 18800      SPEED (MPH): 50      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	EVENING -----	NIGHT -----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.55

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL -----	65 CNEL -----	60 CNEL -----	55 CNEL -----
72.1	139.4	292.3	625.9

Volumes-05  
TABLE Opening Year Peak Hour Traffic  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/24/2017  
ROADWAY SEGMENT: Iris Avenue - Project Driveway 1 to Oliver Street  
NOTES: Arco Gas Station - Opening Year Peak Hour Traffic Volumes

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 18800      SPEED (MPH): 50      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	EVENING -----	NIGHT -----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.55

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL

70 CNEL -----	65 CNEL -----	60 CNEL -----	55 CNEL -----
72.1	139.4	292.3	625.9

Volumes-06  
TABLE Opening Year Peak Hour Traffic  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/24/2017  
ROADWAY SEGMENT: Iris Avenue - Oliver Street to Via Del Lago  
NOTES: Arco Gas Station - Opening Year Peak Hour Traffic Volumes

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 15600      SPEED (MPH): 50      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	EVENING -----	NIGHT -----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.74

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL -----	65 CNEL -----	60 CNEL -----	55 CNEL -----
65.9	124.2	258.7	552.9

TABLE Opening Year with Project Peak  
Hour Traffic Volumes-01  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/24/2017  
ROADWAY SEGMENT: Olive Street - John F. Kennedy Drive to Project Driveway 2  
NOTES: Arco Gas Station - Opening Year with Project Peak Hour Traffic Volumes

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 3200      SPEED (MPH): 35      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES  
DAY                  EVENING                  NIGHT  
---                  -----                  -----

AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 18      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 58.17

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
0.0	0.0	0.0	108.2

TABLE Opening Year with Project Peak  
Hour Traffic Volumes-02  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/24/2017  
ROADWAY SEGMENT: Olive Street - Driveway 2 to Iris Avenue  
NOTES: Arco Gas Station - Opening Year with Project Peak Hour  
Traffic Volumes

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 3800      SPEED (MPH): 35      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	EVENING -----	NIGHT -----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 18      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 58.92

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL -----	65 CNEL -----	60 CNEL -----	55 CNEL -----
0.0	0.0	58.4	120.9

TABLE Opening Year with Project Peak  
Hour Traffic Volumes-03  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/24/2017  
ROADWAY SEGMENT: Iris Avenue - Nason Street to Kaiser Hospital  
Entrance  
NOTES: Arco Gas Station - Opening Year with Project Peak Hour  
Traffic Volumes

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 23200      SPEED (MPH): 50      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES  
DAY                      EVENING                      NIGHT  
---                      -----                      -----

AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 69.47

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
80.4	159.1	335.7	719.8



TABLE Opening Year with Project Peak  
Hour Traffic Volumes-04  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/24/2017  
ROADWAY SEGMENT: Iris Avenue - Kaiser Hospital Entrance to  
Project Driveway 1  
NOTES: Arco Gas Station - Opening Year with Project Peak Hour  
Traffic Volumes

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 19600      SPEED (MPH): 50      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY ---	EVENING -----	NIGHT -----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.73

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL -----	65 CNEL -----	60 CNEL -----	55 CNEL -----
73.7	143.1	300.4	643.4

TABLE Opening Year with Project Peak  
Hour Traffic Volumes-05  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/24/2017  
ROADWAY SEGMENT: Iris Avenue - Project Driveway 1 to Oliver Street  
NOTES: Arco Gas Station - Opening Year with Project Peak Hour Traffic Volumes

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 19600      SPEED (MPH): 50      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES  
DAY                      EVENING                      NIGHT  
---                      -----                      -----

AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 68.73

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
73.7	143.1	300.4	643.4

TABLE Opening Year with Project Peak  
Hour Traffic Volumes-06  
FHWA ROADWAY NOISE LEVEL ANALYSIS

RUN DATE: 10/24/2017  
ROADWAY SEGMENT: Iris Avenue - Oliver Street to Via Del Lago  
NOTES: Arco Gas Station - Opening Year with Project Peak Hour  
Traffic Volumes

\* \* ASSUMPTIONS \* \*

AVERAGE DAILY TRAFFIC: 16400      SPEED (MPH): 50      GRADE: .5

TRAFFIC DISTRIBUTION PERCENTAGES

	DAY	EVENING	NIGHT
	---	-----	-----
AUTOS	75.51	12.57	9.34
M-TRUCKS	1.56	0.09	0.19
H-TRUCKS	0.64	0.02	0.08

ACTIVE HALF-WIDTH (FT): 36      SITE CHARACTERISTICS: SOFT

\* \* CALCULATED NOISE LEVELS \* \*

CNEL AT 50 FT FROM NEAR TRAVEL LANE CENTERLINE (dB) = 67.96

DISTANCE (FEET) FROM ROADWAY CENTERLINE TO CNEL			
70 CNEL	65 CNEL	60 CNEL	55 CNEL
-----	-----	-----	-----
67.5	128.1	267.3	571.6



# TRAFFIC IMPACT ANALYSIS

AM/PM GASOLINE SERVICE STATION  
CITY OF MORENO VALLEY  
RIVERSIDE COUNTY, CALIFORNIA



July 2018

# TRAFFIC IMPACT ANALYSIS

## AM/PM GASOLINE SERVICE STATION CITY OF MORENO VALLEY RIVERSIDE COUNTY, CALIFORNIA

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Project No. SAT1701



July 2018

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## 1.0 INTRODUCTION

This Traffic Impact Analysis (TIA) has been prepared to assess the potential circulation impacts associated with the proposed ARCO AM/PM Gasoline Service Station (Case No. PPA17-0008) to be located at the northwest corner of Oliver Street/Iris Avenue in the City of Moreno Valley (City), Riverside County. Figure 1-1 illustrates the regional and project location. (Figures and tables are located at the end of each chapter.)

This report is intended to satisfy the requirements established by the City of Moreno Valley “Traffic Impact Analysis Preparation Guide,” dated August 2007, as well as the requirements for the disclosure of potential impacts and mitigation measures pursuant to the California Environmental Quality Act (CEQA). The scope of work for this TIA, including trip generation, trip distribution, study area, and analysis methodologies, has been approved by City staff via the Scoping Agreement process. A copy of the Scoping Agreement is included as Appendix A.

This study examines traffic operations in the vicinity of the proposed project under the following six scenarios:

- Existing (2017) Conditions;
- Existing (2017) with Project Conditions;
- Project Completion Year (2022) without Project Conditions;
- Project Completion Year (2022) with Project Conditions;
- Cumulative (2018) without Project Conditions; and
- Cumulative (2018) with Project Conditions.

Traffic conditions were examined for the weekday daily, a.m., and p.m. peak hour conditions. The a.m. peak hour is defined as the one hour of highest traffic volumes occurring between 7:00 and 9:00 a.m. The p.m. peak hour is the one hour of highest traffic volumes occurring between 4:00 and 6:00 p.m. For roadway segments, segments will be analyzed using daily volume counts and compared to the daily service volume standards provided by the City.

### 1.1 PROJECT DESCRIPTION

The proposed project will consist of a gasoline station with 16 fueling stations, a 3,800-square foot convenience store, and a drive-through car wash. The project site is located on the northwest corner of the intersection of Oliver Street and Iris Avenue. Figure 1-2 illustrates the conceptual site plan.

As shown in the site plan, access to the project would be provided via two driveways: one driveway on Oliver Street and one driveway on Iris Avenue. Both driveways will be restricted by raised medians. Therefore, both driveways will operate as right-in/right-out (RIRO) driveways.

Additionally, the City requires that the project driveways meet the driveway spacing standards per City Municipal Code Section 9.11.080. Oliver Street is classified as a minor arterial in the City’s

Circulation Element while Iris Avenue is classified as a Divided Major as per the City's Circulation Element. There is an existing raised media currently on Iris Avenue along the project frontage. The driveway along Iris Avenue meets the requirements per the City's standards of having limited access on a Divided Major. The project shall to construct a raised median on Oliver Street along the project frontage, thereby restricting access at the project driveway to RIRO. Therefore, this driveway will also meet the requirements per the City's standards of having limited access on a Minor Arterial.

The City's TIA guidelines require a minimum of five years from existing conditions to the project opening year. Therefore, for purposes of this analysis, the project opening year has been considered as year 2022.

## 1.2 STUDY AREA

The study area was approved by City staff via the City's scoping agreement process (Appendix A). Based on the TIA Guidelines, the TIA is required to analyze all intersections of Collector or higher classification streets where the project would contribute 50 or more peak hour project trips. Additionally, the City recommended inclusion of additional intersections in this analysis during the scoping agreement process. Therefore, the following intersections were included in the analysis:

1. Nason Street/Iris Avenue;
2. Kaiser Hospital Entrance/Iris Avenue;
3. Project Driveway 1/Iris Avenue;
4. Oliver Street/John F Kennedy Drive;
5. Oliver Street/Project Driveway 2;
6. Oliver Street/Iris Avenue; and
7. Via Del Lago/Iris Avenue.

Figure 1-3 illustrates the locations of all analysis intersections.

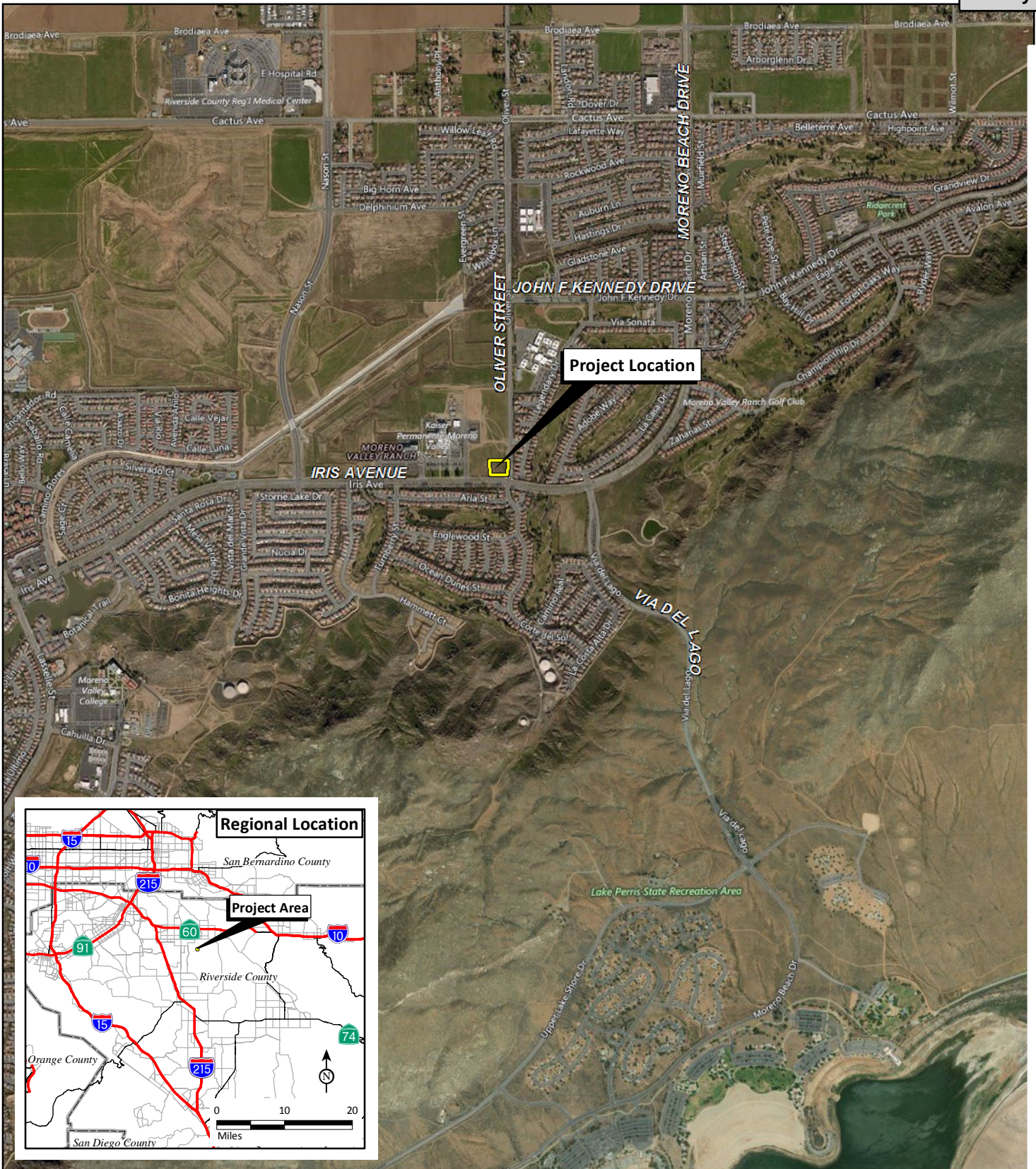
City staff also requested daily roadway segment capacity analysis at the following roadway segments:

1. Oliver Street, from John F Kennedy Drive to Project Driveway 2;
2. Oliver Street, from Project Driveway 2 to Iris Avenue;
3. Iris Avenue, from Nason Street to Kaiser Hospital Entrance;
4. Iris Avenue, from Kaiser Hospital Entrance to Project Driveway 1;
5. Iris Avenue, from Project Driveway 1 to Oliver Street; and
6. Iris Avenue, from Oliver Street to Via Del Lago.

## 1.3 LIST OF CHAPTER 1.0 FIGURES

- Figure 1-1: Regional and Project Location

- Figure 1-2: Conceptual Site Plan
- Figure 1-3: Study Area Intersections



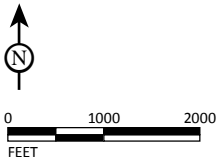
Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

FIGURE 1-:

LSA

LEGEND

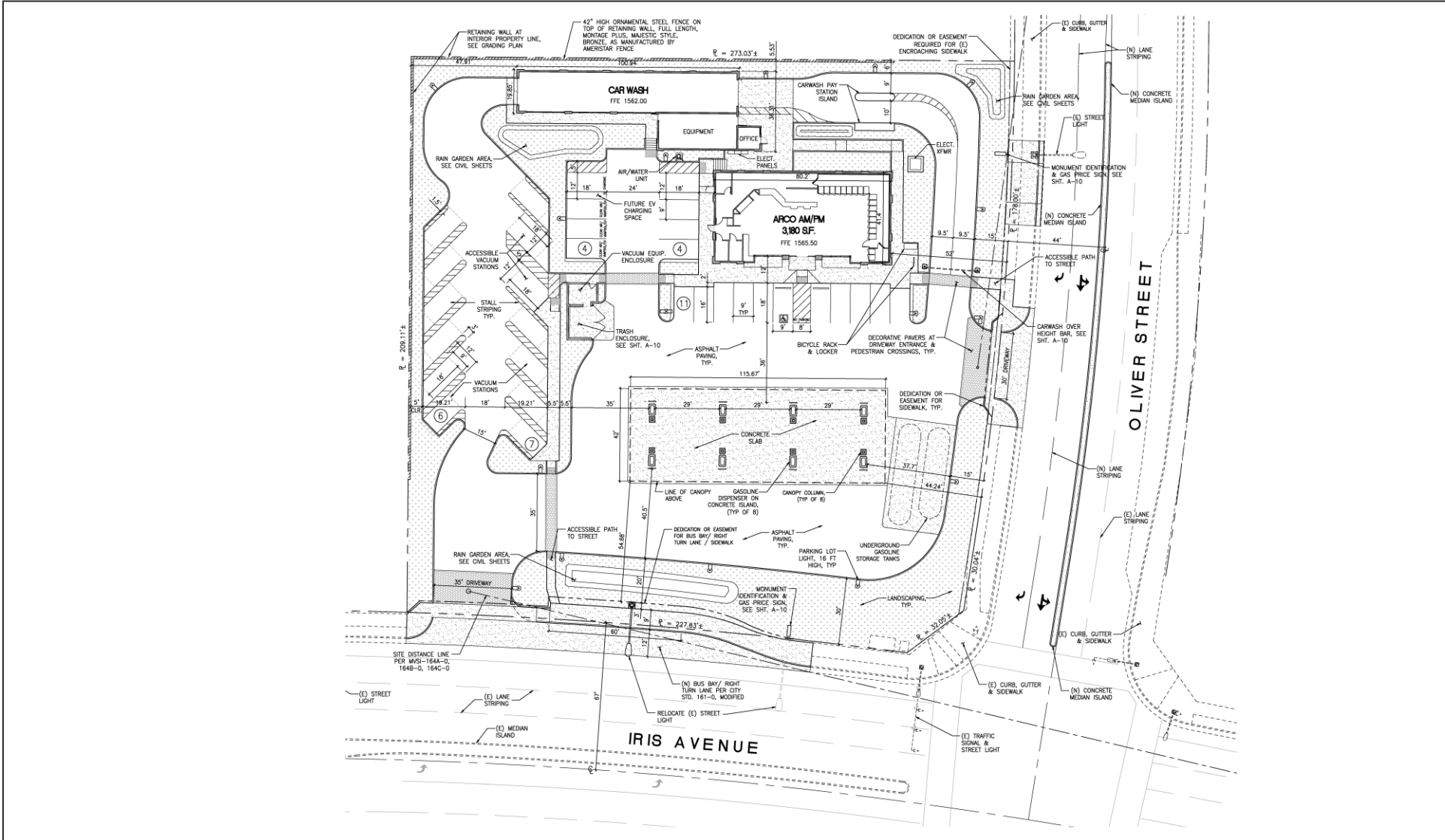
Project Boundary



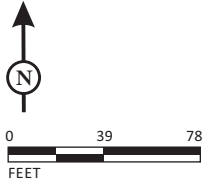
SOURCE: Bing Aerial, 2015; Riverside County, 2015.

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AM/PM Gasoline Service Station  
 Traffic Impact Analysis  
 Regional and Project Location



LSA



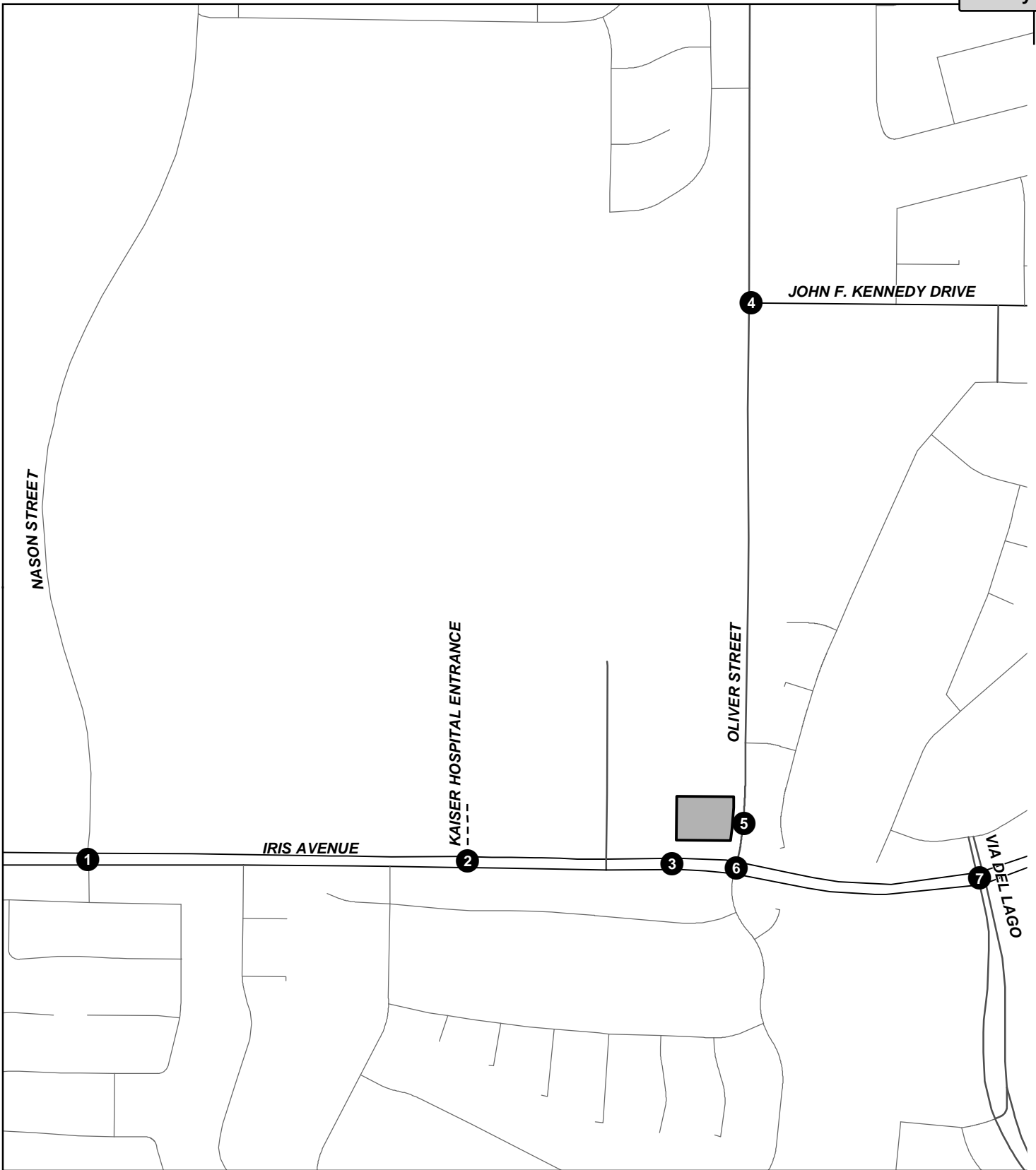
SOURCE: Barghausen Consulting Engineers, 2018.

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FIGURE 1-2

AM/PM Gasoline Service Station  
Traffic Impact Analysis  
Conceptual Site Plan

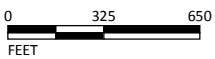
Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO



LSA

LEGEND

- Project Location
- Driveway
- Study Area Intersections



SOURCE: Google Earth, 2016.

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FIGURE 1-:

AM/PM Gasoline Service Station  
 Traffic Impact Analysis  
 Study Area Intersections

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

## 2.0 ANALYSIS METHODOLOGY

### 2.1 LEVEL OF SERVICE DEFINITIONS

Roadway operations and the relationship between capacity and traffic volumes are generally expressed in terms of levels of service (which are defined using the letter grades A through F). These levels recognize that, while an absolute limit exists as to the amount of traffic traveling through a given intersection (the absolute capacity), the conditions that motorists experience rapidly deteriorate as traffic approaches the absolute capacity. Under such conditions, congestion is experienced. There is general instability in the traffic flow, which means that relatively small incidents (e.g., momentary engine stall) can cause considerable fluctuations in speeds and delays. This near-capacity situation is labeled Level of Service (LOS) E. Beyond LOS E, capacity has been exceeded, and arriving traffic will exceed the ability of the intersection to accommodate it. An upstream queue will then form and continue to expand in length until the demand volume again declines.

A complete description of the meaning of level of service can be found in the Transportation Research Board Special Report 209, *Highway Capacity Manual* (HCM). The HCM establishes levels of service A through F for intersections as shown in Table 2-A. Table 2-B provides brief descriptions of the six levels of service, as abstracted from the HCM 2010 for roadway segments. Table 2-C summarizes the HCM 2010 level of service criteria for unsignalized and signalized intersections. Table 2-D summarizes the LOS criteria used to evaluate roadway segments based on the daily capacity for each functional classification as per the City's TIA guidelines. The daily traffic volumes represent the total vehicles (both directions) traveling on a roadway segment within 24 hours.

Consistent with the City's guidelines, the *2010 Highway Capacity Manual* (HCM 2010) analysis methodologies were used to determine intersection levels of service for all study area intersections. Intersection LOS was calculated using Synchro 9.1 software, which uses the HCM 2010 methodologies.

### 2.2 LEVEL OF SERVICE PROCEDURES AND THRESHOLDS

Study intersections analyzed in this report are under the jurisdiction of the City of Moreno Valley. The City uses both LOS C and LOS D as its minimum level of service criteria for intersections and roadway segments. As stated in both the City's General Plan and TIA Guidelines, LOS D is applicable to intersections and roadway segments adjacent to employment-generating land uses while LOS C is applicable to all other areas. Figure 2-1 illustrates the LOS standards for intersections and roadway segments within the City.

### 2.3 PROJECT SIGNIFICANCE THRESHOLD

At study intersections and roadway segments under the jurisdiction of the City, the determination of a significant circulation impact is based on the impact criteria contained in the City's TIA Guidelines, which state that, for projects in conformance with the General Plan, a significant impact occurs at a study intersection or roadway segment when the peak hour LOS falls below the target LOS of C or D with the addition of project traffic or when a project contributes to an unsatisfactory condition (LOS D, E, or F).

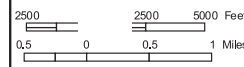


## 2.4 LIST OF CHAPTER 2.0 FIGURES AND TABLES

- Figure 2-1: City of Moreno Valley LOS Standards
- Table 2-A: Intersection Level of Service Definitions
- Table 2-B: Roadway Segments Level of Service Definitions
- Table 2-C: Level of Service Criteria for Unsignalized and Signalized Intersections
- Table 2-D: Roadway Segment Capacity and Levels of Service



— LOS C  
 - - - - - LOS D

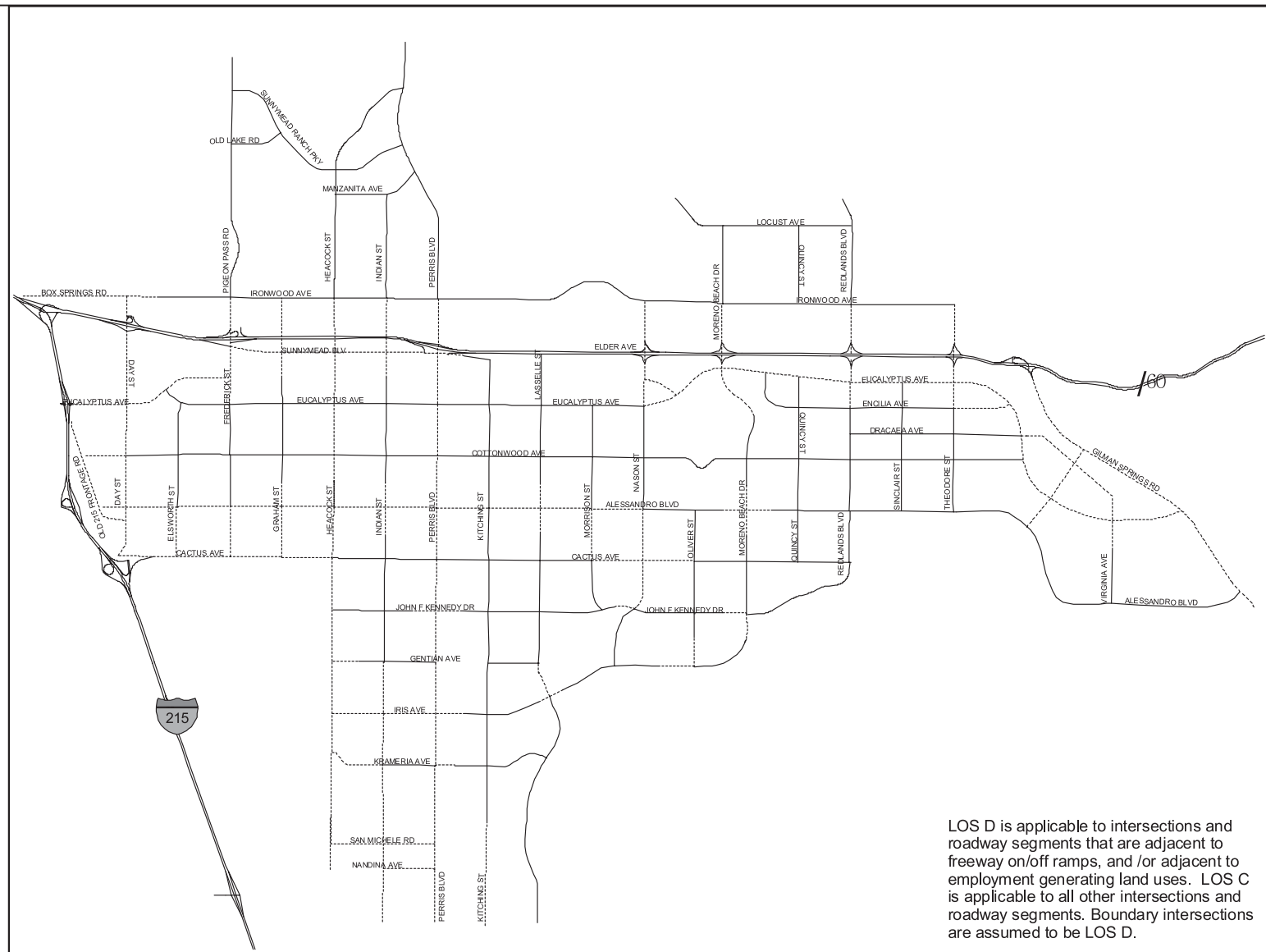


Revision Date: May 10, 2005  
 State Plane NAD83 Zone 6  
 File: G:\av\p\gen\_update2.apr

**GEOGRAPHIC INFORMATION SYSTEMS**

The information shown on this map was compiled from the Riverside County GIS and the City of Moreno Valley GIS. The data base and facility information on this map is for display purposes only and should not be relied upon without independent verification as to its accuracy. Riverside County and City of Moreno Valley will not be held responsible for any data, losses, or damages resulting from the use of this map.

LOS D is applicable to intersections and roadway segments that are adjacent to freeway on/off ramps, and /or adjacent to employment generating land uses. LOS C is applicable to all other intersections and roadway segments. Boundary intersections are assumed to be LOS D.



Source: Urban Crossroads, June 2004.



FIGURE 2-1

AM/PM Gasoline Service Station  
 Traffic Impact Analysis

City of Moreno Valley LOS Standards

**Table 2-A: Intersection Level of Service Definitions**

LOS	Description
A	No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily and nearly all drivers find freedom of operation.
B	This service level represents stable operation, where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.
C	This level still represents stable operating conditions. Occasionally drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.
D	This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is seldom attained no matter how great the demand.
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, both speed and volume can drop to zero.

**Table 2-B: Roadway Segments/Urban Segments Level of Service Definitions**

LOS	Description
A	Describes primarily free-flow operation. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control Delay at the boundary intersection is minimal. The travel speed exceeds 85% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
B	Describes reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted, and control delay at the boundary is not significant. The travel speed is between 67% and 85% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
C	Describes stable operation. The ability to maneuver and change lanes at mid-segment locations may be more restricted than at LOS B. Longer queues at the boundary intersection may contribute to lower travel speeds. The travel speed is between 50% and 67% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
D	Indicates a less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal timing at the boundary intersection. The travel speed is between 40% and 50% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
E	Characterized by unstable operation and significant delay. Such operations may be due to some combination of adverse progression, high volume, and inappropriate signal timing at the boundary intersection. The travel speed is between 30% and 40% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
F	Characterized by flow at extremely low speed. Congestion is likely occurring at the boundary intersection, as indicated by high delay and extensive queuing. The travel speed is between 30% or less of the base free-flow speed, and the volume-to-capacity ratio is greater than 1.0.

**Table 2-C: Level of Service Criteria for Unsignalized and Signalized Intersections**

Level of Service	Unsignalized Intersection Average Delay per Vehicle (sec.)	Signalized Intersection Average Delay per Vehicle (sec.)
A	≤ 10	≤ 10
B	> 10 and ≤ 15	> 10 and ≤ 20
C	> 15 and ≤ 25	> 20 and ≤ 35
D	> 25 and ≤ 35	> 35 and ≤ 55
E	> 35 and ≤ 50	> 55 and ≤ 80
F	> 50	> 80

**Table 2-D: Roadway Segment Capacity and Levels of Service**

Type of Roadway	Level of Service				
	A	B	C	D	E
Six-Lane Divided Arterial	33,900	39,400	45,000	50,600	56,300
Four-Lane Divided Arterial	22,500	26,300	30,000	33,800	37,500
Four-Lane Undivided Arterial	15,000	17,500	20,000	22,500	25,000
Two-Lane Industrial Collector	7,500	8,800	10,000	11,300	12,500
Two-Lane Undivided Residential	N/A	N/A	N/A	N/A	2,000

Source: City of Moreno Valley *Traffic Impact Analysis Preparation Guide*, August 2007

## 3.0 CIRCULATION NETWORK SETTING

### 3.1 EXISTING CIRCULATION NETWORK

The previously referenced Figure 1-3 illustrates the study area intersections for the project. Existing and future study intersection geometrics and stop control are illustrated in Figure 3-1. Following are the three major roadways within the project study area:

- **Iris Avenue** – Iris Avenue is a six lane divided major arterial with a posted speed limit of 50 miles per hour.
- **Oliver Street** – Oliver Street is a four lane minor arterial with a posted speed limit of 35 miles per hour.
- **Nason Street** – Nason Street is a four lane divided arterial with a posted speed limit of 45 miles per hour.

### 3.2 BICYCLE AND PEDESTRIAN FACILITIES

The City of Moreno Valley considers other methods and modes of transportation to improve mobility around the region while creating environmental benefits, health benefits, and economic benefits for the City. Figure 3-2 illustrates the existing pedestrian sidewalk network around the study area. Figure 3-3 illustrates the master plan of trails within the City and surrounding region. These trails include bikeways and multiuse trails readily available and planned for both pedestrian and cyclist use. Figure 3-4 illustrates the Moreno Valley bicycle lane network plan and shows there are existing Class 2 bike lanes around the study area along Nason Street and Iris Avenue. Class 2 bike lanes are lanes striped along the road next to vehicular lanes.

### 3.3 LIST OF CHAPTER 3.0 FIGURES

- Figure 3-1: Existing (2017) and Future Intersection Geometrics and Stop Control
- Figure 3-2: Existing Pedestrian Sidewalk Network
- Figure 3-3: Master Plan of Trails
- Figure 3-4: Bicycle Lane Network Plan

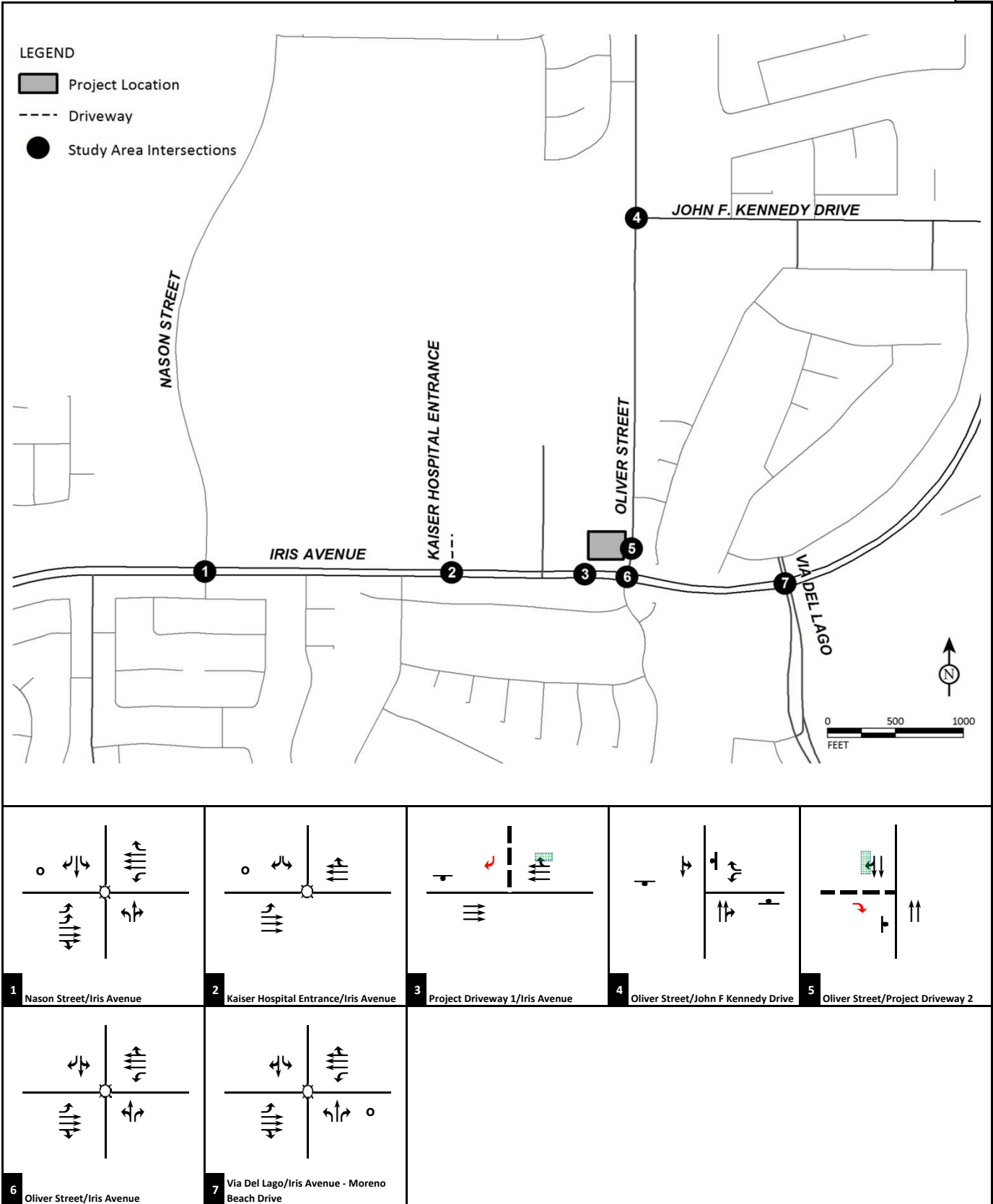


FIGURE 3-1



Legend

- Signal
- Project Driveway
- Future Right Turns
- Stop Sign
- Right-Turn Overlap
- Future Leg
- AM/PM Gasoline Service Station
- Traffic Impact Analysis

Existing (2017) and Future Intersection Geometrics and Stop Control

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Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



LSA

LEGEND

- Project Location
- Sidewalks



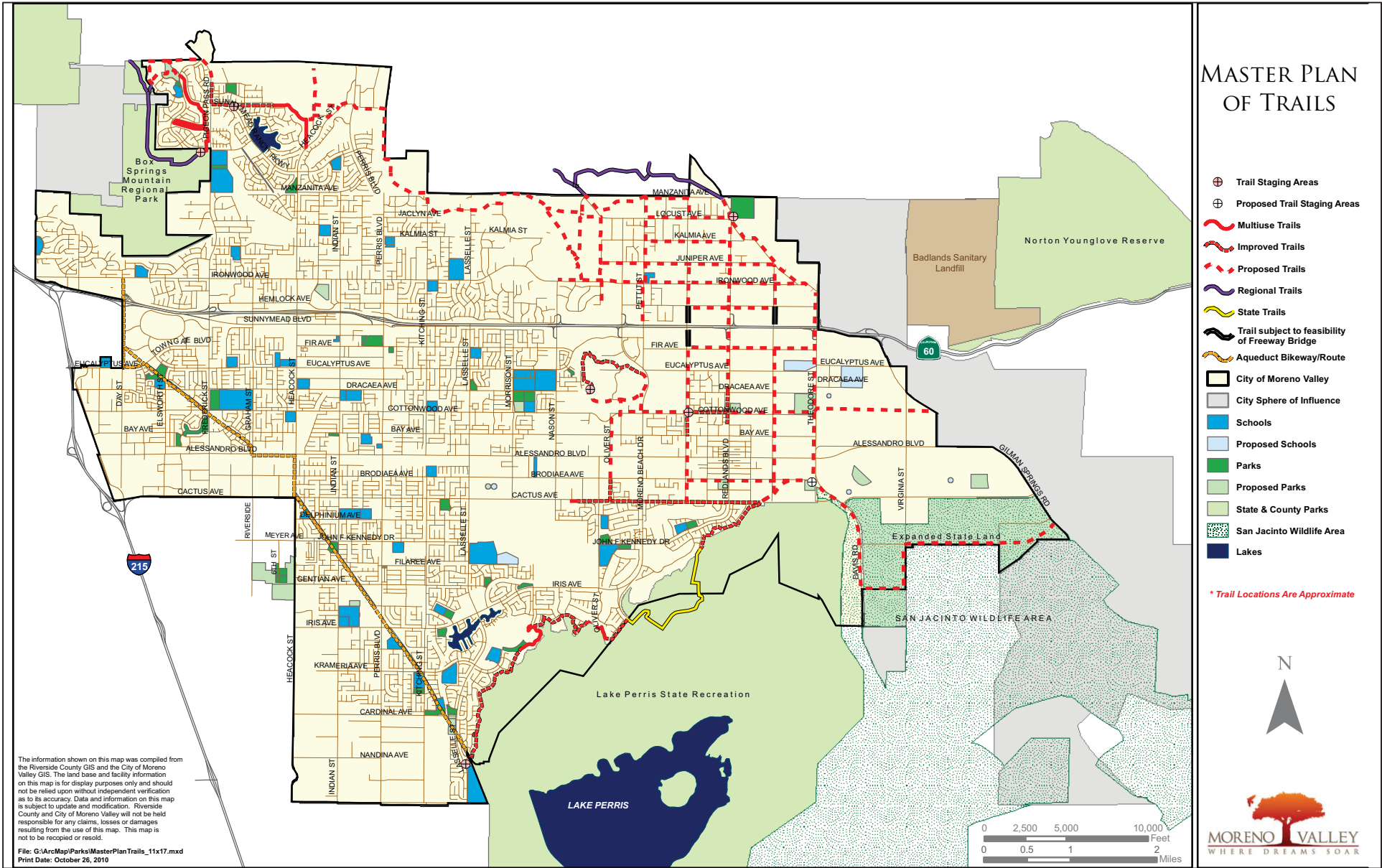
SOURCE: Google Earth, 2016.

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FIGURE 3-2

AM/PM Gasoline Service Station  
 Traffic Impact Analysis  
 Existing Pedestrian Sidewalk Network

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO

# MASTER PLAN OF TRAILS

- Trail Staging Areas
- Proposed Trail Staging Areas
- Multiuse Trails
- Improved Trails
- Proposed Trails
- Regional Trails
- State Trails
- Trail subject to feasibility of Freeway Bridge
- Aqueduct Bikeway/Route
- City of Moreno Valley
- City Sphere of Influence
- Schools
- Proposed Schools
- Parks
- Proposed Parks
- State & County Parks
- San Jacinto Wildlife Area
- Lakes

\* Trail Locations Are Approximate



FIGURE 3-3

LSA

AM/PM Gasoline Service Station  
Traffic Impact Analysis

City of Moreno Valley Master Plan of Trails



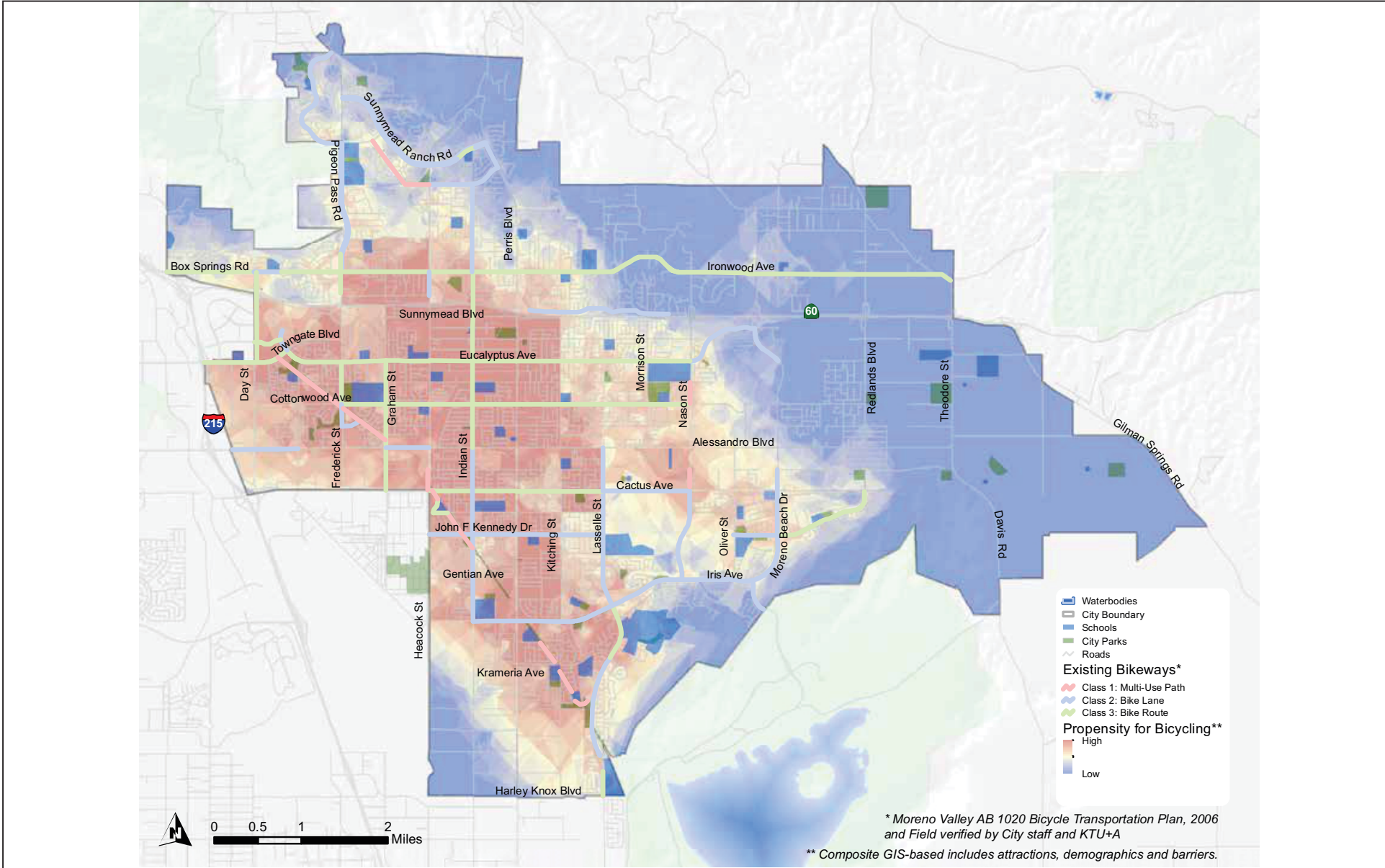


FIGURE 3-4



AM/PM Gasoline Service Station  
Traffic Impact Analysis

Bicycle Lane Network Plan

## 4.0 TRAFFIC VOLUMES WITHOUT PROJECT SCENARIOS

### 4.1 EXISTING (2017) TRAFFIC VOLUMES

For all intersections and roadway segments, existing traffic volumes are based on counts collected by National Data and Surveying Services (NDS) in September 2017. Daily tube counts were collected for roadway segments while a.m. and p.m. peak hour turning movement counts were collected at study intersections. Vehicle classification counts were conducted at the intersections of Nason Street/Iris Avenue and Oliver Street/Iris Avenue and along the roadway segment of Iris Avenue, between Nason Street and Kaiser Hospital Entrance. The percentage of trucks at the remaining study area intersections and roadway segments without classification counts was determined from classification counts at nearby intersections and roadway segments.

Passenger car equivalents (PCE) account for the larger impact of trucks on traffic operations. It does so by assigning each type of truck a PCE factor that represents the number of passenger vehicles that could travel through an intersection in the same time that a particular type of truck could. PCE volumes at study intersections were computed using a factor of 1.5 for 2-axle trucks, 2.0 for 3-axle trucks, and 3.0 for trucks with four or more axles. The percentage of trucks at the remaining intersections was determined from the counts at nearby intersections. At these locations, truck PCE volumes were computed using a PCE factor of 2.0 for all trucks, consistent with the HCM 2010 methodologies. Detailed count sheets are included in Appendix B.

Figure 4-1 illustrates existing peak hour PCE volumes at study intersections. Table 4-A summarizes the existing roadway segment daily traffic volumes (in PCEs).

Detailed volume development worksheets are included in Appendix C.

### 4.2 PROJECT COMPLETION YEAR (2022) WITHOUT PROJECT TRAFFIC VOLUMES

As approved during the City's scoping agreement process (Appendix A), traffic volumes for project completion year (2022) without project conditions were developed by applying a 2.0 percent compounded annual growth rate (10.41 percent aggregate growth for the period from 2017 to 2022) to the existing without project traffic volumes for all the study intersections. The growth rate was determined through the City's scoping agreement process.

Figure 4-2 illustrates peak hour traffic volumes at study intersections for project completion year (2022) conditions. Table 4-B summarizes the project completion year roadway segment daily traffic volumes (in PCEs).

Detailed volume development worksheets are included in Appendix C.

### 4.3 CUMULATIVE (2022) WITHOUT PROJECT TRAFFIC VOLUMES

Information concerning cumulative projects in the vicinity of the proposed project was obtained from the City of Moreno Valley Economic Development website. Figure 4-3 illustrates the cumulative project locations.

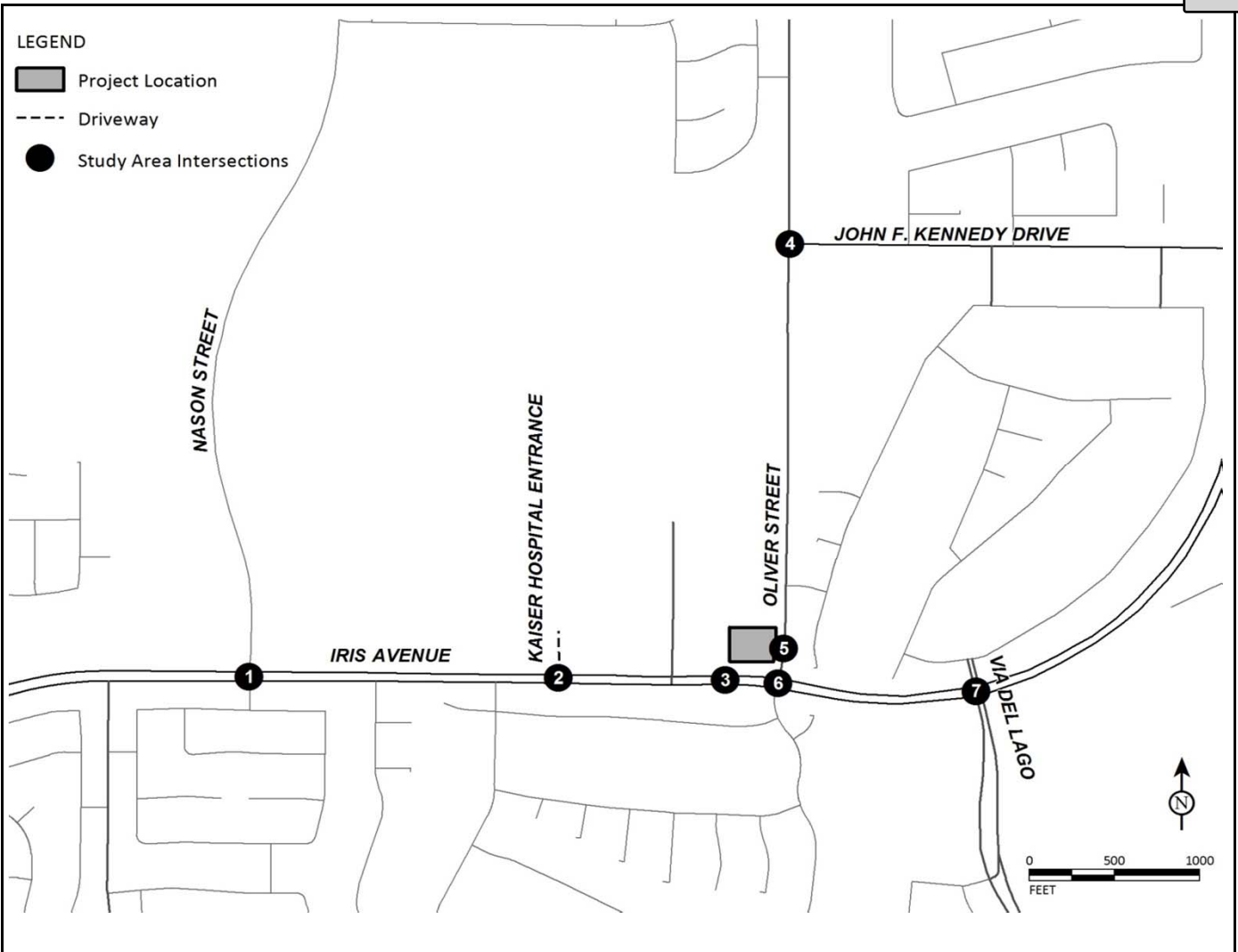
The trip generation for cumulative projects was developed using rates from the Institute of Transportation Engineers (ITE) *Trip Generation*, 9<sup>th</sup> Edition, and from traffic studies of cumulative projects. Table 4-C lists the cumulative projects included in this analysis and shows the cumulative projects are expected to generate 4,066 a.m. peak hour trips, 4,934 p.m. peak hour trips, and 62,227 daily trips.

Cumulative project trips were added to the project completion year (2022) traffic volumes to develop cumulative (2022) traffic volumes for intersections and roadway segments. Project trips for these cumulative projects were assigned to the roadway network based on their locations in relation to surrounding land uses and regional arterials. Figure 4-4 illustrates the total peak hour cumulative project trip assignment at study area intersections. Figure 4-5 illustrates the peak hour PCE traffic volumes at study intersections for cumulative (2022) conditions. Table 4-D summarizes the cumulative (2022) roadway segment daily traffic volumes (in PCEs).

Detailed volume development worksheets are included in Appendix C.

#### 4.4 LIST OF CHAPTER 4.0 FIGURES AND TABLES

- Figure 4-1: Existing (2017) Peak Hour Traffic Volumes
- Figure 4-2: Project Completion Year (2022) Peak Hour Traffic Volumes
- Figure 4-3: Cumulative Projects
- Figure 4-4: Cumulative Projects Trip Assignment
- Figure 4-5: Cumulative (2022) Peak Hour Traffic Volumes
- Table 4-A: Existing (2017) Roadway Segment Levels of Service
- Table 4-B: Project Completion Year (2022) Roadway Segment Levels of Service
- Table 4-C: Cumulative Project Trip Generation
- Table 4-D: Cumulative (2022) Roadway Segment Levels of Service



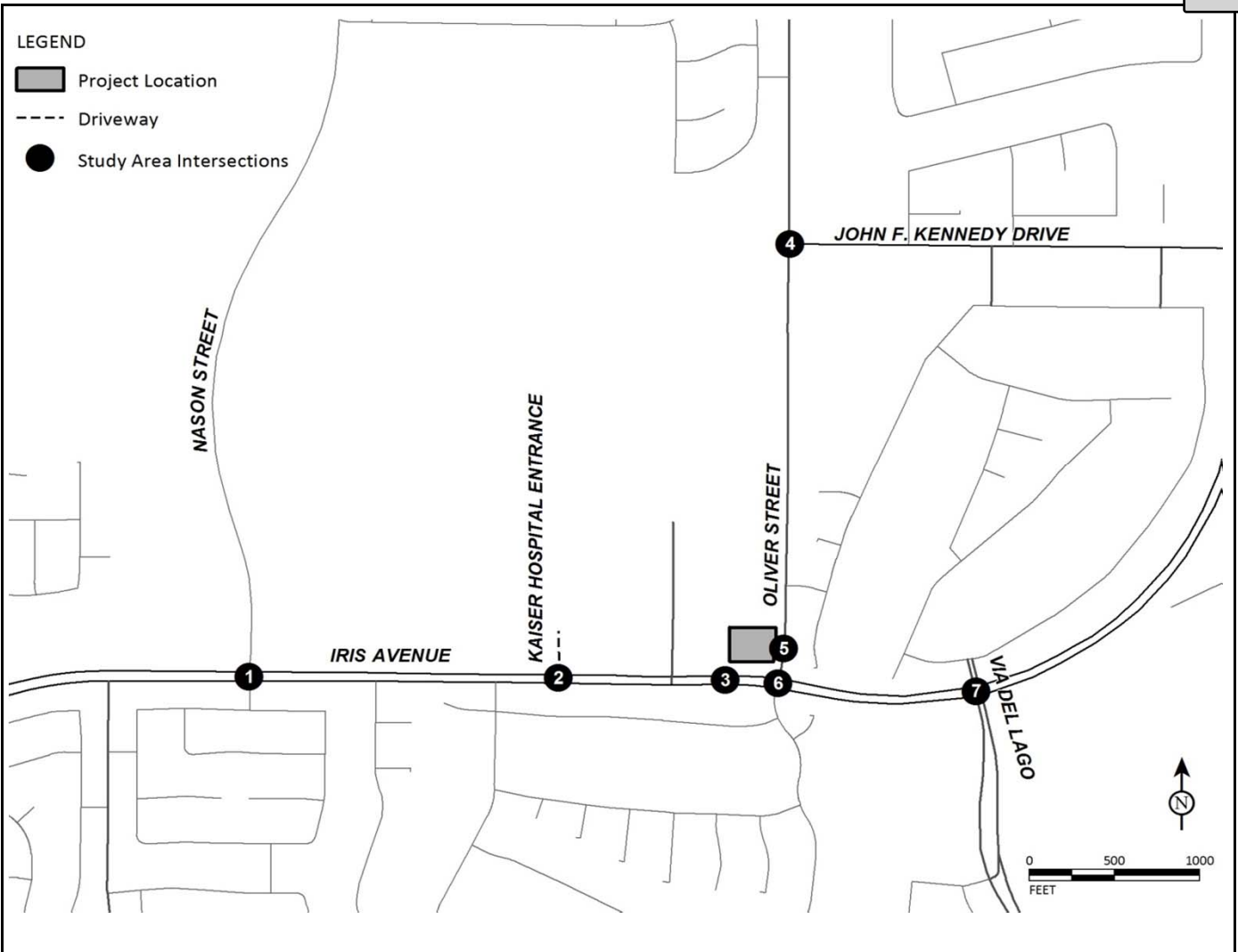
<p><b>1</b></p> <table border="1"> <tr><td>260 / 406</td><td>↑</td><td>76 / 104</td></tr> <tr><td>13 / 37</td><td>↑</td><td>691 / 756</td></tr> <tr><td>100 / 119 *</td><td>↑</td><td>15 / 14 *</td></tr> <tr><td>315 / 230</td><td>↓</td><td>18 / 13</td></tr> <tr><td>782 / 571</td><td>↓</td><td>39 / 22</td></tr> <tr><td>22 / 19</td><td>↓</td><td>10 / 9</td></tr> </table> <p><b>Nason Street/Iris Avenue</b></p>	260 / 406	↑	76 / 104	13 / 37	↑	691 / 756	100 / 119 *	↑	15 / 14 *	315 / 230	↓	18 / 13	782 / 571	↓	39 / 22	22 / 19	↓	10 / 9	<p><b>2</b></p> <table border="1"> <tr><td>22 / 33</td><td>↑</td><td>39 / 18</td></tr> <tr><td>6 / 37</td><td>↑</td><td>685 / 712</td></tr> <tr><td>133 / 73</td><td>↓</td><td></td></tr> <tr><td>708 / 563</td><td>↓</td><td></td></tr> </table> <p><b>Kaiser Hospital Entrance/Iris Avenue</b></p>	22 / 33	↑	39 / 18	6 / 37	↑	685 / 712	133 / 73	↓		708 / 563	↓		<p><b>3</b></p> <table border="1"> <tr><td>706 / 620</td><td>→</td><td>745 / 713</td></tr> </table> <p><b>Project Driveway 1/Iris Avenue</b></p>	706 / 620	→	745 / 713	<p><b>4</b></p> <table border="1"> <tr><td>113 / 62</td><td>←</td><td>92 / 56</td></tr> <tr><td>234 / 120</td><td>←</td><td>24 / 27</td></tr> <tr><td>261 / 81</td><td>→</td><td>44 / 18</td></tr> </table> <p><b>Oliver Street/John F Kennedy Drive</b></p>	113 / 62	←	92 / 56	234 / 120	←	24 / 27	261 / 81	→	44 / 18	<p><b>5</b></p> <table border="1"> <tr><td>226 / 105</td><td>←</td><td></td></tr> <tr><td>221 / 97</td><td>→</td><td></td></tr> </table> <p><b>Oliver Street/Project Driveway 2</b></p>	226 / 105	←		221 / 97	→	
260 / 406	↑	76 / 104																																																		
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2 / 2	↑	459 / 608																																																		
13 / 9	↑	17 / 39																																																		
22 / 23 *	↓	22 / 19																																																		
524 / 482	↓	2 / 0																																																		
18 / 29	↓	40 / 22																																																		

FIGURE 4-1

**LSA**  
 XXX / YYY  
 AM / PM Peak Hour PCE Volumes  
 \* Includes U-Turn movements

AM/PM Gasoline Service Station  
 Traffic Impact Analysis  
 Existing (2017) Peak Hour Traffic Volumes

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



<p><b>1</b></p> <table border="1"> <tr><td>287 / 448</td><td>←</td><td>↑</td><td>84 / 115</td></tr> <tr><td>14 / 41</td><td>←</td><td>↑</td><td>763 / 835</td></tr> <tr><td>110 / 131*</td><td>←</td><td>↑</td><td>17 / 15 *</td></tr> <tr><td>348 / 254</td><td>←</td><td>↑</td><td>20 / 14</td></tr> <tr><td>863 / 630</td><td>←</td><td>↑</td><td>43 / 24</td></tr> <tr><td>24 / 21</td><td>←</td><td>↑</td><td>11 / 10</td></tr> </table> <p><b>Nason Street/Iris Avenue</b></p>	287 / 448	←	↑	84 / 115	14 / 41	←	↑	763 / 835	110 / 131*	←	↑	17 / 15 *	348 / 254	←	↑	20 / 14	863 / 630	←	↑	43 / 24	24 / 21	←	↑	11 / 10	<p><b>2</b></p> <table border="1"> <tr><td>24 / 36</td><td>←</td><td>↑</td><td>43 / 20</td></tr> <tr><td>7 / 41</td><td>←</td><td>↑</td><td>756 / 786</td></tr> <tr><td>147 / 81</td><td>←</td><td>↑</td><td></td></tr> <tr><td>782 / 622</td><td>←</td><td>↑</td><td></td></tr> </table> <p><b>Kaiser Hospital Entrance/Iris Avenue</b></p>	24 / 36	←	↑	43 / 20	7 / 41	←	↑	756 / 786	147 / 81	←	↑		782 / 622	←	↑		<p><b>3</b></p> <table border="1"> <tr><td>779 / 685</td><td>←</td><td>↑</td><td>823 / 787</td></tr> </table> <p><b>Project Driveway 1/Iris Avenue</b></p>	779 / 685	←	↑	823 / 787	<p><b>4</b></p> <table border="1"> <tr><td>125 / 68</td><td>←</td><td>↑</td><td>102 / 62</td></tr> <tr><td>258 / 132</td><td>←</td><td>↑</td><td>26 / 30</td></tr> <tr><td>288 / 89</td><td>←</td><td>↑</td><td>49 / 20</td></tr> </table> <p><b>Oliver Street/John F Kennedy Drive</b></p>	125 / 68	←	↑	102 / 62	258 / 132	←	↑	26 / 30	288 / 89	←	↑	49 / 20	<p><b>5</b></p> <table border="1"> <tr><td>250 / 116</td><td>←</td><td>↑</td><td></td></tr> <tr><td>244 / 107</td><td>←</td><td>↑</td><td></td></tr> </table> <p><b>Oliver Street/Project Driveway 2</b></p>	250 / 116	←	↑		244 / 107	←	↑	
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<p><b>6</b></p> <table border="1"> <tr><td>215 / 84</td><td>←</td><td>↑</td><td>11 / 10</td></tr> <tr><td>28 / 25</td><td>←</td><td>↑</td><td>524 / 656</td></tr> <tr><td>7 / 7</td><td>←</td><td>↑</td><td>38 / 45</td></tr> <tr><td>184 / 82</td><td>←</td><td>↑</td><td>83 / 47</td></tr> <tr><td>574 / 548</td><td>←</td><td>↑</td><td>49 / 15</td></tr> <tr><td>21 / 55</td><td>←</td><td>↑</td><td>42 / 35</td></tr> </table> <p><b>Oliver Street/Iris Avenue</b></p>	215 / 84	←	↑	11 / 10	28 / 25	←	↑	524 / 656	7 / 7	←	↑	38 / 45	184 / 82	←	↑	83 / 47	574 / 548	←	↑	49 / 15	21 / 55	←	↑	42 / 35	<p><b>7</b></p> <table border="1"> <tr><td>42 / 19</td><td>←</td><td>↑</td><td>7 / 14</td></tr> <tr><td>2 / 2</td><td>←</td><td>↑</td><td>507 / 671</td></tr> <tr><td>14 / 10</td><td>←</td><td>↑</td><td>19 / 43</td></tr> <tr><td>* 24 / 25</td><td>←</td><td>↑</td><td>24 / 21</td></tr> <tr><td>579 / 532</td><td>←</td><td>↑</td><td>2 / 0</td></tr> <tr><td>20 / 32</td><td>←</td><td>↑</td><td>44 / 24</td></tr> </table> <p><b>Via Del Lago/Iris Avenue - Moreno Beach Drive</b></p>	42 / 19	←	↑	7 / 14	2 / 2	←	↑	507 / 671	14 / 10	←	↑	19 / 43	* 24 / 25	←	↑	24 / 21	579 / 532	←	↑	2 / 0	20 / 32	←	↑	44 / 24																			
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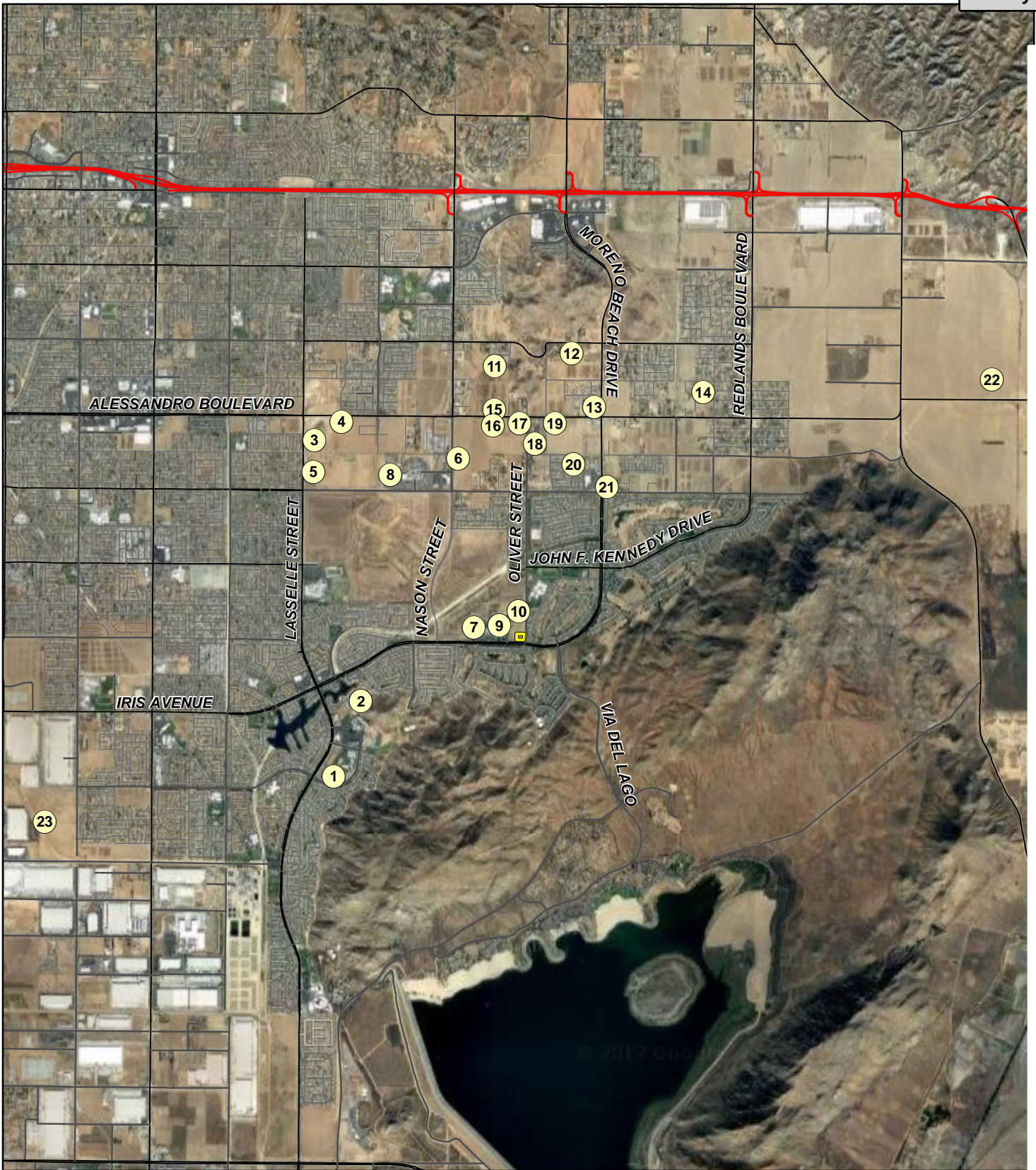
FIGURE 4-2



XXX / YYY  
 AM / PM Peak Hour PCE Volumes  
 \* Includes U-Turn movements

AM/PM Gasoline Service Station  
 Traffic Impact Analysis  
 Project Completion Year (2022) Peak Hour Traffic Volumes

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

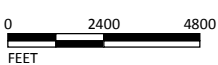


Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

LSA

LEGEND

- Project Location
- Cumulative Projects



SOURCE: Google Earth, 2016.

I:\SAT1701\Reports\Traffic\fig4-3\_CumProjects.mxd (10/19/2017)

FIGURE 4-3

AM/PM Gasoline Service Station  
 Traffic Impact Analysis  
 Cumulative Projects

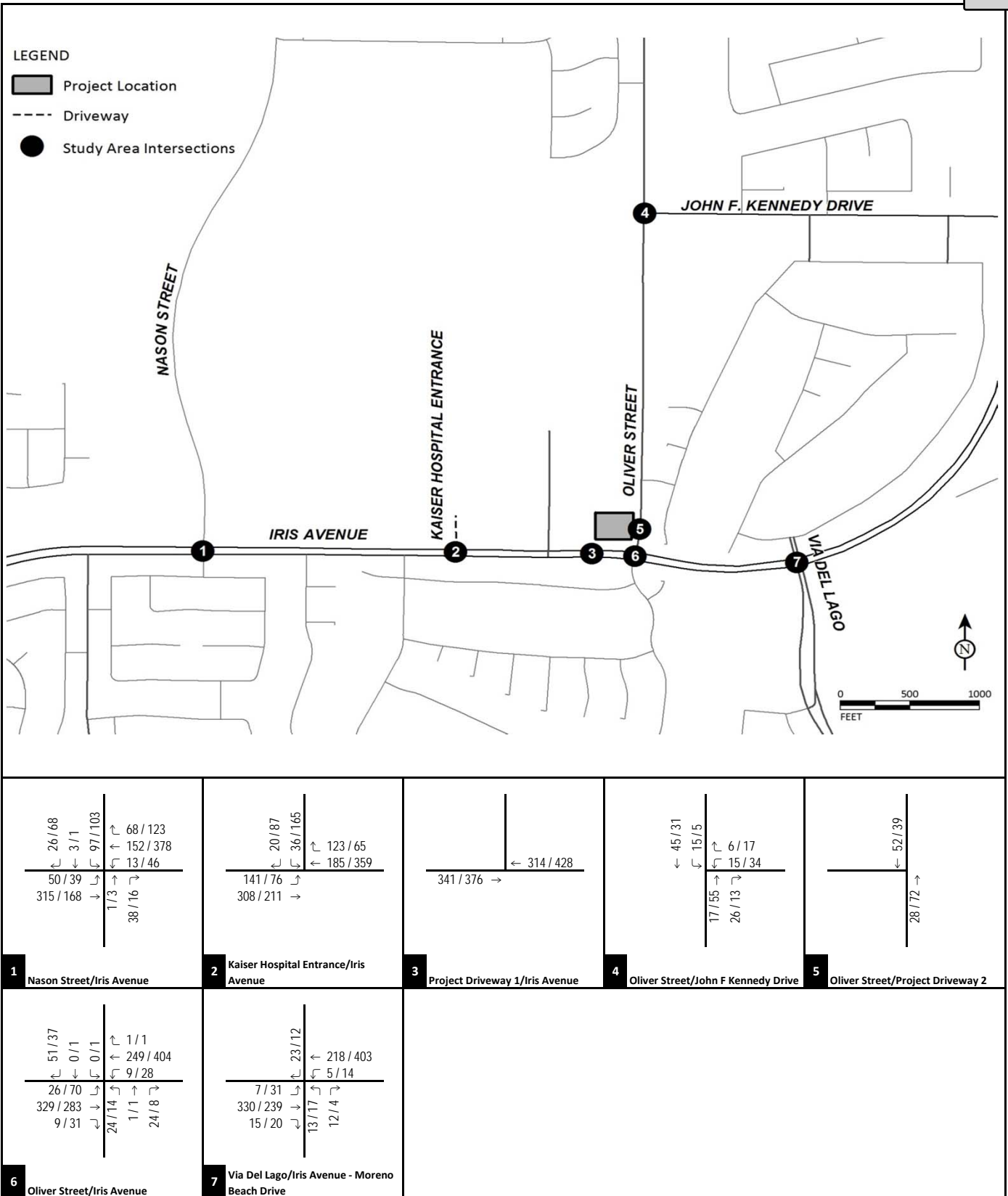
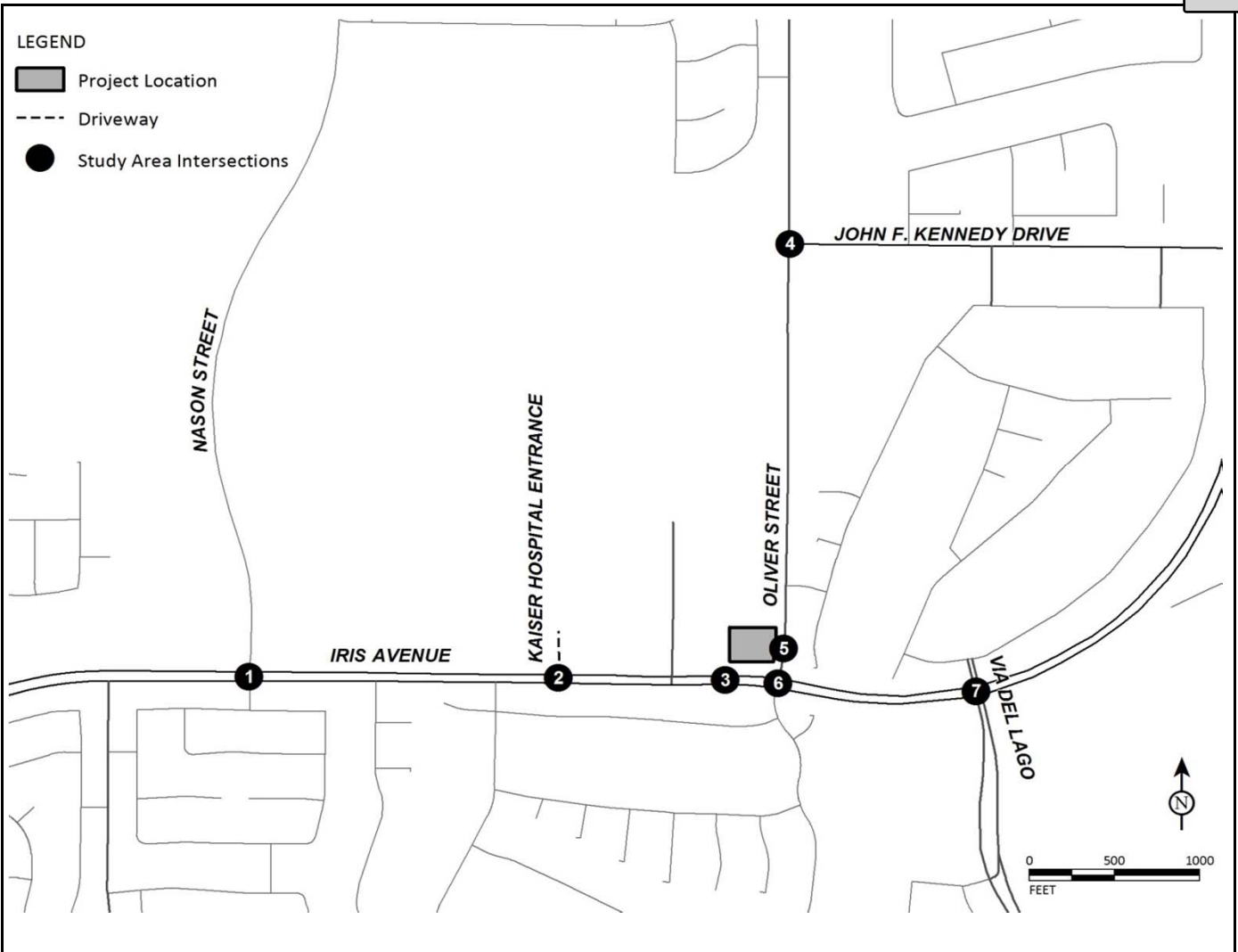


FIGURE 4-4

**LSA**  
 XXX / YYY  
 AM / PM Peak Hour PCE Volumes

AM/PM Gasoline Service Station  
 Traffic Impact Analysis  
 Cumulative Projects Trip Assignment

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



<p><b>1</b> Nason Street/Iris Avenue</p> <table border="1"> <tr><td>313 / 516</td><td>↑</td><td>152 / 238</td></tr> <tr><td>17 / 42</td><td>↑</td><td>915 / 1213</td></tr> <tr><td>207 / 234 *</td><td>↑</td><td>30 / 61 *</td></tr> <tr><td>←</td><td>↓</td><td>←</td></tr> <tr><td>398 / 293</td><td>↓</td><td>44 / 27</td></tr> <tr><td>1178 / 798</td><td>↓</td><td>49 / 26</td></tr> <tr><td>24 / 21</td><td>↓</td><td>↓</td></tr> </table>	313 / 516	↑	152 / 238	17 / 42	↑	915 / 1213	207 / 234 *	↑	30 / 61 *	←	↓	←	398 / 293	↓	44 / 27	1178 / 798	↓	49 / 26	24 / 21	↓	↓	<p><b>2</b> Kaiser Hospital Entrance/Iris Avenue</p> <table border="1"> <tr><td>44 / 123</td><td>↑</td><td>166 / 85</td></tr> <tr><td>43 / 206</td><td>↑</td><td>941 / 1145</td></tr> <tr><td>←</td><td>↓</td><td>←</td></tr> <tr><td>288 / 157</td><td>↓</td><td>↓</td></tr> <tr><td>1090 / 833</td><td>↓</td><td>↓</td></tr> </table>	44 / 123	↑	166 / 85	43 / 206	↑	941 / 1145	←	↓	←	288 / 157	↓	↓	1090 / 833	↓	↓	<p><b>3</b> Project Driveway 1/Iris Avenue</p> <table border="1"> <tr><td>←</td><td>1137 / 1215</td></tr> <tr><td>←</td><td>1120 / 1061</td></tr> <tr><td>←</td><td>→</td></tr> </table>	←	1137 / 1215	←	1120 / 1061	←	→	<p><b>4</b> Oliver Street/John F Kennedy Drive</p> <table border="1"> <tr><td>←</td><td>170 / 99</td><td>↑</td><td>108 / 79</td></tr> <tr><td>↓</td><td>273 / 137</td><td>↑</td><td>41 / 64</td></tr> <tr><td>←</td><td>→</td><td>←</td><td>→</td></tr> <tr><td>305 / 144</td><td>→</td><td>75 / 33</td><td>→</td></tr> </table>	←	170 / 99	↑	108 / 79	↓	273 / 137	↑	41 / 64	←	→	←	→	305 / 144	→	75 / 33	→	<p><b>5</b> Oliver Street/Project Driveway 2</p> <table border="1"> <tr><td>←</td><td>302 / 155</td></tr> <tr><td>←</td><td>272 / 179</td></tr> <tr><td>←</td><td>→</td></tr> </table>	←	302 / 155	←	272 / 179	←	→
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FIGURE 4-5

**LSA**  
XXXX / YYYY  
AM / PM Peak Hour PCE Volumes  
\* Includes U-Turn movements

AM/PM Gasoline Service Station  
Traffic Impact Analysis  
Cumulative (2022) Peak Hour Traffic Volumes

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



**Table 4-A - Existing (2017) Roadway Segment Levels of Service**

Roadway Segment	Functional Classification <sup>1</sup>	LOS Standard <sup>2</sup>	LOS Standard Threshold Volume <sup>1</sup>	Without Project		With Project	
				Daily Volume	LOS	Daily Volume	LOS
<b>Segments on Oliver Street</b>							
From John F Kennedy Drive to Project Driveway 2	4-Lane Undivided Arterial	D	22,500	2,679	A	2,873	A
From Project Driveway 2 to Iris Avenue	4-Lane Undivided Arterial	D	22,500	2,679	A	3,464	A
<b>Segments on Iris Avenue</b>							
From Nason Street to Kaiser Hospital Entrance	6-Lane Divided Arterial	C	45,000	20,289	A	21,074	A
From Kaiser Hospital Entrance to Project Driveway 1	6-Lane Divided Arterial	D	50,600	16,994	A	17,779	A
From Project Driveway 1 to Oliver Street	6-Lane Divided Arterial	D	50,600	16,994	A	17,779	A
From Oliver Street to Via Del Lago	6-Lane Divided Arterial	C	45,000	14,114	A	14,899	A

**Notes:**

LOS = Level of Service

<sup>1</sup> Based on City of Moreno Valley *Traffic Impact Analysis Preparation Guide*, dated August 2007.

<sup>2</sup> LOS Standard based on *Moreno Valley General Plan: Final Program EIR - 5.2 Traffic/Circulation*, dated July 2006.

\* Exceeds LOS Standard

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO

**Table 4-B - Project Completion Year (2022) Roadway Segment Levels of Service**

Roadway Segment	Functional Classification <sup>1</sup>	LOS Standard <sup>2</sup>	LOS Standard Threshold Volume <sup>1</sup>	Without Project		With Project	
				Daily Volume	LOS	Daily Volume	LOS
<b>Segments on Oliver Street</b>							
From John F Kennedy Drive to Project Driveway 2	4-Lane Undivided Arterial	D	22,500	2,958	A	3,152	A
From Project Driveway 2 to Iris Avenue	4-Lane Undivided Arterial	D	22,500	2,958	A	3,743	A
<b>Segments on Iris Avenue</b>							
From Nason Street to Kaiser Hospital Entrance	6-Lane Divided Arterial	C	45,000	22,401	A	23,186	A
From Kaiser Hospital Entrance to Project Driveway 1	6-Lane Divided Arterial	D	50,600	18,763	A	19,548	A
From Project Driveway 1 to Oliver Street	6-Lane Divided Arterial	D	50,600	18,763	A	19,548	A
From Oliver Street to Via Del Lago	6-Lane Divided Arterial	C	45,000	15,583	A	16,368	A

**Notes:**

LOS = Level of Service

<sup>1</sup> Based on City of Moreno Valley *Traffic Impact Analysis Preparation Guide*, dated August 2007.

<sup>2</sup> LOS Standard based on *Moreno Valley General Plan: Final Program EIR - 5.2 Traffic/Circulation*, dated July 2006.

\* Exceeds LOS Standard

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO

Table 4-C - Cumulative Projects Trip Generation

Project No.	Land Use/Builder/Applicant	Units	A.M. Peak Hour			P.M. Peak Hour			Daily
			In	Out	Total	In	Out	Total	
1 . MFD - Continental East		125 DU							
	Trips/Unit <sup>1</sup>		0.10	0.41	0.51	0.40	0.22	0.62	6.65
	Trip Generation		13	51	64	50	27	77	831
2 . MFD - GHA		62 DU							
	Trips/Unit <sup>1</sup>		0.10	0.41	0.51	0.40	0.22	0.62	6.65
	Trip Generation		6	25	31	25	13	38	412
3 . MFD - La Jolla Development/Rochas Grandes		426 DU							
	Trips/Unit <sup>1</sup>		0.10	0.41	0.51	0.40	0.22	0.62	6.65
	Trip Generation		43	174	217	172	92	264	2,833
4 . MFD - Rancho Belago Developers, Inc.		141 DU							
	Trips/Unit <sup>1</sup>		0.10	0.41	0.51	0.40	0.22	0.62	6.65
	Trip Generation		14	58	72	57	31	88	938
5 . MFD - MV Bella Vista GP, LLC		220 DU							
	Trips/Unit <sup>1</sup>		0.10	0.41	0.51	0.40	0.22	0.62	6.65
	Trip Generation		22	90	112	89	48	137	1,463
6 . Moreno Valley Medical Plaza		217.00 TSF							
	Trips/Unit <sup>2</sup>		1.89	0.50	2.39	1.00	2.57	3.57	36.13
	Trip Generation		410	109	519	217	558	775	7,840
7 . Moreno Valley Medical Overlay Area		122.25 TSF							
	Trips/Unit <sup>2</sup>		1.89	0.50	2.39	1.00	2.57	3.57	36.13
	Trip Generation		231	61	292	122	314	436	4,417
8 . Riverside University Health System Expansion		34.75 TSF							
	Trips/Unit <sup>3</sup>		0.60	0.35	0.95	0.35	0.58	0.93	13.22
	Trip Generation		21	12	33	12	20	32	459
9 . Kaiser Permanente Moreno Valley Emergency Room Expansion Hospital		74.00 TSF							
	Trips/Unit <sup>3</sup>		0.60	0.35	0.95	0.35	0.58	0.93	13.22
	Trip Generation		44	26	70	26	43	69	978
10 . Mainstreet Post-Acute Care		57.00 TSF							
	Trips/Unit <sup>4</sup>		0.39	0.16	0.55	0.38	0.36	0.74	7.60
	Trip Generation		22	9	31	22	20	42	433

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Table 4-C - Cumulative Projects Trip Generation

Project No.	Land Use/Builder/Applicant	Units	A.M. Peak Hour			P.M. Peak Hour			Daily
			In	Out	Total	In	Out	Total	
11 . SFD - Winchester Associates		52 DU							
	Trips/Unit <sup>5</sup>		0.19	0.56	0.75	0.63	0.37	1.00	9.52
	Trip Generation		<b>10</b>	<b>29</b>	<b>39</b>	<b>33</b>	<b>19</b>	<b>52</b>	<b>495</b>
12 . SFD - Dev West Engineering		80 DU							
	Trips/Unit <sup>5</sup>		0.19	0.56	0.75	0.63	0.37	1.00	9.52
	Trip Generation		<b>15</b>	<b>45</b>	<b>60</b>	<b>50</b>	<b>30</b>	<b>80</b>	<b>762</b>
13 . SFD - Frontier Homes		56 DU							
	Trips/Unit <sup>5</sup>		0.19	0.56	0.75	0.63	0.37	1.00	9.52
	Trip Generation		<b>11</b>	<b>32</b>	<b>43</b>	<b>35</b>	<b>21</b>	<b>56</b>	<b>533</b>
14 . SFD - Motlagh Family Trust		25 DU							
	Trips/Unit <sup>5</sup>		0.19	0.56	0.75	0.63	0.37	1.00	9.52
	Trip Generation		<b>5</b>	<b>14</b>	<b>19</b>	<b>16</b>	<b>9</b>	<b>25</b>	<b>238</b>
15 . SFD - Winchester Associates		54 DU							
	Trips/Unit <sup>5</sup>		0.19	0.56	0.75	0.63	0.37	1.00	9.52
	Trip Generation		<b>10</b>	<b>30</b>	<b>40</b>	<b>34</b>	<b>20</b>	<b>54</b>	<b>514</b>
16 . SFD - Gabel, Cook, and Associates		107 DU							
	Trips/Unit <sup>5</sup>		0.19	0.56	0.75	0.63	0.37	1.00	9.52
	Trip Generation		<b>20</b>	<b>60</b>	<b>80</b>	<b>67</b>	<b>40</b>	<b>107</b>	<b>1,019</b>
17 . SFD - Winchester Associates		63 DU							
	Trips/Unit <sup>5</sup>		0.19	0.56	0.75	0.63	0.37	1.00	9.52
	Trip Generation		<b>12</b>	<b>35</b>	<b>47</b>	<b>40</b>	<b>23</b>	<b>63</b>	<b>600</b>
18 . SFD - Joe Anderson		32 DU							
	Trips/Unit <sup>5</sup>		0.19	0.56	0.75	0.63	0.37	1.00	9.52
	Trip Generation		<b>6</b>	<b>18</b>	<b>24</b>	<b>20</b>	<b>12</b>	<b>32</b>	<b>305</b>
19 . SFD - Mike McKnight Planning Const.		96 DU							
	Trips/Unit <sup>5</sup>		0.19	0.56	0.75	0.63	0.37	1.00	9.52
	Trip Generation		<b>18</b>	<b>54</b>	<b>72</b>	<b>60</b>	<b>36</b>	<b>96</b>	<b>914</b>
20 . SFD - Frontier Homes		40 DU							
	Trips/Unit <sup>5</sup>		0.19	0.56	0.75	0.63	0.37	1.00	9.52
	Trip Generation		<b>8</b>	<b>23</b>	<b>31</b>	<b>25</b>	<b>15</b>	<b>40</b>	<b>381</b>

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Table 4-C - Cumulative Projects Trip Generation

Project No.	Land Use/Builder/Applicant	Units	A.M. Peak Hour			P.M. Peak Hour			Daily
			In	Out	Total	In	Out	Total	
21 . SFD - KB Homes		159 DU							
	Trips/Unit <sup>5</sup>		0.19	0.56	0.75	0.63	0.37	1.00	9.52
	Trip Generation		<b>30</b>	<b>89</b>	<b>119</b>	<b>100</b>	<b>59</b>	<b>159</b>	<b>1,514</b>
22 . World Logistics Center		21,450.00 TSF							
	Trip Generation <sup>6</sup>		<b>1,197</b>	<b>466</b>	<b>1,663</b>	<b>412</b>	<b>1,396</b>	<b>1,808</b>	<b>30,879</b>
23 . Moreno Valley Logistics Center		1737.52 TSF							
	Trip Generation <sup>7</sup>		<b>321</b>	<b>67</b>	<b>388</b>	<b>71</b>	<b>333</b>	<b>404</b>	<b>3,519</b>
<b>Total Net Trip Generation</b>			<b>2,489</b>	<b>1,577</b>	<b>4,066</b>	<b>1,755</b>	<b>3,179</b>	<b>4,934</b>	<b>62,277</b>

## Notes:

DU = Dwelling Units; TSF = Thousand Square Feet; MFD = Multi-Family Development; SFD = Single-Family Development

<sup>1</sup> Rates based on Land Use 220 "Apartment" from the Institute of Transportation Engineers (ITE) *Trip Generation*, 9th Edition.

<sup>2</sup> Rates based on Land Use 720 "Medical-Dental Office Building" from ITE *Trip Generation*, 9th Edition.

<sup>3</sup> Rates based on Land Use 610 "Hospital" from ITE *Trip Generation*, 9th Edition.

<sup>4</sup> Rates based on Land Use 620 "Nursing Home" from ITE *Trip Generation*, 9th Edition.

<sup>5</sup> Rates based on Land Use 210 "Single-Family Detached Housing" from ITE *Trip Generation*, 9th Edition.

<sup>6</sup> The Phase 1 (Year 2022) project trip generation was extracted from the *Traffic Impact Analysis Report for The World Logistics Center*, dated May 2014.

Only passenger vehicle trip generation is reported. All truck trips were sent to the nearest freeway and did not pass through any study intersections.

<sup>7</sup> The project trip generation was extracted from the *Moreno Valley Logistics Center Traffic Impact Analysis*, dated June 17, 2016. Only passenger vehicle trip generation is reported. All truck trips were sent to the nearest freeway and did not pass through any study intersections.

**Table 4-D - Cumulative (2022) Roadway Segment Levels of Service**

Roadway Segment	Functional Classification <sup>1</sup>	LOS Standard <sup>2</sup>	LOS Standard Threshold Volume <sup>1</sup>	Without Project		With Project	
				Daily Volume	LOS	Daily Volume	LOS
<b>Segments on Oliver Street</b>							
From John F Kennedy Drive to Project Driveway 2	4-Lane Undivided Arterial	D	22,500	4,536	A	4,730	A
From Project Driveway 2 to Iris Avenue	4-Lane Undivided Arterial	D	22,500	4,076	A	4,861	A
<b>Segments on Iris Avenue</b>							
From Nason Street to Kaiser Hospital Entrance	6-Lane Divided Arterial	C	45,000	33,459	A	34,244	B
From Kaiser Hospital Entrance to Project Driveway 1	6-Lane Divided Arterial	D	50,600	29,411	A	30,196	A
From Project Driveway 1 to Oliver Street	6-Lane Divided Arterial	D	50,600	29,999	A	30,784	A
From Oliver Street to Via Del Lago	6-Lane Divided Arterial	C	45,000	25,951	A	26,736	A

**Notes:**

LOS = Level of Service

<sup>1</sup> Based on City of Moreno Valley *Traffic Impact Analysis Preparation Guide*, dated August 2007.

<sup>2</sup> LOS Standard based on *Moreno Valley General Plan: Final Program EIR - 5.2 Traffic/Circulation*, dated July 2006.

\* Exceeds LOS Standard

## 5.0 PROJECT TRAFFIC

### 5.1 PROJECT TRIP GENERATION

The project site includes a gas station with 16 fueling stations, a 3,800-square foot convenience store, and a drive-through car wash. The trip generation for the proposed project was developed using rates from the ITE *Trip Generation*, 9<sup>th</sup> Edition, for Land Use 946 – “Gasoline/Service Station with Convenience Market.” Table 5-A summarizes the a.m. and p.m. peak hours and daily net project trip generation. The project is forecast to generate 88 net a.m. peak hour trips, 101 net p.m. peak hour trips, and 1,111 net daily trips.

Gas stations will typically draw some trips from the traffic passing the site on an adjacent street or from traffic on other roadways within the vicinity. These trips are not “new” trips made for the sole purpose of visiting the site, but are trips made as an intermediate stop en route to an ultimate destination. Trips on adjacent streets passing the site are referred to as “pass-by” trips and only affect traffic at project driveways and on streets adjacent to the project. Pass-by trips were developed and applied using rates from the ITE *Trip Generation Handbook* (2<sup>nd</sup> Edition). Figure 5-1 illustrates the pass-by trip assignment for the proposed project.

### 5.2 PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

The distribution of project trips was developed in consultation with City staff by examining the regional roadway network and the location of the proposed project in relation to the surrounding areas. Figures 5-2 and 5-3 illustrate the outbound and inbound trip distribution for the proposed project at the study intersections, respectively. Trip assignment for project trips is the product of the project trip generation and the trip distribution percentages. Figure 5-4 illustrates the net project trip assignment at the study intersections.

### 5.3 LIST OF CHAPTER 5.0 FIGURES AND TABLES

- Figure 5-1: Pass-By Trips Assignment
- Figure 5-2: Project Trip Distribution (Outbound)
- Figure 5-3: Project Trip Distribution (Inbound)
- Figure 5-4: Net Project Trip Assignment
- Table 5-A: Project Trip Generation

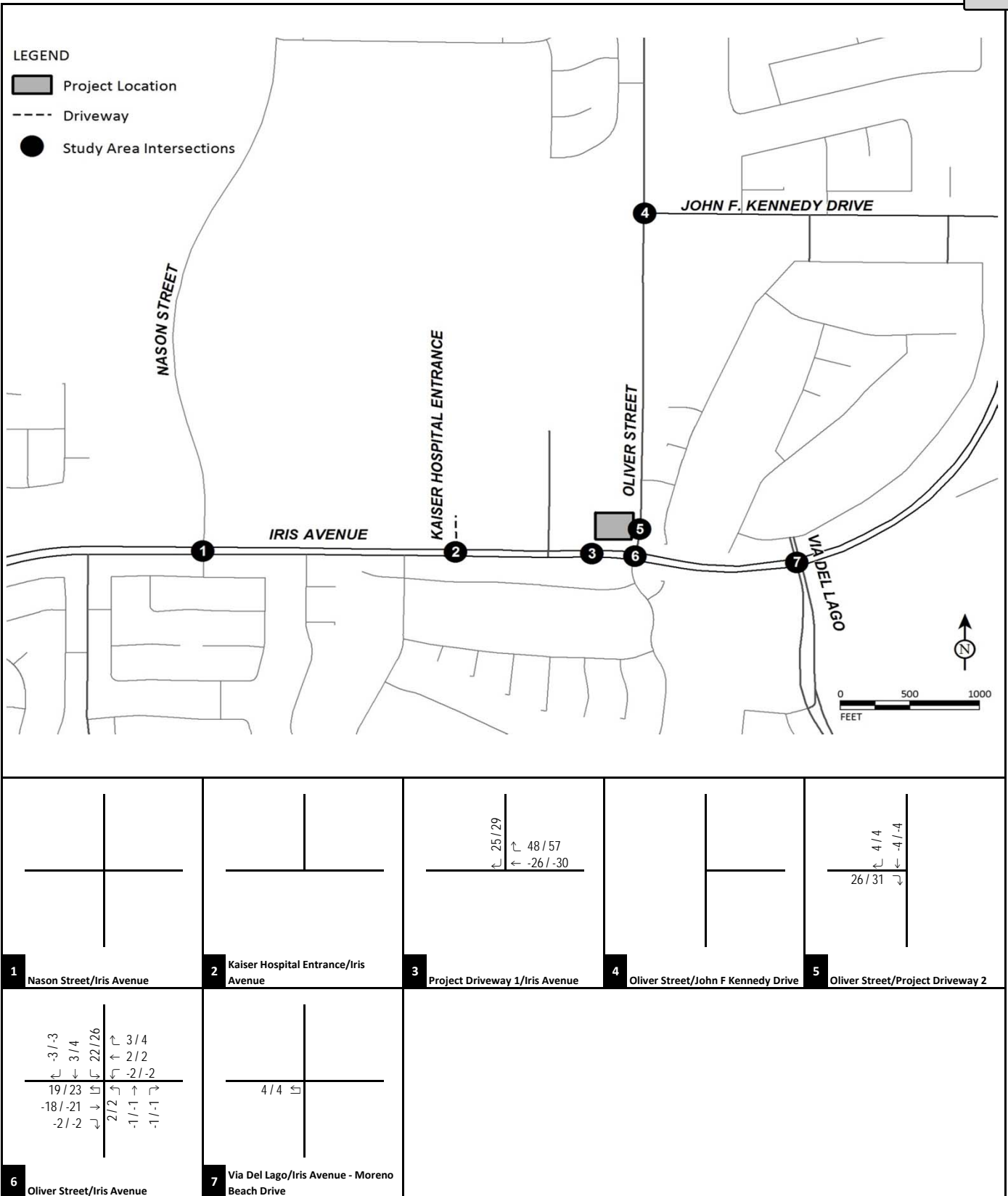


FIGURE 5-1



XX / YY  
 AM / PM Peak Hour PCE Volumes

AM/PM Gasoline Service Station  
 Traffic Impact Analysis  
 Pass-By Trips Assignment

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



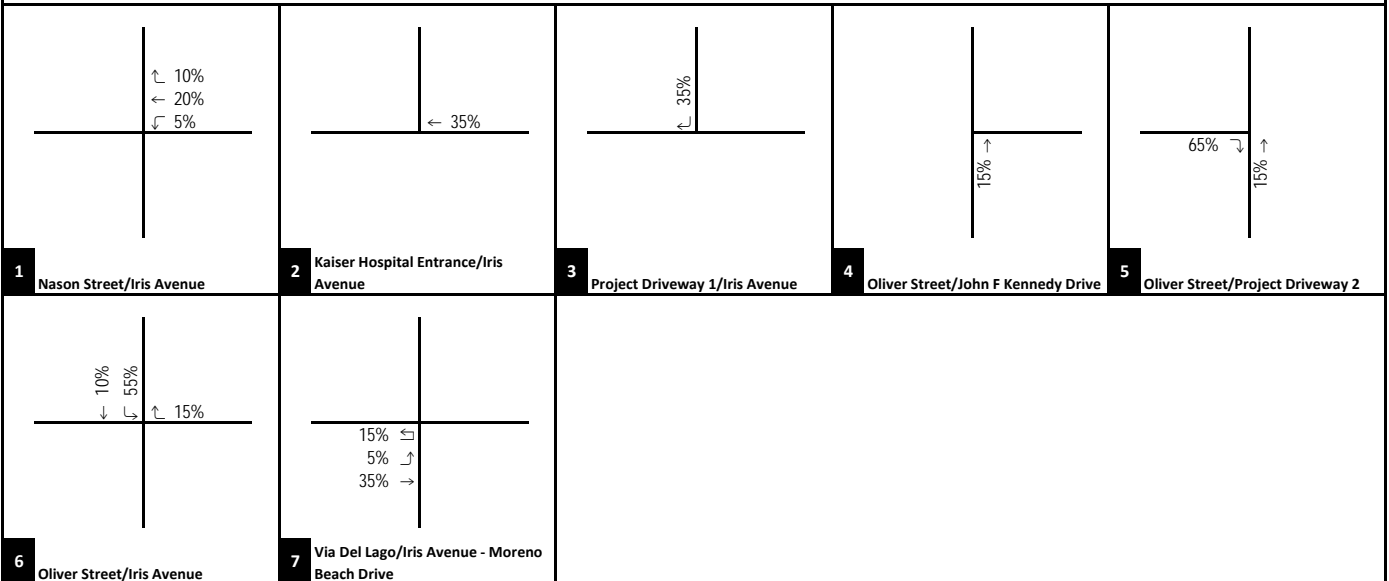
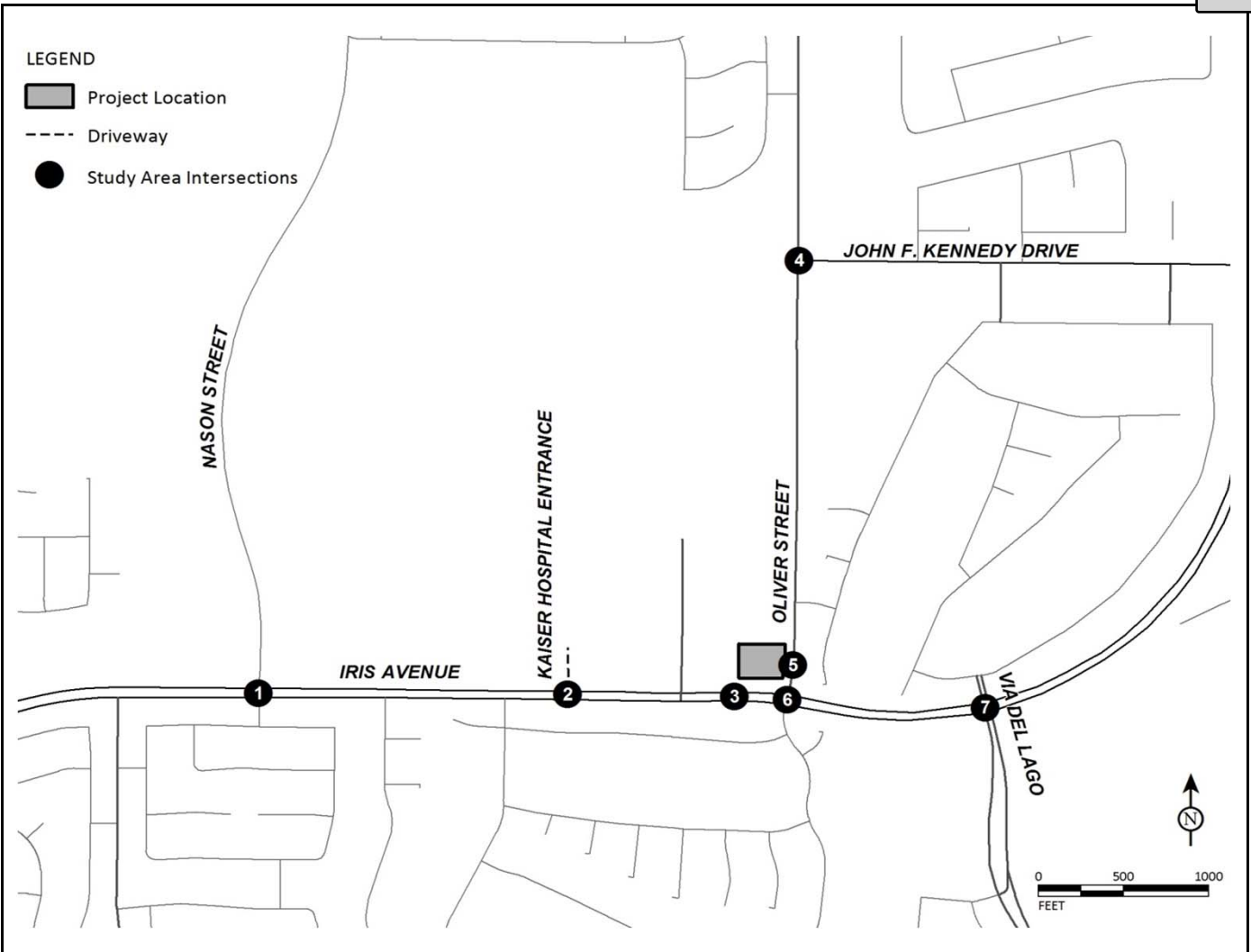


FIGURE 5-2

**LSA**  
XX%  
Outbound Trip Distribution

AM/PM Gasoline Service Station  
Traffic Impact Analysis  
Project Trip Distribution (Outbound)

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

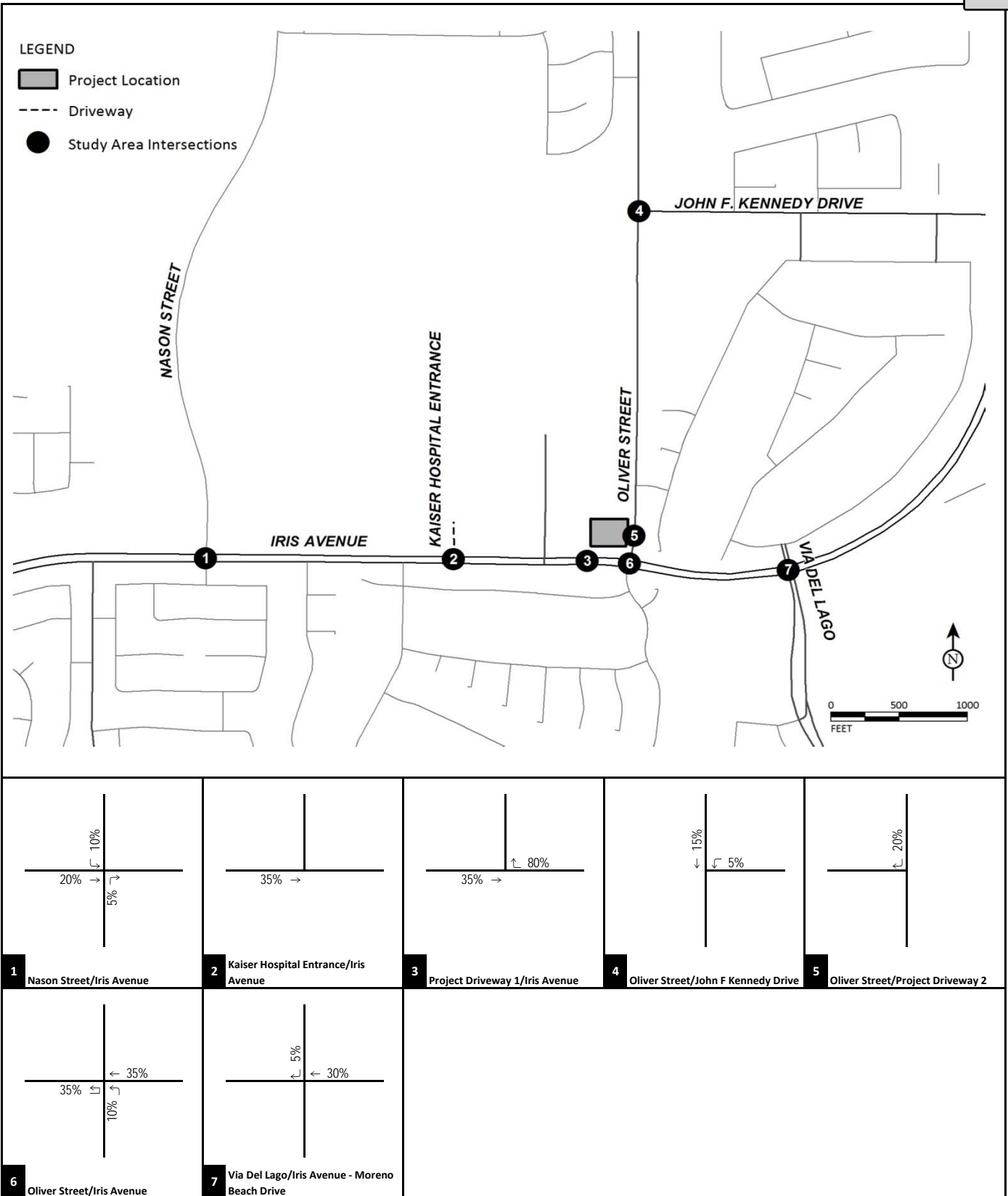


FIGURE 5-3

**LSA**  
 XX%  
 Inbound Trip Distribution

AM/PM Gasoline Service Station  
 Traffic Impact Analysis  
 Project Trip Distribution (Inbound)

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

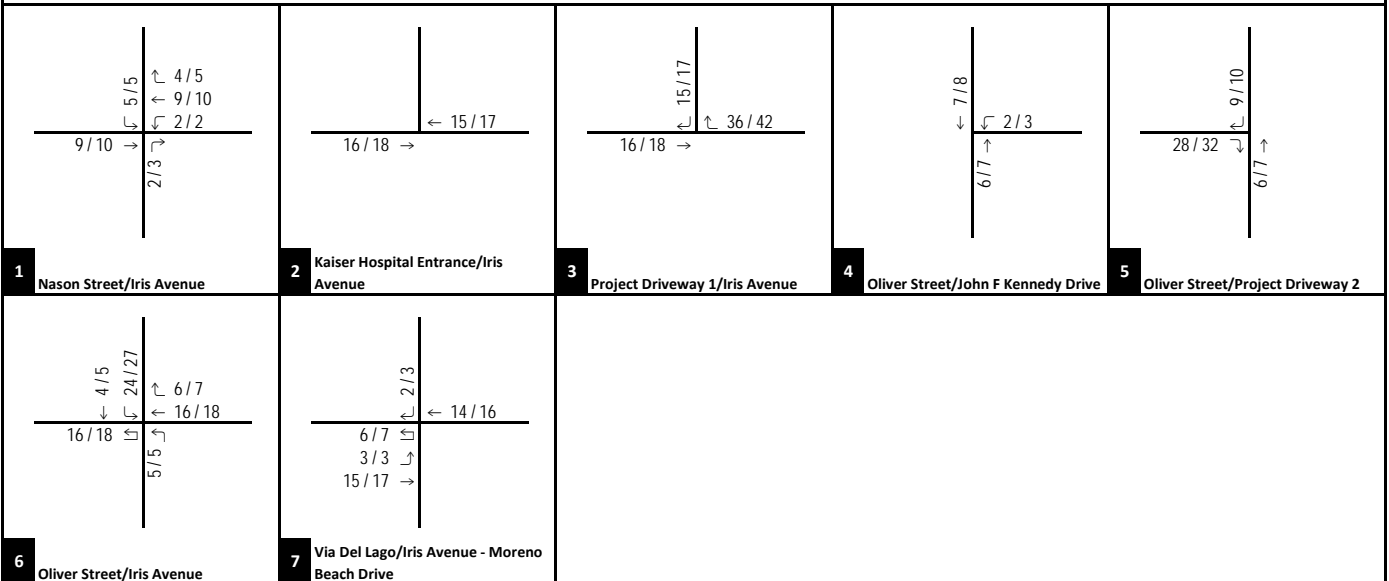
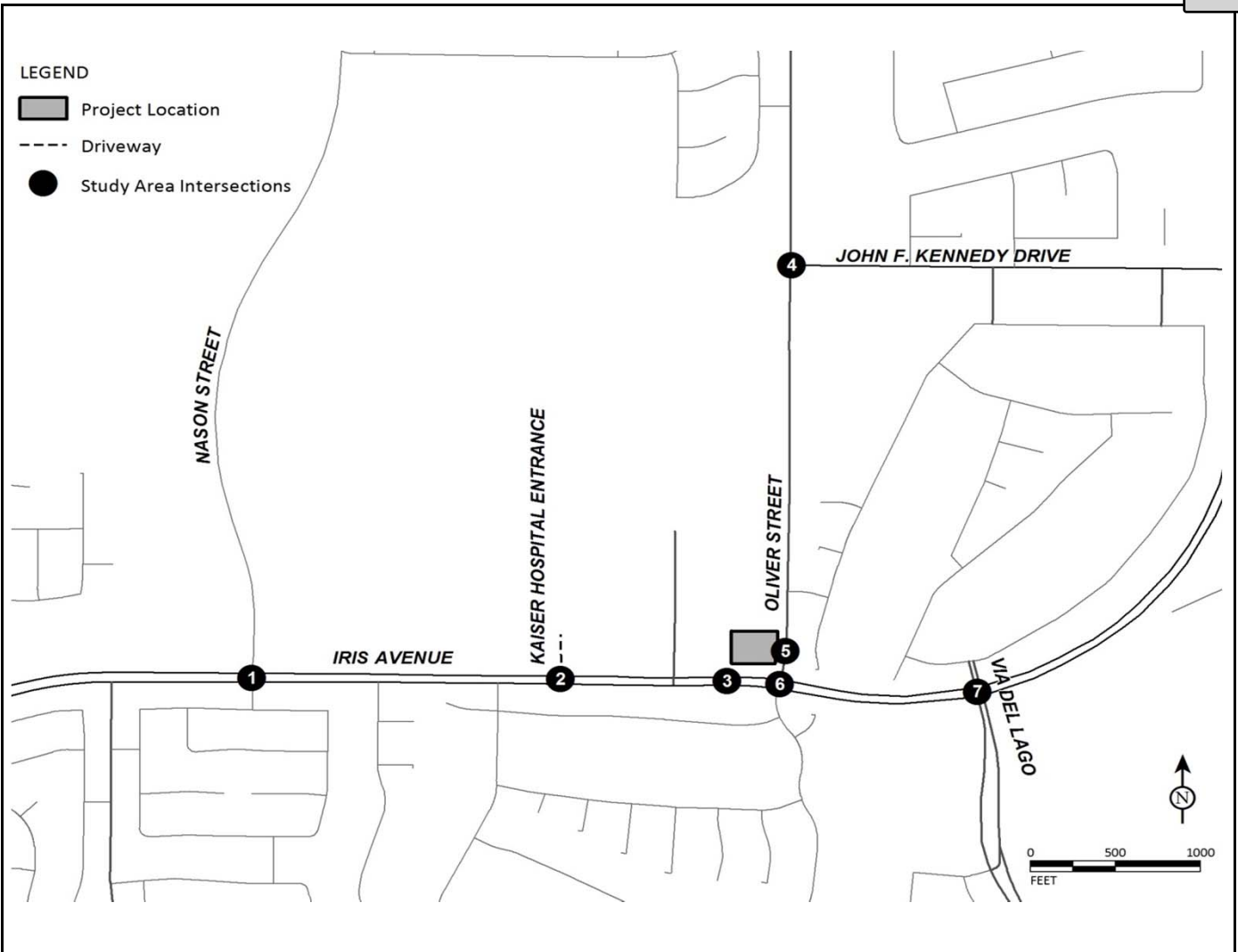


FIGURE 5-4

**LSA**  
 XX / YY  
 AM / PM Peak Hour Traffic Volumes

AM/PM Gasoline Service Station  
 Traffic Impact Analysis  
 Net Project Trip Assignment

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



Table 5-A - Project Trip Generation

Land Use	Units	A.M. Peak Hour			P.M. Peak Hour			Daily
		In	Out	Total	In	Out	Total	
<b>Gasoline Station with Convenience Market and Car Wash</b>	16 Fueling Stations							
Trips/Unit <sup>1</sup>		6.04	5.80	11.84	7.07	6.79	13.86	152.84
Trip Generation		97	93	190	113	109	222	2,445
Pass By Trips <sup>2</sup>		(52)	(50)	(102)	(61)	(60)	(121)	(1,334)
Total Net New Trips		45	43	88	52	49	101	1,111
	<b>Total Trip Generation</b>	<b>97</b>	<b>93</b>	<b>190</b>	<b>113</b>	<b>109</b>	<b>222</b>	<b>2,445</b>
	<b>Pass-By Trips</b>	<b>(52)</b>	<b>(50)</b>	<b>(102)</b>	<b>(61)</b>	<b>(60)</b>	<b>(121)</b>	<b>(1,334)</b>
	<b>Net New Trips</b>	<b>45</b>	<b>43</b>	<b>88</b>	<b>52</b>	<b>49</b>	<b>101</b>	<b>1,111</b>

Notes:

<sup>1</sup> Rates based on Land Use 946 - "Gasoline/Service Station with Convenience Market and Car Wash" from the Institute of Transportation Engineers (ITE) *Trip Generation* Manual, 9th Edition.

<sup>2</sup> Pass-by rates for Land Use 945 - "Gasoline/Service Station with Convenience Market" were factored. A pass-by rate of 53% was used in the the a.m. peak hour, while 54.6% was used in the p.m. peak hour. Since there is no data available for daily pass-by trips, the p.m. pass-by rate has been applied to the daily trip generation.

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

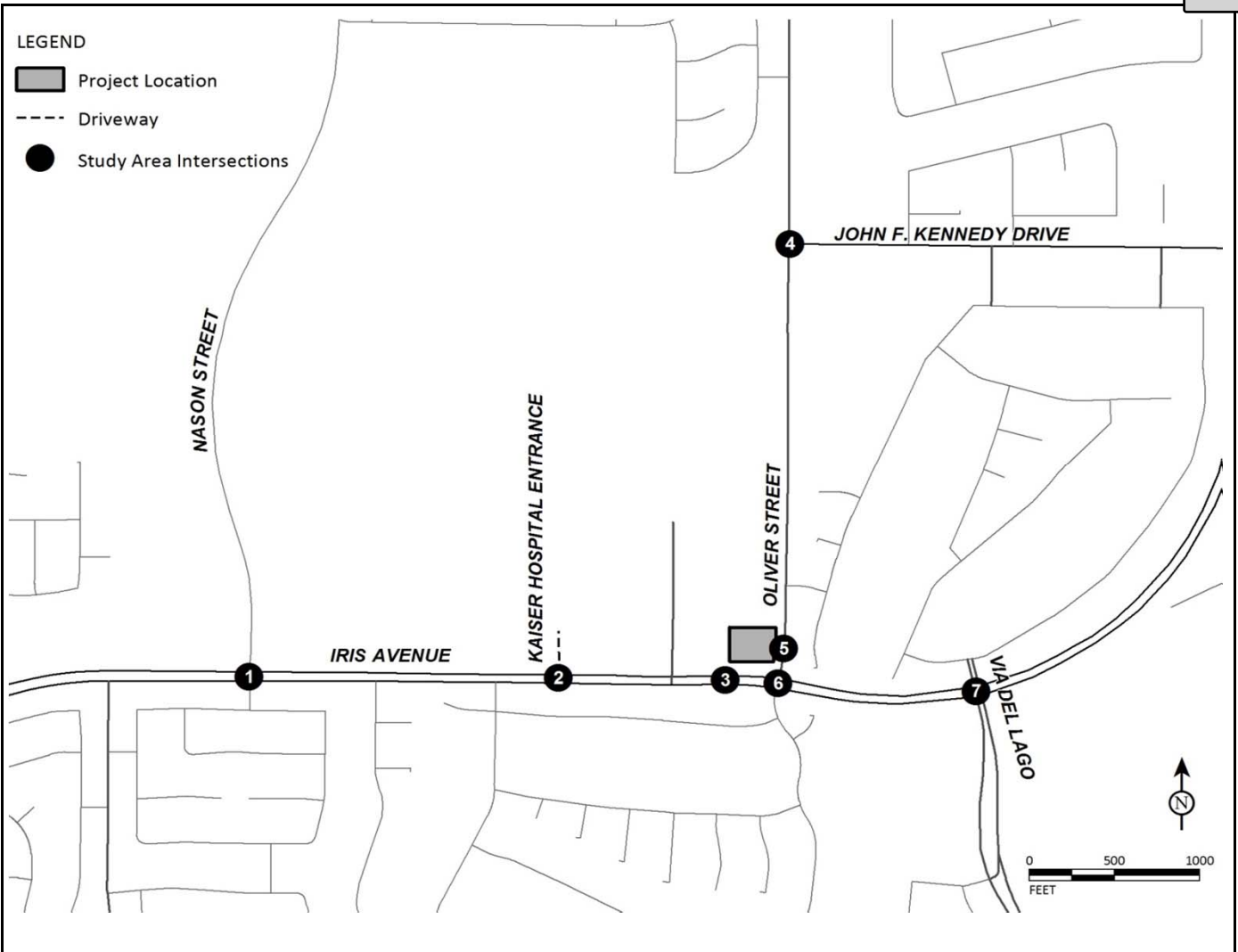
## 6.0 TRAFFIC VOLUMES WITH PROJECT SCENARIOS

Existing (2017), project completion year (2022), and cumulative (2022) with project traffic volumes were developed by adding project traffic to the corresponding without project scenarios. Figures 6-1, 6-2, and 6-3 illustrate “with project” peak hour PCE volumes at study intersections under existing, project completion year (2022), and cumulative (2022) conditions, respectively. Previously referenced Tables 4-A, 4-B, and 4-C summarize the “with project” roadway segment daily PCE traffic volumes under existing, project completion year (2022), and cumulative (2022) conditions.

Detailed volume development worksheets are included in Appendix C.

### 6.1 LIST OF CHAPTER 6.0 FIGURES

- Figure 6-1: Existing (2017) with Project Peak Hour Traffic Volumes
- Figure 6-2: Project Completion Year (2022) with Project Peak Hour Traffic Volumes
- Figure 6-3: Cumulative (2022) with Project Peak Hour Traffic Volumes



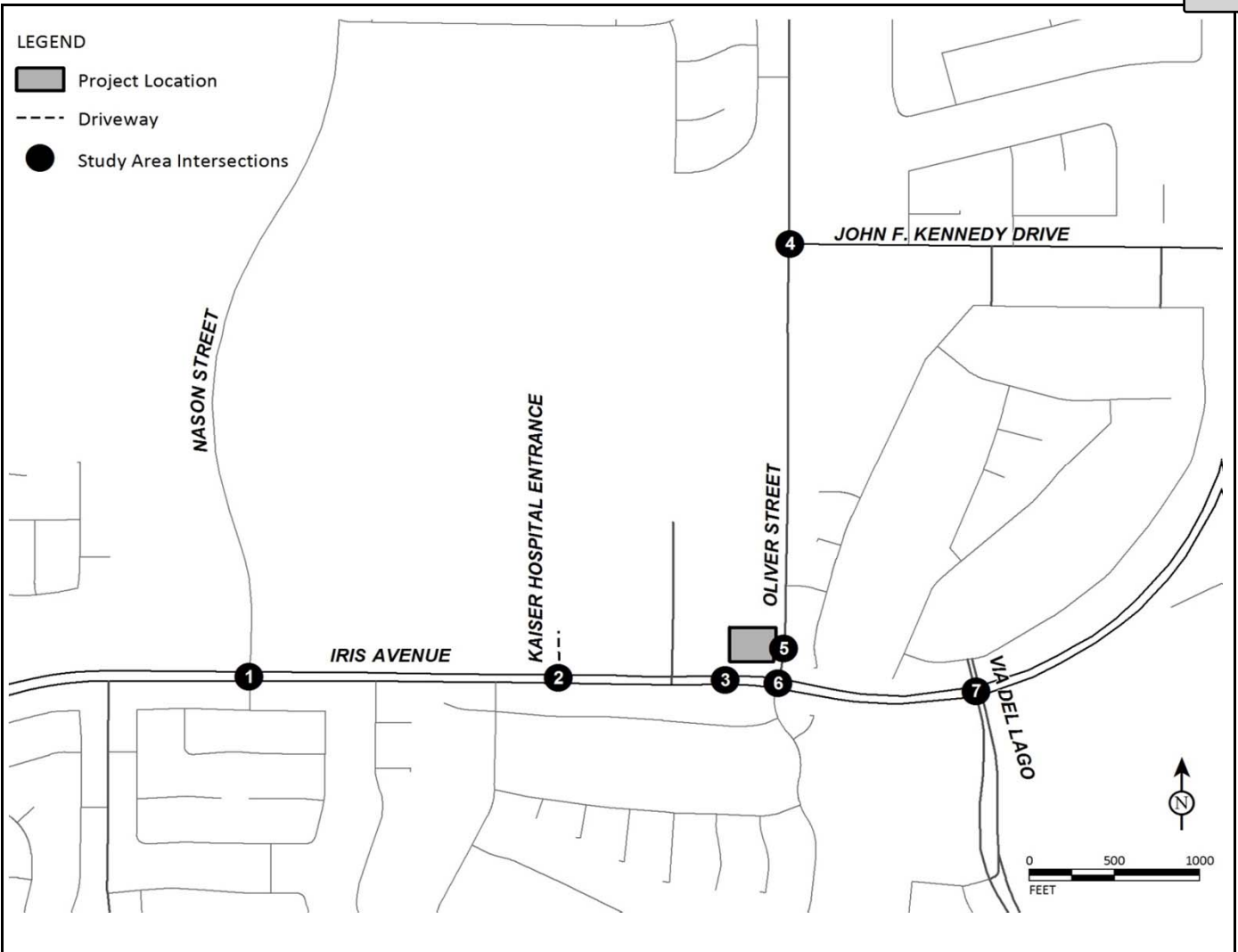
<p><b>1</b></p> <table border="1"> <tr><td>260 / 406</td><td>↑</td><td>80 / 109</td></tr> <tr><td>13 / 37</td><td>↑</td><td>700 / 766</td></tr> <tr><td>105 / 124*</td><td>↑</td><td>17 / 16 *</td></tr> <tr><td>315 / 230</td><td>↓</td><td>18 / 13</td></tr> <tr><td>791 / 581</td><td>↓</td><td>39 / 22</td></tr> <tr><td>22 / 19</td><td>↓</td><td>12 / 12</td></tr> </table>	260 / 406	↑	80 / 109	13 / 37	↑	700 / 766	105 / 124*	↑	17 / 16 *	315 / 230	↓	18 / 13	791 / 581	↓	39 / 22	22 / 19	↓	12 / 12	<p><b>2</b></p> <table border="1"> <tr><td>22 / 33</td><td>↑</td><td>39 / 18</td></tr> <tr><td>6 / 37</td><td>↑</td><td>700 / 729</td></tr> <tr><td>133 / 73</td><td>↓</td><td></td></tr> <tr><td>724 / 581</td><td>↓</td><td></td></tr> </table>	22 / 33	↑	39 / 18	6 / 37	↑	700 / 729	133 / 73	↓		724 / 581	↓		<p><b>3</b></p> <table border="1"> <tr><td>40 / 46</td><td>↑</td><td>84 / 99</td></tr> <tr><td></td><td>↑</td><td>719 / 683</td></tr> <tr><td>722 / 638</td><td>↓</td><td></td></tr> </table>	40 / 46	↑	84 / 99		↑	719 / 683	722 / 638	↓		<p><b>4</b></p> <table border="1"> <tr><td>120 / 70</td><td>←</td><td>92 / 56</td></tr> <tr><td>234 / 120</td><td>←</td><td>26 / 30</td></tr> <tr><td>267 / 88</td><td>→</td><td>44 / 18</td></tr> </table>	120 / 70	←	92 / 56	234 / 120	←	26 / 30	267 / 88	→	44 / 18	<p><b>5</b></p> <table border="1"> <tr><td>13 / 14</td><td>↑</td><td>222 / 101</td></tr> <tr><td>54 / 63</td><td>↓</td><td>227 / 104</td></tr> </table>	13 / 14	↑	222 / 101	54 / 63	↓	227 / 104
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**LSA** FIGURE 6-1

XXX / YYY  
 AM / PM Peak Hour PCE Volumes  
 \* Includes U-Turn movements

AM/PM Gasoline Service Station  
 Traffic Impact Analysis  
 Existing (2017) with Project Peak Hour Traffic Volumes

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



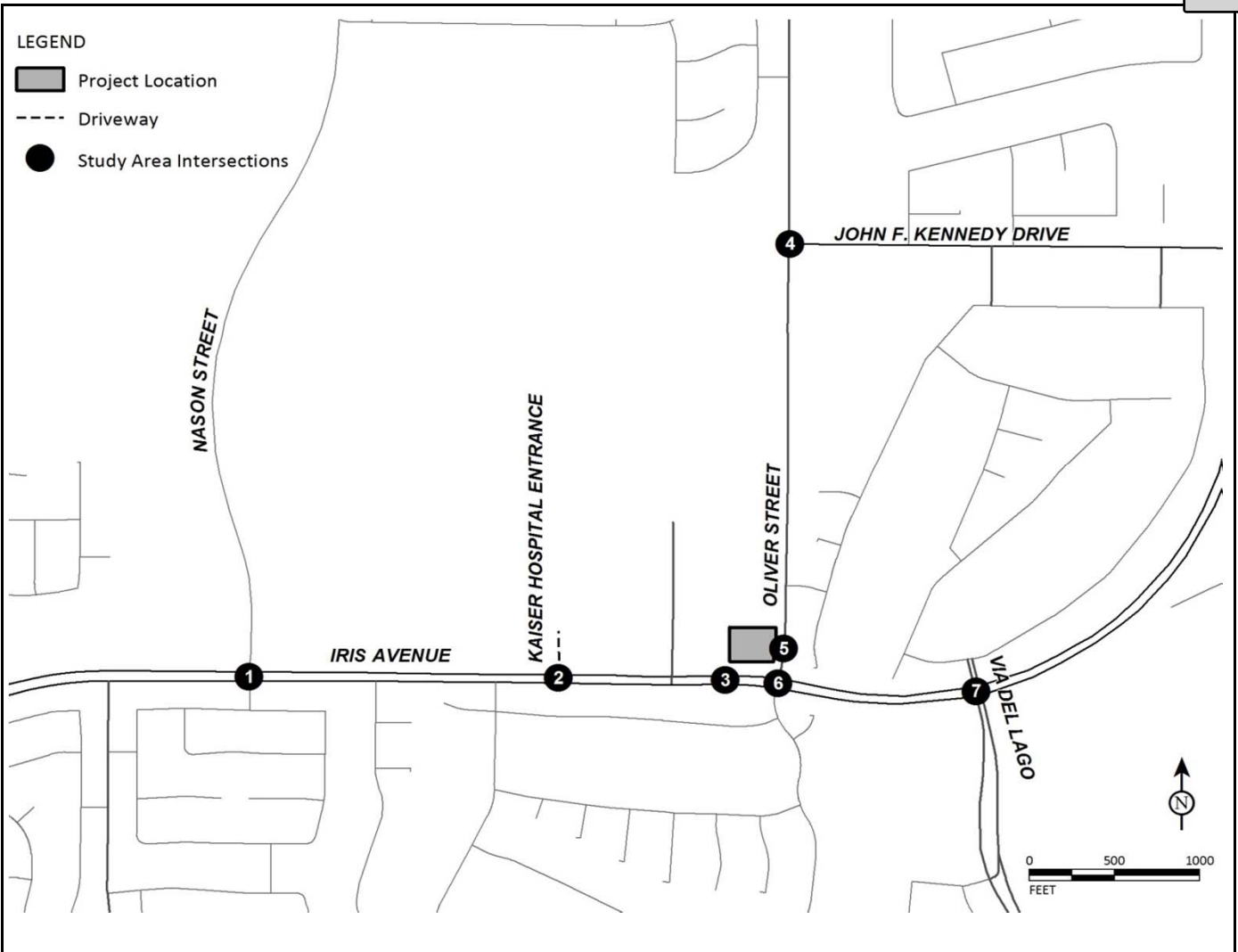
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**LSA** FIGURE 6-2

XXX / YYY  
 AM / PM Peak Hour PCE Volumes  
 \* Includes U-Turn movements

AM/PM Gasoline Service Station  
 Traffic Impact Analysis  
 Project Completion Year (2022) with Project Peak Hour Traffic Volumes

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



<p>313 / 516 17 / 42 212 / 239*</p> <p>156 / 243 924 / 1223 32 / 63 *</p> <p>398 / 293 1187 / 808 24 / 21</p> <p>20 / 14 44 / 27 51 / 29</p>	<p>44 / 123 43 / 206</p> <p>166 / 85 956 / 1162</p> <p>288 / 157 1106 / 851</p>	<p>40 / 46 84 / 99 1111 / 1185</p> <p>1136 / 1079</p>	<p>177 / 107 273 / 137</p> <p>108 / 79 43 / 67</p> <p>311 / 151 75 / 33</p>	<p>13 / 14 298 / 151</p> <p>54 / 63</p> <p>278 / 186</p>
<p><b>1</b> Nason Street/Iris Avenue</p>	<p><b>2</b> Kaiser Hospital Entrance/Iris Avenue</p>	<p><b>3</b> Project Driveway 1/Iris Avenue</p>	<p><b>4</b> Oliver Street/John F Kennedy Drive</p>	<p><b>5</b> Oliver Street/Project Driveway 2</p>
<p>263 / 118 35 / 35 53 / 61</p> <p>21 / 22 791 / 1080 45 / 71</p> <p>245 / 193 885 / 810 28 / 84</p> <p>114 / 68 49 / 15 65 / 42</p>	<p>67 / 34 2 / 2 14 / 10</p> <p>7 / 14 739 / 1090 24 / 57</p> <p>44 / 70 924 / 788 35 / 52</p> <p>37 / 38 2 / 0 56 / 28</p>			
<p><b>6</b> Oliver Street/Iris Avenue</p>	<p><b>7</b> Via Del Lago/Iris Avenue - Moreno Beach Drive</p>			

FIGURE 6-3

**LSA**  
XXXX / YYYY  
AM / PM Peak Hour PCE Volumes  
\* Includes U-Turn movements

AM/PM Gasoline Service Station  
Traffic Impact Analysis  
Cumulative (2022) with Project Peak Hour Traffic Volumes

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



## 7.0 INTERSECTION AND ROADWAY LEVELS OF SERVICE

### 7.1 EXISTING (2017) LEVELS OF SERVICE

#### 7.1.1 Study Intersections

Previously referenced Figure 3-1 illustrates existing geometrics and stop control. An intersection LOS analysis was conducted for existing (2017) conditions using the methodologies previously discussed. Table 7-A summarizes the results of this analysis and shows that all study intersections are currently operating at a satisfactory LOS.

Detailed Level of Service Worksheets are included in Appendix D.

#### 7.1.2 Roadway Segments

A roadway segment LOS analysis was conducted for existing (2017) conditions using the methodologies previously discussed. The levels of service were calculated using the criteria contained in the "Analysis Methodology" section of this report. Previously referenced Table 4-A summarizes the results of this analysis and shows that all roadway segments are currently operating at satisfactory levels of service.

Detailed Level of Service Worksheets are included in Appendix D.

### 7.2 EXISTING (2017) WITH PROJECT LEVELS OF SERVICE

Analysis of the existing with project scenario is provided for CEQA compliance to identify direct project impacts if the project were to be built and in operation today. This scenario eliminates the effects of ambient growth and other cumulative projects and deals specifically with project impacts.

#### 7.2.1 Study Intersections

An intersection LOS analysis was conducted for existing (2017) with project conditions using the methodologies previously discussed. Table 7-A summarizes the results of this analysis and shows that all study intersections are projected to operate at satisfactory levels of service.

Detailed Level of Service Worksheets are included in Appendix D.

#### 7.2.2 Roadway Segments

A roadway segment LOS analysis was conducted for existing (2017) with project conditions using the methodologies previously discussed. The levels of service were calculated using the criteria contained in the "Analysis Methodology" section of this report. Previously referenced Table 4-A summarizes the results of this analysis and shows that all roadway segments are projected to operate at satisfactory levels of service.

Detailed Level of Service Worksheets are included in Appendix D.

## 7.3 PROJECT COMPLETION YEAR (2022) WITHOUT PROJECT LEVELS OF SERVICE

### 7.3.1 Study Intersections

An intersection LOS analysis was conducted for project completion year (2022) conditions using the methodologies previously discussed. Table 7-B summarizes the results of this analysis and shows that all study intersections are projected to operate at satisfactory levels of service.

Detailed Level of Service Worksheets are included in Appendix D.

### 7.3.2 Roadway Segments

A roadway segment LOS analysis was conducted for project completion year (2022) using the methodologies previously discussed. The levels of service were calculated using the criteria contained in the "Analysis Methodology" section of this report. Previously referenced Table 4-B summarizes the results of this analysis and shows that all roadway segments are projected to operate at satisfactory levels of service.

Detailed Level of Service Worksheets are included in Appendix D.

## 7.4 PROJECT COMPLETION YEAR (2022) WITH PROJECT LEVELS OF SERVICE

### 7.4.1 Study Intersections

An intersection LOS analysis was conducted for project completion year (2022) with project conditions using the methodologies previously discussed. Table 7-B summarizes the results of this analysis and shows that all study intersections are projected to operate at satisfactory levels of service.

Detailed Level of Service Worksheets are included in Appendix D.

### 7.4.2 Roadway Segments

A roadway segment LOS analysis was conducted for project completion year (2022) with project using the methodologies previously discussed. The levels of service were calculated using the criteria contained in the "Analysis Methodology" section of this report. Previously referenced Table 4-B summarizes the results of this analysis and shows that all roadway segments are projected to operate at satisfactory levels of service.

Detailed Level of Service Worksheets are included in Appendix D.

## 7.5 CUMULATIVE (2022) WITHOUT PROJECT LEVELS OF SERVICE

### 7.5.1 Study Intersections

An intersection LOS analysis was conducted for cumulative (2022) conditions using the methodologies previously discussed. Table 7-C summarizes the results of this analysis and shows that all study intersections are projected to operate at satisfactory levels of service.

Detailed Level of Service Worksheets are included in Appendix D.

### 7.5.2 Roadway Segments

A roadway segment LOS analysis was conducted for cumulative (2022) conditions using the methodologies previously discussed. The levels of service were calculated using the criteria contained in the "Analysis Methodology" section of this report. Previously referenced Table 4-D summarizes the results of this analysis and shows that all roadway segments are projected to operate at satisfactory levels of service.

Detailed Level of Service Worksheets are included in Appendix D.

## 7.6 CUMULATIVE (2022) WITH PROJECT LEVELS OF SERVICE

### 7.6.1 Study Intersections

An intersection LOS analysis was conducted for cumulative (2022) with project conditions using the methodologies previously discussed. Table 7-C summarizes the results of this analysis and shows that all study intersections are projected to operate at satisfactory levels of service.

Detailed Level of Service Worksheets are included in Appendix D.

### 7.6.2 Roadway Segments

A roadway segment LOS analysis was conducted for cumulative (2022) with project conditions using the methodologies previously discussed. The levels of service were calculated using the criteria contained in the "Analysis Methodology" section of this report. Previously referenced Table 4-D summarizes the results of this analysis and shows that all roadway segments are projected to operate at satisfactory levels of service.

Detailed Level of Service Worksheets are included in Appendix D.

## 7.7 LIST OF CHAPTER 7.0 TABLES

- Table 7-A: Existing (2017) Intersection Levels of Service
- Table 7-B: Project Completion Year (2022) Intersection Levels of Service
- Table 7-C: Cumulative (2022) Intersection Levels of Service



Table 7-A - Existing (2017) Intersection Levels of Service

Intersection	Control	LOS Standard <sup>1</sup>	Without Project				With Project				Project Impact
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
			Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	
1 . Nason Street/Iris Avenue	Signal	C	20.9	C	24.9	C	21.3	C	25.1	C	No
2 . Kaiser Hospital Entrance/Iris Avenue	Signal	D	7.2	A	3.3	A	7.2	A	3.2	A	No
3 . Project Driveway 1/Iris Avenue	OWSC	D	<i>Does Not Exist</i>		<i>Does Not Exist</i>		10.0	A	9.8	A	No
4 . Oliver Street/John F Kennedy Drive	AWSC	C	12.7	B	8.6	A	13.0	B	8.8	A	No
5 . Oliver Street/Project Driveway 2	OWSC	D	<i>Does Not Exist</i>		<i>Does Not Exist</i>		9.2	A	8.8	A	No
6 . Oliver Street/Iris Avenue	Signal	D	24.3	C	17.9	B	41.5	D	23.0	C	No
7 . Via Del Lago/Iris Avenue - Moreno Beach Drive	Signal	C	24.6	C	22.9	C	24.7	C	23.0	C	No

Notes:

OWSC = One-Way Stop Control; AWSC = All-Way Stop Control

Delay = Average control delay in seconds

LOS = Level of Service

<sup>1</sup> LOS Standard based on *Moreno Valley General Plan: Final Program EIR - 5.2 Traffic/Circulation*, dated July 2006.

\* Exceeds LOS Standard



**Table 7-B - Project Completion Year (2022) Intersection Levels of Service**

Intersection	Control	LOS Standard <sup>1</sup>	Without Project				With Project				Project Impact
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
			Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	
1 . Nason Street/Iris Avenue	Signal	C	23.3	C	26.3	C	24.2	C	26.5	C	No
2 . Kaiser Hospital Entrance/Iris Avenue	Signal	D	7.5	A	3.4	A	7.5	A	3.4	A	No
3 . Project Driveway 1/Iris Avenue	OWSC	D	<i>Does Not Exist</i>		<i>Does Not Exist</i>		10.0	A	10.0	A	No
4 . Oliver Street/John F Kennedy Drive	AWSC	C	14.4	B	8.9	A	14.8	B	9.0	A	No
5 . Oliver Street/Project Driveway 2	OWSC	D	<i>Does Not Exist</i>		<i>Does Not Exist</i>		9.2	A	8.9	A	No
6 . Oliver Street/Iris Avenue	Signal	D	24.9	C	18.3	B	45.1	D	23.8	C	No
7 . Via Del Lago/Iris Avenue - Moreno Beach Drive	Signal	C	25.1	C	23.5	C	25.2	C	23.7	C	No

**Notes:**

OWSC = One-Way Stop Control; AWSC = All-Way Stop Control

Delay = Average control delay in seconds

LOS = Level of Service

<sup>1</sup> LOS Standard based on *Moreno Valley General Plan: Final Program EIR - 5.2 Traffic/Circulation*, dated July 2006.

\* Exceeds LOS Standard

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO

Table 7-C - Cumulative (2022) Intersection Levels of Service

Intersection	Control	LOS Standard <sup>1</sup>	Without Project				With Project				Project Impact
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
			Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	Delay (sec.)	LOS	
1 . Nason Street/Iris Avenue	Signal	C	31.8	C	33.8	C	32.2	C	34.5	C	No
2 . Kaiser Hospital Entrance/Iris Avenue	Signal	D	9.3	A	6.5	A	9.4	A	6.5	A	No
3 . Project Driveway 1/Iris Avenue	OWSC	D	<i>Does Not Exist</i>		<i>Does Not Exist</i>		10.6	B	11.0	B	No
4 . Oliver Street/John F Kennedy Drive	AWSC	C	13.4	B	9.3	A	13.7	B	9.4	A	No
5 . Oliver Street/Project Driveway 2	OWSC	D	<i>Does Not Exist</i>		<i>Does Not Exist</i>		9.4	A	9.0	A	No
6 . Oliver Street/Iris Avenue	Signal	D	38.9	D	21.5	C	42.3	D	25.6	C	No
7 . Via Del Lago/Iris Avenue - Moreno Beach Drive	Signal	C	25.7	C	28.1	C	25.9	C	28.4	C	No

Notes:

OWSC = One-Way Stop Control; AWSC = All-Way Stop Control

Delay = Average control delay in seconds

LOS = Level of Service

<sup>1</sup> LOS Standard based on *Moreno Valley General Plan: Final Program EIR - 5.2 Traffic/Circulation*, dated July 2006.

\* Exceeds LOS Standard

## 8.0 CIRCULATION IMPROVEMENTS AND FUNDING SOURCES

### 8.1 RECOMMENDED IMPROVEMENTS BASED ON LOS ANALYSIS

At intersections where the level of service is forecast to be unsatisfactory or where the project would have an impact, the City requires that improvements be identified to maintain conformance with City level of service standards. There are no impacts for any scenarios for either the intersection or roadway segment LOS analyses.

### 8.2 RECOMMENDED IMPROVEMENTS BASED ON INTERSECTION QUEUE ANALYSIS

City staff required an intersection queueing analysis in addition to the LOS analysis. The intersection queueing analysis was conducted at intersections to determine if vehicle stacking at dedicated and shared-turn lanes would conflict with traffic operations. The analysis was performed using the Synchro 9.1 and SimTraffic software. Since Synchro does not report queues at unsignalized intersections, SimTraffic queues have been reported for unsignalized intersections for purposes of this analysis. Table 8-A summarizes the 95<sup>th</sup> percentile queues forecast at the intersections requested by the City. As shown in Table 8-A, the queue exceeds storage capacity at:

- Cumulative (2022) with Project Conditions:
  - Oliver Street/Iris Avenue: Eastbound Left-Turn (a.m. peak hour).

It should be noted that this intersection is projected to operate at a satisfactory LOS under cumulative (2022) with project conditions. As shown in Table 8-A, the available storage for the eastbound left-turn is 240 feet. Under cumulative with the project conditions the 95<sup>th</sup> percentile queue exceeds the available storage by only 1 foot (less than 1 vehicle). Additionally, there is enough space within the transition (approximately 80 feet) to accommodate queues without affecting the eastbound through movement. Therefore, no improvement is recommended for the eastbound left-turn pocket.

### 8.3 FUNDING SOURCES AND MECHANISMS

Infrastructure improvements are needed to accommodate the projected population growth in the project region. As part of the infrastructure improvements, roadway segments and intersections may have to be improved to accommodate the corresponding growth in traffic in the future. Several funding mechanisms/programs, both regional and local, have been developed by jurisdictions to address the long-term transportation infrastructure needs for the region. Typically, these programs collect a mitigation fee for a listed set of improvements along roadway segments and intersections. The following are the fee programs that include the roadway segments and intersections in the study area for the proposed project:

- The Western Riverside Council of Government (WRCOG) Transportation Uniform Mitigation Fee (TUMF) Program; and
- City of Moreno Valley Development Impact Fee (DIF) Program.

### 8.3.1 Transportation Uniform Mitigation Fee (TUMF) Program

The underlying purpose of the TUMF program is “the need to establish a comprehensive funding source to mitigate the cumulative regional transportation impacts of new development on regional arterial highways.” As new development occurs in western Riverside County, the cumulative transportation impacts of this new development are reflected in increased demand for transportation infrastructure leading to decreased levels of service, increased delay and increased congestion on regional transportation facilities, and an overall decline in regional mobility. Therefore, the need to invest in additional transportation infrastructure to meet the increased travel demand and to sustain pre-development traffic conditions to “keep traffic flowing” represents the fundamental premise of the TUMF program.

### 8.3.2 City of Moreno Valley Development Impact Fee (DIF) Program

The City of Moreno Valley has its own DIF program to impose and collect fees for new developments within the City for the purpose of collection funds for roadway and intersections improvements to accommodate the growth of the City as stated in the City’s General Plan Circulation Element. The DIF program may include facilities that are not included and covered in the TUMF program.

## 8.4 PROJECT FAIR SHARE

In the absence of any established fee mechanism for circulation improvements, the project is required to pay its fair-share contribution for the required improvements. The fair-share contribution of the project is the project increment traffic to the total new traffic that is determined for all study intersections. There are no recommended improvements based on the LOS analysis and intersection queue analysis.

## 8.5 LIST OF CHAPTER 8.0 FIGURES AND TABLES

- Table 8-A: Intersection Queue Analysis



Table 8-A - Intersection Queue Analysis

Intersection	Movement	Storage Length (ft/In)	Existing (2017)		Existing (2017) with Project		Project Completion Year (2022)		Project Completion Year (2022) with Project		Cumulative (2022)		Cumulative (2022) with Project	
			95th % Queue		95th % Queue		95th % Queue		95th % Queue		95th % Queue		95th % Queue	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1. Nason Street/Iris Avenue	WBL	170	12	17	13	18	11	15	13	17	16	34	17	36
3. Project Driveway 1/Iris Avenue	WBTR	60	-	-	-	-	-	-	-	-	-	-	22	-
4. Oliver Street/John F Kennedy Drive	WBL	100	45	47	47	47	41	45	45	44	44	47	47	47
6. Oliver Street/Iris Avenue	NBTL	120	89	48	94	53	98	52	103	56	106	58	112	62
	NBR	50	0	0	0	0	0	0	0	0	0	0	0	0
	SBTL	490	30	29	67	69	33	32	69	72	32	31	64	69
	SBR	100	40	2	40	0	42	6	41	4	51	20	51	19
	EBL	240	107	65	187	94	114	69	211	117	121	94	<b>241</b>	218
	EBTR	530	21	100	21	97	26	110	27	106	47	120	46	117
	WBTR	250	45	20	44	20	48	24	47	24	54	44	52	39
7. Via Del Lago/Iris Avenue - Moreno Beach Drive	WBL	1100	15	9	17	11	16	9	19	12	20	13	22	15
	NBL	95	30	27	30	27	32	28	32	28	41	42	41	42
	SBL	50	21	17	21	17	22	18	22	18	21	17	21	17
	EBL	110	35	29	48	42	36	32	50	43	38	50	53	83
WBL	300	26	44	26	44	27	47	27	47	30	55	30	55	

Notes:

**Bold** = Queue exceeds available storage.

All queues reported are 95th percentile queues.

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

## 9.0 SUMMARY AND CONCLUSIONS

The proposed AM/PM Gasoline Service Station Project consists of 16 fueling stations, a 3,800-square foot convenience store, and a drive-through car wash. The project is forecast to generate 88 net a.m. peak hour trips, 101 net p.m. peak hour trips, and 1,111 daily trips.

### 9.1 EXISTING (2017) CONDITIONS SUMMARY

Based on the significance criteria as discussed in the “Significance Threshold” section of this report, all study intersections and roadway segments will operate at a satisfactory LOS under existing (2017) without and with project conditions. There are no intersection queueing conflicts under existing (2017) without and with project conditions.

### 9.2 PROJECT COMPLETION YEAR (2022) CONDITIONS SUMMARY

Based on the significance criteria as discussed in the “Significance Threshold” section of this report, all study intersections and roadway segments will operate at a satisfactory LOS under project completion year (2022) without and with project conditions. There are no intersection queueing conflicts under project completion year (2022) without and with project conditions.

### 9.3 CUMULATIVE (2022) CONDITIONS SUMMARY

Based on the significance criteria as discussed in the “Significance Threshold” section of this report, all study intersections and roadway segments will operate at a satisfactory LOS under project completion year (2022) without and with project conditions. The eastbound left-turn queue exceeds storage capacity at the intersection of Oliver Street/Iris Avenue under cumulative (2022) conditions with project conditions in the a.m. peak hour. It should be noted that there is enough space within the transition to accommodate the eastbound left queues without affecting the eastbound through movement. Therefore, no improvement is required at this intersection.

---

**APPENDIX A:**

**SCOPING AGREEMENT**

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



Date: August 29, 2017

This letter acknowledges the City of Moreno Valley Transportation Engineering Division requirements for the traffic impact analysis of the following project:

Case No. PPA17-0008

Project Name: AM/PM Gasoline Service Station (LSA Project No. SAT1701)

Project Address: Northwest Corner of Iris Avenue and Oliver Street, Moreno Valley, CA 92555

Project Description: Gasoline Station with Convenience Store and Car Wash

Related Cases: N/A

	<u>Consultant</u>	<u>Developer</u>
Name:	LSA Associates, Inc. Attn: Ambarish Mukherjee	Sater Oil International Attn: Eric LeVaughn
Address:	1500 Iowa Avenue, Suite 200 Riverside, CA 92507	683 Cliffside Drive, San Dimas, CA 91773-2957
Telephone:	(951) 781-9310	

**I. BACKGROUND**

LSA will be preparing a traffic impact analysis (TIA) for the proposed AM/PM Gasoline Service Station in the City of Moreno Valley (City). The gasoline station will include 16 fueling stations, a 3,800 square foot convenience store, and a drive-through car wash. The project will be located on the northwest corner of Iris Avenue and Oliver Street in the City. Figure 1 illustrates the regional and project location (All figures and tables attached). Figure 2 illustrates the conceptual site plan.

As shown in the site plan, access to the project would be provided via two driveways: one driveway along Iris Avenue and one driveway along Oliver Street. Because of an existing median on Iris Avenue, the driveway would operate as a right-in/right-out driveway. The driveway on Oliver Street would operate as a right-in/right-out driveway.

The traffic study shall follow the City of Moreno Valley's (City) *Transportation Engineering Division Traffic Impact Analysis Preparation Guidelines*, dated August 2007, for preparation of TIAs. Based on these guidelines the following scope of work is being proposed for the preparation of this TIA.

## II. TRIP GEOGRAPHIC DISTRIBUTION AND ASSIGNMENT

### Project Trip Distribution

Generalized trip distribution patterns were developed based on the location of the proposed project in relation to surrounding land uses and the regional roadway network. Figure 3 illustrates the study area intersections. Figure 4 illustrates the inbound trip distribution for the project. Figure 5 illustrates the outbound trip distribution for the project. As shown in Figure 5, approximately 35 percent of project trips will travel eastwards along Iris Avenue, 35 percent will travel westwards along Iris Avenue, 20 percent northwards along Oliver Street, and 10 percent southwards along Oliver Street.

N: 15%      S: 10%      E: 40%      W: 35%

### Project Pass-By Trip Assignment

Gas stations typically draw some of their trips from the adjacent street traffic, so that some of the project trips are not actually “new” trips to the surrounding circulation system. These trips are referred to as “pass-by” trips and are made as intermediate stops on the way from an origin to a primary trip destination without route diversion. For the proposed project, pass-by trips would occur on Iris Avenue and Oliver Street en route to a final destination. The Institute of Transportation Engineers (ITE) has conducted research on the percentage of pass-by trips for various land uses and are included in the ITE *Trip Generation Handbook* (2<sup>nd</sup> Edition). Project pass-by trip assignment will be developed based on traffic counts collected on the adjacent street system and will be provided in the TIA.

### Net Project Trip Assignment

The trip assignment for project trips is the product of the net project trip generation and the trip distribution percentages. Figure 6 illustrates the net project trip assignment.

## III. SITE TRIP GENERATION FORECAST

- A. The trip generation for the proposed project was developed using rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (9<sup>th</sup> Edition) for Land Use 946 – “Gasoline/Service Station with Convenience Market and Car Wash.”
- B. The pass-by rates for the proposed project were factored using rates based on Land Use 945 – “Gasoline/Service Station with Convenience Market.”

- C. The a.m. peak hour is defined as the one hour of highest traffic volumes occurring between 7:00 and 9:00 a.m. (based upon existing 24-hour traffic counts)
- D. The p.m. peak hour is defined as the one hour of highest traffic volume occurring between 4:00 and 6:00 p.m. (based upon existing 24-hour traffic counts)
- E. Intersection and link acceptable Level of Service “D” for some intersections and links and Level of Service “C” for others based upon the current city policy. (Use Highway Capacity Manual 2010 (HCM 2010) operations procedures; parameters per County of Riverside Traffic Impact Analysis Guidelines.)

**Proposed Use Rates<sup>1</sup>**

<i>Gasoline/Service Station with Convenience Market and Car Wash (per Vehicle Fueling Station)</i>	Daily: <u>152.84</u>	AM: <u>11.840</u>	PM: <u>13.860</u>
Internal Trip Allowance:	Yes: _____	No: <u>X</u>	Percentage: _____ %
Pass-by Trip Allowance:	Yes: <u>X</u>	No: _____	Percentage: <u>53%(AM)/54.6%(PM &amp; Daily)</u>

<sup>1</sup> Institute of Transportation Engineers (ITE) *Trip Generation Manual* (9<sup>th</sup> Edition).

Table A shows the estimated project trips for the proposed project.

**IV. SPECIFIC PROJECT ISSUES TO BE ANALYZED**

- A. The traffic study will address the adequacy of site access and identify specific near-term circulation improvements required at study area intersections and roadways to maintain acceptable peak hour and daily levels of service (LOS).
  - Levels of service with the project will be compared to levels of service without the project for each of the analysis scenarios to determine potential project impacts at

study locations. At study intersections, the determination of significant project impacts will be made based on City's LOS standards and threshold of significance criteria.

- B. The traffic study shall address the project traffic impacts at all study intersections listed in Section VI of this scope and provide appropriate mitigation measures if applicable. Peak-hour traffic signal warrants shall be evaluated for all intersections that are not currently signalized.
- Prior to the preparation of the TIA, LSA will coordinate with City staff to finalize any future roadway improvements within the study area.
  - Mitigation measures will be recommended at locations operating at an unsatisfactory LOS or where the project causes significant impacts. Mitigation measures may include intersection turn lanes, signalization, and segment lane additions. The LOS with mitigation will be calculated and summarized, along with a comparison of the LOS without mitigation. LSA will provide the Synchro files to the City for review.
- C. The traffic study shall address a qualitative assessment of existing and planned non-motorized facilities (e.g. pedestrians, bike routes, trails, etc.) within the study area.
- D. The traffic study shall provide a Queuing Analysis section to determine the 95<sup>th</sup> percentile queues for the following turning movements based on forecasted Existing (2017) with Project Conditions, Project Completion Year (2022) with Project Conditions, and Cumulative (2022) with Project Conditions traffic volumes using Synchro at the following locations:
- All left-turn, right-turn, and U-turn movements at Oliver Street/Iris Avenue;
  - Westbound U-turn movements at Nason Street/Iris Avenue;
  - All left-turn movements at Via Del Lago/Iris Avenue-Moreno Beach Drive;
  - Westbound left-turn movements at Oliver Street/John F Kennedy Drive;
  - Southbound right-turn movements at Oliver Street/Project Driveway; and
  - Westbound right-turn movements at Project Driveway/Iris Avenue.

If there is not sufficient queuing storage length available, the traffic study shall provide mitigation measures for such issues.

- E. The traffic study shall provide a detailed analysis of each driveway location based on Table 9.11.080-14 of the City of Moreno Valley Municipal Code – Design Guidelines, by preparing a table or an exhibit to show the required minimum spacing distance from the adjacent intersection and driveways and whether each proposed driveway location can meet this minimum distance.

## V. STUDY OF HORIZON YEARS

The TIA will be prepared to satisfy the requirements established by the TIA Guidelines, as well as the requirements for the disclosure of potential impacts and mitigation measures pursuant to the

California Environmental Quality Act (CEQA). Based on the TIA Guidelines, the TIA will address existing traffic conditions, future traffic forecasts, project-related impacts and mitigations under the following scenarios:

- A. Existing (2017) Conditions;
- B. Existing (2017) with Project Conditions;
- C. Project Completion Year (2022) without Project Conditions\*;
- D. Project Completion Year (2022) with Project Conditions;
- E. Cumulative (2022) without Project Conditions; and
- F. Cumulative (2022) with Project Conditions.

\*Opening year should have a minimum five (5) year horizon as per Moreno Valley traffic study guidelines.

### Volume Development

Traffic volumes for existing conditions will be developed by collecting existing AM and PM peak hour traffic counts at study intersections and 24 hour traffic volume counts at roadway segments converting the counts to Passenger Car Equivalents (PCEs) based on SBCTA PCE conversion factors. Opening year without project traffic conditions will be developed by applying a 2% compounded annual growth rate to existing traffic volumes. Cumulative conditions traffic volumes will be developed by adding traffic volumes from approved projects to the opening year without project traffic volumes. Information regarding cumulative projects will be obtained from the City of Moreno Valley Economic Development website. Existing, opening year, and cumulative with project traffic volumes will be developed by adding project traffic volumes to the corresponding without project scenarios.

## VI. FACILITIES TO BE STUDIED

### Study Area Intersections

Based on the TIA Guidelines, the TIA is required to analyze all intersections of Collector or higher classification streets where the project will contribute 50 or more peak hour trips, not exceeding a 10-mile radius from the project site. Based on the guidelines, an operational analysis of the following intersections is proposed during the a.m. and p.m. peak hours.

LSA proposes to include the following intersections:

1. Nason Street/Iris Avenue;
2. Kaiser Hospital Entrance/Iris Avenue;
3. Driveway 1/Iris Avenue;
4. Oliver Street/John F Kennedy Drive;



5. Oliver Street/Driveway 2;
6. Oliver Street/Iris Avenue; and
7. Via Del Lago/Iris Avenue – Moreno Beach Drive.

All study intersections will be analyzed during the a.m. and p.m. peak hours. Levels of service for all analysis intersections will be based on the Highway Capacity Manual (2010) for signalized and unsignalized intersections, using the Synchro 9.1 software.

### Roadways

All roadway segments adjacent to intersection analysis locations will be analyzed.

LSA proposes to include the following roadway segments:

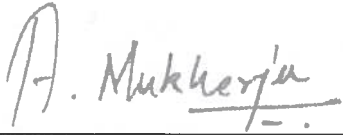
1. Oliver Street, from John F Kennedy Drive to Project Driveway 2;
2. Oliver Street, from Project Driveway 2 to Iris Avenue;
3. Iris Avenue, from Nason Street to Kaiser Hospital Entrance;
4. Iris Avenue, from Kaiser Hospital Entrance to Project Driveway 1;
5. Iris Avenue, from Project Driveway 1 to Oliver Street; and
6. Iris Avenue, from Oliver Street to Via Del Lago.

## VII. DELIVERABLES

- A. Draft traffic impact study (2 hard copies and Electronic PDF)
- B. Final traffic impact study (4 hard copies and Electronic PDF)
- C. All draft and final traffic impact studies shall be delivered with a review fee of \$3,118 to the Permit Technician Land Development Division at Moreno Valley City Hall, 14177 Frederick Street, Moreno Valley.
- D. A signed copy of this **Scoping Agreement** must be included in the submitted draft and final traffic impact studies.

If you have any questions regarding this *Scoping Agreement*, please contact Eric Lewis at (951) 413-3140.

**Recommended by:**



Ambarish Mukherjee, AICP  
Associate  
LSA Associates, Inc.

**Approved By:**



Eric Lewis, P.E., T.E.  
City Traffic Engineer

NOTE: This scoping agreement was reviewed and approved based on the information submitted by LSA Associates on 8/29/2017. LSA Associates and the project applicant acknowledge that any changes to the project (zoning, size, type of use, number or location of access points, etc.) after 8/29/2017 may require this scoping agreement to be revised and resubmitted for review and approval by the City of Moreno valley.

**Attachments**

- Table A: Project Trip Generation
- Figure 1: Regional and Project Location
- Figure 2: Conceptual Site Plan
- Figure 3: Study Area Intersections
- Figure 4: Project Trip Distribution (Inbound)
- Figure 5: Project Trip Distribution (Outbound)
- Figure 6: Net Project Trip Assignment



Table A - Project Trip Generation

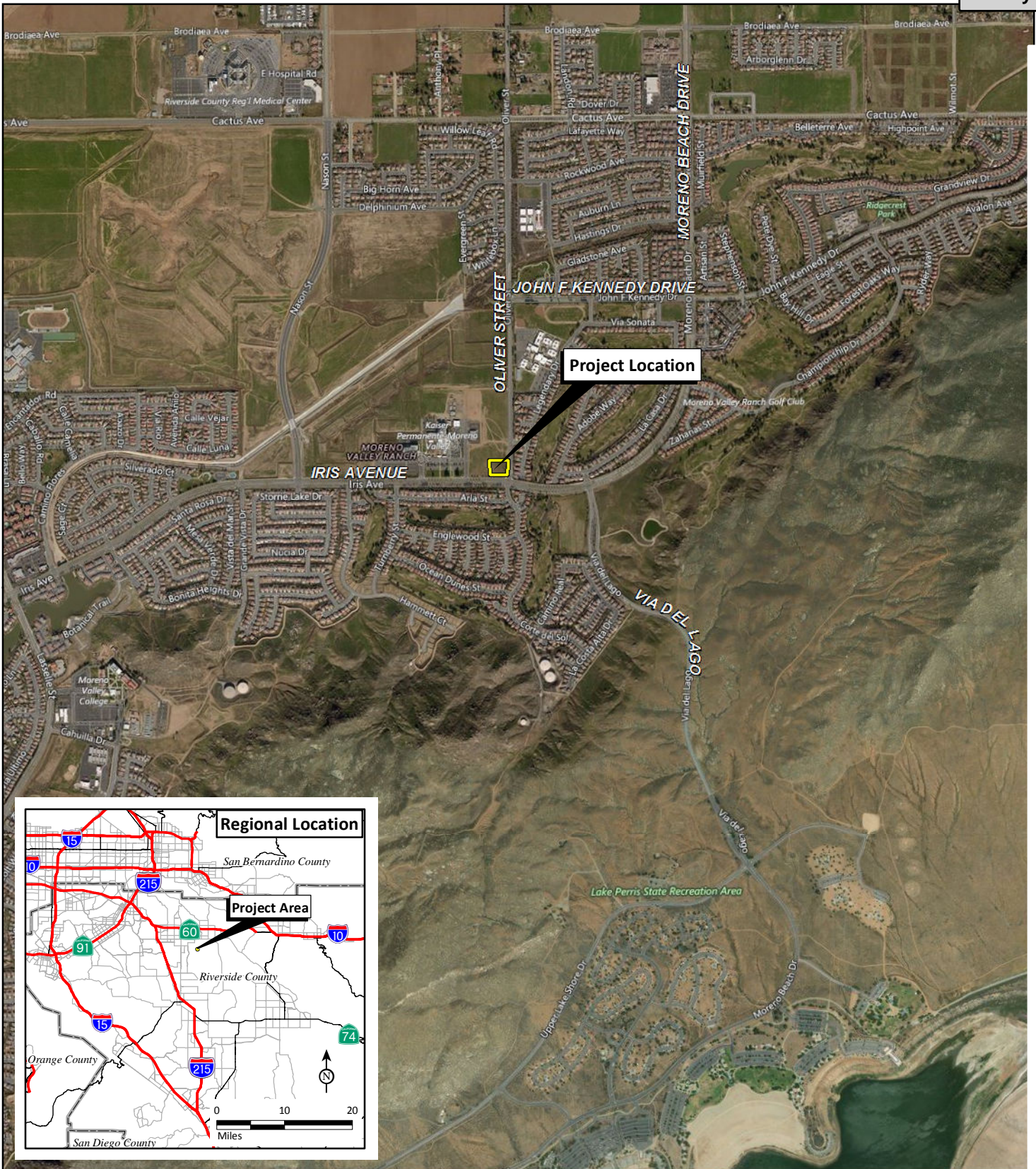
Land Use	Units	A.M. Peak Hour			P.M. Peak Hour			Daily
		In	Out	Total	In	Out	Total	
<b>Gasoline Station with Convenience Market and Car Wash</b>	16 Fueling Stations							
Trips/Unit <sup>1</sup>		6.04	5.80	11.84	7.07	6.79	13.86	152.84
Trip Generation		97	93	190	113	109	222	2,445
Pass By Trips <sup>2</sup>		(52)	(50)	(102)	(61)	(60)	(121)	(1,334)
Total Net New Trips		45	43	88	52	49	101	1,111
	<b>Total Trip Generation</b>	<b>97</b>	<b>93</b>	<b>190</b>	<b>113</b>	<b>109</b>	<b>222</b>	<b>2,445</b>
	<b>Pass-By Trips</b>	<b>(52)</b>	<b>(50)</b>	<b>(102)</b>	<b>(61)</b>	<b>(60)</b>	<b>(121)</b>	<b>(1,334)</b>
	<b>Net New Trips</b>	<b>45</b>	<b>43</b>	<b>88</b>	<b>52</b>	<b>49</b>	<b>101</b>	<b>1,111</b>

Notes:

<sup>1</sup> Rates based on Land Use 946 - "Gasoline/Service Station with Convenience Market and Car Wash" from the Institute of Transportation Engineers (ITE) *Trip Generation* Manual, 9th Edition.

<sup>2</sup> Pass-by rates for Land Use 945 - "Gasoline/Service Station with Convenience Market" were factored. A pass-by rate of 53% was used in the the a.m. peak hour, while 54.6% was used in the p.m. peak hour. Since there is no data available for daily pass-by trips, the p.m. pass-by rate has been applied to the daily trip generation.

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

LSA

LEGEND

 Project Boundary



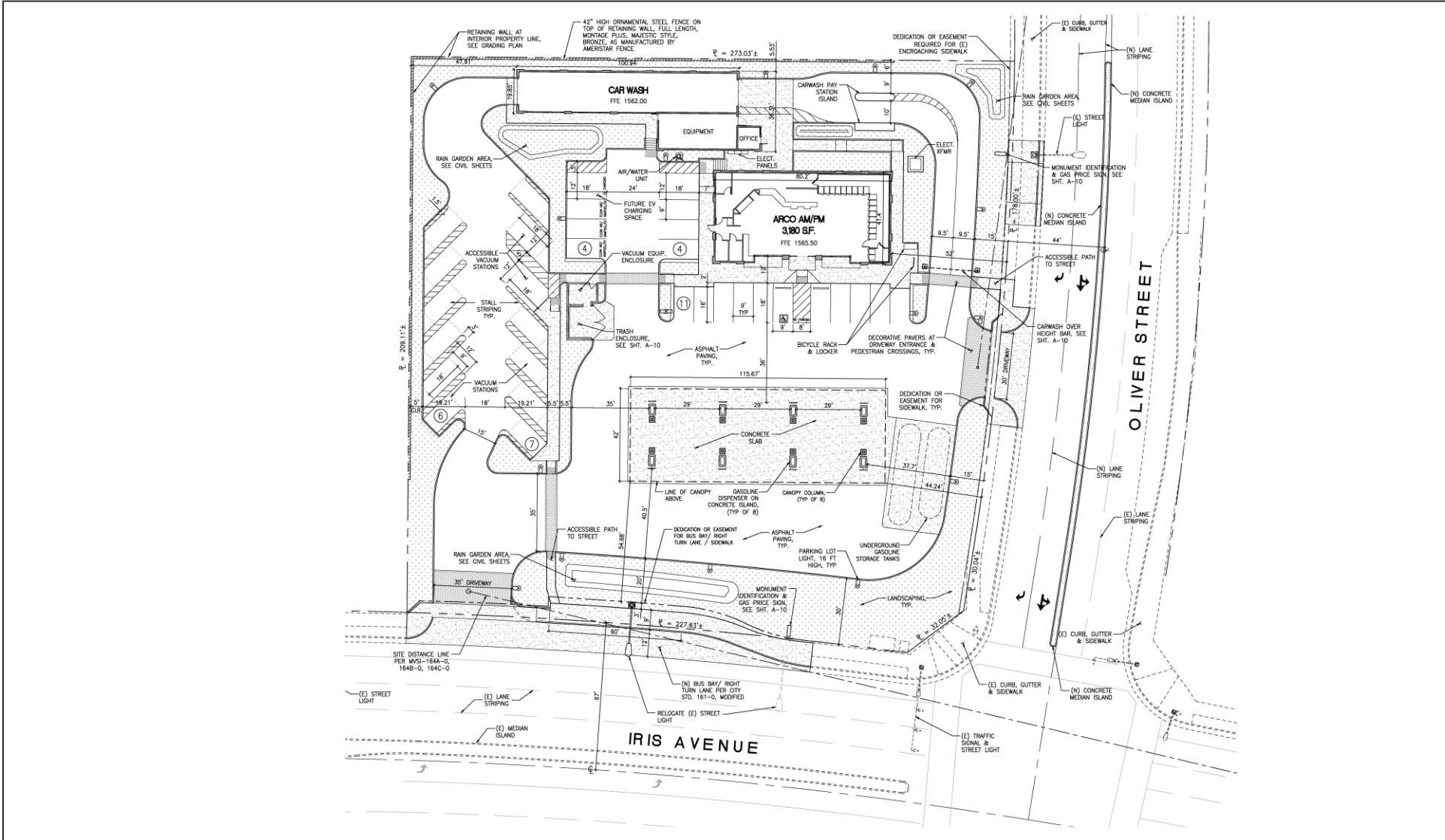
0 1000 2000  
FEET

SOURCE: Bing Aerial, 2015; Riverside County, 2015.

I:\SAT1701\Reports\Traffic\fig1\_RegLoc.mxd (8/25/2017)

FIGURE :

AM/PM Gasoline Service Station  
Traffic Impact Analysis  
Regional and Project Location



Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO

LSA

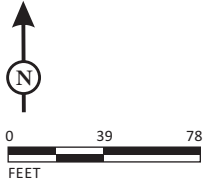
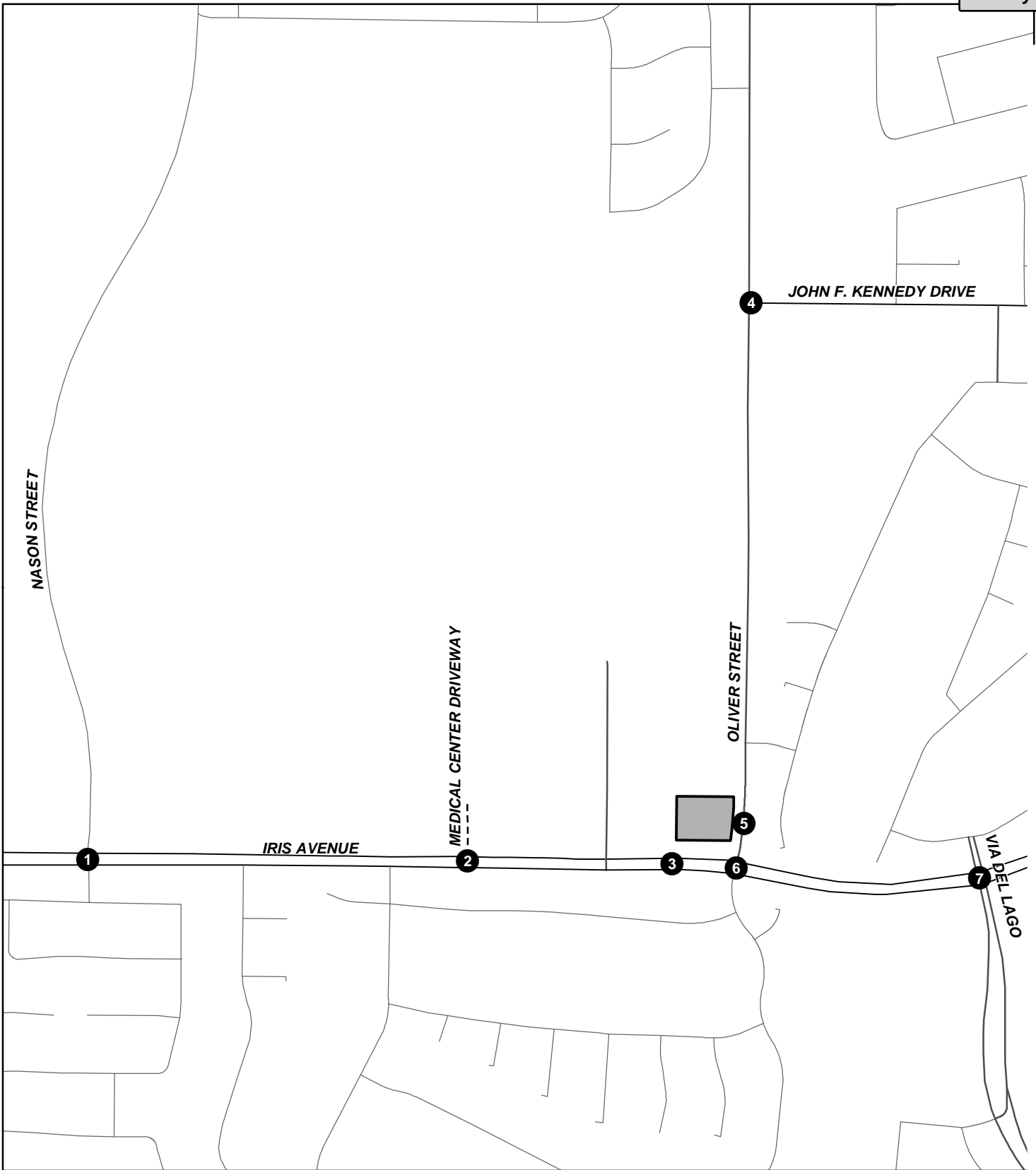


FIGURE 2

AM/PM Gasoline Service Station  
Traffic Impact Analysis  
Conceptual Site Plan

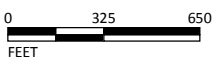
SOURCE: Barghausen Consulting Engineers, 2018.  
I:\SAT1701\Reports\Traffic\fig1-2\_SitePlan.cdr (07/30/2018)



LSA

LEGEND

- Project Location
- Driveway
- Study Area Intersections



SOURCE: Google Earth, 2016.

I:\SAT1701\Reports\Traffic\fig3\_Intersections.mxd (9/28/2017)

FIGURE :

AM/PM Gasoline Service Station  
 Traffic Impact Analysis  
 Study Area Intersections

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

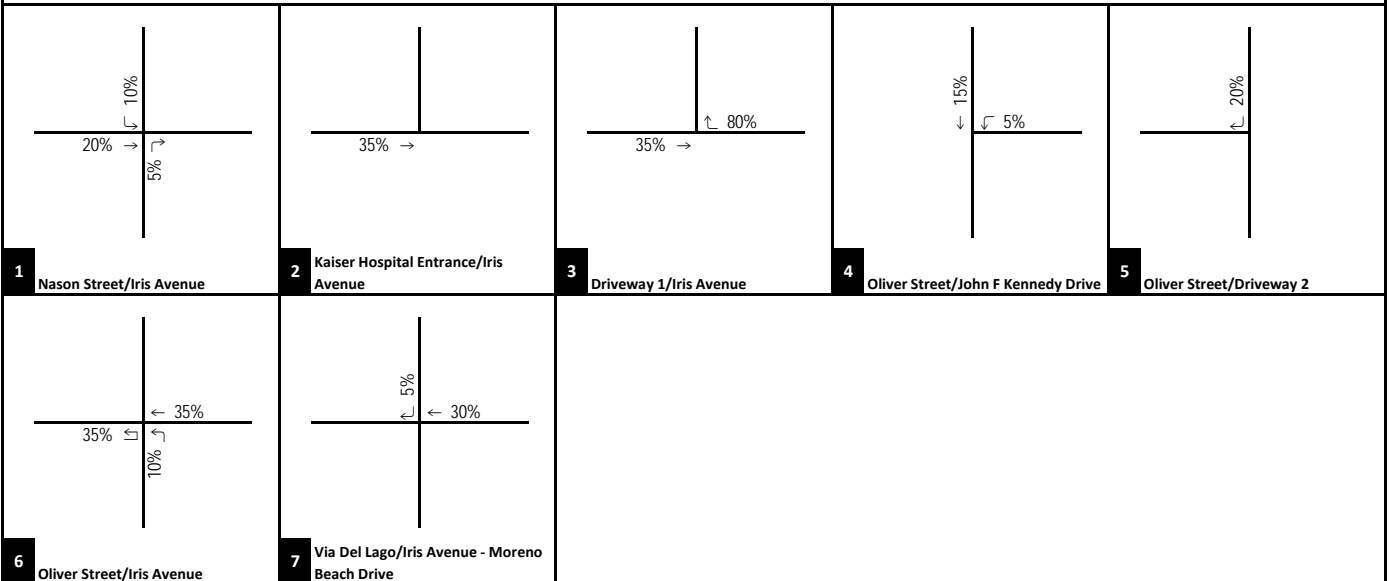
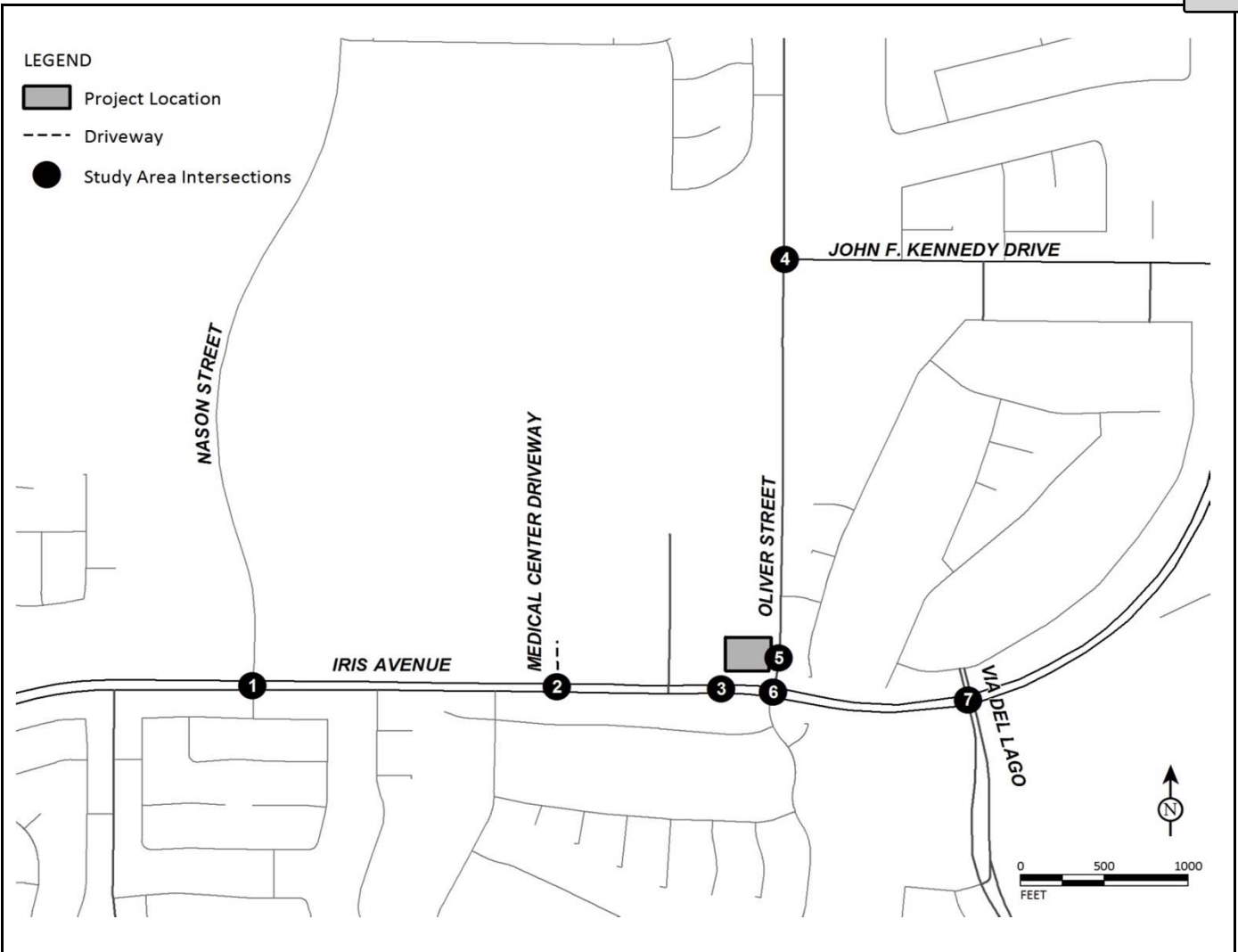


FIGURE 4

**LSA**  
 XX%  
 Inbound Trip Distribution

AM/PM Gasoline Service Station  
 Traffic Impact Analysis  
 Project Trip Distribution (Inbound)

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

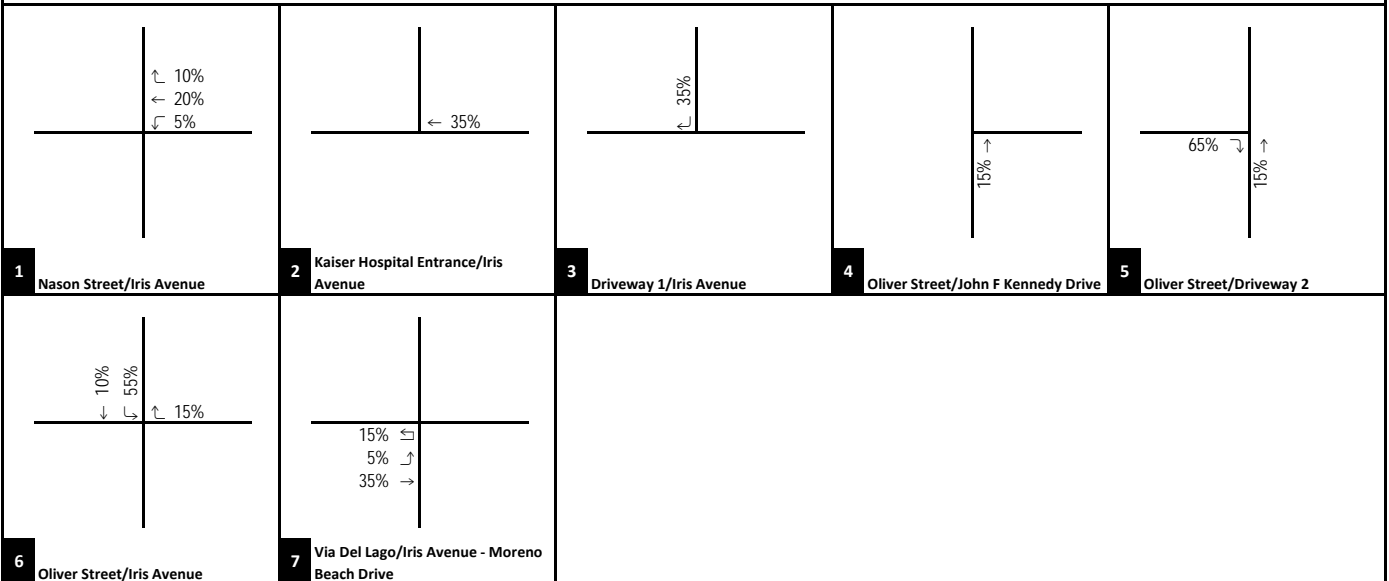
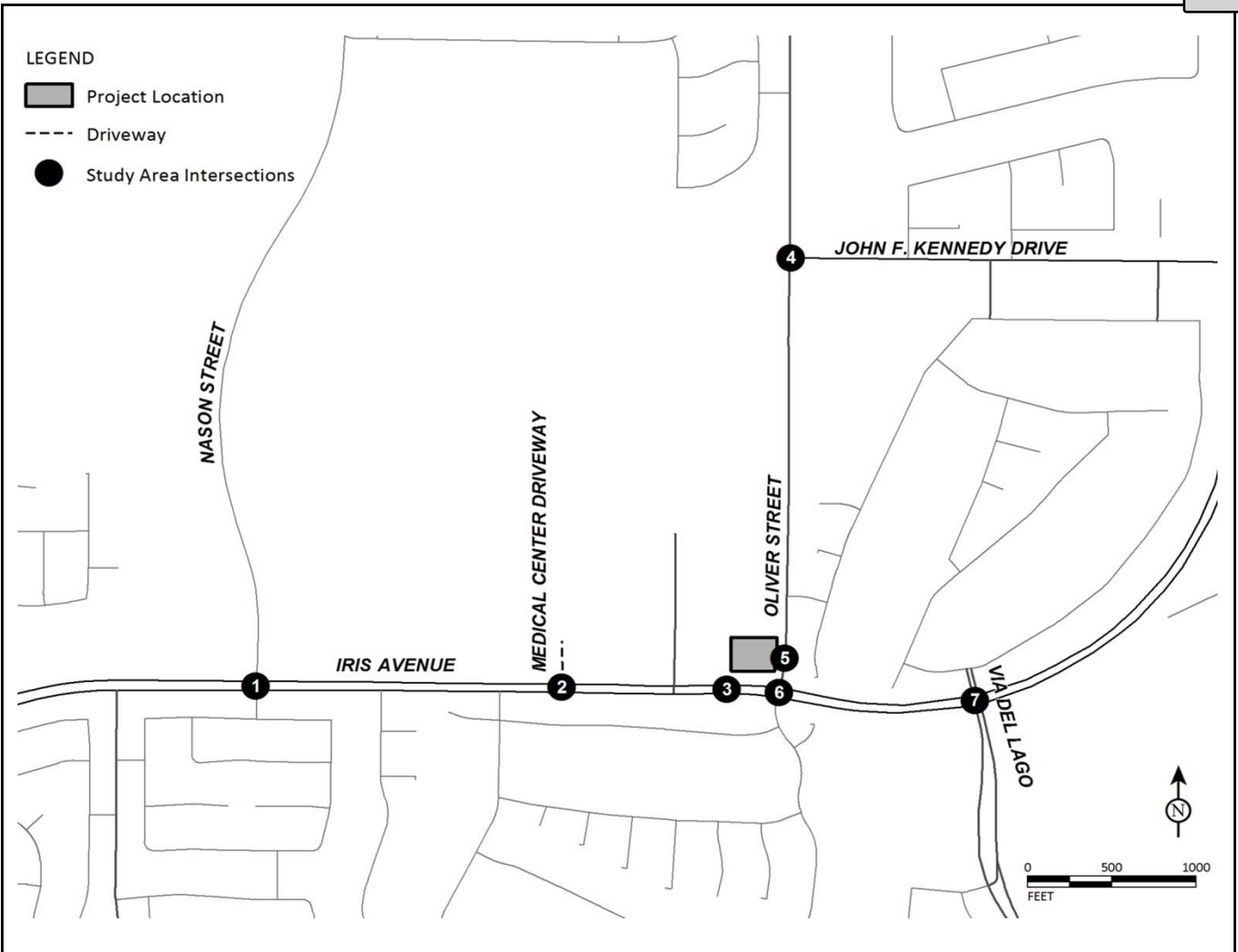


FIGURE 5

**LSA**  
 XX%  
 Outbound Trip Distribution

AM/PM Gasoline Service Station  
 Traffic Impact Analysis  
 Project Trip Distribution (Outbound)

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



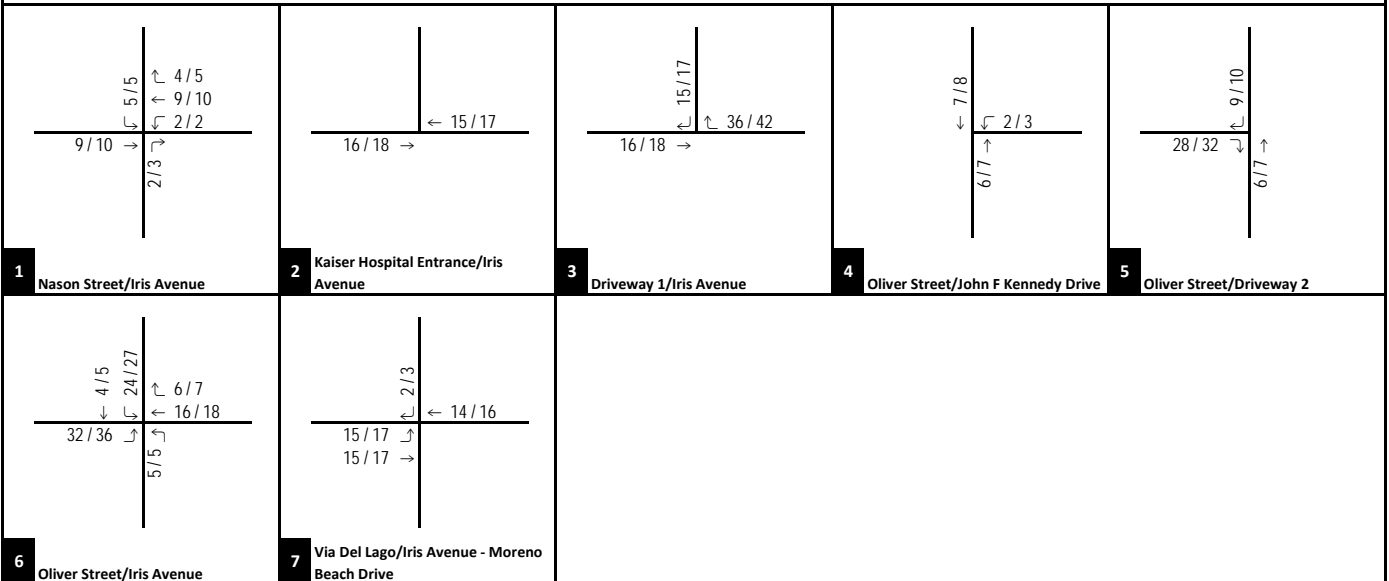
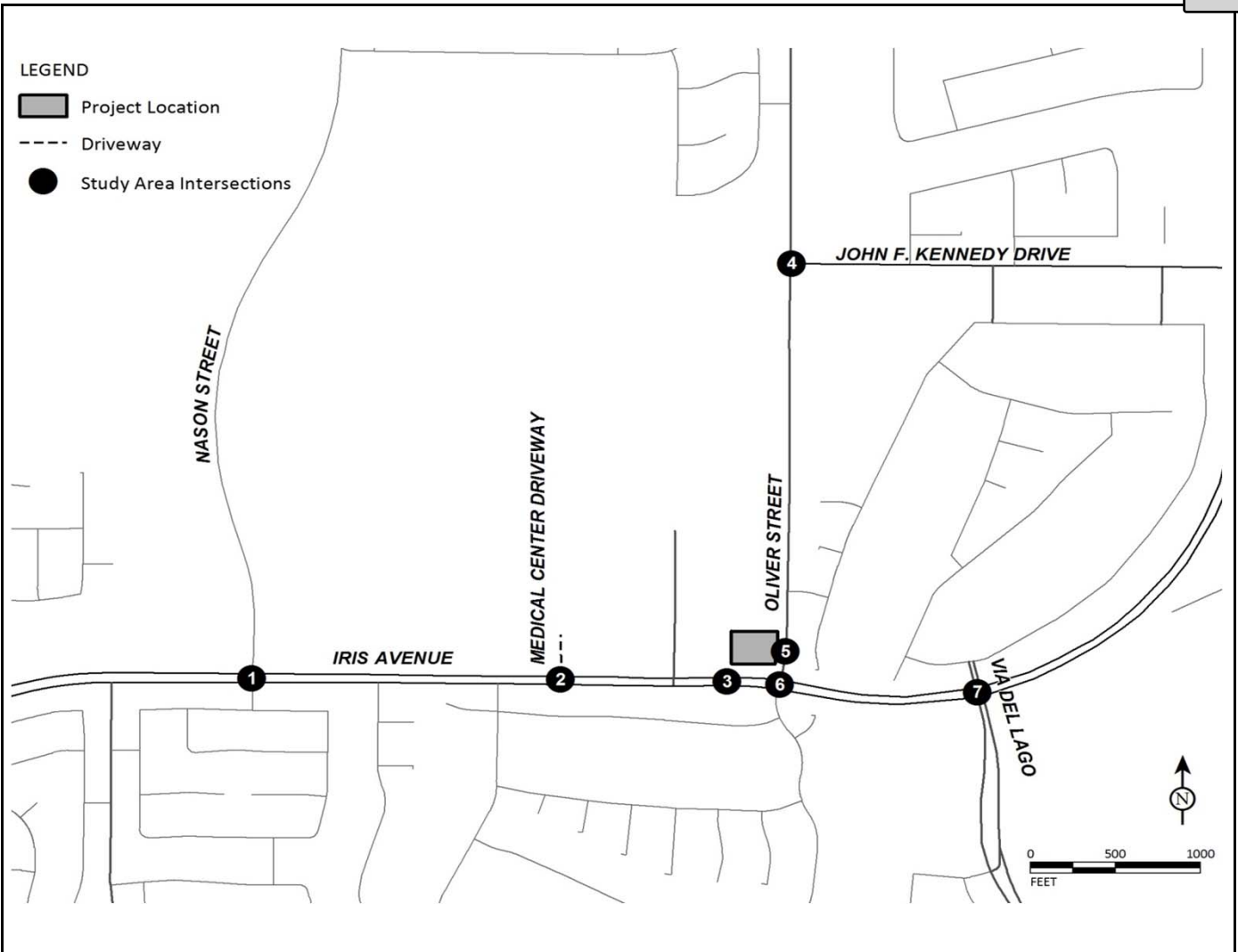


FIGURE 6

**LSA**

XX / YY  
AM / PM Peak Hour Traffic Volumes

AM/PM Gasoline Service Station  
Traffic Impact Analysis  
Net Project Trip Assignment

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

**APPENDIX B:**

**TRAFFIC COUNT SHEETS**

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

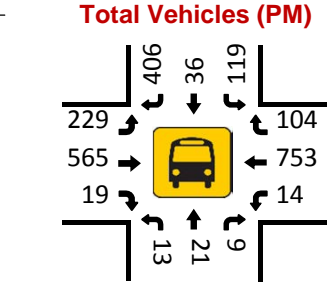
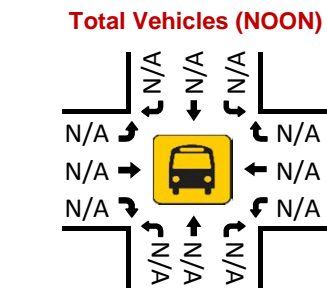
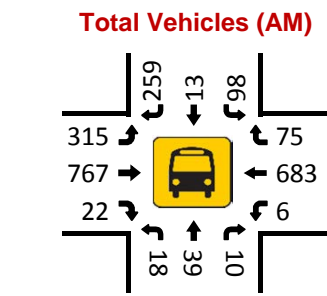
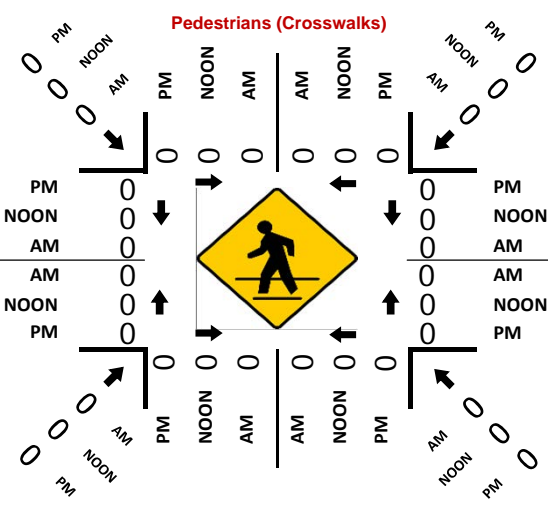
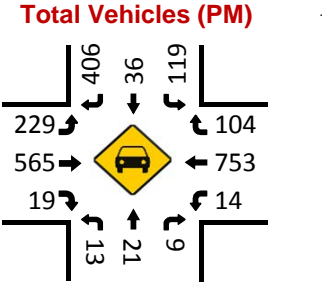
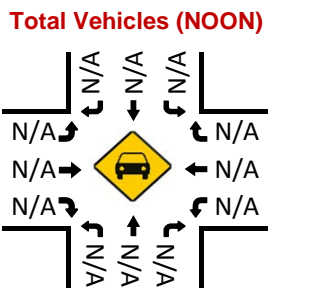
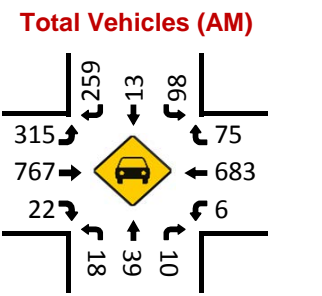
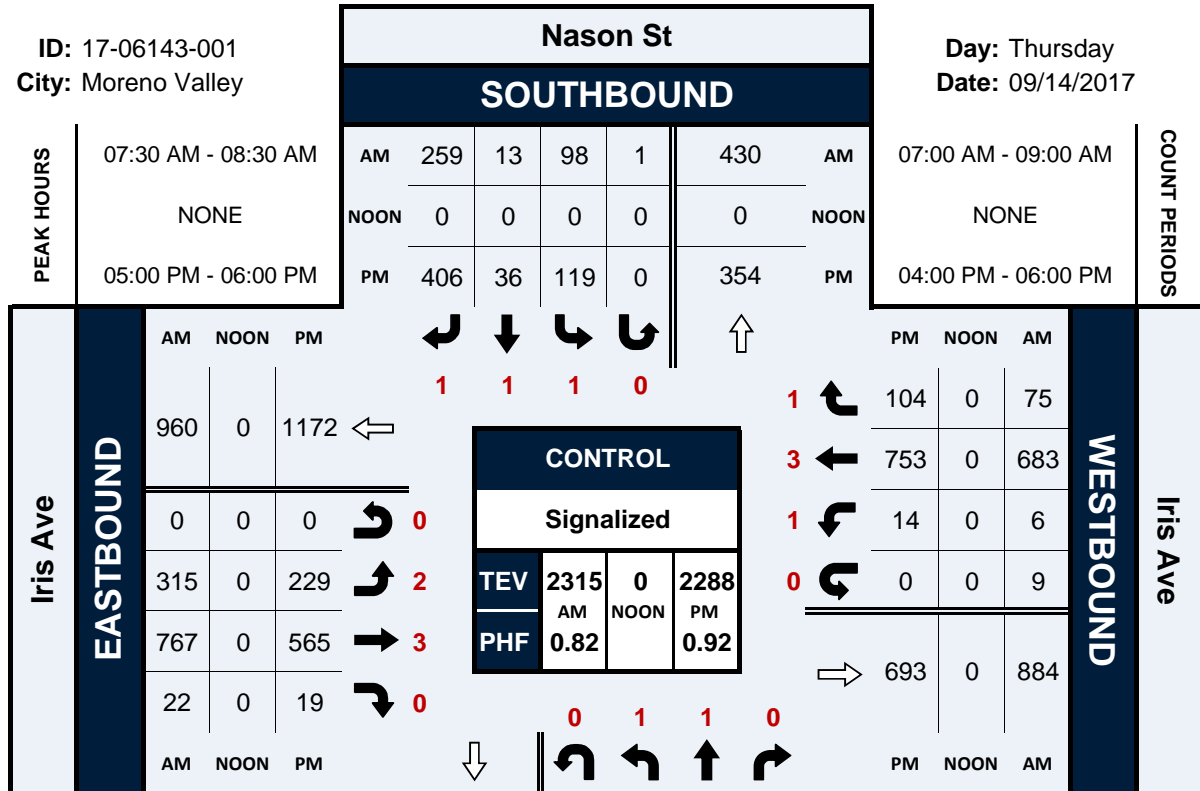
Prepared by National Data & Surveying Services

# Nason St & Iris Ave

## Peak Hour Turning Movement Count

ID: 17-06143-001  
City: Moreno Valley

Day: Thursday  
Date: 09/14/2017



Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

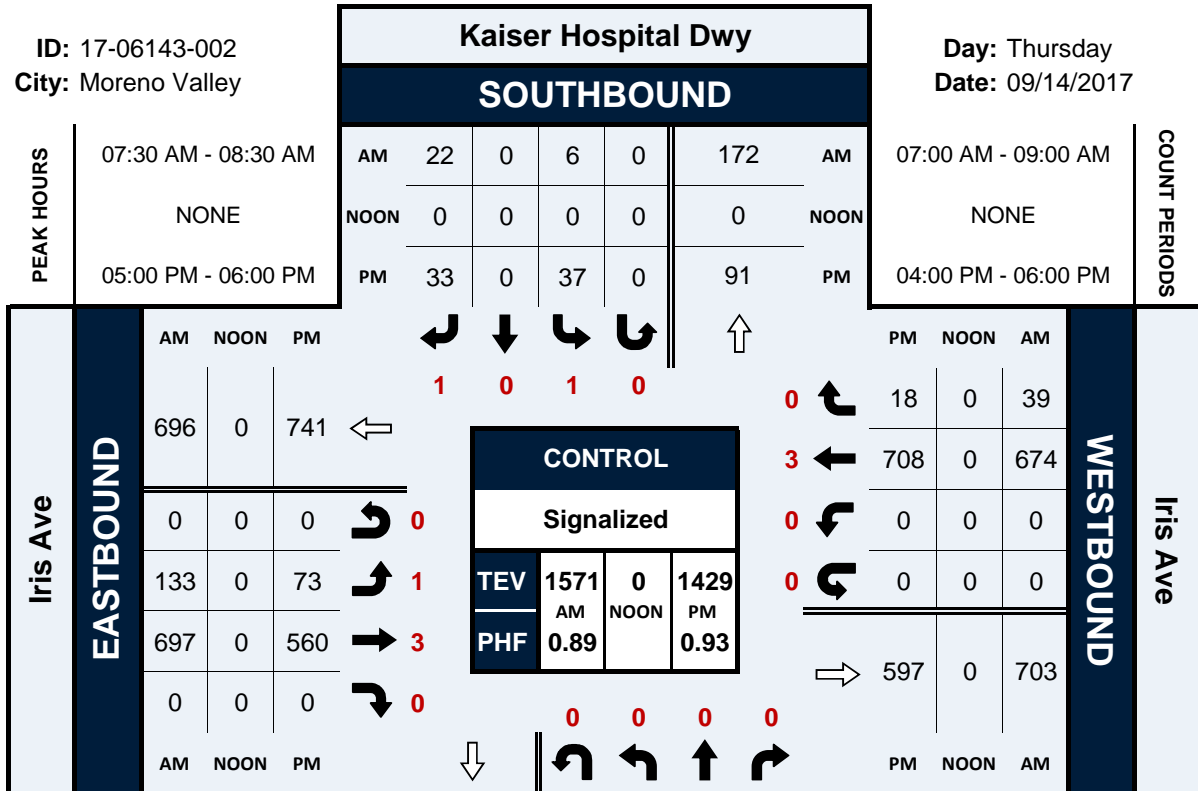
Prepared by National Data & Surveying Services

# Kaiser Hospital Dwy & Iris Ave

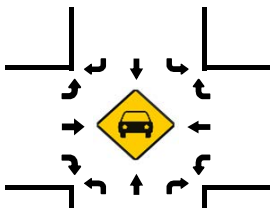
## Peak Hour Turning Movement Count

ID: 17-06143-002  
City: Moreno Valley

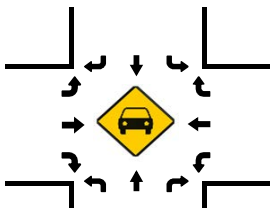
Day: Thursday  
Date: 09/14/2017



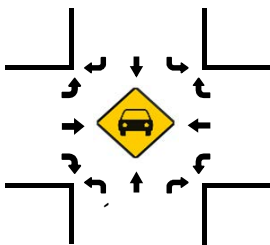
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)

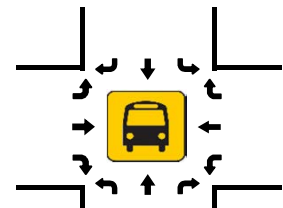


PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

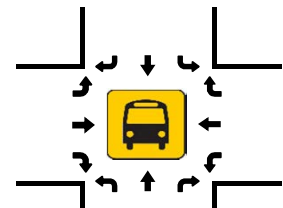
### NORTHBOUND

### Kaiser Hospital Dwy

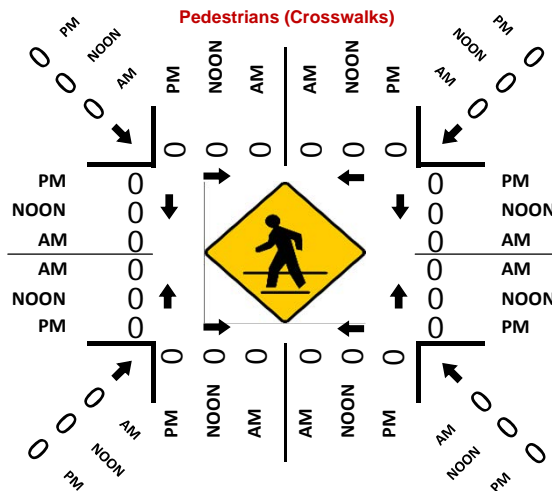
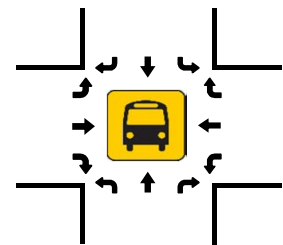
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

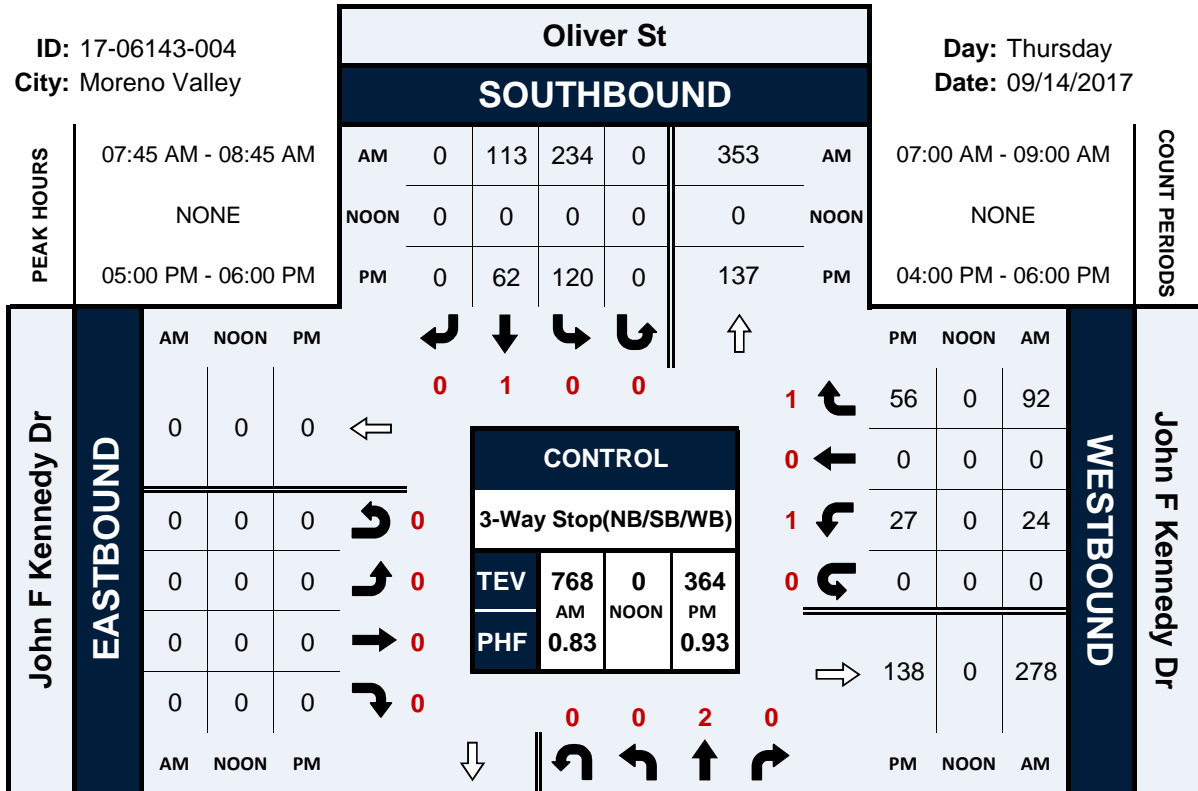
Prepared by National Data & Surveying Services

# Oliver St & John F Kennedy Dr

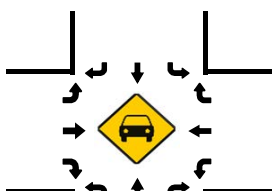
## Peak Hour Turning Movement Count

ID: 17-06143-004  
City: Moreno Valley

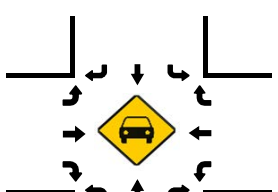
Day: Thursday  
Date: 09/14/2017



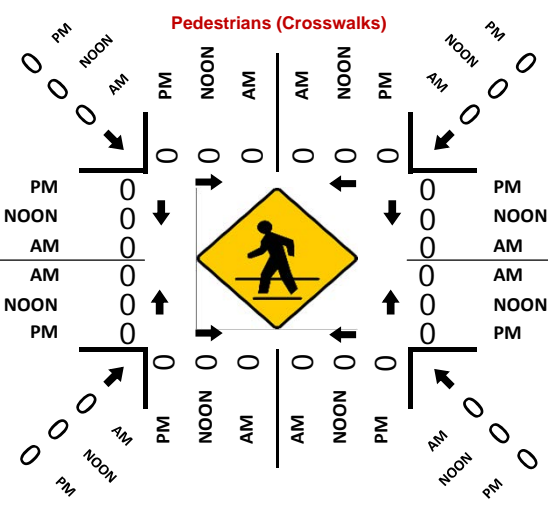
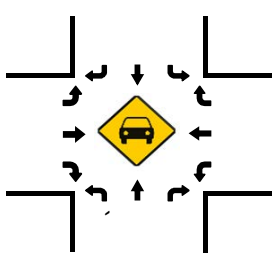
Total Vehicles (AM)



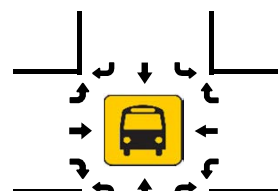
Total Vehicles (NOON)



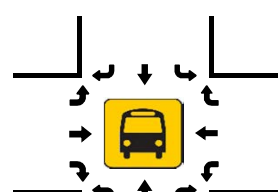
Total Vehicles (PM)



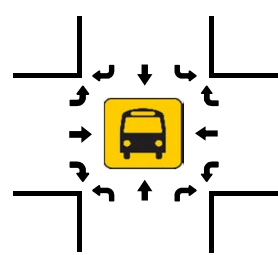
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

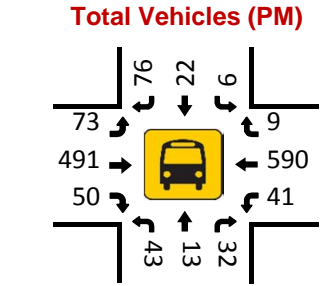
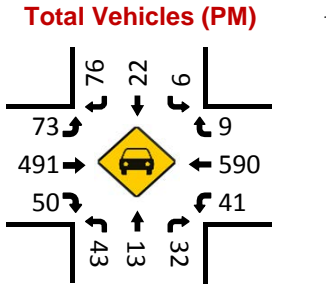
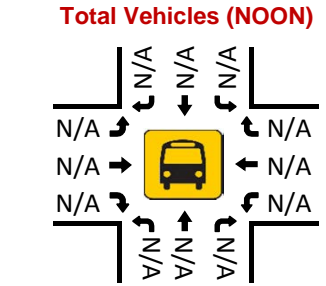
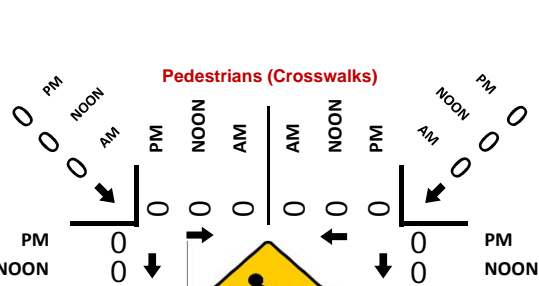
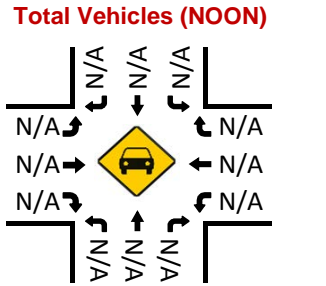
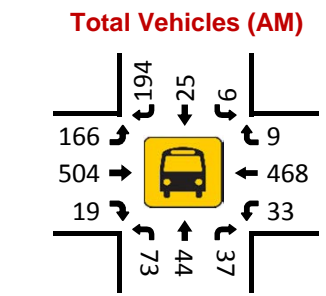
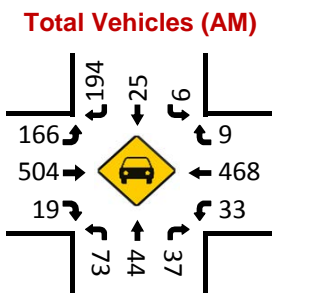
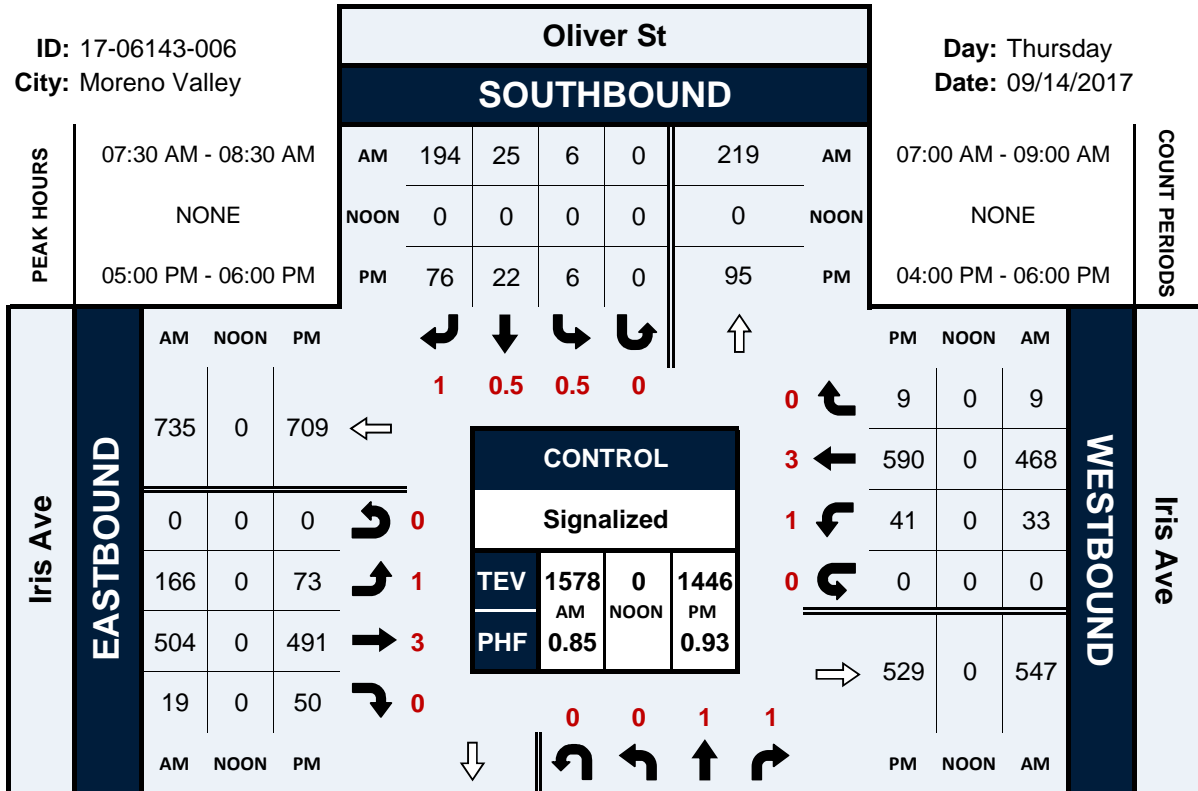
Prepared by National Data & Surveying Services

# Oliver St & Iris Ave

## Peak Hour Turning Movement Count

ID: 17-06143-006  
City: Moreno Valley

Day: Thursday  
Date: 09/14/2017



Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

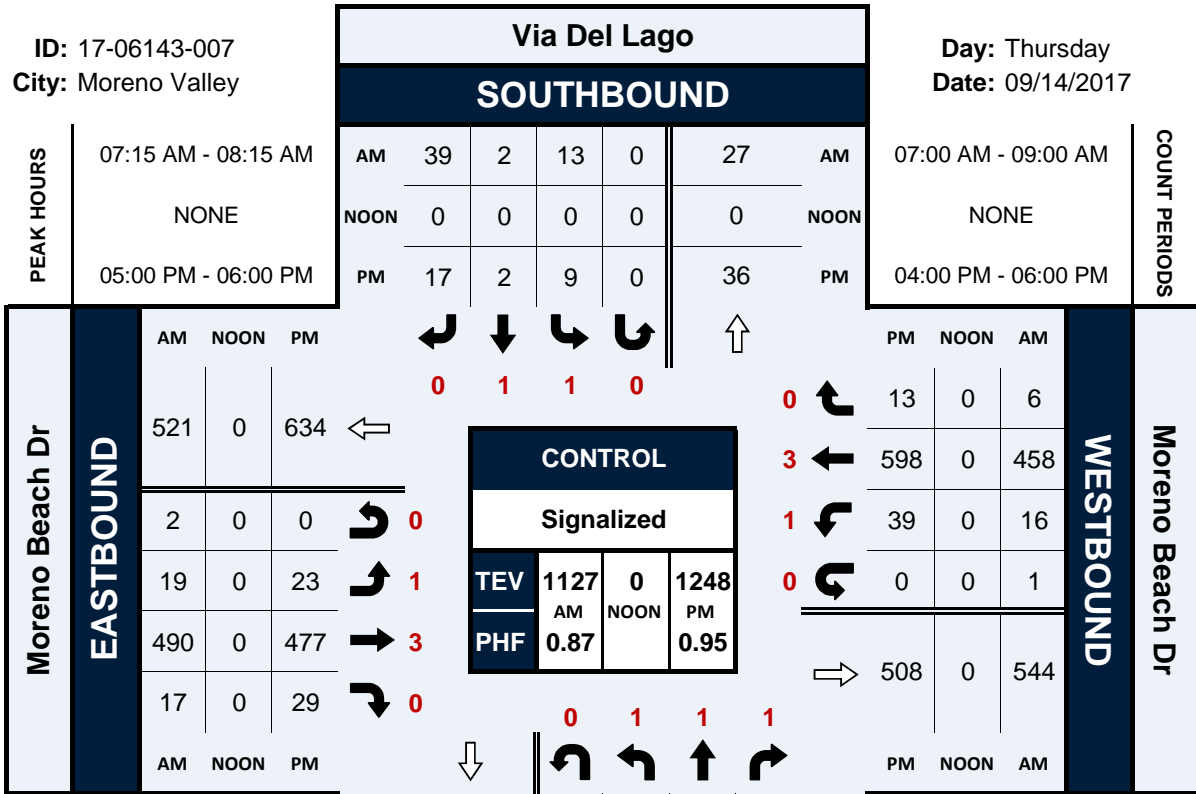
Prepared by National Data & Surveying Services

# Via Del Lago & Moreno Beach Dr

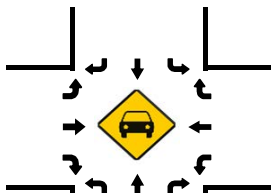
## Peak Hour Turning Movement Count

ID: 17-06143-007  
City: Moreno Valley

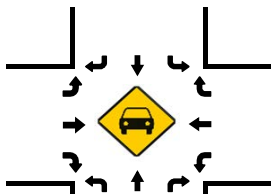
Day: Thursday  
Date: 09/14/2017



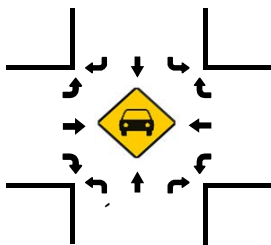
Total Vehicles (AM)



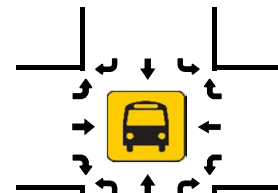
Total Vehicles (NOON)



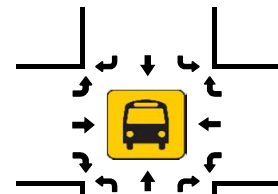
Total Vehicles (PM)



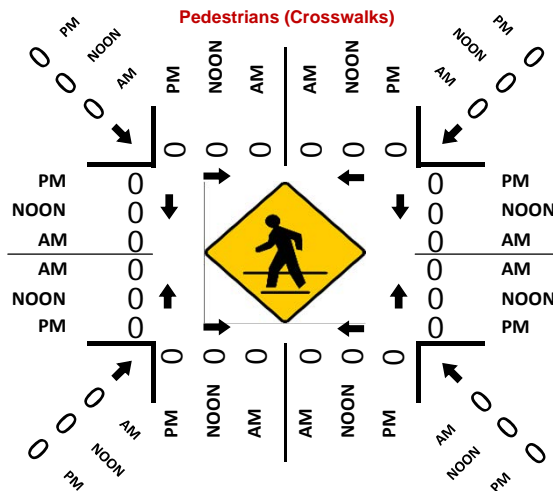
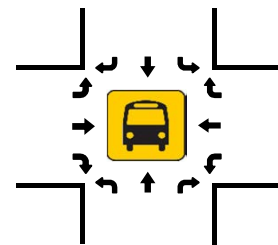
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# CLASSIFICATION

Iris Ave Bet. Nason St & Kaiser Hospital Dwy

Day: Thursday  
Date: 9/14/2017

City: Moreno Valley  
Project #: CA17\_6142\_001

Summary

Time	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	# 10	# 11	# 12	# 13	Total
00:00 AM	1	137	17	0	0	0	0	0	0	0	0	0	0	155
01:00	0	94	9	0	0	0	0	0	1	0	0	0	0	104
02:00	0	84	10	0	0	0	0	0	0	0	0	0	0	94
03:00	1	102	14	0	0	0	0	0	0	0	0	0	0	117
04:00	0	210	31	3	1	0	0	0	0	0	0	0	0	245
05:00	0	394	47	4	6	0	0	0	0	0	0	0	0	451
06:00	0	763	86	13	13	5	0	1	0	0	0	0	0	881
07:00	0	1296	148	15	21	1	0	0	0	0	0	0	0	1481
08:00	0	1202	143	18	20	0	0	0	0	0	0	0	0	1383
09:00	1	744	91	14	12	1	0	3	0	0	0	0	0	866
10:00	1	746	87	11	13	0	1	2	0	0	0	0	0	861
11:00	1	796	103	13	13	0	0	0	0	0	0	0	0	926
12:00 PM	0	807	100	11	13	2	1	1	0	0	0	0	0	935
13:00	0	868	121	10	13	2	1	0	0	0	0	0	0	1015
14:00	1	1147	136	15	16	3	0	0	0	0	0	0	0	1318
15:00	0	1424	179	15	19	0	0	1	0	0	0	0	0	1638
16:00	0	1347	148	13	20	0	1	0	0	1	0	0	0	1530
17:00	0	1302	139	10	17	1	0	1	1	0	0	0	0	1471
18:00	1	1151	126	12	16	0	0	0	0	0	0	0	0	1306
19:00	0	888	83	11	11	2	0	0	0	0	0	0	0	995
20:00	1	749	75	11	10	0	0	0	0	0	0	0	0	846
21:00	0	561	63	7	7	0	0	1	1	0	0	0	0	640
22:00	1	321	40	3	4	0	0	0	0	0	0	0	0	369
23:00	0	250	26	0	1	0	0	0	0	0	0	0	0	277
<b>Totals</b>	<b>9</b>	<b>17383</b>	<b>2022</b>	<b>209</b>	<b>246</b>	<b>17</b>	<b>4</b>	<b>10</b>	<b>3</b>	<b>1</b>				<b>19904</b>
<b>% of Totals</b>	<b>0%</b>	<b>87%</b>	<b>10%</b>	<b>1%</b>	<b>1%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>				<b>100%</b>

<b>AM Volumes</b>	5	6568	786	91	99	7	1	6	1	0	0	0	0	7564
<b>% AM</b>	0%	33%	4%	0%	0%	0%	0%	0%	0%					38%
<b>AM Peak Hour</b>		07:00	07:00	08:00	07:00	06:00	10:00	09:00	01:00					07:00
<b>Volume</b>	1	1296	148	18	21	5	1	3	1					1481
<b>PM Volumes</b>	4	10815	1236	118	147	10	3	4	2	1	0	0	0	12340
<b>% PM</b>	0%	54%	6%	1%	1%	0%	0%	0%	0%	0%				62%
<b>PM Peak Hour</b>	14:00	15:00	15:00	14:00	16:00	14:00	12:00	12:00	17:00	16:00				15:00
<b>Volume</b>	1	1424	179	15	20	3	1	1	1	1				1638

Directional Peak Periods All Classes	AM 7-9		NOON 12-2		PM 4-6		Off Peak Volumes	
	Volume	%	Volume	%	Volume	%	Volume	%
	2864	↔ 14%	1950	↔ 10%	3001	↔ 15%	12089	↔ 61%

Classification Definitions				
1 Motorcycles	4 Buses	7 >=4-Axle Single Units	10 >=6-Axle Single Trailers	13 >=7-Axle Multi-Trailers
2 Passenger Cars	5 2-Axle, 6-Tire Single Units	8 <=4-Axle Single Trailers	11 <=5-Axle Multi-Trailers	
3 2-Axle, 4-Tire Single Units	6 3-Axle Single Units	9 5-Axle Single Trailers	12 6-Axle Multi-Trailers	

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO



Prepared by NDS/ATD

**VOLUME**

Iris Ave Bet. Kaiser Hospital Dwy & Oliver St

Day: Thursday  
Date: 9/14/2017

City: Moreno Valley  
Project #: CA17\_6142\_002

DAILY TOTALS					NB	SB	EB	WB	Total					
					0	0	8,103	8,483	16,586					
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL			
00:00			14	14	28	12:00			80	84	164			
00:15			16	11	27	12:15			82	86	168			
00:30			15	21	36	12:30			108	83	191			
00:45			10	55	14	60	12:45		106	376	104	357	733	
01:00			7	11	18	13:00			86	98	184			
01:15			14	14	28	13:15			89	83	172			
01:30			15	10	25	13:30			84	139	223			
01:45			10	46	6	41	13:45		89	348	142	462	231	810
02:00			2	12	14	14:00			107	100	207			
02:15			9	11	20	14:15			171	88	259			
02:30			9	12	21	14:30			158	164	322			
02:45			4	24	6	41	14:45		163	599	157	509	320	110
03:00			9	9	18	15:00			152	286	438			
03:15			15	9	24	15:15			180	164	344			
03:30			13	19	32	15:30			140	141	281			
03:45			15	52	10	47	15:45		165	637	148	739	313	137
04:00			20	19	39	16:00			149	148	297			
04:15			28	28	56	16:15			149	138	287			
04:30			29	34	63	16:30			155	147	302			
04:45			53	130	23	104	16:45		146	599	166	599	312	119
05:00			46	32	78	17:00			160	173	333			
05:15			33	52	85	17:15			144	157	301			
05:30			47	74	121	17:30			142	209	351			
05:45			57	183	53	211	17:45		150	596	187	726	337	132
06:00			79	46	125	18:00			161	169	330			
06:15			81	88	169	18:15			116	137	253			
06:30			113	94	207	18:30			125	134	259			
06:45			146	419	112	340	18:45		116	518	99	539	215	105
07:00			120	138	258	19:00			87	127	214			
07:15			168	133	301	19:15			76	116	192			
07:30			185	210	395	19:30			100	102	202			
07:45			195	668	206	687	19:45		79	342	114	459	193	801
08:00			157	162	319	20:00			91	107	198			
08:15			170	136	306	20:15			95	87	182			
08:30			174	153	327	20:30			78	75	153			
08:45			144	645	172	623	20:45		89	353	77	346	166	699
09:00			71	91	162	21:00			80	85	165			
09:15			87	77	164	21:15			72	68	140			
09:30			95	81	176	21:30			56	68	124			
09:45			63	316	92	341	21:45		46	254	60	281	106	535
10:00			89	75	164	22:00			38	33	71			
10:15			85	95	180	22:15			30	52	82			
10:30			76	88	164	22:30			34	45	79			
10:45			74	324	76	334	22:45		36	138	37	167	73	305
11:00			102	81	183	23:00			28	47	75			
11:15			93	80	173	23:15			19	30	49			
11:30			96	99	195	23:30			27	19	46			
11:45			87	378	90	350	23:45		29	103	24	120	53	223
<b>TOTALS</b>			3240	3179	6419	<b>TOTALS</b>			4863	5304	10167			
<b>SPLIT %</b>			50.5%	49.5%	38.7%	<b>SPLIT %</b>			47.8%	52.2%	61.3%			

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	8,103	8,483	16,586		
AM Peak Hour			07:30	07:30	07:30	PM Peak Hour			14:30	14:30	14:30
AM Pk Volume			707	714	1421	PM Pk Volume			653	771	1424
Pk Hr Factor			0.906	0.850	0.886	Pk Hr Factor			0.907	0.674	0.810
7 - 9 Volume	0	0	1313	1310	2623	4 - 6 Volume	0	0	1195	1325	2520
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour			16:15	17:00	17:00
7 - 9 Pk Volume	0	0	707	714	1421	4 - 6 Pk Volume	0	0	610	726	1336
Pk Hr Factor	0.000	0.000	0.906	0.850	0.886	Pk Hr Factor	0.000	0.000	0.953	0.868	0.940

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Prepared by NDS/ATD

**VOLUME**

Iris Ave Bet. Oliver St & Via Del Lago

Day: Thursday  
Date: 9/14/2017

City: Moreno Valley  
Project #: CA17\_6142\_003

DAILY TOTALS					NB	SB	EB	WB	Total					
					0	0	6,877	6,898	13,775					
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL			
00:00			22	14	36	12:00			74	70	144			
00:15			6	7	13	12:15			76	68	144			
00:30			12	18	30	12:30			104	70	174			
00:45			10	50	2	12:45			95	349	85	293	180	642
01:00			5	9	14	13:00			73	88	161			
01:15			10	7	17	13:15			83	62	145			
01:30			12	10	22	13:30			76	124	200			
01:45			9	36	7	13:45			78	310	116	390	194	700
02:00			2	11	13	14:00			83	83	166			
02:15			11	9	20	14:15			128	78	206			
02:30			10	9	19	14:30			109	150	259			
02:45			4	27	8	14:45			107	427	128	439	235	866
03:00			8	5	13	15:00			104	148	252			
03:15			16	8	24	15:15			142	114	256			
03:30			12	16	28	15:30			125	125	250			
03:45			17	53	8	15:45			142	513	123	510	265	102
04:00			24	14	38	16:00			124	128	252			
04:15			26	18	44	16:15			141	120	261			
04:30			27	28	55	16:30			140	127	267			
04:45			51	128	16	16:45			137	542	131	506	268	104
05:00			41	22	63	17:00			130	149	279			
05:15			29	37	66	17:15			137	151	288			
05:30			54	65	119	17:30			135	183	318			
05:45			49	173	53	17:45			127	529	154	637	281	116
06:00			74	36	110	18:00			122	159	281			
06:15			74	78	152	18:15			120	122	242			
06:30			108	71	179	18:30			104	111	215			
06:45			127	383	102	18:45			98	444	105	497	203	941
07:00			100	112	212	19:00			75	98	173			
07:15			133	105	238	19:15			60	98	158			
07:30			147	150	297	19:30			87	80	167			
07:45			155	535	158	19:45			74	296	98	374	172	670
08:00			123	115	238	20:00			77	82	159			
08:15			121	89	210	20:15			79	82	161			
08:30			84	88	172	20:30			63	70	133			
08:45			98	426	82	20:45			79	298	64	298	143	596
09:00			67	75	142	21:00			69	67	136			
09:15			75	67	142	21:15			59	71	130			
09:30			78	66	144	21:30			45	59	104			
09:45			64	284	66	21:45			44	217	62	259	106	476
10:00			78	65	143	22:00			33	32	65			
10:15			72	83	155	22:15			31	51	82			
10:30			81	73	154	22:30			30	33	63			
10:45			62	293	65	22:45			34	128	38	154	72	282
11:00			94	68	162	23:00			26	42	68			
11:15			88	60	148	23:15			20	22	42			
11:30			86	83	169	23:30			23	17	40			
11:45			74	342	83	23:45			25	94	19	100	44	194
<b>TOTALS</b>			2730	2441	5171	<b>TOTALS</b>			4147	4457	8604			
<b>SPLIT %</b>			52.8%	47.2%	37.5%	<b>SPLIT %</b>			48.2%	51.8%	62.5%			

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	6,877	6,898	13,775		
AM Peak Hour			07:15	07:15	07:15	PM Peak Hour			16:15	17:15	17:15
AM Pk Volume			558	528	1086	PM Pk Volume			548	647	116
Pk Hr Factor			0.900	0.835	0.867	Pk Hr Factor			0.972	0.884	0.91
7 - 9 Volume	0	0	961	899	1860	4 - 6 Volume	0	0	1071	1143	2214
7 - 9 Peak Hour			07:15	07:15	07:15	4 - 6 Peak Hour			16:15	17:00	17:00
7 - 9 Pk Volume	0	0	558	528	1086	4 - 6 Pk Volume	0	0	548	637	116
Pk Hr Factor	0.000	0.000	0.900	0.835	0.867	Pk Hr Factor	0.000	0.000	0.972	0.870	0.91

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Prepared by NDS/ATD

**VOLUME**

Oliver St Bet. John F Kennedy Dr & Iris Ave

Day: Thursday  
Date: 9/14/2017

City: Moreno Valley  
Project #: CA17\_6142\_004

DAILY TOTALS					NB	SB	EB	WB	Total		
					1,548	1,131	0	0	2,679		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	5	4			9	12:00	11	6			17
00:15	2	1			3	12:15	15	6			21
00:30	2	0			2	12:30	5	11			16
00:45	1	10	0	5	15	12:45	8	39	13	36	75
01:00	0	1			1	13:00	14	8			22
01:15	3	1			4	13:15	13	13			26
01:30	0	2			2	13:30	14	10			24
01:45	0	3	1	5	8	13:45	12	53	9	40	93
02:00	1	0			1	14:00	11	25			36
02:15	1	1			2	14:15	10	49			59
02:30	0	1			1	14:30	27	37			64
02:45	0	2	1	3	5	14:45	63	111	43	154	265
03:00	1	2			3	15:00	98	47			145
03:15	2	2			4	15:15	41	21			62
03:30	1	1			2	15:30	30	17			47
03:45	0	4	2	7	11	15:45	25	194	18	103	297
04:00	1	1			2	16:00	24	12			36
04:15	1	3			4	16:15	20	21			41
04:30	1	0			1	16:30	31	15			46
04:45	0	3	3	7	10	16:45	25	100	13	61	161
05:00	4	6			10	17:00	26	23			49
05:15	5	3			8	17:15	11	13			24
05:30	3	5			8	17:30	30	17			47
05:45	3	15	6	20	35	17:45	32	99	20	73	172
06:00	8	1			9	18:00	20	23			43
06:15	5	8			13	18:15	26	13			39
06:30	14	8			22	18:30	17	11			28
06:45	16	43	14	31	74	18:45	16	79	16	63	142
07:00	17	14			31	19:00	25	8			33
07:15	19	32			51	19:15	10	16			26
07:30	56	47			103	19:30	12	8			20
07:45	75	167	57	150	317	19:45	15	62	5	37	99
08:00	52	25			77	20:00	16	5			21
08:15	51	23			74	20:15	14	8			22
08:30	87	25			112	20:30	10	8			18
08:45	96	286	20	93	379	20:45	14	54	11	32	86
09:00	16	8			24	21:00	10	10			20
09:15	11	9			20	21:15	10	9			19
09:30	12	10			22	21:30	6	9			15
09:45	13	52	11	38	90	21:45	9	35	9	37	72
10:00	10	16			26	22:00	2	4			6
10:15	13	12			25	22:15	5	1			6
10:30	15	3			18	22:30	9	2			11
10:45	11	49	21	52	101	22:45	4	20	2	9	29
11:00	19	23			42	23:00	0	4			4
11:15	15	9			24	23:15	4	1			5
11:30	16	21			37	23:30	2	3			5
11:45	10	60	11	64	124	23:45	2	8	3	11	19
<b>TOTALS</b>	694	475			1169	<b>TOTALS</b>	854	656			1510
<b>SPLIT %</b>	59.4%	40.6%			43.6%	<b>SPLIT %</b>	56.6%	43.4%			56.4%

DAILY TOTALS					NB	SB	EB	WB	Total
					1,548	1,131	0	0	2,679

AM Peak Hour	08:00	07:15		07:45	PM Peak Hour	14:45	14:15		14:30		
AM Pk Volume	286	161		395	PM Pk Volume	232	176		377		
Pk Hr Factor	0.745	0.706		0.748	Pk Hr Factor	0.592	0.898		0.65		
7 - 9 Volume	453	243	0	0	696	4 - 6 Volume	199	134	0	0	333
7 - 9 Peak Hour	08:00	07:15		07:45	4 - 6 Peak Hour	16:15	17:00				16:1
7 - 9 Pk Volume	286	161	0	0	395	4 - 6 Pk Volume	102	73	0	0	174
Pk Hr Factor	0.745	0.706	0.000	0.000	0.748	Pk Hr Factor	0.823	0.793	0.000	0.000	0.88

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

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**APPENDIX C:**

**VOLUME DEVELOPMENT WORKSHEETS**

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Table C-1 - Existing (2017) Peak Hour PCE Volume Summary

	A.M. Peak Hour				P.M. Peak Hour			
	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project
<b>1 Nason Street/Iris Avenue</b>								
NBL	18	0	0	18	13	0	0	13
NBT	39	0	0	39	22	0	0	22
NBR	10	2	0	12	9	3	0	12
SBL	100	5	0	105	119	5	0	124
SBT	13	0	0	13	37	0	0	37
SBR	260	0	0	260	406	0	0	406
EBL	315	0	0	315	230	0	0	230
EBT	782	9	0	791	571	10	0	581
EBR	22	0	0	22	19	0	0	19
WBL	15	2	0	17	14	2	0	16
WBT	691	9	0	700	756	10	0	766
WBR	76	4	0	80	104	5	0	109
North Leg								
Approach	373	5	0	378	562	5	0	567
Departure	430	4	0	434	356	5	0	361
Total	803	9	0	812	918	10	0	928
South Leg								
Approach	67	2	0	69	44	3	0	47
Departure	50	2	0	52	70	2	0	72
Total	117	4	0	121	114	5	0	119
East Leg								
Approach	782	15	0	797	874	17	0	891
Departure	892	16	0	908	699	18	0	717
Total	1,674	31	0	1,705	1,573	35	0	1,608
West Leg								
Approach	1,119	9	0	1,128	820	10	0	830
Departure	969	9	0	978	1,175	10	0	1,185
Total	2,088	18	0	2,106	1,995	20	0	2,015
Total Approaches								
Approach	2,341	31	0	2,372	2,300	35	0	2,335
Departure	2,341	31	0	2,372	2,300	35	0	2,335
Total	4,682	62	0	4,744	4,600	70	0	4,670

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Table C-1 - Existing (2017) Peak Hour PCE Volume Summary

	A.M. Peak Hour				P.M. Peak Hour			
	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project
<b>2 Kaiser Hospital Entrance/Iris Avenue</b>								
NBL	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0	0
SBL	6	0	0	6	37	0	0	37
SBT	0	0	0	0	0	0	0	0
SBR	22	0	0	22	33	0	0	33
EBL	133	0	0	133	73	0	0	73
EBT	708	16	0	724	563	18	0	581
EBR	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0
WBT	685	15	0	700	712	17	0	729
WBR	39	0	0	39	18	0	0	18
North Leg								
Approach	28	0	0	28	70	0	0	70
Departure	172	0	0	172	91	0	0	91
Total	200	0	0	200	161	0	0	161
South Leg								
Approach	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
East Leg								
Approach	724	15	0	739	730	17	0	747
Departure	714	16	0	730	600	18	0	618
Total	1,438	31	0	1,469	1,330	35	0	1,365
West Leg								
Approach	841	16	0	857	636	18	0	654
Departure	707	15	0	722	745	17	0	762
Total	1,548	31	0	1,579	1,381	35	0	1,416
Total Approaches								
Approach	1,593	31	0	1,624	1,436	35	0	1,471
Departure	1,593	31	0	1,624	1,436	35	0	1,471
Total	3,186	62	0	3,248	2,872	70	0	2,942

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Table C-1 - Existing (2017) Peak Hour PCE Volume Summary

	A.M. Peak Hour				P.M. Peak Hour			
	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project
<b>3 Project Driveway 1/Iris Avenue</b>								
NBL	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0	0
SBR	0	15	25	40	0	17	29	46
EBL	0	0	0	0	0	0	0	0
EBT	706	16	0	722	620	18	0	638
EBR	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0
WBT	745	0	-26	719	713	0	-30	683
WBR	0	36	48	84	0	42	57	99
<b>North Leg</b>								
Approach	0	15	25	40	0	17	29	46
Departure	0	36	48	84	0	42	57	99
Total	0	51	73	124	0	59	86	145
<b>South Leg</b>								
Approach	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
<b>East Leg</b>								
Approach	745	36	22	803	713	42	27	782
Departure	706	16	0	722	620	18	0	638
Total	1,451	52	22	1,525	1,333	60	27	1,420
<b>West Leg</b>								
Approach	706	16	0	722	620	18	0	638
Departure	745	15	-1	759	713	17	-1	729
Total	1,451	31	-1	1,481	1,333	35	-1	1,367
<b>Total Approaches</b>								
Approach	1,451	67	47	1,565	1,333	77	56	1,466
Departure	1,451	67	47	1,565	1,333	77	56	1,466
Total	2,902	134	94	3,130	2,666	154	112	2,932

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Table C-1 - Existing (2017) Peak Hour PCE Volume Summary

	A.M. Peak Hour				P.M. Peak Hour			
	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project
<b>4 Oliver Street/John F Kennedy Drive</b>								
NBL	0	0	0	0	0	0	0	0
NBT	261	6	0	267	81	7	0	88
NBR	44	0	0	44	18	0	0	18
SBL	234	0	0	234	120	0	0	120
SBT	113	7	0	120	62	8	0	70
SBR	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0
WBL	24	2	0	26	27	3	0	30
WBT	0	0	0	0	0	0	0	0
WBR	92	0	0	92	56	0	0	56
North Leg								
Approach	347	7	0	354	182	8	0	190
Departure	353	6	0	359	137	7	0	144
Total	700	13	0	713	319	15	0	334
South Leg								
Approach	305	6	0	311	99	7	0	106
Departure	137	9	0	146	89	11	0	100
Total	442	15	0	457	188	18	0	206
East Leg								
Approach	116	2	0	118	83	3	0	86
Departure	278	0	0	278	138	0	0	138
Total	394	2	0	396	221	3	0	224
West Leg								
Approach	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Total Approaches								
Approach	768	15	0	783	364	18	0	382
Departure	768	15	0	783	364	18	0	382
Total	1,536	30	0	1,566	728	36	0	764

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



Table C-1 - Existing (2017) Peak Hour PCE Volume Summary

	A.M. Peak Hour				P.M. Peak Hour			
	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project
<b>5 Oliver Street/Project Driveway 2</b>								
NBL	0	0	0	0	0	0	0	0
NBT	221	6	0	227	97	7	0	104
NBR	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0
SBT	226	0	-4	222	105	0	-4	101
SBR	0	9	4	13	0	10	4	14
EBL	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0
EBR	0	28	26	54	0	32	31	63
WBL	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0
<b>North Leg</b>								
Approach	226	9	0	235	105	10	0	115
Departure	221	6	0	227	97	7	0	104
Total	447	15	0	462	202	17	0	219
<b>South Leg</b>								
Approach	221	6	0	227	97	7	0	104
Departure	226	28	22	276	105	32	27	164
Total	447	34	22	503	202	39	27	268
<b>East Leg</b>								
Approach	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
<b>West Leg</b>								
Approach	0	28	26	54	0	32	31	63
Departure	0	9	4	13	0	10	4	14
Total	0	37	30	67	0	42	35	77
<b>Total Approaches</b>								
Approach	447	43	26	516	202	49	31	282
Departure	447	43	26	516	202	49	31	282
Total	894	86	52	1,032	404	98	62	564

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Table C-1 - Existing (2017) Peak Hour PCE Volume Summary

	A.M. Peak Hour				P.M. Peak Hour			
	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project
<b>6 Oliver Street/Iris Avenue</b>								
NBL	75	5	2	82	43	5	2	50
NBT	44	0	-1	43	14	0	-1	13
NBR	38	0	-1	37	32	0	-1	31
SBL	6	24	22	52	6	27	26	59
SBT	25	4	3	32	23	5	4	32
SBR	195	0	-3	192	76	0	-3	73
EBL	167	16	19	202	74	18	23	115
EBT	520	0	-18	502	496	0	-21	475
EBR	19	0	-2	17	50	0	-2	48
WBL	34	0	-2	32	41	0	-2	39
WBT	475	16	2	493	594	18	2	614
WBR	10	6	3	19	9	7	4	20
<b>North Leg</b>								
Approach	226	28	22	276	105	32	27	164
Departure	221	22	21	264	97	25	26	148
Total	447	50	43	540	202	57	53	312
<b>South Leg</b>								
Approach	157	5	0	162	89	5	0	94
Departure	78	4	-1	81	114	5	0	119
Total	235	9	-1	243	203	10	0	213
<b>East Leg</b>								
Approach	519	22	3	544	644	25	4	673
Departure	564	24	3	591	534	27	4	565
Total	1,083	46	6	1,135	1,178	52	8	1,238
<b>West Leg</b>								
Approach	706	16	-1	721	620	18	0	638
Departure	745	21	1	767	713	23	1	737
Total	1,451	37	0	1,488	1,333	41	1	1,375
<b>Total Approaches</b>								
Approach	1,608	71	24	1,703	1,458	80	31	1,569
Departure	1,608	71	24	1,703	1,458	80	31	1,569
Total	3,216	142	48	3,406	2,916	160	62	3,138

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Table C-1 - Existing (2017) Peak Hour PCE Volume Summary

	A.M. Peak Hour				P.M. Peak Hour			
	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project	Existing Without Project	Net Project Trips	Pass-By Trips	Existing With Project
<b>7 Via Del Lago/Iris Avenue - Moreno Beach Drive</b>								
NBL	22	0	0	22	19	0	0	19
NBT	2	0	0	2	0	0	0	0
NBR	40	0	0	40	22	0	0	22
SBL	13	0	0	13	9	0	0	9
SBT	2	0	0	2	2	0	0	2
SBR	38	2	0	40	17	3	0	20
EBL	22	9	4	35	23	10	4	37
EBT	524	15	0	539	482	17	0	499
EBR	18	0	0	18	29	0	0	29
WBL	17	0	0	17	39	0	0	39
WBT	459	14	0	473	608	16	0	624
WBR	6	0	0	6	13	0	0	13
<b>North Leg</b>								
Approach	53	2	0	55	28	3	0	31
Departure	30	9	4	43	36	10	4	50
Total	83	11	4	98	64	13	4	81
<b>South Leg</b>								
Approach	64	0	0	64	41	0	0	41
Departure	37	0	0	37	70	0	0	70
Total	101	0	0	101	111	0	0	111
<b>East Leg</b>								
Approach	482	14	0	496	660	16	0	676
Departure	577	15	0	592	513	17	0	530
Total	1,059	29	0	1,088	1,173	33	0	1,206
<b>West Leg</b>								
Approach	564	24	4	592	534	27	4	565
Departure	519	16	0	535	644	19	0	663
Total	1,083	40	4	1,127	1,178	46	4	1,228
<b>Total Approaches</b>								
Approach	1,163	40	4	1,207	1,263	46	4	1,313
Departure	1,163	40	4	1,207	1,263	46	4	1,313
Total	2,326	80	8	2,414	2,526	92	8	2,626

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**Table C-2 - Project Compl. Year Peak Hour PCE Vol. Summary**

		AM Peak Hour				
		Existing	2017-	OY	Net	OY
		(2017)	2019	Without	Project	With
		PCE	Growth	Project	Trips	Project
					Pass-By	
					Trips	
<b>1</b>	<b>Nason Street/Iris Avenue</b>					
	NBL	18	2	20	0	20
	NBT	39	4	43	0	43
	NBR	10	1	11	2	13
	SBL	100	10	110	5	115
	SBT	13	1	14	0	14
	SBR	260	27	287	0	287
	EBL	315	33	348	0	348
	EBT	782	81	863	9	872
	EBR	22	2	24	0	24
	WBL	15	2	17	2	19
	WBT	691	72	763	9	772
	WBR	76	8	84	4	88
	North Leg					
	Approach	373	38	411	5	416
	Departure	430	45	475	4	479
	Total	803	83	886	9	895
	South Leg					
	Approach	67	7	74	2	76
	Departure	50	5	55	2	57
	Total	117	12	129	4	133
	East Leg					
	Approach	782	82	864	15	879
	Departure	892	92	984	16	1,000
	Total	1,674	174	1,848	31	1,879
	West Leg					
	Approach	1,119	116	1,235	9	1,244
	Departure	969	101	1,070	9	1,079
	Total	2,088	217	2,305	18	2,323
	Total Approaches					
	Approach	2,341	243	2,584	31	2,615
	Departure	2,341	243	2,584	31	2,615
	Total	4,682	486	5,168	62	5,230

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**Table C-2 - Project Compl. Year Peak Hour PCE Vol. Summary**

	AM Peak Hour					
	Existing (2017) PCE	2017- 2019 Growth	OY Without Project	Net Project Trips	Pass-By Trips	OY With Project
<b>2 Kaiser Hospital Entrance/Iris Avenue</b>						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	6	1	7	0	0	7
SBT	0	0	0	0	0	0
SBR	22	2	24	0	0	24
EBL	133	14	147	0	0	147
EBT	708	74	782	16	0	798
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	685	71	756	15	0	771
WBR	39	4	43	0	0	43
North Leg						
Approach	28	3	31	0	0	31
Departure	172	18	190	0	0	190
Total	200	21	221	0	0	221
South Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
East Leg						
Approach	724	75	799	15	0	814
Departure	714	75	789	16	0	805
Total	1,438	150	1,588	31	0	1,619
West Leg						
Approach	841	88	929	16	0	945
Departure	707	73	780	15	0	795
Total	1,548	161	1,709	31	0	1,740
Total Approaches						
Approach	1,593	166	1,759	31	0	1,790
Departure	1,593	166	1,759	31	0	1,790
Total	3,186	332	3,518	62	0	3,580

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**Table C-2 - Project Compl. Year Peak Hour PCE Vol. Summary**

	AM Peak Hour					
	Existing (2017) PCE	2017- 2019 Growth	OY Without Project	Net Project Trips	Pass-By Trips	OY With Project
<b>3 Project Driveway 1/Iris Avenue</b>						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	0	0	15	25	40
EBL	0	0	0	0	0	0
EBT	706	73	779	16	0	795
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	745	78	823	0	-26	797
WBR	0	0	0	36	48	84
North Leg						
Approach	0	0	0	15	25	40
Departure	0	0	0	36	48	84
Total	0	0	0	51	73	124
South Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
East Leg						
Approach	745	78	823	36	22	881
Departure	706	73	779	16	0	795
Total	1,451	151	1,602	52	22	1,676
West Leg						
Approach	706	73	779	16	0	795
Departure	745	78	823	15	-1	837
Total	1,451	151	1,602	31	-1	1,632
Total Approaches						
Approach	1,451	151	1,602	67	47	1,716
Departure	1,451	151	1,602	67	47	1,716
Total	2,902	302	3,204	134	94	3,432

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**Table C-2 - Project Compl. Year Peak Hour PCE Vol. Summary**

	AM Peak Hour					
	Existing (2017) PCE	2017- 2019 Growth	OY Without Project	Net Project Trips	Pass-By Trips	OY With Project
<b>4 Oliver Street/John F Kennedy Drive</b>						
NBL	0	0	0	0	0	0
NBT	261	27	288	6	0	294
NBR	44	5	49	0	0	49
SBL	234	24	258	0	0	258
SBT	113	12	125	7	0	132
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	24	2	26	2	0	28
WBT	0	0	0	0	0	0
WBR	92	10	102	0	0	102
North Leg						
Approach	347	36	383	7	0	390
Departure	353	37	390	6	0	396
Total	700	73	773	13	0	786
South Leg						
Approach	305	32	337	6	0	343
Departure	137	14	151	9	0	160
Total	442	46	488	15	0	503
East Leg						
Approach	116	12	128	2	0	130
Departure	278	29	307	0	0	307
Total	394	41	435	2	0	437
West Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
Total Approaches						
Approach	768	80	848	15	0	863
Departure	768	80	848	15	0	863
Total	1,536	160	1,696	30	0	1,726

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**Table C-2 - Project Compl. Year Peak Hour PCE Vol. Summary**

	AM Peak Hour					
	Existing (2017) PCE	2017- 2019 Growth	OY Without Project	Net Project Trips	Pass-By Trips	OY With Project
<b>5 Oliver Street/Project Driveway 2</b>						
NBL	0	0	0	0	0	0
NBT	221	23	244	6	0	250
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	226	24	250	0	-4	246
SBR	0	0	0	9	4	13
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	28	26	54
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	226	24	250	9	0	259
Departure	221	23	244	6	0	250
Total	447	47	494	15	0	509
South Leg						
Approach	221	23	244	6	0	250
Departure	226	24	250	28	22	300
Total	447	47	494	34	22	550
East Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
West Leg						
Approach	0	0	0	28	26	54
Departure	0	0	0	9	4	13
Total	0	0	0	37	30	67
Total Approaches						
Approach	447	47	494	43	26	563
Departure	447	47	494	43	26	563
Total	894	94	988	86	52	1,126

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**Table C-2 - Project Compl. Year Peak Hour PCE Vol. Summary**

		AM Peak Hour					
		Existing	2017-	OY	Net	Pass-By	OY
		(2017)	2019	Without	Project	Trips	With
		PCE	Growth	Project	Trips	Trips	Project
<b>6</b>	<b>Oliver Street/Iris Avenue</b>						
	NBL	75	8	83	5	2	90
	NBT	44	5	49	0	-1	48
	NBR	38	4	42	0	-1	41
	SBL	6	1	7	24	22	53
	SBT	25	3	28	4	3	35
	SBR	195	20	215	0	-3	212
	EBL	167	17	184	16	19	219
	EBT	520	54	574	0	-18	556
	EBR	19	2	21	0	-2	19
	WBL	34	4	38	0	-2	36
	WBT	475	49	524	16	2	542
	WBR	10	1	11	6	3	20
	North Leg						
	Approach	226	24	250	28	22	300
	Departure	221	23	244	22	21	287
	Total	447	47	494	50	43	587
	South Leg						
	Approach	157	17	174	5	0	179
	Departure	78	9	87	4	-1	90
	Total	235	26	261	9	-1	269
	East Leg						
	Approach	519	54	573	22	3	598
	Departure	564	59	623	24	3	650
	Total	1,083	113	1,196	46	6	1,248
	West Leg						
	Approach	706	73	779	16	-1	794
	Departure	745	77	822	21	1	844
	Total	1,451	150	1,601	37	0	1,638
	Total Approaches						
	Approach	1,608	168	1,776	71	24	1,871
	Departure	1,608	168	1,776	71	24	1,871
	Total	3,216	336	3,552	142	48	3,742

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**Table C-2 - Project Compl. Year Peak Hour PCE Vol. Summary**

	AM Peak Hour					
	Existing (2017) PCE	2017- 2019 Growth	OY Without Project	Net Project Trips	Pass-By Trips	OY With Project
<b>7 Via Del Lago/Iris Avenue - Moreno Beach Drive</b>						
NBL	22	2	24	0	0	24
NBT	2	0	2	0	0	2
NBR	40	4	44	0	0	44
SBL	13	1	14	0	0	14
SBT	2	0	2	0	0	2
SBR	38	4	42	2	0	44
EBL	22	2	24	9	4	37
EBT	524	55	579	15	0	594
EBR	18	2	20	0	0	20
WBL	17	2	19	0	0	19
WBT	459	48	507	14	0	521
WBR	6	1	7	0	0	7
<b>North Leg</b>						
Approach	53	5	58	2	0	60
Departure	30	3	33	9	4	46
Total	83	8	91	11	4	106
<b>South Leg</b>						
Approach	64	6	70	0	0	70
Departure	37	4	41	0	0	41
Total	101	10	111	0	0	111
<b>East Leg</b>						
Approach	482	51	533	14	0	547
Departure	577	60	637	15	0	652
Total	1,059	111	1,170	29	0	1,199
<b>West Leg</b>						
Approach	564	59	623	24	4	651
Departure	519	54	573	16	0	589
Total	1,083	113	1,196	40	4	1,240
<b>Total Approaches</b>						
Approach	1,163	121	1,284	40	4	1,328
Departure	1,163	121	1,284	40	4	1,328
Total	2,326	242	2,568	80	8	2,656

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Table C-2 - Project Compl. Year Peak Hour PCE Vol. Summary

	PM Peak Hour					
	Existing (2017) PCE	2017- 2019 Growth	OY Without Project	Net Project Trips	Pass-By Trips	OY With Project
<b>1 Nason Street/Iris Avenue</b>						
NBL	13	1	14	0	0	14
NBT	22	2	24	0	0	24
NBR	9	1	10	3	0	13
SBL	119	12	131	5	0	136
SBT	37	4	41	0	0	41
SBR	406	42	448	0	0	448
EBL	230	24	254	0	0	254
EBT	571	59	630	10	0	640
EBR	19	2	21	0	0	21
WBL	14	1	15	2	0	17
WBT	756	79	835	10	0	845
WBR	104	11	115	5	0	120
North Leg						
Approach	562	58	620	5	0	625
Departure	356	37	393	5	0	398
Total	918	95	1,013	10	0	1,023
South Leg						
Approach	44	4	48	3	0	51
Departure	70	7	77	2	0	79
Total	114	11	125	5	0	130
East Leg						
Approach	874	91	965	17	0	982
Departure	699	72	771	18	0	789
Total	1,573	163	1,736	35	0	1,771
West Leg						
Approach	820	85	905	10	0	915
Departure	1,175	122	1,297	10	0	1,307
Total	1,995	207	2,202	20	0	2,222
Total Approaches						
Approach	2,300	238	2,538	35	0	2,573
Departure	2,300	238	2,538	35	0	2,573
Total	4,600	476	5,076	70	0	5,146

Table C-2 - Project Compl. Year Peak Hour PCE Vol. Summary

	PM Peak Hour					
	Existing (2017) PCE	2017- 2019 Growth	OY Without Project	Net Project Trips	Pass-By Trips	OY With Project
<b>2 Kaiser Hospital Entrance/Iris Avenue</b>						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	37	4	41	0	0	41
SBT	0	0	0	0	0	0
SBR	33	3	36	0	0	36
EBL	73	8	81	0	0	81
EBT	563	59	622	18	0	640
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	712	74	786	17	0	803
WBR	18	2	20	0	0	20
North Leg						
Approach	70	7	77	0	0	77
Departure	91	10	101	0	0	101
Total	161	17	178	0	0	178
South Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
East Leg						
Approach	730	76	806	17	0	823
Departure	600	63	663	18	0	681
Total	1,330	139	1,469	35	0	1,504
West Leg						
Approach	636	67	703	18	0	721
Departure	745	77	822	17	0	839
Total	1,381	144	1,525	35	0	1,560
Total Approaches						
Approach	1,436	150	1,586	35	0	1,621
Departure	1,436	150	1,586	35	0	1,621
Total	2,872	300	3,172	70	0	3,242

**Table C-2 - Project Compl. Year Peak Hour PCE Vol. Summary**

	PM Peak Hour					
	Existing (2017) PCE	2017- 2019 Growth	OY Without Project	Net Project Trips	Pass-By Trips	OY With Project
<b>3 Project Driveway 1/Iris Avenue</b>						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	0	0	17	29	46
EBL	0	0	0	0	0	0
EBT	620	65	685	18	0	703
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	713	74	787	0	-30	757
WBR	0	0	0	42	57	99
<b>North Leg</b>						
Approach	0	0	0	17	29	46
Departure	0	0	0	42	57	99
Total	0	0	0	59	86	145
<b>South Leg</b>						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
<b>East Leg</b>						
Approach	713	74	787	42	27	856
Departure	620	65	685	18	0	703
Total	1,333	139	1,472	60	27	1,559
<b>West Leg</b>						
Approach	620	65	685	18	0	703
Departure	713	74	787	17	-1	803
Total	1,333	139	1,472	35	-1	1,506
<b>Total Approaches</b>						
Approach	1,333	139	1,472	77	56	1,605
Departure	1,333	139	1,472	77	56	1,605
Total	2,666	278	2,944	154	112	3,210

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**Table C-2 - Project Compl. Year Peak Hour PCE Vol. Summary**

	PM Peak Hour					
	Existing (2017) PCE	2017- 2019 Growth	OY Without Project	Net Project Trips	Pass-By Trips	OY With Project
<b>4 Oliver Street/John F Kennedy Drive</b>						
NBL	0	0	0	0	0	0
NBT	81	8	89	7	0	96
NBR	18	2	20	0	0	20
SBL	120	12	132	0	0	132
SBT	62	6	68	8	0	76
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	27	3	30	3	0	33
WBT	0	0	0	0	0	0
WBR	56	6	62	0	0	62
<b>North Leg</b>						
Approach	182	18	200	8	0	208
Departure	137	14	151	7	0	158
Total	319	32	351	15	0	366
<b>South Leg</b>						
Approach	99	10	109	7	0	116
Departure	89	9	98	11	0	109
Total	188	19	207	18	0	225
<b>East Leg</b>						
Approach	83	9	92	3	0	95
Departure	138	14	152	0	0	152
Total	221	23	244	3	0	247
<b>West Leg</b>						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
<b>Total Approaches</b>						
Approach	364	37	401	18	0	419
Departure	364	37	401	18	0	419
Total	728	74	802	36	0	838

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**Table C-2 - Project Compl. Year Peak Hour PCE Vol. Summary**

	PM Peak Hour					
	Existing (2017) PCE	2017- 2019 Growth	OY Without Project	Net Project Trips	Pass-By Trips	OY With Project
<b>5 Oliver Street/Project Driveway 2</b>						
NBL	0	0	0	0	0	0
NBT	97	10	107	7	0	114
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	105	11	116	0	-4	112
SBR	0	0	0	10	4	14
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	32	31	63
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
<b>North Leg</b>						
Approach	105	11	116	10	0	126
Departure	97	10	107	7	0	114
Total	202	21	223	17	0	240
<b>South Leg</b>						
Approach	97	10	107	7	0	114
Departure	105	11	116	32	27	175
Total	202	21	223	39	27	289
<b>East Leg</b>						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
<b>West Leg</b>						
Approach	0	0	0	32	31	63
Departure	0	0	0	10	4	14
Total	0	0	0	42	35	77
<b>Total Approaches</b>						
Approach	202	21	223	49	31	303
Departure	202	21	223	49	31	303
Total	404	42	446	98	62	606

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**Table C-2 - Project Compl. Year Peak Hour PCE Vol. Summary**

	PM Peak Hour					
	Existing (2017) PCE	2017- 2019 Growth	OY Without Project	Net Project Trips	Pass-By Trips	OY With Project
<b>6 Oliver Street/Iris Avenue</b>						
NBL	43	4	47	5	2	54
NBT	14	1	15	0	-1	14
NBR	32	3	35	0	-1	34
SBL	6	1	7	27	26	60
SBT	23	2	25	5	4	34
SBR	76	8	84	0	-3	81
EBL	74	8	82	18	23	123
EBT	496	52	548	0	-21	527
EBR	50	5	55	0	-2	53
WBL	41	4	45	0	-2	43
WBT	594	62	656	18	2	676
WBR	9	1	10	7	4	21
<b>North Leg</b>						
Approach	105	11	116	32	27	175
Departure	97	10	107	25	26	158
Total	202	21	223	57	53	333
<b>South Leg</b>						
Approach	89	8	97	5	0	102
Departure	114	11	125	5	0	130
Total	203	19	222	10	0	232
<b>East Leg</b>						
Approach	644	67	711	25	4	740
Departure	534	56	590	27	4	621
Total	1,178	123	1,301	52	8	1,361
<b>West Leg</b>						
Approach	620	65	685	18	0	703
Departure	713	74	787	23	1	811
Total	1,333	139	1,472	41	1	1,514
<b>Total Approaches</b>						
Approach	1,458	151	1,609	80	31	1,720
Departure	1,458	151	1,609	80	31	1,720
Total	2,916	302	3,218	160	62	3,440

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**Table C-2 - Project Compl. Year Peak Hour PCE Vol. Summary**

	PM Peak Hour					
	Existing (2017) PCE	2017- 2019 Growth	OY Without Project	Net Project Trips	Pass-By Trips	OY With Project
<b>7 Via Del Lago/Iris Avenue - Moreno Beach Drive</b>						
NBL	19	2	21	0	0	21
NBT	0	0	0	0	0	0
NBR	22	2	24	0	0	24
SBL	9	1	10	0	0	10
SBT	2	0	2	0	0	2
SBR	17	2	19	3	0	22
EBL	23	2	25	10	4	39
EBT	482	50	532	17	0	549
EBR	29	3	32	0	0	32
WBL	39	4	43	0	0	43
WBT	608	63	671	16	0	687
WBR	13	1	14	0	0	14
<b>North Leg</b>						
Approach	28	3	31	3	0	34
Departure	36	3	39	10	4	53
Total	64	6	70	13	4	87
<b>South Leg</b>						
Approach	41	4	45	0	0	45
Departure	70	7	77	0	0	77
Total	111	11	122	0	0	122
<b>East Leg</b>						
Approach	660	68	728	16	0	744
Departure	513	53	566	17	0	583
Total	1,173	121	1,294	33	0	1,327
<b>West Leg</b>						
Approach	534	55	589	27	4	620
Departure	644	67	711	19	0	730
Total	1,178	122	1,300	46	4	1,350
<b>Total Approaches</b>						
Approach	1,263	130	1,393	46	4	1,443
Departure	1,263	130	1,393	46	4	1,443
Total	2,526	260	2,786	92	8	2,886

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Table C-3- Cumulative (2022) Peak Hour PCE Volume Summary

	AM Peak Hour					
	Opening	Cumulative	Cumulative	Net	Pass-By	Cumulative
	Year	Project	Without	Project		Trips
	2018	Trips	Project	Trips	Trips	Project
<b>1 Nason Street/Iris Avenue</b>						
NBL	20	0	20	0	0	20
NBT	43	1	44	0	0	44
NBR	11	38	49	2	0	51
SBL	110	97	207	5	0	212
SBT	14	3	17	0	0	17
SBR	287	26	313	0	0	313
EBL	348	50	398	0	0	398
EBT	863	315	1,178	9	0	1,187
EBR	24	0	24	0	0	24
WBL	17	13	30	2	0	32
WBT	763	152	915	9	0	924
WBR	84	68	152	4	0	156
North Leg						
Approach	411	126	537	5	0	542
Departure	475	119	594	4	0	598
Total	886	245	1,131	9	0	1,140
South Leg						
Approach	74	39	113	2	0	115
Departure	55	16	71	2	0	73
Total	129	55	184	4	0	188
East Leg						
Approach	864	233	1,097	15	0	1,112
Departure	984	450	1,434	16	0	1,450
Total	1,848	683	2,531	31	0	2,562
West Leg						
Approach	1,235	365	1,600	9	0	1,609
Departure	1,070	178	1,248	9	0	1,257
Total	2,305	543	2,848	18	0	2,866
Total Approaches						
Approach	2,584	763	3,347	31	0	3,378
Departure	2,584	763	3,347	31	0	3,378
Total	5,168	1,526	6,694	62	0	6,756

**Table C-3- Cumulative (2022) Peak Hour PCE Volume Summary**

	AM Peak Hour					
	Opening	Cumulative	Cumulative	Net	Pass-By	Cumulative
	Year	Project	Without	Project		With
2018	Trips	Project	Trips	Trips	Project	
<b>2 Kaiser Hospital Entrance/Iris Avenue</b>						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	7	36	43	0	0	43
SBT	0	0	0	0	0	0
SBR	24	20	44	0	0	44
EBL	147	141	288	0	0	288
EBT	782	308	1,090	16	0	1,106
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	756	185	941	15	0	956
WBR	43	123	166	0	0	166
North Leg						
Approach	31	56	87	0	0	87
Departure	190	264	454	0	0	454
Total	221	320	541	0	0	541
South Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
East Leg						
Approach	799	308	1,107	15	0	1,122
Departure	789	344	1,133	16	0	1,149
Total	1,588	652	2,240	31	0	2,271
West Leg						
Approach	929	449	1,378	16	0	1,394
Departure	780	205	985	15	0	1,000
Total	1,709	654	2,363	31	0	2,394
Total Approaches						
Approach	1,759	813	2,572	31	0	2,603
Departure	1,759	813	2,572	31	0	2,603
Total	3,518	1,626	5,144	62	0	5,206

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Table C-3- Cumulative (2022) Peak Hour PCE Volume Summary

	AM Peak Hour					
	Opening	Cumulative	Cumulative	Net		Cumulative
	Year	Project	Without	Project	Pass-By	With
	2018	Trips	Project	Trips	Trips	Project
<b>3 Project Driveway 1/Iris Avenue</b>						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	0	0	15	25	40
EBL	0	0	0	0	0	0
EBT	779	341	1,120	16	0	1,136
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	823	314	1,137	0	-26	1,111
WBR	0	0	0	36	48	84
North Leg						
Approach	0	0	0	15	25	40
Departure	0	0	0	36	48	84
Total	0	0	0	51	73	124
South Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
East Leg						
Approach	823	314	1,137	36	22	1,195
Departure	779	341	1,120	16	0	1,136
Total	1,602	655	2,257	52	22	2,331
West Leg						
Approach	779	341	1,120	16	0	1,136
Departure	823	314	1,137	15	-1	1,151
Total	1,602	655	2,257	31	-1	2,287
Total Approaches						
Approach	1,602	655	2,257	67	47	2,371
Departure	1,602	655	2,257	67	47	2,371
Total	3,204	1,310	4,514	134	94	4,742

**Table C-3- Cumulative (2022) Peak Hour PCE Volume Summary**

	AM Peak Hour					
	Opening	Cumulative	Cumulative	Net	Pass-By	Cumulative
	Year	Project	Without	Project		With
2018	Trips	Project	Trips	Trips	Project	
<b>4 Oliver Street/John F Kennedy Drive</b>						
NBL	0	0	0	0	0	0
NBT	288	17	305	6	0	311
NBR	49	26	75	0	0	75
SBL	258	15	273	0	0	273
SBT	125	45	170	7	0	177
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	26	15	41	2	0	43
WBT	0	0	0	0	0	0
WBR	102	6	108	0	0	108
North Leg						
Approach	383	60	443	7	0	450
Departure	390	23	413	6	0	419
Total	773	83	856	13	0	869
South Leg						
Approach	337	43	380	6	0	386
Departure	151	60	211	9	0	220
Total	488	103	591	15	0	606
East Leg						
Approach	128	21	149	2	0	151
Departure	307	41	348	0	0	348
Total	435	62	497	2	0	499
West Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
Total Approaches						
Approach	848	124	972	15	0	987
Departure	848	124	972	15	0	987
Total	1,696	248	1,944	30	0	1,974

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**Table C-3- Cumulative (2022) Peak Hour PCE Volume Summary**

	AM Peak Hour					
	Opening	Cumulative	Cumulative	Net	Pass-By	Cumulative
	Year	Project	Without	Project		With
2018	Trips	Project	Trips	Trips	Project	
<b>5 Oliver Street/Project Driveway 2</b>						
NBL	0	0	0	0	0	0
NBT	244	28	272	6	0	278
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	250	52	302	0	-4	298
SBR	0	0	0	9	4	13
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	28	26	54
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	250	52	302	9	0	311
Departure	244	28	272	6	0	278
Total	494	80	574	15	0	589
South Leg						
Approach	244	28	272	6	0	278
Departure	250	52	302	28	22	352
Total	494	80	574	34	22	630
East Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
West Leg						
Approach	0	0	0	28	26	54
Departure	0	0	0	9	4	13
Total	0	0	0	37	30	67
Total Approaches						
Approach	494	80	574	43	26	643
Departure	494	80	574	43	26	643
Total	988	160	1,148	86	52	1,286

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Table C-3- Cumulative (2022) Peak Hour PCE Volume Summary

	AM Peak Hour					
	Opening	Cumulative	Cumulative	Net		Cumulative
	Year	Project	Without	Project	Pass-By	With
	2018	Trips	Project	Trips	Trips	Project
<b>6 Oliver Street/Iris Avenue</b>						
NBL	83	24	107	5	2	114
NBT	49	1	50	0	-1	49
NBR	42	24	66	0	-1	65
SBL	7	0	7	24	22	53
SBT	28	0	28	4	3	35
SBR	215	51	266	0	-3	263
EBL	184	26	210	16	19	245
EBT	574	329	903	0	-18	885
EBR	21	9	30	0	-2	28
WBL	38	9	47	0	-2	45
WBT	524	249	773	16	2	791
WBR	11	1	12	6	3	21
North Leg						
Approach	250	51	301	28	22	351
Departure	244	28	272	22	21	315
Total	494	79	573	50	43	666
South Leg						
Approach	174	49	223	5	0	228
Departure	87	18	105	4	-1	108
Total	261	67	328	9	-1	336
East Leg						
Approach	573	259	832	22	3	857
Departure	623	353	976	24	3	1,003
Total	1,196	612	1,808	46	6	1,860
West Leg						
Approach	779	364	1,143	16	-1	1,158
Departure	822	324	1,146	21	1	1,168
Total	1,601	688	2,289	37	0	2,326
Total Approaches						
Approach	1,776	723	2,499	71	24	2,594
Departure	1,776	723	2,499	71	24	2,594
Total	3,552	1,446	4,998	142	48	5,188

Table C-3- Cumulative (2022) Peak Hour PCE Volume Summary

	AM Peak Hour					
	Opening	Cumulative	Cumulative	Net	Pass-By	Cumulative
	Year	Project	Without	Project		With
2018	Trips	Project	Trips	Trips	Project	
<b>7 Via Del Lago/Iris Avenue - Moreno Beach Drive</b>						
NBL	24	13	37	0	0	37
NBT	2	0	2	0	0	2
NBR	44	12	56	0	0	56
SBL	14	0	14	0	0	14
SBT	2	0	2	0	0	2
SBR	42	23	65	2	0	67
EBL	24	7	31	9	4	44
EBT	579	330	909	15	0	924
EBR	20	15	35	0	0	35
WBL	19	5	24	0	0	24
WBT	507	218	725	14	0	739
WBR	7	0	7	0	0	7
North Leg						
Approach	58	23	81	2	0	83
Departure	33	7	40	9	4	53
Total	91	30	121	11	4	136
South Leg						
Approach	70	25	95	0	0	95
Departure	41	20	61	0	0	61
Total	111	45	156	0	0	156
East Leg						
Approach	533	223	756	14	0	770
Departure	637	342	979	15	0	994
Total	1,170	565	1,735	29	0	1,764
West Leg						
Approach	623	352	975	24	4	1,003
Departure	573	254	827	16	0	843
Total	1,196	606	1,802	40	4	1,846
Total Approaches						
Approach	1,284	623	1,907	40	4	1,951
Departure	1,284	623	1,907	40	4	1,951
Total	2,568	1,246	3,814	80	8	3,902



**Table C-3- Cumulative (2022) Peak Hour PCE Volume Summary**

	PM Peak Hour					
	Opening Year 2018	Cumulative Project Trips	Cumulative Without Project	Net Project Trips	Pass-By Trips	Cumulative With Project
<b>1 Nason Street/Iris Avenue</b>						
NBL	14	0	14	0	0	14
NBT	24	3	27	0	0	27
NBR	10	16	26	3	0	29
SBL	131	103	234	5	0	239
SBT	41	1	42	0	0	42
SBR	448	68	516	0	0	516
EBL	254	39	293	0	0	293
EBT	630	168	798	10	0	808
EBR	21	0	21	0	0	21
WBL	15	46	61	2	0	63
WBT	835	378	1,213	10	0	1,223
WBR	115	123	238	5	0	243
North Leg						
	620	172	792	5	0	797
	393	165	558	5	0	563
	1,013	337	1,350	10	0	1,360
South Leg						
	48	19	67	3	0	70
	77	47	124	2	0	126
	125	66	191	5	0	196
East Leg						
	965	547	1,512	17	0	1,529
	771	287	1,058	18	0	1,076
	1,736	834	2,570	35	0	2,605
West Leg						
	905	207	1,112	10	0	1,122
	1,297	446	1,743	10	0	1,753
	2,202	653	2,855	20	0	2,875
Total Approaches						
	2,538	945	3,483	35	0	3,518
	2,538	945	3,483	35	0	3,518
	5,076	1,890	6,966	70	0	7,036

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

**Table C-3- Cumulative (2022) Peak Hour PCE Volume Summary**

	PM Peak Hour					
	Opening Year 2018	Cumulative Project Trips	Cumulative Without Project	Net Project Trips	Pass-By Trips	Cumulative With Project
<b>2 Kaiser Hospital Entrance/Iris Avenue</b>						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	41	165	206	0	0	206
SBT	0	0	0	0	0	0
SBR	36	87	123	0	0	123
EBL	81	76	157	0	0	157
EBT	622	211	833	18	0	851
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	786	359	1,145	17	0	1,162
WBR	20	65	85	0	0	85
North Leg						
	77	252	329	0	0	329
	101	141	242	0	0	242
	178	393	571	0	0	571
South Leg						
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
East Leg						
	806	424	1,230	17	0	1,247
	663	376	1,039	18	0	1,057
	1,469	800	2,269	35	0	2,304
West Leg						
	703	287	990	18	0	1,008
	822	446	1,268	17	0	1,285
	1,525	733	2,258	35	0	2,293
Total Approaches						
	1,586	963	2,549	35	0	2,584
	1,586	963	2,549	35	0	2,584
	3,172	1,926	5,098	70	0	5,168

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

**Table C-3- Cumulative (2022) Peak Hour PCE Volume Summary**

	PM Peak Hour					
	Opening Year 2018	Cumulative Project Trips	Cumulative Without Project	Net Project Trips	Pass-By Trips	Cumulative With Project
<b>3 Project Driveway 1/Iris Avenue</b>						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	0	0	17	29	46
EBL	0	0	0	0	0	0
EBT	685	376	1,061	18	0	1,079
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	787	428	1,215	0	-30	1,185
WBR	0	0	0	42	57	99
North Leg	0	0	0	17	29	46
	0	0	0	42	57	99
	0	0	0	59	86	145
South Leg	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
East Leg	787	428	1,215	42	27	1,284
	685	376	1,061	18	0	1,079
	1,472	804	2,276	60	27	2,363
West Leg	685	376	1,061	18	0	1,079
	787	428	1,215	17	-1	1,231
	1,472	804	2,276	35	-1	2,310
Total Approaches	1,472	804	2,276	77	56	2,409
	1,472	804	2,276	77	56	2,409
	2,944	1,608	4,552	154	112	4,818

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

**Table C-3- Cumulative (2022) Peak Hour PCE Volume Summary**

	PM Peak Hour					
	Opening Year 2018	Cumulative Project Trips	Cumulative Without Project	Net Project Trips	Pass-By Trips	Cumulative With Project
<b>4 Oliver Street/John F Kennedy Drive</b>						
NBL	0	0	0	0	0	0
NBT	89	55	144	7	0	151
NBR	20	13	33	0	0	33
SBL	132	5	137	0	0	137
SBT	68	31	99	8	0	107
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	30	34	64	3	0	67
WBT	0	0	0	0	0	0
WBR	62	17	79	0	0	79
North Leg						
	200	36	236	8	0	244
	151	72	223	7	0	230
	351	108	459	15	0	474
South Leg						
	109	68	177	7	0	184
	98	65	163	11	0	174
	207	133	340	18	0	358
East Leg						
	92	51	143	3	0	146
	152	18	170	0	0	170
	244	69	313	3	0	316
West Leg						
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
Total Approaches						
	401	155	556	18	0	574
	401	155	556	18	0	574
	802	310	1,112	36	0	1,148

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Table C-3- Cumulative (2022) Peak Hour PCE Volume Summary

	PM Peak Hour					
	Opening Year 2018	Cumulative Project Trips	Cumulative Without Project	Net Project Trips	Pass-By Trips	Cumulative With Project
<b>5 Oliver Street/Project Driveway 2</b>						
NBL	0	0	0	0	0	0
NBT	107	72	179	7	0	186
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	116	39	155	0	-4	151
SBR	0	0	0	10	4	14
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	32	31	63
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
	116	39	155	10	0	165
	107	72	179	7	0	186
	223	111	334	17	0	351
South Leg						
	107	72	179	7	0	186
	116	39	155	32	27	214
	223	111	334	39	27	400
East Leg						
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
West Leg						
	0	0	0	32	31	63
	0	0	0	10	4	14
	0	0	0	42	35	77
Total Approaches						
	223	111	334	49	31	414
	223	111	334	49	31	414
	446	222	668	98	62	828

**Table C-3- Cumulative (2022) Peak Hour PCE Volume Summary**

	PM Peak Hour					
	Opening Year 2018	Cumulative Project Trips	Cumulative Without Project	Net Project Trips	Pass-By Trips	Cumulative With Project
<b>6 Oliver Street/Iris Avenue</b>						
NBL	47	14	61	5	2	68
NBT	15	1	16	0	-1	15
NBR	35	8	43	0	-1	42
SBL	7	1	8	27	26	61
SBT	25	1	26	5	4	35
SBR	84	37	121	0	-3	118
EBL	82	70	152	18	23	193
EBT	548	283	831	0	-21	810
EBR	55	31	86	0	-2	84
WBL	45	28	73	0	-2	71
WBT	656	404	1,060	18	2	1,080
WBR	10	1	11	7	4	22
North Leg						
	116	39	155	32	27	214
	107	72	179	25	26	230
	223	111	334	57	53	444
South Leg						
	97	23	120	5	0	125
	125	60	185	5	0	190
	222	83	305	10	0	315
East Leg						
	711	433	1,144	25	4	1,173
	590	292	882	27	4	913
	1,301	725	2,026	52	8	2,086
West Leg						
	685	384	1,069	18	0	1,087
	787	455	1,242	23	1	1,266
	1,472	839	2,311	41	1	2,353
Total Approaches						
	1,609	879	2,488	80	31	2,599
	1,609	879	2,488	80	31	2,599
	3,218	1,758	4,976	160	62	5,198

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

**Table C-3- Cumulative (2022) Peak Hour PCE Volume Summary**

	PM Peak Hour					
	Opening Year 2018	Cumulative Project Trips	Cumulative Without Project	Net Project Trips	Pass-By Trips	Cumulative With Project
<b>7 Via Del Lago/Iris Avenue - Moreno Beach Drive</b>						
NBL	21	17	38	0	0	38
NBT	0	0	0	0	0	0
NBR	24	4	28	0	0	28
SBL	10	0	10	0	0	10
SBT	2	0	2	0	0	2
SBR	19	12	31	3	0	34
EBL	25	31	56	10	4	70
EBT	532	239	771	17	0	788
EBR	32	20	52	0	0	52
WBL	43	14	57	0	0	57
WBT	671	403	1,074	16	0	1,090
WBR	14	0	14	0	0	14
<b>North Leg</b>						
	31	12	43	3	0	46
	39	31	70	10	4	84
	70	43	113	13	4	130
<b>South Leg</b>						
	45	21	66	0	0	66
	77	34	111	0	0	111
	122	55	177	0	0	177
<b>East Leg</b>						
	728	417	1,145	16	0	1,161
	566	243	809	17	0	826
	1,294	660	1,954	33	0	1,987
<b>West Leg</b>						
	589	290	879	27	4	910
	711	432	1,143	19	0	1,162
	1,300	722	2,022	46	4	2,072
<b>Total Approaches</b>						
	1,393	740	2,133	46	4	2,183
	1,393	740	2,133	46	4	2,183
	2,786	1,480	4,266	92	8	4,366

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Table C-4 - Existing (2017) Daily PCE Volume Summary

	Existing ADT	Project Trips	Existing With Project ADT
1 Oliver Street, from John F Kennedy Drive to Project Driveway 2	2,679	194	2,873
2 Oliver Street, from Project Driveway 2 to Iris Avenue	2,679	785	3,464
3 Iris Avenue, from Nason Street to Kaiser Hospital Entrance	20,289	785	21,074
4 Iris Avenue, from Kaiser Hospital Entrance to Project Driveway 1	16,994	785	17,779
5 Iris Avenue, from Project Driveway 1 to Oliver Street	16,994	785	17,779
6 Iris Avenue, from Oliver Street to Via Del Lago	14,114	785	14,899

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



Table C-5 - Project Completion Year (2022) Daily PCE Volume Summary

		Existing	Growth	Opening Year	Project Trips	Opening Year With Project
1	Oliver Street, from John F Kennedy Drive to Project Driveway 2	2,679	279	2,958	194	3,152
2	Oliver Street, from Project Driveway 2 to Iris Avenue	2,679	279	2,958	785	3,743
3	Iris Avenue, from Nason Street to Kaiser Hospital Entrance	20,289	2,112	22,401	785	23,186
4	Iris Avenue, from Kaiser Hospital Entrance to Project Driveway 1	16,994	1,769	18,763	785	19,548
5	Iris Avenue, from Project Driveway 1 to Oliver Street	16,994	1,769	18,763	785	19,548
6	Iris Avenue, from Oliver Street to Via Del Lago	14,114	1,469	15,583	785	16,368

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Table C-6 - Cumulative (2022) Daily PCE Volume Summary

	Project Completion	Cumulative Trips	Cumulative Without Project	Project Trips	Cumulative With Project
<b>1</b>	<b>Oliver Street, from John F Kennedy Drive to Project Driveway 2</b>				
	2,958	1,578	4,536	194	4,730
<b>2</b>	<b>Oliver Street, from Project Driveway 2 to Iris Avenue</b>				
	2,958	1,118	4,076	785	4,861
<b>3</b>	<b>Iris Avenue, from Nason Street to Kaiser Hospital Entrance</b>				
	22,401	11,058	33,459	785	34,244
<b>4</b>	<b>Iris Avenue, from Kaiser Hospital Entrance to Project Driveway 1</b>				
	18,763	10,648	29,411	785	30,196
<b>5</b>	<b>Iris Avenue, from Project Driveway 1 to Oliver Street</b>				
	18,763	11,236	29,999	785	30,784
<b>6</b>	<b>Iris Avenue, from Oliver Street to Via Del Lago</b>				
	15,583	10,368	25,951	785	26,736

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)





















**APPENDIX D:**

**LEVEL OF SERVICE AND QUEUEING ANALYSIS WORKSHEETS**

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
1: Hillrose Lane/Nason Street & Iris Avenue

AM/PM Gasoline Service Station  
Existing (2017) NP - AM Peak Hour

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	315	782	22	9	6	691	76	18	39	10	1	99
Future Volume (veh/h)	315	782	22	9	6	691	76	18	39	10	1	99
Number	5	2	12		1	6	16	3	8	18		7
Initial Q (Qb), veh	0	0	0		0	0	0	0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00		1.00		1.00	1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00		1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900		1900	1900	1900	1900	1900	1900		1900
Adj Flow Rate, veh/h	384	954	27		7	843	93	22	48	12		121
Adj No. of Lanes	2	3	0		1	3	1	1	1	0		1
Peak Hour Factor	0.82	0.82	0.82		0.82	0.82	0.82	0.82	0.82	0.82		0.82
Percent Heavy Veh, %	0	0	0		0	0	0	0	0	0		0
Cap, veh/h	498	2040	58		36	1408	438	76	388	97		170
Arrive On Green	0.14	0.39	0.39		0.03	0.36	0.36	0.04	0.26	0.26		0.09
Sat Flow, veh/h	3510	5186	147		1810	5187	1615	1810	1468	367		1810
Grp Volume(v), veh/h	384	636	345		7	843	93	22	0	60		121
Grp Sat Flow(s),veh/h/ln	1755	1729	1874		1810	1729	1615	1810	0	1835		1810
Q Serve(g_s), s	7.4	9.6	9.6		0.3	9.3	2.8	0.8	0.0	1.7		4.5
Cycle Q Clear(g_c), s	7.4	9.6	9.6		0.3	9.3	2.8	0.8	0.0	1.7		4.5
Prop In Lane	1.00		0.08		1.00		1.00	1.00		0.20		1.00
Lane Grp Cap(c), veh/h	498	1361	737		36	1408	438	76	0	485		170
V/C Ratio(X)	0.77	0.47	0.47		0.19	0.60	0.21	0.29	0.00	0.12		0.71
Avail Cap(c_a), veh/h	498	1361	737		194	1408	438	194	0	485		233
HCM Platoon Ratio	1.00	1.00	1.00		1.33	1.33	1.33	1.00	1.00	1.00		1.00
Upstream Filter(I)	1.00	1.00	1.00		0.91	0.91	0.91	1.00	0.00	1.00		1.00
Uniform Delay (d), s/veh	28.9	15.8	15.8		33.5	19.3	17.2	32.5	0.0	19.6		30.8
Incr Delay (d2), s/veh	7.3	1.2	2.1		2.4	1.7	1.0	2.1	0.0	0.5		6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	4.1	4.7	5.3		0.2	4.5	1.3	0.5	0.0	1.0		2.5
LnGrp Delay(d),s/veh	36.2	16.9	17.9		35.9	21.0	18.2	34.6	0.0	20.1		37.0
LnGrp LOS	D	B	B		D	C	B	C		C		D
Approach Vol, veh/h		1365				943			82			
Approach Delay, s/veh		22.6				20.8			24.0			
Approach LOS		C				C			C			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.4	31.5	6.9	26.1	13.9	23.0	10.6	22.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.0	18.5	7.0	19.5	7.0	18.5	8.5	18.0				
Max Q Clear Time (g_c+I1), s	2.3	11.6	2.8	3.6	9.4	11.3	6.5	3.7				
Green Ext Time (p_c), s	0.0	4.2	0.0	1.4	0.0	3.4	0.1	0.2				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			20.9									
HCM 2010 LOS			C									
<b>Notes</b>												

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# HCM 2010 Signalized Intersection Summary

## 1: Hillrose Lane/Nason Street & Iris Avenue

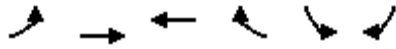
AM/PM Gasoline Service Station  
Existing (2017) NP - AM Peak Hour

Movement	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (veh/h)	13	260
Future Volume (veh/h)	13	260
Number	4	14
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900
Adj Flow Rate, veh/h	16	317
Adj No. of Lanes	1	1
Peak Hour Factor	0.82	0.82
Percent Heavy Veh, %	0	0
Cap, veh/h	601	740
Arrive On Green	0.32	0.32
Sat Flow, veh/h	1900	1615
Grp Volume(v), veh/h	16	317
Grp Sat Flow(s),veh/h/ln	1900	1615
Q Serve(g_s), s	0.4	1.6
Cycle Q Clear(g_c), s	0.4	1.6
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	601	740
V/C Ratio(X)	0.03	0.43
Avail Cap(c_a), veh/h	601	740
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	1.00	1.00
Uniform Delay (d), s/veh	16.5	4.9
Incr Delay (d2), s/veh	0.1	1.8
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.7
LnGrp Delay(d),s/veh	16.6	6.7
LnGrp LOS	B	A
Approach Vol, veh/h	454	
Approach Delay, s/veh	15.1	
Approach LOS	B	
Timer		

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

## HCM 2010 Signalized Intersection Summary 2: Iris Avenue & Kaiser Hospital Entrance

AM/PM Gasoline Service Station  
Existing (2017) NP - AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↵	↑↑↑	↑↑↑		↵	↵		
Traffic Volume (veh/h)	133	708	685	39	6	22		
Future Volume (veh/h)	133	708	685	39	6	22		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900		
Adj Flow Rate, veh/h	149	796	770	44	7	25		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	465	3223	1542	88	478	842		
Arrive On Green	0.51	1.00	0.61	0.61	0.26	0.26		
Sat Flow, veh/h	1810	5358	5193	286	1810	1615		
Grp Volume(v), veh/h	149	796	529	285	7	25		
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1850	1810	1615		
Q Serve(g_s), s	3.4	0.0	6.0	6.0	0.2	0.0		
Cycle Q Clear(g_c), s	3.4	0.0	6.0	6.0	0.2	0.0		
Prop In Lane	1.00			0.15	1.00	1.00		
Lane Grp Cap(c), veh/h	465	3223	1062	568	478	842		
V/C Ratio(X)	0.32	0.25	0.50	0.50	0.01	0.03		
Avail Cap(c_a), veh/h	465	3223	1062	568	478	842		
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.86	0.86	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	13.4	0.0	10.5	10.5	19.0	8.1		
Incr Delay (d2), s/veh	0.3	0.2	1.7	3.1	0.1	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	7	0.0	3.0	3.5	0.1	0.5		
LnGrp Delay(d),s/veh	13.8	0.2	12.2	13.6	19.1	8.2		
LnGrp LOS	B	A	B	B	B	A		
Approach Vol, veh/h		945	814		32			
Approach Delay, s/veh		2.3	12.7		10.6			
Approach LOS		A	B		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		47.5		22.5	22.0	25.5		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		43.0		18.0	17.5	21.0		
Max Q Clear Time (g_c+I1), s		2.0		2.2	5.4	8.0		
Green Ext Time (p_c), s		7.2		0.0	4.7	4.4		
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			7.2					
HCM 2010 LOS			A					

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 AWSC  
4: John F Kennedy Drive & Oliver Street

AM/PM Gasoline Service Station  
Existing (2017) NP - AM Peak Hour

Intersection	
Intersection Delay, s/veh	12.7
Intersection LOS	B





















Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations		↵	↵		↕↕				↵
Traffic Vol, veh/h	0	24	92	0	261	44	0	234	113
Future Vol, veh/h	0	24	92	0	261	44	0	234	113
Peak Hour Factor	1.00	0.83	0.83	1.00	0.83	0.83	1.00	0.83	0.83
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	29	111	0	314	53	0	282	136
Number of Lanes	0	1	1	0	2	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	9.7	9.9	16.1
HCM LOS	A	A	C

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	0%	100%	0%	67%
Vol Thru, %	100%	66%	0%	0%	33%
Vol Right, %	0%	34%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	174	131	24	92	347
LT Vol	0	0	24	0	234
Through Vol	174	87	0	0	113
RT Vol	0	44	0	92	0
Lane Flow Rate	210	158	29	111	418
Geometry Grp	7	7	7	7	4
Degree of Util (X)	0.308	0.221	0.055	0.173	0.607
Departure Headway (Hd)	5.284	5.047	6.834	5.617	5.224
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	675	706	520	632	686
Service Time	3.059	2.821	4.628	3.41	3.292
HCM Lane V/C Ratio	0.311	0.224	0.056	0.176	0.609
HCM Control Delay	10.4	9.3	10	9.6	16.1
HCM Lane LOS	B	A	A	A	C
HCM 95th-tile Q	1.3	0.8	0.2	0.6	4.1

HCM 2010 Signalized Intersection Summary  
6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Existing (2017) NP - AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	520	19	34	475	10	75	44	38	6	25	195
Future Volume (veh/h)	167	520	19	34	475	10	75	44	38	6	25	195
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	196	612	22	40	559	12	88	52	45	7	29	229
Adj No. of Lanes	1	3	0	1	3	0	0	1	1	0	1	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	543	2350	84	194	1381	30	292	155	427	117	423	427
Arrive On Green	0.10	0.15	0.15	0.04	0.09	0.09	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1810	5141	184	1810	5226	112	787	587	1615	209	1600	1615
Grp Volume(v), veh/h	196	411	223	40	369	202	140	0	45	36	0	229
Grp Sat Flow(s),veh/h/ln	1810	1729	1868	1810	1729	1880	1374	0	1615	1808	0	1615
Q Serve(g_s), s	7.1	7.4	7.4	1.5	7.1	7.1	4.3	0.0	1.5	0.0	0.0	8.5
Cycle Q Clear(g_c), s	7.1	7.4	7.4	1.5	7.1	7.1	5.5	0.0	1.5	1.0	0.0	8.5
Prop In Lane	1.00		0.10	1.00		0.06	0.63		1.00	0.19		1.00
Lane Grp Cap(c), veh/h	543	1581	854	194	914	497	447	0	427	539	0	427
V/C Ratio(X)	0.36	0.26	0.26	0.21	0.40	0.41	0.31	0.00	0.11	0.07	0.00	0.54
Avail Cap(c_a), veh/h	543	1581	854	194	914	497	447	0	427	539	0	427
HCM Platoon Ratio	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.3	19.3	19.3	30.9	26.7	26.7	20.8	0.0	19.5	19.3	0.0	22.1
Incr Delay (d2), s/veh	0.4	0.4	0.7	0.5	1.3	2.4	1.8	0.0	0.5	0.2	0.0	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	3.6	4.0	0.8	3.6	4.0	2.4	0.0	0.7	0.6	0.0	4.4
LnGrp Delay(d),s/veh	25.7	19.7	20.0	31.4	28.0	29.1	22.6	0.0	20.0	19.5	0.0	26.8
LnGrp LOS	C	B	C	C	C	C	C		B	B		C
Approach Vol, veh/h		830			611			185				265
Approach Delay, s/veh		21.2			28.6			22.0				25.9
Approach LOS		C			C			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	36.0		22.5	25.0	22.5		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.0	31.5		18.0	20.5	18.0		18.0				
Max Q Clear Time (g_c+I1), s	3.5	9.4		10.5	9.1	9.1		7.5				
Green Ext Time (p_c), s	0.2	4.1		1.2	0.5	2.4		1.5				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				24.3								
HCM 2010 LOS				C								
<b>Notes</b>												

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



HCM 2010 Signalized Intersection Summary  
 7: Via Del Lago & Iris Avenue/Moreno Beach Drive

AM/PM Gasoline Service Station  
 Existing (2017) NP - AM Peak Hour



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔ ↑↑↑			↔ ↑↑↑			↔ ↑	↑	↔	↔	↔	↔
Traffic Volume (veh/h)	2	20	524	18	17	459	6	22	2	40	13	2	38
Future Volume (veh/h)	2	20	524	18	17	459	6	22	2	40	13	2	38
Number		5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		23	602	21	20	528	7	25	2	46	15	2	44
Adj No. of Lanes		1	3	0	1	3	0	1	1	1	1	1	0
Peak Hour Factor		0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %		0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h		344	1507	52	305	1432	19	83	502	699	83	19	411
Arrive On Green		0.06	0.10	0.10	0.17	0.27	0.27	0.05	0.26	0.26	0.05	0.26	0.26
Sat Flow, veh/h		1810	5148	179	1810	5276	70	1810	1900	1615	1810	71	1555
Grp Volume(v), veh/h		23	404	219	20	346	189	25	2	46	15	0	46
Grp Sat Flow(s),veh/h/ln		1810	1729	1868	1810	1729	1888	1810	1900	1615	1810	0	1626
Q Serve(g_s), s		0.8	7.7	7.7	0.7	5.7	5.7	0.9	0.1	0.0	0.6	0.0	1.5
Cycle Q Clear(g_c), s		0.8	7.7	7.7	0.7	5.7	5.7	0.9	0.1	0.0	0.6	0.0	1.5
Prop In Lane		1.00		0.10	1.00		0.04	1.00		1.00	1.00		0.96
Lane Grp Cap(c), veh/h		344	1013	547	305	939	512	83	502	699	83	0	430
V/C Ratio(X)		0.07	0.40	0.40	0.07	0.37	0.37	0.30	0.00	0.07	0.18	0.00	0.11
Avail Cap(c_a), veh/h		344	1013	547	305	939	512	194	502	699	194	0	430
HCM Platoon Ratio		0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		0.98	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh		27.0	25.8	25.8	24.5	20.6	20.6	32.3	19.0	11.6	32.1	0.0	19.5
Incr Delay (d2), s/veh		0.1	1.1	2.1	0.1	1.1	2.0	2.0	0.0	0.2	1.0	0.0	0.5
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.4	3.8	4.3	0.3	2.8	3.2	0.5	0.0	0.5	0.3	0.0	0.7
LnGrp Delay(d),s/veh		27.0	27.0	28.0	24.6	21.8	22.7	34.4	19.0	11.8	33.2	0.0	20.0
LnGrp LOS		C	C	C	C	C	C	C	B	B	C		B
Approach Vol, veh/h			646			555			73			61	
Approach Delay, s/veh			27.3			22.2			19.7			23.2	
Approach LOS			C			C			B			C	
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	15.8	24.5	7.2	22.5	17.3	23.0	7.2	22.5					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	20.0	7.0	18.0	8.5	18.5	7.0	18.0						
Max Q Clear Time (g_c+1), s	9.7	2.9	3.5	2.8	7.7	2.6	2.1						
Green Ext Time (p_c), s	0.0	2.9	0.0	0.1	0.0	2.5	0.0	0.1					
<b>Intersection Summary</b>													
HCM 2010 Ctrl Delay			24.6										
HCM 2010 LOS			C										
<b>Notes</b>													

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
 1: Hillrose Lane/Nason Street & Iris Avenue

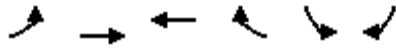
AM/PM Gasoline Service Station  
 Existing (2017) NP - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	571	19	14	756	104	13	22	9	119	37	406
Future Volume (veh/h)	230	571	19	14	756	104	13	22	9	119	37	406
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	250	621	21	15	822	113	14	24	10	129	40	441
Adj No. of Lanes	2	3	0	1	3	1	1	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	373	1384	47	253	1565	487	135	337	140	179	548	638
Arrive On Green	0.11	0.27	0.27	0.05	0.10	0.10	0.07	0.26	0.26	0.10	0.29	0.29
Sat Flow, veh/h	3510	5154	174	1810	5187	1615	1810	1275	531	1810	1900	1615
Grp Volume(v), veh/h	250	416	226	15	822	113	14	0	34	129	40	441
Grp Sat Flow(s),veh/h/ln	1755	1729	1869	1810	1729	1615	1810	0	1806	1810	1900	1615
Q Serve(g_s), s	4.8	7.0	7.0	0.6	10.5	4.5	0.5	0.0	1.0	4.8	1.1	9.2
Cycle Q Clear(g_c), s	4.8	7.0	7.0	0.6	10.5	4.5	0.5	0.0	1.0	4.8	1.1	9.2
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	373	929	502	253	1565	487	135	0	477	179	548	638
V/C Ratio(X)	0.67	0.45	0.45	0.06	0.53	0.23	0.10	0.00	0.07	0.72	0.07	0.69
Avail Cap(c_a), veh/h	381	929	502	253	1565	487	194	0	477	238	548	638
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.96	0.96	0.96	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.1	21.3	21.3	29.0	26.7	24.0	30.2	0.0	19.3	30.6	18.1	6.7
Incr Delay (d2), s/veh	4.4	1.6	2.9	0.1	1.2	1.1	0.3	0.0	0.3	6.9	0.3	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	3.6	4.0	0.3	5.2	2.2	0.3	0.0	0.5	2.7	0.6	5.1
LnGrp Delay(d),s/veh	34.5	22.8	24.2	29.1	28.0	25.1	30.5	0.0	19.6	37.5	18.4	12.8
LnGrp LOS	C	C	C	C	C	C	C		B	D	B	B
Approach Vol, veh/h		892			950			48			610	
Approach Delay, s/veh		26.4			27.6			22.8			18.4	
Approach LOS		C			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.8	22.8	9.2	24.2	11.4	25.1	10.9	22.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.0	18.3	7.0	19.7	7.1	18.2	8.7	18.0				
Max Q Clear Time (g_c+1), s	2.6	9.0	2.5	11.2	6.8	12.5	6.8	3.0				
Green Ext Time (p_c), s	2.3	2.8	0.0	1.3	0.0	2.8	0.1	0.1				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			24.9									
HCM 2010 LOS			C									

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

## HCM 2010 Signalized Intersection Summary 2: Iris Avenue & Kaiser Hospital Entrance

AM/PM Gasoline Service Station  
Existing (2017) NP - PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↖	↗↗↗	↖↖↖		↖	↗		
Traffic Volume (veh/h)	73	563	712	18	37	33		
Future Volume (veh/h)	73	563	712	18	37	33		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900		
Adj Flow Rate, veh/h	78	605	766	19	40	35		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	154	3186	2457	61	491	576		
Arrive On Green	0.17	1.00	0.94	0.94	0.27	0.27		
Sat Flow, veh/h	1810	5358	5377	129	1810	1615		
Grp Volume(v), veh/h	78	605	508	277	40	35		
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1877	1810	1615		
Q Serve(g_s), s	2.7	0.0	0.8	0.8	1.2	1.0		
Cycle Q Clear(g_c), s	2.7	0.0	0.8	0.8	1.2	1.0		
Prop In Lane	1.00			0.07	1.00	1.00		
Lane Grp Cap(c), veh/h	154	3186	1632	886	491	576		
V/C Ratio(X)	0.51	0.19	0.31	0.31	0.08	0.06		
Avail Cap(c_a), veh/h	336	3186	1632	886	491	576		
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.94	0.94	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	27.7	0.0	1.1	1.1	19.0	14.8		
Incr Delay (d2), s/veh	2.4	0.1	0.5	0.9	0.3	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.4	0.5	0.6	1.1		
LnGrp Delay(d),s/veh	30.1	0.1	1.6	2.0	19.3	15.0		
LnGrp LOS	C	A	A	A	B	B		
Approach Vol, veh/h		683	785		75			
Approach Delay, s/veh		3.5	1.7		17.3			
Approach LOS		A	A		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		47.0		23.0	10.0	37.0		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		42.5		18.5	12.5	25.5		
Max Q Clear Time (g_c+I1), s		2.0		3.2	4.7	2.8		
Green Ext Time (p_c), s		12.6		0.1	0.1	10.2		
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			3.3					
HCM 2010 LOS			A					

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 AWSC  
4: John F Kennedy Drive & Oliver Street

AM/PM Gasoline Service Station  
Existing (2017) NP - PM Peak Hour

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A





















Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations		↵	↵		↕↕				↵
Traffic Vol, veh/h	0	27	56	0	81	18	0	120	62
Future Vol, veh/h	0	27	56	0	81	18	0	120	62
Peak Hour Factor	1.00	0.93	0.93	1.00	0.93	0.93	1.00	0.93	0.93
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	29	60	0	87	19	0	129	67
Number of Lanes	0	1	1	0	2	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	8	7.8	9.4
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	0%	100%	0%	66%
Vol Thru, %	100%	60%	0%	0%	34%
Vol Right, %	0%	40%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	54	45	27	56	182
LT Vol	0	0	27	0	120
Through Vol	54	27	0	0	62
RT Vol	0	18	0	56	0
Lane Flow Rate	58	48	29	60	196
Geometry Grp	7	7	7	7	4
Degree of Util (X)	0.079	0.062	0.046	0.076	0.259
Departure Headway (Hd)	4.881	4.6	5.731	4.526	4.77
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	736	781	627	794	755
Service Time	2.597	2.315	3.448	2.242	2.785
HCM Lane V/C Ratio	0.079	0.061	0.046	0.076	0.26
HCM Control Delay	8	7.6	8.7	7.6	9.4
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.3	0.2	0.1	0.2	1

HCM 2010 Signalized Intersection Summary  
6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Existing (2017) NP - PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	496	50	41	594	9	43	14	32	6	23	76
Future Volume (veh/h)	74	496	50	41	594	9	43	14	32	6	23	76
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	80	533	54	44	639	10	46	15	34	6	25	82
Adj No. of Lanes	1	3	0	1	3	0	0	1	1	0	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	543	2395	240	117	1390	22	359	105	427	117	426	427
Arrive On Green	0.10	0.16	0.16	0.13	0.53	0.53	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1810	4793	480	1810	5261	82	1018	399	1615	209	1611	1615
Grp Volume(v), veh/h	80	383	204	44	420	229	61	0	34	31	0	82
Grp Sat Flow(s),veh/h/ln	1810	1729	1815	1810	1729	1885	1417	0	1615	1821	0	1615
Q Serve(g_s), s	2.8	6.7	6.8	1.6	5.3	5.3	1.4	0.0	1.1	0.0	0.0	2.8
Cycle Q Clear(g_c), s	2.8	6.7	6.8	1.6	5.3	5.3	2.3	0.0	1.1	0.9	0.0	2.8
Prop In Lane	1.00		0.26	1.00		0.04	0.75		1.00	0.19		1.00
Lane Grp Cap(c), veh/h	543	1728	907	117	914	498	465	0	427	543	0	427
V/C Ratio(X)	0.15	0.22	0.23	0.38	0.46	0.46	0.13	0.00	0.08	0.06	0.00	0.19
Avail Cap(c_a), veh/h	543	1728	907	194	914	498	465	0	427	543	0	427
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.3	17.4	17.5	29.2	13.4	13.4	19.8	0.0	19.4	19.3	0.0	20.0
Incr Delay (d2), s/veh	0.1	0.3	0.6	1.9	1.6	3.0	0.6	0.0	0.4	0.2	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	3.3	3.6	0.8	2.7	3.1	1.0	0.0	0.5	0.5	0.0	1.3
LnGrp Delay(d),s/veh	23.5	17.7	18.1	31.1	15.0	16.4	20.3	0.0	19.7	19.5	0.0	21.0
LnGrp LOS	C	B	B	C	B	B	C		B	B		C
Approach Vol, veh/h		667			693			95			113	
Approach Delay, s/veh		18.5			16.5			20.1			20.5	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.5	39.0		22.5	25.0	22.5		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.0	31.5		18.0	20.5	18.0		18.0				
Max Q Clear Time (g_c+I1), s	3.6	8.8		4.8	4.8	7.3		4.3				
Green Ext Time (p_c), s	0.0	4.1		0.7	3.6	3.1		0.7				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				17.9								
HCM 2010 LOS				B								
<b>Notes</b>												

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
 7: Via Del Lago & Iris Avenue/Moreno Beach Drive

AM/PM Gasoline Service Station  
 Existing (2017) NP - PM Peak Hour























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔ ↑↑↑ ↘			↙ ↑↑↑ ↘			↙	↑	↙	↙	↘	
Traffic Volume (veh/h)	23	482	29	39	608	13	19	0	22	9	2	17
Future Volume (veh/h)	23	482	29	39	608	13	19	0	22	9	2	17
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	24	513	31	41	647	14	20	0	23	10	2	18
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	360	2030	122	112	1403	30	71	502	527	71	43	390
Arrive On Green	0.07	0.13	0.13	0.06	0.27	0.27	0.04	0.00	0.26	0.04	0.26	0.26
Sat Flow, veh/h	1810	5005	300	1810	5225	113	1810	1900	1615	1810	164	1476
Grp Volume(v), veh/h	24	353	191	41	428	233	20	0	23	10	0	20
Grp Sat Flow(s),veh/h/ln	1810	1729	1847	1810	1729	1880	1810	1900	1615	1810	0	1640
Q Serve(g_s), s	0.9	6.4	6.5	1.5	7.2	7.3	0.8	0.0	0.5	0.4	0.0	0.6
Cycle Q Clear(g_c), s	0.9	6.4	6.5	1.5	7.2	7.3	0.8	0.0	0.5	0.4	0.0	0.6
Prop In Lane	1.00		0.16	1.00		0.06	1.00		1.00	1.00		0.90
Lane Grp Cap(c), veh/h	360	1403	749	112	929	505	71	502	527	71	0	433
V/C Ratio(X)	0.07	0.25	0.25	0.36	0.46	0.46	0.28	0.00	0.04	0.14	0.00	0.05
Avail Cap(c_a), veh/h	360	1403	749	194	929	505	194	502	527	194	0	433
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	0.99	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.6	20.8	20.8	31.5	21.4	21.4	32.7	0.0	7.7	32.5	0.0	19.2
Incr Delay (d2), s/veh	0.1	0.4	0.8	2.0	1.6	3.0	2.1	0.0	0.2	0.9	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.2	3.5	0.8	3.7	4.2	0.4	0.0	0.2	0.2	0.0	0.3
LnGrp Delay(d),s/veh	26.7	21.2	21.6	33.5	23.0	24.4	34.8	0.0	7.8	33.4	0.0	19.4
LnGrp LOS	C	C	C	C	C	C	C		A	C		B
Approach Vol, veh/h		568			702			43			30	
Approach Delay, s/veh		21.6			24.1			20.4			24.0	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.3	32.4	6.8	22.5	17.9	22.8	6.8	22.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	20.0	7.0	18.0	8.7	18.3	7.0	18.0					
Max Q Clear Time (g_c+1), s	8.5	2.8	2.6	2.9	9.3	2.4	2.5					
Green Ext Time (p_c), s	0.0	2.7	0.0	0.0	1.7	2.8	0.0	0.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					22.9							
HCM 2010 LOS					C							
<b>Notes</b>												

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
 1: Hillrose Lane/Nason Street & Iris Avenue

AM/PM Gasoline Service Station  
 Existing (2017) WP - AM Peak Hour

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	315	791	22	9	8	700	80	18	39	12	1	104
Future Volume (veh/h)	315	791	22	9	8	700	80	18	39	12	1	104
Number	5	2	12		1	6	16	3	8	18		7
Initial Q (Qb), veh	0	0	0		0	0	0	0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00		1.00		1.00	1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00		1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900		1900	1900	1900	1900	1900	1900		1900
Adj Flow Rate, veh/h	384	965	27		10	854	98	22	48	15		127
Adj No. of Lanes	2	3	0		1	3	1	1	1	0		1
Peak Hour Factor	0.82	0.82	0.82		0.82	0.82	0.82	0.82	0.82	0.82		0.82
Percent Heavy Veh, %	0	0	0		0	0	0	0	0	0		0
Cap, veh/h	488	2001	56		45	1408	438	76	367	115		175
Arrive On Green	0.14	0.39	0.39		0.03	0.36	0.36	0.04	0.26	0.26		0.10
Sat Flow, veh/h	3510	5187	145		1810	5187	1615	1810	1389	434		1810
Grp Volume(v), veh/h	384	643	349		10	854	98	22	0	63		127
Grp Sat Flow(s),veh/h/ln	1755	1729	1874		1810	1729	1615	1810	0	1823		1810
Q Serve(g_s), s	7.4	9.8	9.8		0.4	9.4	3.0	0.8	0.0	1.8		4.8
Cycle Q Clear(g_c), s	7.4	9.8	9.8		0.4	9.4	3.0	0.8	0.0	1.8		4.8
Prop In Lane	1.00		0.08		1.00		1.00	1.00		0.24		1.00
Lane Grp Cap(c), veh/h	488	1334	723		45	1408	438	76	0	482		175
V/C Ratio(X)	0.79	0.48	0.48		0.22	0.61	0.22	0.29	0.00	0.13		0.73
Avail Cap(c_a), veh/h	488	1334	723		194	1408	438	194	0	482		233
HCM Platoon Ratio	1.00	1.00	1.00		1.33	1.33	1.33	1.00	1.00	1.00		1.00
Upstream Filter(I)	1.00	1.00	1.00		0.91	0.91	0.91	1.00	0.00	1.00		1.00
Uniform Delay (d), s/veh	29.1	16.2	16.2		33.2	19.3	17.2	32.5	0.0	19.6		30.7
Incr Delay (d2), s/veh	8.3	1.2	2.3		2.2	1.8	1.1	2.1	0.0	0.6		7.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	4.1	4.9	5.5		0.2	4.7	1.4	0.5	0.0	1.0		2.8
LnGrp Delay(d),s/veh	37.4	17.5	18.5		35.4	21.1	18.3	34.6	0.0	20.2		38.2
LnGrp LOS	D	B	B		D	C	B	C		C		D
Approach Vol, veh/h		1376				962			85			
Approach Delay, s/veh		23.3				20.9			23.9			
Approach LOS		C				C			C			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.7	31.0	6.9	26.3	13.7	23.0	10.8	22.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.0	18.5	7.0	19.5	7.0	18.5	8.5	18.0				
Max Q Clear Time (g_c+I1), s	2.4	11.8	2.8	3.6	9.4	11.4	6.8	3.8				
Green Ext Time (p_c), s	0.0	4.1	0.0	1.4	0.0	3.4	0.1	0.2				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			21.3									
HCM 2010 LOS			C									
<b>Notes</b>												

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# HCM 2010 Signalized Intersection Summary

## 1: Hillrose Lane/Nason Street & Iris Avenue

AM/PM Gasoline Service Station  
Existing (2017) WP - AM Peak Hour

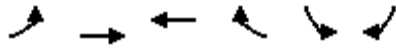
Movement	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (veh/h)	13	260
Future Volume (veh/h)	13	260
Number	4	14
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900
Adj Flow Rate, veh/h	16	317
Adj No. of Lanes	1	1
Peak Hour Factor	0.82	0.82
Percent Heavy Veh, %	0	0
Cap, veh/h	606	740
Arrive On Green	0.32	0.32
Sat Flow, veh/h	1900	1615
Grp Volume(v), veh/h	16	317
Grp Sat Flow(s),veh/h/ln	1900	1615
Q Serve(g_s), s	0.4	1.6
Cycle Q Clear(g_c), s	0.4	1.6
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	606	740
V/C Ratio(X)	0.03	0.43
Avail Cap(c_a), veh/h	606	740
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	1.00	1.00
Uniform Delay (d), s/veh	16.4	4.9
Incr Delay (d2), s/veh	0.1	1.8
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.7
LnGrp Delay(d),s/veh	16.5	6.7
LnGrp LOS	B	A
Approach Vol, veh/h	460	
Approach Delay, s/veh	15.7	
Approach LOS	B	
Timer		

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



## HCM 2010 Signalized Intersection Summary 2: Iris Avenue & Kaiser Hospital Entrance

AM/PM Gasoline Service Station  
Existing (2017) WP - AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↖	↑↑↑	↑↑↑		↗	↘		
Traffic Volume (veh/h)	133	724	700	39	6	22		
Future Volume (veh/h)	133	724	700	39	6	22		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900		
Adj Flow Rate, veh/h	149	813	787	44	7	25		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	465	3223	1544	86	478	842		
Arrive On Green	0.51	1.00	0.61	0.61	0.26	0.26		
Sat Flow, veh/h	1810	5358	5199	280	1810	1615		
Grp Volume(v), veh/h	149	813	540	291	7	25		
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1851	1810	1615		
Q Serve(g_s), s	3.4	0.0	6.1	6.2	0.2	0.0		
Cycle Q Clear(g_c), s	3.4	0.0	6.1	6.2	0.2	0.0		
Prop In Lane	1.00			0.15	1.00	1.00		
Lane Grp Cap(c), veh/h	465	3223	1062	568	478	842		
V/C Ratio(X)	0.32	0.25	0.51	0.51	0.01	0.03		
Avail Cap(c_a), veh/h	465	3223	1062	568	478	842		
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.85	0.85	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	13.4	0.0	10.5	10.5	19.0	8.1		
Incr Delay (d2), s/veh	0.3	0.2	1.7	3.3	0.1	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	7	0.0	3.1	3.6	0.1	0.5		
LnGrp Delay(d),s/veh	13.8	0.2	12.3	13.8	19.1	8.2		
LnGrp LOS	B	A	B	B	B	A		
Approach Vol, veh/h		962	831		32			
Approach Delay, s/veh		2.3	12.8		10.6			
Approach LOS		A	B		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		47.5		22.5	22.0	25.5		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		43.0		18.0	17.5	21.0		
Max Q Clear Time (g_c+I1), s		2.0		2.2	5.4	8.2		
Green Ext Time (p_c), s		7.3		0.0	4.8	4.4		
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			7.2					
HCM 2010 LOS			A					

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 TWSC  
3: Iris Avenue & Project Driveway 1

AM/PM Gasoline Service Station  
Existing (2017) WP - AM Peak Hour

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↑↑↑		↑↑↑			↑
Traffic Vol, veh/h	0	722	719	84	0	40
Future Vol, veh/h	0	722	719	84	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	722	719	84	0	40
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	402
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	-	0	*759
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	1
Mov Cap-1 Maneuver	-	-	-	-	-	*759
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		SB	
HCM Control Delay, s	0		0		10	
HCM LOS					B	
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	759		
HCM Lane V/C Ratio	-	-	-	0.053		
HCM Control Delay (s)	-	-	-	10		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0.2		
Notes						
~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    *: All major volume in platoon						

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 AWSC  
4: John F Kennedy Drive & Oliver Street

AM/PM Gasoline Service Station  
Existing (2017) WP - AM Peak Hour

Intersection	
Intersection Delay, s/veh	13
Intersection LOS	B

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations		↵	↵		↕↕				↵
Traffic Vol, veh/h	0	26	92	0	267	44	0	234	120
Future Vol, veh/h	0	26	92	0	267	44	0	234	120
Peak Hour Factor	1.00	0.83	0.83	1.00	0.83	0.83	1.00	0.83	0.83
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	31	111	0	322	53	0	282	145
Number of Lanes	0	1	1	0	2	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	9.8	10	16.6
HCM LOS	A	A	C

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	0%	100%	0%	66%
Vol Thru, %	100%	67%	0%	0%	34%
Vol Right, %	0%	33%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	178	133	26	92	354
LT Vol	0	0	26	0	234
Through Vol	178	89	0	0	120
RT Vol	0	44	0	92	0
Lane Flow Rate	214	160	31	111	427
Geometry Grp	7	7	7	7	4
Degree of Util (X)	0.316	0.226	0.06	0.174	0.621
Departure Headway (Hd)	5.305	5.071	6.867	5.65	5.24
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	671	702	517	627	682
Service Time	3.081	2.847	4.667	3.449	3.309
HCM Lane V/C Ratio	0.319	0.228	0.06	0.177	0.626
HCM Control Delay	10.5	9.3	10.1	9.7	16.6
HCM Lane LOS	B	A	B	A	C
HCM 95th-tile Q	1.4	0.9	0.2	0.6	4.3

HCM 2010 TWSC  
5: Oliver Street & Project Driveway 2

AM/PM Gasoline Service Station  
Existing (2017) WP - AM Peak Hour

Intersection							
Int Delay, s/veh	1						
Movement	EBL	EBR	NBL	NBT	SBT	SBR	
Lane Configurations		↗		↖↖	↖↖		
Traffic Vol, veh/h	0	54	0	227	222	13	
Future Vol, veh/h	0	54	0	227	222	13	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	100	100	100	100	100	100	
Heavy Vehicles, %	0	0	0	0	0	0	
Mvmt Flow	0	54	0	227	222	13	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	-	118	-	0	-	0	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Critical Hdwy	-	6.9	-	-	-	-	
Critical Hdwy Stg 1	-	-	-	-	-	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	
Follow-up Hdwy	-	3.3	-	-	-	-	
Pot Cap-1 Maneuver	0	918	0	-	-	-	
Stage 1	0	-	0	-	-	-	
Stage 2	0	-	0	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	-	918	-	-	-	-	
Mov Cap-2 Maneuver	-	-	-	-	-	-	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Approach	EB	NB		SB			
HCM Control Delay, s	9.2	0		0			
HCM LOS	A						
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR			
Capacity (veh/h)	-	918	-	-			
HCM Lane V/C Ratio	-	0.059	-	-			
HCM Control Delay (s)	-	9.2	-	-			
HCM Lane LOS	-	A	-	-			
HCM 95th %tile Q(veh)	-	0.2	-	-			

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Existing (2017) WP - AM Peak Hour

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	35	167	502	17	32	493	19	82	43	37	52	32
Future Volume (veh/h)	35	167	502	17	32	493	19	82	43	37	52	32
Number		5	2	12	1	6	16	3	8	18	7	4
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		196	591	20	38	580	22	96	51	44	61	38
Adj No. of Lanes		1	3	0	1	3	0	0	1	1	0	1
Peak Hour Factor		0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %		0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h		543	2356	79	194	1356	51	85	29	427	83	34
Arrive On Green		0.10	0.15	0.15	0.04	0.09	0.09	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h		1810	5154	174	1810	5130	194	0	109	1615	0	128
Grp Volume(v), veh/h		196	396	215	38	390	212	147	0	44	99	0
Grp Sat Flow(s),veh/h/ln		1810	1729	1869	1810	1729	1866	109	0	1615	128	0
Q Serve(g_s), s		7.1	7.1	7.1	1.4	7.5	7.5	0.0	0.0	1.4	0.0	0.0
Cycle Q Clear(g_c), s		7.1	7.1	7.1	1.4	7.5	7.5	18.5	0.0	1.4	18.5	0.0
Prop In Lane		1.00		0.09	1.00		0.10	0.65		1.00	0.62	
Lane Grp Cap(c), veh/h		543	1581	855	194	914	493	114	0	427	117	0
V/C Ratio(X)		0.36	0.25	0.25	0.20	0.43	0.43	1.29	0.00	0.10	0.85	0.00
Avail Cap(c_a), veh/h		543	1581	855	194	914	493	114	0	427	117	0
HCM Platoon Ratio		0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	0.98	0.98	0.98	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh		25.3	19.1	19.2	30.8	26.9	26.9	30.4	0.0	19.5	28.9	0.0
Incr Delay (d2), s/veh		0.4	0.4	0.7	0.5	1.4	2.7	181.6	0.0	0.5	49.5	0.0
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		3.6	3.5	3.9	0.7	3.8	4.3	7.9	0.0	0.7	3.5	0.0
LnGrp Delay(d),s/veh		25.7	19.5	19.9	31.3	28.3	29.6	212.0	0.0	20.0	78.4	0.0
LnGrp LOS		C	B	B	C	C	C	F		B	E	
Approach Vol, veh/h			807			640			191			325
Approach Delay, s/veh			21.1			28.9			167.8			42.4
Approach LOS			C			C			F			D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	36.0		22.5	25.0	22.5		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.0	31.5		18.0	20.5	18.0		18.0				
Max Q Clear Time (g_c+1), s	3.4	9.1		20.5	9.1	9.5		20.5				
Green Ext Time (p_c), s	0.2	4.0		0.0	0.5	2.5		0.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			41.5									
HCM 2010 LOS			D									
<b>Notes</b>												

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# HCM 2010 Signalized Intersection Summary

## 6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Existing (2017) WP - AM Peak Hour

Movement	SBR
Lane Configurations	↑
Traffic Volume (veh/h)	192
Future Volume (veh/h)	192
Number	14
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	226
Adj No. of Lanes	1
Peak Hour Factor	0.85
Percent Heavy Veh, %	0
Cap, veh/h	427
Arrive On Green	0.26
Sat Flow, veh/h	1615
Grp Volume(v), veh/h	226
Grp Sat Flow(s),veh/h/ln	1615
Q Serve(g_s), s	8.4
Cycle Q Clear(g_c), s	8.4
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	427
V/C Ratio(X)	0.53
Avail Cap(c_a), veh/h	427
HCM Platoon Ratio	1.00
Upstream Filter(l)	1.00
Uniform Delay (d), s/veh	22.0
Incr Delay (d2), s/veh	4.6
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	4.3
LnGrp Delay(d),s/veh	26.7
LnGrp LOS	C
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer	

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
 7: Via Del Lago & Iris Avenue/Moreno Beach Drive

AM/PM Gasoline Service Station  
 Existing (2017) WP - AM Peak Hour



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔ ↑↑↑			↔ ↑↑↑			↔ ↑	↑	↔ ↑	↔ ↑	↔	↔
Traffic Volume (veh/h)	12	23	539	18	17	473	6	22	2	40	13	2	40
Future Volume (veh/h)	12	23	539	18	17	473	6	22	2	40	13	2	40
Number		5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		26	620	21	20	544	7	25	2	46	15	2	46
Adj No. of Lanes		1	3	0	1	3	0	1	1	1	1	1	0
Peak Hour Factor		0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %		0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h		344	1509	51	305	1433	18	83	502	699	83	18	412
Arrive On Green		0.06	0.10	0.10	0.17	0.27	0.27	0.05	0.26	0.26	0.05	0.26	0.26
Sat Flow, veh/h		1810	5153	174	1810	5278	68	1810	1900	1615	1810	68	1557
Grp Volume(v), veh/h		26	415	226	20	356	195	25	2	46	15	0	48
Grp Sat Flow(s),veh/h/ln		1810	1729	1869	1810	1729	1888	1810	1900	1615	1810	0	1625
Q Serve(g_s), s		0.9	7.9	8.0	0.7	5.9	5.9	0.9	0.1	0.0	0.6	0.0	1.6
Cycle Q Clear(g_c), s		0.9	7.9	8.0	0.7	5.9	5.9	0.9	0.1	0.0	0.6	0.0	1.6
Prop In Lane		1.00		0.09	1.00		0.04	1.00		1.00	1.00		0.96
Lane Grp Cap(c), veh/h		344	1013	547	305	939	512	83	502	699	83	0	430
V/C Ratio(X)		0.08	0.41	0.41	0.07	0.38	0.38	0.30	0.00	0.07	0.18	0.00	0.11
Avail Cap(c_a), veh/h		344	1013	547	305	939	512	194	502	699	194	0	430
HCM Platoon Ratio		0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh		27.0	25.9	25.9	24.5	20.7	20.7	32.3	19.0	11.6	32.1	0.0	19.5
Incr Delay (d2), s/veh		0.1	1.2	2.3	0.1	1.2	2.1	2.0	0.0	0.2	1.0	0.0	0.5
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.5	4.0	4.5	0.3	2.9	3.3	0.5	0.0	0.5	0.3	0.0	0.8
LnGrp Delay(d),s/veh		27.1	27.1	28.2	24.6	21.9	22.9	34.4	19.0	11.8	33.2	0.0	20.0
LnGrp LOS		C	C	C	C	C	C	C	B	B	C		C
Approach Vol, veh/h			667			571			73			63	
Approach Delay, s/veh			27.5			22.3			19.7			23.2	
Approach LOS			C			C			B			C	
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	15.8	24.5	7.2	22.5	17.3	23.0	7.2	22.5					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	20.0	7.0	18.0	8.5	18.5	7.0	18.0						
Max Q Clear Time (g_c+1), s	10.0	2.9	3.6	2.9	7.9	2.6	2.1						
Green Ext Time (p_c), s	0.0	2.9	0.0	0.1	0.0	2.6	0.0	0.1					
<b>Intersection Summary</b>													
HCM 2010 Ctrl Delay			24.7										
HCM 2010 LOS			C										
<b>Notes</b>													

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
1: Hillrose Lane/Nason Street & Iris Avenue

AM/PM Gasoline Service Station  
Existing (2017) WP - PM Peak Hour

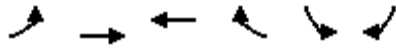
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	581	19	16	766	109	13	22	12	124	37	406
Future Volume (veh/h)	230	581	19	16	766	109	13	22	12	124	37	406
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	250	632	21	17	833	118	14	24	13	135	40	441
Adj No. of Lanes	2	3	0	1	3	1	1	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	373	1385	46	248	1552	483	140	307	166	184	548	638
Arrive On Green	0.11	0.27	0.27	0.05	0.10	0.10	0.08	0.26	0.26	0.10	0.29	0.29
Sat Flow, veh/h	3510	5157	171	1810	5187	1615	1810	1160	629	1810	1900	1615
Grp Volume(v), veh/h	250	423	230	17	833	118	14	0	37	135	40	441
Grp Sat Flow(s),veh/h/ln	1755	1729	1870	1810	1729	1615	1810	0	1789	1810	1900	1615
Q Serve(g_s), s	4.8	7.1	7.2	0.6	10.7	4.7	0.5	0.0	1.1	5.1	1.1	9.2
Cycle Q Clear(g_c), s	4.8	7.1	7.2	0.6	10.7	4.7	0.5	0.0	1.1	5.1	1.1	9.2
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.35	1.00		1.00
Lane Grp Cap(c), veh/h	373	929	502	248	1552	483	140	0	473	184	548	638
V/C Ratio(X)	0.67	0.46	0.46	0.07	0.54	0.24	0.10	0.00	0.08	0.74	0.07	0.69
Avail Cap(c_a), veh/h	381	929	502	248	1552	483	194	0	473	238	548	638
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.1	21.3	21.3	29.1	26.9	24.2	30.0	0.0	19.3	30.5	18.1	6.7
Incr Delay (d2), s/veh	4.4	1.6	3.0	0.1	1.3	1.1	0.3	0.0	0.3	8.2	0.3	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	3.6	4.1	0.3	5.3	2.3	0.3	0.0	0.6	2.9	0.6	5.0
LnGrp Delay(d),s/veh	34.5	22.9	24.3	29.2	28.2	25.4	30.3	0.0	19.7	38.7	18.4	12.7
LnGrp LOS	C	C	C	C	C	C	C		B	D	B	B
Approach Vol, veh/h		903			968			51			616	
Approach Delay, s/veh		26.5			27.9			22.6			18.8	
Approach LOS		C			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.6	22.8	9.4	24.2	11.4	24.9	11.1	22.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.0	18.3	7.0	19.7	7.1	18.2	8.7	18.0				
Max Q Clear Time (g_c+1), s	2.6	9.2	2.5	11.2	6.8	12.7	7.1	3.1				
Green Ext Time (p_c), s	2.3	2.8	0.0	1.3	0.0	2.8	0.0	0.1				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			25.1									
HCM 2010 LOS			C									

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



## HCM 2010 Signalized Intersection Summary 2: Iris Avenue & Kaiser Hospital Entrance

AM/PM Gasoline Service Station  
Existing (2017) WP - PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↖	↗↗↗	↖↖↖		↖	↗		
Traffic Volume (veh/h)	73	581	729	18	37	33		
Future Volume (veh/h)	73	581	729	18	37	33		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900		
Adj Flow Rate, veh/h	78	625	784	19	40	35		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	154	3186	2459	59	491	576		
Arrive On Green	0.17	1.00	0.94	0.94	0.27	0.27		
Sat Flow, veh/h	1810	5358	5381	126	1810	1615		
Grp Volume(v), veh/h	78	625	520	283	40	35		
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1878	1810	1615		
Q Serve(g_s), s	2.7	0.0	0.8	0.8	1.2	1.0		
Cycle Q Clear(g_c), s	2.7	0.0	0.8	0.8	1.2	1.0		
Prop In Lane	1.00			0.07	1.00	1.00		
Lane Grp Cap(c), veh/h	154	3186	1632	886	491	576		
V/C Ratio(X)	0.51	0.20	0.32	0.32	0.08	0.06		
Avail Cap(c_a), veh/h	336	3186	1632	886	491	576		
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.94	0.94	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	27.7	0.0	1.1	1.1	19.0	14.8		
Incr Delay (d2), s/veh	2.4	0.1	0.5	1.0	0.3	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.4	0.5	0.6	1.1		
LnGrp Delay(d),s/veh	30.1	0.1	1.6	2.0	19.3	15.0		
LnGrp LOS	C	A	A	A	B	B		
Approach Vol, veh/h		703	803		75			
Approach Delay, s/veh		3.5	1.7		17.3			
Approach LOS		A	A		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		47.0		23.0	10.0	37.0		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		42.5		18.5	12.5	25.5		
Max Q Clear Time (g_c+I1), s		2.0		3.2	4.7	2.8		
Green Ext Time (p_c), s		13.1		0.1	0.1	10.5		
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			3.2					
HCM 2010 LOS			A					

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 TWSC  
3: Iris Avenue & Project Driveway 1

AM/PM Gasoline Service Station  
Existing (2017) WP - PM Peak Hour

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↑↑↑		↑↑↑			↑
Traffic Vol, veh/h	0	638	683	99	0	46
Future Vol, veh/h	0	638	683	99	0	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	638	683	99	0	46
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	391
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	-	0	*797
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	1
Mov Cap-1 Maneuver	-	-	-	-	-	*797
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		SB	
HCM Control Delay, s	0		0		9.8	
HCM LOS					A	
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	797		
HCM Lane V/C Ratio	-	-	-	0.058		
HCM Control Delay (s)	-	-	-	9.8		
HCM Lane LOS	-	-	-	A		
HCM 95th %tile Q(veh)	-	-	-	0.2		
Notes						
~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    *: All major volume in platoon						

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 AWSC  
4: John F Kennedy Drive & Oliver Street

AM/PM Gasoline Service Station  
Existing (2017) WP - PM Peak Hour

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations		↙	↗		↕↔				↕
Traffic Vol, veh/h	0	30	56	0	88	18	0	120	70
Future Vol, veh/h	0	30	56	0	88	18	0	120	70
Peak Hour Factor	1.00	0.93	0.93	1.00	0.93	0.93	1.00	0.93	0.93
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	32	60	0	95	19	0	129	75
Number of Lanes	0	1	1	0	2	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	8.1	7.9	9.6
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	0%	100%	0%	63%
Vol Thru, %	100%	62%	0%	0%	37%
Vol Right, %	0%	38%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	59	47	30	56	190
LT Vol	0	0	30	0	120
Through Vol	59	29	0	0	70
RT Vol	0	18	0	56	0
Lane Flow Rate	63	51	32	60	204
Geometry Grp	7	7	7	7	4
Degree of Util (X)	0.086	0.066	0.052	0.076	0.272
Departure Headway (Hd)	4.9	4.633	5.771	4.565	4.785
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	733	775	622	786	754
Service Time	2.617	2.35	3.49	2.284	2.8
HCM Lane V/C Ratio	0.086	0.066	0.051	0.076	0.271
HCM Control Delay	8.1	7.7	8.8	7.7	9.6
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.3	0.2	0.2	0.2	1.1

HCM 2010 TWSC  
5: Oliver Street & Project Driveway 2

AM/PM Gasoline Service Station  
Existing (2017) WP - PM Peak Hour

Intersection							
Int Delay, s/veh	2						
Movement	EBL	EBR	NBL	NBT	SBT	SBR	
Lane Configurations		↑		↑↑	↑↑		
Traffic Vol, veh/h	0	63	0	104	101	14	
Future Vol, veh/h	0	63	0	104	101	14	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	100	100	100	100	100	100	
Heavy Vehicles, %	0	0	0	0	0	0	
Mvmt Flow	0	63	0	104	101	14	
Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	-	58	-	0	-	0	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Critical Hdwy	-	6.9	-	-	-	-	
Critical Hdwy Stg 1	-	-	-	-	-	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	
Follow-up Hdwy	-	3.3	-	-	-	-	
Pot Cap-1 Maneuver	0	1002	0	-	-	-	
Stage 1	0	-	0	-	-	-	
Stage 2	0	-	0	-	-	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	-	1002	-	-	-	-	
Mov Cap-2 Maneuver	-	-	-	-	-	-	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Approach	EB		NB		SB		
HCM Control Delay, s	8.8		0		0		
HCM LOS	A						
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR			
Capacity (veh/h)	-	1002	-	-			
HCM Lane V/C Ratio	-	0.063	-	-			
HCM Control Delay (s)	-	8.8	-	-			
HCM Lane LOS	-	A	-	-			
HCM 95th %tile Q(veh)	-	0.2	-	-			

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Existing (2017) WP - PM Peak Hour

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	41	74	475	48	39	614	20	50	13	31	59	32
Future Volume (veh/h)	41	74	475	48	39	614	20	50	13	31	59	32
Number		5	2	12	1	6	16	3	8	18	7	4
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		80	511	52	42	660	22	54	14	33	63	34
Adj No. of Lanes		1	3	0	1	3	0	0	1	1	0	1
Peak Hour Factor		0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %		0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h		543	2402	241	114	1363	45	92	14	427	85	29
Arrive On Green		0.10	0.17	0.17	0.13	0.53	0.53	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h		1810	4791	482	1810	5156	171	0	53	1615	0	111
Grp Volume(v), veh/h		80	367	196	42	442	240	68	0	33	97	0
Grp Sat Flow(s),veh/h/ln		1810	1729	1815	1810	1729	1870	53	0	1615	111	0
Q Serve(g_s), s		2.8	6.4	6.5	1.5	5.7	5.7	0.0	0.0	1.1	0.0	0.0
Cycle Q Clear(g_c), s		2.8	6.4	6.5	1.5	5.7	5.7	18.5	0.0	1.1	18.5	0.0
Prop In Lane		1.00		0.27	1.00		0.09	0.79		1.00	0.65	
Lane Grp Cap(c), veh/h		543	1734	910	114	914	494	106	0	427	114	0
V/C Ratio(X)		0.15	0.21	0.22	0.37	0.48	0.49	0.64	0.00	0.08	0.85	0.00
Avail Cap(c_a), veh/h		543	1734	910	194	914	494	106	0	427	114	0
HCM Platoon Ratio		0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	0.98	0.98	0.98	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh		23.3	17.2	17.3	29.3	13.5	13.5	31.2	0.0	19.3	29.6	0.0
Incr Delay (d2), s/veh		0.1	0.3	0.5	1.9	1.8	3.3	25.9	0.0	0.4	50.9	0.0
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		1.4	3.2	3.4	0.8	2.8	3.3	2.1	0.0	0.5	3.5	0.0
LnGrp Delay(d),s/veh		23.5	17.5	17.8	31.3	15.3	16.8	57.1	0.0	19.7	80.5	0.0
LnGrp LOS		C	B	B	C	B	B	E		B	F	
Approach Vol, veh/h			643			724			101			175
Approach Delay, s/veh			18.4			16.7			44.9			53.9
Approach LOS			B			B			D			D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.4	39.1		22.5	25.0	22.5		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.0	31.5		18.0	20.5	18.0		18.0				
Max Q Clear Time (g_c+I1), s	3.5	8.5		20.5	4.8	7.7		20.5				
Green Ext Time (p_c), s	0.0	3.9		0.0	3.4	3.2		0.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			23.0									
HCM 2010 LOS			C									
<b>Notes</b>												

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# HCM 2010 Signalized Intersection Summary

## 6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Existing (2017) WP - PM Peak Hour

Movement	SBR
Lane Configurations	7
Traffic Volume (veh/h)	73
Future Volume (veh/h)	73
Number	14
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	78
Adj No. of Lanes	1
Peak Hour Factor	0.93
Percent Heavy Veh, %	0
Cap, veh/h	427
Arrive On Green	0.26
Sat Flow, veh/h	1615
Grp Volume(v), veh/h	78
Grp Sat Flow(s),veh/h/ln	1615
Q Serve(g_s), s	2.6
Cycle Q Clear(g_c), s	2.6
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	427
V/C Ratio(X)	0.18
Avail Cap(c_a), veh/h	427
HCM Platoon Ratio	1.00
Upstream Filter(l)	1.00
Uniform Delay (d), s/veh	19.9
Incr Delay (d2), s/veh	0.9
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	1.3
LnGrp Delay(d),s/veh	20.8
LnGrp LOS	C
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer	

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
 7: Via Del Lago & Iris Avenue/Moreno Beach Drive

AM/PM Gasoline Service Station  
 Existing (2017) WP - PM Peak Hour























Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔ ↑↑↑			↔ ↑↑↑			↔ ↑	↑	↔	↔	↔	↔
Traffic Volume (veh/h)	11	26	499	29	39	624	13	19	0	22	9	2	20
Future Volume (veh/h)	11	26	499	29	39	624	13	19	0	22	9	2	20
Number		5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		28	531	31	41	664	14	20	0	23	10	2	21
Adj No. of Lanes		1	3	0	1	3	0	1	1	1	1	1	0
Peak Hour Factor		0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %		0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h		360	2035	118	112	1404	30	71	502	527	71	38	395
Arrive On Green		0.07	0.13	0.13	0.06	0.27	0.27	0.04	0.00	0.26	0.04	0.26	0.26
Sat Flow, veh/h		1810	5016	291	1810	5229	110	1810	1900	1615	1810	142	1494
Grp Volume(v), veh/h		28	365	197	41	439	239	20	0	23	10	0	23
Grp Sat Flow(s),veh/h/ln		1810	1729	1849	1810	1729	1881	1810	1900	1615	1810	0	1636
Q Serve(g_s), s		1.0	6.6	6.7	1.5	7.4	7.5	0.8	0.0	0.5	0.4	0.0	0.7
Cycle Q Clear(g_c), s		1.0	6.6	6.7	1.5	7.4	7.5	0.8	0.0	0.5	0.4	0.0	0.7
Prop In Lane		1.00		0.16	1.00		0.06	1.00		1.00	1.00		0.91
Lane Grp Cap(c), veh/h		360	1403	750	112	929	505	71	502	527	71	0	432
V/C Ratio(X)		0.08	0.26	0.26	0.36	0.47	0.47	0.28	0.00	0.04	0.14	0.00	0.05
Avail Cap(c_a), veh/h		360	1403	750	194	929	505	194	502	527	194	0	432
HCM Platoon Ratio		0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		0.99	0.99	0.99	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh		26.7	20.9	20.9	31.5	21.4	21.5	32.7	0.0	7.7	32.5	0.0	19.2
Incr Delay (d2), s/veh		0.1	0.4	0.8	2.0	1.7	3.2	2.1	0.0	0.2	0.9	0.0	0.2
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.5	3.3	3.6	0.8	3.8	4.3	0.4	0.0	0.2	0.2	0.0	0.4
LnGrp Delay(d),s/veh		26.8	21.3	21.8	33.5	23.2	24.6	34.8	0.0	7.8	33.4	0.0	19.4
LnGrp LOS		C	C	C	C	C	C	C		A	C		B
Approach Vol, veh/h			590			719			43			33	
Approach Delay, s/veh			21.7			24.2			20.4			23.7	
Approach LOS			C			C			C			C	
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	32.4	6.8	22.5	17.9	22.8	6.8	22.5						
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5						
Max Green Setting (Gmax), s	20.0	7.0	18.0	8.7	18.3	7.0	18.0						
Max Q Clear Time (g_c+1), s	8.7	2.8	2.7	3.0	9.5	2.4	2.5						
Green Ext Time (p_c), s	0.0	2.8	0.0	0.0	1.8	2.9	0.0	0.0					
<b>Intersection Summary</b>													
HCM 2010 Ctrl Delay			23.0										
HCM 2010 LOS			C										
<b>Notes</b>													

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
 1: Hillrose Lane/Nason Street & Iris Avenue

AM/PM Gasoline Service Station  
 Project Completion Year (2022) NP - AM Peak Hour

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	348	863	24	10	7	763	84	20	43	11	1	109
Future Volume (veh/h)	348	863	24	10	7	763	84	20	43	11	1	109
Number	5	2	12		1	6	16	3	8	18		7
Initial Q (Qb), veh	0	0	0		0	0	0	0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00		1.00		1.00	1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00		1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900		1900	1900	1900	1900	1900	1900		1900
Adj Flow Rate, veh/h	424	1052	29		9	930	102	24	52	13		133
Adj No. of Lanes	2	3	0		1	3	1	1	1	0		1
Peak Hour Factor	0.82	0.82	0.82		0.82	0.82	0.82	0.82	0.82	0.82		0.82
Percent Heavy Veh, %	0	0	0		0	0	0	0	0	0		0
Cap, veh/h	475	1991	55		42	1408	438	80	388	97		182
Arrive On Green	0.14	0.38	0.38		0.03	0.36	0.36	0.04	0.26	0.26		0.10
Sat Flow, veh/h	3510	5190	143		1810	5187	1615	1810	1468	367		1810
Grp Volume(v), veh/h	424	701	380		9	930	102	24	0	65		133
Grp Sat Flow(s),veh/h/ln	1755	1729	1875		1810	1729	1615	1810	0	1835		1810
Q Serve(g_s), s	8.3	11.0	11.0		0.3	10.5	3.1	0.9	0.0	1.9		5.0
Cycle Q Clear(g_c), s	8.3	11.0	11.0		0.3	10.5	3.1	0.9	0.0	1.9		5.0
Prop In Lane	1.00		0.08		1.00		1.00	1.00		0.20		1.00
Lane Grp Cap(c), veh/h	475	1326	719		42	1408	438	80	0	485		182
V/C Ratio(X)	0.89	0.53	0.53		0.21	0.66	0.23	0.30	0.00	0.13		0.73
Avail Cap(c_a), veh/h	475	1326	719		194	1408	438	194	0	485		233
HCM Platoon Ratio	1.00	1.00	1.00		1.33	1.33	1.33	1.00	1.00	1.00		1.00
Upstream Filter(I)	1.00	1.00	1.00		0.82	0.82	0.82	1.00	0.00	1.00		1.00
Uniform Delay (d), s/veh	29.8	16.7	16.7		33.3	19.7	17.3	32.4	0.0	19.6		30.6
Incr Delay (d2), s/veh	18.8	1.5	2.8		2.1	2.0	1.0	2.0	0.0	0.6		8.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	5.2	5.4	6.2		0.2	5.3	1.5	0.5	0.0	1.0		2.9
LnGrp Delay(d),s/veh	48.6	18.2	19.5		35.4	21.7	18.3	34.4	0.0	20.2		38.9
LnGrp LOS	D	B	B		D	C	B	C		C		D
Approach Vol, veh/h		1505				1041			89			
Approach Delay, s/veh		27.1				21.5			24.0			
Approach LOS		C				C			C			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.6	30.8	7.1	26.4	13.5	23.0	11.0	22.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.0	18.5	7.0	19.5	7.0	18.5	8.5	18.0				
Max Q Clear Time (g_c+1), s	2.3	13.0	2.9	3.8	10.3	12.5	7.0	3.9				
Green Ext Time (p_c), s	0.0	3.7	0.0	1.6	0.0	3.2	0.1	0.2				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			23.3									
HCM 2010 LOS			C									
<b>Notes</b>												

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



# HCM 2010 Signalized Intersection Summary

## 1: Hillrose Lane/Nason Street & Iris Avenue

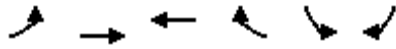
AM/PM Gasoline Service Station  
Project Completion Year (2022) NP - AM Peak Hour

Movement	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (veh/h)	14	287
Future Volume (veh/h)	14	287
Number	4	14
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900
Adj Flow Rate, veh/h	17	350
Adj No. of Lanes	1	1
Peak Hour Factor	0.82	0.82
Percent Heavy Veh, %	0	0
Cap, veh/h	608	736
Arrive On Green	0.32	0.32
Sat Flow, veh/h	1900	1615
Grp Volume(v), veh/h	17	350
Grp Sat Flow(s),veh/h/ln	1900	1615
Q Serve(g_s), s	0.4	1.8
Cycle Q Clear(g_c), s	0.4	1.8
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	608	736
V/C Ratio(X)	0.03	0.48
Avail Cap(c_a), veh/h	608	736
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	1.00	1.00
Uniform Delay (d), s/veh	16.3	5.0
Incr Delay (d2), s/veh	0.1	2.2
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.1
LnGrp Delay(d),s/veh	16.4	7.2
LnGrp LOS	B	A
Approach Vol, veh/h	500	
Approach Delay, s/veh	16.0	
Approach LOS	B	
Timer		

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

## HCM 2010 Signalized Intersection Summary 2: Iris Avenue & Kaiser Hospital Entrance

AM/PM Gasoline Service Station  
Project Completion Year (2022) NP - AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↖	↗↗↗	↖↖↖		↖	↗		
Traffic Volume (veh/h)	147	782	756	43	7	24		
Future Volume (veh/h)	147	782	756	43	7	24		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900		
Adj Flow Rate, veh/h	165	879	849	48	8	27		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	465	3223	1543	87	478	842		
Arrive On Green	0.51	1.00	0.61	0.61	0.26	0.26		
Sat Flow, veh/h	1810	5358	5196	283	1810	1615		
Grp Volume(v), veh/h	165	879	584	313	8	27		
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1850	1810	1615		
Q Serve(g_s), s	3.8	0.0	6.9	6.9	0.2	0.0		
Cycle Q Clear(g_c), s	3.8	0.0	6.9	6.9	0.2	0.0		
Prop In Lane	1.00			0.15	1.00	1.00		
Lane Grp Cap(c), veh/h	465	3223	1062	568	478	842		
V/C Ratio(X)	0.35	0.27	0.55	0.55	0.02	0.03		
Avail Cap(c_a), veh/h	465	3223	1062	568	478	842		
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.82	0.82	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	13.5	0.0	10.7	10.7	19.0	8.2		
Incr Delay (d2), s/veh	0.4	0.2	2.0	3.8	0.1	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	9	0.1	3.4	3.9	0.1	0.5		
LnGrp Delay(d),s/veh	13.9	0.2	12.7	14.5	19.1	8.2		
LnGrp LOS	B	A	B	B	B	A		
Approach Vol, veh/h		1044	897		35			
Approach Delay, s/veh		2.3	13.4		10.7			
Approach LOS		A	B		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		47.5		22.5	22.0	25.5		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		43.0		18.0	17.5	21.0		
Max Q Clear Time (g_c+I1), s		2.0		2.2	5.8	8.9		
Green Ext Time (p_c), s		8.2		0.0	5.1	4.7		
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			7.5					
HCM 2010 LOS			A					

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 AWSC  
4: John F Kennedy Drive & Oliver Street

AM/PM Gasoline Service Station  
Project Completion Year (2022) NP - AM Peak Hour

Intersection	
Intersection Delay, s/veh	14.4
Intersection LOS	B

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations		↵	↵		↕↕				↵
Traffic Vol, veh/h	0	26	102	0	288	49	0	258	125
Future Vol, veh/h	0	26	102	0	288	49	0	258	125
Peak Hour Factor	1.00	0.83	0.83	1.00	0.83	0.83	1.00	0.83	0.83
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	31	123	0	347	59	0	311	151
Number of Lanes	0	1	1	0	2	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	10.1	10.6	19.2
HCM LOS	B	B	C

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	0%	100%	0%	67%
Vol Thru, %	100%	66%	0%	0%	33%
Vol Right, %	0%	34%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	192	145	26	102	383
LT Vol	0	0	26	0	258
Through Vol	192	96	0	0	125
RT Vol	0	49	0	102	0
Lane Flow Rate	231	175	31	123	461
Geometry Grp	7	7	7	7	4
Degree of Util (X)	0.353	0.255	0.062	0.202	0.681
Departure Headway (Hd)	5.493	5.254	7.128	5.908	5.417
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	659	688	505	610	674
Service Time	3.193	2.954	4.842	3.622	3.417
HCM Lane V/C Ratio	0.351	0.254	0.061	0.202	0.684
HCM Control Delay	11.2	9.7	10.3	10.1	19.2
HCM Lane LOS	B	A	B	B	C
HCM 95th-tile Q	1.6	1	0.2	0.8	5.3

HCM 2010 Signalized Intersection Summary  
6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Project Completion Year (2022) NP - AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	574	21	38	524	11	83	49	42	7	28	215
Future Volume (veh/h)	184	574	21	38	524	11	83	49	42	7	28	215
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	216	675	25	45	616	13	98	58	49	8	33	253
Adj No. of Lanes	1	3	0	1	3	0	0	1	1	0	1	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	543	2347	87	194	1382	29	288	153	427	117	422	427
Arrive On Green	0.10	0.15	0.15	0.04	0.09	0.09	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1810	5135	190	1810	5228	110	772	579	1615	209	1596	1615
Grp Volume(v), veh/h	216	454	246	45	407	222	156	0	49	41	0	253
Grp Sat Flow(s),veh/h/ln	1810	1729	1867	1810	1729	1881	1351	0	1615	1805	0	1615
Q Serve(g_s), s	7.8	8.2	8.2	1.7	7.8	7.9	5.2	0.0	1.6	0.0	0.0	9.6
Cycle Q Clear(g_c), s	7.8	8.2	8.2	1.7	7.8	7.9	6.3	0.0	1.6	1.1	0.0	9.6
Prop In Lane	1.00		0.10	1.00		0.06	0.63		1.00	0.20		1.00
Lane Grp Cap(c), veh/h	543	1581	853	194	914	497	441	0	427	539	0	427
V/C Ratio(X)	0.40	0.29	0.29	0.23	0.45	0.45	0.35	0.00	0.11	0.08	0.00	0.59
Avail Cap(c_a), veh/h	543	1581	853	194	914	497	441	0	427	539	0	427
HCM Platoon Ratio	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.97	0.97	0.97	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.6	19.6	19.6	31.0	27.1	27.1	21.1	0.0	19.5	19.4	0.0	22.5
Incr Delay (d2), s/veh	0.5	0.5	0.9	0.6	1.5	2.8	2.2	0.0	0.5	0.3	0.0	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	4.0	4.4	0.9	3.9	4.5	2.7	0.0	0.8	0.6	0.0	5.0
LnGrp Delay(d),s/veh	26.1	20.1	20.5	31.6	28.6	29.9	23.3	0.0	20.1	19.6	0.0	28.4
LnGrp LOS	C	C	C	C	C	C	C		C	B		C
Approach Vol, veh/h		916			674			205				294
Approach Delay, s/veh		21.6			29.2			22.6				27.2
Approach LOS		C			C			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	36.0		22.5	25.0	22.5		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.0	31.5		18.0	20.5	18.0		18.0				
Max Q Clear Time (g_c+I1), s	3.7	10.2		11.6	9.8	9.9		8.3				
Green Ext Time (p_c), s	0.2	4.6		1.3	0.5	2.5		1.7				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				24.9								
HCM 2010 LOS				C								
<b>Notes</b>												

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
 7: Via Del Lago & Iris Avenue/Moreno Beach Drive

AM/PM Gasoline Service Station  
 Project Completion Year (2022) NP - AM Peak Hour



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		🚗🚗🚗			🚗🚗🚗			🚗	🚗	🚗	🚗	🚗	
Traffic Volume (veh/h)	2	22	579	20	19	507	7	24	2	44	14	2	42
Future Volume (veh/h)	2	22	579	20	19	507	7	24	2	44	14	2	42
Number		5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		25	666	23	22	583	8	28	2	51	16	2	48
Adj No. of Lanes		1	3	0	1	3	0	1	1	1	1	1	0
Peak Hour Factor		0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %		0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h		338	1508	52	299	1431	20	89	502	694	89	17	412
Arrive On Green		0.06	0.10	0.10	0.17	0.27	0.27	0.05	0.26	0.26	0.05	0.26	0.26
Sat Flow, veh/h		1810	5149	177	1810	5273	72	1810	1900	1615	1810	65	1560
Grp Volume(v), veh/h		25	447	242	22	382	209	28	2	51	16	0	50
Grp Sat Flow(s),veh/h/ln		1810	1729	1869	1810	1729	1887	1810	1900	1615	1810	0	1625
Q Serve(g_s), s		0.9	8.5	8.6	0.7	6.3	6.4	1.0	0.1	0.0	0.6	0.0	1.6
Cycle Q Clear(g_c), s		0.9	8.5	8.6	0.7	6.3	6.4	1.0	0.1	0.0	0.6	0.0	1.6
Prop In Lane		1.00		0.09	1.00		0.04	1.00		1.00	1.00		0.96
Lane Grp Cap(c), veh/h		338	1013	547	299	939	512	89	502	694	89	0	429
V/C Ratio(X)		0.07	0.44	0.44	0.07	0.41	0.41	0.31	0.00	0.07	0.18	0.00	0.12
Avail Cap(c_a), veh/h		338	1013	547	299	939	512	194	502	694	194	0	429
HCM Platoon Ratio		0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh		27.1	26.2	26.2	24.7	20.9	20.9	32.1	19.0	11.8	31.9	0.0	19.5
Incr Delay (d2), s/veh		0.1	1.4	2.5	0.1	1.3	2.4	2.0	0.0	0.2	1.0	0.0	0.6
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.5	4.3	4.8	0.4	3.2	3.7	0.6	0.0	0.6	0.3	0.0	0.8
LnGrp Delay(d),s/veh		27.2	27.6	28.7	24.8	22.2	23.3	34.1	19.0	12.0	32.9	0.0	20.1
LnGrp LOS		C	C	C	C	C	C	C	B	B	C		C
Approach Vol, veh/h			714			613			81			66	
Approach Delay, s/veh			28.0			22.7			19.8			23.2	
Approach LOS			C			C			B			C	
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	15.6	24.5	7.4	22.5	17.1	23.0	7.4	22.5					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	20.0	7.0	18.0	8.5	18.5	7.0	18.0						
Max Q Clear Time (g_c+1), s	10.6	3.0	3.6	2.9	8.4	2.6	2.1						
Green Ext Time (p_c), s	0.0	3.0	0.0	0.1	0.0	2.7	0.0	0.1					
<b>Intersection Summary</b>													
HCM 2010 Ctrl Delay			25.1										
HCM 2010 LOS			C										
<b>Notes</b>													

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
1: Hillrose Lane/Nason Street & Iris Avenue

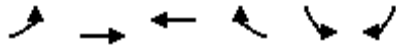
AM/PM Gasoline Service Station  
Project Completion Year (2022) NP - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	254	630	21	15	835	115	14	24	10	131	41	448
Future Volume (veh/h)	254	630	21	15	835	115	14	24	10	131	41	448
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	276	685	23	16	908	125	15	26	11	142	45	487
Adj No. of Lanes	2	3	0	1	3	1	1	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	381	1384	46	240	1518	473	148	335	142	192	548	641
Arrive On Green	0.11	0.27	0.27	0.04	0.10	0.10	0.08	0.26	0.26	0.11	0.29	0.29
Sat Flow, veh/h	3510	5155	173	1810	5187	1615	1810	1269	537	1810	1900	1615
Grp Volume(v), veh/h	276	459	249	16	908	125	15	0	37	142	45	487
Grp Sat Flow(s),veh/h/ln	1755	1729	1870	1810	1729	1615	1810	0	1805	1810	1900	1615
Q Serve(g_s), s	5.3	7.8	7.9	0.6	11.7	5.0	0.5	0.0	1.1	5.3	1.2	10.4
Cycle Q Clear(g_c), s	5.3	7.8	7.9	0.6	11.7	5.0	0.5	0.0	1.1	5.3	1.2	10.4
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	381	929	502	240	1518	473	148	0	477	192	548	641
V/C Ratio(X)	0.72	0.49	0.50	0.07	0.60	0.26	0.10	0.00	0.08	0.74	0.08	0.76
Avail Cap(c_a), veh/h	381	929	502	240	1518	473	194	0	477	238	548	641
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.2	21.6	21.6	29.3	27.7	24.6	29.8	0.0	19.3	30.4	18.1	6.8
Incr Delay (d2), s/veh	6.7	1.9	3.5	0.1	1.6	1.3	0.3	0.0	0.3	9.2	0.3	8.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	3.9	4.5	0.3	5.9	2.4	0.3	0.0	0.6	3.1	0.7	5.9
LnGrp Delay(d),s/veh	36.9	23.5	25.1	29.4	29.3	25.9	30.1	0.0	19.7	39.6	18.4	15.0
LnGrp LOS	D	C	C	C	C	C	C		B	D	B	B
Approach Vol, veh/h		984			1049			52			674	
Approach Delay, s/veh		27.6			28.9			22.7			20.4	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.3	22.8	9.7	24.2	11.6	24.5	11.4	22.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.0	18.3	7.0	19.7	7.1	18.2	8.7	18.0				
Max Q Clear Time (g_c+I1), s	2.6	9.9	2.5	12.4	7.3	13.7	7.3	3.1				
Green Ext Time (p_c), s	2.5	2.9	0.0	1.3	0.0	2.5	0.0	0.1				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			26.3									
HCM 2010 LOS			C									

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

## HCM 2010 Signalized Intersection Summary 2: Iris Avenue & Kaiser Hospital Entrance

AM/PM Gasoline Service Station  
Project Completion Year (2022) NP - PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↖	↗↗↗	↖↖↖		↘	↘		
Traffic Volume (veh/h)	81	622	786	20	41	36		
Future Volume (veh/h)	81	622	786	20	41	36		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900		
Adj Flow Rate, veh/h	87	669	845	22	44	39		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	161	3186	2435	63	491	582		
Arrive On Green	0.18	1.00	0.94	0.94	0.27	0.27		
Sat Flow, veh/h	1810	5358	5370	135	1810	1615		
Grp Volume(v), veh/h	87	669	562	305	44	39		
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1876	1810	1615		
Q Serve(g_s), s	3.1	0.0	1.1	1.1	1.3	1.1		
Cycle Q Clear(g_c), s	3.1	0.0	1.1	1.1	1.3	1.1		
Prop In Lane	1.00			0.07	1.00	1.00		
Lane Grp Cap(c), veh/h	161	3186	1620	879	491	582		
V/C Ratio(X)	0.54	0.21	0.35	0.35	0.09	0.07		
Avail Cap(c_a), veh/h	336	3186	1620	879	491	582		
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.93	0.93	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	27.5	0.0	1.2	1.2	19.0	14.7		
Incr Delay (d2), s/veh	2.6	0.1	0.6	1.1	0.4	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.6	0.8	0.7	1.3		
LnGrp Delay(d),s/veh	30.1	0.1	1.8	2.3	19.4	14.9		
LnGrp LOS	C	A	A	A	B	B		
Approach Vol, veh/h		756	867		83			
Approach Delay, s/veh		3.6	2.0		17.3			
Approach LOS		A	A		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		47.0		23.0	10.2	36.8		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		42.5		18.5	12.5	25.5		
Max Q Clear Time (g_c+I1), s		2.0		3.3	5.1	3.1		
Green Ext Time (p_c), s		14.5		0.2	0.1	11.3		
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			3.4					
HCM 2010 LOS			A					

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 AWSC  
4: John F Kennedy Drive & Oliver Street

AM/PM Gasoline Service Station  
Project Completion Year (2022) NP - PM Peak Hour

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations		↙	↗		↕↔				↕
Traffic Vol, veh/h	0	30	62	0	89	20	0	132	68
Future Vol, veh/h	0	30	62	0	89	20	0	132	68
Peak Hour Factor	1.00	0.93	0.93	1.00	0.93	0.93	1.00	0.93	0.93
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	32	67	0	96	22	0	142	73
Number of Lanes	0	1	1	0	2	0	0	0	1





















Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	8.1	7.9	9.8
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	0%	100%	0%	66%
Vol Thru, %	100%	60%	0%	0%	34%
Vol Right, %	0%	40%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	59	50	30	62	200
LT Vol	0	0	30	0	132
Through Vol	59	30	0	0	68
RT Vol	0	20	0	62	0
Lane Flow Rate	64	53	32	67	215
Geometry Grp	7	7	7	7	4
Degree of Util (X)	0.087	0.069	0.052	0.085	0.287
Departure Headway (Hd)	4.928	4.645	5.805	4.599	4.811
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	729	773	618	781	748
Service Time	2.645	2.362	3.525	2.318	2.826
HCM Lane V/C Ratio	0.088	0.069	0.052	0.086	0.287
HCM Control Delay	8.1	7.7	8.8	7.7	9.8
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.3	0.2	0.2	0.3	1.2



HCM 2010 Signalized Intersection Summary  
6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Project Completion Year (2022) NP - PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	548	55	45	656	10	47	15	35	7	25	84
Future Volume (veh/h)	82	548	55	45	656	10	47	15	35	7	25	84
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	88	589	59	48	705	11	51	16	38	8	27	90
Adj No. of Lanes	1	3	0	1	3	0	0	1	1	0	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	543	2382	236	123	1391	22	358	101	427	134	404	427
Arrive On Green	0.10	0.16	0.16	0.14	0.53	0.53	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1810	4798	476	1810	5262	82	1011	382	1615	267	1531	1615
Grp Volume(v), veh/h	88	423	225	48	463	253	67	0	38	35	0	90
Grp Sat Flow(s),veh/h/ln	1810	1729	1816	1810	1729	1886	1393	0	1615	1797	0	1615
Q Serve(g_s), s	3.1	7.5	7.6	1.7	6.0	6.1	1.7	0.0	1.2	0.0	0.0	3.0
Cycle Q Clear(g_c), s	3.1	7.5	7.6	1.7	6.0	6.1	2.7	0.0	1.2	1.0	0.0	3.0
Prop In Lane	1.00		0.26	1.00		0.04	0.76		1.00	0.23		1.00
Lane Grp Cap(c), veh/h	543	1717	902	123	914	498	459	0	427	538	0	427
V/C Ratio(X)	0.16	0.25	0.25	0.39	0.51	0.51	0.15	0.00	0.09	0.07	0.00	0.21
Avail Cap(c_a), veh/h	543	1717	902	194	914	498	459	0	427	538	0	427
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.97	0.97	0.97	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.5	17.9	17.9	28.9	13.6	13.6	19.9	0.0	19.4	19.3	0.0	20.1
Incr Delay (d2), s/veh	0.1	0.3	0.7	2.0	1.9	3.5	0.7	0.0	0.4	0.2	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	3.7	4.0	0.9	3.1	3.6	1.1	0.0	0.6	0.5	0.0	1.5
LnGrp Delay(d),s/veh	23.6	18.2	18.6	30.9	15.5	17.1	20.6	0.0	19.8	19.5	0.0	21.2
LnGrp LOS	C	B	B	C	B	B	C		B	B		C
Approach Vol, veh/h		736			764			105			125	
Approach Delay, s/veh		19.0			17.0			20.3			20.7	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.7	38.8		22.5	25.0	22.5		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.0	31.5		18.0	20.5	18.0		18.0				
Max Q Clear Time (g_c+I1), s	3.7	9.6		5.0	5.1	8.1		4.7				
Green Ext Time (p_c), s	0.0	4.5		0.8	4.0	3.3		0.8				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			18.3									
HCM 2010 LOS			B									
<b>Notes</b>												

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
 7: Via Del Lago & Iris Avenue/Moreno Beach Drive

AM/PM Gasoline Service Station  
 Project Completion Year (2022) NP - PM Peak Hour

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔ ↑↑↑ ↗			↖ ↑↑↑ ↗			↖	↑	↖	↖	↗	↗
Traffic Volume (veh/h)	25	532	32	43	671	14	21	0	24	10	2	19
Future Volume (veh/h)	25	532	32	43	671	14	21	0	24	10	2	19
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	27	566	34	46	714	15	22	0	26	11	2	20
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	356	1997	119	120	1404	29	76	502	534	76	39	393
Arrive On Green	0.06	0.13	0.13	0.07	0.27	0.27	0.04	0.00	0.26	0.04	0.26	0.26
Sat Flow, veh/h	1810	5007	299	1810	5229	110	1810	1900	1615	1810	149	1488
Grp Volume(v), veh/h	27	390	210	46	472	257	22	0	26	11	0	22
Grp Sat Flow(s),veh/h/ln	1810	1729	1847	1810	1729	1881	1810	1900	1615	1810	0	1637
Q Serve(g_s), s	1.0	7.1	7.2	1.7	8.1	8.1	0.8	0.0	0.5	0.4	0.0	0.7
Cycle Q Clear(g_c), s	1.0	7.1	7.2	1.7	8.1	8.1	0.8	0.0	0.5	0.4	0.0	0.7
Prop In Lane	1.00		0.16	1.00		0.06	1.00		1.00	1.00		0.91
Lane Grp Cap(c), veh/h	356	1380	737	120	929	505	76	502	534	76	0	433
V/C Ratio(X)	0.08	0.28	0.29	0.38	0.51	0.51	0.29	0.00	0.05	0.14	0.00	0.05
Avail Cap(c_a), veh/h	356	1380	737	194	929	505	194	502	534	194	0	433
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.8	21.4	21.4	31.3	21.7	21.7	32.5	0.0	7.5	32.3	0.0	19.2
Incr Delay (d2), s/veh	0.1	0.5	1.0	2.0	2.0	3.6	2.1	0.0	0.2	0.9	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.5	3.9	0.9	4.1	4.7	0.5	0.0	0.3	0.2	0.0	0.3
LnGrp Delay(d),s/veh	26.8	21.9	22.3	33.3	23.7	25.3	34.6	0.0	7.6	33.2	0.0	19.4
LnGrp LOS	C	C	C	C	C	C	C		A	C		B
Approach Vol, veh/h		627			775			48			33	
Approach Delay, s/veh		22.2			24.8			20.0			24.0	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	31.9	6.9	22.5	17.8	22.8	6.9	22.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	20.0	7.0	18.0	8.7	18.3	7.0	18.0					
Max Q Clear Time (g_c+1), s	9.2	2.8	2.7	3.0	10.1	2.4	2.5					
Green Ext Time (p_c), s	0.0	2.9	0.0	0.0	1.9	2.9	0.0	0.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				23.5								
HCM 2010 LOS				C								
<b>Notes</b>												

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
1: Hillrose Lane/Nason Street & Iris Avenue

AM/PM Gasoline Service Station  
Project Completion Year (2022) WP - AM Peak Hour

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	348	872	24	10	9	772	88	20	43	13	1	114
Future Volume (veh/h)	348	872	24	10	9	772	88	20	43	13	1	114
Number	5	2	12		1	6	16	3	8	18		7
Initial Q (Qb), veh	0	0	0		0	0	0	0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00		1.00		1.00	1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00		1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900		1900	1900	1900	1900	1900	1900		1900
Adj Flow Rate, veh/h	424	1063	29		11	941	107	24	52	16		139
Adj No. of Lanes	2	3	0		1	3	1	1	1	0		1
Peak Hour Factor	0.82	0.82	0.82		0.82	0.82	0.82	0.82	0.82	0.82		0.82
Percent Heavy Veh, %	0	0	0		0	0	0	0	0	0		0
Cap, veh/h	462	1955	53		48	1408	438	80	369	113		188
Arrive On Green	0.13	0.38	0.38		0.04	0.36	0.36	0.04	0.26	0.26		0.10
Sat Flow, veh/h	3510	5191	142		1810	5187	1615	1810	1395	429		1810
Grp Volume(v), veh/h	424	708	384		11	941	107	24	0	68		139
Grp Sat Flow(s),veh/h/ln	1755	1729	1875		1810	1729	1615	1810	0	1824		1810
Q Serve(g_s), s	8.4	11.2	11.2		0.4	10.7	3.2	0.9	0.0	2.0		5.2
Cycle Q Clear(g_c), s	8.4	11.2	11.2		0.4	10.7	3.2	0.9	0.0	2.0		5.2
Prop In Lane	1.00		0.08		1.00		1.00	1.00		0.24		1.00
Lane Grp Cap(c), veh/h	462	1302	706		48	1408	438	80	0	482		188
V/C Ratio(X)	0.92	0.54	0.54		0.23	0.67	0.24	0.30	0.00	0.14		0.74
Avail Cap(c_a), veh/h	462	1302	706		194	1408	438	194	0	482		233
HCM Platoon Ratio	1.00	1.00	1.00		1.33	1.33	1.33	1.00	1.00	1.00		1.00
Upstream Filter(I)	1.00	1.00	1.00		0.81	0.81	0.81	1.00	0.00	1.00		1.00
Uniform Delay (d), s/veh	30.0	17.1	17.1		33.1	19.7	17.3	32.4	0.0	19.7		30.4
Incr Delay (d2), s/veh	23.3	1.6	3.0		2.0	2.1	1.1	2.0	0.0	0.6		9.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	5.6	5.6	6.4		0.2	5.3	1.6	0.5	0.0	1.1		3.1
LnGrp Delay(d),s/veh	53.3	18.7	20.1		35.0	21.8	18.4	34.4	0.0	20.3		39.6
LnGrp LOS	D	B	C		D	C	B	C		C		D
Approach Vol, veh/h		1516				1059			92			
Approach Delay, s/veh		28.8				21.6			24.0			
Approach LOS		C				C			C			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.8	30.4	7.1	26.7	13.2	23.0	11.3	22.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.0	18.5	7.0	19.5	7.0	18.5	8.5	18.0				
Max Q Clear Time (g_c+1), s	2.4	13.2	2.9	3.8	10.4	12.7	7.2	4.0				
Green Ext Time (p_c), s	0.0	3.6	0.0	1.6	0.0	3.2	0.1	0.2				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			24.2									
HCM 2010 LOS			C									
<b>Notes</b>												

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# HCM 2010 Signalized Intersection Summary

## 1: Hillrose Lane/Nason Street & Iris Avenue

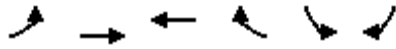
AM/PM Gasoline Service Station  
Project Completion Year (2022) WP - AM Peak Hour

Movement	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (veh/h)	14	287
Future Volume (veh/h)	14	287
Number	4	14
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900
Adj Flow Rate, veh/h	17	350
Adj No. of Lanes	1	1
Peak Hour Factor	0.82	0.82
Percent Heavy Veh, %	0	0
Cap, veh/h	616	736
Arrive On Green	0.32	0.32
Sat Flow, veh/h	1900	1615
Grp Volume(v), veh/h	17	350
Grp Sat Flow(s),veh/h/ln	1900	1615
Q Serve(g_s), s	0.4	1.8
Cycle Q Clear(g_c), s	0.4	1.8
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	616	736
V/C Ratio(X)	0.03	0.48
Avail Cap(c_a), veh/h	616	736
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	1.00	1.00
Uniform Delay (d), s/veh	16.1	5.0
Incr Delay (d2), s/veh	0.1	2.2
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.2
LnGrp Delay(d),s/veh	16.2	7.2
LnGrp LOS	B	A
Approach Vol, veh/h	506	
Approach Delay, s/veh	16.4	
Approach LOS	B	
Timer		

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

## HCM 2010 Signalized Intersection Summary 2: Iris Avenue & Kaiser Hospital Entrance

AM/PM Gasoline Service Station  
Project Completion Year (2022) WP - AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↖	↗↗↗	↖↖↖		↖	↖		
Traffic Volume (veh/h)	147	798	771	43	7	24		
Future Volume (veh/h)	147	798	771	43	7	24		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900		
Adj Flow Rate, veh/h	165	897	866	48	8	27		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	465	3223	1545	85	478	842		
Arrive On Green	0.51	1.00	0.61	0.61	0.26	0.26		
Sat Flow, veh/h	1810	5358	5202	278	1810	1615		
Grp Volume(v), veh/h	165	897	595	319	8	27		
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1851	1810	1615		
Q Serve(g_s), s	3.8	0.0	7.1	7.1	0.2	0.0		
Cycle Q Clear(g_c), s	3.8	0.0	7.1	7.1	0.2	0.0		
Prop In Lane	1.00			0.15	1.00	1.00		
Lane Grp Cap(c), veh/h	465	3223	1062	568	478	842		
V/C Ratio(X)	0.35	0.28	0.56	0.56	0.02	0.03		
Avail Cap(c_a), veh/h	465	3223	1062	568	478	842		
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.81	0.81	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	13.5	0.0	10.7	10.7	19.0	8.2		
Incr Delay (d2), s/veh	0.4	0.2	2.1	4.0	0.1	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	9	0.1	3.6	4.2	0.1	0.5		
LnGrp Delay(d),s/veh	13.9	0.2	12.9	14.7	19.1	8.2		
LnGrp LOS	B	A	B	B	B	A		
Approach Vol, veh/h		1062	914		35			
Approach Delay, s/veh		2.3	13.5		10.7			
Approach LOS		A	B		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		47.5		22.5	22.0	25.5		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		43.0		18.0	17.5	21.0		
Max Q Clear Time (g_c+I1), s		2.0		2.2	5.8	9.1		
Green Ext Time (p_c), s		8.4		0.0	5.2	4.7		
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			7.5					
HCM 2010 LOS			A					

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 TWSC  
3: Iris Avenue & Project Driveway 1

AM/PM Gasoline Service Station  
Project Completion Year (2022) WP - AM Peak Hour

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↑↑↑		↑↑↑			↑
Traffic Vol, veh/h	0	795	797	84	0	40
Future Vol, veh/h	0	795	797	84	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	795	797	84	0	40
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	441
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	-	0	*759
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	1
Mov Cap-1 Maneuver	-	-	-	-	-	*759
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		SB	
HCM Control Delay, s	0		0		10	
HCM LOS					B	
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	759		
HCM Lane V/C Ratio	-	-	-	0.053		
HCM Control Delay (s)	-	-	-	10		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0.2		
Notes						
~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    *: All major volume in platoon						

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 AWSC  
4: John F Kennedy Drive & Oliver Street

AM/PM Gasoline Service Station  
Project Completion Year (2022) WP - AM Peak Hour

Intersection	
Intersection Delay, s/veh	14.8
Intersection LOS	B

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations		↵	↵		↕↕				↵
Traffic Vol, veh/h	0	28	102	0	294	49	0	258	132
Future Vol, veh/h	0	28	102	0	294	49	0	258	132
Peak Hour Factor	1.00	0.83	0.83	1.00	0.83	0.83	1.00	0.83	0.83
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	34	123	0	354	59	0	311	159
Number of Lanes	0	1	1	0	2	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	10.2	10.7	19.9
HCM LOS	B	B	C

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	0%	100%	0%	66%
Vol Thru, %	100%	67%	0%	0%	34%
Vol Right, %	0%	33%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	196	147	28	102	390
LT Vol	0	0	28	0	258
Through Vol	196	98	0	0	132
RT Vol	0	49	0	102	0
Lane Flow Rate	236	177	34	123	470
Geometry Grp	7	7	7	7	4
Degree of Util (X)	0.362	0.26	0.067	0.203	0.696
Departure Headway (Hd)	5.517	5.281	7.168	5.948	5.435
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	656	684	502	606	667
Service Time	3.217	2.981	4.882	3.662	3.435
HCM Lane V/C Ratio	0.36	0.259	0.068	0.203	0.705
HCM Control Delay	11.3	9.8	10.4	10.2	19.9
HCM Lane LOS	B	A	B	B	C
HCM 95th-tile Q	1.6	1	0.2	0.8	5.6

HCM 2010 TWSC  
5: Oliver Street & Project Driveway 2

AM/PM Gasoline Service Station  
Project Completion Year (2022) WP - AM Peak Hour

Intersection							
Int Delay, s/veh	0.9						
Movement	EBL	EBR	NBL	NBT	SBT	SBR	
Lane Configurations		↗		↗↗	↗↗		
Traffic Vol, veh/h	0	54	0	250	246	13	
Future Vol, veh/h	0	54	0	250	246	13	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	100	100	100	100	100	100	
Heavy Vehicles, %	0	0	0	0	0	0	
Mvmt Flow	0	54	0	250	246	13	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	-	130	-	0	-	0	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Critical Hdwy	-	6.9	-	-	-	-	
Critical Hdwy Stg 1	-	-	-	-	-	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	
Follow-up Hdwy	-	3.3	-	-	-	-	
Pot Cap-1 Maneuver	0	902	0	-	-	-	
Stage 1	0	-	0	-	-	-	
Stage 2	0	-	0	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	-	902	-	-	-	-	
Mov Cap-2 Maneuver	-	-	-	-	-	-	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Approach	EB	NB		SB			
HCM Control Delay, s	9.2	0		0			
HCM LOS	A						
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR			
Capacity (veh/h)	-	902	-	-			
HCM Lane V/C Ratio	-	0.06	-	-			
HCM Control Delay (s)	-	9.2	-	-			
HCM Lane LOS	-	A	-	-			
HCM 95th %tile Q(veh)	-	0.2	-	-			

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



HCM 2010 Signalized Intersection Summary  
6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Project Completion Year (2022) WP - AM Peak Hour

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	35	184	556	19	36	542	20	90	48	41	53	35
Future Volume (veh/h)	35	184	556	19	36	542	20	90	48	41	53	35
Number		5	2	12	1	6	16	3	8	18	7	4
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		216	654	22	42	638	24	106	56	48	62	41
Adj No. of Lanes		1	3	0	1	3	0	0	1	1	0	1
Peak Hour Factor		0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %		0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h		543	2356	79	194	1356	51	85	29	427	82	36
Arrive On Green		0.10	0.15	0.15	0.07	0.18	0.18	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h		1810	5155	173	1810	5132	192	0	109	1615	0	136
Grp Volume(v), veh/h		216	438	238	42	429	233	162	0	48	103	0
Grp Sat Flow(s),veh/h/ln		1810	1729	1869	1810	1729	1866	109	0	1615	136	0
Q Serve(g_s), s		7.8	7.9	7.9	1.5	7.8	7.8	0.0	0.0	1.6	0.0	0.0
Cycle Q Clear(g_c), s		7.8	7.9	7.9	1.5	7.8	7.8	18.5	0.0	1.6	18.5	0.0
Prop In Lane		1.00		0.09	1.00		0.10	0.65		1.00	0.60	
Lane Grp Cap(c), veh/h		543	1581	855	194	914	493	114	0	427	118	0
V/C Ratio(X)		0.40	0.28	0.28	0.22	0.47	0.47	1.42	0.00	0.11	0.87	0.00
Avail Cap(c_a), veh/h		543	1581	855	194	914	493	114	0	427	118	0
HCM Platoon Ratio		0.33	0.33	0.33	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	0.96	0.96	0.96	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh		25.6	19.5	19.5	29.7	24.4	24.4	30.5	0.0	19.5	28.8	0.0
Incr Delay (d2), s/veh		0.5	0.4	0.8	0.5	1.7	3.1	234.1	0.0	0.5	53.5	0.0
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		4.0	3.9	4.3	0.8	3.9	4.5	9.6	0.0	0.8	3.7	0.0
LnGrp Delay(d),s/veh		26.1	19.9	20.3	30.3	26.1	27.5	264.6	0.0	20.1	82.2	0.0
LnGrp LOS		C	B	C	C	C	C	F		C	F	
Approach Vol, veh/h			892			704			210			352
Approach Delay, s/veh			21.5			26.8			208.7			44.0
Approach LOS			C			C			F			D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	36.0		22.5	25.0	22.5		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.0	31.5		18.0	20.5	18.0		18.0				
Max Q Clear Time (g_c+I1), s	3.5	9.9		20.5	9.8	9.8		20.5				
Green Ext Time (p_c), s	0.2	4.4		0.0	0.5	2.7		0.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			45.1									
HCM 2010 LOS			D									
<b>Notes</b>												

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

## HCM 2010 Signalized Intersection Summary

### 6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Project Completion Year (2022) WP - AM Peak Hour

Movement	SBR
Lane Configurations	7
Traffic Volume (veh/h)	212
Future Volume (veh/h)	212
Number	14
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	249
Adj No. of Lanes	1
Peak Hour Factor	0.85
Percent Heavy Veh, %	0
Cap, veh/h	427
Arrive On Green	0.26
Sat Flow, veh/h	1615
Grp Volume(v), veh/h	249
Grp Sat Flow(s),veh/h/ln	1615
Q Serve(g_s), s	9.4
Cycle Q Clear(g_c), s	9.4
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	427
V/C Ratio(X)	0.58
Avail Cap(c_a), veh/h	427
HCM Platoon Ratio	1.00
Upstream Filter(l)	1.00
Uniform Delay (d), s/veh	22.4
Incr Delay (d2), s/veh	5.7
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	4.9
LnGrp Delay(d),s/veh	28.1
LnGrp LOS	C
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer	

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
 7: Via Del Lago & Iris Avenue/Moreno Beach Drive

AM/PM Gasoline Service Station  
 Project Completion Year (2022) WP - AM Peak Hour

























Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔ ↑↑↑			↔ ↑↑↑			↔ ↑	↑	↔	↔	↔	↔
Traffic Volume (veh/h)	12	25	594	20	19	521	7	24	2	44	14	2	44
Future Volume (veh/h)	12	25	594	20	19	521	7	24	2	44	14	2	44
Number		5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		29	683	23	22	599	8	28	2	51	16	2	51
Adj No. of Lanes		1	3	0	1	3	0	1	1	1	1	1	0
Peak Hour Factor		0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %		0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h		338	1509	51	299	1432	19	89	502	694	89	16	413
Arrive On Green		0.06	0.10	0.10	0.17	0.27	0.27	0.05	0.26	0.26	0.05	0.26	0.26
Sat Flow, veh/h		1810	5154	173	1810	5275	70	1810	1900	1615	1810	61	1563
Grp Volume(v), veh/h		29	458	248	22	392	215	28	2	51	16	0	53
Grp Sat Flow(s),veh/h/ln		1810	1729	1869	1810	1729	1888	1810	1900	1615	1810	0	1624
Q Serve(g_s), s		1.1	8.7	8.8	0.7	6.5	6.5	1.0	0.1	0.0	0.6	0.0	1.7
Cycle Q Clear(g_c), s		1.1	8.7	8.8	0.7	6.5	6.5	1.0	0.1	0.0	0.6	0.0	1.7
Prop In Lane		1.00		0.09	1.00		0.04	1.00		1.00	1.00		0.96
Lane Grp Cap(c), veh/h		338	1013	547	299	939	512	89	502	694	89	0	429
V/C Ratio(X)		0.09	0.45	0.45	0.07	0.42	0.42	0.31	0.00	0.07	0.18	0.00	0.12
Avail Cap(c_a), veh/h		338	1013	547	299	939	512	194	502	694	194	0	429
HCM Platoon Ratio		0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		0.98	0.98	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh		27.2	26.3	26.3	24.7	21.0	21.0	32.1	19.0	11.8	31.9	0.0	19.6
Incr Delay (d2), s/veh		0.1	1.4	2.6	0.1	1.4	2.5	2.0	0.0	0.2	1.0	0.0	0.6
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.5	4.4	5.0	0.4	3.3	3.8	0.6	0.0	0.6	0.3	0.0	0.9
LnGrp Delay(d),s/veh		27.3	27.7	29.0	24.8	22.3	23.5	34.1	19.0	12.0	32.9	0.0	20.2
LnGrp LOS		C	C	C	C	C	C	C	B	B	C		C
Approach Vol, veh/h			735			629			81			69	
Approach Delay, s/veh			28.1			22.8			19.8			23.1	
Approach LOS			C			C			B			C	
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	15.6	24.5	7.4	22.5	17.1	23.0	7.4	22.5					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	20.0	7.0	18.0	8.5	18.5	7.0	18.0						
Max Q Clear Time (g_c+1), s	10.8	3.0	3.7	3.1	8.5	2.6	2.1						
Green Ext Time (p_c), s	0.0	3.1	0.0	0.2	0.0	2.7	0.0	0.1					
<b>Intersection Summary</b>													
HCM 2010 Ctrl Delay			25.2										
HCM 2010 LOS			C										
<b>Notes</b>													

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
1: Hillrose Lane/Nason Street & Iris Avenue

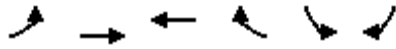
AM/PM Gasoline Service Station  
Project Completion Year (2022) WP - PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	254	640	21	17	845	120	14	24	13	136	41	448
Future Volume (veh/h)	254	640	21	17	845	120	14	24	13	136	41	448
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	276	696	23	18	918	130	15	26	14	148	45	487
Adj No. of Lanes	2	3	0	1	3	1	1	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	381	1385	46	234	1499	467	154	307	166	198	548	641
Arrive On Green	0.11	0.27	0.27	0.04	0.10	0.10	0.09	0.26	0.26	0.11	0.29	0.29
Sat Flow, veh/h	3510	5158	170	1810	5187	1615	1810	1163	626	1810	1900	1615
Grp Volume(v), veh/h	276	466	253	18	918	130	15	0	40	148	45	487
Grp Sat Flow(s),veh/h/ln	1755	1729	1870	1810	1729	1615	1810	0	1789	1810	1900	1615
Q Serve(g_s), s	5.3	8.0	8.0	0.7	11.9	5.2	0.5	0.0	1.2	5.6	1.2	10.2
Cycle Q Clear(g_c), s	5.3	8.0	8.0	0.7	11.9	5.2	0.5	0.0	1.2	5.6	1.2	10.2
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.35	1.00		1.00
Lane Grp Cap(c), veh/h	381	929	502	234	1499	467	154	0	473	198	548	641
V/C Ratio(X)	0.72	0.50	0.50	0.08	0.61	0.28	0.10	0.00	0.08	0.75	0.08	0.76
Avail Cap(c_a), veh/h	381	929	502	234	1499	467	194	0	473	238	548	641
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.2	21.6	21.7	29.5	27.9	24.9	29.5	0.0	19.4	30.2	18.1	6.7
Incr Delay (d2), s/veh	6.7	1.9	3.6	0.1	1.8	1.4	0.3	0.0	0.4	10.0	0.3	8.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	4.1	4.6	0.3	5.9	2.5	0.3	0.0	0.6	3.3	0.7	5.9
LnGrp Delay(d),s/veh	36.9	23.6	25.2	29.6	29.7	26.3	29.8	0.0	19.7	40.3	18.4	14.9
LnGrp LOS	D	C	C	C	C	C	C		B	D	B	B
Approach Vol, veh/h		995			1066			55			680	
Approach Delay, s/veh		27.7			29.2			22.5			20.7	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	22.8	10.0	24.2	11.6	24.2	11.7	22.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.0	18.3	7.0	19.7	7.1	18.2	8.7	18.0				
Max Q Clear Time (g_c+1), s	2.7	10.0	2.5	12.2	7.3	13.9	7.6	3.2				
Green Ext Time (p_c), s	2.5	2.9	0.0	1.3	0.0	2.5	0.0	0.1				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			26.5									
HCM 2010 LOS			C									

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

## HCM 2010 Signalized Intersection Summary 2: Iris Avenue & Kaiser Hospital Entrance

AM/PM Gasoline Service Station  
Project Completion Year (2022) WP - PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↖	↗↗↗	↖↖↖		↘	↘		
Traffic Volume (veh/h)	81	640	803	20	41	36		
Future Volume (veh/h)	81	640	803	20	41	36		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900		
Adj Flow Rate, veh/h	87	688	863	22	44	39		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	161	3186	2437	62	491	582		
Arrive On Green	0.18	1.00	0.94	0.94	0.27	0.27		
Sat Flow, veh/h	1810	5358	5373	132	1810	1615		
Grp Volume(v), veh/h	87	688	573	312	44	39		
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1877	1810	1615		
Q Serve(g_s), s	3.1	0.0	1.1	1.1	1.3	1.1		
Cycle Q Clear(g_c), s	3.1	0.0	1.1	1.1	1.3	1.1		
Prop In Lane	1.00			0.07	1.00	1.00		
Lane Grp Cap(c), veh/h	161	3186	1620	879	491	582		
V/C Ratio(X)	0.54	0.22	0.35	0.35	0.09	0.07		
Avail Cap(c_a), veh/h	336	3186	1620	879	491	582		
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.92	0.92	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	27.5	0.0	1.2	1.2	19.0	14.7		
Incr Delay (d2), s/veh	2.6	0.1	0.6	1.1	0.4	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.6	0.8	0.7	1.3		
LnGrp Delay(d),s/veh	30.1	0.1	1.8	2.3	19.4	14.9		
LnGrp LOS	C	A	A	A	B	B		
Approach Vol, veh/h		775	885		83			
Approach Delay, s/veh		3.5	2.0		17.3			
Approach LOS		A	A		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		47.0		23.0	10.2	36.8		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		42.5		18.5	12.5	25.5		
Max Q Clear Time (g_c+I1), s		2.0		3.3	5.1	3.1		
Green Ext Time (p_c), s		15.0		0.2	0.1	11.6		
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			3.4					
HCM 2010 LOS			A					

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 TWSC  
3: Iris Avenue & Project Driveway 1

AM/PM Gasoline Service Station  
Project Completion Year (2022) WP - PM Peak Hour

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↑↑↑		↑↑↑			↑
Traffic Vol, veh/h	0	703	757	99	0	46
Future Vol, veh/h	0	703	757	99	0	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	703	757	99	0	46
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	428
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	-	0	*759
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	1
Mov Cap-1 Maneuver	-	-	-	-	-	*759
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		SB	
HCM Control Delay, s	0		0		10	
HCM LOS					B	
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	759		
HCM Lane V/C Ratio	-	-	-	0.061		
HCM Control Delay (s)	-	-	-	10		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0.2		
Notes						
~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    *: All major volume in platoon						

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 AWSC  
4: John F Kennedy Drive & Oliver Street

AM/PM Gasoline Service Station  
Project Completion Year (2022) WP - PM Peak Hour

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations		↵	↵		↕↕				↵
Traffic Vol, veh/h	0	33	62	0	96	20	0	132	76
Future Vol, veh/h	0	33	62	0	96	20	0	132	76
Peak Hour Factor	1.00	0.93	0.93	1.00	0.93	0.93	1.00	0.93	0.93
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	35	67	0	103	22	0	142	82
Number of Lanes	0	1	1	0	2	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	8.2	8	9.9
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	0%	100%	0%	63%
Vol Thru, %	100%	62%	0%	0%	37%
Vol Right, %	0%	38%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	64	52	33	62	208
LT Vol	0	0	33	0	132
Through Vol	64	32	0	0	76
RT Vol	0	20	0	62	0
Lane Flow Rate	69	56	35	67	224
Geometry Grp	7	7	7	7	4
Degree of Util (X)	0.095	0.073	0.058	0.086	0.3
Departure Headway (Hd)	4.946	4.676	5.844	4.637	4.824
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	725	767	614	773	747
Service Time	2.668	2.397	3.569	2.362	2.844
HCM Lane V/C Ratio	0.095	0.073	0.057	0.087	0.3
HCM Control Delay	8.2	7.8	8.9	7.8	9.9
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.3	0.2	0.2	0.3	1.3

HCM 2010 TWSC  
5: Oliver Street & Project Driveway 2

AM/PM Gasoline Service Station  
Project Completion Year (2022) WP - PM Peak Hour

Intersection							
Int Delay, s/veh	1.9						
Movement	EBL	EBR	NBL	NBT	SBT	SBR	
Lane Configurations		↑		↑↑	↑↑		
Traffic Vol, veh/h	0	63	0	114	112	14	
Future Vol, veh/h	0	63	0	114	112	14	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	100	100	100	100	100	100	
Heavy Vehicles, %	0	0	0	0	0	0	
Mvmt Flow	0	63	0	114	112	14	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	-	63	-	0	-	0	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Critical Hdwy	-	6.9	-	-	-	-	
Critical Hdwy Stg 1	-	-	-	-	-	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	
Follow-up Hdwy	-	3.3	-	-	-	-	
Pot Cap-1 Maneuver	0	995	0	-	-	-	
Stage 1	0	-	0	-	-	-	
Stage 2	0	-	0	-	-	-	
Platoon blocked, %							
Mov Cap-1 Maneuver	-	995	-	-	-	-	
Mov Cap-2 Maneuver	-	-	-	-	-	-	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Approach	EB	NB		SB			
HCM Control Delay, s	8.9	0		0			
HCM LOS	A						
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR			
Capacity (veh/h)	-	995	-	-			
HCM Lane V/C Ratio	-	0.063	-	-			
HCM Control Delay (s)	-	8.9	-	-			
HCM Lane LOS	-	A	-	-			
HCM 95th %tile Q(veh)	-	0.2	-	-			

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



HCM 2010 Signalized Intersection Summary  
6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Project Completion Year (2022) WP - PM Peak Hour

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	41	82	527	53	43	676	21	54	14	34	60	34
Future Volume (veh/h)	41	82	527	53	43	676	21	54	14	34	60	34
Number		5	2	12	1	6	16	3	8	18	7	4
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		88	567	57	46	727	23	58	15	37	65	37
Adj No. of Lanes		1	3	0	1	3	0	0	1	1	0	1
Peak Hour Factor		0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %		0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h		543	2389	238	120	1365	43	92	14	427	84	31
Arrive On Green		0.10	0.16	0.16	0.13	0.53	0.53	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h		1810	4797	477	1810	5166	163	0	53	1615	0	117
Grp Volume(v), veh/h		88	407	217	46	486	264	73	0	37	102	0
Grp Sat Flow(s),veh/h/ln		1810	1729	1816	1810	1729	1871	53	0	1615	117	0
Q Serve(g_s), s		3.1	7.2	7.3	1.6	6.5	6.5	0.0	0.0	1.2	0.0	0.0
Cycle Q Clear(g_c), s		3.1	7.2	7.3	1.6	6.5	6.5	18.5	0.0	1.2	18.5	0.0
Prop In Lane		1.00		0.26	1.00		0.09	0.79		1.00	0.64	
Lane Grp Cap(c), veh/h		543	1722	904	120	914	495	106	0	427	115	0
V/C Ratio(X)		0.16	0.24	0.24	0.38	0.53	0.53	0.69	0.00	0.09	0.89	0.00
Avail Cap(c_a), veh/h		543	1722	904	194	914	495	106	0	427	115	0
HCM Platoon Ratio		0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	0.96	0.96	0.96	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh		23.5	17.7	17.7	29.1	13.7	13.7	31.5	0.0	19.4	29.6	0.0
Incr Delay (d2), s/veh		0.1	0.3	0.6	1.9	2.1	3.9	30.5	0.0	0.4	57.4	0.0
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		1.6	3.5	3.8	0.9	3.2	3.8	2.3	0.0	0.6	3.8	0.0
LnGrp Delay(d),s/veh		23.6	18.0	18.3	31.0	15.8	17.6	62.0	0.0	19.8	87.0	0.0
LnGrp LOS		C	B	B	C	B	B	E		B	F	
Approach Vol, veh/h			712			796			110			189
Approach Delay, s/veh			18.8			17.3			47.8			56.7
Approach LOS			B			B			D			E
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	38.9		22.5	25.0	22.5		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.0	31.5		18.0	20.5	18.0		18.0				
Max Q Clear Time (g_c+I1), s	3.6	9.3		20.5	5.1	8.5		20.5				
Green Ext Time (p_c), s	0.0	4.4		0.0	3.8	3.3		0.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			23.8									
HCM 2010 LOS			C									
<b>Notes</b>												

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# HCM 2010 Signalized Intersection Summary

## 6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Project Completion Year (2022) WP - PM Peak Hour

Movement	SBR
Lane Configurations	7
Traffic Volume (veh/h)	81
Future Volume (veh/h)	81
Number	14
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	87
Adj No. of Lanes	1
Peak Hour Factor	0.93
Percent Heavy Veh, %	0
Cap, veh/h	427
Arrive On Green	0.26
Sat Flow, veh/h	1615
Grp Volume(v), veh/h	87
Grp Sat Flow(s),veh/h/ln	1615
Q Serve(g_s), s	2.9
Cycle Q Clear(g_c), s	2.9
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	427
V/C Ratio(X)	0.20
Avail Cap(c_a), veh/h	427
HCM Platoon Ratio	1.00
Upstream Filter(l)	1.00
Uniform Delay (d), s/veh	20.0
Incr Delay (d2), s/veh	1.1
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	1.4
LnGrp Delay(d),s/veh	21.1
LnGrp LOS	C
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer	

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
 7: Via Del Lago & Iris Avenue/Moreno Beach Drive

AM/PM Gasoline Service Station  
 Project Completion Year (2022) WP - PM Peak Hour























Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		3 ↑↑↑			3 ↑↑↑			1 ↑	1 ↑	1 ↑	1 ↑	1 ↑	
Traffic Volume (veh/h)	11	28	549	32	43	687	14	21	0	24	10	2	22
Future Volume (veh/h)	11	28	549	32	43	687	14	21	0	24	10	2	22
Number		5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		30	584	34	46	731	15	22	0	26	11	2	23
Adj No. of Lanes		1	3	0	1	3	0	1	1	1	1	1	0
Peak Hour Factor		0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %		0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h		356	2001	116	120	1405	29	76	502	534	76	35	397
Arrive On Green		0.06	0.13	0.13	0.07	0.27	0.27	0.04	0.00	0.26	0.04	0.26	0.26
Sat Flow, veh/h		1810	5017	290	1810	5232	107	1810	1900	1615	1810	131	1504
Grp Volume(v), veh/h		30	401	217	46	483	263	22	0	26	11	0	25
Grp Sat Flow(s),veh/h/ln		1810	1729	1849	1810	1729	1881	1810	1900	1615	1810	0	1635
Q Serve(g_s), s		1.1	7.3	7.4	1.7	8.3	8.3	0.8	0.0	0.5	0.4	0.0	0.8
Cycle Q Clear(g_c), s		1.1	7.3	7.4	1.7	8.3	8.3	0.8	0.0	0.5	0.4	0.0	0.8
Prop In Lane		1.00		0.16	1.00		0.06	1.00		1.00	1.00		0.92
Lane Grp Cap(c), veh/h		356	1380	738	120	929	505	76	502	534	76	0	432
V/C Ratio(X)		0.08	0.29	0.29	0.38	0.52	0.52	0.29	0.00	0.05	0.14	0.00	0.06
Avail Cap(c_a), veh/h		356	1380	738	194	929	505	194	502	534	194	0	432
HCM Platoon Ratio		0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		0.98	0.98	0.98	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh		26.8	21.5	21.5	31.3	21.8	21.8	32.5	0.0	7.5	32.3	0.0	19.2
Incr Delay (d2), s/veh		0.1	0.5	1.0	2.0	2.1	3.8	2.1	0.0	0.2	0.9	0.0	0.3
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.6	3.6	4.0	0.9	4.2	4.8	0.5	0.0	0.3	0.2	0.0	0.4
LnGrp Delay(d),s/veh		26.9	22.0	22.5	33.3	23.8	25.6	34.6	0.0	7.6	33.2	0.0	19.5
LnGrp LOS		C	C	C	C	C	C	C		A	C		B
Approach Vol, veh/h			648			792			48			36	
Approach Delay, s/veh			22.4			25.0			20.0			23.7	
Approach LOS			C			C			B			C	
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	31.9	6.9	22.5	17.8	22.8	6.9	22.5						
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5						
Max Green Setting (Gmax), s	20.0	7.0	18.0	8.7	18.3	7.0	18.0						
Max Q Clear Time (g_c+1), s	9.4	2.8	2.8	3.1	10.3	2.4	2.5						
Green Ext Time (p_c), s	0.0	3.0	0.0	0.1	1.9	3.0	0.0	0.0					
<b>Intersection Summary</b>													
HCM 2010 Ctrl Delay			23.7										
HCM 2010 LOS			C										
<b>Notes</b>													

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
1: Hillrose Lane/Nason Street & Iris Avenue

AM/PM Gasoline Service Station  
Cumulative (2022) NP - AM Peak Hour

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	398	1178	24	10	20	915	152	20	44	49	1	206
Future Volume (veh/h)	398	1178	24	10	20	915	152	20	44	49	1	206
Number	5	2	12		1	6	16	3	8	18		7
Initial Q (Qb), veh	0	0	0		0	0	0	0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00		1.00		1.00	1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00		1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900		1900	1900	1900	1900	1900	1900		1900
Adj Flow Rate, veh/h	398	1178	24		20	915	152	20	44	49		206
Adj No. of Lanes	2	3	0		1	3	1	1	1	0		1
Peak Hour Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00		1.00
Percent Heavy Veh, %	0	0	0		0	0	0	0	0	0		0
Cap, veh/h	376	1775	36		71	1408	438	71	217	242		233
Arrive On Green	0.11	0.34	0.34		0.05	0.36	0.36	0.04	0.26	0.26		0.13
Sat Flow, veh/h	3510	5233	107		1810	5187	1615	1810	822	916		1810
Grp Volume(v), veh/h	398	778	424		20	915	152	20	0	93		206
Grp Sat Flow(s),veh/h/ln	1755	1729	1881		1810	1729	1615	1810	0	1738		1810
Q Serve(g_s), s	7.5	13.4	13.4		0.7	10.3	4.8	0.8	0.0	2.9		7.8
Cycle Q Clear(g_c), s	7.5	13.4	13.4		0.7	10.3	4.8	0.8	0.0	2.9		7.8
Prop In Lane	1.00		0.06		1.00		1.00	1.00		0.53		1.00
Lane Grp Cap(c), veh/h	376	1173	638		71	1408	438	71	0	459		233
V/C Ratio(X)	1.06	0.66	0.66		0.28	0.65	0.35	0.28	0.00	0.20		0.89
Avail Cap(c_a), veh/h	376	1173	638		194	1408	438	194	0	459		233
HCM Platoon Ratio	1.00	1.00	1.00		1.33	1.33	1.33	1.00	1.00	1.00		1.00
Upstream Filter(I)	1.00	1.00	1.00		0.69	0.69	0.69	1.00	0.00	1.00		1.00
Uniform Delay (d), s/veh	31.2	19.7	19.7		32.2	19.6	17.8	32.7	0.0	20.0		30.0
Incr Delay (d2), s/veh	62.6	3.0	5.4		1.5	1.6	1.5	2.1	0.0	1.0		30.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	6.9	6.9	7.9		0.4	5.1	2.3	0.4	0.0	1.5		5.9
LnGrp Delay(d),s/veh	93.8	22.7	25.1		33.7	21.2	19.3	34.8	0.0	21.0		60.7
LnGrp LOS	F	C	C		C	C	B	C		C		E
Approach Vol, veh/h		1600				1087			113			
Approach Delay, s/veh		41.0				21.2			23.4			
Approach LOS		D				C			C			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.8	27.7	6.8	28.7	11.5	23.0	13.0	22.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.0	18.5	7.0	19.5	7.0	18.5	8.5	18.0				
Max Q Clear Time (g_c+1), s	2.7	15.4	2.8	3.5	9.5	12.3	9.8	4.9				
Green Ext Time (p_c), s	0.0	2.3	0.0	1.7	0.0	3.4	0.0	0.3				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			31.8									
HCM 2010 LOS			C									
<b>Notes</b>												

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# HCM 2010 Signalized Intersection Summary

## 1: Hillrose Lane/Nason Street & Iris Avenue

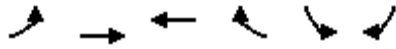
AM/PM Gasoline Service Station  
Cumulative (2022) NP - AM Peak Hour

Movement	SBT	SBR
Lane Configurations	↑	↗
Traffic Volume (veh/h)	17	313
Future Volume (veh/h)	17	313
Number	4	14
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900
Adj Flow Rate, veh/h	17	313
Adj No. of Lanes	1	1
Peak Hour Factor	1.00	1.00
Percent Heavy Veh, %	0	0
Cap, veh/h	672	744
Arrive On Green	0.35	0.35
Sat Flow, veh/h	1900	1615
Grp Volume(v), veh/h	17	313
Grp Sat Flow(s),veh/h/ln	1900	1615
Q Serve(g_s), s	0.4	1.5
Cycle Q Clear(g_c), s	0.4	1.5
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	672	744
V/C Ratio(X)	0.03	0.42
Avail Cap(c_a), veh/h	672	744
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	1.00	1.00
Uniform Delay (d), s/veh	14.8	4.8
Incr Delay (d2), s/veh	0.1	1.7
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.7
LnGrp Delay(d),s/veh	14.8	6.6
LnGrp LOS	B	A
Approach Vol, veh/h	536	
Approach Delay, s/veh	27.7	
Approach LOS	C	
Timer		

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

## HCM 2010 Signalized Intersection Summary 2: Iris Avenue & Kaiser Hospital Entrance

AM/PM Gasoline Service Station  
Cumulative (2022) NP - AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↖	↗↗↗	↖↖↖		↖	↗		
Traffic Volume (veh/h)	288	1090	941	166	43	44		
Future Volume (veh/h)	288	1090	941	166	43	44		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900		
Adj Flow Rate, veh/h	288	1090	941	166	43	44		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	465	3223	1364	240	478	842		
Arrive On Green	0.51	1.00	0.61	0.61	0.26	0.26		
Sat Flow, veh/h	1810	5358	4611	781	1810	1615		
Grp Volume(v), veh/h	288	1090	732	375	43	44		
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1762	1810	1615		
Q Serve(g_s), s	7.9	0.0	9.9	10.0	1.3	0.0		
Cycle Q Clear(g_c), s	7.9	0.0	9.9	10.0	1.3	0.0		
Prop In Lane	1.00			0.44	1.00	1.00		
Lane Grp Cap(c), veh/h	465	3223	1062	541	478	842		
V/C Ratio(X)	0.62	0.34	0.69	0.69	0.09	0.05		
Avail Cap(c_a), veh/h	465	3223	1062	541	478	842		
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.63	0.63	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	14.6	0.0	11.3	11.3	19.4	8.2		
Incr Delay (d2), s/veh	1.6	0.2	3.7	7.1	0.4	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.0	0.1	5.0	5.7	0.7	0.9		
LnGrp Delay(d),s/veh	16.1	0.2	14.9	18.4	19.8	8.4		
LnGrp LOS	B	A	B	B	B	A		
Approach Vol, veh/h		1378	1107		87			
Approach Delay, s/veh		3.5	16.1		14.0			
Approach LOS		A	B		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		47.5		22.5	22.0	25.5		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		43.0		18.0	17.5	21.0		
Max Q Clear Time (g_c+I1), s		2.0		3.3	9.9	12.0		
Green Ext Time (p_c), s		11.4		0.2	4.7	4.8		
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			9.3					
HCM 2010 LOS			A					

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 AWSC  
4: John F Kennedy Drive & Oliver Street

AM/PM Gasoline Service Station  
Cumulative (2022) NP - AM Peak Hour

Intersection	
Intersection Delay, s/veh	13.4
Intersection LOS	B

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations		↵	↵		↕↕				↵
Traffic Vol, veh/h	0	41	108	0	305	75	0	273	170
Future Vol, veh/h	0	41	108	0	305	75	0	273	170
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	41	108	0	305	75	0	273	170
Number of Lanes	0	1	1	0	2	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	9.9	10	17.6
HCM LOS	A	A	C

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	0%	100%	0%	62%
Vol Thru, %	100%	58%	0%	0%	38%
Vol Right, %	0%	42%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	203	177	41	108	443
LT Vol	0	0	41	0	273
Through Vol	203	102	0	0	170
RT Vol	0	75	0	108	0
Lane Flow Rate	203	177	41	108	443
Geometry Grp	7	7	7	7	4
Degree of Util (X)	0.302	0.248	0.08	0.174	0.647
Departure Headway (Hd)	5.35	5.05	7.017	5.798	5.259
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	665	703	514	622	682
Service Time	3.141	2.841	4.717	3.498	3.34
HCM Lane V/C Ratio	0.305	0.252	0.08	0.174	0.65
HCM Control Delay	10.5	9.5	10.3	9.7	17.6
HCM Lane LOS	B	A	B	A	C
HCM 95th-tile Q	1.3	1	0.3	0.6	4.7

# HCM 2010 Signalized Intersection Summary

## 6: Oliver Street & Iris Avenue

### AM/PM Gasoline Service Station

Cumulative (2022) NP - AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	903	30	47	773	12	107	50	66	7	28	266
Future Volume (veh/h)	210	903	30	47	773	12	107	50	66	7	28	266
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	210	903	30	47	773	12	107	50	66	7	28	266
Adj No. of Lanes	1	3	0	1	3	0	0	1	1	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	543	2357	78	194	1391	22	86	25	427	62	190	427
Arrive On Green	0.10	0.15	0.15	0.11	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1810	5157	171	1810	5262	82	0	96	1615	0	717	1615
Grp Volume(v), veh/h	210	605	328	47	508	277	157	0	66	35	0	266
Grp Sat Flow(s),veh/h/ln	1810	1729	1870	1810	1729	1886	96	0	1615	717	0	1615
Q Serve(g_s), s	7.6	11.0	11.1	1.7	8.9	8.9	0.0	0.0	2.2	0.0	0.0	10.2
Cycle Q Clear(g_c), s	7.6	11.0	11.1	1.7	8.9	8.9	18.5	0.0	2.2	18.5	0.0	10.2
Prop In Lane	1.00		0.09	1.00		0.04	0.68		1.00	0.20		1.00
Lane Grp Cap(c), veh/h	543	1581	855	194	914	498	112	0	427	251	0	427
V/C Ratio(X)	0.39	0.38	0.38	0.24	0.56	0.56	1.40	0.00	0.15	0.14	0.00	0.62
Avail Cap(c_a), veh/h	543	1581	855	194	914	498	112	0	427	251	0	427
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.5	20.8	20.8	28.6	22.2	22.2	30.9	0.0	19.8	20.2	0.0	22.7
Incr Delay (d2), s/veh	0.5	0.7	1.3	0.6	2.3	4.2	226.5	0.0	0.8	1.2	0.0	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	5.4	6.1	0.9	4.5	5.2	9.2	0.0	1.1	0.6	0.0	5.3
LnGrp Delay(d),s/veh	26.0	21.5	22.1	29.3	24.5	26.4	257.5	0.0	20.5	21.4	0.0	29.4
LnGrp LOS	C	C	C	C	C	C	F		C	C		C
Approach Vol, veh/h		1143			832			223			301	
Approach Delay, s/veh		22.5			25.4			187.3			28.5	
Approach LOS		C			C			F			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	36.0		22.5	25.0	22.5		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.0	31.5		18.0	20.5	18.0		18.0				
Max Q Clear Time (g_c+I1), s	3.7	13.1		20.5	9.6	10.9		20.5				
Green Ext Time (p_c), s	0.2	6.0		0.0	0.5	2.9		0.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				38.9								
HCM 2010 LOS				D								
<b>Notes</b>												

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



HCM 2010 Signalized Intersection Summary  
 7: Via Del Lago & Iris Avenue/Moreno Beach Drive

AM/PM Gasoline Service Station  
 Cumulative (2022) NP - AM Peak Hour



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		3	↑↑↑		3	↑↑↑		3	↑	↑	3	↑	3
Traffic Volume (veh/h)	2	29	909	35	24	725	7	37	2	56	14	2	65
Future Volume (veh/h)	2	29	909	35	24	725	7	37	2	56	14	2	65
Number		5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		29	909	35	24	725	7	37	2	56	14	2	65
Adj No. of Lanes		1	3	0	1	3	0	1	1	1	1	1	0
Peak Hour Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %		0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h		321	1501	58	282	1438	14	106	502	679	106	13	416
Arrive On Green		0.12	0.20	0.20	0.16	0.27	0.27	0.06	0.26	0.26	0.06	0.26	0.26
Sat Flow, veh/h		1810	5126	197	1810	5298	51	1810	1900	1615	1810	48	1574
Grp Volume(v), veh/h		29	613	331	24	473	259	37	2	56	14	0	67
Grp Sat Flow(s),veh/h/ln		1810	1729	1865	1810	1729	1891	1810	1900	1615	1810	0	1622
Q Serve(g_s), s		1.0	11.3	11.3	0.8	8.1	8.1	1.4	0.1	0.0	0.5	0.0	2.2
Cycle Q Clear(g_c), s		1.0	11.3	11.3	0.8	8.1	8.1	1.4	0.1	0.0	0.5	0.0	2.2
Prop In Lane		1.00		0.11	1.00		0.03	1.00		1.00	1.00		0.97
Lane Grp Cap(c), veh/h		321	1013	546	282	939	513	106	502	679	106	0	429
V/C Ratio(X)		0.09	0.61	0.61	0.09	0.50	0.50	0.35	0.00	0.08	0.13	0.00	0.16
Avail Cap(c_a), veh/h		321	1013	546	282	939	513	194	502	679	194	0	429
HCM Platoon Ratio		0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh		25.8	24.4	24.5	25.3	21.5	21.5	31.7	19.0	12.2	31.3	0.0	19.8
Incr Delay (d2), s/veh		0.1	2.5	4.6	0.1	1.9	3.5	2.0	0.0	0.2	0.6	0.0	0.8
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.5	5.7	6.5	0.4	4.1	4.7	0.7	0.0	0.7	0.3	0.0	1.1
LnGrp Delay(d),s/veh		25.9	27.0	29.1	25.4	23.5	25.0	33.6	19.0	12.4	31.8	0.0	20.5
LnGrp LOS		C	C	C	C	C	C	C	B	B	C		C
Approach Vol, veh/h			973			756			95			81	
Approach Delay, s/veh			27.6			24.1			20.8			22.5	
Approach LOS			C			C			C			C	
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	4.9	24.5	8.1	22.5	16.4	23.0	8.1	22.5					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	20.0	7.0	18.0	8.5	18.5	7.0	18.0						
Max Q Clear Time (g_c+1), s	13.3	3.4	4.2	3.0	10.1	2.5	2.1						
Green Ext Time (p_c), s	0.0	3.3	0.0	0.2	0.0	3.0	0.0	0.1					
<b>Intersection Summary</b>													
HCM 2010 Ctrl Delay			25.7										
HCM 2010 LOS			C										
<b>Notes</b>													

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
1: Hillrose Lane/Nason Street & Iris Avenue

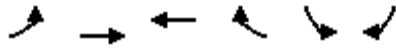
AM/PM Gasoline Service Station  
Cumulative (2022) NP - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	293	798	21	61	1213	238	14	27	26	234	42	516
Future Volume (veh/h)	293	798	21	61	1213	238	14	27	26	234	42	516
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	293	798	21	61	1213	238	14	27	26	234	42	516
Adj No. of Lanes	2	3	0	1	3	1	1	1	0	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	381	1396	37	194	1386	431	194	235	227	238	548	641
Arrive On Green	0.11	0.27	0.27	0.04	0.09	0.09	0.11	0.26	0.26	0.13	0.29	0.29
Sat Flow, veh/h	3510	5197	137	1810	5187	1615	1810	891	858	1810	1900	1615
Grp Volume(v), veh/h	293	531	288	61	1213	238	14	0	53	234	42	516
Grp Sat Flow(s),veh/h/ln	1755	1729	1876	1810	1729	1615	1810	0	1749	1810	1900	1615
Q Serve(g_s), s	5.7	9.3	9.3	2.3	16.2	9.9	0.5	0.0	1.6	9.0	1.1	10.4
Cycle Q Clear(g_c), s	5.7	9.3	9.3	2.3	16.2	9.9	0.5	0.0	1.6	9.0	1.1	10.4
Prop In Lane	1.00		0.07	1.00		1.00	1.00		0.49	1.00		1.00
Lane Grp Cap(c), veh/h	381	929	504	194	1386	431	194	0	462	238	548	641
V/C Ratio(X)	0.77	0.57	0.57	0.31	0.88	0.55	0.07	0.00	0.11	0.98	0.08	0.80
Avail Cap(c_a), veh/h	381	929	504	194	1386	431	194	0	462	238	548	641
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.81	0.81	0.81	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	22.1	22.1	31.3	30.8	27.9	28.1	0.0	19.5	30.3	18.1	6.4
Incr Delay (d2), s/veh	9.2	2.5	4.7	0.7	6.6	4.1	0.2	0.0	0.5	53.7	0.3	10.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	4.7	5.5	1.2	8.6	4.9	0.2	0.0	0.8	8.0	0.6	6.3
LnGrp Delay(d),s/veh	39.5	24.7	26.8	32.0	37.4	32.0	28.3	0.0	20.0	84.0	18.4	16.8
LnGrp LOS	D	C	C	C	D	C	C		C	F	B	B
Approach Vol, veh/h		1112			1512			67			792	
Approach Delay, s/veh		29.1			36.3			21.8			36.7	
Approach LOS		C			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.5	22.8	11.5	24.2	11.6	22.7	13.2	22.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.0	18.3	7.0	19.7	7.1	18.2	8.7	18.0				
Max Q Clear Time (g_c+1), s	4.3	11.3	2.5	12.4	7.7	18.2	11.0	3.6				
Green Ext Time (p_c), s	2.1	3.0	0.1	1.4	0.0	0.0	0.0	0.2				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			33.8									
HCM 2010 LOS			C									

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

## HCM 2010 Signalized Intersection Summary 2: Iris Avenue & Kaiser Hospital Entrance

AM/PM Gasoline Service Station  
Cumulative (2022) NP - PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↖	↗↗↗	↖↖↖		↖	↗		
Traffic Volume (veh/h)	157	833	1145	85	206	123		
Future Volume (veh/h)	157	833	1145	85	206	123		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900		
Adj Flow Rate, veh/h	157	833	1145	85	206	123		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	206	3186	2185	162	491	622		
Arrive On Green	0.23	1.00	0.89	0.89	0.27	0.27		
Sat Flow, veh/h	1810	5358	5099	366	1810	1615		
Grp Volume(v), veh/h	157	833	803	427	206	123		
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1835	1810	1615		
Q Serve(g_s), s	5.7	0.0	3.4	3.4	6.6	3.5		
Cycle Q Clear(g_c), s	5.7	0.0	3.4	3.4	6.6	3.5		
Prop In Lane	1.00			0.20	1.00	1.00		
Lane Grp Cap(c), veh/h	206	3186	1533	814	491	622		
V/C Ratio(X)	0.76	0.26	0.52	0.52	0.42	0.20		
Avail Cap(c_a), veh/h	336	3186	1533	814	491	622		
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.78	0.78	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	26.1	0.0	2.4	2.4	21.0	14.3		
Incr Delay (d2), s/veh	4.5	0.2	1.3	2.4	2.6	0.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	8.0	0.0	1.6	2.0	3.6	4.0		
LnGrp Delay(d),s/veh	30.7	0.2	3.7	4.8	23.6	15.0		
LnGrp LOS	C	A	A	A	C	B		
Approach Vol, veh/h		990	1230		329			
Approach Delay, s/veh		5.0	4.1		20.4			
Approach LOS		A	A		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		47.0		23.0	12.0	35.0		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		42.5		18.5	12.5	25.5		
Max Q Clear Time (g_c+I1), s		2.0		8.6	7.7	5.4		
Green Ext Time (p_c), s		22.0		0.7	0.2	14.1		
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			6.5					
HCM 2010 LOS			A					

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 AWSC  
4: John F Kennedy Drive & Oliver Street

AM/PM Gasoline Service Station  
Cumulative (2022) NP - PM Peak Hour

Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations		↵	↵		↕↕				↵
Traffic Vol, veh/h	0	64	79	0	144	33	0	137	99
Future Vol, veh/h	0	64	79	0	144	33	0	137	99
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	64	79	0	144	33	0	137	99
Number of Lanes	0	1	1	0	2	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	8.7	8.4	10.4
HCM LOS	A	A	B

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	0%	100%	0%	58%
Vol Thru, %	100%	59%	0%	0%	42%
Vol Right, %	0%	41%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	96	81	64	79	236
LT Vol	0	0	64	0	137
Through Vol	96	48	0	0	99
RT Vol	0	33	0	79	0
Lane Flow Rate	96	81	64	79	236
Geometry Grp	7	7	7	7	4
Degree of Util (X)	0.136	0.108	0.107	0.105	0.327
Departure Headway (Hd)	5.09	4.803	6	4.792	4.989
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	704	745	597	746	720
Service Time	2.825	2.538	3.741	2.533	3.022
HCM Lane V/C Ratio	0.136	0.109	0.107	0.106	0.328
HCM Control Delay	8.6	8.1	9.5	8.1	10.4
HCM Lane LOS	A	A	A	A	B
HCM 95th-tile Q	0.5	0.4	0.4	0.4	1.4

HCM 2010 Signalized Intersection Summary  
6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Cumulative (2022) NP - PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	152	831	86	73	1060	11	61	16	43	8	26	121
Future Volume (veh/h)	152	831	86	73	1060	11	61	16	43	8	26	121
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	152	831	86	73	1060	11	61	16	43	8	26	121
Adj No. of Lanes	1	3	0	1	3	0	0	1	1	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	543	2300	237	150	1399	15	362	85	427	137	400	427
Arrive On Green	0.10	0.16	0.16	0.17	0.53	0.53	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1810	4779	492	1810	5293	55	1019	321	1615	278	1514	1615
Grp Volume(v), veh/h	152	600	317	73	692	379	77	0	43	34	0	121
Grp Sat Flow(s),veh/h/ln	1810	1729	1813	1810	1729	1890	1340	0	1615	1791	0	1615
Q Serve(g_s), s	5.4	10.8	10.9	2.6	11.0	11.0	2.4	0.0	1.4	0.0	0.0	4.2
Cycle Q Clear(g_c), s	5.4	10.8	10.9	2.6	11.0	11.0	3.3	0.0	1.4	0.9	0.0	4.2
Prop In Lane	1.00		0.27	1.00		0.03	0.79		1.00	0.24		1.00
Lane Grp Cap(c), veh/h	543	1664	873	150	914	500	446	0	427	537	0	427
V/C Ratio(X)	0.28	0.36	0.36	0.49	0.76	0.76	0.17	0.00	0.10	0.06	0.00	0.28
Avail Cap(c_a), veh/h	543	1664	873	194	914	500	446	0	427	537	0	427
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.88	0.88	0.88	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.5	19.8	19.9	27.8	14.7	14.7	20.2	0.0	19.5	19.3	0.0	20.5
Incr Delay (d2), s/veh	0.3	0.6	1.2	2.1	5.2	9.2	0.8	0.0	0.5	0.2	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	5.4	5.8	1.3	5.7	6.7	1.3	0.0	0.7	0.5	0.0	2.1
LnGrp Delay(d),s/veh	24.8	20.4	21.0	30.0	19.9	23.9	21.0	0.0	19.9	19.5	0.0	22.1
LnGrp LOS	C	C	C	C	B	C	C		B	B		C
Approach Vol, veh/h		1069			1144			120			155	
Approach Delay, s/veh		21.2			21.9			20.6			21.6	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	37.7		22.5	25.0	22.5		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.0	31.5		18.0	20.5	18.0		18.0				
Max Q Clear Time (g_c+I1), s	4.6	12.9		6.2	7.4	13.0		5.3				
Green Ext Time (p_c), s	0.0	6.4		0.9	5.4	2.9		0.9				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.5								
HCM 2010 LOS				C								
<b>Notes</b>												

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
 7: Via Del Lago & Iris Avenue/Moreno Beach Drive

AM/PM Gasoline Service Station  
 Cumulative (2022) NP - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔ ↑↑↑ ↵			↵ ↑↑↑ ↵			↵	↑	↵	↵	↵	↵
Traffic Volume (veh/h)	56	771	52	57	1074	14	38	0	28	10	2	31
Future Volume (veh/h)	56	771	52	57	1074	14	38	0	28	10	2	31
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	56	771	52	57	1074	14	38	0	28	10	2	31
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	324	1855	125	134	1417	18	107	502	547	107	26	405
Arrive On Green	0.06	0.12	0.12	0.07	0.27	0.27	0.06	0.00	0.26	0.06	0.26	0.26
Sat Flow, veh/h	1810	4966	334	1810	5277	69	1810	1900	1615	1810	99	1531
Grp Volume(v), veh/h	56	536	287	57	704	384	38	0	28	10	0	33
Grp Sat Flow(s),veh/h/ln	1810	1729	1841	1810	1729	1888	1810	1900	1615	1810	0	1630
Q Serve(g_s), s	2.1	10.0	10.1	2.1	13.1	13.1	1.4	0.0	0.5	0.4	0.0	1.1
Cycle Q Clear(g_c), s	2.1	10.0	10.1	2.1	13.1	13.1	1.4	0.0	0.5	0.4	0.0	1.1
Prop In Lane	1.00		0.18	1.00		0.04	1.00		1.00	1.00		0.94
Lane Grp Cap(c), veh/h	324	1292	688	134	929	507	107	502	547	107	0	431
V/C Ratio(X)	0.17	0.41	0.42	0.42	0.76	0.76	0.35	0.00	0.05	0.09	0.00	0.08
Avail Cap(c_a), veh/h	324	1292	688	194	929	507	194	502	547	194	0	431
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.0	23.6	23.6	31.0	23.5	23.5	31.6	0.0	6.8	31.1	0.0	19.3
Incr Delay (d2), s/veh	0.2	0.9	1.8	2.1	5.8	10.2	2.0	0.0	0.2	0.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	5.0	5.5	1.1	7.0	8.3	0.8	0.0	0.3	0.2	0.0	0.5
LnGrp Delay(d),s/veh	28.2	24.5	25.4	33.1	29.3	33.7	33.6	0.0	7.0	31.5	0.0	19.7
LnGrp LOS	C	C	C	C	C	C	C		A	C		B
Approach Vol, veh/h		879			1145			66			43	
Approach Delay, s/veh		25.1			30.9			22.3			22.4	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	30.2	8.2	22.5	16.5	22.8	8.2	22.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	20.0	7.0	18.0	8.7	18.3	7.0	18.0					
Max Q Clear Time (g_c+1), s	12.1	3.4	3.1	4.1	15.1	2.4	2.5					
Green Ext Time (p_c), s	0.0	3.4	0.0	0.1	2.2	2.0	0.0	0.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				28.1								
HCM 2010 LOS				C								
<b>Notes</b>												

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
 1: Hillrose Lane/Nason Street & Iris Avenue

AM/PM Gasoline Service Station  
 Cumulative (2022) WP - AM Peak Hour

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	398	1187	24	10	22	924	156	20	44	51	1	211
Future Volume (veh/h)	398	1187	24	10	22	924	156	20	44	51	1	211
Number	5	2	12		1	6	16	3	8	18		7
Initial Q (Qb), veh	0	0	0		0	0	0	0	0	0		0
Ped-Bike Adj(A_pbT)	1.00		1.00		1.00		1.00	1.00		1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00		1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900		1900	1900	1900	1900	1900	1900		1900
Adj Flow Rate, veh/h	398	1187	24		22	924	156	20	44	51		211
Adj No. of Lanes	2	3	0		1	3	1	1	1	0		1
Peak Hour Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00		1.00
Percent Heavy Veh, %	0	0	0		0	0	0	0	0	0		0
Cap, veh/h	376	1762	36		76	1408	438	71	212	246		233
Arrive On Green	0.11	0.34	0.34		0.06	0.36	0.36	0.04	0.26	0.26		0.13
Sat Flow, veh/h	3510	5234	106		1810	5187	1615	1810	804	932		1810
Grp Volume(v), veh/h	398	784	427		22	924	156	20	0	95		211
Grp Sat Flow(s),veh/h/ln	1755	1729	1881		1810	1729	1615	1810	0	1736		1810
Q Serve(g_s), s	7.5	13.6	13.6		0.8	10.4	5.0	0.8	0.0	3.0		8.1
Cycle Q Clear(g_c), s	7.5	13.6	13.6		0.8	10.4	5.0	0.8	0.0	3.0		8.1
Prop In Lane	1.00		0.06		1.00		1.00	1.00		0.54		1.00
Lane Grp Cap(c), veh/h	376	1164	633		76	1408	438	71	0	459		233
V/C Ratio(X)	1.06	0.67	0.67		0.29	0.66	0.36	0.28	0.00	0.21		0.91
Avail Cap(c_a), veh/h	376	1164	633		194	1408	438	194	0	459		233
HCM Platoon Ratio	1.00	1.00	1.00		1.33	1.33	1.33	1.00	1.00	1.00		1.00
Upstream Filter(I)	1.00	1.00	1.00		0.68	0.68	0.68	1.00	0.00	1.00		1.00
Uniform Delay (d), s/veh	31.2	19.9	19.9		32.0	19.6	17.9	32.7	0.0	20.0		30.1
Incr Delay (d2), s/veh	62.6	3.1	5.7		1.4	1.6	1.5	2.1	0.0	1.0		35.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0
%ile BackOfQ(50%),veh/ln	6.9	6.9	8.0		0.4	5.2	2.4	0.4	0.0	1.6		6.3
LnGrp Delay(d),s/veh	93.8	23.0	25.6		33.5	21.3	19.4	34.8	0.0	21.1		65.1
LnGrp LOS	F	C	C		C	C	B	C		C		E
Approach Vol, veh/h		1609				1102			115			
Approach Delay, s/veh		41.2				21.2			23.4			
Approach LOS		D				C			C			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.9	27.6	6.8	28.7	11.5	23.0	13.0	22.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.0	18.5	7.0	19.5	7.0	18.5	8.5	18.0				
Max Q Clear Time (g_c+1), s	2.8	15.6	2.8	3.5	9.5	12.4	10.1	5.0				
Green Ext Time (p_c), s	0.0	2.2	0.0	1.7	0.0	3.3	0.0	0.3				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			32.2									
HCM 2010 LOS			C									
<b>Notes</b>												

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# HCM 2010 Signalized Intersection Summary

## 1: Hillrose Lane/Nason Street & Iris Avenue

AM/PM Gasoline Service Station  
Cumulative (2022) WP - AM Peak Hour

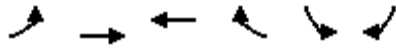
Movement	SBT	SBR
Lane Configurations	↑	↗
Traffic Volume (veh/h)	17	313
Future Volume (veh/h)	17	313
Number	4	14
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900
Adj Flow Rate, veh/h	17	313
Adj No. of Lanes	1	1
Peak Hour Factor	1.00	1.00
Percent Heavy Veh, %	0	0
Cap, veh/h	672	744
Arrive On Green	0.35	0.35
Sat Flow, veh/h	1900	1615
Grp Volume(v), veh/h	17	313
Grp Sat Flow(s),veh/h/ln	1900	1615
Q Serve(g_s), s	0.4	1.5
Cycle Q Clear(g_c), s	0.4	1.5
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	672	744
V/C Ratio(X)	0.03	0.42
Avail Cap(c_a), veh/h	672	744
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	1.00	1.00
Uniform Delay (d), s/veh	14.8	4.8
Incr Delay (d2), s/veh	0.1	1.7
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.7
LnGrp Delay(d),s/veh	14.8	6.6
LnGrp LOS	B	A
Approach Vol, veh/h	541	
Approach Delay, s/veh	29.7	
Approach LOS	C	
Timer		

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



## HCM 2010 Signalized Intersection Summary 2: Iris Avenue & Kaiser Hospital Entrance

AM/PM Gasoline Service Station  
Cumulative (2022) WP - AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↖	↗↗↗	↖↖↖		↘	↘		
Traffic Volume (veh/h)	288	1106	956	166	43	44		
Future Volume (veh/h)	288	1106	956	166	43	44		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900		
Adj Flow Rate, veh/h	288	1106	956	166	43	44		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	465	3223	1367	237	478	842		
Arrive On Green	0.51	1.00	0.61	0.61	0.26	0.26		
Sat Flow, veh/h	1810	5358	4622	771	1810	1615		
Grp Volume(v), veh/h	288	1106	742	380	43	44		
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1764	1810	1615		
Q Serve(g_s), s	7.9	0.0	10.1	10.2	1.3	0.0		
Cycle Q Clear(g_c), s	7.9	0.0	10.1	10.2	1.3	0.0		
Prop In Lane	1.00			0.44	1.00	1.00		
Lane Grp Cap(c), veh/h	465	3223	1062	542	478	842		
V/C Ratio(X)	0.62	0.34	0.70	0.70	0.09	0.05		
Avail Cap(c_a), veh/h	465	3223	1062	542	478	842		
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.62	0.62	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	14.6	0.0	11.3	11.3	19.4	8.2		
Incr Delay (d2), s/veh	1.5	0.2	3.8	7.4	0.4	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.0	0.1	5.1	5.8	0.7	0.9		
LnGrp Delay(d),s/veh	16.1	0.2	15.1	18.7	19.8	8.4		
LnGrp LOS	B	A	B	B	B	A		
Approach Vol, veh/h		1394	1122		87			
Approach Delay, s/veh		3.5	16.3		14.0			
Approach LOS		A	B		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		47.5		22.5	22.0	25.5		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		43.0		18.0	17.5	21.0		
Max Q Clear Time (g_c+I1), s		2.0		3.3	9.9	12.2		
Green Ext Time (p_c), s		11.6		0.2	4.7	4.7		
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			9.4					
HCM 2010 LOS			A					

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 TWSC  
3: Iris Avenue & Project Driveway 1

AM/PM Gasoline Service Station  
Cumulative (2022) WP - AM Peak Hour

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↑↑↑		↑↑↑			↑
Traffic Vol, veh/h	0	1136	1111	84	0	40
Future Vol, veh/h	0	1136	1111	84	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1136	1111	84	0	40
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	598
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	-	0	*683
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	1
Mov Cap-1 Maneuver	-	-	-	-	-	*683
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		SB	
HCM Control Delay, s	0		0		10.6	
HCM LOS					B	
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	683		
HCM Lane V/C Ratio	-	-	-	0.059		
HCM Control Delay (s)	-	-	-	10.6		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0.2		
Notes						
~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    *: All major volume in platoon						

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 AWSC  
4: John F Kennedy Drive & Oliver Street

AM/PM Gasoline Service Station  
Cumulative (2022) WP - AM Peak Hour

Intersection	
Intersection Delay, s/veh	13.7
Intersection LOS	B

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations		↵	↵		↕↕				↵
Traffic Vol, veh/h	0	43	108	0	311	75	0	273	177
Future Vol, veh/h	0	43	108	0	311	75	0	273	177
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	43	108	0	311	75	0	273	177
Number of Lanes	0	1	1	0	2	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	10	10.1	18.1
HCM LOS	A	B	C

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	0%	100%	0%	61%
Vol Thru, %	100%	58%	0%	0%	39%
Vol Right, %	0%	42%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	207	179	43	108	450
LT Vol	0	0	43	0	273
Through Vol	207	104	0	0	177
RT Vol	0	75	0	108	0
Lane Flow Rate	207	179	43	108	450
Geometry Grp	7	7	7	7	4
Degree of Util (X)	0.309	0.252	0.084	0.175	0.659
Departure Headway (Hd)	5.365	5.068	7.05	5.83	5.27
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	661	700	511	619	680
Service Time	3.161	2.863	4.75	3.53	3.355
HCM Lane V/C Ratio	0.313	0.256	0.084	0.174	0.662
HCM Control Delay	10.6	9.6	10.4	9.8	18.1
HCM Lane LOS	B	A	B	A	C
HCM 95th-tile Q	1.3	1	0.3	0.6	4.9

HCM 2010 TWSC  
5: Oliver Street & Project Driveway 2

AM/PM Gasoline Service Station  
Cumulative (2022) WP - AM Peak Hour

Intersection							
Int Delay, s/veh	0.8						
Movement	EBL	EBR	NBL	NBT	SBT	SBR	
Lane Configurations		↗		↗↗	↗↗		
Traffic Vol, veh/h	0	54	0	278	298	13	
Future Vol, veh/h	0	54	0	278	298	13	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	100	100	100	100	100	100	
Heavy Vehicles, %	0	0	0	0	0	0	
Mvmt Flow	0	54	0	278	298	13	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	-	156	-	0	-	0	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Critical Hdwy	-	6.9	-	-	-	-	
Critical Hdwy Stg 1	-	-	-	-	-	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	
Follow-up Hdwy	-	3.3	-	-	-	-	
Pot Cap-1 Maneuver	0	868	0	-	-	-	
Stage 1	0	-	0	-	-	-	
Stage 2	0	-	0	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	-	868	-	-	-	-	
Mov Cap-2 Maneuver	-	-	-	-	-	-	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Approach	EB	NB		SB			
HCM Control Delay, s	9.4	0		0			
HCM LOS	A						
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR			
Capacity (veh/h)	-	868	-	-			
HCM Lane V/C Ratio	-	0.062	-	-			
HCM Control Delay (s)	-	9.4	-	-			
HCM Lane LOS	-	A	-	-			
HCM 95th %tile Q(veh)	-	0.2	-	-			

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Cumulative (2022) WP - AM Peak Hour

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	35	210	885	28	45	791	21	114	49	65	53	35
Future Volume (veh/h)	35	210	885	28	45	791	21	114	49	65	53	35
Number		5	2	12	1	6	16	3	8	18	7	4
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		210	885	28	45	791	21	114	49	65	53	35
Adj No. of Lanes		1	3	0	1	3	0	0	1	1	0	1
Peak Hour Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %		0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h		543	2362	75	194	1373	36	87	23	427	82	36
Arrive On Green		0.10	0.15	0.15	0.11	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h		1810	5166	163	1810	5196	138	0	88	1615	0	136
Grp Volume(v), veh/h		210	592	321	45	526	286	163	0	65	88	0
Grp Sat Flow(s),veh/h/ln		1810	1729	1871	1810	1729	1876	88	0	1615	136	0
Q Serve(g_s), s		7.6	10.8	10.8	1.6	9.2	9.3	0.0	0.0	2.2	0.0	0.0
Cycle Q Clear(g_c), s		7.6	10.8	10.8	1.6	9.2	9.3	18.5	0.0	2.2	18.5	0.0
Prop In Lane		1.00		0.09	1.00		0.07	0.70		1.00	0.60	
Lane Grp Cap(c), veh/h		543	1581	855	194	914	496	111	0	427	118	0
V/C Ratio(X)		0.39	0.37	0.38	0.23	0.58	0.58	1.47	0.00	0.15	0.74	0.00
Avail Cap(c_a), veh/h		543	1581	855	194	914	496	111	0	427	118	0
HCM Platoon Ratio		0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	0.94	0.94	0.94	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh		25.5	20.7	20.7	28.6	22.3	22.4	31.2	0.0	19.7	27.7	0.0
Incr Delay (d2), s/veh		0.5	0.7	1.3	0.6	2.5	4.5	254.7	0.0	0.8	34.2	0.0
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		3.9	5.3	5.9	0.8	4.7	5.4	10.0	0.0	1.1	2.8	0.0
LnGrp Delay(d),s/veh		26.0	21.4	22.0	29.2	24.8	26.9	285.9	0.0	20.5	61.9	0.0
LnGrp LOS		C	C	C	C	C	C	F		C	E	
Approach Vol, veh/h			1123			857			228			351
Approach Delay, s/veh			22.4			25.7			210.2			37.4
Approach LOS			C			C			F			D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	36.0		22.5	25.0	22.5		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.0	31.5		18.0	20.5	18.0		18.0				
Max Q Clear Time (g_c+I1), s	3.6	12.8		20.5	9.6	11.3		20.5				
Green Ext Time (p_c), s	0.2	5.9		0.0	0.5	2.8		0.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			42.3									
HCM 2010 LOS			D									
<b>Notes</b>												

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# HCM 2010 Signalized Intersection Summary

## 6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Cumulative (2022) WP - AM Peak Hour

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	263
Future Volume (veh/h)	263
Number	14
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	263
Adj No. of Lanes	1
Peak Hour Factor	1.00
Percent Heavy Veh, %	0
Cap, veh/h	427
Arrive On Green	0.26
Sat Flow, veh/h	1615
Grp Volume(v), veh/h	263
Grp Sat Flow(s),veh/h/ln	1615
Q Serve(g_s), s	10.0
Cycle Q Clear(g_c), s	10.0
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	427
V/C Ratio(X)	0.62
Avail Cap(c_a), veh/h	427
HCM Platoon Ratio	1.00
Upstream Filter(l)	1.00
Uniform Delay (d), s/veh	22.6
Incr Delay (d2), s/veh	6.5
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	5.2
LnGrp Delay(d),s/veh	29.2
LnGrp LOS	C
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer	

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
 7: Via Del Lago & Iris Avenue/Moreno Beach Drive

AM/PM Gasoline Service Station  
 Cumulative (2022) WP - AM Peak Hour

























Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔ ↑↑↑			↔ ↑↑↑			↔ ↑	↑	↔ ↑	↔ ↑	↔ ↑	
Traffic Volume (veh/h)	12	32	924	35	24	739	7	37	2	56	14	2	67
Future Volume (veh/h)	12	32	924	35	24	739	7	37	2	56	14	2	67
Number		5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		32	924	35	24	739	7	37	2	56	14	2	67
Adj No. of Lanes		1	3	0	1	3	0	1	1	1	1	1	0
Peak Hour Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %		0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h		321	1502	57	282	1438	14	106	502	679	106	12	416
Arrive On Green		0.12	0.20	0.20	0.16	0.27	0.27	0.06	0.26	0.26	0.06	0.26	0.26
Sat Flow, veh/h		1810	5130	194	1810	5299	50	1810	1900	1615	1810	47	1575
Grp Volume(v), veh/h		32	622	337	24	482	264	37	2	56	14	0	69
Grp Sat Flow(s),veh/h/ln		1810	1729	1866	1810	1729	1891	1810	1900	1615	1810	0	1622
Q Serve(g_s), s		1.1	11.5	11.5	0.8	8.3	8.3	1.4	0.1	0.0	0.5	0.0	2.3
Cycle Q Clear(g_c), s		1.1	11.5	11.5	0.8	8.3	8.3	1.4	0.1	0.0	0.5	0.0	2.3
Prop In Lane		1.00		0.10	1.00		0.03	1.00		1.00	1.00		0.97
Lane Grp Cap(c), veh/h		321	1013	546	282	939	513	106	502	679	106	0	429
V/C Ratio(X)		0.10	0.61	0.62	0.09	0.51	0.51	0.35	0.00	0.08	0.13	0.00	0.16
Avail Cap(c_a), veh/h		321	1013	546	282	939	513	194	502	679	194	0	429
HCM Platoon Ratio		0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		0.96	0.96	0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh		25.9	24.5	24.5	25.3	21.6	21.6	31.7	19.0	12.2	31.3	0.0	19.8
Incr Delay (d2), s/veh		0.1	2.7	4.9	0.1	2.0	3.7	2.0	0.0	0.2	0.6	0.0	0.8
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.6	5.8	6.7	0.4	4.2	4.8	0.7	0.0	0.7	0.3	0.0	1.1
LnGrp Delay(d),s/veh		26.0	27.2	29.4	25.4	23.6	25.2	33.6	19.0	12.4	31.8	0.0	20.6
LnGrp LOS		C	C	C	C	C	C	C	B	B	C		C
Approach Vol, veh/h			991			770			95			83	
Approach Delay, s/veh			27.9			24.2			20.8			22.5	
Approach LOS			C			C			C			C	
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	4.9	24.5	8.1	22.5	16.4	23.0	8.1	22.5					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	20.0	7.0	18.0	8.5	18.5	7.0	18.0						
Max Q Clear Time (g_c+1), s	13.5	3.4	4.3	3.1	10.3	2.5	2.1						
Green Ext Time (p_c), s	0.0	3.2	0.0	0.2	0.0	3.0	0.0	0.1					
<b>Intersection Summary</b>													
HCM 2010 Ctrl Delay			25.9										
HCM 2010 LOS			C										
<b>Notes</b>													

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
1: Hillrose Lane/Nason Street & Iris Avenue

AM/PM Gasoline Service Station  
Cumulative (2022) WP - PM Peak Hour

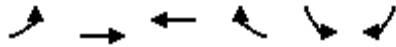
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	293	808	21	63	1223	243	14	27	29	239	42	516
Future Volume (veh/h)	293	808	21	63	1223	243	14	27	29	239	42	516
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	293	808	21	63	1223	243	14	27	29	239	42	516
Adj No. of Lanes	2	3	0	1	3	1	1	1	0	1	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	381	1396	36	194	1386	431	194	222	238	238	548	641
Arrive On Green	0.11	0.27	0.27	0.04	0.09	0.09	0.11	0.26	0.26	0.13	0.29	0.29
Sat Flow, veh/h	3510	5199	135	1810	5187	1615	1810	839	902	1810	1900	1615
Grp Volume(v), veh/h	293	537	292	63	1223	243	14	0	56	239	42	516
Grp Sat Flow(s),veh/h/ln	1755	1729	1876	1810	1729	1615	1810	0	1741	1810	1900	1615
Q Serve(g_s), s	5.7	9.4	9.4	2.4	16.3	10.1	0.5	0.0	1.7	9.2	1.1	10.4
Cycle Q Clear(g_c), s	5.7	9.4	9.4	2.4	16.3	10.1	0.5	0.0	1.7	9.2	1.1	10.4
Prop In Lane	1.00		0.07	1.00		1.00	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	381	929	504	194	1386	431	194	0	460	238	548	641
V/C Ratio(X)	0.77	0.58	0.58	0.32	0.88	0.56	0.07	0.00	0.12	1.00	0.08	0.80
Avail Cap(c_a), veh/h	381	929	504	194	1386	431	194	0	460	238	548	641
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.80	0.80	0.80	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	22.2	22.2	31.3	30.8	28.0	28.1	0.0	19.6	30.4	18.1	6.4
Incr Delay (d2), s/veh	9.2	2.6	4.8	0.8	6.9	4.2	0.2	0.0	0.5	59.6	0.3	10.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	4.8	5.5	1.2	8.7	5.0	0.2	0.0	0.9	8.5	0.6	6.3
LnGrp Delay(d),s/veh	39.5	24.8	27.0	32.1	37.8	32.2	28.3	0.0	20.1	90.0	18.4	16.8
LnGrp LOS	D	C	C	C	D	C	C		C	F	B	B
Approach Vol, veh/h		1122			1529			70			797	
Approach Delay, s/veh		29.2			36.6			21.7			38.8	
Approach LOS		C			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.5	22.8	11.5	24.2	11.6	22.7	13.2	22.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.0	18.3	7.0	19.7	7.1	18.2	8.7	18.0				
Max Q Clear Time (g_c+1), s	4.4	11.4	2.5	12.4	7.7	18.3	11.2	3.7				
Green Ext Time (p_c), s	2.0	2.9	0.1	1.4	0.0	0.0	0.0	0.2				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			34.5									
HCM 2010 LOS			C									

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



HCM 2010 Signalized Intersection Summary  
2: Iris Avenue & Kaiser Hospital Entrance

AM/PM Gasoline Service Station  
Cumulative (2022) WP - PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↖	↗↗↗	↖↖↖		↖	↗		
Traffic Volume (veh/h)	157	851	1162	85	206	123		
Future Volume (veh/h)	157	851	1162	85	206	123		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900		
Adj Flow Rate, veh/h	157	851	1162	85	206	123		
Adj No. of Lanes	1	3	3	0	1	1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	206	3186	2187	160	491	622		
Arrive On Green	0.23	1.00	0.89	0.89	0.27	0.27		
Sat Flow, veh/h	1810	5358	5105	361	1810	1615		
Grp Volume(v), veh/h	157	851	814	433	206	123		
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1836	1810	1615		
Q Serve(g_s), s	5.7	0.0	3.5	3.5	6.6	3.5		
Cycle Q Clear(g_c), s	5.7	0.0	3.5	3.5	6.6	3.5		
Prop In Lane	1.00			0.20	1.00	1.00		
Lane Grp Cap(c), veh/h	206	3186	1533	814	491	622		
V/C Ratio(X)	0.76	0.27	0.53	0.53	0.42	0.20		
Avail Cap(c_a), veh/h	336	3186	1533	814	491	622		
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00		
Upstream Filter(I)	0.77	0.77	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	26.1	0.0	2.4	2.4	21.0	14.3		
Incr Delay (d2), s/veh	4.5	0.2	1.3	2.5	2.6	0.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	8.0	0.0	1.6	2.0	3.6	4.0		
LnGrp Delay(d),s/veh	30.6	0.2	3.7	4.9	23.6	15.0		
LnGrp LOS	C	A	A	A	C	B		
Approach Vol, veh/h		1008	1247		329			
Approach Delay, s/veh		4.9	4.1		20.4			
Approach LOS		A	A		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		47.0		23.0	12.0	35.0		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		42.5		18.5	12.5	25.5		
Max Q Clear Time (g_c+I1), s		2.0		8.6	7.7	5.5		
Green Ext Time (p_c), s		22.5		0.7	0.2	14.2		
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			6.5					
HCM 2010 LOS			A					

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 TWSC  
3: Iris Avenue & Project Driveway 1

AM/PM Gasoline Service Station  
Cumulative (2022) WP - PM Peak Hour

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↑↑↑		↑↑↑			↑
Traffic Vol, veh/h	0	1079	1185	99	0	46
Future Vol, veh/h	0	1079	1185	99	0	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1079	1185	99	0	46
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	642
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	-	0	*645
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	1
Mov Cap-1 Maneuver	-	-	-	-	-	*645
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		SB	
HCM Control Delay, s	0		0		11	
HCM LOS					B	
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	645		
HCM Lane V/C Ratio	-	-	-	0.071		
HCM Control Delay (s)	-	-	-	11		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0.2		
Notes						
~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    *: All major volume in platoon						

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 AWSC  
4: John F Kennedy Drive & Oliver Street

AM/PM Gasoline Service Station  
Cumulative (2022) WP - PM Peak Hour

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Lane Configurations		↵	↵		↕↕				↵
Traffic Vol, veh/h	0	67	79	0	151	33	0	137	107
Future Vol, veh/h	0	67	79	0	151	33	0	137	107
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	67	79	0	151	33	0	137	107
Number of Lanes	0	1	1	0	2	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	8.7	8.5	10.6
HCM LOS	A	A	B

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	0%	100%	0%	56%
Vol Thru, %	100%	60%	0%	0%	44%
Vol Right, %	0%	40%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	101	83	67	79	244
LT Vol	0	0	67	0	137
Through Vol	101	50	0	0	107
RT Vol	0	33	0	79	0
Lane Flow Rate	101	83	67	79	244
Geometry Grp	7	7	7	7	4
Degree of Util (X)	0.143	0.112	0.112	0.106	0.339
Departure Headway (Hd)	5.109	4.83	6.038	4.829	5.005
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	702	741	593	740	717
Service Time	2.845	2.566	3.78	2.572	3.038
HCM Lane V/C Ratio	0.144	0.112	0.113	0.107	0.34
HCM Control Delay	8.7	8.2	9.5	8.1	10.6
HCM Lane LOS	A	A	A	A	B
HCM 95th-tile Q	0.5	0.4	0.4	0.4	1.5

HCM 2010 TWSC  
5: Oliver Street & Project Driveway 2

AM/PM Gasoline Service Station  
Cumulative (2022) WP - PM Peak Hour

Intersection							
Int Delay, s/veh	1.4						
Movement	EBL	EBR	NBL	NBT	SBT	SBR	
Lane Configurations		↑		↑↑	↑↑		
Traffic Vol, veh/h	0	63	0	186	151	14	
Future Vol, veh/h	0	63	0	186	151	14	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	0	-	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	100	100	100	100	100	100	
Heavy Vehicles, %	0	0	0	0	0	0	
Mvmt Flow	0	63	0	186	151	14	
Major/Minor	Minor2	Major1		Major2			
Conflicting Flow All	-	83	-	0	-	0	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Critical Hdwy	-	6.9	-	-	-	-	
Critical Hdwy Stg 1	-	-	-	-	-	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	
Follow-up Hdwy	-	3.3	-	-	-	-	
Pot Cap-1 Maneuver	0	966	0	-	-	-	
Stage 1	0	-	0	-	-	-	
Stage 2	0	-	0	-	-	-	
Platoon blocked, %							
Mov Cap-1 Maneuver	-	966	-	-	-	-	
Mov Cap-2 Maneuver	-	-	-	-	-	-	
Stage 1	-	-	-	-	-	-	
Stage 2	-	-	-	-	-	-	
Approach	EB	NB		SB			
HCM Control Delay, s	9	0		0			
HCM LOS	A						
Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR			
Capacity (veh/h)	-	966	-	-			
HCM Lane V/C Ratio	-	0.065	-	-			
HCM Control Delay (s)	-	9	-	-			
HCM Lane LOS	-	A	-	-			
HCM 95th %tile Q(veh)	-	0.2	-	-			

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Cumulative (2022) WP - PM Peak Hour

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	41	152	810	84	71	1080	22	68	15	42	61	35
Future Volume (veh/h)	41	152	810	84	71	1080	22	68	15	42	61	35
Number		5	2	12	1	6	16	3	8	18	7	4
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		152	810	84	71	1080	22	68	15	42	61	35
Adj No. of Lanes		1	3	0	1	3	0	0	1	1	0	1
Peak Hour Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %		0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h		543	2304	238	148	1383	28	94	12	427	84	31
Arrive On Green		0.10	0.16	0.16	0.16	0.53	0.53	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h		1810	4778	493	1810	5233	107	0	45	1615	0	118
Grp Volume(v), veh/h		152	585	309	71	714	388	83	0	42	96	0
Grp Sat Flow(s),veh/h/ln		1810	1729	1813	1810	1729	1881	45	0	1615	118	0
Q Serve(g_s), s		5.4	10.5	10.6	2.5	11.6	11.6	0.0	0.0	1.4	0.0	0.0
Cycle Q Clear(g_c), s		5.4	10.5	10.6	2.5	11.6	11.6	18.5	0.0	1.4	18.5	0.0
Prop In Lane		1.00		0.27	1.00		0.06	0.82		1.00	0.64	
Lane Grp Cap(c), veh/h		543	1668	874	148	914	497	106	0	427	115	0
V/C Ratio(X)		0.28	0.35	0.35	0.48	0.78	0.78	0.79	0.00	0.10	0.83	0.00
Avail Cap(c_a), veh/h		543	1668	874	194	914	497	106	0	427	115	0
HCM Platoon Ratio		0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	0.85	0.85	0.85	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh		24.5	19.7	19.7	27.9	14.9	14.9	32.4	0.0	19.5	29.2	0.0
Incr Delay (d2), s/veh		0.3	0.6	1.1	2.0	5.6	9.9	43.3	0.0	0.5	47.7	0.0
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		2.8	5.2	5.6	1.3	6.1	7.2	2.9	0.0	0.7	3.4	0.0
LnGrp Delay(d),s/veh		24.8	20.3	20.8	29.9	20.5	24.8	75.7	0.0	19.9	76.8	0.0
LnGrp LOS		C	C	C	C	C	C	E		B	E	
Approach Vol, veh/h			1046			1173			125			214
Approach Delay, s/veh			21.1			22.5			56.9			46.6
Approach LOS			C			C			E			D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	37.8		22.5	25.0	22.5		22.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.0	31.5		18.0	20.5	18.0		18.0				
Max Q Clear Time (g_c+I1), s	4.5	12.6		20.5	7.4	13.6		20.5				
Green Ext Time (p_c), s	0.0	6.3		0.0	5.3	2.7		0.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			25.6									
HCM 2010 LOS			C									
<b>Notes</b>												

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

# HCM 2010 Signalized Intersection Summary

## 6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Cumulative (2022) WP - PM Peak Hour

Movement	SBR
Lane Configurations	7
Traffic Volume (veh/h)	118
Future Volume (veh/h)	118
Number	14
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	118
Adj No. of Lanes	1
Peak Hour Factor	1.00
Percent Heavy Veh, %	0
Cap, veh/h	427
Arrive On Green	0.26
Sat Flow, veh/h	1615
Grp Volume(v), veh/h	118
Grp Sat Flow(s),veh/h/ln	1615
Q Serve(g_s), s	4.1
Cycle Q Clear(g_c), s	4.1
Prop In Lane	1.00
Lane Grp Cap(c), veh/h	427
V/C Ratio(X)	0.28
Avail Cap(c_a), veh/h	427
HCM Platoon Ratio	1.00
Upstream Filter(l)	1.00
Uniform Delay (d), s/veh	20.4
Incr Delay (d2), s/veh	1.6
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(50%),veh/ln	2.0
LnGrp Delay(d),s/veh	22.0
LnGrp LOS	C
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer	

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

HCM 2010 Signalized Intersection Summary  
 7: Via Del Lago & Iris Avenue/Moreno Beach Drive

AM/PM Gasoline Service Station  
 Cumulative (2022) WP - PM Peak Hour



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		☞ ↑↑↑			☞ ↑↑↑			☞	↑	☞	☞	↑	
Traffic Volume (veh/h)	11	59	788	52	57	1090	14	38	0	28	10	2	34
Future Volume (veh/h)	11	59	788	52	57	1090	14	38	0	28	10	2	34
Number		5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h		59	788	52	57	1090	14	38	0	28	10	2	34
Adj No. of Lanes		1	3	0	1	3	0	1	1	1	1	1	0
Peak Hour Factor		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %		0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h		324	1858	122	134	1418	18	107	502	547	107	24	406
Arrive On Green		0.06	0.12	0.12	0.07	0.27	0.27	0.06	0.00	0.26	0.06	0.26	0.26
Sat Flow, veh/h		1810	4973	327	1810	5278	68	1810	1900	1615	1810	90	1538
Grp Volume(v), veh/h		59	547	293	57	714	390	38	0	28	10	0	36
Grp Sat Flow(s),veh/h/ln		1810	1729	1842	1810	1729	1888	1810	1900	1615	1810	0	1629
Q Serve(g_s), s		2.2	10.2	10.3	2.1	13.3	13.3	1.4	0.0	0.5	0.4	0.0	1.2
Cycle Q Clear(g_c), s		2.2	10.2	10.3	2.1	13.3	13.3	1.4	0.0	0.5	0.4	0.0	1.2
Prop In Lane		1.00		0.18	1.00		0.04	1.00		1.00	1.00		0.94
Lane Grp Cap(c), veh/h		324	1292	688	134	929	507	107	502	547	107	0	430
V/C Ratio(X)		0.18	0.42	0.43	0.42	0.77	0.77	0.35	0.00	0.05	0.09	0.00	0.08
Avail Cap(c_a), veh/h		324	1292	688	194	929	507	194	502	547	194	0	430
HCM Platoon Ratio		0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		0.96	0.96	0.96	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh		28.1	23.7	23.7	31.0	23.6	23.6	31.6	0.0	6.8	31.1	0.0	19.4
Incr Delay (d2), s/veh		0.3	1.0	1.8	2.1	6.1	10.7	2.0	0.0	0.2	0.4	0.0	0.4
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		1.1	5.1	5.6	1.1	7.1	8.4	0.8	0.0	0.3	0.2	0.0	0.6
LnGrp Delay(d),s/veh		28.3	24.7	25.6	33.1	29.7	34.3	33.6	0.0	7.0	31.5	0.0	19.8
LnGrp LOS		C	C	C	C	C	C	C		A	C		B
Approach Vol, veh/h			899			1161			66			46	
Approach Delay, s/veh			25.2			31.4			22.3			22.3	
Approach LOS			C			C			C			C	
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	30.2	8.2	22.5	16.5	22.8	8.2	22.5						
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5						
Max Green Setting (Gmax), s	20.0	7.0	18.0	8.7	18.3	7.0	18.0						
Max Q Clear Time (g_c+1), s	12.3	3.4	3.2	4.2	15.3	2.4	2.5						
Green Ext Time (p_c), s	0.0	3.4	0.0	0.1	2.2	1.9	0.0	0.0					
<b>Intersection Summary</b>													
HCM 2010 Ctrl Delay			28.4										
HCM 2010 LOS			C										
<b>Notes</b>													

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Queues  
1: Hillrose Lane/Nason Street & Iris Avenue

AM/PM Gasoline Service Station  
Existing (2017) NP - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	384	981	16	843	93	22	60	122	16	317
v/c Ratio	1.02	0.47	0.08	0.60	0.15	0.11	0.11	0.72	0.02	0.32
Control Delay	87.1	17.1	30.1	8.3	0.5	29.8	17.2	55.1	17.1	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.1	17.1	30.1	8.3	0.5	29.8	17.2	55.1	17.1	2.4
Queue Length 50th (ft)	~89	102	4	24	0	9	16	51	4	4
Queue Length 95th (ft)	#149	160	m12	27	0	26	38	#109	16	23
Internal Link Dist (ft)		469		1782			117		826	
Turn Bay Length (ft)	260		170		160	100		210		
Base Capacity (vph)	375	2084	203	1407	608	193	563	175	730	986
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.47	0.08	0.60	0.15	0.11	0.11	0.70	0.02	0.32

#### Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

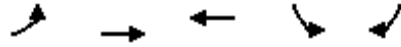
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Queues  
2: Iris Avenue & Kaiser Hospital Entrance

AM/PM Gasoline Service Station  
Existing (2017) NP - AM Peak Hour



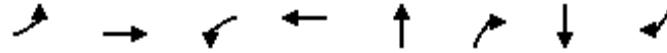
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	149	796	814	7	25
v/c Ratio	0.36	0.25	0.43	0.01	0.03
Control Delay	10.2	0.6	7.9	19.2	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	10.2	0.6	7.9	19.2	2.9
Queue Length 50th (ft)	55	3	42	2	0
Queue Length 95th (ft)	m17	4	60	11	8
Internal Link Dist (ft)		1782	966	165	
Turn Bay Length (ft)	190			110	
Base Capacity (vph)	464	3223	1912	477	944
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.32	0.25	0.43	0.01	0.03

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues  
6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Existing (2017) NP - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	196	634	40	571	140	45	36	229
v/c Ratio	0.45	0.27	0.21	0.42	0.28	0.07	0.06	0.34
Control Delay	19.6	2.8	36.9	9.7	21.6	0.2	19.4	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.6	2.8	36.9	9.7	21.6	0.2	19.4	4.9
Queue Length 50th (ft)	82	19	19	75	49	0	12	0
Queue Length 95th (ft)	107	21	45	15	89	0	30	40
Internal Link Dist (ft)		213		1171	331		132	
Turn Bay Length (ft)	240		250			50		
Base Capacity (vph)	541	2391	193	1369	501	635	590	679
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.27	0.21	0.42	0.28	0.07	0.06	0.34
<b>Intersection Summary</b>								

Queues  
7: Via Del Lago & Iris Avenue/Moreno Beach Drive

AM/PM Gasoline Service Station  
Existing (2017) NP - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	25	623	20	535	25	2	46	15	46
v/c Ratio	0.11	0.31	0.10	0.25	0.13	0.00	0.06	0.08	0.08
Control Delay	23.8	3.9	29.7	15.5	30.1	17.0	0.8	29.3	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.8	3.9	29.7	15.5	30.1	17.0	0.8	29.3	7.8
Queue Length 50th (ft)	12	4	8	30	10	1	0	6	1
Queue Length 95th (ft)	35	35	26	92	30	5	4	21	22
Internal Link Dist (ft)		1171		556		319			124
Turn Bay Length (ft)	110		300		95			50	
Base Capacity (vph)	244	2024	193	2154	193	689	795	193	566
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.31	0.10	0.25	0.13	0.00	0.06	0.08	0.08
Intersection Summary									

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Queues  
1: Hillrose Lane/Nason Street & Iris Avenue

AM/PM Gasoline Service Station  
Existing (2017) NP - PM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	250	642	15	822	113	14	34	129	40	441
v/c Ratio	0.66	0.31	0.08	0.59	0.19	0.07	0.06	0.57	0.05	0.41
Control Delay	39.2	15.6	14.2	10.1	1.0	29.2	15.6	39.1	14.4	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.2	15.6	14.2	10.1	1.0	29.2	15.6	39.1	14.4	3.4
Queue Length 50th (ft)	54	62	6	41	0	6	8	53	9	18
Queue Length 95th (ft)	#92	115	m17	54	0	21	27	104	34	53
Internal Link Dist (ft)		469		1782			117		826	
Turn Bay Length (ft)	260		170		160	100		210		
Base Capacity (vph)	380	2068	193	1385	602	193	555	237	798	1065
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.31	0.08	0.59	0.19	0.07	0.06	0.54	0.05	0.41

**Intersection Summary**

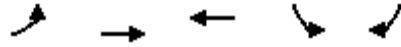
# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues  
2: Iris Avenue & Kaiser Hospital Entrance

AM/PM Gasoline Service Station  
Existing (2017) NP - PM Peak Hour



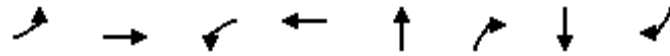
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	78	605	785	40	35
v/c Ratio	0.33	0.19	0.33	0.08	0.05
Control Delay	37.2	4.1	3.5	19.6	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	37.2	4.1	3.5	19.6	3.8
Queue Length 50th (ft)	37	34	19	13	0
Queue Length 95th (ft)	m77	17	27	34	13
Internal Link Dist (ft)		1782	966	165	
Turn Bay Length (ft)	190			110	
Base Capacity (vph)	335	3186	2372	489	847
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.23	0.19	0.33	0.08	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues  
6: Oliver Street & Iris Avenue

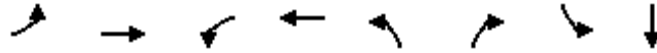
AM/PM Gasoline Service Station  
Existing (2017) NP - PM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	80	587	44	649	61	34	31	82
v/c Ratio	0.17	0.22	0.23	0.37	0.15	0.06	0.06	0.15
Control Delay	18.0	7.8	22.5	10.2	21.0	0.2	19.8	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	7.8	22.5	10.2	21.0	0.2	19.8	0.6
Queue Length 50th (ft)	26	60	18	86	20	0	10	0
Queue Length 95th (ft)	65	100	20	9	48	0	29	2
Internal Link Dist (ft)		213		1171	331		132	
Turn Bay Length (ft)	240		250			50		
Base Capacity (vph)	541	2689	193	1740	407	547	484	547
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.22	0.23	0.37	0.15	0.06	0.06	0.15
<b>Intersection Summary</b>								

Queues  
7: Via Del Lago & Iris Avenue/Moreno Beach Drive

AM/PM Gasoline Service Station  
Existing (2017) NP - PM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	24	544	41	661	20	23	10	20
v/c Ratio	0.11	0.22	0.21	0.25	0.10	0.03	0.05	0.04
Control Delay	18.8	4.6	31.2	12.1	29.7	0.0	28.9	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.8	4.6	31.2	12.1	29.7	0.0	28.9	10.4
Queue Length 50th (ft)	8	4	17	39	8	0	4	1
Queue Length 95th (ft)	29	104	44	119	27	0	17	16
Internal Link Dist (ft)		1171		556				124
Turn Bay Length (ft)	110		300		95		50	
Base Capacity (vph)	237	2512	198	2655	193	895	193	447
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.22	0.21	0.25	0.10	0.03	0.05	0.04
<b>Intersection Summary</b>								

Queues  
1: Hillrose Lane/Nason Street & Iris Avenue

AM/PM Gasoline Service Station  
Existing (2017) WP - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	384	992	19	854	98	22	63	128	16	317
v/c Ratio	1.02	0.48	0.09	0.61	0.16	0.11	0.13	0.74	0.02	0.32
Control Delay	87.1	17.2	30.0	8.2	0.5	29.8	16.8	56.4	17.1	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.1	17.2	30.0	8.2	0.5	29.8	16.8	56.4	17.1	2.4
Queue Length 50th (ft)	~89	104	4	24	0	9	16	54	4	4
Queue Length 95th (ft)	#149	162	m13	27	0	26	38	#116	16	23
Internal Link Dist (ft)		469		1782			117		826	
Turn Bay Length (ft)	260		170		160	100		210		
Base Capacity (vph)	375	2084	203	1407	608	193	495	174	730	986
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.48	0.09	0.61	0.16	0.11	0.13	0.74	0.02	0.32

#### Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

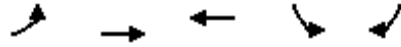
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Queues  
2: Iris Avenue & Kaiser Hospital Entrance

AM/PM Gasoline Service Station  
Existing (2017) WP - AM Peak Hour



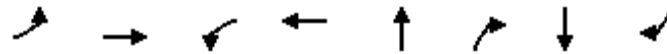
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	149	813	831	7	25
v/c Ratio	0.36	0.25	0.43	0.01	0.03
Control Delay	10.3	0.7	9.6	19.2	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	10.3	0.7	9.6	19.2	2.9
Queue Length 50th (ft)	55	3	51	2	0
Queue Length 95th (ft)	m18	4	m69	11	8
Internal Link Dist (ft)		1782	966	165	
Turn Bay Length (ft)	190			110	
Base Capacity (vph)	464	3223	1912	477	944
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.32	0.25	0.43	0.01	0.03

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues  
6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Existing (2017) WP - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	237	611	38	602	147	44	99	226
v/c Ratio	1.01	0.21	0.20	0.44	0.39	0.08	0.26	0.38
Control Delay	88.4	2.3	36.3	10.5	24.8	0.3	22.5	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.4	2.3	36.3	10.5	24.8	0.3	22.5	5.4
Queue Length 50th (ft)	~115	16	18	79	52	0	34	0
Queue Length 95th (ft)	#187	21	44	17	94	0	67	40
Internal Link Dist (ft)		213		1171	331		132	
Turn Bay Length (ft)	240		250			50		
Base Capacity (vph)	235	2872	193	1369	380	547	387	593
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.01	0.21	0.20	0.44	0.39	0.08	0.26	0.38

#### Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
7: Via Del Lago & Iris Avenue/Moreno Beach Drive

AM/PM Gasoline Service Station  
Existing (2017) WP - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	40	641	20	551	25	2	46	15	48
v/c Ratio	0.18	0.32	0.10	0.26	0.13	0.00	0.06	0.08	0.08
Control Delay	27.5	6.1	29.7	15.5	30.1	17.0	0.8	29.3	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.5	6.1	29.7	15.5	30.1	17.0	0.8	29.3	7.6
Queue Length 50th (ft)	19	15	8	31	10	1	0	6	1
Queue Length 95th (ft)	48	45	26	95	30	5	4	21	22
Internal Link Dist (ft)		1171		556		319			124
Turn Bay Length (ft)	110		300		95			50	
Base Capacity (vph)	244	2024	193	2154	193	689	795	193	567
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.32	0.10	0.26	0.13	0.00	0.06	0.08	0.08
Intersection Summary									

Queues  
1: Hillrose Lane/Nason Street & Iris Avenue

AM/PM Gasoline Service Station  
Existing (2017) WP - PM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	250	653	17	833	118	14	37	135	40	441
v/c Ratio	0.66	0.32	0.09	0.60	0.20	0.07	0.07	0.59	0.05	0.41
Control Delay	39.2	15.7	14.9	10.8	1.4	29.2	14.8	40.3	14.4	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.2	15.7	14.9	10.8	1.4	29.2	14.8	40.3	14.4	3.4
Queue Length 50th (ft)	54	63	7	51	0	6	8	56	9	18
Queue Length 95th (ft)	#92	117	m18	66	0	21	28	#116	34	53
Internal Link Dist (ft)		469		1782			117		826	
Turn Bay Length (ft)	260		170		160	100		210		
Base Capacity (vph)	380	2068	193	1385	602	193	552	237	798	1065
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.32	0.09	0.60	0.20	0.07	0.07	0.57	0.05	0.41

Intersection Summary

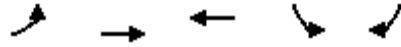
# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues  
2: Iris Avenue & Kaiser Hospital Entrance

AM/PM Gasoline Service Station  
Existing (2017) WP - PM Peak Hour



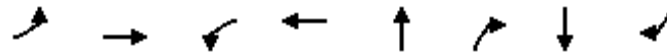
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	78	625	803	40	35
v/c Ratio	0.33	0.20	0.34	0.08	0.05
Control Delay	37.0	4.2	5.3	19.6	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	37.0	4.2	5.3	19.6	3.8
Queue Length 50th (ft)	37	35	29	13	0
Queue Length 95th (ft)	m77	17	40	34	13
Internal Link Dist (ft)		1782	966	165	
Turn Bay Length (ft)	190			110	
Base Capacity (vph)	335	3186	2372	489	847
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.23	0.20	0.34	0.08	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues  
6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Existing (2017) WP - PM Peak Hour



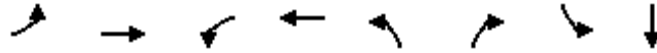
Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	121	563	42	682	68	33	97	78
v/c Ratio	0.64	0.21	0.22	0.39	0.18	0.06	0.24	0.14
Control Delay	36.5	7.6	23.2	10.8	21.5	0.2	22.3	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.5	7.6	23.2	10.8	21.5	0.2	22.3	0.5
Queue Length 50th (ft)	40	57	17	91	23	0	33	0
Queue Length 95th (ft)	#94	97	20	11	53	0	69	0
Internal Link Dist (ft)		213		1171	331		132	
Turn Bay Length (ft)	240		250			50		
Base Capacity (vph)	217	2689	193	1737	381	547	400	547
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.21	0.22	0.39	0.18	0.06	0.24	0.14

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
7: Via Del Lago & Iris Avenue/Moreno Beach Drive

AM/PM Gasoline Service Station  
Existing (2017) WP - PM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	39	562	41	678	20	23	10	23
v/c Ratio	0.17	0.22	0.21	0.26	0.10	0.03	0.05	0.05
Control Delay	23.2	7.6	31.2	12.2	29.7	0.0	28.9	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.2	7.6	31.2	12.2	29.7	0.0	28.9	9.9
Queue Length 50th (ft)	14	14	17	40	8	0	4	1
Queue Length 95th (ft)	42	109	44	122	27	0	17	17
Internal Link Dist (ft)		1171		556				124
Turn Bay Length (ft)	110		300		95		50	
Base Capacity (vph)	249	2514	198	2655	193	892	193	448
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.22	0.21	0.26	0.10	0.03	0.05	0.05
<b>Intersection Summary</b>								

Queues  
1: Hillrose Lane/Nason Street & Iris Avenue

AM/PM Gasoline Service Station  
Project Completion Year (2022) NP - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	424	1081	19	930	102	24	65	134	17	350
v/c Ratio	1.13	0.52	0.09	0.66	0.17	0.12	0.13	0.77	0.02	0.36
Control Delay	119.3	17.7	31.5	8.2	0.5	30.0	17.4	60.3	17.1	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	119.3	17.7	31.5	8.2	0.5	30.0	17.4	60.3	17.1	3.0
Queue Length 50th (ft)	~111	115	5	27	0	10	17	57	4	11
Queue Length 95th (ft)	#170	179	m11	30	m0	27	40	#124	17	31
Internal Link Dist (ft)		469		1782			117		826	
Turn Bay Length (ft)	260		170		160	100		210		
Base Capacity (vph)	375	2084	203	1407	608	193	496	174	730	982
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.13	0.52	0.09	0.66	0.17	0.12	0.13	0.77	0.02	0.36

#### Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

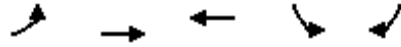
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



## Queues 2: Iris Avenue & Kaiser Hospital Entrance

AM/PM Gasoline Service Station  
Project Completion Year (2022) NP - AM Peak Hour



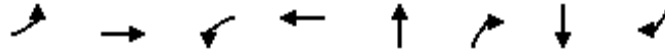
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	165	879	897	8	27
v/c Ratio	0.36	0.27	0.56	0.02	0.03
Control Delay	9.6	0.7	9.6	19.3	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	9.6	0.7	9.6	19.3	3.0
Queue Length 50th (ft)	61	3	47	3	0
Queue Length 95th (ft)	m20	6	66	12	9
Internal Link Dist (ft)		1782	966	165	
Turn Bay Length (ft)	190			110	
Base Capacity (vph)	464	3223	1589	477	945
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.36	0.27	0.56	0.02	0.03

### Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues  
6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Project Completion Year (2022) NP - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	216	700	45	629	156	49	41	253
v/c Ratio	0.50	0.29	0.23	0.46	0.32	0.08	0.07	0.37
Control Delay	20.4	2.8	37.2	10.0	22.1	0.2	19.5	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.4	2.8	37.2	10.0	22.1	0.2	19.5	4.9
Queue Length 50th (ft)	91	21	21	83	55	0	13	0
Queue Length 95th (ft)	114	26	48	16	98	0	33	42
Internal Link Dist (ft)		213		1171	331		132	
Turn Bay Length (ft)	240		250			50		
Base Capacity (vph)	541	2401	193	1369	493	632	585	692
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.29	0.23	0.46	0.32	0.08	0.07	0.37
<b>Intersection Summary</b>								

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Queues  
7: Via Del Lago & Iris Avenue/Moreno Beach Drive

AM/PM Gasoline Service Station  
Project Completion Year (2022) NP - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	27	689	22	591	28	2	51	16	50
v/c Ratio	0.12	0.34	0.11	0.27	0.15	0.00	0.06	0.08	0.09
Control Delay	23.7	4.0	29.8	15.7	30.3	17.0	1.1	29.4	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.7	4.0	29.8	15.7	30.3	17.0	1.1	29.4	7.5
Queue Length 50th (ft)	13	5	9	34	11	1	0	6	1
Queue Length 95th (ft)	36	39	27	102	32	5	6	22	22
Internal Link Dist (ft)		1171		556		319			124
Turn Bay Length (ft)	110		300		95			50	
Base Capacity (vph)	244	2024	193	2154	193	689	795	193	569
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.34	0.11	0.27	0.15	0.00	0.06	0.08	0.09
Intersection Summary									

Queues  
1: Hillrose Lane/Nason Street & Iris Avenue

AM/PM Gasoline Service Station  
Project Completion Year (2022) NP - PM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	276	708	16	908	125	15	37	142	45	487
v/c Ratio	0.73	0.34	0.08	0.66	0.21	0.08	0.07	0.62	0.06	0.46
Control Delay	42.9	15.9	14.1	10.9	1.2	29.3	15.6	42.1	14.4	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	15.9	14.1	10.9	1.2	29.3	15.6	42.1	14.4	4.2
Queue Length 50th (ft)	60	69	6	46	0	6	8	59	10	28
Queue Length 95th (ft)	#111	127	m15	60	0	22	29	#125	36	66
Internal Link Dist (ft)		469		1782			117		826	
Turn Bay Length (ft)	260		170		160	100		210		
Base Capacity (vph)	380	2068	193	1385	602	193	555	237	798	1061
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.34	0.08	0.66	0.21	0.08	0.07	0.60	0.06	0.46

Intersection Summary

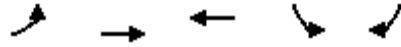
# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

## Queues 2: Iris Avenue & Kaiser Hospital Entrance

AM/PM Gasoline Service Station  
Project Completion Year (2022) NP - PM Peak Hour



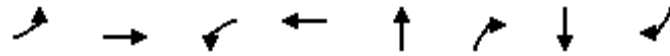
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	87	669	867	44	39
v/c Ratio	0.36	0.21	0.37	0.09	0.05
Control Delay	37.4	4.2	3.6	19.8	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	37.4	4.2	3.6	19.8	3.6
Queue Length 50th (ft)	42	38	21	14	0
Queue Length 95th (ft)	m83	19	31	37	13
Internal Link Dist (ft)		1782	966	165	
Turn Bay Length (ft)	190			110	
Base Capacity (vph)	335	3186	2349	489	849
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.26	0.21	0.37	0.09	0.05

### Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues  
6: Oliver Street & Iris Avenue

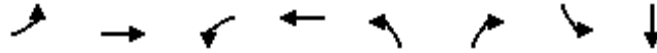
AM/PM Gasoline Service Station  
Project Completion Year (2022) NP - PM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	88	648	48	716	67	38	35	90
v/c Ratio	0.19	0.24	0.25	0.41	0.17	0.07	0.07	0.16
Control Delay	18.0	7.8	24.4	8.5	21.2	0.3	19.9	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	7.8	24.4	8.5	21.2	0.3	19.9	1.2
Queue Length 50th (ft)	29	67	20	97	22	0	11	0
Queue Length 95th (ft)	69	110	24	9	52	0	32	6
Internal Link Dist (ft)		213		1171	331		132	
Turn Bay Length (ft)	240		250			50		
Base Capacity (vph)	541	2688	193	1740	403	547	479	547
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.24	0.25	0.41	0.17	0.07	0.07	0.16
<b>Intersection Summary</b>								

Queues  
7: Via Del Lago & Iris Avenue/Moreno Beach Drive

AM/PM Gasoline Service Station  
Project Completion Year (2022) NP - PM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	27	600	46	729	22	26	11	22
v/c Ratio	0.13	0.25	0.24	0.29	0.11	0.03	0.06	0.05
Control Delay	18.8	6.3	32.0	14.4	29.9	0.0	28.9	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.8	6.3	32.0	14.4	29.9	0.0	28.9	10.1
Queue Length 50th (ft)	9	5	18	43	9	0	4	1
Queue Length 95th (ft)	32	113	47	131	28	0	18	16
Internal Link Dist (ft)		1171		556				124
Turn Bay Length (ft)	110		300		95		50	
Base Capacity (vph)	237	2354	194	2485	193	923	193	448
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.25	0.24	0.29	0.11	0.03	0.06	0.05
<b>Intersection Summary</b>								

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Queues  
1: Hillrose Lane/Nason Street & Iris Avenue

AM/PM Gasoline Service Station  
Project Completion Year (2022) WP - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	424	1092	21	941	107	24	68	140	17	350
v/c Ratio	1.13	0.52	0.10	0.67	0.18	0.12	0.14	0.80	0.02	0.36
Control Delay	119.3	17.7	32.2	8.0	0.6	30.0	16.9	64.9	17.1	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	119.3	17.7	32.2	8.0	0.6	30.0	16.9	64.9	17.1	3.0
Queue Length 50th (ft)	~111	117	5	26	0	10	17	60	4	11
Queue Length 95th (ft)	#170	180	m13	30	m0	27	40	#131	17	31
Internal Link Dist (ft)		469		1782			117		826	
Turn Bay Length (ft)	260		170		160	100		210		
Base Capacity (vph)	375	2084	203	1407	608	193	496	174	730	982
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.13	0.52	0.10	0.67	0.18	0.12	0.14	0.80	0.02	0.36

#### Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

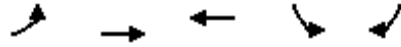
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



## Queues 2: Iris Avenue & Kaiser Hospital Entrance

AM/PM Gasoline Service Station  
Project Completion Year (2022) WP - AM Peak Hour



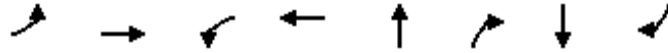
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	165	897	914	8	27
v/c Ratio	0.36	0.28	0.58	0.02	0.03
Control Delay	9.9	0.8	11.2	19.3	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	9.9	0.8	11.2	19.3	3.2
Queue Length 50th (ft)	61	4	56	3	1
Queue Length 95th (ft)	m22	8	m75	12	9
Internal Link Dist (ft)		1782	966	165	
Turn Bay Length (ft)	190			110	
Base Capacity (vph)	464	3223	1588	477	944
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.36	0.28	0.58	0.02	0.03

### Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

## Queues 6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Project Completion Year (2022) WP - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	257	676	42	662	162	48	103	249
v/c Ratio	1.16	0.25	0.22	0.48	0.43	0.09	0.27	0.41
Control Delay	137.7	2.6	37.3	9.8	25.7	0.3	22.7	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	137.7	2.6	37.3	9.8	25.7	0.3	22.7	5.4
Queue Length 50th (ft)	~141	21	20	90	58	0	35	0
Queue Length 95th (ft)	#211	27	47	19	103	0	69	41
Internal Link Dist (ft)		213		1171	331		132	
Turn Bay Length (ft)	240		250			50		
Base Capacity (vph)	221	2702	193	1369	376	547	385	610
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.16	0.25	0.22	0.48	0.43	0.09	0.27	0.41

### Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
7: Via Del Lago & Iris Avenue/Moreno Beach Drive

AM/PM Gasoline Service Station  
Project Completion Year (2022) WP - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	43	706	22	607	28	2	51	16	53
v/c Ratio	0.27	0.35	0.11	0.31	0.15	0.00	0.06	0.08	0.09
Control Delay	29.9	6.0	29.8	17.2	30.3	17.0	1.1	29.4	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.9	6.0	29.8	17.2	30.3	17.0	1.1	29.4	7.3
Queue Length 50th (ft)	20	13	9	58	11	1	0	6	1
Queue Length 95th (ft)	50	51	27	104	32	5	6	22	23
Internal Link Dist (ft)		1171		556		319			124
Turn Bay Length (ft)	110		300		95			50	
Base Capacity (vph)	174	2024	193	1961	193	689	795	193	571
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.35	0.11	0.31	0.15	0.00	0.06	0.08	0.09

Intersection Summary

Queues  
1: Hillrose Lane/Nason Street & Iris Avenue

AM/PM Gasoline Service Station  
Project Completion Year (2022) WP - PM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	276	719	18	918	130	15	40	148	45	487
v/c Ratio	0.73	0.35	0.09	0.66	0.22	0.08	0.08	0.65	0.06	0.46
Control Delay	42.9	16.0	14.5	11.5	1.5	29.3	14.9	43.8	14.4	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	16.0	14.5	11.5	1.5	29.3	14.9	43.8	14.4	4.2
Queue Length 50th (ft)	60	70	7	55	0	6	8	61	10	28
Queue Length 95th (ft)	#111	129	m17	79	0	22	30	#132	36	66
Internal Link Dist (ft)		469		1782			117		826	
Turn Bay Length (ft)	260		170		160	100		210		
Base Capacity (vph)	380	2068	193	1385	602	193	494	237	798	1061
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.35	0.09	0.66	0.22	0.08	0.08	0.62	0.06	0.46

#### Intersection Summary

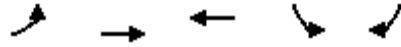
# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

## Queues 2: Iris Avenue & Kaiser Hospital Entrance

AM/PM Gasoline Service Station  
Project Completion Year (2022) WP - PM Peak Hour



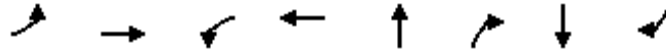
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	87	688	885	44	39
v/c Ratio	0.36	0.22	0.38	0.09	0.05
Control Delay	37.2	4.2	5.3	19.8	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	37.2	4.2	5.3	19.8	3.6
Queue Length 50th (ft)	42	39	32	14	0
Queue Length 95th (ft)	m82	20	43	37	13
Internal Link Dist (ft)		1782	966	165	
Turn Bay Length (ft)	190			110	
Base Capacity (vph)	335	3186	2349	489	849
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.26	0.22	0.38	0.09	0.05

### Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues  
6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Project Completion Year (2022) WP - PM Peak Hour



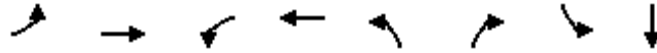
Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	129	624	46	750	73	37	102	87
v/c Ratio	0.72	0.23	0.24	0.43	0.19	0.07	0.26	0.16
Control Delay	45.1	7.7	24.0	7.9	21.7	0.2	22.4	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.1	7.7	24.0	7.9	21.7	0.2	22.4	1.0
Queue Length 50th (ft)	43	64	19	102	24	0	35	0
Queue Length 95th (ft)	#117	106	24	12	56	0	72	4
Internal Link Dist (ft)		213		1171	331		132	
Turn Bay Length (ft)	240		250			50		
Base Capacity (vph)	202	2688	193	1736	378	547	400	547
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.23	0.24	0.43	0.19	0.07	0.26	0.16

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
7: Via Del Lago & Iris Avenue/Moreno Beach Drive

AM/PM Gasoline Service Station  
Project Completion Year (2022) WP - PM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	41	618	46	746	22	26	11	25
v/c Ratio	0.25	0.26	0.24	0.33	0.11	0.03	0.06	0.06
Control Delay	25.2	9.2	32.0	15.9	29.9	0.0	28.9	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.2	9.2	32.0	15.9	29.9	0.0	28.9	9.7
Queue Length 50th (ft)	14	14	18	74	9	0	4	1
Queue Length 95th (ft)	43	117	47	135	28	0	18	17
Internal Link Dist (ft)		1171		556				124
Turn Bay Length (ft)	110		300		95		50	
Base Capacity (vph)	175	2356	194	2290	193	920	193	449
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.26	0.24	0.33	0.11	0.03	0.06	0.06
<b>Intersection Summary</b>								

Queues  
1: Hillrose Lane/Nason Street & Iris Avenue

AM/PM Gasoline Service Station  
Cumulative (2022) NP - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	398	1202	30	915	152	20	93	207	17	313
v/c Ratio	1.06	0.63	0.15	0.65	0.25	0.10	0.19	1.22	0.02	0.30
Control Delay	97.3	21.5	35.4	7.3	0.8	29.7	12.3	171.3	14.8	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	97.3	21.5	35.4	7.3	0.8	29.7	12.3	171.3	14.8	2.0
Queue Length 50th (ft)	~99	132	9	26	0	8	14	~112	4	3
Queue Length 95th (ft)	#180	#250	m16	32	m0	27	47	#233	19	29
Internal Link Dist (ft)		469		1782			117		826	
Turn Bay Length (ft)	260		170		160	100		210		
Base Capacity (vph)	375	1915	203	1407	608	193	498	170	792	1046
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.06	0.63	0.15	0.65	0.25	0.10	0.19	1.22	0.02	0.30

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

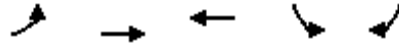
Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



## Queues 2: Iris Avenue & Kaiser Hospital Entrance

## AM/PM Gasoline Service Station

Cumulative (2022) NP - AM Peak Hour



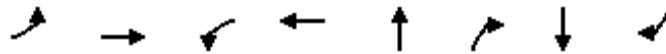
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	288	1090	1107	43	44
v/c Ratio	0.62	0.34	0.69	0.09	0.05
Control Delay	13.2	1.0	8.3	20.1	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.2	1.0	8.3	20.1	4.7
Queue Length 50th (ft)	115	6	42	14	4
Queue Length 95th (ft)	m42	m13	60	36	16
Internal Link Dist (ft)		1782	966	165	
Turn Bay Length (ft)	190			110	
Base Capacity (vph)	464	3223	1594	477	941
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.62	0.34	0.69	0.09	0.05

### Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues  
6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Cumulative (2022) NP - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	210	933	47	785	157	66	35	266
v/c Ratio	0.48	0.39	0.24	0.57	0.32	0.10	0.06	0.38
Control Delay	18.0	3.3	36.9	10.9	22.2	0.3	19.4	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	3.3	36.9	10.9	22.2	0.3	19.4	4.9
Queue Length 50th (ft)	89	30	23	108	55	0	11	0
Queue Length 95th (ft)	121	47	54	20	106	0	32	51
Internal Link Dist (ft)		213		1171	331		132	
Turn Bay Length (ft)	240		250			50		
Base Capacity (vph)	541	2398	193	1370	486	633	586	702
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.39	0.24	0.57	0.32	0.10	0.06	0.38
<b>Intersection Summary</b>								

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Queues  
7: Via Del Lago & Iris Avenue/Moreno Beach Drive

AM/PM Gasoline Service Station  
Cumulative (2022) NP - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	31	944	24	732	37	2	56	14	67
v/c Ratio	0.14	0.47	0.12	0.34	0.19	0.00	0.07	0.07	0.12
Control Delay	21.8	3.2	30.0	16.2	31.2	17.0	1.4	29.2	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.8	3.2	30.0	16.2	31.2	17.0	1.4	29.2	6.9
Queue Length 50th (ft)	14	5	10	44	15	1	0	6	1
Queue Length 95th (ft)	m38	57	30	132	41	5	9	21	28
Internal Link Dist (ft)		1171		556		319			124
Turn Bay Length (ft)	110		300		95			50	
Base Capacity (vph)	244	2023	193	2155	193	689	795	193	578
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.47	0.12	0.34	0.19	0.00	0.07	0.07	0.12

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Queues  
1: Hillrose Lane/Nason Street & Iris Avenue

AM/PM Gasoline Service Station  
Cumulative (2022) NP - PM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	293	819	61	1213	238	14	53	234	42	516
v/c Ratio	0.77	0.47	0.32	0.88	0.39	0.07	0.11	0.99	0.05	0.49
Control Delay	45.9	20.6	18.1	18.5	2.1	29.2	12.8	90.2	14.4	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.9	20.6	18.1	18.5	2.1	29.2	12.8	90.2	14.4	4.6
Queue Length 50th (ft)	64	110	19	62	1	6	9	102	10	33
Queue Length 95th (ft)	#121	149	m34	#155	0	21	33	#233	34	77
Internal Link Dist (ft)		469		1782			117		826	
Turn Bay Length (ft)	260		170		160	100		210		
Base Capacity (vph)	380	1730	193	1385	605	193	484	237	798	1060
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.47	0.32	0.88	0.39	0.07	0.11	0.99	0.05	0.49

#### Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

## Queues 2: Iris Avenue & Kaiser Hospital Entrance

## AM/PM Gasoline Service Station

Cumulative (2022) NP - PM Peak Hour



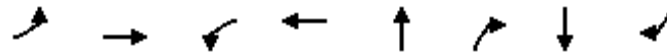
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	157	833	1230	206	123
v/c Ratio	0.55	0.26	0.60	0.42	0.15
Control Delay	39.6	3.2	3.7	24.2	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	39.6	3.2	3.7	24.2	8.7
Queue Length 50th (ft)	76	24	20	73	23
Queue Length 95th (ft)	m119	m31	28	130	48
Internal Link Dist (ft)		1782	966	165	
Turn Bay Length (ft)	190			110	
Base Capacity (vph)	335	3186	2059	489	838
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.47	0.26	0.60	0.42	0.15

### Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues  
6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Cumulative (2022) NP - PM Peak Hour



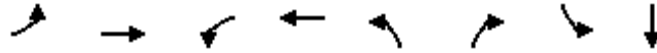
Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	152	917	73	1071	77	43	34	121
v/c Ratio	0.32	0.36	0.38	0.62	0.19	0.08	0.07	0.22
Control Delay	18.1	8.0	32.6	8.6	21.6	0.3	19.9	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.1	8.0	32.6	8.6	21.6	0.3	19.9	2.8
Queue Length 50th (ft)	53	94	26	158	26	0	11	0
Queue Length 95th (ft)	94	120	m44	13	58	0	31	20
Internal Link Dist (ft)		213		1171	331		132	
Turn Bay Length (ft)	240		250			50		
Base Capacity (vph)	541	2522	193	1739	395	547	477	547
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.36	0.38	0.62	0.19	0.08	0.07	0.22

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues  
7: Via Del Lago & Iris Avenue/Moreno Beach Drive

AM/PM Gasoline Service Station  
Cumulative (2022) NP - PM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	56	823	57	1088	38	28	10	33
v/c Ratio	0.26	0.35	0.29	0.47	0.20	0.03	0.05	0.07
Control Delay	19.2	5.9	33.0	17.4	31.3	0.1	28.8	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.2	5.9	33.0	17.4	31.3	0.1	28.8	8.8
Queue Length 50th (ft)	22	5	23	117	15	0	4	1
Queue Length 95th (ft)	50	144	55	205	42	0	17	20
Internal Link Dist (ft)		1171		556				124
Turn Bay Length (ft)	110		300		95		50	
Base Capacity (vph)	237	2348	196	2292	193	906	193	454
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.35	0.29	0.47	0.20	0.03	0.05	0.07
<b>Intersection Summary</b>								

Queues  
1: Hillrose Lane/Nason Street & Iris Avenue

AM/PM Gasoline Service Station  
Cumulative (2022) WP - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	398	1211	32	924	156	20	95	212	17	313
v/c Ratio	1.06	0.63	0.16	0.66	0.26	0.10	0.19	1.25	0.02	0.30
Control Delay	97.3	21.6	35.8	7.3	0.8	29.7	12.1	184.8	14.8	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	97.3	21.6	35.8	7.3	0.8	29.7	12.1	184.8	14.8	2.0
Queue Length 50th (ft)	~99	134	9	24	0	8	14	~117	4	3
Queue Length 95th (ft)	#180	#254	m17	34	m0	27	47	#240	19	29
Internal Link Dist (ft)		469		1782			117		826	
Turn Bay Length (ft)	260		170		160	100		210		
Base Capacity (vph)	375	1915	203	1407	608	193	498	169	792	1046
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.06	0.63	0.16	0.66	0.26	0.10	0.19	1.25	0.02	0.30

#### Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

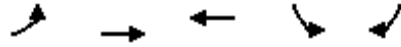
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Queues  
2: Iris Avenue & Kaiser Hospital Entrance

AM/PM Gasoline Service Station  
Cumulative (2022) WP - AM Peak Hour



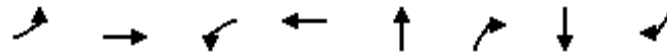
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	288	1106	1122	43	44
v/c Ratio	0.62	0.34	0.70	0.09	0.05
Control Delay	13.2	1.0	9.7	20.1	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.2	1.0	9.7	20.1	4.8
Queue Length 50th (ft)	116	6	50	14	5
Queue Length 95th (ft)	m43	m14	m69	36	16
Internal Link Dist (ft)		1782	966	165	
Turn Bay Length (ft)	190			110	
Base Capacity (vph)	464	3223	1592	477	941
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.62	0.34	0.70	0.09	0.05

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues  
6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Cumulative (2022) WP - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	245	913	45	812	163	65	88	263
v/c Ratio	1.30	0.34	0.23	0.59	0.44	0.12	0.23	0.42
Control Delay	190.3	2.9	37.2	10.5	25.9	0.4	22.1	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	190.3	2.9	37.2	10.5	25.9	0.4	22.1	5.4
Queue Length 50th (ft)	~146	29	22	115	58	0	30	0
Queue Length 95th (ft)	#241	46	52	22	112	0	64	51
Internal Link Dist (ft)		213		1171	331		132	
Turn Bay Length (ft)	240		250			50		
Base Capacity (vph)	189	2702	193	1368	372	547	389	620
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.30	0.34	0.23	0.59	0.44	0.12	0.23	0.42

#### Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
7: Via Del Lago & Iris Avenue/Moreno Beach Drive

AM/PM Gasoline Service Station  
Cumulative (2022) WP - AM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	44	959	24	746	37	2	56	14	69
v/c Ratio	0.27	0.47	0.12	0.38	0.19	0.00	0.07	0.07	0.12
Control Delay	27.2	4.7	30.0	17.8	31.2	17.0	1.4	29.2	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.2	4.7	30.0	17.8	31.2	17.0	1.4	29.2	6.8
Queue Length 50th (ft)	21	14	10	73	15	1	0	6	1
Queue Length 95th (ft)	53	66	30	134	41	5	9	21	28
Internal Link Dist (ft)		1171		556		319			124
Turn Bay Length (ft)	110		300		95			50	
Base Capacity (vph)	174	2025	193	1963	193	689	795	193	580
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.47	0.12	0.38	0.19	0.00	0.07	0.07	0.12
Intersection Summary									

Attachment: Appendix J - Traffic Impact Analysis (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

Queues  
1: Hillrose Lane/Nason Street & Iris Avenue

AM/PM Gasoline Service Station  
Cumulative (2022) WP - PM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	293	829	63	1223	243	14	56	239	42	516
v/c Ratio	0.77	0.48	0.33	0.88	0.40	0.07	0.12	1.01	0.05	0.49
Control Delay	45.9	20.7	18.7	19.0	2.3	29.2	12.5	95.5	14.4	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.9	20.7	18.7	19.0	2.3	29.2	12.5	95.5	14.4	4.6
Queue Length 50th (ft)	64	112	20	78	1	6	9	~106	10	33
Queue Length 95th (ft)	#121	151	m36	#249	0	21	34	#239	34	77
Internal Link Dist (ft)		469		1782			117		826	
Turn Bay Length (ft)	260		170		160	100		210		
Base Capacity (vph)	380	1730	193	1385	609	193	484	237	798	1060
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.48	0.33	0.88	0.40	0.07	0.12	1.01	0.05	0.49

#### Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

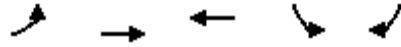
# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

## Queues 2: Iris Avenue & Kaiser Hospital Entrance

AM/PM Gasoline Service Station  
Cumulative (2022) WP - PM Peak Hour



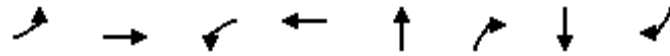
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	157	851	1247	206	123
v/c Ratio	0.55	0.27	0.61	0.42	0.16
Control Delay	39.4	3.2	4.3	24.2	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	39.4	3.2	4.3	24.2	8.7
Queue Length 50th (ft)	75	25	32	73	24
Queue Length 95th (ft)	m119	m32	m41	130	48
Internal Link Dist (ft)		1782	966	165	
Turn Bay Length (ft)	190			110	
Base Capacity (vph)	335	3186	2059	489	837
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.47	0.27	0.61	0.42	0.15

### Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues  
6: Oliver Street & Iris Avenue

AM/PM Gasoline Service Station  
Cumulative (2022) WP - PM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	193	894	71	1102	83	42	96	118
v/c Ratio	1.38	0.33	0.37	0.80	0.22	0.08	0.24	0.22
Control Delay	232.5	6.9	31.6	12.5	22.1	0.3	22.2	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	232.5	6.9	31.6	12.5	22.1	0.3	22.2	2.7
Queue Length 50th (ft)	~104	92	25	164	28	0	32	0
Queue Length 95th (ft)	#218	117	m39	15	62	0	69	19
Internal Link Dist (ft)		213		1171	331		132	
Turn Bay Length (ft)	240		250			50		
Base Capacity (vph)	140	2689	193	1369	371	547	399	547
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.38	0.33	0.37	0.80	0.22	0.08	0.24	0.22

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

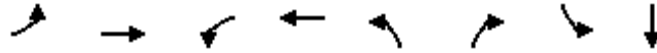
# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues  
7: Via Del Lago & Iris Avenue/Moreno Beach Drive

AM/PM Gasoline Service Station  
Cumulative (2022) WP - PM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBR	SBL	SBT
Lane Group Flow (vph)	70	840	57	1104	38	28	10	36
v/c Ratio	0.61	0.36	0.29	0.53	0.20	0.03	0.05	0.08
Control Delay	46.1	8.2	33.0	19.2	31.3	0.1	28.8	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.1	8.2	33.0	19.2	31.3	0.1	28.8	8.6
Queue Length 50th (ft)	27	14	23	120	15	0	4	1
Queue Length 95th (ft)	#83	149	55	208	42	0	17	20
Internal Link Dist (ft)		1171		556				124
Turn Bay Length (ft)	110		300		95		50	
Base Capacity (vph)	118	2348	196	2097	193	905	193	455
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.36	0.29	0.53	0.20	0.03	0.05	0.08

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queuing and Blocking Report  
Existing (2017) NP - AM Peak Hour

10/18/2017

Intersection: 3: Iris Avenue & Project Driveway 1

Movement

Directions Served  
Maximum Queue (ft)  
Average Queue (ft)  
95th Queue (ft)  
Link Distance (ft)  
Upstream Blk Time (%)  
Queuing Penalty (veh)  
Storage Bay Dist (ft)  
Storage Blk Time (%)  
Queuing Penalty (veh)

Intersection: 4: John F Kennedy Drive & Oliver Street

Movement	WB	WB	NB	NB	SB
Directions Served	L	R	T	TR	LT
Maximum Queue (ft)	32	55	57	102	102
Average Queue (ft)	23	31	39	54	57
95th Queue (ft)	45	53	57	84	85
Link Distance (ft)		580	1351	1351	352
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100				
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: Oliver Street & Project Driveway 2

Movement

Directions Served  
Maximum Queue (ft)  
Average Queue (ft)  
95th Queue (ft)  
Link Distance (ft)  
Upstream Blk Time (%)  
Queuing Penalty (veh)  
Storage Bay Dist (ft)  
Storage Blk Time (%)  
Queuing Penalty (veh)



Queuing and Blocking Report  
Existing (2017) NP - PM Peak Hour

10/18/2017

Intersection: 3: Iris Avenue & Project Driveway 1

Movement

Directions Served  
Maximum Queue (ft)  
Average Queue (ft)  
95th Queue (ft)  
Link Distance (ft)  
Upstream Blk Time (%)  
Queuing Penalty (veh)  
Storage Bay Dist (ft)  
Storage Blk Time (%)  
Queuing Penalty (veh)

Intersection: 4: John F Kennedy Drive & Oliver Street

Movement	WB	WB	NB	NB	SB
Directions Served	L	R	T	TR	LT
Maximum Queue (ft)	50	31	58	55	55
Average Queue (ft)	27	29	29	25	40
95th Queue (ft)	47	39	51	48	59
Link Distance (ft)		580	1351	1351	352
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100				
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: Oliver Street & Project Driveway 2

Movement

Directions Served  
Maximum Queue (ft)  
Average Queue (ft)  
95th Queue (ft)  
Link Distance (ft)  
Upstream Blk Time (%)  
Queuing Penalty (veh)  
Storage Bay Dist (ft)  
Storage Blk Time (%)  
Queuing Penalty (veh)

Queuing and Blocking Report  
Existing (2017) WP - AM Peak Hour

10/18/2017

Intersection: 3: Iris Avenue & Project Driveway 1

Movement	SB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	25
95th Queue (ft)	45
Link Distance (ft)	171
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: John F Kennedy Drive & Oliver Street

Movement	WB	WB	NB	NB	SB
Directions Served	L	R	T	TR	LT
Maximum Queue (ft)	51	55	55	57	96
Average Queue (ft)	21	31	41	48	59
95th Queue (ft)	47	47	59	66	84
Link Distance (ft)		580	1351	1351	352
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100				
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: Oliver Street & Project Driveway 2

Movement	EB
Directions Served	R
Maximum Queue (ft)	55
Average Queue (ft)	28
95th Queue (ft)	51
Link Distance (ft)	109
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report  
Existing (2017) WP - PM Peak Hour

10/18/2017

Intersection: 3: Iris Avenue & Project Driveway 1

Movement	SB
Directions Served	R
Maximum Queue (ft)	55
Average Queue (ft)	24
95th Queue (ft)	51
Link Distance (ft)	171
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: John F Kennedy Drive & Oliver Street

Movement	WB	WB	NB	NB	SB
Directions Served	L	R	T	TR	LT
Maximum Queue (ft)	53	55	55	56	57
Average Queue (ft)	21	26	33	31	41
95th Queue (ft)	47	51	50	52	60
Link Distance (ft)		580	1351	1351	352
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100				
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: Oliver Street & Project Driveway 2

Movement	EB
Directions Served	R
Maximum Queue (ft)	30
Average Queue (ft)	26
95th Queue (ft)	40
Link Distance (ft)	109
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report  
 Project Completion Year (2022) NP - AM Peak Hour

10/18/2017

Intersection: 3: Iris Avenue & Project Driveway 1

Movement

Directions Served  
 Maximum Queue (ft)  
 Average Queue (ft)  
 95th Queue (ft)  
 Link Distance (ft)  
 Upstream Blk Time (%)  
 Queuing Penalty (veh)  
 Storage Bay Dist (ft)  
 Storage Blk Time (%)  
 Queuing Penalty (veh)

Intersection: 4: John F Kennedy Drive & Oliver Street

Movement	WB	WB	NB	NB	SB
Directions Served	L	R	T	TR	LT
Maximum Queue (ft)	31	56	98	77	102
Average Queue (ft)	16	31	42	43	59
95th Queue (ft)	41	51	71	67	88
Link Distance (ft)		580	1351	1351	352
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100				
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: Oliver Street & Project Driveway 2

Movement

Directions Served  
 Maximum Queue (ft)  
 Average Queue (ft)  
 95th Queue (ft)  
 Link Distance (ft)  
 Upstream Blk Time (%)  
 Queuing Penalty (veh)  
 Storage Bay Dist (ft)  
 Storage Blk Time (%)  
 Queuing Penalty (veh)

Queuing and Blocking Report  
 Project Completion Year (2022) NP - PM Peak Hour

10/18/2017

Intersection: 3: Iris Avenue & Project Driveway 1

Movement

Directions Served  
 Maximum Queue (ft)  
 Average Queue (ft)  
 95th Queue (ft)  
 Link Distance (ft)  
 Upstream Blk Time (%)  
 Queuing Penalty (veh)  
 Storage Bay Dist (ft)  
 Storage Blk Time (%)  
 Queuing Penalty (veh)

Intersection: 4: John F Kennedy Drive & Oliver Street

Movement	WB	WB	NB	NB	SB
Directions Served	L	R	T	TR	LT
Maximum Queue (ft)	53	31	53	31	78
Average Queue (ft)	16	27	22	22	39
95th Queue (ft)	45	42	48	45	61
Link Distance (ft)		580	1351	1351	352
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100				
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: Oliver Street & Project Driveway 2

Movement

Directions Served  
 Maximum Queue (ft)  
 Average Queue (ft)  
 95th Queue (ft)  
 Link Distance (ft)  
 Upstream Blk Time (%)  
 Queuing Penalty (veh)  
 Storage Bay Dist (ft)  
 Storage Blk Time (%)  
 Queuing Penalty (veh)

Queuing and Blocking Report  
 Project Completion Year (2022) WP - AM Peak Hour

10/18/2017

Intersection: 3: Iris Avenue & Project Driveway 1

Movement	SB
Directions Served	R
Maximum Queue (ft)	56
Average Queue (ft)	26
95th Queue (ft)	48
Link Distance (ft)	171
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: John F Kennedy Drive & Oliver Street

Movement	WB	WB	NB	NB	SB
Directions Served	L	R	T	TR	LT
Maximum Queue (ft)	31	56	75	82	141
Average Queue (ft)	21	35	44	55	64
95th Queue (ft)	45	50	68	78	96
Link Distance (ft)		580	1351	1351	352
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100				
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: Oliver Street & Project Driveway 2

Movement	EB
Directions Served	R
Maximum Queue (ft)	56
Average Queue (ft)	28
95th Queue (ft)	45
Link Distance (ft)	109
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report  
 Project Completion Year (2022) WP - PM Peak Hour

10/18/2017

Intersection: 3: Iris Avenue & Project Driveway 1

Movement	SB
Directions Served	R
Maximum Queue (ft)	55
Average Queue (ft)	24
95th Queue (ft)	51
Link Distance (ft)	171
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: John F Kennedy Drive & Oliver Street

Movement	WB	WB	NB	NB	SB
Directions Served	L	R	T	TR	LT
Maximum Queue (ft)	31	55	54	55	56
Average Queue (ft)	27	25	29	33	37
95th Queue (ft)	44	54	50	52	54
Link Distance (ft)		580	1351	1351	352
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100				
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 5: Oliver Street & Project Driveway 2

Movement	EB
Directions Served	R
Maximum Queue (ft)	54
Average Queue (ft)	32
95th Queue (ft)	45
Link Distance (ft)	109
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

## Queuing and Blocking Report

### Cumulative (2022) NP - AM Peak Hour

10/18/2017

#### Intersection: 3: Iris Avenue & Project Driveway 1

##### Movement

Directions Served  
 Maximum Queue (ft)  
 Average Queue (ft)  
 95th Queue (ft)  
 Link Distance (ft)  
 Upstream Blk Time (%)  
 Queuing Penalty (veh)  
 Storage Bay Dist (ft)  
 Storage Blk Time (%)  
 Queuing Penalty (veh)

#### Intersection: 4: John F Kennedy Drive & Oliver Street

Movement	WB	WB	NB	NB	SB
Directions Served	L	R	T	TR	LT
Maximum Queue (ft)	31	76	72	98	133
Average Queue (ft)	21	35	45	62	77
95th Queue (ft)	44	54	66	91	118
Link Distance (ft)		580	1351	1351	352
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100				
Storage Blk Time (%)					
Queuing Penalty (veh)					

#### Intersection: 5: Oliver Street & Project Driveway 2

##### Movement

Directions Served  
 Maximum Queue (ft)  
 Average Queue (ft)  
 95th Queue (ft)  
 Link Distance (ft)  
 Upstream Blk Time (%)  
 Queuing Penalty (veh)  
 Storage Bay Dist (ft)  
 Storage Blk Time (%)  
 Queuing Penalty (veh)



## Queuing and Blocking Report

### Cumulative (2022) NP - PM Peak Hour

10/18/2017

#### Intersection: 3: Iris Avenue & Project Driveway 1

##### Movement

Directions Served  
 Maximum Queue (ft)  
 Average Queue (ft)  
 95th Queue (ft)  
 Link Distance (ft)  
 Upstream Blk Time (%)  
 Queuing Penalty (veh)  
 Storage Bay Dist (ft)  
 Storage Blk Time (%)  
 Queuing Penalty (veh)

#### Intersection: 4: John F Kennedy Drive & Oliver Street

Movement	WB	WB	NB	NB	SB
Directions Served	L	R	T	TR	LT
Maximum Queue (ft)	55	32	79	68	74
Average Queue (ft)	29	29	33	37	43
95th Queue (ft)	47	40	54	61	64
Link Distance (ft)		580	1351	1351	352
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100				
Storage Blk Time (%)					
Queuing Penalty (veh)					

#### Intersection: 5: Oliver Street & Project Driveway 2

##### Movement

Directions Served  
 Maximum Queue (ft)  
 Average Queue (ft)  
 95th Queue (ft)  
 Link Distance (ft)  
 Upstream Blk Time (%)  
 Queuing Penalty (veh)  
 Storage Bay Dist (ft)  
 Storage Blk Time (%)  
 Queuing Penalty (veh)

## Queuing and Blocking Report

### Cumulative (2022) WP - AM Peak Hour

10/18/2017

#### Intersection: 3: Iris Avenue & Project Driveway 1

Movement	WB	SB
Directions Served	T	R
Maximum Queue (ft)	56	31
Average Queue (ft)	3	16
95th Queue (ft)	22	41
Link Distance (ft)	224	171
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

#### Intersection: 4: John F Kennedy Drive & Oliver Street

Movement	WB	WB	NB	NB	SB
Directions Served	L	R	T	TR	LT
Maximum Queue (ft)	53	54	79	94	195
Average Queue (ft)	28	35	49	52	92
95th Queue (ft)	47	55	73	78	147
Link Distance (ft)		580	1351	1351	352
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100				
Storage Blk Time (%)					
Queuing Penalty (veh)					

#### Intersection: 5: Oliver Street & Project Driveway 2

Movement	EB	SB
Directions Served	R	TR
Maximum Queue (ft)	77	31
Average Queue (ft)	27	1
95th Queue (ft)	52	12
Link Distance (ft)	109	1119
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

## Queuing and Blocking Report Cumulative (2022) WP - PM Peak Hour

10/18/2017

### Intersection: 3: Iris Avenue & Project Driveway 1

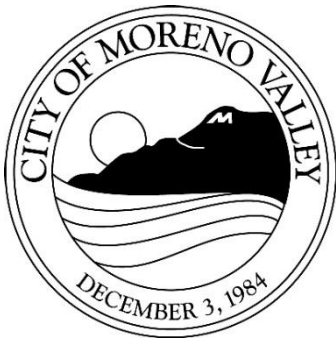
Movement	SB
Directions Served	R
Maximum Queue (ft)	53
Average Queue (ft)	23
95th Queue (ft)	48
Link Distance (ft)	171
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

### Intersection: 4: John F Kennedy Drive & Oliver Street

Movement	WB	WB	NB	NB	SB
Directions Served	L	R	T	TR	LT
Maximum Queue (ft)	53	54	81	77	58
Average Queue (ft)	28	27	43	48	42
95th Queue (ft)	47	47	66	68	61
Link Distance (ft)		580	1351	1351	352
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	100				
Storage Blk Time (%)					
Queuing Penalty (veh)					

### Intersection: 5: Oliver Street & Project Driveway 2

Movement	EB
Directions Served	R
Maximum Queue (ft)	55
Average Queue (ft)	26
95th Queue (ft)	45
Link Distance (ft)	109
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	



This may affect your property

# Notice of PUBLIC HEARING

Notice is hereby given that a Public Hearing will be held by the City Council of the City of Moreno Valley on the following item(s):

**Project:** PEN18-0016 – Conditional Use Permit  
**Applicant:** Sater Oil International, LLC  
**Owner:** Sater Oil International, LLC  
**Representative:** Ed Hale of Barghausen  
**A.P. No:** 486-310-038  
**Location:** Northwest corner of Iris Avenue and Oliver Street  
**Proposal:** A Conditional Use Permit to establish a new 3,180 square foot ARCO AM/PM gas station, operating 24 hours, with 8 fuel islands, and an car wash. A Type-20 alcohol sales license for beer and wine is also proposed. The property is zoned (NC) Neighborhood Commercial and is on a 1.31 acre parcel.

**Council District:** 4

**Environmental Determination:** The City of Moreno Valley has reviewed the above project in accordance with California Environmental Quality Act (CEQA) Guidelines Section 15070 and has determined that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because mitigation measures have been required of the project that will reduce potential impacts to a less than significant level. Therefore, a Mitigated Negative Declaration is recommended for the project.

A public hearing before the City Council has been scheduled for the proposed project. Any person interested in commenting on the proposal and recommended environmental determination may speak at the hearing or provide written testimony at or prior to the hearing. The project application, supporting plans and environmental documents may be inspected at the Community Development Department at 14177 Frederick Street, Moreno Valley, California during normal business hours (7:30 a.m. to 5:30 p.m., Monday through Thursday and 7:30 a.m. to 4:30 p.m., Friday), or you may telephone (951) 413-3206 for further information.

The City Council, at the Hearing or during deliberations, could approve changes or alternatives to the proposal. If you challenge any of these items in court, you may be limited to raising only those items you or someone else raised at the Public Hearing described in this notice, or in written correspondence delivered to the City Council at, or prior to, the Public Hearing.



**LOCATION** N ↑

## CITY COUNCIL HEARING

City Council Chamber, City Hall  
 14177 Frederick Street  
 Moreno Valley, Calif. 92553

**DATE AND TIME:** February 19, 2019, 6:00 p.m.  
**CONTACT PLANNER:** Gabriel Diaz  
**PHONE:** (951) 413-3226

*Upon request and in compliance with the Americans with Disabilities Act of 1990, any person with a disability who requires a modification or accommodation in order to participate in a meeting should direct such request to Guy Pegan, ADA Coordinator, at 951.413.3120 at least 4 hours before the meeting. The 48-hour notification will enable the City to make reasonable arrangements to ensure accessibility to this meeting.*

Attachment: Public Hearing Notice (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

OFFICIAL MINUTES OF THE  
PLANNING COMMISSION  
OF THE CITY OF MORENO VALLEY

REGULAR MEETING – 7:00 PM  
December 13, 2018

**CALL TO ORDER**

This Regular Meeting of the Planning Commission of the City of Moreno Valley was called to order at 7:03 p.m., by Chair Barnes in the Council Chamber located at 14177 Frederick Street.

**ROLL CALL**

Planning Commission:	Jeffrey Barnes	Chair	Present
	Patricia Korzec	Vice Chair	Present
	Robert Harris	Commissioner	Present
	JoAnn Stephan	Commissioner	Present
	Jeffrey Sims	Commissioner	Present
	Ray L. Baker	Commissioner	Present
	Alvin DeJohnette	Commissioner	Present

**PLEDGE OF ALLEGIANCE**

The Pledge of Allegiance was led by Commissioner Sims.

**APPROVAL OF AGENDA**

APPROVAL OF AGENDA

Motion made by Commissioner Baker and seconded by Commissioner Alvin DeJohnette.

**Vote:** 7-0  
**Ayes:** Vice Chair Korzec, Commissioners Harris, Stephan, Sims, Baker, Vice Chair Barnes and Commissioner DeJohnette  
**Action:** **Approved**

**STAFF PRESENT**

Paul Early	City Attorney
Patty Nevins	Planning Official
Chris Ormsby	Senior Planner
Gabriel Diaz	Associate Planner
Eric Lewis	City Traffic Engineer
Michael Lloyd	Assistance City Engineer
Vince Giron	Associate Engineer
Doug Bloom	Assistant Fire Marshal
Ashley Aparicio	Planning Commission Secretary

Attachment: Planning Commission Minutes 12.13.18 (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)

**CONSENT CALENDAR****APPROVAL OF MINUTES**

Planning Commission - Regular Meeting – October 25, 2018 7:00 PM

Motion made by Commissioner Baker and seconded by Commissioner Harris.

**Vote:** 6-1  
**Ayes:** Vice Chair Korzec, Commissioners Harris, Stephan, Baker, Vice Chair Barnes and Commissioner DeJohnette  
**Abstain:** Commissioner Jeffrey Sims  
**Action:** **Approved**

**PUBLIC COMMENTS PROCEDURE**Rafael Brugueras

1. Wished the Commissioners a Merry Christmas and Happy New Year, as it has been a wonderful 2018 working alongside all of them and watching our City grow.
2. He has seen a lot of projects being built and states we are still waiting on those who committed to build so we can get those houses, apartments, jobs, streets, etc., and is thankful for the work that has been done.
3. He is deeply grateful for those who have served in the past and who have helped make Moreno Valley great today, because today Moreno Valley is brand new. There are many new developers looking to come to town. We have many new residents, 210,000 residents from the Mayor's reference at Snow Day.
4. He is deeply grateful for living in the City of Moreno Valley for 25 years under the M of Hope. Do not lose hope and for those who listen, you know what is coming and we need you to be involved, so stay involved because we need you to be.

**NON-PUBLIC HEARING ITEMS**

No Items for Discussion

**PUBLIC HEARING ITEMS**

1. Request for Continuance to the January 10, 2019 Planning Commission Meeting for a proposed Conditional Use Permit for a 116 Bed Moreno Valley Skilled Nursing Facility, located on the north side of Alessandro Boulevard and easterly of Kitching Street. (Report of: Planning Commission)

Motion made by Commissioner Stephan and seconded by Commissioner Sims to approve the request for continuance to the January 10, 2019 Planning Commission Meeting.

**Vote:** 7-0  
**Ayes:** Vice Chair Korzec, Commissioners Harris, Stephan, Sims, Baker, Vice Chair Barnes and Commissioner DeJohnette  
**Action:** **Approved**

- 2. **CONDITIONAL USE PERMIT FOR A GAS STATION WITH 8 FUEL STATIONS, CAR WASH, AND CONVENIENCE STORE INCLUDING TYPE-20 ALCOHOL SALES FOR BEER AND WINE (Report of: Planning Commission)**
- A. Staff recommends that Planning Commission APPROVE Resolution Nos. 2018-54 and 2018-55, and thereby:

Resolution No. 2018-54

- 1. ADOPT the Mitigated Negative Declaration prepared for Conditional Use Permit PEN18-0016 pursuant to the California Environmental Quality Act (CEQA) Guidelines, and included as Exhibit A; and
- 2. ADOPT the Mitigated Monitoring and Reporting Program prepared for Conditional Use Permit PEN18-0016 pursuant to the California Environmental Quality Act (CEQA) Guidelines, and included as Exhibit B;

Resolution No. 2018-55

- 3. APPROVE Conditional Use Permit PEN18-0016, a request by Sater Oil International, LLC, for a 24-hour gas station operation with 8 fuel stations, convenience store, including type-20 alcohol sales for beer and wine, and a car wash, on a 1.31 acre property located at the northwest corner of Iris Avenue and Oliver Street, subject to the attached conditions of approval included as Exhibit A.

**Public Hearing Opened:** 7:42 p.m.

Public Comments

- Raymond Talbut opposes the item.
- Sylvia A Taylor opposes the item.
- Josie Arias opposes the item.
- Gabrielle Sibley opposes the item.
- Gerardo Rios opposes the item.
- Emily Engelsollah opposes the item.
- Leonardo Gonzalez opposes the item.

Jose Morales opposes the item.  
Rafael Brugueras supports the item.  
Angelica Avina opposes the item.  
Josie Robles opposes the item.  
Alfred Lopez opposes the item.  
Flennette Antoine opposes the item.  
Charles Robinson opposes the item.

**Public Hearing Closed:** 8:26 p.m.

Motion made by Vice Chair Korzec and seconded by Commissioner Baker to approve Resolution Nos. 2018-54 and 2018-55.

**Vote:** 6-1  
**Ayes:** Vice Chair Korzec, Commissioners Harris, Stephan, Sims, Baker and Vice Chair Barnes  
**Noes:** Commissioner Alvin DeJohnette  
**Action:** **Approved**

**OTHER COMMISSION BUSINESS**

No Items for Discussion

**STAFF COMMENTS**

Patty Nevins, Planning Official, gave an update for the following projects and stated that at the City Council meeting last Tuesday, December 18, 2018 the following items have been approved.


The Yum Yum Donuts projects on Perris and Cottonwood.  
The Brodiaea Centerpointe Project on Frederick and Brodiaea  
The Brodiaea Residential Project on Brodiaea and Quincy

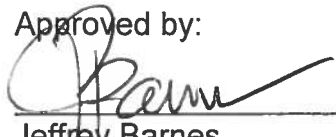
**PLANNING COMMISSIONER COMMENTS**

No Items for Discussion

**ADJOURNMENT**

There being no further business to come before the Planning Commission, Chair Barnes adjourned the meeting at 8:47 PM.

Submitted by:  
  
Ashley Aparicio  
Planning Commission Secretary

Approved by:  
  
Jeffrey Barnes  
Chair

Attachment: Planning Commission Minutes 12.13.18 (3362 : Conditional Use Permit PEN18-0016 ARCO Service Station)



**BY EMAIL**

December 13, 2018

City of Moreno Valley Planning Commission  
 c/o Gabriel Diaz, Project Planner  
 14177 Frederick Street  
 Moreno Valley, CA 92552  
 gabrield@moval.org

**Re: Public Comments – Sater Arco AM/PM Gas Station (Mitigated Negative Declaration and Conditional Use Permit - PEN 18-0016); December 13, 2018 Planning Commission Meeting, Agenda Item 2.**

Dear City of Moreno Valley Planning Commission:

The Multi-Cultural Assembly for Sustainable Development submits the following comments regarding the Sater Arco Gas Station project (“the Project”). This project is Item 2 on the December 13, 2018 Planning Commission agenda.

We object to the approval of the Project on the basis of the Mitigated Negative Declaration because there is a fair argument in the record of significant environmental impacts. As such, the California Environmental Quality Act (CEQA) demands the preparation of an Environmental Impact Report (EIR) before the Project can be approved. Our objections include, but are not limited to, the following comments:

**Notification to Resource Agencies**

The Initial Study/Mitigated Negative Declaration (IS/MND) apparently has not been circulated to public agencies with jurisdiction over resources that are potentially impacted by the Project. This includes biological, air quality, public safety (fire), hazard, and water quality agencies. In fact, the IS/MND was prepared only on November 20, 2018. Notification and circulation of the MND to public agencies is necessary before the MND can be legally approved.

**Project Description**

The IS/MND’s Project Description is inadequate as it fails to note that Landmark Middle School is located .20 miles (or approximately 1050 feet) from the Project site to the

northeast. This is a sensitive receptor that must be fully disclosed and evaluated in terms of the Project's potential impacts.

### **Deferred Mitigation**

In most impact areas, the IS/MND relies upon future consultation and approval by other agencies. For instance, MM HAZ-1 states that prior to issuance of a construction permit, that the project applicant shall provide proof that public safety agencies have reviewed and approved the Project's emergency response plan. Given that the particular Project will introduce a gas station to the residential and school community (involving the transport and storage of hazardous materials), proper agencies must review and approve the Project's emergency response plan and any other aspects of the Project before Project approval.

### **Hazards**

The IS/MND relies upon a Phase I Environmental Site Assessment from September 2003. The ESA should be updated. Also, the Project clearly meets a threshold of significance for significant hazard impacts contrary to the IS/MND's conclusion. Specifically, the IS/MND asks whether the Project will "emit hazardous emissions or handle hazardous ... materials, substances...within one-quarter mile of an existing ... school". The Project will be located *less* than one quarter mile from Landmark Middle School. The IS/MND must therefore be revised to state that impacts are potentially significant, and it must impose mitigation to ensure that impacts are less than significant.

### **Noise**

There are a number of flaws, inconsistencies, and omissions in the Project's noise analysis. These include, but are not limited to, the following:

First, the noise section of the IS/MND does not disclose applicable noise standards particularly residential noise standards. And, there is no disclosure in the noise section of the existing, ambient noise levels so that Project noise levels can be compared to existing noise levels. One must look to the noise study to find this information.

Second, the construction noise analysis is inadequate. The analysis compares only "maximum" single -event noise levels due to the Project against maximum single-event noise levels (ambient) (i.e., Lmax). That is, the noise analysis looks at whether the Project will cause significant noise impacts relative to only single-event, short-term noise impacts; there is no disclosure of project construction noise levels in terms of Leq. The noise study concludes that the loudest ambient noise event is actually equal to the loudest construction noise event, thus concluding there is no significant construction noise impact. But this is misleading. The noise analysis must compare ambient noise in terms of Leq against Project construction noise in terms of Leq., which is in fact the unit of measurement used in the residential noise standard. Next, the construction noise analysis assumes that construction

noise “may” attenuate 5 to 10 dBA. But there is no evidence to support this claim. And, the existing concrete wall will not attenuate noise with respect to the second story of residences. Finally, with respect to construction noise, there is no evidence that mitigation measure NOI-1 reduces construction noise below applicable noise thresholds. In total, construction noise levels exceed residential noise standards and represent a substantial temporary increase over existing ambient noise levels. Thus, absent adequate mitigation, an EIR is required.

Third, the operational noise analysis is adequate and fails to properly disclose the long-term noise impacts of Project operation. For instance, the noise analysis states that the nearest residential receptors would be exposed to a noise level of 52 to 62 dBA Lmax due to parking lot activities. The analysis then concludes that a single noise measurement of 76.9 Lmax was measured at a nearby residence, therefore, there are no significant impacts. The analysis fails to disclose Project noise levels in terms of Leq and compare those levels to ambient noise conditions in terms of Leq. A single noise event of 76.9 Lmax is an outlier: the noise analysis must evaluate and disclose average operational noise levels against the residential noise standard of 60 dBA (daytime). The same is true of the carwash noise which also represents a significant noise impact. Moreover, the cumulative or total effects of the Project operation (parking lot activities plus car wash) must be disclosed. Further, there is no analysis or disclosure of the Project’s contribution to noise at nighttime – where the residential noise standard is lower. The Project must evaluate on-site noise generating activities (parking lot activity etc.) against the nighttime noise standard.

### Public Services

The IS/MND’s conclusions regarding fire protection are unsubstantiated and contrary to the evidence. The IS/MND states that the City’s General Plan requires a fire response time of 5 minutes, and that “because the Project proposes a gas station, fire services may be needed at a quick response time.” Yet, the Project does *not* meet fire response time requirements according to the IS/MND. There is no basis for disregarding the City’s General Plan requirement for fire response time – particularly where the IS/MND otherwise admits that the gas station use creates a particular need for fire protection services. According to Google maps, the nearest fire station is located within an 8 or 9 minute drive from the Kaiser Medical Center located to the west of the Project site. The fact that the Project does not satisfy the General Plan’s requirement for fire response time creates a conflict between the Project and the General Plan as well as raises a fair argument of significant CEQA impacts.

### Traffic

The IS/MND indicates a significant traffic impact with respect to the intersection of Oliver Street and Iris Avenue. This intersection will operate at LOS D in the AM Peak hour. The Project must meet LOS C standards, otherwise reliance on an MND is improper. And, there is not evidence that the Project may operate at LOS D due to “high employment”

concentrations. The intersection in question is surrounded by residential uses. It is not a "high" employment area.

**Conditional Use Permit**

The findings cannot be made in support of the CUP. The gas station use coupled with alcohol sales is not compatible with the surrounding residential community. Moreover, the Project does not meet fire response time, and therefore represents a safety risk to the community.

**Conclusion**

We urge you to deny the Project until an adequate Environmental Impact Report is prepared. Thank you for your consideration of these comments.

Sincerely,



For  
Multi-Cultural Assembly For Sustainable Development

*LEONARDO GONZALEZ Member.*

## MEMORANDUM

**DATE:** February 4, 2019

**To:** Gabriel Diaz, Associate Planner, City of Moreno Valley

**FROM:** Ray Hussey AICP, LSA Associate

**SUBJECT:** Response to "Public Comments - Sater Arco AM/PM Gas Station (Mitigated Negative Declaration and Conditional Use Permit - PEN 18-0016); December 13, 2018 Planning Commission Meeting, Agenda Item 2." (LSA Project No. SAT1701)

This Memorandum provides responses to the fifteen (15) environmental related comments raised in the letter titled "Public Comments - Sater Arco AM/PM Gas Station (Mitigated Negative Declaration and Conditional Use Permit - PEN 18-0016); December 13, 2018 Planning Commission Meeting, Agenda Item 2" by the Multi-Cultural Assembly for Sustainable Development dated December 13, 2018. The following responses to the fifteen comments (see attached letter with brackets numbered 1-15) are limited to the issues as they relate to the California Environmental Quality Act (CEQA). The responses are as follows.

### RESPONSES TO COMMENTS

#### Comment 1

Comment 1 is an introductory statement that summarizes the commenter's detailed comments that follow later on in the letter. Consequently, Comment 1 is a conclusory statement that does not raise any new issue, specific concern, or question regarding the adequacy of the Initial Study/Mitigated Negative Declaration (IS/MND). No further response is required.

#### Comment 2

Comment 2 states the IS/MND was not "... circulated to public agencies with jurisdiction over resources ..." potentially affected by the project including biological, air quality, public fire safety, hazards, and water quality. As set forth in CEQA Guidelines Section 15073 regarding public review of a proposed Negative Declaration (ND) or Mitigated Negative Declaration (MND), lead agencies are obligated to send the ND or MND to public agencies with jurisdiction by law over resources affected by the project. As defined in CEQA Guidelines Section 15366, jurisdiction by law includes public agencies that have authority to:

- 1) grant a permit or other entitlement for use;
- 2) provide funding for the project in question; or

- 3) exercise authority over resources which may be affected by the project.

The proposed project does not require use permit or entitlement approvals from any other agency other than the City of Moreno Valley (City). Similarly, there is no public agency funding that will be provided for the proposed project. Lastly, there are no public agencies (e.g., California Department of Wildlife, State Lands Commission, State Department of Parks and Recreation, University of California) that will exercise authority over resources affected by the proposed project. No further response is required.

### Comment 3

Comment 3 states that the project description contained in the IS/MND is inadequate because it does not identify the Landmark Middle School located approximately 0.20 miles to the north and that it is “... a sensitive receptor that must be fully disclosed and evaluated in terms of the Project’s potential impacts.”

As set forth in CEQA Guidelines Section 15063, an Initial Study shall contain:

- 1) a description of the project including the location of the project; and
- 2) an identification of the environmental setting.

CEQA Guidelines Section 15071 similarly sets forth that the ND (or MND) circulated for public review shall include:

- 1) a brief description of the project, including a commonly used name for the project, if any, and ;
- 2) the location of the project, preferably shown on a map, and the name of the project proponent.

The IS/MND is consistent with these requirements for a project description as it relates to an ND or MND. For example, page 1 (Item no. 1) of the IS/MND states the common name of the proposed project. Pages 1 and 2 (Item no. 8) provides a detailed three paragraph description of the proposed project. Page 2 (Item no. 9). Figure 1 shows the regional location of the project site, while Figure 2 shows an aerial view of the project site and identifies the surrounding land uses. Figure 3A and 3B are site photographs. Lastly, Figure 4 contains the preliminary site plan for the proposed project.

In addition, Page 2 (Item no. 9) of the IS/MND describes the project surroundings. As stated, surrounding uses were described to include one- and two-story single-family residential houses to the east across Oliver Street, two-story single-family residential houses to the south across Iris Avenue, vacant land to the north and west, and Kaiser Permanente Hospital just beyond the vacant land to the west. These built land uses (the homes and Kaiser facilities) are sensitive receptors. As can be seen by viewing Figure 2, the closest sensitive receptor to the project site are the homes to the east and/or south. The property lines to these homes are located as close as 85 or 100 feet from the proposed project property line as noted on pages 21, 38, 39 and 42 in the IS/MND. As stated in

Comment 3, the Landmark Middle School is located approximately 1050 feet, or more than ten times further away than the nearest sensitive receptors. In fact, the school is too distant to appear within the window of area presented on IS/MND Figure 2.

Initial Study Checklist Question VIII c) requires that a project proposed within a quarter mile of an existing or proposed school site address the potential for that project to produce hazardous impacts onto the existing or proposed school. As detailed in the response to Comment 6 below, page 32 of the IS/MND determined there are existing regulations (i.e., a project specific Hazardous Materials Business Emergency Plan administered by the Moreno Valley Fire Department) that reduce the significance of the hazard impact to no impact.

For these reasons, the IS/MND properly addressed project construction and operational impacts from air pollution emissions and noise generation on the nearest receptor locations located only 85 to 100 feet from the project site. The IS/MND properly concluded the significance of construction and operational air quality and noise impacts were either no impact, less than significant, or less than significant with mitigation. No further response is required.

#### Comment 4

Comment 4 states that in “... most impact areas ...” the IS/MND relies on future consultation and approval by other agencies. However, the comment cites only one instance related to review and approval of the project’s emergency response plan by public safety agencies. Public safety agencies are local police and fire.

The Moreno Valley Police Department (MVPD) is staffed by the Riverside County Sheriff’s Department as part of a contract between MVPD and Riverside the County. Serving exclusively as the local police in the City, the MVPD consists of the Administration Division, Station Administration Unit, Accounting Unit, Community Services Unit, Neighborhood Watch Unit, and the Volunteer Unit. The Moreno Valley Fire Department (MVFD) is part of the CALFIRE/Riverside County Fire Department’s regional, integrated, cooperative fire protection organization as part of a contractual relationship with these agencies. Serving exclusively as the local fire department in the City, the MVFD consists of an Administration Section and Fire Operations.

The MVPD and MVFD are staffed by officers and fire personnel dedicated exclusively to the respective missions of their department. The MVPD and MVFD have their own stations, vehicles, and equipment. Both the MVPD and MVFD are part of the City, are not outside agencies, and routinely review project development plans as part of the City department review team to ensure adequate safety and emergency response is accommodated in the design of project plans.

The project is required to prepare an emergency response plan which is a standard requirement of the City. Applicable City Departments, primarily the MVFD, are responsible for the review and implementation of the emergency response planning effort prior to the construction and operation of the proposed project gas station project. The City will grant permits for the construction and operation of the project once this standard review process takes place, in the same manner as any project that involves the use, storage, or transport of hazardous materials. In other words, the

project cannot be built until MM HAZ-1 has been implemented (please refer to the Mitigation Monitoring and Reporting Plan (MMRP) for the explanation of the timing, approval and implementation of MM HAZ-1). The action to prepare an emergency response plan is not deferral of mitigation, because MM HAZ-1 sets forth detailed requirements and the MMRP shall ensure it will be prepared and implemented. Furthermore, the approval of the emergency response plan is an administrative action which does not require review and approval of a decision making body such as the Planning Commission or City Council and it does not need to be prepared prior to project approval. No further response is required.

#### Comment 5

Comment 5 states that the IS/MND relies on a Phase I ESA from 2003 and that it should be updated. The conditions on the project site have not changed since the 2003 ESA was prepared. In addition, Phase I ESA's do not have a sunset date, and need only be updated should conditions on the site or in the immediate vicinity change. No further response is required.

#### Comment 6

Comment 6 states that the project "... clearly ...." meets a threshold of significance for significant hazard impacts and that the IS/MND's conclusion is incorrect. Comment 6 questions the conclusion on page 32 of the IS/MND, Checklist Question VIII c), that asks: "Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?" Commenter's argument is that the Landmark Middle School is located 0.20 miles away, less than one quarter of a mile from the project site. Commenter appears to suggest the project will produce a significant hazard impact on the school, simply because the proposed project is located within one quarter mile of the school.

The intention of this CEQA question is to ensure that potential hazardous emissions, materials, substances, or waste associated with a project proposed near an existing or proposed school site is addressed. As clearly and succinctly provided on page 32 of the IS/MND, the proposed project will not result in any hazard related impacts with implementation of existing regulations in accordance with a project specific "Hazardous Materials Business Emergency Plan administered by the MVFD, as applicable; in accordance with California Health and Safety Code Section 25507, and other local, state, and federal standards, ordinances, and regulations." Based on the hazard reduction features associated with the Hazardous Materials Business Emergency Plan, the significance of this issue as stated in the IS/MND was properly determined to be no impact. No further response is required.

#### Comment 7

Comment 7 states that the IS/MND does not disclose the noise standards or ambient noise levels. The comment notes that this information is provided in the technical report. As noted on page 37 of the IS/MND, Appendix I of the IS/MND includes the technical report that provides additional regulatory discussion and background noise levels. No further response is required.



### Comment 8

Comment 8 suggests that a  $L_{eq}$  construction analysis should have been prepared. The comment states that the noise analysis must compare ambient noise in terms of  $L_{eq}$  against project construction noise in terms of  $L_{eq}$ . However, it should be noted that the commenter erroneously reports that the City's residential noise standard is in terms of  $L_{eq}$ . Furthermore, the City does not have quantitative construction noise level thresholds, only operational noise level thresholds. As shown on page 12 of the Noise and Vibration Impact Analysis, construction noise is permitted in the City under Section 11.80.030(D)(9) of the Municipal Code which limits activities to the hours of 7:00 a.m. and 8:00 p.m. every day. The project would implement Mitigation Measure NOI-1 which would require adherence to the City's Municipal Code permitted construction hours, thereby bringing construction activities associated with the project into compliance with the City's Municipal Code, resulting in construction impacts that would be less than significant. No further response is required.

However, for discussion purposes only, LSA has prepared an analysis of the construction  $L_{eq}$ , the results of which are presented below. As discussed in the Noise and Vibration Impact Analysis, typical maximum noise levels range up to 86 dBA  $L_{max}$  at 50 feet during the noisiest construction phases. The nearest sensitive receptors that may be subject to construction noise include the single family residences located approximately 85 feet east of the project site across Oliver Street. At 85 feet, noise levels would attenuate approximately 5 dBA from the increased distance compared to the noise level measured at 50 feet from the active construction area.

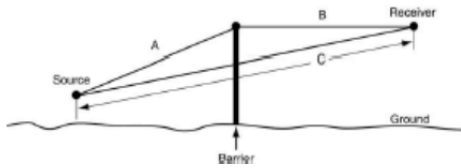
Based on a maximum noise level of 86 dBA  $L_{max}$  at 50 feet during construction of the proposed project, and assuming that a crane, forklift, and tractor would be operating simultaneously, construction of the proposed project would result in noise levels of approximately 76 dBA  $L_{eq}$ . For example, with the noise reductions that would be achieved with the existing sound barrier, exterior noise levels at the closest sensitive receptors would be approximately 69.3 dBA  $L_{eq}$  during construction. As noted on page 12 of the Technical Report, construction noise is not subject to the noise limits of the operational noise ordinance and is permitted between the hours of 7:00 a.m. and 8:00 p.m.

Implementation of best management practices for project construction, as identified as Mitigation Measure NOI-1, would reduce potential construction period noise impacts for the indicated sensitive receptors. Additionally, Mitigation Measure NOI-1 would require all equipment to be equipped with properly operating and maintained mufflers, which would reduce equipment noise by approximately 5 dBA. The placement of stationary equipment so that noise is directed away from sensitive receptors and the location of staging areas that create the greatest possible distance between construction activities and receptors would also substantially reduce noise levels, depending on the distance achieved. Therefore, with implementation of Mitigation Measure NOI-1, noise levels would be reduced and would therefore, not result in a substantial temporary increase in noise. The project would also not result in an exceedance of any noise standard. No further response is required.

### Comment 9

Comment 9 indicates that the IS/MND's use of the word "may" within the text to describe the noise reduction achieved by the existing sound barriers seems inconclusive. The noise reduction achieved by a barrier varies based on wall height, distance from the source to the receptor location, and receptor height. The noise reduction was calculated using the following formula:

Barrier Parameter P  
 $P = A + B - C$



$$\text{Barrier Attenuation} = \min\left[15 \text{ or } \left(20 * \log\left(\frac{2.51\sqrt{P}}{\tanh(4.46\sqrt{P})}\right) + 5\right)\right]$$

It should also be noted that the Municipal Code considers exterior noise environments and does not consider interior noise levels, such as those associated with second story floors of residential dwellings. No further response is required.

### Comment 10

Comment 10 states that there is no evidence that Mitigation Measure NOI-1 would reduce construction noise to below the applicable noise thresholds. However, as stated above in response to Comment 8, Mitigation Measure NOI-1 would require adherence to the City's Municipal Code construction hours and therefore, construction noise would be in compliance with City standards and would not result in a significant noise impact. No further response is required.

### Comment 11

Comment 11 states that the operational noise analysis is "adequate and fails to properly disclose the long-term noise impacts of Project operation" however, we interpret this is a typo and the commenter intended to state "inadequate." The City disagrees that the operational noise analysis is inadequate. Long-term operational noise impacts are discussed in Appendix I of the IS/MND and pages 39-41 of the IS/MND.

This comment indicates that that the project noise levels should be presented in terms of  $L_{eq}$  and compared to the ambient noise levels in terms of  $L_{eq}$ . However, the City's Municipal Code is based on  $L_{max}$  and therefore  $L_{max}$  is used for purposes of the significance analysis. Additionally, noise associated with the project, such as parking lot noise and car wash noise would be intermittent with maximum noise levels occurring instantaneously (i.e., a door slam), with minimal noise generated during other periods of time. This type of noise is best evaluated in terms of maximum noise levels. The change in noise levels due to traffic associated with the project in terms of CNEL were evaluated in the IS/MND. Table F and Table G of the IS/MND indicate that traffic noise associated with the

project would increase by up to 1.2 dBA, which would be considered less than significant. No further response is required.

The comment states that the operational noise standard for the project is 60 dBA during the daytime. However, as shown in Table G of the Noise and Vibration Impact Analysis, the maximum sound level for the *source land use category as measured 200 feet from the source of the sound* is 65 dBA during the day and 60 dBA during the night. For purposes of evaluating the proposed project, the source is a commercial use on privately owned property. Therefore, the 65 daytime and 60 dBA nighttime thresholds would be applicable to the proposed project. No further response is required.

Parking lot noise generates noise levels of up to 70 dBA  $L_{max}$  at a distance of 50 feet. With distance attenuation, noise levels associated with parking lot activities at a distance of 200 feet would be 58 dBA  $L_{max}$  and would not exceed the City's Municipal Code standard of 60 dBA or 65 dBA. Additionally, as discussed on page 39 of the IS/MND, noise levels associated with the parking lot would be lower than existing maximum noise levels at adjacent sensitive receptor locations. No further response is required.

#### Comment 12

Comment 12 states that carwash noise would be significant. Carwash noise is discussed on page 41 of the IS/MND. Carwash equipment would be enclosed providing noise attenuation. Additionally, existing sound barriers at surrounding residential properties would reduce noise levels to 59 dBA, which is below the City's standard for commercial uses of 65 dBA for daytime operations. As outlined in the project description and on page 41 of the noise section of the IS/MND, the carwash would not operate during the nighttime hours. Therefore, the project would not result in the exposure of persons to or generation of noise levels in excess of standards. No further response is required.

Additionally, as described on page 41 of the IS/MND, existing noise levels in the project vicinity are dominated by vehicle traffic on Iris Avenue and Olive Avenue. Noise levels from car wash operations would not result in a substantial increase in noise, as operations would be lower than the existing noise associated with traffic. No further response is required.

#### Comment 13

Comment 13 states there is no discussion of nighttime or cumulative noise impacts. As detailed in the project description and on page 41 of the noise section of the IS/MND, the carwash would not operate during the nighttime hours. As noted under response to comment 11, the project parking lot activities would not exceed the nighttime noise standards. Therefore, impacts during the nighttime hours would not occur. No further response is required.

The cumulative noise impacts associated with traffic noise are shown in Table G of the IS/MND. Results of the cumulative traffic analysis indicate the project would increase traffic noise under cumulative conditions by 1.0 dBA, which would not be considered perceptible. Therefore, as determined in the IS/MND, the proposed project would not result in a cumulative impact. No further response is required.

### Comment 14

Comment 14 states the “.... IS/MND’s conclusions regarding fire protection are unsubstantiated and contrary to the evidence.” Commenter’s argument is the City General Plan requires a 5 minute fire response time, the project uses will require a quick response time, and response times will be 8 or 9 minutes, the project will not satisfy the General Plan requirement for fire response time, the project conflicts with this a General Plan policy, and there is a fair argument that a significant CEQA impact might occur.

There are three errors in this reasoning. First, although the General Plan Safety Element, page 6-7, states a “.... five-minute response time is considered to be the maximum time standard for serving urban and suburban uses”, the General Plan does not include such a response time as a Goal or Objective. Second, the responsibility for maintaining an emergency response time is a local agency, in this case the City. Although a City may choose to require that a large development project include a new fire station or another emergency response facility if the subject project is proposed in an area that does not have such facilities, the proposed project is small. In addition, the proposed project is consistent with the underlying General Plan land use designation for the site and therefore the General Plan took the site and the non-residential land uses in the project vicinity [i.e., Commercial (“C”) and Office (“O”) designations in northwest quadrant of the Oliver Street/Iris Avenue intersection) into consideration. Third, the purpose of conducting the emergency response time analysis is to determine if the proposed project might require the expansion of an existing fire facility or the construction of a new facility, the construction of which could cause significant environmental impacts. The project does not propose to expand an existing fire facility or build a new fire facility, and basis for requiring such construction that might result in a significant environmental impact. The less than significant conclusion found in the IS/MND is proper. No further response is required.

### Comment 15

Comment 15 states the IS/MND identifies a significant traffic impact at the intersection of Oliver Street and Iris Avenue because it is forecast to operate at level of service (LOS) D in the a.m. peak hour and the intersection must meet a LOS C standard. The Commenter is suggesting a LOS C service standard should have been applied, because the intersection is not in a “high employment” area. In accordance with long standing City policy, the LOS D service standard is applied for analysis of intersections that have fronting uses that are not residential in nature. As shown on the City’s General Plan land use map, the land use designation on the north frontage of Iris Avenue is Commercial (“C”) from Oliver Street west across the proposed project site and Kaiser property. The land use designation on the west frontage of Oliver Street is “C” from Oliver Street to Shellie Way and Office (“O”) from Shellie Way to Landmark Middle School (Filaree Avenue). For these reasons, the IS/MND properly used the LOS D service standard. No further response is required.

Attachment: Comment Letter with brackets

BY EMAIL

December 13, 2018

City of Moreno Valley Planning Commission  
c/o Gabriel Diaz, Project Planner  
14177 Frederick Street  
Moreno Valley, CA 92552  
gabrield@moval.org

**Re: Public Comments – Sater Arco AM/PM Gas Station (Mitigated Negative Declaration and Conditional Use Permit - PEN 18-0016); December 13, 2018 Planning Commission Meeting, Agenda Item 2.**

Dear City of Moreno Valley Planning Commission:

The Multi-Cultural Assembly for Sustainable Development submits the following comments regarding the Sater Arco Gas Station project (“the Project”). This project is Item 2 on the December 13, 2018 Planning Commission agenda.

We object to the approval of the Project on the basis of the Mitigated Negative Declaration because there is a fair argument in the record of significant environmental impacts. As such, the California Environmental Quality Act (CEQA) demands the preparation of an Environmental Impact Report (EIR) before the Project can be approved. Our objections include, but are not limited to, the following comments:

**Notification to Resource Agencies**

The Initial Study/Mitigated Negative Declaration (IS/MND) apparently has not been circulated to public agencies with jurisdiction over resources that are potentially impacted by the Project. This includes biological, air quality, public safety (fire), hazard, and water quality agencies. In fact, the IS/MND was prepared only on November 20, 2018. Notification and circulation of the MND to public agencies is necessary before the MND can be legally approved.

**Project Description**

The IS/MND’s Project Description is inadequate as it fails to note that Landmark Middle School is located .20 miles (or approximately 1050 feet) from the Project site to the

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Attachment: Applicant CEQA Responses to PC Letter Dec 13 2018 Multi-Cultural Assembly for Sustainable Development (3362 : Conditional

northeast. This is a sensitive receptor that must be fully disclosed and evaluated in terms of the Project's potential impacts.

3 cont

**Deferred Mitigation**

In most impact areas, the IS/MND relies upon future consultation and approval by other agencies. For instance, MM HAZ-1 states that prior to issuance of a construction permit, that the project applicant shall provide proof that public safety agencies have reviewed and approved the Project's emergency response plan. Given that the particular Project will introduce a gas station to the residential and school community (involving the transport and storage of hazardous materials), proper agencies must review and approve the Project's emergency response plan and any other aspects of the Project before Project approval.

4

**Hazards**

The IS/MND relies upon a Phase I Environmental Site Assessment from September 2003. The ESA should be updated. Also, the Project clearly meets a threshold of significance for significant hazard impacts contrary to the IS/MND's conclusion. Specifically, the IS/MND asks whether the Project will "emit hazardous emissions or handle hazardous ... materials, substances...within one-quarter mile of an existing ... school". The Project will be located less than one quarter mile from Landmark Middle School. The IS/MND must therefore be revised to state that impacts are potentially significant, and it must impose mitigation to ensure that impacts are less than significant.

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**Noise**

There are a number of flaws, inconsistencies, and omissions in the Project's noise analysis. These include, but are not limited to, the following:

First, the noise section of the IS/MND does not disclose applicable noise standards particularly residential noise standards. And, there is no disclosure in the noise section of the existing, ambient noise levels so that Project noise levels can be compared to existing noise levels. One must look to the noise study to find this information.

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Second, the construction noise analysis is inadequate. The analysis compares only "maximum" single -event noise levels due to the Project against maximum single-event noise levels (ambient) (i.e., Lmax). That is, the noise analysis looks at whether the Project will cause significant noise impacts relative to only single-event, short-term noise impacts; there is no disclosure of project construction noise levels in terms of Leq. The noise study concludes that the loudest ambient noise event is actually equal to the loudest construction noise event, thus concluding there is no significant construction noise impact. But this is misleading. The noise analysis must compare ambient noise in terms of Leq against Project construction noise in terms of Leq., which is in fact the unit of measurement used in the residential noise standard. Next, the construction noise analysis assumes that construction

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Attachment: Applicant CEQA Responses to PC Letter Dec 13 2018 Multi-Cultural Assembly for Sustainable Development (3362 : Conditional

noise “may” attenuate 5 to 10 dBA. But there is no evidence to support this claim. And, the existing concrete wall will not attenuate noise with respect to the second story of residences. Finally, with respect to construction noise, there is no evidence that mitigation measure NOI-1 reduces construction noise below applicable noise thresholds. In total, construction noise levels exceed residential noise standards and represent a substantial temporary increase over existing ambient noise levels. Thus, absent adequate mitigation, an EIR is required.

9 cont'd

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Third, the operational noise analysis is adequate and fails to properly disclose the long-term noise impacts of Project operation. For instance, the noise analysis states that the nearest residential receptors would be exposed to a noise level of 52 to 62 dBA Lmax due to parking lot activities. The analysis then concludes that a single noise measurement of 76.9 Lmax was measured at a nearby residence, therefore, there are no significant impacts. The analysis fails to disclose Project noise levels in terms of Leq and compare those levels to ambient noise conditions in terms of Leq. A single noise event of 76.9 Lmax is an outlier: the noise analysis must evaluate and disclose average operational noise levels against the residential noise standard of 60 dBA (daytime). The same is true of the carwash noise which also represents a significant noise impact. Moreover, the cumulative or total effects of the Project operation (parking lot activities plus car wash) must be disclosed. Further, there is no analysis or disclosure of the Project’s contribution to noise at nighttime – where the residential noise standard is lower. The Project must evaluate on-site noise generating activities (parking lot activity etc.) against the nighttime noise standard.

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**Public Services**

The IS/MND’s conclusions regarding fire protection are unsubstantiated and contrary to the evidence. The IS/MND states that the City’s General Plan requires a fire response time of 5 minutes, and that “because the Project proposes a gas station, fire services may be needed at a quick response time.” Yet, the Project does *not* meet fire response time requirements according to the IS/MND. There is no basis for disregarding the City’s General Plan requirement for fire response time – particularly where the IS/MND otherwise admits that the gas station use creates a particular need for fire protection services. According to Google maps, the nearest fire station is located within an 8 or 9 minute drive from the Kaiser Medical Center located to the west of the Project site. The fact that the Project does not satisfy the General Plan’s requirement for fire response time creates a conflict between the Project and the General Plan as well as raises a fair argument of significant CEQA impacts.

14

**Traffic**

The IS/MND indicates a significant traffic impact with respect to the intersection of Oliver Street and Iris Avenue. This intersection will operate at LOS D in the AM Peak hour. The Project must meet LOS C standards, otherwise reliance on an MND is improper. And, there is not evidence that the Project may operate at LOS D due to “high employment”

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Attachment: Applicant CEQA Responses to PC Letter Dec 13 2018 Multi-Cultural Assembly for Sustainable Development (3362 : Conditional

concentrations. The intersection in question is surrounded by residential uses. It is not a "high" employment area.

15 Cont'd

**Conditional Use Permit**

The findings cannot be made in support of the CUP. The gas station use coupled with alcohol sales is not compatible with the surrounding residential community. Moreover, the Project does not meet fire response time, and therefore represents a safety risk to the community.

**Conclusion**

We urge you to deny the Project until an adequate Environmental Impact Report is prepared. Thank you for your consideration of these comments.

Sincerely,

For  
Multi-Cultural Assembly For Sustainable Development

*LEONARDO GONZALEZ Member.*

Attachment: Applicant CEQA Responses to PC Letter Dec 13 2018 Multi-Cultural Assembly for Sustainable Development (3362 : Conditional





## Report to City Council

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**TO:** Mayor and City Council

**FROM:** Richard J. Sandzimier, Community Development Director

**AGENDA DATE:** February 19, 2019

**TITLE:** STREAMLINING THE TRANSPORTATION UNIFORM MITIGATION FEE (TUMF) CALCULATION AND COLLECTION PROCESS

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### **RECOMMENDED ACTION**

#### **Recommendations: That the City Council:**

1. Introduce and conduct the first reading of Ordinance \_\_\_ amending Chapter 3.44 of Title 3 of the City of Moreno Valley Municipal Code to include a process for Western Riverside County Council of Governments to perform calculations for and collection of fees under the Western Riverside County Transportation Uniform Mitigation Fee (TUMF) Program.
2. Schedule the second reading and adoption of Ordinance \_\_\_ for the next regular Council meeting.

### **SUMMARY**

The City Council is asked to consider Ordinance No. XX to amend portions of Chapter 3.44 of Title 3 of the City of Moreno Valley Municipal Code, which include a process for shifting responsibility from the City to the Western Riverside Council of Governments (WRCOG) to perform calculation for and collection of fees under the Western Riverside County Transportation Uniform Mitigation Fee (TUMF) Program.

### **BACKGROUND**

The Western Riverside Council of Governments (WRCOG) Transportation Uniform Mitigation Fee ("TUMF") Program is a regional program designed to provide transportation and transit infrastructure that mitigates the impact of new growth in

Western Riverside County. Each of WRCOG's eighteen-member jurisdictions (Member Agencies), which include the City of Moreno Valley, participates in the TUMF Program through an adopted ordinance, collects fees from new development, and remits the fees to WRCOG.

WRCOG, upon recommendation by the WRCOG Executive Committee, recently adopted a revision to the TUMF calculation and collection process to provide agencies an option in which WRCOG calculates and collects TUMF on behalf of member agencies that elect to delegate the fee calculation and collection to WRCOG. The WRCOG staff report is included as Attachment 1 for additional background.

## **DISCUSSION**

Member agency staff are currently responsible for calculating and collecting TUMF for all new development within its jurisdiction. TUMF funds are remitted to WRCOG monthly and in-depth reviews are conducted on an annual basis. On October 1, 2018, WRCOG approved a policy change to the TUMF calculation process to allow member agencies the option to shift responsibility for TUMF calculations and collections to WRCOG in an effort to improve the cost-effectiveness of the process for WRCOG and its member agencies.

The option to delegate the TUMF calculation and collection to WRCOG provides numerous benefits, including a significant reduction in local agency staff time required to calculate and collect the TUMF, elimination of the need for extensive end of the year reviews, and a shift of the responsibility for errors from the member agency to WRCOG. Under the current process, member agencies bear the responsibility for any errors related to TUMF calculations and collections. This update to the process will result in savings to member agency planning and public works resources, in addition to the member agency's finance department resources.

The general process for TUMF calculations by WRCOG will require member agency staff to electronically complete TUMF calculation worksheets, with project-specific details, and submit to WRCOG. WRCOG staff has committed to a 48-hour response time – wherein most calculations will be completed within 48 hours, or additional information will be requested by WRCOG within 48 hours if there are unique project circumstances to consider. WRCOG staff will maintain a database of all credit agreements and the credit agreement process will not change significantly. WRCOG will host a secure, online web portal to provide the option for electronic fee payment by developers. Developers will also have the option of going to the WRCOG office to make TUMF payments in person. Once a project has paid TUMF, receipt of payment will be forwarded to the developer and applicable member agency staff. Because WRCOG will be responsible for all calculations and collections, member agency staff time required for TUMF monthly reports and annual reviews would be significantly reduced.

In the event of a TUMF assessment dispute, developers will retain the option to appeal the assessment by WRCOG and pay the TUMF in protest, so that the project can still move forward. The TUMF dispute resolution process will be streamlined, allowing

developers to go directly to WRCOG with disputes. Most notably, responsibility for TUMF miscalculations will shift from the member agency to WRCOG, given that the information provided by the member agency is complete and accurate.

WRCOG calculation and collection of TUMF is permissible under the Mitigation Fee Act. Shifting responsibility to WRCOG is not mandatory at this time; thus, member agencies could also retain TUMF calculation and collection responsibility. WRCOG calculation and collection of TUMF would require approval of an updated TUMF Ordinance and take effect on May 1, 2019 to allow interagency coordination on the implementation on payment of fees. Staff has been working with WRCOG staff and the timing of the approval of this updated TUMF Ordinance is acceptable.

## **ENVIRONMENTAL**

The proposed action is not subject to a California Environmental Quality Act (CEQA) determination pursuant to Section 15060(c)(3) of the CEQA Guidelines.

## **ALTERNATIVES**

1. Introduce and conduct the first reading of the proposed Ordinance as submitted, and schedule the second reading and adoption for the next regular City Council meeting. Staff recommends this alternative.
2. Do not introduce, nor pursue the adoption, of the proposed Ordinance and thereby retain the City's TUMF regulations, as they currently exist. Staff does not recommend this alternative.

## **FISCAL IMPACT**

The proposed Ordinance is expected to result in cost savings for the City principally in reduced demands on Community Development Department, Public Works Department and Financial & Management Services Department resources that are currently involved in administration of and auditing efforts given the responsibilities for calculating and collecting TUMF will be shifted to WRCOG staff and would reduce annual auditing.

## **PREPARATION OF STAFF REPORT**

Prepared By:  
Claudia Manrique  
Associate Planner

Department Head Approval:  
Richard J. Sandzimier  
Community Development Director

Concurred By:  
Patty Nevins  
Planning Official

## **CITY COUNCIL GOALS**

None

**CITY COUNCIL STRATEGIC PRIORITIES**

- 1. Economic Development
- 2. Public Safety
- 3. Library
- 4. Infrastructure
- 5. Beautification, Community Engagement, and Quality of Life
- 6. Youth Programs

Objective 4.9: Expand upon existing Intelligent Transportation Systems.

**ATTACHMENTS**

- 1. WRCOG Staff Report to Executive Committee 10/1/18
- 2. TUMF Ordfinaldraft0213
- 3. TUMF Ordredline0213

**APPROVALS**

Budget Officer Approval	<u>✓ Approved</u>	2/11/19 8:42 AM
City Attorney Approval	<u>✓ Approved</u>	2/13/19 3:38 PM
City Manager Approval	<u>✓ Approved</u>	2/13/19 4:09 PM



# Western Riverside Council of Governments Executive Committee

## Staff Report

**Subject:** Proposed New TUMF Calculation Policy

**Contact:** Christopher Gray, Director of Transportation, [cgray@wrcoq.us](mailto:cgray@wrcoq.us), (951) 405-6710

**Date:** October 1, 2018

*The purpose of this item is to provide an update and request action on a proposed new TUMF calculation policy that would have WRCOG calculate and collect TUMF for member agencies that elect to have WRCOG take responsibility of the calculation and collection of TUMF.*

### **Requested Actions:**

1. Adopt changes to the TUMF Administrative Plan to allow for WRCOG to calculate and collect TUMF on behalf of its member agencies that wish to enroll in this process.
2. Direct staff to prepare an amendment to the TUMF Ordinance to allow WRCOG to collect TUMF on behalf of its member agencies that wish to enroll in this process.
3. Direct staff to consult with each member agency to formally determine those that wish to enroll in this process.
4. Direct staff to work with legislative bodies with each agency wishing to enroll in this process to adopt an update to their TUMF Ordinance.
5. Direct staff to allow those agencies who do not wish at this time to enroll in this process to continue calculating and collecting TUMF.
6. Direct staff to contact all member agencies on an annual basis to verify enrollment status.

*WRCOG's Transportation Uniform Mitigation Fee (TUMF) Program is a regional fee program designed to provide transportation and transit infrastructure that mitigates the impact of new growth in Western Riverside County. Each of WRCOG's member jurisdictions and the March JPA participates in the Program through an adopted ordinance, collects fees from new development, and remits the fees to WRCOG. WRCOG, as administrator of the TUMF Program, allocates TUMF to the Riverside County Transportation Commission (RCTC), groupings of jurisdictions – referred to as TUMF Zones – based on the amounts of fees collected in these groups, the Regional Conservation Authority (RCA) and the Riverside Transit Agency (RTA).*

### **TUMF Calculation Review**

Since spring 2018, staff has pursued a potential policy change to the TUMF calculation process as the result of a comprehensive review of TUMF Remittance Reports submitted by member agencies for Fiscal Year (FY) 2017/2018 that identified a number of miscalculations that ultimately resulted in over \$300,000 in refunds to developers. Further, staff has noted that the current calculation process has led to several significant issues between WRCOG and its member agencies. These issues cost significant WRCOG and member agency staff and legal resources as the issues have taken multiple years to resolve. Staff's interpretation is that similar issues will continue to arise without a modification to the TUMF calculation policy. Therefore, staff has determined that it is appropriate to provide member agencies an option that would significantly revise the TUMF calculation and collection process, with the goal of improving the cost-effectiveness of the process for WRCOG and its member agencies.

The item has been presented to various WRCOG Committees and, through the course of the presentations, staff received questions on the implementation and legal aspect of a proposed structure in which WRCOG would calculate and collect TUMF. Staff provided information on the process and schedule to the Planning Directors (PDC), Public Works (PWC), and Technical Advisory (TAC) Committees in August. Additionally, staff presented the proposed forms for comment that member agencies would use to submit development project specifics to WRCOG for the calculation of TUMF.

At its August 16, 2018, meeting, the TAC unanimously recommended that the Executive Committee approve an option that would have WRCOG calculate and collect TUMF for all member agencies. This would significantly streamline the TUMF process by reducing the back-and-forth between WRCOG and member agency staff prior to fee collection. At its September meetings, the PDC and PWC unanimously recommended that the Executive Committee approve an option that would allow WRCOG to calculate and collect TUMF for member agencies that wish to adopt this new policy. Pursuant to the PDC and PWC recommendation, agencies would also have the option of continuing with the current TUMF calculation, collection, remittance, and annual review process.

### **WRCOG Calculation and Collection Feasibility**

Legal counsel has prepared a memo regarding the feasibility of options presented to the WRCOG Committees; a summary is provided as follows:

The Mitigation Fee Act does not prohibit WRCOG from calculating, verifying or collecting TUMF on behalf of its member agencies.

Legal counsel has advised staff that the TUMF Model Ordinance allows either WRCOG or its member agencies to calculate TUMF obligations for new development. Having WRCOG staff calculate TUMF for its member agencies would require an amendment to the TUMF Administrative Plan, which would be subject to approval of the Executive Committee. This change to the Administrative Plan is one of the actions being presented today for approval. WRCOG may also collect TUMF on behalf of its member agencies, subject to a member agency's governing body adopting an Amendment to the current TUMF Ordinance.

### **Proposed TUMF Calculation Process**

In response to feedback received, the proposed update to the TUMF calculation process would provide agencies the option to have WRCOG calculate and collect TUMF. Agencies would also have the option of continuing with the current TUMF calculation, collection, and remittance process.

WRCOG staff presented a series of worksheets that would be used by member agencies to submit project-specific details to WRCOG for the calculation of TUMF at the August 2018 PDC and PWC meetings. Staff distributed proposed worksheets to members of each Committee for additional review and comment. Staff received comments on the proposed worksheets and incorporated the requested changes into the revised worksheets (Attachments 1 through 3).

WRCOG staff would use the information provided by the member agency staff on the calculation worksheets to calculate the TUMF based on the fee per unit and number of units proposed for each development project. This amount would then be communicated to the developer for payment of TUMF. Once TUMF has been paid to WRCOG, a receipt would be forwarded to the developer and the appropriate member agency to notify the member agency staff that the TUMF requirement has been satisfied. This communication is key because member agencies have the ultimate authority to issue project approvals, including building permits or certificates of occupancy.

During the initial presentations on this item, staff received questions regarding the turnaround time for WRCOG to provide TUMF calculations to member agencies. WRCOG has staffing resources to accommodate calculation of TUMF for all member agencies and all calculations would be provided to member agencies within 48 hours, or no longer than one week for projects that require additional review. Additionally, all of the worksheets and calculations would be completed electronically.

Fee collection would also be electronic, allowing the developer to pay TUMF in an online web portal. This approach would be no different than the process for other regional fees, such as water district or school district fees, which are calculated and collected by these agencies. WRCOG already collects fees through the PACE Program and has financial systems in place to accommodate TUMF collection.

The overall calculation process for these agencies would be as follows:



Reporting requirements for agencies that elect to have WRCOG calculate and collect TUMF would be dramatically simpler, as WRCOG staff would simply verify that calculation forms were submitted for all building permits issued. This review could occur on a monthly or annual basis. Agencies that choose to continue calculating and collecting TUMF would be required to continue the current monthly Remittance Report submittals and be subject to in-depth annual reviews.

### Frequently Asked Questions

Staff has received a number of questions on the proposed change to the TUMF calculation and collection process. Two of the most common questions, with answers, include:

- **What happens if an agency wants to maintain the current process?** If an agency wishes to still calculate and collect TUMF, they may choose to do so. WRCOG would defer to each individual agency to determine how this formal notification would occur. Potential options could include a letter from the City Manager / County Executive Officer / March JPA Executive Officer or formal action by the elected body of the agency. Each agency will have the option to determine how to notify WRCOG which can include City Council / Board of Supervisors action or a formal letter from the agency.
- **Would WRCOG charge an additional processing fee for TUMF calculations?** No. The TUMF Program authorizes WRCOG to expend funds generated from TUMF that are necessary and reasonable to carry out its responsibilities for administering and managing the Program.
- **Could agencies continue to charge a TUMF processing fee?** Yes. Member agencies would retain authority to charge an additional, separate TUMF processing fee on an agency-by-agency basis to recuperate costs associated with member agency staff time spent on the TUMF Program (i.e., submitting forms with project specific details for WRCOG calculation of TUMF).
- **Would the Credit Agreement process change if WRCOG were to calculate and collect TUMF?** The Credit Agreement process would not significantly change, as member agencies are ultimately responsible for acceptance of infrastructure constructed pursuant to Agreements.

Answers to additional frequently asked questions can be found in Attachment 4.

### Proposed Implementation Schedule

If action is taken by the Executive Committee in October, implementation of the new calculation policy could proceed as follows:

October 1, 2018: Executive Committee takes action to update the TUMF Administrative Plan to change the policy in which TUMF is calculated to allow WRCOG to calculate TUMF on behalf of member agencies that elect to have WRCOG take calculate and collect TUMF. The Executive Committee takes action on the amended TUMF Ordinance to have WRCOG calculate and collect TUMF for member agencies that elect to adopt the TUMF Ordinance.

October 2, 2018 – November 30, 2018: Agencies opt-into the new TUMF calculation and collection policy that would shift responsibility from the member agency to WRCOG. All agencies will be required to formally notify WRCOG of their approach – whether shifting responsibility of calculation and collection to WRCOG or maintaining responsibility of calculation and collection with the local jurisdiction.

December 2018 – March 2019: The governing body of each member agency interested in WRCOG calculating and collecting TUMF approves TUMF Ordinance Amendment.

April 1, 2019: WRCOG begins fee collection, contingent on member agency approval of the amended TUMF Ordinance. Agencies would also have the option of adopting the amended TUMF Ordinance after April 1, 2019; however, WRCOG will not begin collecting fees until after the amended Ordinance is adopted.

### **Next Steps**

Once approved by the Executive Committee, WRCOG will contact each WRCOG member agency through its TAC representative and ascertain their interest in delegating fee calculation and collection to WRCOG within 30 days. Staff will ask each agency to formally notify WRCOG of their intent to either retain fee calculation and collection responsibilities or delegate them to WRCOG. Each agency will be responsible for determining the appropriate means to determine their intent, whether it be through an administrative action, action of their legislative body, or some other approach. Once we have received notices from our member agencies, WRCOG will coordinate with those enrolling in the process to move forward on an update to their respective TUMF Ordinance. If a member agency chooses to maintain fee calculation and collection responsibilities, no further action would be needed by that agency. As noted above, the fee calculation and collection process will be formalized through the adoption of an updated TUMF Ordinance by those agencies wishing to do so.

### **Prior Actions:**

September 13, 2018: The Public Works Committee and the Planning Directors Committee 1) recommended that the Executive Committee adopt changes to the Administrative Plan to allow for WRCOG to calculate and collect TUMF on behalf of its member agencies that wish to enroll in this process; 2) recommended that the Executive Committee direct staff to prepare an amendment to the TUMF Ordinance to allow WRCOG to collect TUMF on behalf of its member agencies that wish to enroll in this process; 3) recommended that the Executive Committee direct staff to consult with each member agency to formally determine those that wish to enroll in this process; 4) recommended that the Executive Committee direct staff to work with legislative bodies of each agency wishing to enroll in this process to adopt an update to their TUMF Ordinance; 5) recommended that the Executive Committee direct staff to allow those agencies who do not wish at this time to enroll in this process to continue calculating and collecting TUMF; and, 6) requested that WRCOG staff contact all agencies on an annual basis to confirm enrollment status.

August 16, 2018: The Technical Advisory Committee recommended that the Executive Committee approve an option that would have WRCOG calculate and collect all project TUMF fees and exemptions.

August 9, 2018: The Public Works Committee and the Planning Directors Committee reviewed and provided input on the proposed TUMF calculation policy change.

May 17, 2018: The Technical Advisory Committee 1) recommended that the Executive Committee approve an option that would have WRCOG verify all project TUMF fees and verify exemptions; 2) directed staff to complete a comprehensive update to the TUMF Calculator Tool by August 2018; 3) directed staff to complete the TUMF Administrative Plan update with the process for implementing an option that would have WRCOG calculate all project TUMF fees and verify exemptions by August 2018.



May 10, 2018:

The Public Works Committee 1) recommended that the Executive Committee approve an option that would have WRCOG verify all project TUMF fees and verify exemptions; 2) directed staff to complete a comprehensive update to the TUMF Calculator Tool by August 2018; 3) directed staff to complete the TUMF Administrative Plan update with the process for implementing an option that would have WRCOG verify all project TUMF fees and verify exemptions by August 2018.

**Fiscal Impact:**

Transportation Department activities are included in the Agency's adopted Fiscal Year 2018/2019 Budget under the Transportation Department.

**Attachments:**

1. Draft TUMF Worksheet for Calculations.
2. Draft TUMF Worksheet for Exemptions.
3. Draft TUMF Worksheet for Defined Land Uses.
4. Frequently Asked Questions.
5. Draft Amendment to the TUMF Ordinance.
6. Draft TUMF Administrative Plan.
7. Draft TUMF Model Improvement and Credit Agreement.

# Item 6.A

## Proposed New TUMF Calculation Policy

# Attachment 1

## Draft TUMF Worksheet for Calculations

**TUMF CALCULATION WORKSHEET**

**Project Title:** \_\_\_\_\_

**Project Address:** \_\_\_\_\_

**Permit Number:** \_\_\_\_\_

**Agency:** \_\_\_\_\_

**Developer Contact Name:** \_\_\_\_\_

**Developer Email:** \_\_\_\_\_ **Developer Phone No.:** \_\_\_\_\_

**Exemption:**  No /  Yes (please complete TUMF Exemption Worksheet for all exemptions)

**Credit Agreement:**  No /  Yes (Name of Agreement: \_\_\_\_\_)

**Project Square Footage/# of Units:** \_\_\_\_\_  
*Note: Please complete 1 worksheet per project use.*

**STANDARD PROJECT TYPES (Check one)**

- |  |   |
|--|---|
| <input type="checkbox"/> Single-Family Residential | <input type="checkbox"/> Retail                   |
| <input type="checkbox"/> Multi-Family Residential  | <input type="checkbox"/> Service                  |
| <input type="checkbox"/> Industrial                | <input type="checkbox"/> Class A & Class B Office |

**TUMF CALCULATION HANDBOOK CATEGORIES (Check one & also complete TUMF Defined Land Use Worksheet)**

- |  |   |
|--|---|
| <input type="checkbox"/> Transit Oriented Development  | <input type="checkbox"/> Wholesale Nursery                                  |
| <input type="checkbox"/> Active Senior Living          | <input type="checkbox"/> Retail Nursery                                     |
| <input type="checkbox"/> Fuel Filling Station          | <input type="checkbox"/> High-Cube Warehouse/Distribution Center            |
| <input type="checkbox"/> Congregate Care/Nursing Home  | <input type="checkbox"/> Winery   |
| <input type="checkbox"/> Mini-Warehouse/Rental Storage | <input type="checkbox"/> Electric Vehicle Supply Equipment Charging Station |
| <input type="checkbox"/> Golf Course                   |   |

**Please email Jessica May at [jmay@wrcog.us](mailto:jmay@wrcog.us) or call 951-405-6713 with TUMF calculation-related questions.**

**CERTIFICATION**

Under penalty of perjury, I certify that the above is a true and accurate project description for purposes of calculating TUMF.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

# Item 6.A

## Proposed New TUMF Calculation Policy

# Attachment 2

## Draft TUMF Worksheet for Exemptions

## TUMF EXEMPTION WORKSHEET

Project Name: \_\_\_\_\_

Permit Number: \_\_\_\_\_

EXEMPTION TYPE	DOCUMENTATION REQUIRED
<input type="checkbox"/> Low-Income Residential Housing	<input type="checkbox"/> <u>Rental Housing</u> : Restriction to lower-income households for period of 55-years after issuance of Certificate of Occupancy <input type="checkbox"/> <u>For-Sale Units</u> : Restriction to ownership by persons and families of low or moderate income for at least 45-years after issuance of Certificate of Occupancy
<input type="checkbox"/> Government/Public Buildings, Schools, or Facilities	<input type="checkbox"/> Proof of payment of prevailing wage rates for project construction <input type="checkbox"/> Copy of Long-term lease with a government agency <input type="checkbox"/> Copy of deed restriction limiting use to government/public facility for minimum 20 years
<input type="checkbox"/> Development Agreement ( <i>must be on WRCOG-approved list</i> )	<input type="checkbox"/> Copy of Development Agreement
<input type="checkbox"/> Rehabilitation/Reconstruction of Habitable Structures, with replacement in-kind	<input type="checkbox"/> Proof of existence prior to January 1, 2000 <input type="checkbox"/> Project plans/description, showing replacement in-kind
<input type="checkbox"/> Rehabilitation/Reconstruction of Habitable Structures, credit for previous structure	<input type="checkbox"/> Proof of existence prior to January 1, 2000 <input type="checkbox"/> Square footage/# of units of structure to be demolished on-site: _____
<input type="checkbox"/> "Guest Dwellings" and "Detached Second Units"	<input type="checkbox"/> Lot zoned for and contains existing single-family residence <input type="checkbox"/> Second dwelling located on same lot as existing dwelling
<input type="checkbox"/> Additional Single-Family Residential Units on the Same Parcel as Existing	<input type="checkbox"/> Copy of agricultural zoning classifications <input type="checkbox"/> Site plan, showing existing single-family unit
<input type="checkbox"/> Kennels and Catteries on Existing Single Family Residence	<input type="checkbox"/> Site plan, showing existing single-family unit
<input type="checkbox"/> Non-Revenue Generating Sanctuary/Activity at House of Worship	<input type="checkbox"/> Project description
<input type="checkbox"/> Non-Profit Corporation/Organization Offering Full-Time Day School	<input type="checkbox"/> Proof of organization's 501(c)(3) status/documentation that no profit will be generated by the use
<input type="checkbox"/> New Single-Family Homes for Veterans	<input type="checkbox"/> Proof of organization's 501(c)(3) status

Please email Jessica May at [jmay@wrcog.us](mailto:jmay@wrcog.us) or call 951-405-6713 with TUMF calculation-related questions.

# Item 6.A

## Proposed New TUMF Calculation Policy

# Attachment 3

## Draft TUMF Worksheet for Defined Land Uses

## TUMF DEFINED LAND USE WORKSHEET

Project Name and Number: \_\_\_\_\_

PROJECT TYPE	DOCUMENTATION REQUIRED
<input type="checkbox"/> Transit Oriented Development	Site plan showing: <ul style="list-style-type: none"> <li><input type="checkbox"/> Residential use of not less than 50% of total floorspace;</li> <li><input type="checkbox"/> Maximum number of parking spaces.</li> </ul> Location Map showing: <ul style="list-style-type: none"> <li><input type="checkbox"/> One convenience retail store selling food within ½ mile of development;</li> <li><input type="checkbox"/> Seven eligible diverse uses within ½ mile of development, including previously described food retail store.</li> </ul>
<input type="checkbox"/> Active Senior Living	<ul style="list-style-type: none"> <li><input type="checkbox"/> Documentation showing a minimum 20 dwelling units in community;</li> <li><input type="checkbox"/> Local zoning/governing documents characterizing development as senior citizen housing pursuant to Cal. Civ. Code §51.11;</li> <li><input type="checkbox"/> Occupancy restriction statement pursuant to Cal. Bus. &amp; Prof. Code §11010.05 [2016].</li> </ul>
<input type="checkbox"/> Fuel Filling Station	Total number of fuel filling positions: _____ Note: number of "fuel filling positions" = number of cars that can be fueled at the same time Total gross floor area of buildings: _____
<input type="checkbox"/> Congregate Care/Nursing Home	Total number of beds: _____
<input type="checkbox"/> Mini-Warehouse/Rental Storage	Total site area (acres): _____
<input type="checkbox"/> Golf Course	Total number of holes: _____ Total gross floor area of buildings (SF): _____
<input type="checkbox"/> Wholesale or Retail Nursery	Total site area (acres): _____ Total gross floor area of buildings (SF): _____
<input type="checkbox"/> High-Cube Warehouse/ Distribution Center	Total gross floor area of buildings (SF): _____
<input type="checkbox"/> Winery	Total gross floor area of tasting room and/or associated ancillary uses (SF): _____ Total gross floor area of all buildings (SF): _____
<input type="checkbox"/> Electric Vehicle Supply Equipment Charging Station	Total number of publicly accessible ESVE units: _____

Please email Jessica May at [jmay@wrcog.us](mailto:jmay@wrcog.us) or call 951-405-6713 with TUMF calculation-related questions.

# Item 6.A

## Proposed New TUMF Calculation Policy

# Attachment 4

## Frequently Asked Questions





# Transportation Uniform Mitigation Fee (TUMF)

## Frequently Asked Questions

### TUMF Process

WRCOG's Transportation Uniform Mitigation Fee (TUMF) Program is a regional fee program designed to provide transportation and transit infrastructure that mitigates the impact of new growth in western Riverside County. WRCOG administers the program in partnership with its member agencies. Each member agencies elects to participate in the TUMF Program through adoption of an ordinance and membership in WRCOG.

In an effort to create additional efficiencies in the TUMF Program, WRCOG is pursuing a revision in the TUMF process to give member agencies the option to shift responsibility of calculation and collection of TUMF from the member agency to WRCOG.

Below are responses to some "Frequently Asked Questions" regarding the proposed revision. Please do not hesitate to contact Christopher Gray, Director of Transportation at [cgray@wrcog.us](mailto:cgray@wrcog.us) or at 951-405-6710 if you have additional questions.

**Question:** *Why is WRCOG proposing a change to the TUMF process?*

**Response:** A number of calculation issues have arisen throughout the history of the TUMF Program, which has led to time consuming and expensive resolution processes for both WRCOG and member agency staff. Ultimately, the member agency is responsible for confirmed calculation errors. Staff's interpretation is that these types of issues will continue to arise without an update to the TUMF calculation policy.

**Question:** *Can an agency continue to calculate and collect TUMF within its boundaries?*

**Response:** Yes. Two options are currently proposed by WRCOG staff:

1. No change to the current process – A member agency will continue to calculate and collect TUMF, before remitting TUMF to WRCOG on a monthly basis; or
2. WRCOG calculates and collects TUMF on behalf of the member agency.

Each member agency will be required to commit to either Option 1 or 2. These options are illustrated in **Attachment 1** and **Attachment 2** to this FAQ.

**Question: *What would the new process entail?***

Response: Developers would work with member agency staff to complete TUMF Calculation Worksheets with project-specific information for submittal to WRCOG staff for fee calculation. WRCOG staff would review submitted TUMF Calculation Worksheets and provide a TUMF fee assessment or feedback within 48 hours. This submittal process would be completed electronically.

TUMF fee collection would still occur at either building permit or certificate of occupancy issuance. Developers would have the option of paying fees online or in-person at the WRCOG offices. WRCOG staff would send receipt of TUMF payment to the respective member agency for agency issuance of building permit or certificate of occupancy.

**Question: *Why should a local agency support this change?***

Response: This approach provides three significant benefits. First, there will be a significant reduction in local agency staff time required to calculate and collect the TUMF. Second, there will no longer be the need for extensive end of the year audits. Third, agencies who delegate this responsibility to WRCOG will no longer be responsible for any errors or omissions related to TUMF.

It is important to understand that agency's bear the responsibility for any errors related to TUMF calculations. In the instances in which TUMF is miscalculated, an agency is ultimately responsible to pay WRCOG for the difference between the collected fee and the fee due. Sometimes, it may not be possible for an agency to collect this amount since the development project has already been approved and may already be operational.

**Question: *Does the Mitigation Fee Act allow for WRCOG to calculate and collect TUMF?***

Response: The Mitigation Fee Act does not prohibit WRCOG from calculating, verifying, or collecting TUMF on behalf of its member agencies. In fact, other regional fee programs which were based on the TUMF already implement this approach, such as the Fresno COG Regional Fee Program.

The TUMF Ordinance will be amended to allow WRCOG to calculate and collect TUMF. The governing body of each member agency will be required to approve a TUMF Ordinance Amendment to allow WRCOG to calculate and collect TUMF if the agency elects to have WRCOG take responsibility for fee calculation and collection within its boundaries.

**Question:** *Would WRCOG charge an additional processing fee for TUMF calculations?*

Response: No. The TUMF Program authorizes WRCOG to expend funds generated from TUMF that are necessary and reasonable to carry out its responsibilities for administering and managing the Program. The maximum amount of TUMF revenue that WRCOG can utilize for administering and managing the Program is 4%. Historically, WRCOG has utilized approximately 3% of the TUMF revenue for administrative costs.

**Question:** *Would WRCOG need to add staff to accommodate calculation and collection of TUMF?*

Response: No. WRCOG staff currently spend a significant amount of time working with member agencies to resolve fee calculation issues *after* fees have been collected. WRCOG calculation and collection of fees would be a proactive approach to ensure that questions and concerns are addressed *before* fees have been collected and will significantly reduce back-and-forth discussion after fees have been collected.

WRCOG staff currently respond to fee calculation-related questions within 24 hours and are confident that the majority of calculations would be processed within 48 hours. For special-case calculations that require additional information from the member agency or developer before a fee assessment can be provided, WRCOG would initiate the fee-calculation discussion within 48 hours to resolve these issues in a timely manner.

**Question:** *Could agencies continue to charge a TUMF processing fee?*

Yes. Member agencies would retain authority to charge an additional, separate TUMF processing fee on an agency-by-agency basis to recuperate costs associated with member agency staff time spent on the TUMF Program (i.e. submitting forms with project specific details for WRCOG calculation of TUMF).

**Question:** *Does this mean that WRCOG is taking over land use control from local agencies?*

Response: No. Local agencies will maintain their current responsibilities in terms of reviewing and approving development projects. WRCOG will simply calculate the TUMF and collect the fee for those local agencies who chose to go this route.

This approach is no different than other regional fees such as Water District and School District fees, which are calculated and collected by these agencies.

**Question:** *Would the TUMF assessment on new development continue to occur at issuance of building permit?*

Response: Yes. TUMF would generally continue to be assessed at issuance of building permit; however, developers would also continue to have the option of deferring TUMF payment until final inspection or certificate of occupancy. The fees assessed shall be based on the fee amounts in effect at the time that the payment is due under the TUMF Ordinance adopted by each member agency.

**Question:** *Could developers submit fee calculation worksheets directly to WRCOG?*

Response: No. Member agency staff would be required to submit TUMF Calculation Worksheets to WRCOG to ensure that the information provided on the Calculation Worksheet for calculation of TUMF accurately matches the proposed development project. This is important because member agencies would still have the ultimate authority to issue project approvals including building permits or certificates of occupancy.

**Question:** *How would the TUMF be determined by WRCOG?*

Response: Neither fee levels or calculation methodologies would change at this time as a result of the updated fee calculation and collection policy. WRCOG staff would continue to use fee levels outlined in the 2016 Nexus Update, as approved by the WRCOG Executive Committee on July 10, 2017. The proposed Calculation Worksheets for submittal to WRCOG are based on existing methodology outlined in the TUMF Fee Calculation Handbook.

Once Calculation Worksheets would be submitted by member agency staff to WRCOG, WRCOG staff would calculate the TUMF based on the fee per unit and number of units proposed by a development project. This amount would then be communicated to the developer for payment of TUMF. Once TUMF has been paid to WRCOG, a receipt would be forwarded to the appropriate member agency staff and to the developer to notify the member agency that the TUMF requirement has been satisfied.

**Question:** *Would developers be required to go to the WRCOG office for payment of TUMF?*

Response: No. Developers would have the option to pay TUMF fees via a convenient online portal. In-person TUMF payment would also be available at the WRCOG office.

**Question:** *Would developers still have the option of entering Credit Agreements? Would this process change?*

Response: The Credit Agreement process would not significantly change. Credit Agreements would still be executed between member agencies and developers, as member agencies would ultimately be responsible for the acceptance of the infrastructure constructed pursuant to the Credit Agreement.

WRCOG staff would track administration of credits pursuant to each Credit Agreement as building permits tied to an Agreement are pulled.

**Question:** *What would WRCOG's response time be for calculation of TUMF?*

Response: WRCOG will commit to a 48-hour response time for TUMF fee calculations. The majority of projects will be straightforward, and a calculation would be available within this time period. For more complicated projects, WRCOG staff will initiate discussion with member agency staff within 48 hours. The turnaround time on these types of requests is currently less than a single day.

WRCOG staff has the capacity to calculate and collect TUMF. It is important to note that staff currently spends a significant amount of time working with member agency staff and developers after errors in TUMF calculation have been made and fees have been collected. This new proactive approach would avoid mistakes up-front, making the process more efficient and straight-forward for all parties involved.

**Question:** *Could a developer appeal WRCOG's calculation of TUMF?*

Response: Yes. The appeal process currently requires developers to pay TUMF in protest and then bring their concerns to the applicable City Council prior to formally bringing their concerns to WRCOG. Therefore, it can take several weeks for an appeal to reach WRCOG, and several more weeks before a decision can be made.

The appeal process would be significantly simplified through the WRCOG calculation and collection of TUMF, because developers would have the option to bring appeals directly to WRCOG. WRCOG staff would continue to coordinate with member agency staff to resolve appeals.

**Question:** *How would this change impact reporting/annual review requirements?*

Response: Because WRCOG would be responsible for TUMF calculation and collection, WRCOG staff would simply verify that TUMF Calculation Worksheets were submitted for all building permits issued within a given time period.

This would significantly streamline the process as the current process involves planning and finance staff time gathering relevant information such as receipts of TUMF payment, building permits, and Remittance Reports.

**Question:** *When could these changes take effect?*

Response: These proposed changes are currently being discussed in several of WRCOG's committees. A tentative schedule of implementation is shown below:

October 2018: WRCOG Executive Committee takes action to update the TUMF Administrative Plan to have WRCOG calculate TUMF for all member agencies. The WRCOG Executive Committee will also take action on the amended TUMF Ordinance to have WRCOG calculate and collect TUMF for member agencies that elect to adopt the TUMF Ordinance.

Once the Executive Committee takes action on a revised TUMF process for calculation and collection, member agencies would have thirty days to notify the WRCOG Executive Director if they intend to opt-in to have WRCOG collect fees.

November 2018: Calculation policy takes effect on predetermined date; for example, November 1, 2018.

November 2018 – March 2019: Governing body of each member agency interested in WRCOG collection of TUMF approves TUMF Ordinance Amendment.

April 1, 2019: WRCOG begins fee collection, contingent on member agency approval of the amended TUMF Ordinance. Agencies would also have the option of adopting the amended TUMF Ordinance after April 1, 2019; however, WRCOG will not begin collecting fees until after the amended Ordinance is adopted.

**Question:** *What happens if an agency wants to maintain the current process?*

Response: If an agency wishes to still calculate and collect TUMF, they may choose to do so. We simply ask that each agency formally notify WRCOG of their intended approach so that we can work with those agencies who wish to delegate fee calculation and collection to WRCOG.

WRCOG would defer to each individual agency to determine how this formal notification would occur. Potential options could include a letter from the City Manager or even formal action by the elected body of the agency.

WRCOG is also developing new tools, such as the online fee estimator, and new reporting procedures to limit future miscalculations and streamline the process. Agencies which choose to calculate and collect TUMF should be aware that

WRCOG will be requesting additional information for each fee calculation to reduce the number of errors below their current level.

**Question:** *What if my agency chooses not to delegate fee calculation and collection to WRCOG at this time? Will there be future opportunities to participate in this effort?*

**Response:** WRCOG will be reaching out to each agency after the Executive Committee takes action in October to determine whether they want to allow WRCOG to calculate and collect the fee or retain this responsibility. Based on the schedule above, we anticipate that fee calculation and collection will take effect in April 2019.

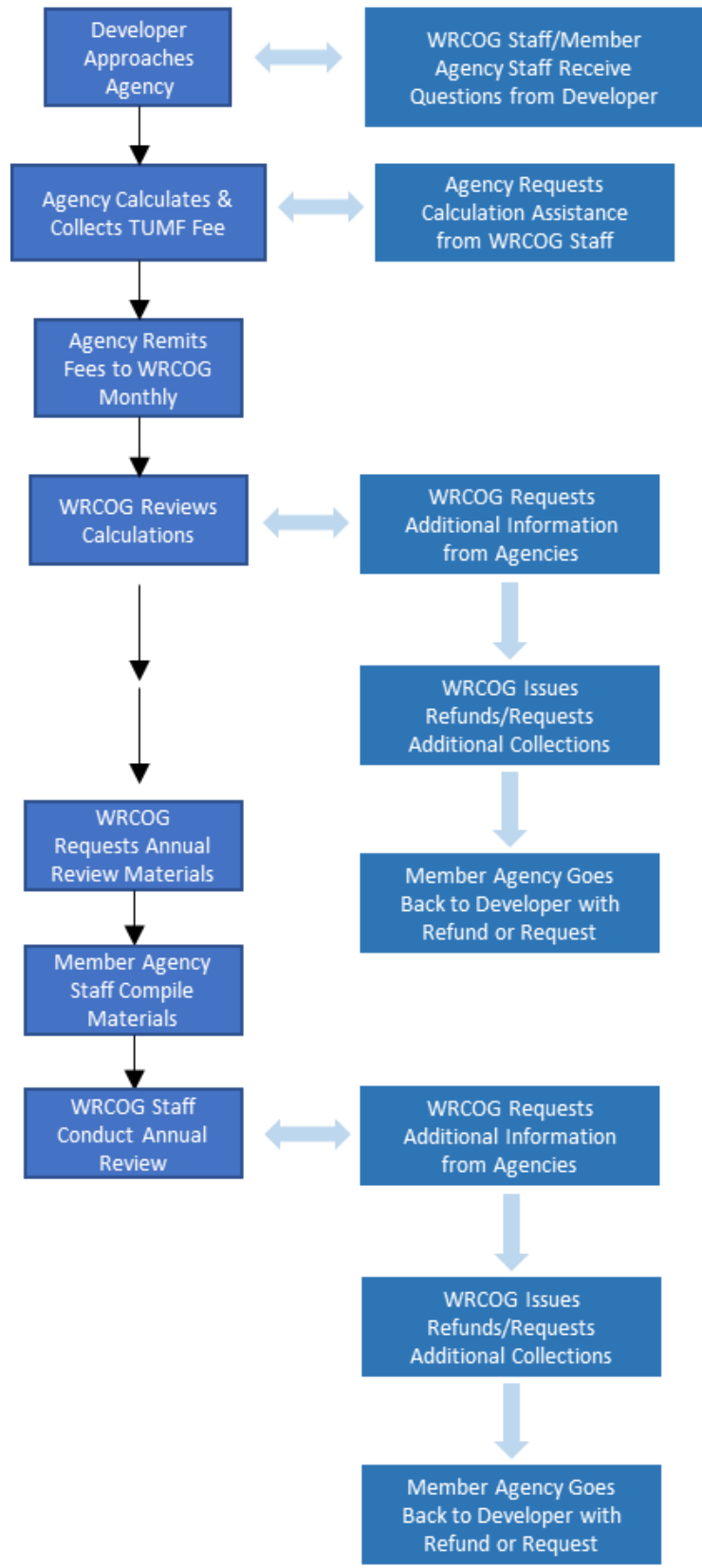
For those agencies who may wish to wait on making this decision, WRCOG will provide future opportunities for agencies who may delegate fee calculation and collection to WRCOG in the future. We anticipate that the process would proceed as follows:

- On January 1 of each year, WRCOG will distribute a letter to each member agency that continues to calculate and collect TUMF
- This letter will ask the agency whether they plan to delegate this task to WRCOG
- If the agency elects to delegate this task, then WRCOG will work with that agency with an amended TUMF Ordinance to implement this change
- If there is no change, then no further action is necessary

**Question:** *How can I find out more about WRCOG's TUMF Program?*

**Response:** To learn more about WRCOG's TUMF Program, please refer to the WRCOG website at [www.wrcog.us](http://www.wrcog.us) and select the TUMF link. To request a meeting or presentation, please contact Christopher Gray, WRCOG Director of Transportation, at [cgray@wrcog.us](mailto:cgray@wrcog.us) or at 951-405-6710.

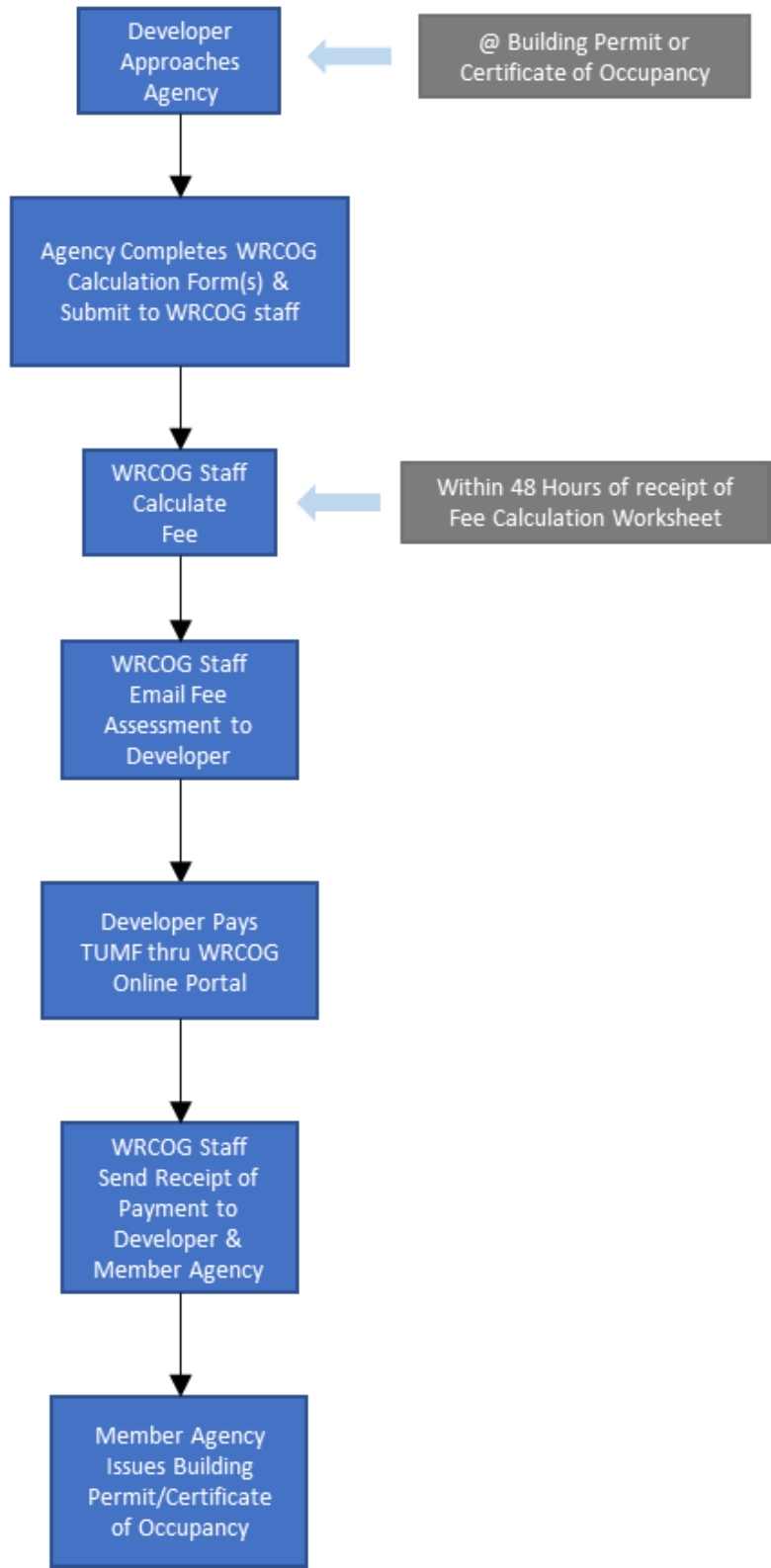
### Attachment 1 – Current TUMF Process



Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF)



### Attachment 2 – Proposed TUMF Process



# Item 6.A

## Proposed New TUMF Calculation Policy

# Attachment 5

## Draft Amendment to the TUMF Ordinance

## ORDINANCE NO. \_\_\_\_\_

**AN ORDINANCE OF THE CITY OF \_\_\_\_\_ AMENDING  
ORDINANCE NO. \_\_\_\_\_ TO INCLUDE A PROCESS FOR WRCOG CALCULATION AND  
COLLECTION OF FEES UNDER THE WESTERN RIVERSIDE COUNTY TRANSPORTATION  
UNIFORM MITIGATION FEE (TUMF) PROGRAM**

The City Council of the City of \_\_\_\_\_, California “(City)” ordains as follows:

Section 1. Title.

This Ordinance shall be known as Amendment No. 1 to the “Western Riverside County Transportation Uniform Mitigation Fee Program Ordinance of 2017” (“Ordinance”).

Section 2. Findings.

A. The City is a member agency of the Western Riverside Council of Governments (“WRCOG”), a joint powers agency comprised of the County of Riverside and 18 cities located in Western Riverside County. Acting in concert, the WRCOG Member Agencies developed a plan whereby the shortfall in funds needed to enlarge the capacity of the Regional System of Highways and Arterials in Western Riverside County (the “Regional System”) could be made up in part by a Transportation Uniform Mitigation Fee (“TUMF”) on future residential, commercial and industrial development.

B. WRCOG, upon the recommendation of the WRCOG Executive Committee, now desires to adopt a process in which WRCOG calculates and collects TUMF on behalf of member agencies under the Western Riverside County Transportation Uniform Mitigation Fee Program Ordinance of 2018.

C. The findings set forth in Ordinance No. \_\_\_ remain true and correct, and by this reference are incorporated into this Ordinance No. \_\_\_ as if set forth in full herein. This Ordinance No. \_\_\_ shall amend and supersede the provisions of Ordinance No. \_\_\_, and to the extent any provisions herein conflict with any provisions of Ordinance No. \_\_\_ or any other ordinance of the City, the City Council finds and determines that it is the intent of the City Council that the provisions herein shall control.

Section 3. Definitions.

For the purpose of this Ordinance, the following words, terms and phrases shall have the following meanings:

A. **“Class ‘A’ Office”** means an office building that is typically characterized by high quality design, use of high end building materials, state of the art technology for voice and data, on site support services/maintenance, and often includes full service ancillary uses such as, but not limited to a bank, restaurant/office coffee shop, health club, printing shop, and reserved parking. The minimum requirements of an office building classified as Class ‘A’ Office shall be as follows: (i) minimum of three stories (exception will be made for March JPA, where height requirements exist); (ii) minimum of 10,000 square feet per floor; (iii) steel frame construction; (iv) central, interior lobby; and (v) access to suites shall be from inside the building unless the building is located in a central business district with major foot traffic, in which case the first floor

may be accessed from the street to provide entrances/ exits for commercial uses within the building.

B. **“Class ‘B’ Office”** means an office building that is typically characterized by high quality design, use of high end building materials, state of the art technology for voice and data, on site support services/maintenance, and often includes full service ancillary uses such as, but not limited to a bank, restaurant/office coffee shop, health club, printing shop, and reserved parking. The minimum requirements of an office building classified as Class ‘B’ Office shall be as follows: (i) minimum of two stories; (ii) minimum of 15,000 square feet per floor; (iii) steel frame, concrete or masonry shell construction; (iv) central, interior lobby; and (v) access to suites shall be from inside the building unless the building is located in a central business district with major foot traffic, in which case the first floor may be accessed from the street to provide entrances/exits for commercial uses within the building.

C. **“Development Project” or “Project”** means any project undertaken for the purposes of development, including the issuance of a permit for construction.

D. **“Gross Acreage”** means the total property area as shown on a land division of a map of record, or described through a recorded legal description of the property. This area shall be bounded by road rights of way and property lines.

E. **“Habitable Structure”** means any structure or part thereof where persons reside, congregate or work and which is legally occupied in whole or part in accordance with applicable building codes, and state and local laws.

F. **“Industrial Project”** means any development project that proposes any industrial or manufacturing use allowed in the following Ordinance No. \_\_\_\_\_ zoning classifications: I-P, M-S-C, M-M, M-H, M-R, M-R-A, A-1, A-P, A-2, A-D, W-E, or SP with one of the aforementioned zones used as the base zone.

G. **“Low Income Residential Housing”** means “Residential Affordable Units”: (A) for rental housing, the units shall be made available, rented and restricted to “lower income households” (as defined in Health and Safety Code Section 50079.5) at an “affordable rent” (as defined in Health and Safety Code Section 50053), ). Affordable units that are rental housing shall be made available, rented, and restricted to lower income households at an affordable rent for a period of at least fifty-five (55) years after the issuance of a certificate of occupancy for new residential development. and (B) for for-sale housing, the units shall be sold to “persons or families of low or moderate income” (as defined in Health and Safety Code Section 50093) at a purchase price that will not cause the purchaser’s monthly housing cost to exceed “affordable housing cost (as defined in Health and Safety Code Section 50052.5) Affordable units that are for-sale housing units shall be restricted to ownership by persons and families of low or moderate income for at least forty-five (45) years after the issuance of a certificate of occupancy for the new residential development.

H. **“Multi-Family Residential Unit”** means a development project that has a density of greater than eight (8) residential dwelling units per gross acre.

I. **“Non-Residential Unit”** means retail commercial, service commercial and industrial development which is designed primarily for non-dwelling use, but shall include hotels and motels.

- J. **“Recognized Financing District”** means a Financing District as defined in the TUMF Administrative Plan as may be amended from time to time.
- K. **“Residential Dwelling Unit”** means a building or portion thereof used by one (1) family and containing but one (1) kitchen, which is designed primarily for residential occupancy including single-family and multi-family dwellings. “Residential Dwelling Unit” shall not include hotels or motels.
- L. **“Retail Commercial Project”** means any development project that proposes any retail commercial activity use not defined as a service commercial project allowed in the following Ordinance No. \_\_\_\_\_ classifications: R-1, R-R, R-R-O, R-1-A, R-A, R-2, R-2-A, R-3, R-3-A, R-T, R-T-R, R-4, R-5, R-6, C-1/C-P, C-T, C-P-S, C-R, C-O, R-V-C, C-V, W-2, R-D, N-A, W-2-M, W-1, or SP with one of the aforementioned zones used as the base zone, which can include any eating/dining facility residing on the retail commercial development premises.
- M. **“Service Commercial Project”** means any development project that is predominately dedicated to business activities associated with professional or administrative services, and typically consists of corporate offices, financial institutions, legal, and medical offices eating/dining facilities, and other uses related to personal or professional services.
- N. **“Single Family Residential Unit”** means each residential dwelling unit in a development that has a density of eight (8) units to the gross acre or less.
- O. **“TUMF Participating Jurisdiction”** means a jurisdiction in Western Riverside County which has adopted and implemented an ordinance authorizing participation in the TUMF Program and complies with all regulations established in the TUMF Administrative Plan, as adopted and amended from time to time by the WRCOG.
- P. **“Disabled Veteran”** means any veteran who is retired or is in process of medical retirement from military service who is or was severely injured in a theatre of combat operations and has or received a letter of eligibility for the Veterans Administration Specially Adapted Housing (SAH) Grant Program.
- Q. **“Government/public buildings, public schools, and public facilities”** means any owned and operated facilities by a government entity in accordance with Section 4. Exemptions, Subsection F of this Ordinance. A new development that is subject to a long-term lease with a government agency for government/public buildings, public schools, and public facilities shall apply only if all of the following conditions are met:
- (a) The new development being constructed is subject to a long-term lease with a government agency.
  - (b) The project shall have a deed restriction placed on the property that limits the use to government/public facility for the term of the lease, including all extension options, for a period of not less than 20 years. Any change in the use of the facility from government shall trigger the payment of the TUMF in effect at the time of the change is made.
  - (c) No less than ninety percent of the total square footage of the building is leased to the government agency during the term of deed restriction the long term and any extensions thereof.
  - (d) The new development is constructed at prevailing wage rates.
  - (e) A copy of the lease is provided to the applicable jurisdiction and to WRCOG.

(f) Based on the facts and circumstances WRCOG determines that the intent of the lease is to provide for a long-term government use, and not to evade payment of TUMF.

R. **“Non-profit Organization”** means an organization operated exclusively for exempt purposes set forth in section 501(c)(3) of the Internal Revenue Code, and none of its earnings may inure to any private shareholder or individual. In addition, it may not be an action organization, i.e., it may not attempt to influence legislation as a substantial part of its activities and it may not participate in any campaign activity for or against political candidates. For the purposes of the TUMF Program, the non-profit may be a 501(c) (3) charitable organization as defined by the Internal Revenue Service.

S. **“Long-Term Lease”** as used in the TUMF Program, a “long-term lease” shall mean a lease with a term of no less than twenty years.

T. **“Mixed-Use Development”** as used in the TUMF Program, means Developments with the following criteria: (1) three or more significant revenue-producing uses, and (2) significant physical and functional integration of project components.

U. **“Guest Dwellings” and “Detached Second Units”** according to the State of California legal definition as following: 1) The second unit is not intended for sale and may be rented; 2) The lot is zoned for single-family dwellings; 3) The lot contains an existing single-family dwelling; 4) The second unit is either attached to the existing dwelling and located within the living area of the existing dwelling or detached from the existing dwelling and located on the same lot as the existing dwelling; and 5) Are ministerially amended by each jurisdiction’s local codes.

V. **“TUMF Administrative Plan”** means that the TUMF Administration Plan adopted by the WRCOG Execution Committee May 5, 2003, as amended, setting forth detailed administration procedures and requirements for the TUMF program.

#### Section 4. Establishment of the Transportation Uniform Mitigation Fee.

A. **Adoption of TUMF Schedule.** The City Council shall adopt an applicable TUMF schedule through a separate resolution, which may be amended from time to time.

B. **Fee Calculation.** The fees shall be calculated by WRCOG according to the calculation methodology fee set forth in the WRCOG TUMF Fee Calculation Handbook adopted July 14, 2003, as amended from time to time. In addition to data in the Fee Calculation Handbook, WRCOG Staff may consider the following items when establishing the appropriate fee calculation methodology:

- Underlying zoning of the site
- Land-use classifications in the latest Nexus Study
- Project specific traffic studies
- Latest Standardized reference manuals such as the Institute of Traffic Engineers Trip Generation Manual
- Previous TUMF calculations for similar uses
- WRCOG staff shall approve final draft credit / reimbursement agreement prior to execution

WRCOG shall have final determination regarding the appropriate methodology to calculate the fee based on the information provided by the local agency. In case of a conflict between the applicant, WRCOG, and/or the local agency regarding the fee calculation methodology, the dispute resolution process in the TUMF Administrative Plan will apply.

C. **Fee Adjustment.** The fee schedule may be periodically reviewed and the amounts adjusted by the WRCOG Executive Committee. By amendment to the Resolution reference is subsection A, above, the fees may be increased or decreased to reflect the changes in actual and estimated costs of the Regional System including, but not limited to, debt service, lease payments and construction costs. The adjustment of the fees may also reflect changes in the facilities required to be constructed, in estimated revenues received pursuant to this Ordinance, as well as the availability or lack thereof of other funds with which to construct the Regional System. WRCOG shall review the TUMF Program no less than every four (4) years after the effective date of this Ordinance.-

D. **Purpose.** The purpose of the TUMF is to fund those certain improvements to the Regional System as depicted in Exhibit "A" and identified in the 2016 Nexus Study, Exhibit "B."

E. **Applicability.** The TUMF shall apply to all new development within the City, unless otherwise exempt hereunder.

F. **Exemptions.** The following types of new development shall be exempt from the provisions of this Ordinance and in TUMF Administrative Plan:

1. Low income residential housing as described in Section 3 Definitions, Subsection G of this Ordinance and in the TUMF Administrative Plan.
2. Government/public buildings, public schools, and public facilities as described in Section 3. Definitions, Subsection Q. of this Ordinance and in the TUMF Administrative Plan. Airports that are public use airports and are appropriately permitted by Caltrans or other state agency.
3. Development Projects which are the subject of a Public Facilities Development Agreement entered into pursuant to Government Code section 65864 *et seq.*, prior to the effective date of Ordinance No. \_\_\_\_\_[insert number. of original TUMF Ordinance], wherein the imposition of new fees are expressly prohibited, provided that if the term of such a Development Agreement is extended by amendment or by any other manner after the effective date of Ordinance No. \_\_\_\_\_[insert number. of original TUMF Ordinance], the TUMF shall be imposed.
4. The rehabilitation and/or reconstruction of any habitable structure in use on or after January 1, 2000, provided that the same or fewer traffic trips are generated as a result thereof.
5. Guest Dwellings and Detached Second Units as described in this Ordinance in Section 3. Definitions, Subsection U. and in the Administrative Plan
6. Kennels and Catteries established in connection with an existing single family residential unit.
7. Any sanctuary, or other activity under the same roof of a church or other house of worship that is not revenue generating and is eligible for a property tax exemption (excluding concert venues, coffee/snack shops, book stores, for-profit pre-school day-cares, etc., which would be assessed TUMF.)

8. Any nonprofit corporation or nonprofit organization offering and conducting full-time day school at the elementary, middle school or high school level for students between the ages of five and eighteen years.

9. New single-family homes, constructed by non-profit organizations, specially adapted and designed for maximum freedom of movement and independent living for qualified Disabled Veterans.”

10. Other uses may be exempt as determined by the WRCOG Executive Committee as further defined in the TUMF Administrative Plan.

G. **Credit.** Regional System improvements may be credited toward the TUMF in accordance with the TUMF Administrative Plan and the following:

#### **Regional Tier**

i. **Arterial Credits:** If a developer constructs arterial improvements identified on the Regional System, the developer shall receive credit for all costs associated with the arterial component based on approved Nexus Study for the Regional System effective at the time the credit agreement is entered into. WRCOG staff must pre-approve any credit agreements that deviate from the standard WRCOG approved format.

ii. **Other Credits:** In special circumstances, when a developer constructs off-site improvements such as an interchange, bridge, or railroad grade separation, credits shall be determined by WRCOG and the City in consultation with the developer. All such credits must have prior written approval from WRCOG.

iii. The amount of the development fee credit shall not exceed the maximum amount determined by the Nexus Study for the Regional System at the time the credit agreement is entered into or actual costs, whichever is less.

#### **Local Tier**

i. The local jurisdictions shall compare facilities in local fee programs against the Regional System and eliminate any overlap in its local fee program except where there is a Recognized Financing District has been established.

ii. If there is a Recognized Financing District established, the local agency may credit that portion of the facility identified in both programs against the TUMF in accordance with the TUMF Administrative Plan.

#### Section 5. Reimbursements.

Should the developer construct Regional System improvements in excess of the TUMF fee obligation, the developer may be reimbursed based on actual costs or the approved Nexus Study effective at the time the agreement was entered into, whichever is less. Reimbursements shall be enacted through an agreement between the developer and the City, contingent on funds being available and approved by WRCOG. In all cases, however, reimbursements under such special agreements must coincide with construction of the transportation improvements as scheduled in the five-year Zone Transportation Improvement Program’s adopted annually by WRCOG.

#### Section 6. Procedures for the Levy, Collection and Disposition of Fees.



A. **Authority of the Building Department.** The Director of Building & Safety, or his/her designee, is hereby authorized provide WRCOG with development project specifics for the calculation of TUMF in a manner consistent with the TUMF Administrative Plan.

B. **Payment and Collection.** Payment of the fees shall be as follows:

i. All fees collected hereunder shall be collected by WRCOG for deposit, investment, accounting and expenditure in accordance with the provisions of this Ordinance, TUMF Administrative Plan, and the Mitigation Fee Act.

ii. The fees shall be paid at the time a certificate of occupancy is issued for the Development Project or upon final inspection, whichever comes first (the "Payment Date"). However this section should not be construed to prevent payment of the fees prior to issuance of an occupancy permit or final inspection. Fees may be paid at the issuance of a building permit, and the fee payment shall be calculated based on the fee in effect at that time, provided the developer tenders the full amount of his/her TUMF obligation. If the developer makes only a partial payment prior to the Payment Date, the amount of the fee due shall be based on the TUMF fee schedule in place on the Payment Date. The fees shall be calculated according to fee schedule set forth in the Ordinance and the calculation methodology set forth in the Fee Calculation Handbook adopted July 14, 2003, as amended from time to time.

iii. The fees required to be paid shall be the fee amounts in effect at the time of payment is due under this Ordinance, not the date the Ordinance is initially adopted. The City shall not enter into a development agreement which freezes future adjustments of the TUMF.

iv. If all or part of any development project is sold prior to payment of the fee, the property shall continue to be subject to the requirement for payment of the fee. The obligation to pay the fee shall run with the land and be binding on all the successors in interest to the property.

v. Fees shall not be waived.

C. **Issuance of Certificate of Occupancy.** The City shall not issue a certificate of occupancy for any Development Project until WRCOG has provided written evidence that it has collected the fee.

D. **Appeals.** Appeals shall be filed with WRCOG in accordance with the provisions of the TUMF Administrative Plan. Appealable issues shall be the application of the fee, application of credits, application of reimbursement, application of the legal action stay and application of exemption.

E. **Reports to WRCOG.** The Director of Building and Safety, or his/her designee, shall prepare and deliver to the Executive Director of WRCOG, periodic reports as will be established under Section 7 of this Ordinance.

Section 7. Appointment of the TUMF Administrator.

WRCOG is hereby appointed as the Administrator of the Transportation Uniform Mitigation Fee Program. WRCOG is hereby authorized to collect all fees generated from the TUMF within the City, and to invest, account for and expend such fees in accordance with the provisions of this Ordinance and the Mitigation Fee Act. The detailed administrative procedures concerning the implementation of this Ordinance shall be contained in the TUMF Administrative Plan. Furthermore, the TUMF Administrator shall use the Fee Calculation Handbook adopted July 14, 2003, as amended from time to time, for the purpose of calculating a developer's TUMF

obligation. In addition to detailing the methodology for calculating all TUMF obligations of different categories of new development, the purpose of the Fee Calculation Handbook is to clarify for the TUMF Administrator, where necessary, the definition and calculation methodology for uses not clearly defined in the respective TUMF ordinances.

WRCOG shall expend only that amount of the funds generated from the TUMF for staff support, audit, administrative expenses, and contract services that are necessary and reasonable to carry out its responsibilities and in no case shall the funds expended for salaries and benefits exceed one percent (1%) of the revenue raised by the TUMF Program. The TUMF Administrative Plan further outlines the fiscal responsibilities and limitations of the Administrator.

**Section 8. Effect.**

No provisions of this Ordinance shall entitle any person who has already paid the TUMF to receive a refund, credit or reimbursement of such payment. This Ordinance does not create any new TUMF.

**Section 9. Severability.**

If any one or more of the terms, provisions or sections of this Ordinance shall to any extent be judged invalid, unenforceable and/or voidable for any reason whatsoever by a court of competent jurisdiction, then each and all of the remaining terms, provisions and sections of this Ordinance shall not be affected thereby and shall be valid and enforceable.

**Section 10. No Procedural Defenses.**

Prohibition of Jurisdictions from raising procedural defenses, including without limitation a statute of limitations, laches, the California Government Tort Claims Act, and necessary parties in a dispute with WRCOG regarding the matters set forth herein.

**Section 11. Judicial Review.**

In accordance with State law, any judicial action or proceeding to attack, review, set aside, void or annul this Ordinance shall be commenced within \_\_\_\_\_ days of the date of adoption of this Ordinance.

**Section 12. Ordinance No.**

This Ordinance supersedes the provisions of Ordinance No. \_\_\_\_\_ provided this Ordinance is not declared invalid or unenforceable by a court of competent jurisdiction. If, for whatever reason, this Ordinance is declared invalid or unenforceable by a court of competent jurisdiction, Ordinance No. \_\_\_\_\_ all other related ordinances and polices shall remain in full force and effect.

**Section 13. Effective Date.**

This Ordinance shall take effect on XXXXXXXXXX.

MOVED AND PASSED upon this \_\_\_\_ day of \_\_\_\_ 2018, by the following vote:  
AYES:

NOES:

ABSTAIN:

ABSENT:

\_\_\_\_\_  
Mayor

ATTEST:

\_\_\_\_\_  
City Clerk

DRAFT

EXHIBIT "A"  
MAP OF REGIONAL SYSTEM

DRAFT

Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF)

EXHIBIT "A"

EXHIBIT "B"  
NEXUS STUDY

DRAFT

Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF)

EXHIBIT "B"

DRAFT

EXHIBIT "B"

DRAFT

<b>Summary report:</b>	
<b>Litéra® Change-Pro 7.5.0.135 Document comparison done on 9/13/2018 8:21:52 PM</b>	
<b>Style name:</b> Default Style	
<b>Intelligent Table Comparison:</b> Active	
<b>Original DMS:</b> iw://iManage/iManage/31401125/1	
<b>Modified DMS:</b> iw://iManage/iManage/31401125/2	
<b>Changes:</b>	
<u>Add</u>	15
<del>Delete</del>	13
<del>Move From</del>	1
<u>Move To</u>	1
<u>Table Insert</u>	0
<del>Table Delete</del>	0
<u>Table moves to</u>	0
<del>Table moves from</del>	0
Embedded Graphics (Visio, ChemDraw, Images etc.)	0
Embedded Excel	0
Format changes	0
<b>Total Changes:</b>	<b>30</b>



# Item 6.A

## Proposed New TUMF Calculation Policy

# Attachment 6

## Draft TUMF Administrative Plan

# Transportation Uniform Mitigation Fee

## ADMINISTRATIVE PLAN

August     , 2018



PREPARED BY THE WESTERN RIVERSIDE COUNCIL OF GOVERNMENTS  
RIVERSIDE COUNTY ADMINISTRATIVE CENTER ANNEX  
4080 LEMON STREET, 3<sup>RD</sup> FLOOR, MS 1032  
RIVERSIDE, CALIFORNIA, 92501-3609  
PHONE (951) 955-7985  
FAX (951) 787-7991

***Western Riverside Council of Governments (WRCOG)***

***Administrative Plan for the Western Riverside County  
Transportation Uniform Mitigation Fee (TUMF) Program***

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***Administrative Plan for the  
Western Riverside County Transportation Uniform Mitigation Fee  
(TUMF) Program***

**Preamble**

Future development within Western Riverside County will result in traffic volumes exceeding the capacity of the Regional System of Highways and Arterials (RSHA or Regional System) as it presently exists. The Regional System needs to be expanded to accommodate anticipated future growth; current funds are inadequate to construct the Regional System needed to avoid the unacceptable levels of traffic congestion and related adverse impacts.

The TUMF Program provides significant additional funds from new development to make improvements to the Regional System, complementing funds generated by Measure A, local transportation fee programs, and other potential funding sources. By establishing a fee on new development in the sub-region, local agencies have established a mechanism by which developers effectively contribute their “fair share” toward sustaining the regional transportation system. This is a twenty-five year program and is influenced by a variety of market factors that could cause a shortfall or surplus in the revenue projections. WRCOG shall review the TUMF Program no less than every four (4) years after the effective date of the 2016 TUMF Program Ordinance. Additionally, WRCOG will bring forward, on an annual basis, a Construction Cost Index Adjustment to the TUMF in effect at the time for review and action by the WRCOG Executive Committee. The Program is not designed to be the only source of revenue to construct the identified facilities, and it will be necessary for matching funds from a variety of available sources to be provided.

It is the intent that TUMF requirements may be met by paying cash, building eligible facilities or through public financing, such as Community Facility Districts and Assessment Districts, or private financing vehicles consistent with local jurisdiction policies.

General TUMF Program parameters, definitions and procedures are described in the TUMF Program Ordinance adopted by participating Western Riverside County jurisdictions. The Western Riverside Council of Governments (WRCOG) is designated as the TUMF Program Administrator, and as such will work closely with member jurisdictions, the Riverside County Transportation Commission (RCTC), the Riverside Transit Agency (RTA), and Riverside County Regional Conservation Authority (RCA) to coordinate the TUMF expenditures to maximize the effectiveness of future transportation investments. As the Program Administrator, WRCOG, agrees to indemnify, defend and hold harmless any TUMF Program participant, and its respective agents, officers, members, officials, employees, and attorneys, whose TUMF Ordinance is challenged in court, from and against all claims, liabilities, damages, or costs of any kind whatsoever, including attorneys’ fees and court costs; provided, however, that such indemnity and defense shall not extend or apply to challenges alleging procedural defects in the adoption and implementation of the TUMF Ordinance.

“TUMF Administrative Plan” means the Administrative Plan for the Western Riverside County TUMF Program prepared by WRCOG dated March 24, 2003, in substantially the form approved by the WRCOG Executive Committee on April 7, 2003, as may be amended from time to time, provided that, any material amendments to the TUMF Administrative Plan shall be approved by WRCOG Executive Committee.”

This Administrative Plan serves as the guideline to implement the TUMF Program and will be amended as needed to address changing conditions over the life of the Program.

- I. **Purpose** - The Purpose of this Administrative Plan is to provide those jurisdictions and agencies that are participants in TUMF Program with guidelines and policies for implementation of the TUMF Program. This Administrative Plan specifies implementation and responsibilities for the TUMF Program.

TUMF Program funds may only be used for capital expenditures associated with the Regional System of Highways and Arterials and for capital expenditures for transit system improvements consistent with the TUMF Nexus Study. These purposes include expenditures for the planning, environmental review, engineering and design costs, right of way acquisition, and administrative costs.

- II. **Authority** - The TUMF Program applies to those jurisdictions in Western Riverside County (County of Riverside and the Cities of Banning, Calimesa, Canyon Lake, Corona, Eastvale, Hemet, Jurupa Valley, Lake Elsinore, Menifee, Moreno Valley, Murrieta, Norco, Perris, Riverside, San Jacinto, Temecula, Wildomar and the March Joint Powers Authority (JPA)) that have adopted and are implementing the TUMF Program Ordinance. The TUMF Program has been developed pursuant to and consistent with authority provided in the requirements of California Government Code Chapter 5 Section 66000-66008 Fees for Development Projects also known as California Assembly Bill 1600 (AB 1600 or the Mitigation Fee Act), which governs the assessment of development impact fees in California. The Mitigation Fee Act requires that all local agencies in California, including cities, counties, and special districts follow three basic rules when instituting impact fees as follows:
- A. Establish a nexus or reasonable relationship between the development impact fee's use and the type of project for which the fee is required;
  - B. The fee must not exceed the project's proportional "fair share" of the proposed improvement; and
  - C. The fee cannot be used to correct current problems or to make improvements for existing development.

- III. **Imposition of and Participation in the TUMF Program** - Participating jurisdictions in Western Riverside County are responsible for adopting and enforcing all provisions of the TUMF Ordinance and calculating and collecting fees on new development within their jurisdictions. However, participating jurisdictions may adopt the amendment to the TUMF Ordinance (Amendment) which shall designate and authorize WRCOG to calculate and collect the TUMF on such participating jurisdiction's behalf.

To be considered a participant in the TUMF Program, WRCOG Member Agencies which existed in 2003 must have an effective date for the TUMF Ordinance of no later than June 1, 2003. Any Member Agency formed after 2003 must enact the TUMF Model Ordinance and any amendments thereto upon incorporation. All Member Agency must adopt any amendment of the TUMF Ordinance within ninety (90) days of approval by the WRCOG Executive Committee unless otherwise directed by the WRCOG Executive Committee. Participating jurisdictions shall not repeal or modify the Model TUMF Ordinance, except that modifications are permitted to meet local municipal codes and references. Further, in order to be considered a participating jurisdiction, local jurisdictions shall collect the full TUMF and transmit the fee to WRCOG as provided

herein, or shall authorize WRCOG to collect TUMF on its behalf pursuant to the Amendment.

Those jurisdictions that have ordinances with an effective date after June 1, 2003, or opt out of the TUMF Program and decide to participate at a later date must remit to WRCOG the amount of TUMF Program revenue for new development that was not collected by the jurisdiction. In order to verify the amount of revenue that would have been collected during the period in which a jurisdiction did not participate, said jurisdiction shall provide WRCOG with an annual report of building permit activity by the land uses identified in the Nexus Study. The remittance of the fee shall be accomplished in a lump sum payment unless other arrangements are agreed to in writing by WRCOG Executive Committee. Those jurisdictions that are not considered participants in the TUMF Program shall not be eligible to participate in the TUMF Program or the decision-making processes as more fully described in this document.

Non-participating jurisdictions will be ineligible to vote on any TUMF Program item and to receive their share of an estimated \$1.02 billion in local streets and roads funds that will be allocated from the Reauthorized Measure A.

- A. Calculation of the TUMF** - Each participating jurisdiction shall calculate and collect the TUMF from new development projects as outlined in the Fee Calculation portion of the Transportation Handbook as well as the most recent TUMF Ordinances and Fee Resolutions. For residential development projects, the fee is based on the number of units and for non-residential, the fee is based on the square footage. For non-residential development projects not included in the TUMF Fee Calculation Handbook, a traffic analysis acceptable to WRCOG is required to determine the fee based on the traffic impact of the proposed project. This method of calculation may be different from how the local development impact fee is determined.

The TUMF shall be calculated using the most current fee schedule in effect at the time the fee is due. Participating jurisdictions are prohibited from freezing TUMF by such means as “locking” a fee rate by paying a deposit or a portion of the fee prior to the date the fee is due or by entering into a Development Agreement or other agreement with a developer that freezes the fee at a certain level.

Partial Payments or Deposits: WRCOG discourages the use of deposits and partial payments as it will create additional reporting requirements for the jurisdictions and may give the developer the impression that the fees are not subject to change. However, if a jurisdiction allows for deposits or partial payments, it will transmit the partial payment/deposit to WRCOG in accordance with the TUMF ordinance along with a remittance report. In the variance column of the Remittance report, the jurisdiction shall indicate that the fee collected is a portion of the total due. When the balance is paid, the jurisdiction shall calculate the total fee for the project based on the TUMF fee schedule in place at the time the balance is paid and deduct the partial payment against the total. The balance will be transmitted in accordance with the TUMF ordinance and this Administrative Plan. The variance column of the Remittance report shall indicate that the balance is paid. If there is a fee adjustment between the deposit/partial payment and the payment of the balance, the fee that is required to be paid will be based on the most current TUMF fee schedule.

For the purpose of calculating the TUMF obligation for non-residential development the applicable land use category for a non-residential development is determined based on the predominate authorized use of the building or structure permitted by the underlying zoning associated with the new development. Projects could be subject to higher fee if the land use intensifies during the development process from what was originally proposed to the jurisdiction.

As an alternative to the above-described procedures, and at the option of each participating jurisdiction (subject to the written consent of WRCOG and evidenced by adoption of the Amendment), a participating jurisdiction may elect for WRCOG to calculate and collect the TUMF on behalf of the participating jurisdiction. Should a participating jurisdiction make such an election, the participating jurisdiction shall submit all information related to the development project that, in WRCOG's determination, is necessary for making such calculation, which shall generally include (without limitation) TUMF land use, type of development, number of units for residential development, square footage for non-residential development, and any additional pertinent information as requested by WRCOG. WRCOG will typically require [redacted] days to review the information and make a determination once all required information has been provided to WRCOG. In cases where an outside consultant review of the information is necessary, the review period may be extended.

In submitting a development project to WRCOG for TUMF calculation, the participating jurisdiction certifies and warrants that all information related to the development project (i.e., square footage, TUMF land use, type of development, etc.) is true, accurate, and complete. WRCOG shall be entitled to rely on such information, and shall not be responsible for any harm resulting from any error, inaccuracy, or otherwise. Any balance in TUMF obligation due to incorrect development project information will be the responsibility of the participating jurisdiction.

In the event a participating jurisdiction makes the election to have WRCOG calculate and collect TUMF, WRCOG shall take full responsibility for calculating the TUMF obligation and any shortfall in the calculation shall not be the responsibility of the participating jurisdiction.

In order to elect for WRCOG to calculate and collect TUMF on its behalf, a participating jurisdiction shall adopt the Amendment to the TUMF Ordinance in the form prepared by WRCOG. WRCOG will consult with each participating jurisdiction on a yearly basis to confirm if WRCOG or the participating jurisdiction is the responsible party for TUMF calculation and collection for the ensuing year. However, in the event WRCOG does not consult with a participating jurisdiction for any reason in a given year, TUMF for such participating jurisdiction shall continue to be calculated and collected in the ensuing year in the same manner as it was collected in the current year.

**Exemptions to the Payment of TUMF** - The TUMF Ordinance sets forth exemptions to the payment of TUMF. Those exemptions are summarized in Exhibit "G," attached hereto.



**B. Refunds** – Under certain circumstances, such as double payment, expiration of a building permit, or fee miscalculation, an applicant may be entitled to a TUMF refund. Refunds will be reimbursed by the end of the fiscal year on a first come, first served basis, depending upon the net revenue stream. Refunds will only be considered reimbursable if requested within 3 years of the original TUMF payment. In all cases, the applicant must promptly submit a refund request with proof of TUMF payment to WRCOG if WRCOG collected the TUMF, or if collected by a local jurisdiction, the refund request shall be submitted to that local jurisdiction, which will subsequently forward the request to WRCOG for verification, review and possible action.

1. **Expiration Of Building Permits** - If a building permit should expire, is revoked, or is voluntarily surrendered and is, therefore voided and no construction or improvement of land has commenced, then the applicant may be entitled to a refund of the TUMF collected which was paid as a condition of approval, less administration.

The applicant shall pay the current TUMF in effect at the time in full if he reapplies for the permit.

If a development project is partially under construction at the time of the effective date of the TUMF Ordinance, the TUMF shall be paid only on that portion of the development for which a building permit is next issued.

2. **Double Payments** – on occasion due to a clerical error, a developer has paid all or a portion of the required TUMF for project twice. In such cases, a refund of the double payment may be required. If, however, it is determined that the developer paid the fees to the jurisdiction to expedite the project with the intent of entering into a credit agreement at a later time the refund process is different and is more fully described in section VI of this document.
3. **Balance Due** – when TUMF is incorrectly calculated due to clerical error, it is the City's responsibility to remit the balance due to WRCOG. The error must be discovered within 3 years for the City to be held accountable. The amount due can be remitted through alternate methods agreed to by the WRCOG Committees. If first vetted through WRCOG staff in writing, the calculation is not subject to additional review.

**C. March Joint Powers Authority** - The March JPA shall not have a separate vote at the WRCOG Executive Committee as it has representation by elected officials from the County of Riverside and Cities of Moreno Valley, Perris, and Riverside. The Executive Director of the March JPA shall be a voting member of the WRCOG Technical Advisory Committee (WRCOG TAC) for TUMF Program items only. The March JPA is a unique partner in the TUMF Program in that it has land use authority and therefore will need to adopt and implement the TUMF Program in the same manner as the cities and county.

**IV. Allocation of Funds** – After the administrative costs and MSHCP are allocated (as specified in Section IX herein), TUMF funds shall be distributed in accordance with

WRCOG Executive Committee actions, the Nexus Study, this Administrative Plan and any future amendments thereto.

- A. **Allocation to Regional Transit Improvements** - Of the TUMF funds received by WRCOG, 1.64% shall be allocated to the RTA for making regional transit improvements.
  - B. **Allocation to Regionally Significant Transportation Improvements** - Of the TUMF funds received by WRCOG, 46.39% shall be allocated to the RCTC for programming improvements to the arterials of regional significance on the Regional System of Highways and Arterials.
  - C. **Allocation to Zones** - Of the TUMF funds received by WRCOG, 46.39% shall be allocated to the five Zones for programming improvements to the Regional System of Highways and Arterials as determined by the respective Zone Committees. The amount of TUMF funds allocated to each Zone shall be proportionate to the amount of TUMF revenue generated from the zone.
  - D. **Allocation to Mitigate TUMF Construction Projects** – Of the TUMF funds received by WRCOG, 1.59% shall be allocated to the RCA to purchase habitat for the MSHCP, to mitigate the impacts of TUMF construction projects.
- V. **Administration of the Program** - WRCOG shall administer the TUMF Program as described in the enabling Ordinance adopted by participating jurisdictions and further defined in this Administrative Plan.
- VI. **Administration of Credits** – The TUMF Ordinance has a provision that if a developer constructs a TUMF facility, the developer will receive credit against the TUMF obligation for the project improvements. Please refer to the WRCOG TUMF Credit/Reimbursement Manual attached hereto as Exhibit F and incorporated in full as if set forth herein for the procedures in which credits are administered and issued for developers constructing TUMF improvements.
- VII. **Administration of Reimbursements** –Local jurisdictions/agencies and developers are eligible for reimbursement for construction of TUMF facilities in certain instances. The process for local agencies is different than for landowners/developers; the processes are described in the WRCOG TUMF Credit/Reimbursement Manual, attached hereto as Exhibit F and incorporated in full as if set forth herein.
- VIII. **Administrative Responsibilities**
- A. **Program Administration** - As set forth in Section II, WRCOG is designated as the TUMF Program Administrator. As Administrator, WRCOG shall receive all fees generated from the TUMF as collected by WRCOG or local jurisdictions and review permits for correct land-use type assessment and proper remittance of TUMF. WRCOG shall invest, account for and expend such fees in accordance with the TUMF Ordinance and applicable state laws.

For jurisdictions that are not participating in the TUMF Program, the representative for that jurisdiction shall not be eligible to vote on any matter

related to the TUMF Program that goes before the WRCOG TAC and WRCOG Executive Committee.

1. **The WRCOG Executive Director** - Reporting to the WRCOG Executive Committee, the Executive Director shall be responsible for the following TUMF Program activities:
  - a. Administration of the TUMF Program, including development of model credit and reimbursement agreements, fee collection process and processing Program appeals;
  - b. Conduct an audit to report on the evidence that the collection and expenditure of funds collected is in accordance with the Mitigation Fee Act. The audit shall be presented to the WRCOG Executive Committee and made available to the public;
  - c. Establishment and management of the "TUMF Program Trust Fund" for the purposes of depositing TUMF revenues and income interest earned on Trust Fund deposits;
  - d. Preparation of an Annual Report for consideration by the WRCOG Executive Committee detailing the status of the TUMF Program including but not limited to fees collected and disseminated, capital projects planned for, prioritized, and built;
  - e. Preparation of periodic comprehensive TUMF Program review and required by the California Mitigation Fee Act. The review of the TUMF Program will include a review of the various Nexus Study inputs and assumptions, and preparation of recommendations on potential TUMF Program revisions for consideration by the WRCOG Executive Committee. Such reviews and updates may include, but are not limited to recommended fee adjustments based on changes in the facilities required to be constructed, and revenues received pursuant to the Ordinance;
  - f. Preparation of technical studies/analysis required to select and prioritize Regionally Significant Arterial projects;
  - g. Development of a five-year TIP that identifies projects that are scheduled and funded for construction over a specified period of time and is reviewed on an annual basis;
  - h. Development of a 5-year Expenditure Report that documents the expenditure of funds that identifies the purpose to which the fee is to be put, demonstrates a relationship and purpose for which the fee is being collected and identifies all sources and amount of funding anticipated to complete the financing of incomplete infrastructure facilities in accordance with California Government Code Sections 66000 et seq. for consideration by the WRCOG Executive Committee;
  - i. Staff support to and coordination with each of the TUMF Zone Committees as necessary;
  - j. Other related activities as directed by the WRCOG Executive Committee;
  - k. Approve Zone and RTA TIP Administrative Amendments; and
  - l. Execute amendments to TUMF reimbursement agreements.

**2. The WRCOG Executive Committee** - The WRCOG Executive Committee shall be responsible for reviewing and acting on the following:

- a. Recommendations for project selection and prioritization of the Regionally Significant Arterials, and the TIP;
- b. Review and possible approval of recommendations on projects from the Public Works Committee (PWC) and WRCOG TAC;
- c. The approval of the TUMF Program Administrative Plan, Technical Transportation Manual and any subsequent amendments thereto; and
- d. Recommendation of changes to the TUMF model Ordinance for consideration by participating jurisdictions.

In developing recommendations on Regionally Significant Arterials for consideration by the WRCOG Executive Committee, WRCOG staff and the Committee structure shall work with RCTC to coordinate compatibility with Measure A project priorities and schedules of area transportation improvements. WRCOG staff and the WRCOG Executive Committee shall also work with WRCOG jurisdictions and each Zone Committee for the same purposes.

For jurisdictions that are not participating in the TUMF Program, the WRCOG Executive Committee representative for that jurisdiction shall not be eligible to vote on any matter related to the TUMF that goes before the WRCOG Executive Committee.

**3. The WRCOG Technical Advisory Committee** - The WRCOG TAC shall review and make recommendations to the WRCOG Executive Committee on the following:

- a. Program updates and reviews and all supporting technical documentation;
- b. Revisions to the Administration Plan, Technical Transportation Manual, Fee Calculation Handbook and any other Program document;
- c. Ordinance revisions; and
- d. Annual fee adjustments.

The WRCOG TAC shall also provide additional assistance to the TUMF Program as requested by the WRCOG Executive Committee. For jurisdictions that are not participating in the TUMF Program, the WRCOG TAC representative for that jurisdiction shall not be eligible to vote on any matter related to the TUMF Program that goes before the WRCOG Executive Committee or WRCOG TAC.

**4. The Public Works Committee/TUMF PWC** - The PWC shall be comprised of the Public Works Director or designee from each participating jurisdiction of WRCOG, RCTC, RTA and WRCOG and shall be responsible for the following:

- a. Providing technical assistance and guidance for program updates;

- b. Developing objective criteria for project selection and prioritization including but not limited to the following factors: traffic safety issues potentially created by growth, regional significance, availability of matching funds, mitigation of congestion created by new development, system continuity, geographic balance, project readiness, and completed projects with reimbursement agreements;
- c. Providing additional assistance to the TUMF Program as requested by the WRCOG Executive Committee, RCTC and/or the WRCOG TAC and/or the Zone TAC;
- d. Overseeing the reparation of the Technical Transportation Manual;
- e. Preparing the 5-Year TIP, which will be reviewed and amended annually and fully adjusted every two years as members of the Zone TAC;
- f. Providing recommendations on the RCTC Regional Arterial TUMF Program of Projects every four years along with the Nexus Study update to the WRCOG TAC, WRCOG Executive Committee and RCTC;
- g. Selecting a lead agency for each of the projects on the TIP;
- h. Reviewing the Annual Report prepared by WRCOG;
- i. Revising the RSHA as may be necessary (at a minimum every 4 years); and
- j. Review and revise Unit Cost Assumptions to the RSHA as may be necessary (at a minimum every 4 years).

**B. Regional Arterial Administration** - RCTC through an MOU with WRCOG (effective October 1, 2008) is the responsible agency for programming and delivering the Regionally Significant Arterials designed under Measure A and defined in the Nexus Study. WRCOG and RCTC have established a committee structure that incorporates the Public Works Directors, City Managers the WRCOG Executive Committee, and the RCTC Board for the development, review and approval of the Regional Arterial TUMF Program of projects.

1. **The RCTC Executive Director** - The Executive Director shall be responsible for the following TUMF Program activities:
  - a. Establishment and management of the “TUMF Program Trust Fund” for the purposes of depositing TUMF revenues and income interest earned on Trust Fund deposits;
  - b. Development of the RCTC Regional Arterial TUMF Program that identifies Regional projects for reimbursement that are scheduled and funded for construction by jurisdictions and developers over a specified period of time and is reviewed on an annual basis;
  - c. Staff support to and coordination with the TUMF Committees as necessary; and
  - d. Other related activities as directed by the RCTC Board.
2. **The Riverside County Transportation Commission** - RCTC shall be responsible for reviewing and acting on recommendations for project selection and prioritization of the RCTC Regional Arterial TUMF Program.

RCTC shall review and consider recommendations on the RCTC Regional Arterial TUMF Program project on TUMF Regional Arterial projects from the TUMF Public Works Committee, WRCOG TAC, and WRCOG Executive Committee.

- C. Zone Administration** - Each Zone shall establish a committee structure, similar to Exhibit "A", for the purpose of preparing a Zone Transportation Improvement Program (TIP) with the TUMF revenue that has been returned to the Zone and develop policies that impact the Zone, such as how to close a funding shortfall in the Zone. The Executive Committee has determined that the 5-Year TIP shall be balanced to the most reasonable extent possible and that program shortfalls will need to be closed or projects could be reduced or eliminated from the TIP. The Zone TAC shall be responsible for prioritization of projects, selection of the lead agency for each project, and to review all the projects for consistency within the Zone.

All Zones shall approve their TIP by consensus and forward their recommendations to Executive Committee for review and approval to ensure compatibility with the other Zones and the Technical Transportation Manual.

Zone dollars are to be allocated by the Zone TAC only and cannot be utilized or borrowed for projects located outside the zone unless such projects are: 1) proposed and approved by the Zone Committee and have a direct benefit to the Zone and 2) are consistent with the Nexus Study. In furtherance of this Section VIII.B, each Zone shall abide by the Guidelines set forth in Exhibit "C".

The Riverside County Transportation Improvement Plan approved by Riverside County voters on November 5, 2002 states "Funding which is not allocated to a city or county because it is not a participant in the TUMF Program in the Coachella Valley area and the TUMF and MSHCP in the Western County area shall be allocated to the Regional Arterial Program in the geographic area in which the city or portion of the county is located".

Each City and a portion of the unincorporated area of Riverside County are assigned to each of the zones. The five Zones are as follows:

1. Northwest Zone – The Cities of Corona, Eastvale, Jurupa Valley, Norco, Riverside and the County of Riverside, and the March JPA;
2. Southwest Zone – The Cities of Canyon Lake, Lake Elsinore, Murrieta, Temecula, Wildomar, and the County of Riverside;
3. Central Zone – The Cities of Menifee, Moreno Valley and Perris, and the County of Riverside, and the March JPA;
4. Pass Zone – The Cities of Banning and Calimesa, and the County of Riverside;
5. Hemet/San Jacinto Zone – The Cities of Hemet and San Jacinto and the County of Riverside.

**D. Local Administration** – Participating jurisdictions that have not opted to elect that WRCOG calculate and collect the TUMF on their behalf, are responsible for collecting the TUMF, as provided in the TUMF Ordinance. Fees collected and a corresponding Remittance Report are required to be transmitted to the Executive Director of WRCOG. In accordance with the TUMF Ordinance, the Amendment, and the Mitigation Fee Act, WRCOG shall deposit, invest, and expend the transmitted fees. Participating jurisdictions that have not opted for WRCOG to calculate and collect the TUMF on their behalf, are required to transmit reports as set forth below to WRCOG which will include, but not be limited to the following information regarding the TUMF Program status.

1. **Monthly Remittance Reports** – Participating jurisdictions are required to submit the standard Remittance Reports to WRCOG by the tenth (10<sup>th</sup>) day of the month end for the previous month’s activity, for example; June’s Remittance report is due July 10. The report shall contain information necessary for WRCOG to determine the total amount of fees collected within each fee category as it relates to the number of building permits, certificates of occupancy, or final inspections issued during the same period of time. Remittance reports are required even when no fees have been collected, and will show building permits or certificates of occupancy have been issued. In addition the participating jurisdiction shall provide WRCOG the following information: the name of the developer or payee, project address, APN, total square feet, credits issued, variance in the fee assessed, and such other information as requested by WRCOG. As an example, the variance column needs to be filled out for any issue that will lead to a fee other than the standard calculation. This information will assist WRCOG in tracking new development, total revenue received and revenue projections for purposes of Program audits and program updates.
2. **Remittance Delays** - If a participating jurisdiction does not transmit the fees along with a corresponding Remittance Report by the tenth (10<sup>th</sup>) day of the close of the month for the previous month in which fees were collected, the following fiscal policy shall be applied:

On the eleventh (11<sup>th</sup>) day after the close of the month WRCOG staff shall notify, in writing, the delinquent jurisdiction of the delinquency and request that said jurisdiction remit by the fifteenth (15<sup>th</sup>), the fees and the required Remittance Report;

If fees and Remittance Report have not been received, by the fifteenth (15<sup>th</sup>) day, WRCOG staff will invoice the jurisdiction for the approximate amount owed plus interest and penalties which is calculated at the current interest rate earned by the Riverside County Investment Pool plus thirty-five basis parts beginning from the first day of the month following the closing of the month being reported;

WRCOG staff will continue this notification until sixty (60) days after the close of the month. At which time, WRCOG will determine if an audit is necessary of the jurisdiction’s TUMF account, general ledger and any other financial data. If an audit is conducted, WRCOG will investigate the

amount owed and the cause of delay. Upon completion of the audit, WRCOG staff shall make any recommendations to resolve any outstanding issues; and

If an audit is required due to reporting and remittance irregularities, the jurisdiction shall incur the cost of the audit.

3. **Accruals** - the TUMF Program utilizes the five Zone 5-Year TIPs to allocate projects, which are based on the amount of available revenue to each Zone as determined by carryover and projected funds. At fiscal year-end, any unspent funds remaining on the TIPs that are not identified and accrued do not automatically roll over and may not be available for programming the following fiscal year. It is necessary for jurisdictions to identify those unused programmed funds so that they can be carried over to the next fiscal year. If the funds are not accrued, WRCOG cannot release the funds to the jurisdiction until the following year when the TIPs are officially adopted.

**E. Riverside Transit Agency** – In accordance with the Nexus Study 1.64% of funds received will be made available to the RTA to make capital facilities improvements for transit purposes as identified in the Nexus Study. The RTA shall provide a report to the WRCOG Executive Committee each year, which has been reviewed by the technical committees, detailing its expenditures of TUMF Program funds received, as well as future commitments for transit facilities using TUMF Program revenues as determined by the RTA Board of Directors.

**F. Information From Participating Jurisdictions Electing For WRCOG To Calculate And Collect Tumf** – Participating jurisdictions that have elected for WRCOG to calculate and collect the TUMF are responsible for providing WRCOG will all necessary materials/information to calculate the TUMF. These participating jurisdictions will also be required to periodically submit verification to WRCOG that calculation worksheets have been completed for all building permits issued within a given time period.

**IX. Administrative Costs.** The TUMF Ordinance, as amended from time to time, authorizes WRCOG to expend funds generated from TUMF that are necessary and reasonable to carry out its responsibilities to implement the Program. The WRCOG Executive Committee adopted a series of policies that clarify the expenditure and retention of program funds for the Administration of the Program and they are as follows:

1. WRCOG will retain no more than one percent (1%) of the total TUMF Program revenue for administration salaries and benefits;
2. Administration costs will be budgeted at whatever is reasonable and necessary, but not to exceed four percent (4%) of the TUMF revenues collected (inclusive of the one percent administrative salaries and benefit cap) unless otherwise directed by the Executive Committee.
3. Beginning July 1, 2006, WRCOG will take the administrative component from the revenue collected based on the total fee obligation inclusive of executed credit agreements.



4. Beginning July 1, 2006, all CFD's, SCIP and other financing mechanisms will pay the maximum (4%) administrative component in cash to WRCOG. When the administrative component is less than 4% then the surplus revenue will be allocated in accordance to their adopted percentages to the Multi-species Habitat Conservation Plan, RCTC, RTA and the Zones.
  5. For refunds, whether it is because the project is no longer going forward or expiration of building permits (where no construction has commenced), the applicant is entitled to a refund less the administrative component. Refunds will be processed based on available cash and will not take precedence over the projects identified as funded on the approved TIP. Refunds will however take precedence over the addition of new projects to the TIP.
- X. Appeals.** Appeals shall only be made in accordance with the provisions of this Section X.
- A. Persons or Entities Who Having Standing to Appeal.** No person or entity shall have standing to avail themselves of this Section X, except those persons or individuals who are responsible for paying the TUMF and have an unresolved appealable issue or matter.
  - B. Appealable Issues and Matters.** No issue or matter shall be heard or reviewed under this Section X unless the issue or matter is appealable. An issue or matter is appealable, if a qualified person or entity ("Appellant") has a good-faith dispute directly related to Appellant's Property ("TUMF Dispute") regarding (i) the amount of Appellant's TUMF obligation; (ii) the administration of TUMF Credits; (iii) exemption of Appellant's property from the TUMF Program; or (iv) administration of TUMF reimbursements.
  - C. Appeal Process.**
    1. If a qualified person or entity has a TUMF Dispute, he or she shall first attempt to resolve the dispute informally with WRCOG staff. The staff of the local jurisdiction may also participate in such discussions. If the TUMF Dispute remains unresolved after a reasonable attempt to address it at the local level, the qualified person or entity may submit a written appeal to the WRCOG Executive Director. The Appellant and the WRCOG Executive Director, or designee, shall attempt to resolve the issue within thirty (30) days of the WRCOG Executive Director's receipt of the appeal. At the conclusion of the thirty (30) day period, the WRCOG Executive Director shall render a written decision on the appeal. If the Appellant desires further review from WRCOG, the Appellant may submit a written request for review to the WRCOG Executive Committee chair.
    2. After the written appeal is received by the WRCOG Executive Committee chair, the item shall be presented to the WRCOG Administration & Finance Committee for review. At the request of either WRCOG staff or the Appellant, the decision of the WRCOG Administration & Finance Committee shall be forwarded to the WRCOG Executive Committee for review and action. The decision of the WRCOG Executive Commission shall be final.

- XI. Arbitration.** When there is a dispute among the Zone members that cannot be resolved and prevents the adoption of a project prioritization schedule, the matter shall be forwarded to the WRCOG TAC and WRCOG Executive Committee for a determination. Once the WRCOG Executive Committee takes action on the issue the decision is final.

If there is a dispute at the WRCOG Executive Committee level regarding project prioritization of a specific project(s) and a consensus cannot be reached, that project shall be tabled until such time as new information is presented and the matter can be resolved.

- XII. TUMF Program Amendments.** WRCOG shall undertake a review of all components of the TUMF Program in accordance with Government Code Section 66000 et seq. and other applicable laws, and, if necessary, recommend Program amendments and/or adjustments. Amendments to the Administrative Plan will be subject to the approval of the WRCOG Executive Committee. Amendments required to the TUMF Program Ordinance shall be approved by each participating jurisdiction, acting on recommendations provided by the WRCOG Executive Committee. The review shall consider whether future administration costs to participating jurisdictions are needed.

- 1. TUMF Network Revisions:** The TUMF Network is reviewed and revised at regular Nexus Study updates, with minor adjustments such as name changes, distances, and other errors that may be found from time to time occurring on a more frequent basis. However, there could be instances when certain assumptions were made during a Nexus Update that did not come to fruition that should be addressed. The primary cause is when a new city is incorporated and inherits the TUMF Network, which may not reflect the new jurisdiction's General Plan or priorities; another example is if a jurisdiction needs to "trade" a facility on the Network due to a rapid change in development patterns that should not wait for the normal revision cycle.

For new cities there would be an opportunity to review the TUMF Network with WRCOG staff to ensure that the Network identifies their priorities and allows them to make recommendations and to have the ability to swap out facilities. Any revision request must meet the criteria to be on the Network before the PWC will consider the request.

Jurisdictions that are not part of the above mentioned group that need to swap out facilities, must justify the swap by demonstrating that it provides continued regional circulation, meets the criteria to be on the TUMF Network, and does not provide an advantage to a specific land-use, community, developer/project for the purposes of TUMF credits or reimbursements. These jurisdictions must also demonstrate that the impacts mitigated in the swapped facilities are substantially similar to those impacts that would have been mitigated in the abandoned facilities.

This process is intended to be applied on an annual basis during interim years between revisions to the TUMF Nexus Study that would inherently include a revision to the TUMF Network. The deadline to submit any revision is June 30th. The focus of this process is the ability to shift projects on the TUMF Network with the intent to incur minimal fiscal impacts to the Program fee and Nexus determination, rather than adding new projects that would have a far more

significant effect on the Program fee and therefore would be more appropriately addressed during the regular Nexus Study reviews. The exception to this policy is the ability for newly incorporated cities to request new additions during the initial cycle of this adjustment process to ensure appropriate facilities are designated to address their individual city's needs.

The process requires the jurisdiction to submit a written justification of the requested TUMF Network facility shift. Elements to be addressed in the written justification should include an explanation of the rationale for the proposed facility shift specifically explaining why the facility should be addressed as part of the TUMF Program and cannot be addressed as part of an equivalent local program, and verification that the proposed shift in facility does not unduly favor or disadvantage a specific developer or development interest. Proximity to areas of significant recent development activity (i.e. shifts in development patterns resulting in changes in transportation system impacts to be mitigated) and the net cost differential to the program following the facility adjustment are key elements to be addressed in the written justification. The written justification must also demonstrate that the impacts mitigated in the proposed facility shift are substantially similar to those impacts that would have been mitigated in the abandoned facilities.

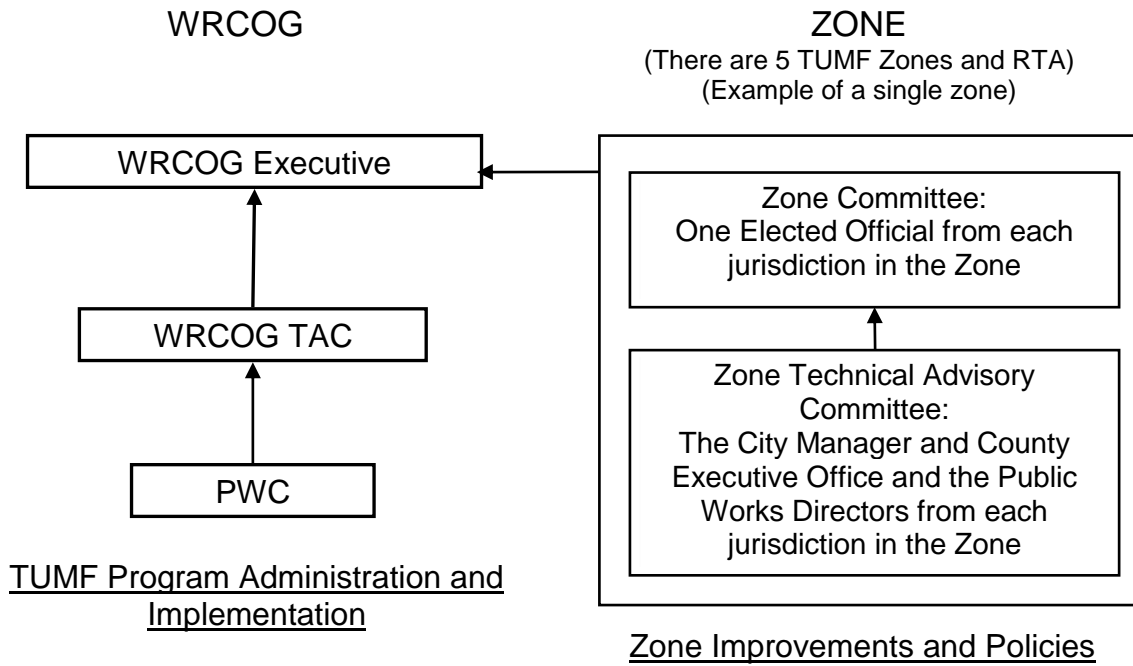
The existing criteria contained in the TUMF Nexus Study for identifying facilities to be included in the TUMF Network was refined for the purposes of evaluating requests for TUMF Network Amendments. All requested Network adjustments will be evaluated and scored using a point system based on key performance indicators consistent with the existing criteria contained in the TUMF Nexus Study. The scoring criteria is "Exhibit D" of this Plan. Only facilities defined in a participating jurisdiction's General Plan Circulation Element (or equivalent document) as an arterial highway facility with a minimum four (4) lanes at build-out will be evaluated for inclusion in the TUMF Network.

- XIII. CEQA.** The TUMF Program currently is a financing mechanism dependent on future actions of the WRCOG Executive Committee for improvements to the RSHA. WRCOG and its associated committees will be prioritizing and scheduling improvements on the RSHA, as such, the appropriate environmental documentation, shall be completed before a project can commence construction.

The TUMF Program was developed to mitigate the cumulative impacts of future growth on the RSHA. It was not developed to mitigate project-specific traffic impacts. Accordingly the program does not relieve any development project of the responsibility to mitigate project-specific impacts identified in the environmental analysis prepared for the project. When a development project is required to construct RSHA facilities as project-specific mitigation, it shall be eligible for credit and or reimbursement.

EXHIBIT "A"

# TUMF Decision Making Process



## EXHIBIT “B”

### Guidelines for the Administration of the Programmed Projects in the Zone’s Adopted 5-Year TIP

Once each Zone’s 5-Year Transportation Improvement Program (TIP) is adopted by the WRCOG Executive Committee, said TIPs shall be incorporated into and governed by these guidelines, the Administrative Plan, and Technical Transportation Manual in accordance with AB 1600. Annually, WRCOG staff meets with the Zone Technical Advisory Committees to review the status of all programmed projects on the 5-Year TIPs and bring the subsequent project adjustment requests to the Zone Committees for approval. The goals of the annual review process are as follows: (i) to update project cost estimates; (ii) to review project status; (iii) to determine the continued viability of projects; (iv) review the backlog of reimbursement projects; (v) to address local jurisdiction issues; and (vi) address compliance with AB 1600.

#### Adjustments:

In accordance with the Technical Transportation Manual and the original reimbursement agreement entered into with the lead jurisdiction, all approved projects’ funding and schedules are directly tied to critical milestones. As such, requests to change a project’s funding or schedule shall necessitate an amendment to the original agreement and the adopted TIP. Annual 5-Year TIP adjustments could include, but are not limited to:

- Scope of work reductions or additions;
- Project or phase delays;
- Project or phase cancellations;
- New shelf-ready network projects being added as replacement projects;
- Project or phase advances; and
- Request to transfer funding beyond a programmed project’s limits within a Zone.

#### Levels of Approval:

##### A. Zone Committee/WRCOG Executive Committee

The following shall be approved by the Zone Committee and adopted by the WRCOG Executive Committee as required in the Administrative Plan:

1. Annual updates to the Zone TIP.
2. Requests to increase total TUMF funding allocations to projects on the Zone TIP. These requests may be made by the local jurisdiction administratively outside of the annual TIP update cycles if deemed necessary by one of the Zone participating jurisdictions and WRCOG management due to unforeseen circumstances that necessitate immediate action. Such unforeseen circumstances shall include, but not be limited to, higher than expected bid prices, TUMF as a Federal or State match, etc. WRCOG staff will obtain action from the Zone Committee in these cases either by calling for a Special Zone Committee meeting or through individual consultation.

3. Administrative requests to advance funds or adjust project schedules on TIP approved projects, upon the recommendation of the Public Works Committee. Such advancements are subject to:
  - Jurisdiction's proof of readiness to move forward with project, and
  - Zone's current cash flow can support the advancement or change.

B. WRCOG Executive Director

The WRCOG Executive Director shall be responsible for the review and approval of the following changes to an approved Zone TIP, including the review and approval of any agreements, for:

1. Change in Lead Jurisdiction, with the written consent of the transferring and accepting Lead Jurisdiction.
2. Cancellation of project upon request of the local jurisdiction. In the event of cancellation, all funds shall revert to the Zone TIP Trust account.
3. Approval of final completion of the project. Upon notification from the Jurisdiction that the Project has been completed, all unused funds programmed for that Project shall revert to the Zone TIP Trust account.
4. All other administrative requests, upon consultation with the Public Works Committee.

C. Public Works Committee

The Public Works Committee shall be responsible for the review and approval of the following:

1. Requests to move funds within project categories (environmental, design, etc.) administratively, contingent upon participating jurisdiction's certification of viability of all phases.
2. Provide recommendations to the WRCOG Executive Director on any other requests that are deemed administrative in nature by the Director.

All administrative adjustments will be submitted to the WRCOG Executive Committee as part of the next Annual Review Report for final adoption.

D. Obligating Programmed Funds

The TUMF Program has established the policy that construction projects take priority, and therefore, WRCOG limits the obligation of TUMF dollars. WRCOG has two options by which to obligate TUMF. In both options, steps 1, 2, and 3 (Option A) or 6 (Option B) must be completed by the local jurisdiction to ensure TUMF funding can be made available for use on an eligible project. Since TUMF project funds are generally obligated on a first come first served basis, failure to follow the prescribed steps for either option may preclude a project sponsor from receiving TUMF payments for completed work until sufficient funds are available to be obligated.

**Option A:**

Funding for a project programmed on Zone 5-Year TIPs is not considered obligated by WRCOG until certain steps outlined below have been accomplished by the local jurisdiction.

1. Ensure that funding for the project phase is **programmed in the current year** of an adopted 5-Year TIP.
2. Ensure that there is a **signed (executed) reimbursement agreement** that matches the funding amount with the funding amount of the project phase in the adopted TIP.
3. Submit **an invoice for TUMF eligible work** prior to the end of the fiscal year to obligate the project phase funding. At the time of submitting the first invoice, the project sponsor will be required to submit all necessary supporting documentation (not previously submitted) in accordance with the provisions of the reimbursement agreement.
4. WRCOG will obligate the entire phase of the project if there is available revenue at the time the invoice is submitted.

**Option B:**

Funding for a project programmed on Zone 5-Year TIPs is not considered obligated by WRCOG until the steps outlined below have been accomplished by the local jurisdiction.

1. Ensure that funding for the project phase is **programmed in the current year** of an adopted 5-Year TIP.
2. Ensure that there is a **signed (executed) reimbursement agreement** that matches the funding amount with the funding amount of the project phase in the adopted TIP.
3. Send WRCOG a letter of **notice of intent** to issue RFP, solicit bids, make offer to purchase ROW or other similar action to verify that sufficient funding is available and that funds are obligated and reserved exclusively for the particular project phase.
4. Receive a **notice of obligation** from WRCOG within fourteen working days of receipt of the notice of intent confirming the amount of funding that is obligated and reserved exclusively for the particular project phase. Alternatively, the project sponsor will receive a notice of deferred obligation if WRCOG determines that insufficient funds are currently available for the project phase to be obligated.
5. Award the project and execute a contract within four months of receipt of the notice of obligation from WRCOG and send a letter of **confirmation of award** to WRCOG including evidence of a Board/Council action relating to the project award and contract execution.
6. Commence project work and submit the **first invoice** for payment within nine months of receipt of letter of obligation by WRCOG to preserve fund obligation. At the time of submitting the first invoice, the project sponsor will be required to submit all necessary supporting documentation (not previously submitted) in accordance with the provisions of the reimbursement agreement.

If a contract has not been executed within four months of receipt of the notice of obligation from WRCOG (step 5), there will be a review of the project status. Based on the review of project status, WRCOG will either:

- i. extend the fund obligation for up to a total of nine months from the notice of obligation if the project sponsor can demonstrate a realistic expectation that the project will be awarded and a confirmation of award can be provided to WRCOG within that time frame; or
- ii. de-obligate the funds.

Similarly, if the first invoice has not been submitted to WRCOG within nine months of receipt of the letter of obligation (step 6), there will be a review of the project status. Based on the review of project status, WRCOG will either:

- i. extend the fund obligation for up to an additional nine months if the project sponsor can demonstrate a realistic expectation that the project work will commence and a first invoice is submitted within that time frame; or
- ii. de-obligate the funds.

E. Programming the Cost Assumption’s 10 Percent Contingency

The TUMF Program has established the policy allowing local jurisdictions the ability to choose how to apply the available 10 percent Contingency costs historically assigned to the construction phase of a project when it is programmed on a TUMF 5-Year Transportation Improvement Program (TIP). The Contingency fund is 10 percent of the sum of the new lane, right-of-way, bridge, interchange, and railroad costs.

Under this new policy, some jurisdictions may opt to continue applying the 10 percent Contingency to the construction costs, while others may choose to apply a portion of the 10 percent Contingency to help defray their administrative costs incurred during the planning and engineering phase delivery.

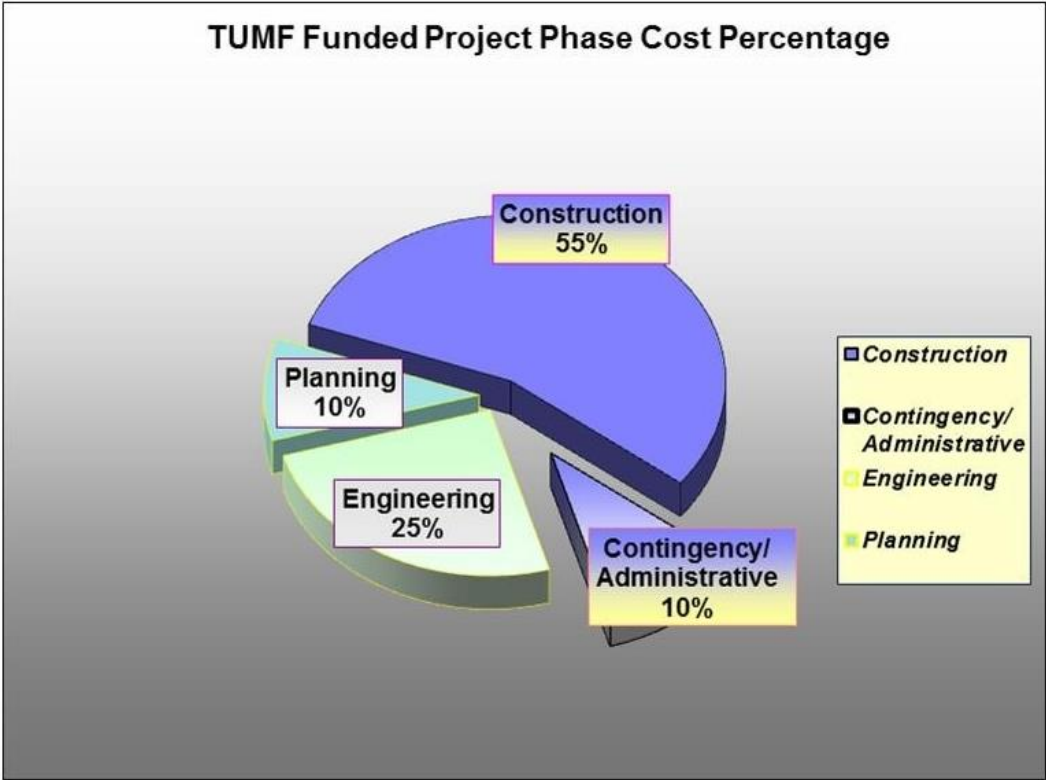
Since currently programmed construction funds already reflect the eligible 10 percent Contingency, the policy only applies to those projects that have not obligated or received payments on their construction phases.

For those jurisdictions who wish to recapture administrative costs of ongoing projects programmed on the TIP that do not involve an obligated construction phase, up to 10 percent of each of the programmed planning and engineering phases would be eligible for administrative costs and would be deducted from the available 10 percent contingency (leaving the remaining balance to be applied to construction costs or construction administration costs.)

Scenario –

Construction costs	= \$1,000,000
Contingency	= \$ 100,000 (or 10%)
Planning costs	= \$ 100,000
Engineering costs	= \$ 250,000
Admin costs (PA&ED)	= \$ 10,000 (or 10% of \$100k)
Admin costs (ENG)	= \$ <u>25,000</u> (or 10% of \$250k)
Balance Contingency	= \$ 65,000 (for construction admin or contingency costs)





Jurisdictions may apply a portion or all of the available 10 percent Contingency to reimburse accrued administration costs for all three phases by requesting the amount to be programmed as a separate line item on the TIP during a biennial TIP review or amendment as any other project adjustment.

All existing and future reimbursement agreements, cost estimates, and scopes of work will need to be amended to include specific language covering the jurisdiction's individual contingency use option.

## EXHIBIT “C”

The following table summarizes the criteria, evaluation thresholds and point values for evaluating TUMF Network adjustment requests for approval. For each evaluation measure, the maximum point value has been highlighted in **bold** font for easy reference.

Criteria	Evaluation Thresholds	Points
Minimum number of lanes at build-out	Less than 4 lanes	not eligible
	4 or 5 lanes	5
	6 or more lanes	<b>15</b>
Jurisdictions served	1 jurisdiction	0
	2 jurisdictions	5
	3 or more jurisdictions	<b>10</b>
Future forecast traffic volumes	Less than 20,000 vehicles per day	0
	20,000 to 24,999 vehicles per day	5
	25,000 to 29,999 vehicles per day	10
	30,000 to 34,999 vehicles per day	15
	35,000 to 39,999 vehicles per day	20
	40,000 or more vehicles per day	<b>25</b>
Future forecast volume to capacity ratio	< 0.80 (LOS A/B/C)	0
	0.81 – 0.90 (LOS D)	5
	0.91 – 1.00 (LOS E)	10
	> 1.00 (LOS F)	<b>15</b>
Regional fixed route transit services accommodated	No service	0
	1 or more services	<b>10</b>
Net fiscal impact of TUMF Network adjustment	More than \$1,000,000 cost addition	-15
	\$200,000 to \$1,000,000 cost addition	-5
	\$199,999 cost addition to \$199,999 cost savings	5
	\$200,000 to \$1,000,000 cost savings	15
	More than \$1,000,000 cost savings	<b>25</b>
<b>Maximum Possible Score</b>		<b>100</b>

## EXHIBIT “D”

### TUMF Program Definitions

For the purpose of the TUMF Administrative Plan, the following words, terms and phrases shall have the following meanings:

A. **“Class ‘A’ Office”** means an office building that is typically characterized by high quality design, use of high end building materials, state of the art technology for voice and data, on site support services/maintenance, and often includes full service ancillary uses such as, but not limited to a bank, restaurant/office coffee shop, health club, printing shop, and reserved parking. The minimum requirements of an office building classified as Class ‘A’ Office shall be as follows: (i) minimum of three stories (exception will be made for March JPA, where height requirements exist); (ii) minimum of 10,000 square feet per floor; (iii) steel frame construction; (iv) central, interior lobby; and (v) access to suites shall be from inside the building unless the building is located in a central business district with major foot traffic, in which case the first floor may be accessed from the street to provide entrances/ exits for commercial uses within the building.

B. **“Class ‘B’ Office”** means an office building that is typically characterized by high quality design, use of high end building materials, state of the art technology for voice and data, on site support services/maintenance, and often includes full service ancillary uses such as, but not limited to a bank, restaurant/office coffee shop, health club, printing shop, and reserved parking. The minimum requirements of an office building classified as Class ‘B’ Office shall be as follows: (i) minimum of two stories; (ii) minimum of 15,000 square feet per floor; (iii) steel frame, concrete or masonry shell construction; (iv) central, interior lobby; and (v) access to suites shall be from inside the building unless the building is located in a central business district with major foot traffic, in which case the first floor may be accessed from the street to provide entrances/exits for commercial uses within the building.

C. **“Development Project”** or **“Project”** means any project undertaken for the purposes of development, including the issuance of a permit for construction.

D. **“Gross Acreage”** means the total property area as shown on a land division of a map of record, or described through a recorded legal description of the property. This area shall be bounded by road rights of way and property lines.

E. **“Habitable Structure”** means any structure or part thereof where persons reside, congregate or work and which is legally occupied in whole or part in accordance with applicable building codes, and state and local laws.

F. **“Industrial Project”** means any development project that proposes any industrial or manufacturing use allowed in the following Ordinance No. \_\_\_\_\_ zoning classifications: I-P, M-S-C, M-M, M-H, M-R, M-R-A, A-1, A-P, A-2, A-D, W-E, or SP with one of the aforementioned zones used as the base zone.

G. **“Low Income Residential Housing”** means “Residential Affordable Units”: (A) for rental housing, the units shall be made available, rented and restricted to “lower income households” (as defined in Health and Safety Code Section 50079.5) at an “affordable rent” (as defined in Health and Safety Code Section 50053), ). Affordable units that are rental housing shall be made available, rented, and restricted to lower income households at an affordable rent

for a period of at least fifty-five (55) years after the issuance of a certificate of occupancy for new residential development. (B) for for-sale housing, the units shall be sold to “persons or families of low or moderate income” (as defined in Health and Safety Code Section 50093) at a purchase price that will not cause the purchaser’s monthly housing cost to exceed “affordable housing cost (as defined in Health and Safety Code Section 50052.5) Affordable units that are for-sale housing units shall be restricted to ownership by persons and families of low or moderate income for at least forty-five (45) years after the issuance of a certificate of occupancy for the new residential development.

H. **“Multi-Family Residential Unit”** means a development project that has a density of greater than eight (8) residential dwelling units per gross acre.

I. **“Non-Residential Unit”** means retail commercial, service commercial and industrial development which is designed primarily for non-dwelling use, but shall include hotels and motels.

J. **“Recognized Financing District”** means a Financing District as defined in the TUMF Administrative Plan as may be amended from time to time.

K. **“Residential Dwelling Unit”** means a building or portion thereof used by one (1) family and containing but one (1) kitchen, which is designed primarily for residential occupancy including single-family and multi-family dwellings. “Residential Dwelling Unit” shall not include hotels or motels.

L. **“Retail Commercial Project”** means any development project with the predominant use that proposes any retail commercial activity use not defined as a service commercial project allowed in the following Ordinance No. \_\_\_\_\_ classifications: R-1, R-R, R-R-O, R-1-A, R-A, R-2, R-2-A, R-3, R-3-A, R-T, R-T-R, R-4, R-5, R-6, C-1/C-P, C-T, C-P-S, C-R, C-O, R-V-C, C-V, W-2, R-D, N-A, W-2-M, W-1, or SP with one of the aforementioned zones used as the base zone, which can include any eating/dinning facility residing on the retail commercial development premises.

M. **“Service Commercial Project”** means any development project that is predominately dedicated to business activities associated with professional or administrative services, and typically consists of corporate offices, financial institutions, legal, and medical offices, which can include a stand-alone eating/dining facility residing on the service commercial development premises.

N. **“Single Family Residential Unit”** means each residential dwelling unit in a development that has a density of eight (8) units to the gross acre or less.

O. **“TUMF Participating Jurisdiction”** means a jurisdiction in Western Riverside County which has adopted and implemented an ordinance authorizing participation in the TUMF Program and complies with all regulations established in the TUMF Administrative Plan, as adopted and amended from time to time by the WRCOG.

P. **“Disabled Veteran”** means any veteran who is retired or is in process of medical retirement from military service who is or was severely injured in a theatre of combat operations and has or received a letter of eligibility for the Veterans Administration Specially Adapted Housing (SAH) Grant Program.

Q. Government/public buildings, public schools, and public facilities that are owned and operated by a government entity in accordance with Section G. subsection Iv of the model TUMF Ordinance. A new development that is subject to a long-term lease with a government agency for government/public buildings, public schools, and public facilities shall apply only if all of the following conditions are met:

- (a) The new development being constructed is subject to a long-term lease with a government agency.
- (b) The project shall have a deed restriction placed on the property that limits the use to government/public facility for the term of the lease, including all extension options, for a period of not less than 20 years. Any change in the use of the facility from government shall trigger the payment of the TUMF in effect at the time of the change is made.
- (c) No less than ninety percent of the total square footage of the building is leased to the government agency.
- (d) The new development is constructed at prevailing wage rates.
- (e) A copy of the lease is provided to the applicable jurisdiction and to WRCOG.
- (f) Based on the facts and circumstances, the intent of the lease is to provide for a long-term government use, and not to evade payment of TUMF.

R. **“Non-profit Organization”** means an organization operated exclusively for exempt purposes set forth in section 501(c)(3) of the Internal Revenue Code, and none of its earnings may inure to any private shareholder or individual. In addition, it may not be an action organization, i.e., it may not attempt to influence legislation as a substantial part of its activities and it may not participate in any campaign activity for or against political candidates. For the purposes of the TUMF Program, the non-profit may be a 501(c) (3) charitable organization as defined by the Internal Revenue Service.

S. **“Long-Term Lease”** as used in the TUMF Program, a “long-term lease” shall mean a lease with a term of no less than twenty years.

T. **“Mixed-Use Development”** as used in the TUMF Program, means Developments with the following criteria: (1) three or more significant revenue-producing uses, and (2) significant physical and functional integration of project components.

U. **“Guest Dwellings”** and **“Detached Second Units”** according to the State of California legal definition as following: 1) The second unit is not intended for sale and may be rented; 2) The lot is zoned for single-family dwellings; 3) The lot contains an existing single-family dwelling; 4) The second unit is either attached to the existing dwelling and located within the living area of the existing dwelling or detached from the existing dwelling and located on the same lot as the existing dwelling; and 5) Are ministerially amended by each jurisdiction’s local codes.

## EXHIBIT "E"

### TUMF Program Exemptions

The following types of new development shall be exempt from the provisions of the TUMF Administration Plan:

1. Low income residential housing as defined in Exhibit E, Section G of the Administrative Plan.
2. Government/public buildings, public schools, and public facilities that are owned and operated by a government entity in accordance with Section Q of Exhibit E of the Administrative Plan and Section G. subsection Iv of the model TUMF Ordinance. Airports that are public use airports and are appropriately permitted by Caltrans or other state agency.
3. Development Projects which are the subject of a Public Facilities Development Agreement entered into pursuant to Government Code section 65864 *et seq*, prior to June 30, 2003, wherein the imposition of new fees are expressly prohibited, provided that if the term of such a Development Agreement is extended by amendment or by any other manner after June 30, 2003, the TUMF shall be imposed.
4. The rehabilitation and/or reconstruction of any habitable structure in use on or after January 1, 2000, provided that the same or fewer traffic trips are generated as a result thereof.
5. "Guest Dwellings" and "Detached Second Units" As defined in Exhibit E of the Administrative Plan and the TUMF Ordinance.
6. Additional single-family residential units located on the same parcel pursuant to the provisions of any agricultural zoning classifications set forth in the Municipal Code.
7. Kennels and Catteries established in connection with an existing single family residential unit.
8. Any sanctuary, or other activity under the same roof of a church or other house of worship that is not revenue generating and is eligible for a property tax exemption (excluding concert venue, coffee/snack shop, book store, for-profit pre-school day-care, etc.)
9. Any nonprofit corporation or nonprofit organization offering and conducting full-time day school at the elementary, middle school or high school level for students between the ages of five and eighteen years.
10. "New single-family homes, constructed by non-profit organizations, specially adapted and designed for maximum freedom of movement and independent living for qualified Disabled Veterans."

**EXHIBIT "F"**



# WRCOG TUMF

## Credit/Reimbursement Manual

### Final Draft

Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF)

October 19, 2017



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# WRCOG TUMF Credit/Reimbursement Manual

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Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF)



# WRCOG TUMF Credit/Reimbursement Manual

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# WRCOG TUMF

## 1. Introduction

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## 1. Introduction

### 1.1 What is the WRCOG Transportation Uniform Mitigation Fee (TUMF) Program?

The Western Riverside Council of Governments (WRCOG) recognizes future development within western Riverside County will result in traffic volumes exceeding the capacity of the region’s highways and roadways. To address future capacity needs and supplement other available transportation funds, the TUMF Program was established.

The TUMF Program is a regional fee program designed to provide transportation and transit infrastructure that mitigates the impact of new growth in the western Riverside County. Each of WRCOG’s member jurisdictions and the March Joint Powers Authority (JPA) participates in the TUMF Program through an adopted ordinance, collects fees from new development, and remits the fees to WRCOG. As the administrator of the TUMF Program, WRCOG allocates TUMF funds to a variety of agencies in the region, including:

- Riverside Transportation Commission (RCTC);
- Riverside Transit Agency (RTA);
- Western Riverside Regional Conservation Authority (RCA); and
- Western Riverside cities and Riverside County areas, through the applicable TUMF Zone.

Figure 1.1, **WRCOG TUMF Zones**, illustrates the location of each zone.

Allocation for each TUMF Zone is based on the amount of fees collected in each jurisdiction. Funding accumulated through the TUMF Program is used to construct transportation improvements needed to accommodate future travel demand in western Riverside County. By levying a fee on new developments in the region, public agencies will be establishing a mechanism by which developers and in turn new county residents and employees effectively contribute their “fair share” toward sustaining the regional transportation system.

Fees are used to fund planning, engineering, right-of-way acquisition, and construction of eligible TUMF facilities. Eligible projects are identified in the TUMF Nexus Study, which establishes a nexus or reasonable relationship between the development impact fee’s use and the type of project for which the fee is required.

#### WRCOG TUMF Zones

There are five TUMF Zones designated in the TUMF Program

- Central
- Hemet/San Jacinto
- Northwest
- Pass
- Southwest

Each Zone is a specific geographic area in the WRCOG sub-region with common transportation issues. Zone level meetings occur among the public works, executive management, and elected officials who select which projects are to be prioritized. Each TUMF Zone receives 46.39% of TUMF revenues that are collected from the jurisdictions in that Zone.

#### TUMF Nexus Study

Identifies the future improvements needed for the TUMF Network. The TUMF Nexus Study also summarizes the TUMF network cost calculations for each of the individual roadway segment and the maximum eligible TUMF share for each segment.



# WRCOG TUMF Credit/Reimbursement Manual

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# WRCOG TUMF Credit/Reimbursement Manual

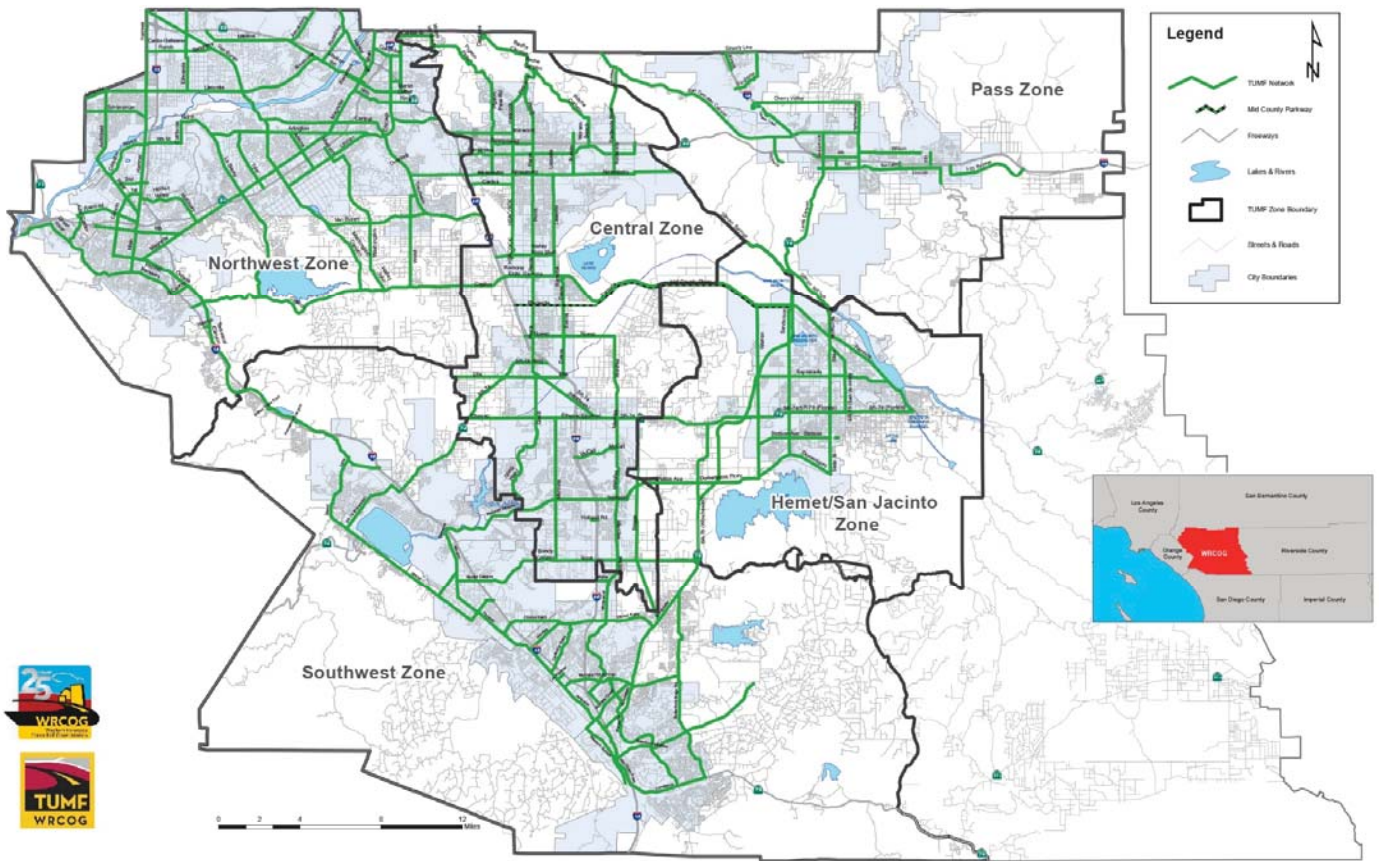


Figure 1: WRCOG TUMF Zones





# WRCOG TUMF Credit/Reimbursement Manual

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# WRCOG TUMF Credit/Reimbursement Manual

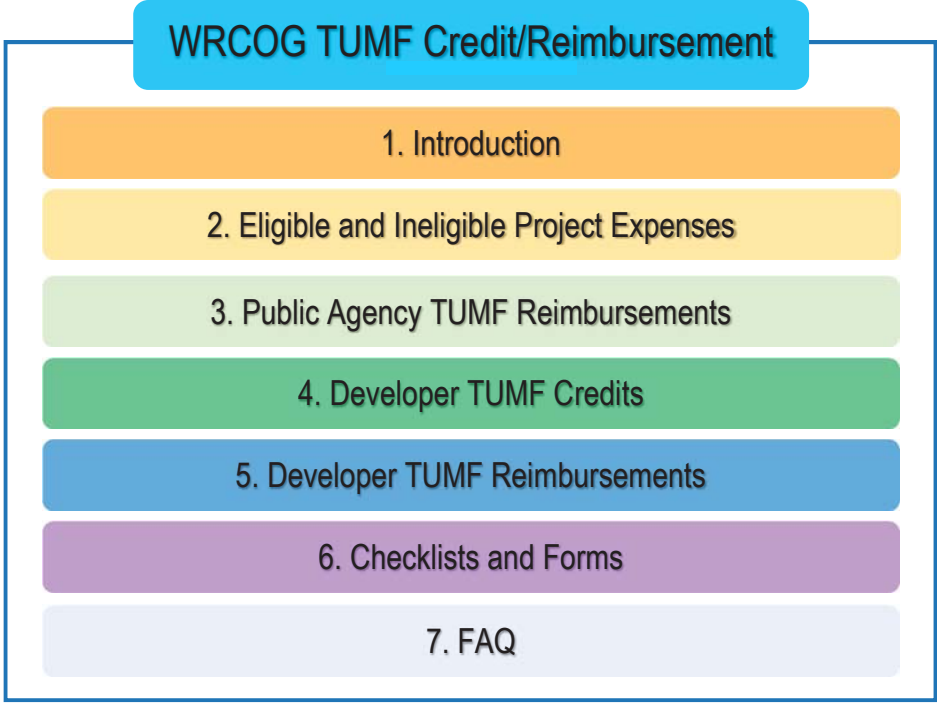
## 1.2 Purpose and Use of WRCOG TUMF Credit/Reimbursement Manual

The purpose of the WRCOG TUMF Credit/Reimbursement Manual is to provide those jurisdictions and agencies that are participants in the TUMF Program with guidelines on how to claim funds allocated for improvements to the TUMF Network as identified in the most recently adopted TUMF Nexus Study. This manual is intended to be a guide for TUMF participants and shall not be construed to establish any new rules or requirements. Binding TUMF Program rules are set forth in the TUMF Administrative Plan and the applicable city/county TUMF ordinances and resolutions.

This manual provides details on the reimbursement process for public agencies, credit and reimbursement process for developers, required documentation for TUMF invoicing to WRCOG and other TUMF funding elements.

Public agencies and developers seeking TUMF credits and/or reimbursements are encouraged to follow the guidelines set forth in this manual. However, WRCOG recognizes that changes and deviations from this manual may be necessary to accommodate and address specific project factors and public agency needs. WRCOG will coordinate with public agencies when deviations to credit or reimbursement process steps are required. All TUMF reimbursements require an agreement with WRCOG and/or the applicable TUMF participating agency.

The WRCOG TUMF Credit/Reimbursement Manual is organized into the following sections:





# WRCOG TUMF Credit/Reimbursement Manual

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# WRCOG TUMF

## 2. Eligible and Ineligible Project Expenses

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# WRCOG TUMF Credit/Reimbursement Manual

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# WRCOG TUMF Credit/Reimbursement Manual

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## 2. Eligible and Ineligible Project Expenses

### 2.1 TUMF Reimbursement Manual Vision and Reimbursement Principles

The WRCOG TUMF Reimbursement Manual assists local jurisdictions with the reimbursement process for eligible project costs of transportation improvements and facilities by providing a comprehensive, user-friendly handbook.

WRCOG coordinates with each local jurisdiction to encourage an efficient reimbursement process, but recognizes that questions regarding the reimbursement eligibility of some improvements and facilities may occur. To assist in determining the eligibility of projects costs, WRCOG utilizes the following TUMF Reimbursement Principles:

PRINCIPLE 1: Proposed improvements/costs contribute to the reduction of congestion in the region’s transportation network.

PRINCIPLE 2: Proposed improvements/costs contribute to capacity enhancement in the region’s transportation network.

PRINCIPLE 3: Proposed improvements/costs do not exceed the maximum TUMF share identified in the most recent TUMF Nexus Study.

PRINCIPLE 4: Proposed improvements/costs are integral to the implementation of the TUMF facility.

Reimbursements through the TUMF Program are for eligible project expenses for roadway segments identified on the TUMF Network or Regional System of Highways and Arterials (RSHA) as indicated in the TUMF Administrative Plan and Nexus Study. It is the responsibility of member jurisdictions to demonstrate the eligibility under the TUMF Program of all expenses submitted to WRCOG for review and potential reimbursement. The TUMF Program can only contribute funding for particular expenses as they relate to capacity enhancing projects included in the TUMF Nexus Study. Funding amounts explicitly stated in Reimbursement Agreements between WRCOG and member jurisdictions are reimbursed only if all invoices submitted contain TUMF eligible expenses.

The following sections list eligible and ineligible project expenses for reimbursement.





# WRCOG TUMF Credit/Reimbursement Manual

## 2.2 Eligible Project Types

Project reimbursement items eligible for funding reimbursement shall follow the Federal Guidelines as defined in MAP 21 and in the Caltrans Local Assistance Procedure Manual (LAPM). The following lists project types eligible for TUMF reimbursement:

Table 2-1 Eligible Project Types for TUMF Reimbursement	
	Construction of additional TUMF Network roadway lanes
	Construction of new TUMF Network roadway segments
	Expansion of existing TUMF Network bridge structures
	Construction of new TUMF Network bridge structures
	Expansion of existing TUMF Network interchanges with freeways
	Construction of new TUMF Network interchanges with freeways
	Grade separation of existing RSHA Network at-grade rail crossings

For eligible project types, the required Typical Roadway Standard assumes the following standard design characteristics that are consistent with the minimum requirements of the Caltrans Highway Design Manual:

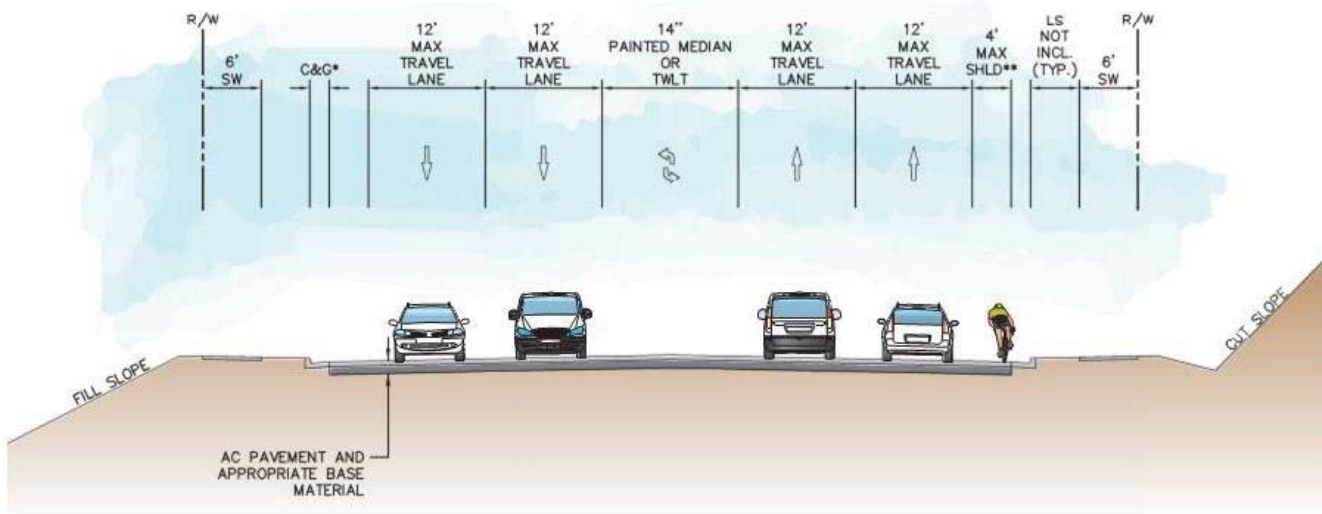
- Asphalt concrete pavement and appropriate base material to accomplish 12 feet per travel lane plus up to four feet for ancillary treatments (e.g. shoulders or Class II Bike Lane);
- Concrete curb and gutter and associated drainage (e.g. paved roadway shoulders and/or open swale);
- Storm drains located within curb to curb, and associated transverse portions perpendicular to the roadway and adjoining portions longitudinal to the roadway (the longitudinal storm drain line shall be sized and reimbursed only for the roadway within right-of-way limits);
- 14-foot paved and painted median (or dual center left turn lane);
- Traffic signals at intersections with state highways and other major arterials that are also on the TUMF Network if identified in the application project description and warranted;
- Pavement striping and roadway signing, as required;
- 6-foot wide concrete sidewalks and associated curb cuts for ADA access at street crossings.

# WRCOG TUMF Credit/Reimbursement Manual

## 2.3 Model Typical Sections for Eligible Project Costs

Figures 2.1 – 2.6 illustrate general configurations typically eligible for reimbursement under the WRCOG TUMF Program. For more complex projects, additional project features are reviewed for reimbursement eligibility using the TUMF Reimbursement Principles.

Figure 2.1 Typical Section – Construction of New Roadway Lanes



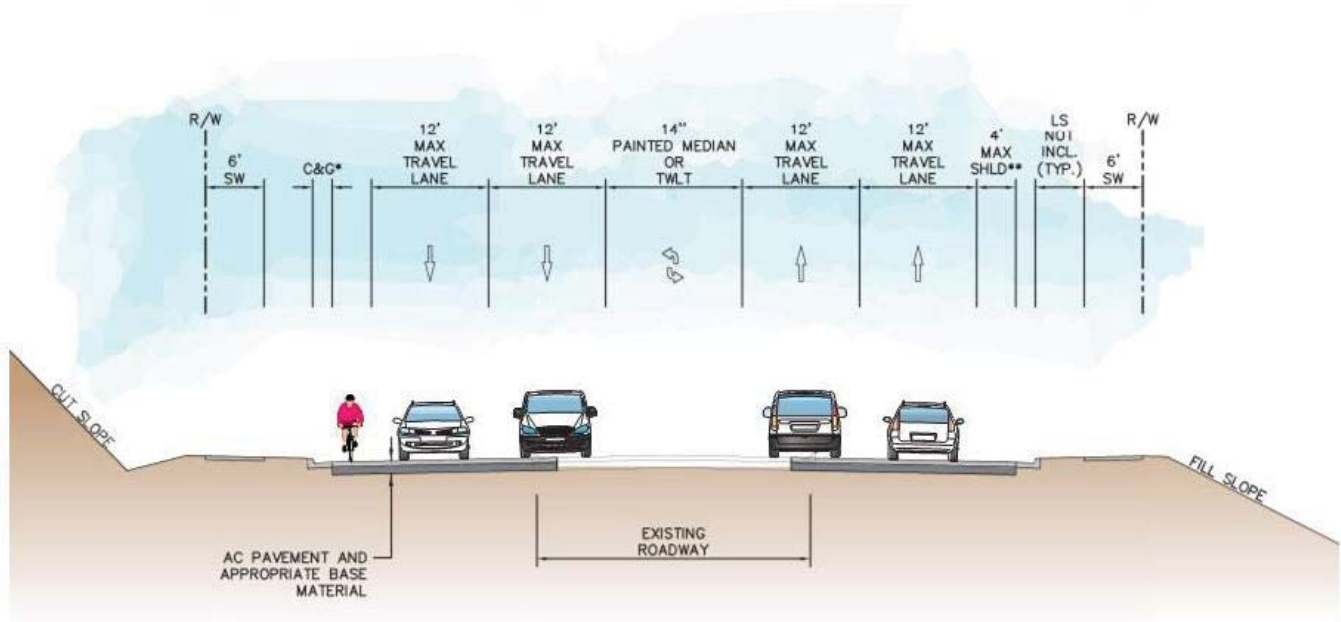
### CONSTRUCTION OF NEW ROADWAY LANES

BASIC FEATURES  
NOT TO SCALE

- \* - CONCRETE CURB AND GUTTER AND ASSOCIATED DRAINAGE (E.G. PAVED ROADWAY SHOULDERS AND/OR OPEN SWALE)
- \*\* - UP TO FOUR FEET FOR ANCILLARY TREATMENTS (E.G. SHOULDERS OR CLASS II BIKE LANE)
- LS - LANDSCAPE
- R/W - RIGHT-OF-WAY
- SW - SIDEWALK
- SHLD - SHOULDER
- TWLT - TWO WAY LEFT TURN
- TYP. - TYPICAL

# WRCOG TUMF Credit/Reimbursement Manual

Figure 2.2 Typical Section – Construction of Additional Roadway Lanes



## CONSTRUCTION OF ADDITIONAL ROADWAY LANES

BASIC FEATURES  
NOT TO SCALE

- \* - CONCRETE CURB AND GUTTER AND ASSOCIATED DRAINAGE (E.G. PAVED ROADWAY SHOULDERS AND/OR OPEN SWALE)
- \*\* - UP TO FOUR FEET FOR ANCILLARY TREATMENTS (E.G. SHOULDERS OR CLASS II BIKE LANE)
- LS - LANDSCAPE
- R/W - RIGHT-OF-WAY
- SW - SIDEWALK
- SHLD - SHOULDER
- TWLT - TWO WAY LEFT TURN
- TYP. - TYPICAL

# WRCOG TUMF Credit/Reimbursement Manual

Figure 2.3 Typical Configuration – Construction of New Interchange

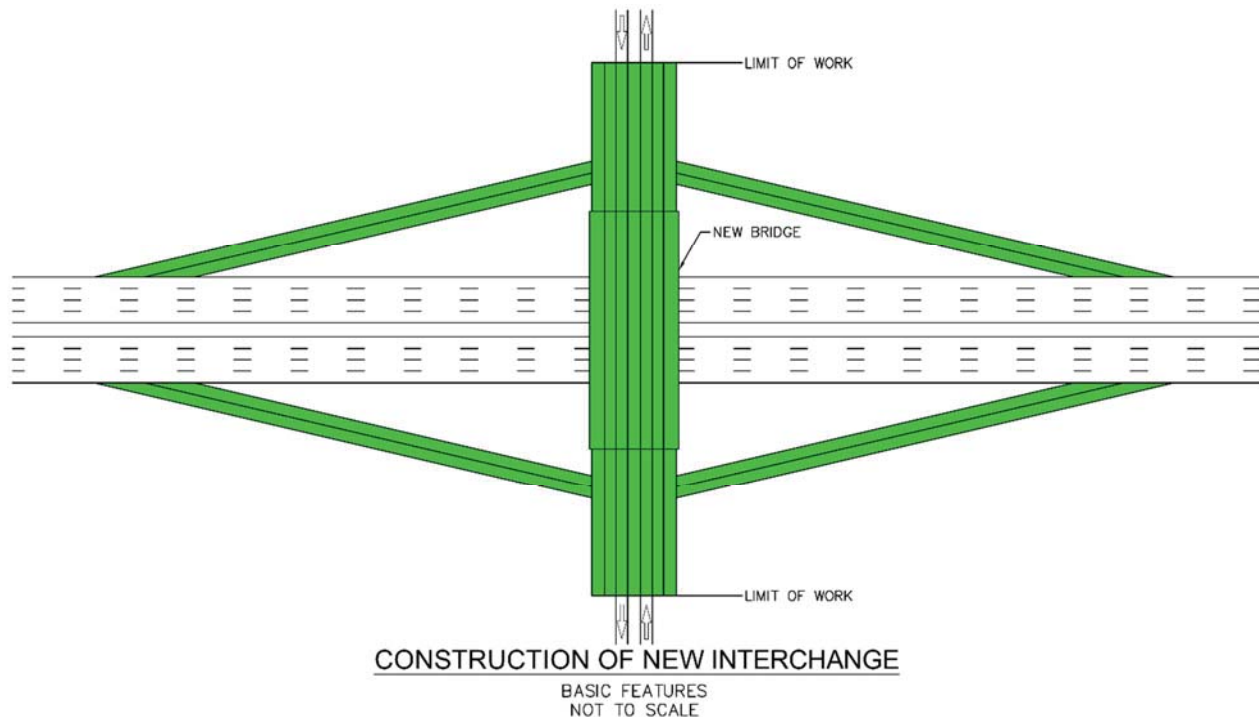


Figure 2.4 Typical Configuration – Construction of Interchange Improvements

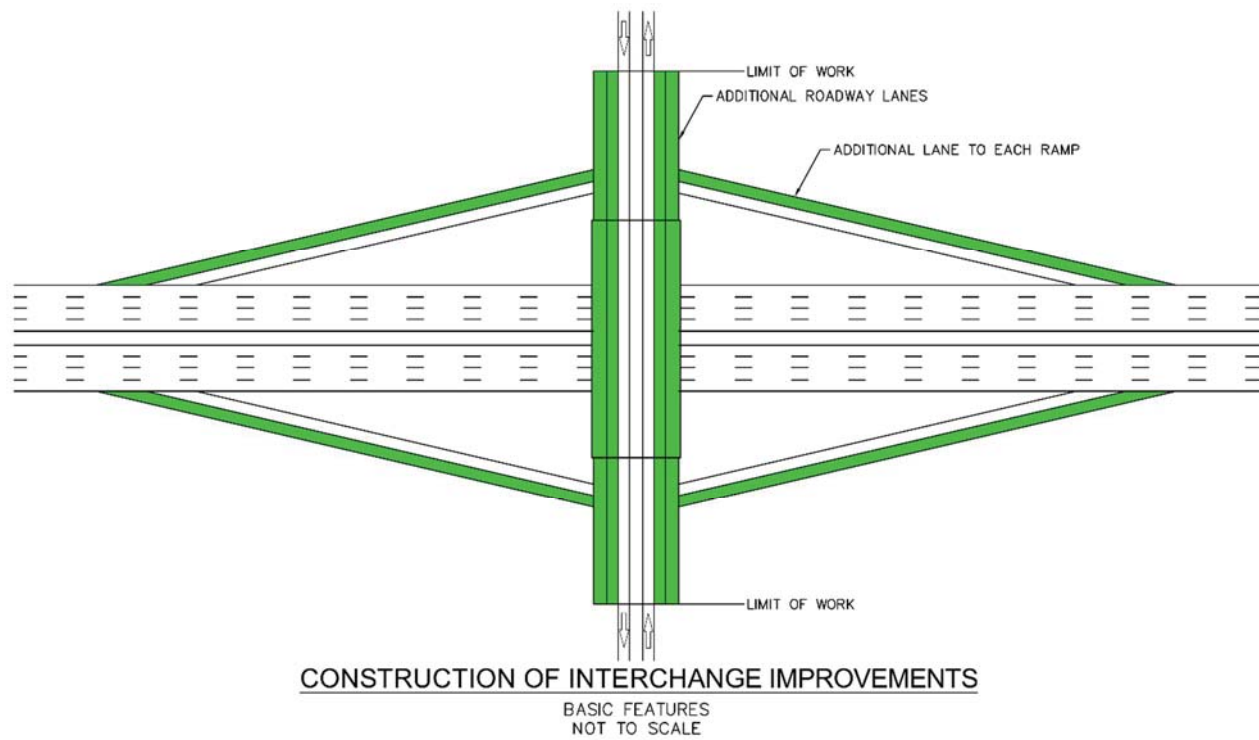


Figure 2.5 Typical Configuration – Construction of New Grade Separation

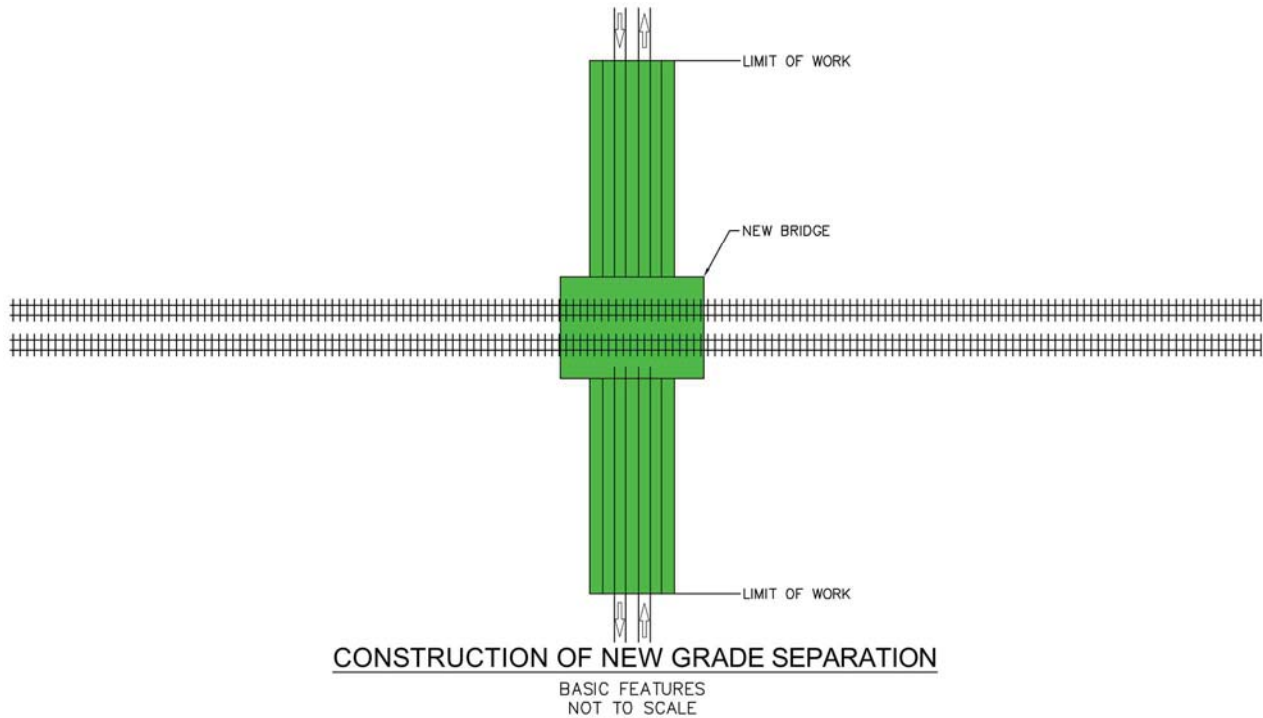
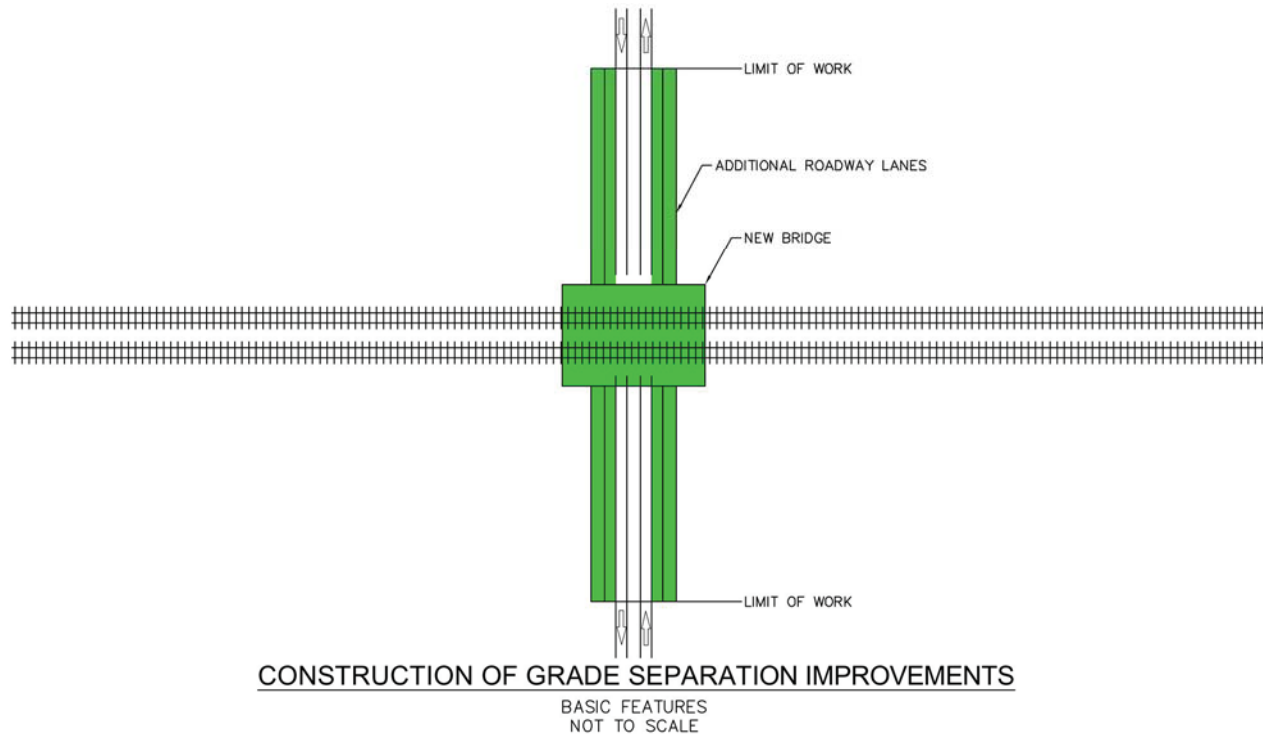


Figure 2.6 Typical Configuration – Construction of Grade Separation Improvements





# WRCOG TUMF Credit/Reimbursement Manual

Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF)

## 2.4 Eligible Project Expenses

Eligible project expenses include the following items, provided that such items are included in the scope of work approved under the reimbursement agreement between the public agency and WRCOG:

Table 2-2 Eligible Project Expenses for TUMF Reimbursement	
	Public agency and/or consultant costs associated with direct project coordination and support
	Funds expended in preparation of preliminary engineering studies
	Funds expended in preparation of environmental review documentation for the project
	All costs associated with right-of-way acquisition, legal costs for condemnation procedures if authorized by the public agency, and costs of reviewing appraisals and offers for property acquisition
	Costs reasonable incurred if condemnation proceeds
	Costs incurred in the preparation of plans, specifications, and estimates by the public agency or consultants
	Public agency costs associated with bidding, advertising, and awarding of project contracts
	Construction costs, including change orders to construction contract approved by the public agency
	Construction management, field inspection and material testing costs
	Any public agency administrative cost to deliver the project
	Maximum reimbursed for Project Approval and Environmental Document (PA&ED) Phase work = 10% of Construction Costs
	Maximum reimbursed for Plan, Specification and Estimate (PS&E) Phase work = 15% of Construction Costs
	Maximum reimbursed for Construction Management (CM) Phase work = 15% of Construction Costs



# WRCOG TUMF Credit/Reimbursement Manual

Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF))

## 2.5 Ineligible Project Types and Expenses

Ineligible project costs include the items listed below. Ineligible project costs follow the Federal Guidelines as defined in MAP 21 and in the Caltrans Local Assistance Procedure Manual (LAPM). These improvements are not eligible for TUMF funding and will be the responsibility of the local funding agency.

Table 2-3 Ineligible Project Types and Expenses for TUMF Reimbursement	
	<p>Roadway improvements more than the Typical Roadway Standard. These improvements may include, but are not limited to:</p> <ul style="list-style-type: none"> <li>• Portland concrete cement pavement or other aesthetic pavement types (except at interchanges and overpasses)</li> <li>• Major rehabilitation or overlay of existing pavement in adjacent roadway lanes</li> <li>• Raised barriers medians</li> <li>• Parking lanes</li> <li>• Roadway tapers outside the extent of the approved project</li> <li>• Sanitary sewage infrastructure</li> <li>• Water systems</li> <li>• Dry Utilities</li> <li>• Undergrounding infrastructure</li> <li>• Relocation of non-prior rights utilities</li> <li>• Storm drain systems in excess of draining the roadway</li> <li>• Landscaping</li> <li>• Street lighting</li> <li>• Class I Bike Lanes (e.g. separate bicycle paths)</li> <li>• Detection/retention basins outside of street right-of-way</li> <li>• Excess Right-of-Way</li> <li>• Crosswalk Enhancements (e.g. in-pavement lights and HAWK Pedestrian Crosswalk Systems)</li> </ul>
	Environmental permitting
	Agency staff time in excess of 15% of programmed engineering
	Agency staff time in excess of 15% of programmed construction
	Temporary (interim) improvements



# WRCOG TUMF

## 3. Public Agency TUMF Reimbursements



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# WRCOG TUMF Credit/Reimbursement Manual

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# WRCOG TUMF Credit/Reimbursement Manual

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## 3. Public Agency TUMF Reimbursements

Public agencies who construct TUMF facilities are eligible for reimbursement of eligible project costs equivalent to the maximum share identified in the Nexus Study or actual project cost, whichever is less. **Figure 3.1, Public Agency TUMF Reimbursement Process**, illustrates the TUMF reimbursement process for public agencies.



# WRCOG TUMF Credit/Reimbursement Manual

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## WRCOG TUMF Credit/Reimbursement Manual

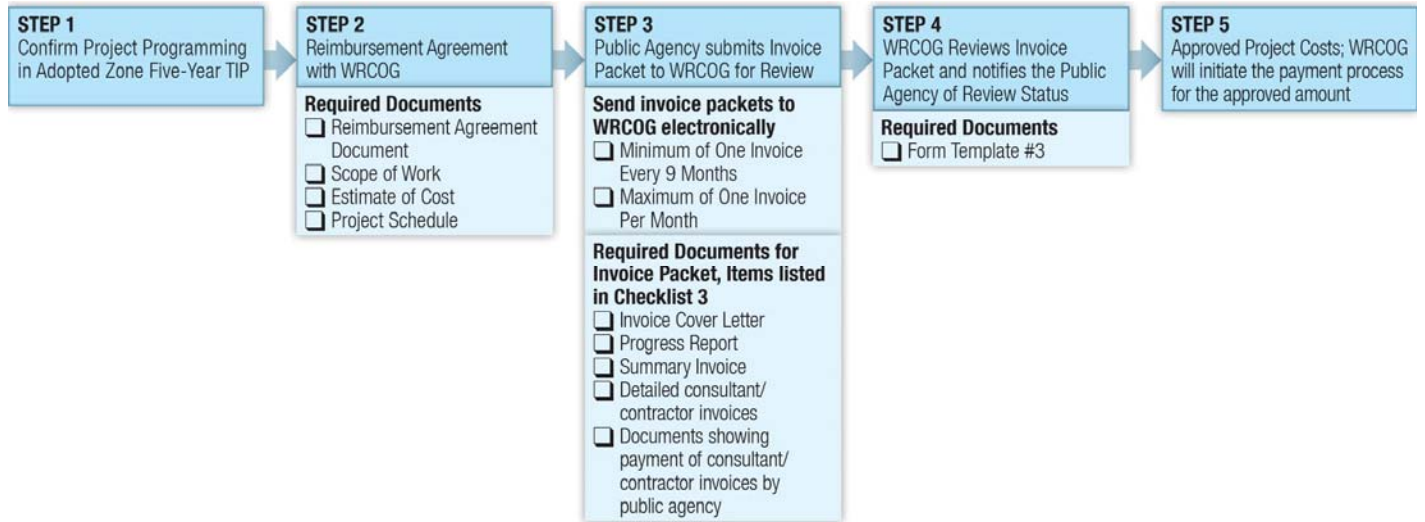


Figure 3.1: Public Agency TUMF Reimbursement Process



# WRCOG TUMF Credit/Reimbursement Manual

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# WRCOG TUMF Credit/Reimbursement Manual

## 3.1 Obtaining a Reimbursement

The following illustrates the steps for public agency reimbursements:

### Step 1. Confirm Project Programming

The public agency shall confirm that the project phase is programmed in the current year of the adopted Zone Five-Year Transportation Improvement Program (TIP).

### Step 2. Reimbursement Agreement with WRCOG

Public agencies are required to enter a reimbursement agreement with WRCOG to be eligible to receive TUMF revenue. The amount eligible for reimbursement will be based on the awarded contract, but will not exceed the maximum TUMF share identified in the current TUMF Nexus Study.

A public agency is required to enter a reimbursement agreement with WRCOG at the start of a project and does not have to renew the reimbursement agreement every fiscal year unless the amount programmed for the project or project phase increases or decreases in the most recent Zone Five-Year Transportation Improvement Program.

A public agency entering a reimbursement agreement with WRCOG will need to complete and submit the following documents to WRCOG:

- Reimbursement Agreement Document – *Document template provided as Attachment A in Section 6, Checklists and Forms.*
- Scope of Work – *Provide descriptions of major tasks to complete the project. This document should indicate any project phasing and key project milestones.*
- Estimate of Cost – *Provide an estimate of total project costs. This document should include an estimate of Local Match Contribution per requirements of the TUMF program.*
- Project Schedule – *Provide an estimated timeline to complete key tasks identified in the Scope of Work. This document should include dates for project milestones.*

**STEP 1**  
Confirm Project Programming in Adopted Zone Five-Year TIP



**STEP 2**  
Reimbursement Agreement with WRCOG

- Required Documents**
- Reimbursement Agreement Document
  - Scope of Work
  - Estimate of Cost
  - Project Schedule



Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF)





# WRCOG TUMF Credit/Reimbursement Manual

## Step 3. Reimbursement Invoicing and Reporting by Public Agency

### Invoices and Progress Reports

- Invoices should be submitted to WRCOG during the fiscal year at a:
  - Minimum of one (1) invoice every 9 months; and
  - Maximum of one (1) invoice per month
- Each invoice packet sent to WRCOG shall include the following (Refer to **Section 6, Checklist and Forms**, for **Checklist 3** and model form templates):
  - Quarterly Invoice Cover Letter (**Attachment F: Form Template 1**)
  - Quarterly Progress Report (**Attachment G: Form Template 2**)
  - Quarterly Invoice (**Attachment H: Form Template 3**)
  - Detailed consultant/contractor invoices
  - Documents showing payment of consultant/contractor invoices by public agency

### Invoice Submittal

- Credit reimbursement agreements shall be submitted electronically to WRCOG.
- Credit reimbursement agreements shall be submitted to the following WRCOG staff email address: **Daniel Ramirez-Cornejo**, [dcornejo@wrcog.us](mailto:dcornejo@wrcog.us)
- A notice will be sent from WRCOG confirming receipt.

## Step 4. Review by WRCOG

Upon receipt of an invoice packet, WRCOG will review and provide a written notification following **Attachment H: Form Template 3** in **Section 6, Checklists and Forms**, to the public agency stating:

- a. Approved Project Costs;
- b. Rejected Project Costs: Project costs that do not comply with the TUMF Program. WRCOG will provide reasons why specific project costs were not approved.

**STEP 3**  
Public Agency submits Invoice Packet to WRCOG for Review

**Send invoice packets to WRCOG electronically**

- Minimum of One Invoice Every 9 Months
- Maximum of One Invoice Per Month

**Required Documents for Invoice Packet, Items listed in Checklist 3**

- Invoice Cover Letter
- Progress Report
- Summary Invoice
- Detailed consultant/contractor invoices
- Documents showing payment of consultant/contractor invoices by public agency



**STEP 4**  
WRCOG Reviews Invoice Packet and notifies the Public Agency of Review Status

**Required Documents**

- Form Template #3





# WRCOG TUMF Credit/Reimbursement Manual

## Step 5. Approved/Rejected Project Costs

---

Upon approval of the invoice, WRCOG will initiate the payment process for the approved amount to the public agency.

### STEP 5

Approved Project Costs; WRCOG will initiate the payment process for the approved amount



# WRCOG TUMF Credit/Reimbursement Manual

## 3.2 Obligation of TUMF Funds

Funding for a project programmed on a Zone Five-Year TIP is not considered obligated by WRCOG until certain steps outlined below have been completed by the public agency:

- a. Ensure that funding for the project phase is programmed in the current year of an adopted Five-Year TIP.
- b. Ensure that there is a signed (executed) reimbursement agreement that matches the funding amount with the funding amount of the project phase in the adopted Five-Year TIP.
- c. Submit the first invoice for TUMF eligible work starting in September of the fiscal year. At the time of submitting the first invoice, the public agency will be required to submit all necessary supporting documentation (not previously submitted) in accordance with the provisions of the reimbursement agreement.

If the first invoice has not been submitted to WRCOG by December, there will be a review of the project status. Based on the review of the project status, WRCOG will either:

- a. Extend the fund obligation for up to an additional nine (9) months so the project sponsor can demonstrate a realistic expectation that the project work will commence and a first invoice is submitted within that time frame; or
- b. De-obligate the funds.



# WRCOG TUMF

## 4. Developer TUMF Credits

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# WRCOG TUMF Credit/Reimbursement Manual

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# WRCOG TUMF Credit/Reimbursement Manual

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## 4. Developer TUMF Credits

Per the TUMF Program, developers proposing certain types of development within WRCOG member agencies are required to pay TUMF fees as outlined in the TUMF Nexus Study. These fees represent the developer's "TUMF obligation." Through the TUMF Program, developers may qualify for credits against their TUMF obligation. Developers may be eligible to earn TUMF credit for the following:

- Construction of TUMF improvements identified on the Regional System of Highways and Arterials (RSHA) Network;
- Right-of-Way (ROW) dedication for RSHA improvements; and
- Monetary contributions to construct TUMF improvements.

**Figure 4.1 – 4.3 and Sections 4.1 – 4.3** illustrate and summarize the separate processes for obtaining TUMF credits.





# WRCOG TUMF Credit/Reimbursement Manual

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## WRCOG TUMF Credit/Reimbursement Manual

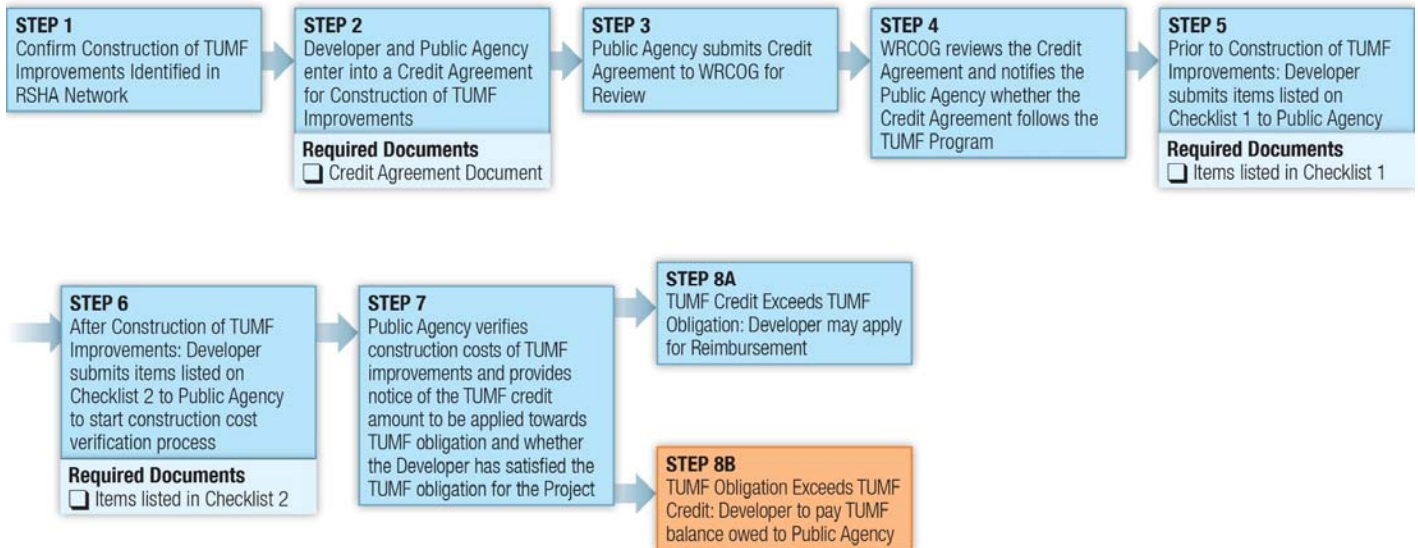


Figure 4.1: Credit for Construction of TUMF Improvements Process



# WRCOG TUMF Credit/Reimbursement Manual

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# WRCOG TUMF Credit/Reimbursement Manual

## 4.1 Credit for Construction of TUMF Improvements

For construction of TUMF improvements as identified on the RSHA Network, developers are entitled to a TUMF credit of up to 100% of the TUMF obligation fee, not to exceed the maximum TUMF share. TUMF credit shall be determined based on approved improvement plans and after conditions of approval have been determined.

The following are the typical steps to obtain TUMF Credits for the construction of TUMF improvements:

### Step 1. Determine if Improvements Qualify for TUMF Credits

The public agency shall confirm that construction of TUMF improvements are identified in the RSHA Network.

**STEP 1**  
Confirm Construction of TUMF Improvements Identified in RSHA Network

### Step 2. Credit Agreement with Public Agency

Developers are required to enter into a Credit Agreement for Construction of TUMF Improvements with the public agency to be eligible to receive TUMF credits. A model Credit/Reimbursement Master Agreement document template is provided in **Section 6, Checklists and Forms.**

**STEP 2**  
Developer and Public Agency enter into a Credit Agreement for Construction of TUMF Improvements

**Required Documents**  
 Credit Agreement Document

### Step 3. Credit Agreement Submittal to WRCOG

The public agency shall submit the Credit Agreement for Construction of TUMF Improvements to WRCOG for approval in accordance to the following:

- Credit reimbursement agreements shall be submitted electronically to WRCOG.
- Credit reimbursement agreements shall be submitted to the following WRCOG staff email address: **Daniel Ramirez-Cornejo**, [dcornejo@wrcog.us](mailto:dcornejo@wrcog.us)
- A notice will be sent from WRCOG confirming receipt.

**STEP 3**  
Public Agency submits Credit Agreement to WRCOG for Review



# WRCOG TUMF Credit/Reimbursement Manual

## Step 4. Review by WRCOG

Upon receipt of a Credit Reimbursement Agreement, WRCOG will review and provide a written notification to the public agency stating:

- a. Approved: The agreement complies with the TUMF Program; or
- b. Denied: The agreement does not comply with the TUMF Program. WRCOG will provide reasons agreement does not comply.

### Denied Credit Agreement

In the event WRCOG denies the credit agreement, the public agency may revise and resubmit the credit agreement for approval.

## Step 5. Prior to Construction of TUMF Improvements: Submit Items on Checklist 1

The developer will initiate project delivery of TUMF improvements by preparing a bid package per the public agency's requirements. Prior to construction of TUMF improvements, the developer is required to submit the items listed on **Checklist 1** found in **Section 6, Checklists and Forms**, to the public agency prior to start of construction. The public agency will make Checklist items available to WRCOG upon request.

## Step 6. Post Construction of TUMF Improvements: Submit Items on Checklist 2

After TUMF improvements have been constructed, the developer is required to submit the items listed on **Checklist 2** found in **Section 6, Checklists and Forms**, to initiate the construction cost verification process to the public agency after project construction is complete.

**STEP 4**  
WRCOG reviews the Credit Agreement and notifies the Public Agency whether the Credit Agreement follows the TUMF Program



**STEP 5**  
Prior to Construction of TUMF Improvements: Developer submits items listed on Checklist 1 to Public Agency

**Required Documents**  
 Items listed in Checklist 1



**STEP 6**  
After Construction of TUMF Improvements: Developer submits items listed on Checklist 2 to Public Agency to start construction cost verification process

**Required Documents**  
 Items listed in Checklist 2



Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF)



# WRCOG TUMF Credit/Reimbursement Manual

## Step 7. Review by Public Agency

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Upon receipt of items listed on **Checklist 2**, the public agency will verify the construction costs and provide a written notice determining the TUMF Credit amount to be applied towards the project to offset the TUMF Obligation and whether the Developer has fully satisfied the TUMF Obligation for the project.

**STEP 7**  
Public Agency verifies construction costs of TUMF improvements and provides notice of the TUMF credit amount to be applied towards TUMF obligation and whether the Developer has satisfied the TUMF obligation for the Project



## Step 8. TUMF Credit and TUMF Obligation

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### TUMF Credit Exceeds TUMF Obligation

If the TUMF credit amount exceeds the TUMF Obligation for the project, the project will be deemed to have completely satisfied its TUMF Obligation and the developer may apply for reimbursement as discussed in **Section 5, Developer TUMF Reimbursement**.

**STEP 8A**  
TUMF Credit Exceeds TUMF Obligation: Developer may apply for Reimbursement

### TUMF Obligation Exceeds TUMF Credit

If the TUMF Obligation exceeds the TUMF credit amount for the project, the amount of the difference is the TUMF balance owed by the developer. The developer shall pay the TUMF balance to the public agency to fully satisfy the TUMF obligation for the project.

**STEP 8B**  
TUMF Obligation Exceeds TUMF Credit: Developer to pay TUMF balance owed to Public Agency



# WRCOG TUMF Credit/Reimbursement Manual

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## WRCOG TUMF Credit/Reimbursement Manual

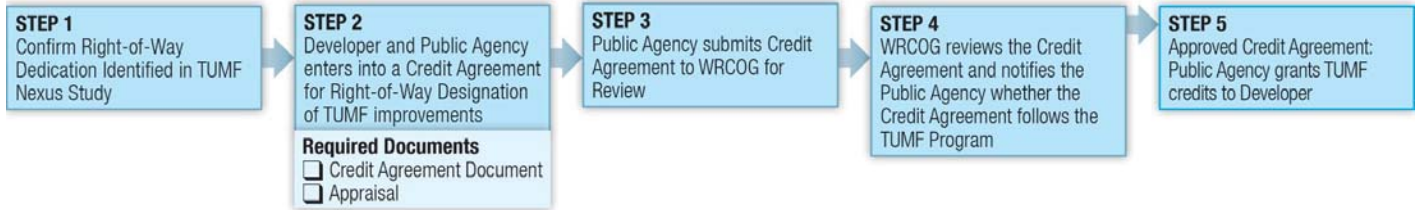


Figure 4.2: Credit for Right-of-Way Dedication Process





# WRCOG TUMF Credit/Reimbursement Manual

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# WRCOG TUMF Credit/Reimbursement Manual

## 4.2 Credit for Right-of-Way Dedication

A developer may receive TUMF credits for Right-of-Way (ROW) dedications. The ROW dedications that may be eligible for TUMF credits are required to be:

- ROW dedications for RSHA improvements; and
- ROW dedications not part of construction projects.

The following are the typical steps to obtain TUMF Credits for Right-of-Way Dedication:

### Step 1. Determine if ROW Dedication Qualifies for TUMF Credits

The public agency shall confirm that the ROW dedication is identified in the TUMF Nexus Study.

**STEP 1**  
Confirm Right-of-Way Dedication Identified in TUMF Nexus Study

### Step 2. Credit Agreement with Public Agency

The developer is required to enter into an WRCOG - approved Credit Agreement for ROW Dedication with the public agency to be eligible to receive TUMF credits. A model Credit/Reimbursement Master Agreement document template is provided in **Section 6, Checklists and Forms**. Each Credit Agreement for ROW Dedication shall include the following:

**STEP 2**  
Developer and Public Agency enters into a Credit Agreement for Right-of-Way Designation of TUMF improvements

**Required Documents**

- Credit Agreement Document
- Appraisal

- Credit Agreement for ROW Dedication between developer and public agency; and
- Appraisal

#### Appraisals

An appraisal is required as part of the Credit Agreement and will be determined using one of the following methods:

- The developer provides to the public agency a current appraisal (no more than two years old), of the ROW to be dedicated. The public agency reviews it and determines if the appraisal is valid and acceptable; or
- The developer accepts the appraisal of the public agency.

The appraisal will determine the value of the ROW being dedicated and the amount eligible for credit, but will not exceed the maximum share of credits available for ROW dedication as identified in the current WRCOG TUMF Nexus Study.



# WRCOG TUMF Credit/Reimbursement Manual

## Step 3. Credit Agreement Submittal to WRCOG

The public agency shall submit the Credit Agreement to WRCOG for approval in accordance to the following:

- Credit agreements shall be submitted electronically to WRCOG.
- Credit agreements shall be submitted to the following WRCOG staff email address: **Daniel Ramirez-Cornejo**, [dcomejo@wrcog.us](mailto:dcomejo@wrcog.us)
- A notice will be sent from WRCOG confirming receipt.

## Step 4. Review by WRCOG

Upon receipt of the Credit Agreement, WRCOG will review and provide a written notification to the public agency within 20 days stating:

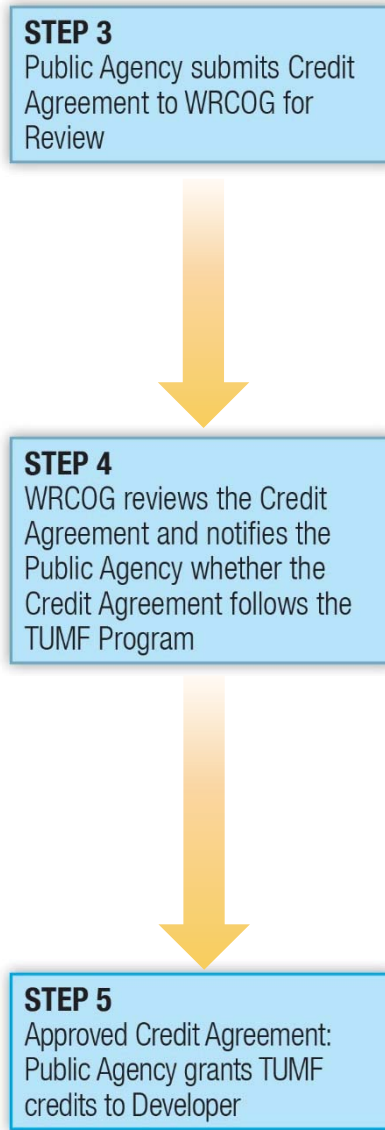
- Approved: The agreement complies with the TUMF Program; or
- Denied: The agreement does not comply with the TUMF Program. WRCOG will provide reasons agreement does not comply.

### Denied Credit Agreement

In the event WRCOG denies the credit agreement, the public agency may revise and resubmit the credit agreement for approval.

## Step 5. Public Agency Grants TUMF Credits

Upon approval of the Credit Agreement, the public agency will initiate the process to issue to the developer TUMF credits against the TUMF obligation paid by the developer.





## WRCOG TUMF Credit/Reimbursement Manual

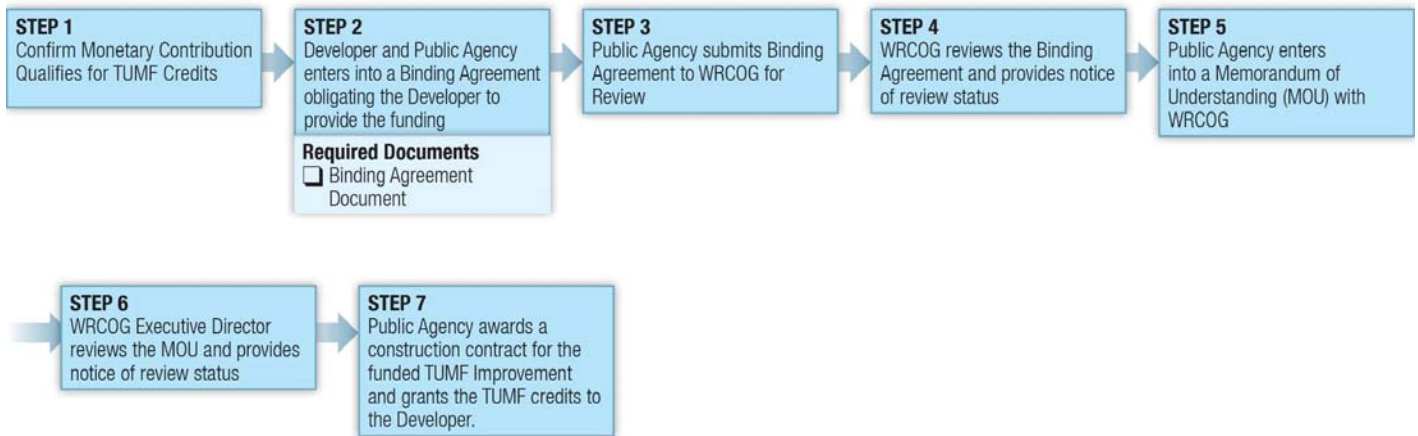


Figure 4.3: Credit for Monetary Contributions Process



# WRCOG TUMF Credit/Reimbursement Manual

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# WRCOG TUMF Credit/Reimbursement Manual

## 4.3 Credit for Monetary Contributions

For monetary contributions from developers to fund improvements, developers are entitled to a TUMF credit up to 100% of the TUMF obligation, not to exceed the maximum TUMF share as identified in the TUMF Nexus Study.

### Provisions for Monetary Contributions

The following provisions apply to the public agency responsible for the monetary contribution:

- The public agency shall be responsible for implementation of the improvement for which funding is provided by the developer;
- Improvements for which funding is provided shall not be eligible for TUMF Program prioritization or funding;
- In the event that not all funds contributed by a developer are spent within 3-years of contribution, the public agency shall remit any unspent funds received from the developer to WRCOG. The 3-year term may be extended by action of the WRCOG Executive Committee upon request of the public agency.

The following are the steps to obtain TUMF Credits for Monetary Contributions:

### Step 1. Determine if Monetary Contribution Qualifies for TUMF Credits

The public agency shall confirm that the improvement is identified in the TUMF Nexus Study. A developer may receive TUMF credit for monetary contributions funding one of the following types of improvements:

- Any Type 1, 2, or 3 interchange on an interstate or state highway. Any Type 1, 2, or 3 interchange includes all phases of the project, including any pre-construction activities (PSR/PDS, PA&ED, PS&E, ROW).

**STEP 1**  
Confirm Monetary Contribution Qualifies for TUMF Credits





# WRCOG TUMF Credit/Reimbursement Manual

## Step 2. Binding Agreement with Public Agency

The developer is required to enter into a Binding Agreement for Monetary Contributions with the public agency obligating the developer to provide the funding and to be eligible to receive TUMF Credits.

**STEP 2**  
Developer and Public Agency enters into a Binding Agreement obligating the Developer to provide the funding

**Required Documents**  
 Binding Agreement Document

## Step 3. Binding Agreement Submittal to WRCOG

The public agency shall submit the executed Binding Agreement to WRCOG for approval in accordance to the following:

- Binding agreements shall be submitted electronically to WRCOG.
- Binding agreements shall be submitted to the following WRCOG staff email address: **Daniel Ramirez-Cornejo**, [dcomejo@wrcog.us](mailto:dcomejo@wrcog.us)
- A notice will be sent from WRCOG confirming receipt.

**STEP 3**  
Public Agency submits Binding Agreement to WRCOG for Review

## Step 4. Review by WRCOG

Upon receipt of a Binding Agreement, WRCOG will review and provide a written notification to the public agency within stating:

- Approved: The agreement complies with the TUMF Program; or
- Denied: The agreement does not comply with the TUMF Program. WRCOG will provide reasons agreement does not comply.

### Denied Credit Agreement

In the event WRCOG denies the binding agreement, the public agency may revise and resubmit the binding agreement for approval.

**STEP 4**  
WRCOG reviews the Binding Agreement and provides notice of review status

## Step 5. Memorandum of Understanding (MOU) with WRCOG

The public agency shall enter a MOU with WRCOG and provide information, as requested by WRCOG, to account for the credit and provide an explanation of why the improvement to be funded with the monetary contribution cannot be constructed by the developer.

**STEP 5**  
Public Agency enters into a Memorandum of Understanding (MOU) with WRCOG

Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF)



# WRCOG TUMF Credit/Reimbursement Manual

## Step 6. Approval from WRCOG Executive Director

Upon receipt of the MOU, the WRCOG Executive Director will review and provide a written approval of the MOU. The Executive Director is encouraged to consult with the WRCOG Public Works Committee before approving the award of credit.

In the event the WRCOG Executive Director rejects the MOU, the public agency may revise and resubmit for approval.

## Step 7. Public Agency to Grant Credits

Upon approval of the MOU, the public agency will award the contract for the TUMF improvement phase for which the funding is contributed. Credit will only be granted to a developer after the public agency has awarded a contract for the improvement phase for which the funding is contributed has been awarded. Credits will be granted to the developer after the contract has been awarded and TUMF eligible expenses are incurred and verified by a member agency.

**STEP 6**  
WRCOG Executive Director reviews the MOU and provides notice of review status



**STEP 7**  
Public Agency awards a construction contract for the funded TUMF Improvement and grants the TUMF credits to the Developer.





# WRCOG TUMF Credit/Reimbursement Manual

## 4.4 Provisions for Developers Use of Credit

The following additional provisions apply to developers use of credits granted through the TUMF Program:

- All TUMF credits shall be used first by the developer to offset the TUMF obligation for the project.
- Credits may not be transferred or sold to other development projects, unless:
  - The property to which the credits are being transferred or sold is contiguous to the same TUMF facility and owned and conditioned for improvement by the same developer; and
  - The transfer is approved by WRCOG in writing.
- WRCOG may place conditions on the use, transfer, or sale of credits in order to maintain the integrity of the TUMF program. In some cases, a public agency may be required to acknowledge that the property is one contiguous project.
- Developers must exhaust all credits before they are eligible for reimbursements. Any reimbursement shall be made only in accordance with a reimbursement agreement as discussed in **Section 5, Developer TUMF Reimbursements**.

## 4.5 Provisions for Public Agencies Use of Credits

The following additional provisions apply to public agencies use of credits granted through the TUMF Program:

- Each public agency shall be responsible for the administration of TUMF credit agreements.
- Each public agency shall transmit all TUMF credit agreements to WRCOG within 60 days of execution by that public agency.
- A public agency may not allow a developer to pay the TUMF obligation fees before entering into a credit agreement with the expectation of receiving a refund.
- Any improvement made to the RSHA that is obligated through an existing fee district (prior to June 1, 2003) shall not be eligible for TUMF credit.
- Should it be determined that a public agency granted credits exceeding the maximum TUMF credit, that public agency shall provide WRCOG payment in the amount equal to the excess credit amount.
- Any project that is exempt from the fee is not entitled to fee credits or reimbursement.



# WRCOG TUMF Credit/Reimbursement Manual

## 4.6 New Financing Districts and Bond Issues

The local jurisdiction shall compare facilities in local fee programs against the RSHA and eliminate any overlap in its local fee program.

A financing district is defined as a community facilities district, a local road and bridge district, or an assessment district. For a financing district created or bonds or other evidence of indebtedness issued on or after June 1, 2003, the local jurisdiction may allow a property owner, in lieu of the payment of TUMF to participate in such a financing district and receive credit against the TUMF obligation if the district is funding the following facilities:

- A Regionally Significant Transportation Improvement – facilities that typically are proposed to have six lanes at build out and extend between multiple jurisdictions, or discrete useable segment thereof, as determined by WRCOG;
- Any Type 1, 2, or 3 Interchange or an Interstate or State Highway;
- Any Railroad Crossing with an estimated construction cost of more than ten million dollars (\$10,000,000); and
- Any Bridge located on a regionally significant arterial as defined above.

### 4.6.1. Credit in Lieu of TUMF Payment

- A. Prior to and in lieu of payment of TUMF under other funding programs, the local jurisdiction must do all of the following:
  1. Sell bonds within 3 years in an amount sufficient to construct the improvement for which the financing district is created;
  2. Receive written approval from the WRCOG Executive Director, or designee; and
  3. In the event that a local jurisdiction is unable to satisfy the requirements described in note 1, above, the local jurisdiction may still excuse the payment of bonds if the local jurisdiction enters into an agreement with WRCOG in which it commits to pay the full amount of any excused Fee, plus interest at the average rate earned by WRCOG over the past twelve months, in the event that the bonds may be extended up to an additional 5 years with the approval of the WRCOG Executive Committee.
- B. If a local jurisdiction proposed to issue a credit in lieu of requiring the payment of TUMF as provided in this section, then the jurisdiction shall enter into an MOU with WRCOG, and provide reasonable information to account for the credit.
- C. If credit is issued in lieu of requiring the payment of TUMF as provided in this section, then the jurisdiction shall be responsible for construction of the improvements and those improvements shall not be eligible for TUMF Program prioritization or funding.



## WRCOG TUMF Credit/Reimbursement Manual

- D. Any dispute regarding the implementation of this section may be appealed by the local jurisdiction to the WRCOG Executive Committee for a final determination.
- E. Where there is an existing financing district or an existing fee program established prior to June 1, 2003, with bonded indebtedness, then the local jurisdiction may credit payment of the TUMF for that portion of the facility identified in both programs. Notwithstanding the previous sentence, a local jurisdiction shall not issue a TUMF credit for any facilities for which bonds have been issued after February 4, 2008, regardless of when the financing district was first created.

This section is not intended to impact the administration of credits as included in this manual.



# WRCOG TUMF

## 5. Developer TUMF Reimbursements

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# WRCOG TUMF Credit/Reimbursement Manual

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# WRCOG TUMF Credit/Reimbursement Manual

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## 5. Developer TUMF Reimbursements

Developers may be eligible for reimbursement for the construction of TUMF facilities in certain instances. If a developer constructs TUMF improvements that cost more than the TUMF obligation, the developer may be reimbursed for the actual project costs that exceed the TUMF obligation. Reimbursements shall be made through an agreement between the developer and the public agency, and contingent upon funds being available.

In all cases, reimbursements under such agreements be programmed in the Zone Five-Year Transportation Improvement Program adopted annually by WRCOG for all approved TUMF improvements. **Figure 5.1, Developer TUMF Reimbursement Process**, illustrates the typical TUMF reimbursement process for developers.





# WRCOG TUMF Credit/Reimbursement Manual

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## WRCOG TUMF Credit/Reimbursement Manual

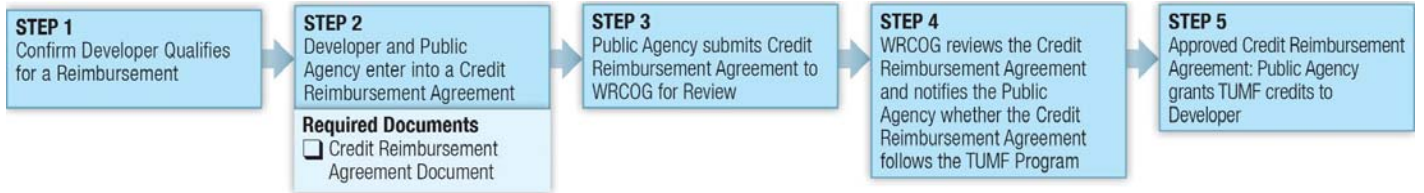


Figure 5.1: Developer TUMF Reimbursement Process



# WRCOG TUMF Credit/Reimbursement Manual

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# WRCOG TUMF Credit/Reimbursement Manual

## 5.1 Obtaining a Reimbursement

The following illustrates the steps for developer reimbursements:

### Step 1. Determine if Developer Qualifies for a Reimbursement

The developer may enter into a reimbursement agreement with the jurisdiction to reimburse the developer/owner for the direct and verifiable costs of constructing improvements to the Regional System of Highways and Arterials (RSHA) when all of the following conditions have been met:

- All available credits have been exhausted;
- The improvements received prior approval from the jurisdiction and WRCOG based on review of the TUMF project priority list; and
- The jurisdiction and WRCOG have reviewed and approved the scope of the project to be constructed.

In no event, shall the developer be reimbursed for improvements to the RSHA in excess of the most current approved Maximum TUMF Share for the facility on the TUMF network at the time that the Credit Reimbursement Agreement is executed.

### Step 2. Credit Reimbursement Agreement with Public Agency

The developer is required to enter into a Credit Reimbursement Agreement with the Public Agency to be eligible to receive a reimbursement. A model Credit/Reimbursement Master Agreement document template is provided in **Section 6, Checklists and Forms**.

### Step 3. Credit Reimbursement Agreement Submittal to WRCOG

The public agency shall submit the Credit Reimbursement Agreement to WRCOG for review in accordance to the following:

- Credit reimbursement agreements shall be submitted electronically to WRCOG.
- Credit reimbursement agreements shall be submitted to the following WRCOG staff email address: **Daniel Ramirez-Cornejo**, [dcornejo@wrcog.us](mailto:dcornejo@wrcog.us)
- A notice will be sent from WRCOG confirming receipt.

**STEP 1**  
Confirm Developer Qualifies for a Reimbursement



**STEP 2**  
Developer and Public Agency enter into a Credit Reimbursement Agreement  
**Required Documents**  
 Credit Reimbursement Agreement Document



**STEP 3**  
Public Agency submits Credit Reimbursement Agreement to WRCOG for Review



Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF)



# WRCOG TUMF Credit/Reimbursement Manual

## Step 4. Review by WRCOG

Upon receipt of a Credit Reimbursement Agreement, WRCOG will review and provide a written notification to the public agency stating:

- a. Approved: The agreement complies with the TUMF Program; or
- b. Denied: The agreement does not comply with the TUMF Program. WRCOG will provide reasons agreement does not comply.

### Denied Credit Reimbursement Agreement

In the event WRCOG denies the credit reimbursement agreement, the public agency may revise and resubmit the credit reimbursement agreement for approval.

## Step 5. Approved Credit Reimbursement Agreement

Upon approval of the Credit Reimbursement Agreement, the public agency will initiate the payment process for the approved amount to the developer.

**STEP 4**  
 WRCOG reviews the Credit Reimbursement Agreement and notifies the Public Agency whether the Credit Reimbursement Agreement follows the TUMF Program



**STEP 5**  
 Approved Credit Reimbursement Agreement: Public Agency grants TUMF credits to Developer

## 5.2 Provisions

The following additional provisions apply to reimbursements granted through the TUMF Program. TUMF Reimbursements shall be in accordance with the following:

- A development that is exempt from paying the TUMF is not eligible for reimbursement.



# WRCOG TUMF

## 6. Checklists and Forms

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# WRCOG TUMF Credit/Reimbursement Manual

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# WRCOG TUMF Credit/Reimbursement Manual

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## 6. Checklists and Forms

The following Checklists and Forms are provided as model form templates:

- WRCOG TUMF Public Agency Reimbursement Agreement (**Attachment A**)\*
- WRCOG TUMF Developer Credit and Reimbursement Master Agreement (**Attachment B**)\*
- Checklist 1: Developer Credit Agreement to Construct TUMF Improvements- List of Documents and Requirements Prior to Construction of TUMF Improvements (**Attachment C**)
- Checklist 2: Developer Credit Agreement to Construct TUMF Improvements- List of Documents and Requirements to Initiate Construction Cost Verification Process (**Attachment D**)
- Checklist 3: Public Agency Reimbursement – Invoice Packet Forms List (**Attachment E**)
- Form Template 1: Invoice Cover Letter (MS Word) (**Attachment F**)
- Form Template 2: Progress Report (MS Word) (**Attachment G**)
- Form Template 3: Reimbursement Invoice (MS Excel) (**Attachment H**)

\* Latest versions found at <http://www.wrcog.cog.ca.us/199/Administration-Fees>



# WRCOG TUMF Credit/Reimbursement Manual

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# WRCOG TUMF Credit/Reimbursement Manual

## ATTACHMENT A

### WRCOG TUMF Public Agency Reimbursement Agreement

Latest versions found at <http://www.wrcog.cog.ca.us/199/Administration-Fees>



# WRCOG TUMF Credit/Reimbursement Manual

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For Use Between Public Agency and Developer  
"Master Agreement"

**IMPROVEMENT AND CREDIT / REIMBURSEMENT AGREEMENT  
TRANSPORTATION UNIFORM MITIGATION FEE PROGRAM**

This **IMPROVEMENT AND CREDIT AGREEMENT** ("Agreement") is entered into this \_\_\_ day of \_\_\_\_\_, 20\_\_\_, by and between the [\*\*INSERT "City" OR "County" of \_\_\_\_\_, [\*\*a California municipal corporation or a subdivision of the State of California \*\*] ("AGENCY"), and \_\_\_\_\_, a California [\*\*INSERT TYPE OF ENTITY - corporation, partnership, sole proprietorship or other legal entity\*\*], with its principal place of business at [\*\*ENTER ADDRESS\*\*] ("Developer"). AGENCY and Developer are sometimes hereinafter referred to individually as "Party" and collectively as "Parties".

**RECITALS**

**WHEREAS**, Developer owns \_\_\_ acres of real property located within the AGENCY of \_\_\_\_\_, California, which is more specifically described in the legal description set forth in Exhibit "A", attached hereto and incorporated herein by this reference ("Property");

**WHEREAS**, Developer has requested from AGENCY-certain entitlements and/or permits for the construction of improvements on the Property, which are more particularly described \_\_\_\_\_ as

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ ("Project");

**WHEREAS**, the AGENCY is a member agency of the Western Riverside Council of Governments ("WRCOG"), a joint powers agency comprised of the County of Riverside and 17 cities located in Western Riverside County. WRCOG is the administrator for the Transportation Uniform Mitigation Fee ("TUMF") Program;

**WHEREAS**, as part of the TUMF Program, the AGENCY has adopted "Transportation Uniform Mitigation Fee Nexus Study: 2009 Update" ("2009 Nexus Study")

**WHEREAS**, as a condition to AGENCY's approval of the Project, AGENCY has required Developer to construct certain street and transportation system improvement(s) of regional importance ("TUMF Improvements");

**WHEREAS**, pursuant to the TUMF Program, the AGENCY requires Developer to pay the TUMF which covers the Developer's fair share of the costs to deliver those TUMF Improvements that help mitigate the Project's traffic impacts and burdens on the Regional System of Highways and Arterials (also known as the "TUMF Network"), generated by the Project and that are necessary to protect the safety, health and welfare of persons that travel to and from the Project using the TUMF Network;

# For Use Between Public Agency and Developer "Master Agreement"

**WHEREAS**, the TUMF Improvements have been designated as having Regional or Zonal Significance as further described in the 2009 Nexus Study and the 5 year Transportation Improvement Program as may be amended;

**WHEREAS**, AGENCY and Developer now desire to enter into this Agreement for the following purposes: (1) to provide for the timely delivery of the TUMF Improvements, (2) to ensure that delivery of the TUMF Improvements is undertaken as if the TUMF Improvements were constructed under the direction and authority of the AGENCY, (3) to provide a means by which the Developer’s costs for project delivery of the TUMF Improvements and related right-of-ways is offset against Developer’s obligation to pay the applicable TUMF for the Project in accordance with the TUMF Administrative Plan adopted by WRCOG, and (4) to provide a means, subject to the separate approval of WRCOG, for Developer to be reimbursed to the extent the actual and authorized costs for the delivery of the TUMF Improvements exceeds Developer’s TUMF obligation.

**NOW, THEREFORE, for the purposes set forth herein, and for good and valuable consideration, the adequacy of which is hereby acknowledged, Developer and AGENCY hereby agree as follows:**

## TERMS

1.0 Incorporation of Recitals. The Parties hereby affirm the facts set forth in the Recitals above and agree to the incorporation of the Recitals as though fully set forth herein.

2.0 Construction of TUMF Improvements. Developer shall construct or have constructed at its own cost, expense, and liability certain street and transportation system improvements generally described as INSERT TUMF IMPROVEMENTS

\_\_\_\_\_, and as shown more specifically on the plans, profiles, and specifications which have been or will be prepared by or on behalf of Developer and approved by AGENCY, and which are incorporated herein by this reference (“TUMF Improvements”). Construction of the TUMF Improvements shall include any transitions and/or other incidental work deemed necessary for drainage or public safety. Developer shall be responsible for the replacement, relocation, or removal of any component of any existing public or private improvement in conflict with the construction or installation of the TUMF Improvements. Such replacement, relocation, or removal shall be performed to the complete satisfaction of AGENCY and the owner of such improvement. Developer further promises and agrees to provide all equipment, tools, materials, labor, tests, design work, and engineering services necessary to fully and adequately complete the TUMF Improvements.

2.1 Pre-approval of Plans and Specifications. Developer is prohibited from commencing work on any portion of the TUMF Improvements until all plans and specifications for the TUMF Improvements have been submitted to and approved by AGENCY. Approval by AGENCY shall

## For Use Between Public Agency and Developer "Master Agreement"

not relieve Developer from ensuring that all TUMF Improvements conform with all other requirements and standards set forth in this Agreement.

2.2 Permits and Notices. Prior to commencing any work, Developer shall, at its sole cost, expense, and liability, obtain all necessary permits and licenses and give all necessary and incidental notices required for the lawful construction of the TUMF Improvements and performance of Developer's obligations under this Agreement. Developer shall conduct the work in full compliance with the regulations, rules, and other requirements contained in any permit or license issued to Developer.

2.3 Public Works Requirements. In order to insure that the TUMF Improvements will be constructed as if they had been constructed under the direction and supervision, or under the authority of, AGENCY, Developer shall comply with all of the following requirements with respect to the construction of the TUMF Improvements:

(a) Developer shall obtain bids for the construction of the TUMF Improvements, in conformance with the standard procedures and requirements of AGENCY with respect to its public works projects, or in a manner which is approved by the Public Works Department.

(b) The contract or contracts for the construction of the TUMF Improvements shall be awarded to the responsible bidder(s) submitting the lowest responsive bid(s) for the construction of the TUMF Improvements.

(c) Developer shall require, and the specifications and bid and contract documents shall require, all such contractors to pay prevailing wages (in accordance with Articles 1 and 2 of Chapter 1, Part 7, Division 2 of the Labor Code) and to otherwise comply with applicable provisions of the Labor Code, the Government Code and the Public Contract Code relating to public works projects of cities/counties and as required by the procedures and standards of AGENCY with respect to the construction of its public works projects or as otherwise directed by the Public Works Department.

(d) All such contractors shall be required to provide proof of insurance coverage throughout the term of the construction of the TUMF Improvements which they will construct in conformance with AGENCY's standard procedures and requirements.

(e) Developer and all such contractors shall comply with such other requirements relating to the construction of the TUMF Improvements which AGENCY may impose by written notification delivered to Developer and each such contractor at any time, either prior to the receipt of bids by Developer for the construction of the TUMF Improvements, or, to the extent required as a result of changes in applicable laws, during the progress of construction thereof.



## For Use Between Public Agency and Developer "Master Agreement"

Developer shall provide proof to AGENCY, at such intervals and in such form as AGENCY may require that the foregoing requirements have been satisfied as to the TUMF Improvements.

2.4 Quality of Work; Compliance With Laws and Codes. The construction plans and specifications for the TUMF Improvements shall be prepared in accordance with all applicable federal, state and local laws, ordinances, regulations, codes, standards, and other requirements. The TUMF Improvements shall be completed in accordance with all approved maps, plans, specifications, standard drawings, and special amendments thereto on file with AGENCY, as well as all applicable federal, state, and local laws, ordinances, regulations, codes, standards, and other requirements applicable at the time work is actually commenced.

2.5 Standard of Performance. Developer and its contractors, if any, shall perform all work required, constructing the TUMF Improvements in a skillful and workmanlike manner, and consistent with the standards generally recognized as being employed by professionals in the same discipline in the State of California. Developer represents and maintains that it or its contractors shall be skilled in the professional calling necessary to perform the work. Developer warrants that all of its employees and contractors shall have sufficient skill and experience to perform the work assigned to them, and that they shall have all licenses, permits, qualifications and approvals of whatever nature that are legally required to perform the work, and that such licenses, permits, qualifications and approvals shall be maintained throughout the term of this Agreement.

2.6 Alterations to TUMF Improvements. All work shall be done and the TUMF Improvements completed as shown on approved plans and specifications, and any subsequent alterations thereto. If during the course of construction and installation it is determined that the public interest requires alterations in the TUMF Improvements, Developer shall undertake such design and construction changes as may be reasonably required by AGENCY. Any and all alterations in the plans and specifications and the TUMF Improvements to be completed may be accomplished without first giving prior notice thereof to Developer's surety for this Agreement.

3.0 Maintenance of TUMF Improvements. AGENCY shall not be responsible or liable for the maintenance or care of the TUMF Improvements until AGENCY approves and accepts them. AGENCY shall exercise no control over the TUMF Improvements until accepted. Any use by any person of the TUMF Improvements, or any portion thereof, shall be at the sole and exclusive risk of Developer at all times prior to AGENCY's acceptance of the TUMF Improvements. Developer shall maintain all of the TUMF Improvements in a state of good repair until they are completed by Developer and approved and accepted by AGENCY, and until the security for the performance of this Agreement is released. It shall be Developer's responsibility to initiate all maintenance work, but if it shall fail to do so, it shall promptly perform such maintenance work when notified to do so by AGENCY. If Developer fails to properly prosecute its maintenance obligation under this section, AGENCY may do all work necessary for such maintenance and the cost thereof shall be the responsibility of Developer and its surety under this Agreement. AGENCY shall not be responsible or liable for any damages or

## For Use Between Public Agency and Developer "Master Agreement"

injury of any nature in any way related to or caused by the TUMF Improvements or their condition prior to acceptance.

4.0 Fees and Charges. Developer shall, at its sole cost, expense, and liability, pay all fees, charges, and taxes arising out of the construction of the TUMF Improvements, including, but not limited to, all plan check, design review, engineering, inspection, sewer treatment connection fees, and other service or impact fees established by AGENCY.

5.0 AGENCY Inspection of TUMF Improvements. Developer shall, at its sole cost, expense, and liability, and at all times during construction of the TUMF Improvements, maintain reasonable and safe facilities and provide safe access for inspection by AGENCY of the TUMF Improvements and areas where construction of the TUMF Improvements is occurring or will occur.

6.0 Liens. Upon the expiration of the time for the recording of claims of liens as prescribed by Sections 8412 and 8414 of the Civil Code with respect to the TUMF Improvements, Developer shall provide to AGENCY such evidence or proof as AGENCY shall require that all persons, firms and corporations supplying work, labor, materials, supplies and equipment to the construction of the TUMF Improvements, have been paid, and that no claims of liens have been recorded by or on behalf of any such person, firm or corporation. Rather than await the expiration of the said time for the recording of claims of liens, Developer may elect to provide to AGENCY a title insurance policy or other security acceptable to AGENCY guaranteeing that no such claims of liens will be recorded or become a lien upon any of the Property.

7.0 Acceptance of TUMF Improvements; As-Built or Record Drawings. If the TUMF Improvements are properly completed by Developer and approved by AGENCY, and if they comply with all applicable federal, state and local laws, ordinances, regulations, codes, standards, and other requirements, AGENCY shall be authorized to accept the TUMF Improvements. AGENCY may, in its sole and absolute discretion, accept fully completed portions of the TUMF Improvements prior to such time as all of the TUMF Improvements are complete, which shall not release or modify Developer's obligation to complete the remainder of the TUMF Improvements. Upon the total or partial acceptance of the TUMF Improvements by AGENCY, Developer shall file with the Recorder's Office of the County of Riverside a notice of completion for the accepted TUMF Improvements in accordance with California Civil Code sections 8182, 8184, 9204, and 9208 ("Notice of Completion"), at which time the accepted TUMF Improvements shall become the sole and exclusive property of AGENCY without any payment therefore. Notwithstanding the foregoing, AGENCY may not accept any TUMF Improvements unless and until Developer provides one (1) set of "as-built" or record drawings or plans to the AGENCY for all such TUMF Improvements. The drawings shall be certified and shall reflect the condition of the TUMF Improvements as constructed, with all changes incorporated therein.

## For Use Between Public Agency and Developer "Master Agreement"

8.0 Warranty and Guarantee. Developer hereby warrants and guarantees all the TUMF Improvements against any defective work or labor done, or defective materials furnished in the performance of this Agreement, including the maintenance of the TUMF Improvements, for a period of one (1) year following completion of the work and acceptance by AGENCY ("Warranty"). During the Warranty, Developer shall repair, replace, or reconstruct any defective or otherwise unsatisfactory portion of the TUMF Improvements, in accordance with the current ordinances, resolutions, regulations, codes, standards, or other requirements of AGENCY, and to the approval of AGENCY. All repairs, replacements, or reconstruction during the Warranty shall be at the sole cost, expense, and liability of Developer and its surety. As to any TUMF Improvements which have been repaired, replaced, or reconstructed during the Warranty, Developer and its surety hereby agree to extend the Warranty for an additional one (1) year period following AGENCY's acceptance of the repaired, replaced, or reconstructed TUMF Improvements. Nothing herein shall relieve Developer from any other liability it may have under federal, state, or local law to repair, replace, or reconstruct any TUMF Improvement following expiration of the Warranty or any extension thereof. Developer's warranty obligation under this section shall survive the expiration or termination of this Agreement.

9.0 Administrative Costs. If Developer fails to construct and install all or any part of the TUMF Improvements, or if Developer fails to comply with any other obligation contained herein, Developer and its surety shall be jointly and severally liable to AGENCY for all administrative expenses, fees, and costs, including reasonable attorney's fees and costs, incurred in obtaining compliance with this Agreement or in processing any legal action or for any other remedies permitted by law.

### 10.0 Default; Notice; Remedies.

10.1 Notice. If Developer neglects, refuses, or fails to fulfill or timely complete any obligation, term, or condition of this Agreement, or if AGENCY determines there is a violation of any federal, state, or local law, ordinance, regulation, code, standard, or other requirement, AGENCY may at any time thereafter declare Developer to be in default or violation of this Agreement and make written demand upon Developer or its surety, or both, to immediately remedy the default or violation ("Notice"). Developer shall substantially commence the work required to remedy the default or violation within five (5) days of the Notice. If the default or violation constitutes an immediate threat to the public health, safety, or welfare, AGENCY may provide the Notice verbally, and Developer shall substantially commence the required work within twenty-four (24) hours thereof. Immediately upon AGENCY's issuance of the Notice, Developer and its surety shall be liable to AGENCY for all costs of construction and installation of the TUMF Improvements and all other administrative costs or expenses as provided for in this Section 10.0 of this Agreement.

10.2 Failure to Remedy; AGENCY Action. If the work required to remedy the noticed default or violation is not diligently prosecuted to a completion acceptable to AGENCY within the time frame contained in the Notice, AGENCY may complete all remaining work, arrange for the completion of all remaining work, and/or conduct such remedial activity as in its sole and

## For Use Between Public Agency and Developer "Master Agreement"

absolute discretion it believes is required to remedy the default or violation. All such work or remedial activity shall be at the sole and absolute cost, expense, and liability of Developer and its surety, without the necessity of giving any further notice to Developer or surety. AGENCY's right to take such actions shall in no way be limited by the fact that Developer or its surety may have constructed any of the TUMF Improvements at the time of AGENCY's demand for performance. In the event AGENCY elects to complete or arrange for completion of the remaining work and the TUMF Improvements, AGENCY may require all work by Developer or its surety to cease in order to allow adequate coordination by AGENCY.

**10.3 Other Remedies.** No action by AGENCY pursuant to this Section 10.0 *et seq.* of this Agreement shall prohibit AGENCY from exercising any other right or pursuing any other legal or equitable remedy available under this Agreement or any federal, state, or local law. AGENCY may exercise its rights and remedies independently or cumulatively, and AGENCY may pursue inconsistent remedies. AGENCY may institute an action for damages, injunctive relief, or specific performance.

**11.0 Security; Surety Bonds.** Prior to the commencement of any work on the TUMF Improvements, Developer or its contractor shall provide AGENCY with surety bonds in the amounts and under the terms set forth below ("Security"). The amount of the Security shall be based on the estimated actual costs to construct the TUMF Improvements, as determined by AGENCY after Developer has awarded a contract for construction of the TUMF Improvements to the lowest responsive and responsible bidder in accordance with this Agreement ("Estimated Costs"). If AGENCY determines, in its sole and absolute discretion, that the Estimated Costs have changed, Developer or its contractor shall adjust the Security in the amount requested by AGENCY. Developer's compliance with this Section 11.0 *et seq.* of this Agreement shall in no way limit or modify Developer's indemnification obligation provided in Section 12.0 of this Agreement.

**11.1 Performance Bond.** To guarantee the faithful performance of the TUMF Improvements and all the provisions of this Agreement, to protect AGENCY if Developer is in default as set forth in Section 10.0 *et seq.* of this Agreement, and to secure the one-year guarantee and warranty of the TUMF Improvements, Developer or its contractor shall provide AGENCY a faithful performance bond in an amount which sum shall be not less than one hundred percent (100%) of the Estimated Costs. The AGENCY may, in its sole and absolute discretion, partially release a portion or portions of the security provided under this section as the TUMF Improvements are accepted by AGENCY, provided that Developer is not in default on any provision of this Agreement and the total remaining security is not less than \_\_\_\_\_ (%) of the Estimated Costs. All security provided under this section shall be released at the end of the Warranty period, or any extension thereof as provided in Section 11.0 of this Agreement, provided that Developer is not in default on any provision of this Agreement.

**11.2 Labor & Material Bond.** To secure payment to the contractors, subcontractors, laborers, materialmen, and other persons furnishing labor, materials, or equipment for performance of the TUMF Improvements and this Agreement, Developer or its

## For Use Between Public Agency and Developer "Master Agreement"

contractor shall provide AGENCY a labor and materials bond in an amount which sum shall not be less than one hundred percent (100%) of the Estimated Costs. The security provided under this section may be released by written authorization of AGENCY after six (6) months from the date AGENCY accepts the TUMF Improvements. The amount of such security shall be reduced by the total of all stop notice or mechanic's lien claims of which AGENCY is aware, plus an amount equal to twenty percent (20%) of such claims for reimbursement of AGENCY's anticipated administrative and legal expenses arising out of such claims.

11.3 Additional Requirements. The surety for any surety bonds provided as Security shall have a current A.M. Best rating of at least "A" and FSC-VIII, shall be licensed to do business in California, and shall be satisfactory to AGENCY. As part of the obligation secured by the Security and in addition to the face amount of the Security, Developer, its contractor or the surety shall secure the costs and reasonable expenses and fees, including reasonable attorney's fees and costs, incurred by AGENCY in enforcing the obligations of this Agreement. Developer, its contractor and the surety shall stipulate and agree that no change, extension of time, alteration, or addition to the terms of this Agreement, the TUMF Improvements, or the plans and specifications for the TUMF Improvements shall in any way affect its obligation on the Security.

11.4 Evidence and Incorporation of Security. Evidence of the Security shall be provided on the forms set forth in Exhibit "B", unless other forms are deemed acceptable by the AGENCY, and when such forms are completed to the satisfaction of AGENCY, the forms and evidence of the Security shall be attached hereto as Exhibit "B" and incorporated herein by this reference.

12.0 Indemnification. Developer shall defend, indemnify, and hold harmless AGENCY, its elected officials, employees, and agents from any and all actual or alleged claims, demands, causes of action, liability, loss, damage, or injury to property or persons, including wrongful death, whether imposed by a court of law or by administrative action of any federal, state, or local governmental agency, arising out of or incident to any acts, omissions, negligence, or willful misconduct of Developer, its employees, contractors, or agents in connection with the performance of this Agreement, or arising out of or in any way related to or caused by the TUMF Improvements or their condition prior to AGENCY's approval and acceptance of the TUMF Improvements ("Claims"). This indemnification includes, without limitation, the payment of all penalties, fines, judgments, awards, decrees, attorneys fees, and related costs or expenses, and the reimbursement of AGENCY, its elected officials, employees, and/or agents for all legal expenses and costs incurred by each of them. This indemnification excludes only such portion of any Claim which is caused solely and exclusively by the negligence or willful misconduct of AGENCY as determined by a court or administrative body of competent jurisdiction. Developer's obligation to indemnify shall survive the expiration or termination of this Agreement, and shall not be restricted to insurance proceeds, if any, received by AGENCY, its elected officials, employees, or agents.

13.0 Insurance.

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13.1 Types; Amounts. Developer shall procure and maintain, and shall require its contractors to procure and maintain, during performance of this Agreement, insurance of the types and in the amounts described below ("Required Insurance"). If any of the Required Insurance contains a general aggregate limit, such insurance shall apply separately to this Agreement or be no less than two times the specified occurrence limit.

13.1.1 General Liability. Occurrence version general liability insurance, or equivalent form, with a combined single limit of not less than Two Million Dollars (\$2,000,000) per occurrence for bodily injury, personal injury, and property damage.

13.1.2 Business Automobile Liability. Business automobile liability insurance, or equivalent form, with a combined single limit of not less than One Million Dollars (\$1,000,000) per occurrence. Such insurance shall include coverage for the ownership, operation, maintenance, use, loading, or unloading of any auto owned, leased, hired, or borrowed by the insured or for which the insured is responsible.

13.1.3 Workers' Compensation. Workers' compensation insurance with limits as required by the Labor Code of the State of California and employers' liability insurance with limits of not less than One Million Dollars (\$1,000,000) per occurrence, at all times during which insured retains employees.

13.1.4 Professional Liability. For any consultant or other professional who will engineer or design the TUMF Improvements, liability insurance for errors and omissions with limits not less than Two Million Dollars (\$2,000,000) per occurrence, shall be procured and maintained for a period of five (5) years following completion of the TUMF Improvements. Such insurance shall be endorsed to include contractual liability.

13.2 Deductibles. Any deductibles or self-insured retentions must be declared to and approved by AGENCY. At the option of AGENCY, either: (a) the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects AGENCY, its elected officials, officers, employees, agents, and volunteers; or (b) Developer and its contractors shall provide a financial guarantee satisfactory to AGENCY guaranteeing payment of losses and related investigation costs, claims, and administrative and defense expenses.

13.3 Additional Insured; Separation of Insureds. The Required Insurance, except for the professional liability and workers' compensation insurance, shall name AGENCY, its elected officials, officers, employees, and agents as additional insureds with respect to work performed by or on behalf of Developer or its contractors, including any materials, parts, or equipment furnished in connection therewith. The Required Insurance shall contain standard separation of insureds provisions, and shall contain no special limitations on the scope of its protection to AGENCY, its elected officials, officers, employees, or agents.

13.4 Primary Insurance; Waiver of Subrogation. The Required Insurance shall be primary with respect to any insurance or self-insurance programs covering AGENCY, its elected

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officials, officers, employees, or agents. The policy required for workers' compensation insurance shall provide that the insurance company waives all right of recovery by way of subrogation against AGENCY in connection with any damage or harm covered by such policy.

13.5Certificates; Verification. Developer and its contractors shall furnish AGENCY with original certificates of insurance and endorsements effecting coverage for the Required Insurance. The certificates and endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf. All certificates and endorsements must be received and approved by AGENCY before work pursuant to this Agreement can begin. AGENCY reserves the right to require complete, certified copies of all required insurance policies, at any time.

13.6Term; Cancellation Notice. Developer and its contractors shall maintain the Required Insurance for the term of this Agreement and shall replace any certificate, policy, or endorsement which will expire prior to that date. All policies shall be endorsed to provide that the Required Insurance shall not be suspended, voided, reduced, canceled, or allowed to expire except on thirty (30) days' prior written notice to AGENCY.

13.7Insurer Rating. Unless approved in writing by AGENCY, all Required Insurance shall be placed with insurers licensed to do business in the State of California and with a current A.M. Best rating of at least "A" and FSC-VIII.

14.0TUMF Credit.

14.1Developer's TUMF Obligation. Developer hereby agrees and accepts that as of the date of this Agreement, the amount Developer is obligated to pay to AGENCY pursuant to ( insert appropriate reference for city or county ) as part of the TUMF Program is [INSERT DOLLAR VALUE OF TUMF REQUIREMENT] (\$ \_\_\_\_\_) ("TUMF Obligation"). This TUMF Obligation shall be initially determined under the nexus study and fee schedule in effect for the AGENCY at the time the Developer submits a building permit application for the TUMF Improvement. Notwithstanding, this TUMF Obligation does not have to be paid until the Certificate of Occupancy is obtained.

14.2Fee Adjustments. Notwithstanding the foregoing, Developer agrees that this Agreement shall not estop AGENCY from adjusting the TUMF in accordance with the provisions of ( insert appropriate reference for city or county ).

14.3Credit Offset Against TUMF Obligation. Pursuant to ( insert appropriate reference for city or county ) and in consideration for Developer's obligation under this Agreement for the delivery of TUMF Improvements, credit shall be applied by AGENCY to offset the TUMF Obligation ("Credit") subject to adjustment and reconciliation under Section 14.5 of this agreement. Developer hereby agrees that the amount of the Credit shall be applied after Developer has initiated the process of project delivery of TUMF Improvements to the

## For Use Between Public Agency and Developer "Master Agreement"

lowest responsible bidder in accordance with this Agreement. Developer further agrees that the dollar amount of the Credit shall be equal to the lesser of: (A) the bid amount set forth in the contract awarded to the lowest responsible bidder, or (B) the unit cost assumptions for the TUMF Improvement in effect at the time of the contract award, as such assumptions are identified and determined in the 2009 Nexus Study and the TUMF Administrative Plan adopted by WRCOG ("Unit Cost Assumptions").

The bid amount and the Unit Cost Assumptions shall hereafter be collectively referred to as "Estimated Credit". At no time will the Credit exceed the Developer's TUMF Obligation. If the dollar amount of the Estimated Credit exceeds the dollar amount of the TUMF Obligation, Developer will be deemed to have completely satisfied its TUMF Obligation for the Project and may apply for a reimbursement agreement, to the extent applicable, as provided in Section 14.6 of this Agreement. If the dollar amount of the Estimated Credit is less than the dollar amount of the TUMF Obligation, the Developer agrees the Credit shall be applied to offset the TUMF Obligation as follows:

(1) For residential units in the Project, the Credit shall be applied to all residential units to offset and/or satisfy the TUMF Obligation. The residential units for which the TUMF Obligation has been offset and/or satisfied by use of the Credit, and the amount of offset applicable to each unit, shall be identified in the notice provided to the Developer by AGENCY pursuant to this section.

(2) For commercial and industrial structures in the Project, the Credit shall be applied to all commercial and industrial development to offset and/or satisfy the TUMF Obligation. The commercial or industrial structure(s) for which the TUMF Obligation has been offset and/or satisfied by use of the Credit, and the amount of offset applicable to such structure(s), shall be identified in the notice provided to the Developer by AGENCY pursuant to this section.

AGENCY shall provide Developer written notice of the determinations that AGENCY makes pursuant to this section, including how the Credit is applied to offset the TUMF Obligation as described above.

**14.4 Verified Cost of the TUMF Improvements.** Upon recordation of the Notice of Completion for the TUMF Improvements and acceptance of the TUMF Improvements by AGENCY, Developer shall submit to the AGENCY Public Works Director the information set forth in the attached Exhibit "C". The AGENCY Public Works Director, or his or her designee, shall use the information provided by Developer to calculate the total actual costs incurred by Developer in delivering the TUMF Improvements covered under this Agreement ("Verified Costs"). The AGENCY Public Works Director will use his or her best efforts to determine the amount of the Verified Costs and provide Developer written notice thereof within thirty (30) calendar days of receipt of all the required information from Developer.



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14.5 Reconciliation; Final Credit Offset Against TUMF Obligation. The Developer is aware of and accepts the fact that Credits are speculative and conceptual in nature. The actual amount of Credit that shall be applied by AGENCY to offset the TUMF Obligation shall be equal to the lesser of: (A) the Verified Costs or (B) Unit Cost Assumptions for the TUMF Improvements as determined in accordance with Section 14.3 of this Agreement ("Actual Credit"). No Actual Credit will be awarded until the Verified Costs are determined through the reconciliation process. Please be advised that while a Developer may use an engineer's estimates in order to estimate Credits for project planning purposes, the Actual Credit awarded will only be determined by the reconciliation process.

(a) TUMF Balance. If the dollar amount of the Actual Credit is less than the dollar amount of the TUMF Obligation, the AGENCY Public Works Director shall provide written notice to Developer of the amount of the difference owed ("TUMF Balance") and Developer shall pay the TUMF Balance in accordance with ( insert appropriate reference for city or county) to fully satisfy the TUMF Obligation (see Exhibit "F" - Example "A").

(b) TUMF Reimbursement. If the dollar amount of the Actual Credit exceeds the TUMF Obligation, Developer will be deemed to have fully satisfied the TUMF Obligation for the Project and may apply for a reimbursement agreement, to the extent applicable, as provided in Section 14.6 of this Agreement. AGENCY shall provide Developer written notice of the determinations that AGENCY makes pursuant to this section (see Exhibit "F" - Example "B").

(c) TUMF Overpayment. If the dollar amount of the Actual Credit exceeds the Estimated Credit, but is less than the TUMF Obligation, but the Actual Credit plus additional monies collected by AGENCY from Developer for the TUMF Obligation exceed the TUMF Obligation ("TUMF Overpayment"), Developer will be deemed to have fully satisfied the TUMF Obligation for the Project and may be entitled to a refund. The AGENCY's Public Works Director shall provide written notice to WRCOG and the Developer of the amount of the TUMF Overpayment and AGENCY shall direct WRCOG to refund the Developer in accordance with ( insert appropriate reference for city or county ) (see Exhibit "F" - Example C).

14.6 Reimbursement Agreement. If authorized under either Section 14.3 or Section 14.5 Developer may apply to AGENCY and WRCOG for a reimbursement agreement for the amount by which the Actual Credit exceeds the TUMF Obligation, as determined pursuant to Section 14.3 of this Agreement, ( insert appropriate reference for city or county ), and the TUMF Administrative Plan adopted by WRCOG ("Reimbursement Agreement"). If AGENCY and WRCOG agree to a Reimbursement Agreement with Developer, the Reimbursement Agreement shall be executed on the form set forth in Exhibit "D," and shall contain the terms and conditions set forth therein. The Parties agree that the Reimbursement Agreement shall be subject to all terms and conditions of this Agreement, and that upon execution, an executed copy of the Reimbursement Agreement shall be attached hereto and shall be incorporated herein as a material part of this Agreement as though fully set forth herein.

### 15.0 Miscellaneous.

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15.1 Assignment. Developer may assign all or a portion of its rights pursuant to this Agreement to a purchaser of a portion or portions of the Property ("Assignment"). Developer and such purchaser and assignee ("Assignee") shall provide to AGENCY such reasonable proof as it may require that Assignee is the purchaser of such portions of the Property. Any assignment pursuant to this section shall not be effective unless and until Developer and Assignee have executed an assignment agreement with AGENCY in a form reasonably acceptable to AGENCY, whereby Developer and Assignee agree, except as may be otherwise specifically provided therein, to the following: (1) that Assignee shall receive all or a portion of Developer's rights pursuant to this Agreement, including such credit as is determined to be applicable to the portion of the Property purchased by Assignee pursuant to Section 14.0 et seq. of this Agreement, and (2) that Assignee shall be bound by all applicable provisions of this Agreement.

15.2 Relationship Between the Parties. The Parties hereby mutually agree that this Agreement shall not operate to create the relationship of partnership, joint venture, or agency between AGENCY and Developer. Developer's contractors are exclusively and solely under the control and dominion of Developer. Nothing herein shall be deemed to make Developer or its contractors an agent or contractor of AGENCY.

15.3 Warranty as to Property Ownership; Authority to Enter Agreement. Developer hereby warrants that it owns fee title to the Property and that it has the legal capacity to enter into this Agreement. Each Party warrants that the individuals who have signed this Agreement have the legal power, right, and authority make this Agreement and bind each respective Party.

15.4 Prohibited Interests. Developer warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for Developer, to solicit or secure this Agreement. Developer also warrants that it has not paid or agreed to pay any company or person, other than a bona fide employee working solely for Developer, any fee, commission, percentage, brokerage fee, gift, or other consideration contingent upon the making of this Agreement. For breach of this warranty, AGENCY shall have the right to rescind this Agreement without liability.

15.5 Notices. All notices, demands, invoices, and written communications shall be in writing and delivered to the following addresses or such other addresses as the Parties may designate by written notice:

To AGENCY: [INSERT "CITY" OR "COUNTY"] OF \_\_\_\_\_

Fax No. (909) \_\_\_\_\_

To Developer: \_\_\_\_\_

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Attn: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Fax No. (\_\_\_\_) \_\_\_\_\_

Depending upon the method of transmittal, notice shall be deemed received as follows: by facsimile, as of the date and time sent; by messenger, as of the date delivered; and by U.S. Mail first class postage prepaid, as of 72 hours after deposit in the U.S. Mail.

15.6 Cooperation; Further Acts. The Parties shall fully cooperate with one another, and shall take any additional acts or sign any additional documents as may be necessary, appropriate, or convenient to attain the purposes of this Agreement.

15.7 Construction; References; Captions. It being agreed the Parties or their agents have participated in the preparation of this Agreement, the language of this Agreement shall be construed simply, according to its fair meaning, and not strictly for or against any Party. Any term referencing time, days, or period for performance shall be deemed calendar days and not work days. All references to Developer include all personnel, employees, agents, and contractors of Developer, except as otherwise specified in this Agreement. All references to AGENCY include its elected officials, officers, employees, agents, and volunteers except as otherwise specified in this Agreement. The captions of the various articles and paragraphs are for convenience and ease of reference only, and do not define, limit, augment, or describe the scope, content, or intent of this Agreement.

15.8 Amendment; Modification. No supplement, modification, or amendment of this Agreement shall be binding unless executed in writing and signed by both Parties.

15.9 Waiver. No waiver of any default shall constitute a waiver of any other default or breach, whether of the same or other covenant or condition. No waiver, benefit, privilege, or service voluntarily given or performed by a Party shall give the other Party any contractual right by custom, estoppel, or otherwise.

15.10 Binding Effect. Each and all of the covenants and conditions shall be binding on and shall inure to the benefit of the Parties, and their successors, heirs, personal representatives, or assigns. This section shall not be construed as an authorization for any Party to assign any right or obligation.

15.11 No Third Party Beneficiaries. There are no intended third party beneficiaries of any right or obligation assumed by the Parties.

15.12 Invalidity; Severability. If any portion of this Agreement is declared invalid, illegal, or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions shall continue in full force and effect.

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15.13 Consent to Jurisdiction and Venue. This Agreement shall be construed in accordance with and governed by the laws of the State of California. Any legal action or proceeding brought to interpret or enforce this Agreement, or which in any way arises out of the Parties' activities undertaken pursuant to this Agreement, shall be filed and prosecuted in the appropriate California State Court in the County of Riverside, California. Each Party waives the benefit of any provision of state or federal law providing for a change of venue to any other court or jurisdiction including, without limitation, a change of venue based on the fact that a governmental entity is a party to the action or proceeding, or that a federal right or question is involved or alleged to be involved in the action or proceeding. Without limiting the generality of the foregoing waiver, Developer expressly waives any right to have venue transferred pursuant to California Code of Civil Procedure Section 394.

15.14 Time is of the Essence. Time is of the essence in this Agreement, and the Parties agree to execute all documents and proceed with due diligence to complete all covenants and conditions.

15.15 Counterparts. This Agreement may be signed in counterparts, each of which shall constitute an original and which collectively shall constitute one instrument.

15.16 Entire Agreement. This Agreement contains the entire agreement between AGENCY and Developer and supersedes any prior oral or written statements or agreements between AGENCY and Developer.

[SIGNATURES OF PARTIES ON NEXT PAGE]

For Use Between Public Agency and Developer  
"Master Agreement"

**IN WITNESS WHEREOF, the Parties hereto have executed this Agreement  
as of the day and year first above written.**

DEVELOPER:

[\*\*INSERT NAME OF DEVELOPER\*\*]

By: \_\_\_\_\_

Its: \_\_\_\_\_

ATTEST:

By: \_\_\_\_\_

Its: \_\_\_\_\_

[\*\*INSERT "CITY" OR "COUNTY" OF  
\_\_\_\_\_\*\*]:

By: \_\_\_\_\_

Its: \_\_\_\_\_

ATTEST:

By: \_\_\_\_\_

Its: \_\_\_\_\_

**EXHIBIT “A”**

**LEGAL DESCRIPTION OF PROPERTY**

[ATTACH BEHIND THIS PAGE]

EXHIBIT A-1

**EXHIBIT “B”  
FORMS FOR SECURITY**

[ATTACHED BEHIND THIS PAGE]

EXHIBIT B

BOND NO. \_\_\_\_\_  
INITIAL PREMIUM: \_\_\_\_\_  
SUBJECT TO RENEWAL

**PERFORMANCE BOND**

WHEREAS, the [INSERT "City" OR "County"] of \_\_\_\_\_ ("AGENCY") has executed an agreement with \_\_\_\_\_ (hereinafter "Developer"), requiring Developer to perform certain work consisting of but not limited to, furnishing all labor, materials, tools, equipment, services, and incidentals for the construction of street and transportation system improvements (hereinafter the "Work");

WHEREAS, the Work to be performed by Developer is more particularly set forth in that certain TUMF Improvement and Credit/Reimbursement Agreement dated \_\_\_\_\_, (hereinafter the "Agreement"); and

WHEREAS, the Agreement is hereby referred to and incorporated herein by this reference; and

WHEREAS, Developer or its contractor is required by the Agreement to provide a good and sufficient bond for performance of the Agreement, and to guarantee and warranty the Work constructed thereunder.

NOW, THEREFORE, we the undersigned, \_\_\_\_\_, as Principal and \_\_\_\_\_, a corporation organized and existing under the laws of the State of \_\_\_\_\_ and duly authorized to transact business under the laws of the State of California, as Surety, are held and firmly bound unto the AGENCY in the sum of \_\_\_\_\_ (\$\_\_\_\_\_), said sum being not less than one hundred percent (100%) of the total cost of the Work as set forth in the Agreement, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such, that if Developer and its contractors, or their heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions, agreements, guarantees, and warranties in the Agreement and any alteration thereof made as therein provided, to be kept and performed at the time and in the manner therein specified and in all respects according to their intent and meaning, and to indemnify and save harmless AGENCY, its officers, employees, and agents, as stipulated in the Agreement, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

As part of the obligation secured hereby, and in addition to the face amount specified therefor, there shall be included costs and reasonable expenses and fees, including reasonable attorney's fees, incurred by AGENCY in successfully enforcing such obligation, all to be taxed as costs and included in any judgment rendered.

EXHIBIT B



The said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or additions to the terms of the said Agreement or to the Work to be performed thereunder or the specification accompanying the same shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Agreement or to the Work.

IN WITNESS WHEREOF, we have hereto set our hands and seals this \_\_\_\_ day on \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Principal

By: \_\_\_\_\_  
President

\_\_\_\_\_  
Surety

By: \_\_\_\_\_  
Attorney-in-Fact

**CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT**

**CIVIL CODE §1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document, to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA )  
COUNTY OF \_\_\_\_\_ )

On \_\_\_\_\_, before me, \_\_\_\_\_  
Date Here Insert Name and Title of the Officer

personally appeared \_\_\_\_\_  
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature \_\_\_\_\_  
Signature of Notary Public

Place Notary Seal Above

**OPTIONAL**

*Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.*

**Description of Attached Document**

Title of Type of Document: \_\_\_\_\_ Document Date: \_\_\_\_\_  
Number of Pages: \_\_\_\_\_ Signer(s) Other Than Named Above: \_\_\_\_\_

**Capacity(ies) Claimed by Signer(s)**

Signer's Name: \_\_\_\_\_ Signer's Name: \_\_\_\_\_

- Corporate Officer – Title(s): \_\_\_\_\_
- Partner -  Limited  General
- Individual  Attorney in Fact
- Trustee  Guardian or Conservator
- Other: \_\_\_\_\_

- Corporate Officer – Title(s): \_\_\_\_\_
- Partner -  Limited  General
- Individual  Attorney in Fact
- Trustee  Guardian or Conservator
- Other: \_\_\_\_\_

Signer is Representing: \_\_\_\_\_

Signer is Representing: \_\_\_\_\_

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, \_\_\_\_\_, certify that I am the \_\_\_\_\_ Secretary of the corporation named as principal in the attached bond, that \_\_\_\_\_ who signed the said bond on behalf of the principal was then \_\_\_\_\_ of said corporation; that I know his signature, and his signature thereto is genuine; and that said bond was duly signed, sealed and attested for and in behalf of said corporation by authority of its governing Board.

(Corporate Seal) \_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

NOTE: A copy of the power of attorney to local representatives of the bonding company may be attached hereto.

BOND NO. \_\_\_\_\_  
INITIAL PREMIUM: \_\_\_\_\_  
SUBJECT TO RENEWAL

**LABOR & MATERIAL BOND**

WHEREAS, the [INSERT "City" OR "County"] of \_\_\_\_\_ ("AGENCY") has executed an agreement with \_\_\_\_\_ (hereinafter "Developer"), requiring Developer to perform certain work consisting of but not limited to, furnishing all labor, materials, tools, equipment, services, and incidentals for the construction of street and transportation system improvements (hereinafter "Work");

WHEREAS, the Work to be performed by Developer is more particularly set forth in that certain Improvement and Credit / Reimbursement Agreement dated \_\_\_\_\_, (hereinafter the "Agreement"); and

WHEREAS, Developer or its contractor is required to furnish a bond in connection with the Agreement providing that if Developer or any of his or its contractors shall fail to pay for any materials, provisions, or other supplies, or terms used in, upon, for or about the performance of the Work contracted to be done, or for any work or labor done thereon of any kind, or for amounts due under the provisions of 3248 of the California Civil Code, with respect to such work or labor, that the Surety on this bond will pay the same together with a reasonable attorney's fee in case suit is brought on the bond.

NOW, THEREFORE, we the undersigned, \_\_\_\_\_, as Principal and \_\_\_\_\_, a corporation organized and existing under the laws of the State of \_\_\_\_\_ and duly authorized to transact business under the laws of the State of California, as Surety, are held and firmly bound unto the AGENCY and to any and all material men, persons, companies or corporations furnishing materials, provisions, and other supplies used in, upon, for or about the performance of the said Work, and all persons, companies or corporations renting or hiring teams, or implements or machinery, for or contributing to said Work to be done, and all persons performing work or labor upon the same and all persons supplying both work and materials as aforesaid, the sum of \_\_\_\_\_ (\$ \_\_\_\_\_), said sum being not less than 100% of the total amount payable by Developer under the terms of the Agreement, for which payment well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if Developer or its contractors, or their heirs, executors, administrators, successors, or assigns, shall fail to pay for any materials, provisions, or other supplies or machinery used in, upon, for or about the performance of the Work contracted to be done, or for work or labor thereon of any kind, or fail to pay any of the persons named in California Civil Code Section 9100, or amounts due under the Unemployment Insurance Code with respect to work or labor performed by any such claimant, or for any amounts required to be deducted, withheld, and paid over to the Employment Development

EXHIBIT B

Department from the wages of employees of the contractor and his subcontractors pursuant to Section 13020 of the Unemployment Insurance Code with respect to such work and labor, and all other applicable laws of the State of California and rules and regulations of its agencies, then said Surety will pay the same in or to an amount not exceeding the sum specified herein.

In case legal action is required to enforce the provisions of this bond, the prevailing party shall be entitled to recover reasonable attorneys' fees in addition to court costs, necessary disbursements and other consequential damages. In addition to the provisions hereinabove, it is agreed that this bond will inure to the benefit of any and all persons, companies and corporations entitled to make claims under Sections 8024, 8400, 8402, 8404, 8430, 9100 of the California Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this bond.

The said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or additions to the terms of the Agreement or to the Work to be performed thereunder or the specification accompanying the same shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Agreement or to the Work.

IN WITNESS WHEREOF, we have hereto set our hands and seals this \_\_\_\_ day on \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Principal

By: \_\_\_\_\_  
President

\_\_\_\_\_  
Surety

By: \_\_\_\_\_  
Attorney-in-Fact

**CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT**

**CIVIL CODE §1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA )  
COUNTY OF \_\_\_\_\_ )

On \_\_\_\_\_, before me, \_\_\_\_\_  
Date Here Insert Name and Title of the Officer

personally appeared \_\_\_\_\_  
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature \_\_\_\_\_  
Signature of Notary Public

Place Notary Seal Above

**OPTIONAL**

*Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.*

**Description of Attached Document**

Title of Type of Document: \_\_\_\_\_ Document Date: \_\_\_\_\_  
Number of Pages: \_\_\_\_\_ Signer(s) Other Than Named Above: \_\_\_\_\_

**Capacity(ies) Claimed by Signer(s)**

Signer's Name: \_\_\_\_\_ Signer's Name: \_\_\_\_\_

- Corporate Officer – Title(s): \_\_\_\_\_
- Partner -  Limited  General
- Individual  Attorney in Fact
- Trustee  Guardian or Conservator
- Other: \_\_\_\_\_

- Corporate Officer – Title(s): \_\_\_\_\_
- Partner -  Limited  General
- Individual  Attorney in Fact
- Trustee  Guardian or Conservator
- Other: \_\_\_\_\_

Signer is Representing: \_\_\_\_\_

Signer is Representing: \_\_\_\_\_

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, \_\_\_\_\_, certify that I am the \_\_\_\_\_ Secretary of the \_\_\_\_\_ corporation named as principal in the attached bond, that \_\_\_\_\_ who signed the said bond on behalf of the principal was then \_\_\_\_\_ of said corporation; that I know his signature, and his signature thereto is genuine; and that said bond was duly signed, sealed and attested for and in behalf of said corporation by authority of its governing Board.

(Corporate Seal) \_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

NOTE: A copy of the power of attorney to local representatives of the bonding company may be attached hereto.

**EXHIBIT “C”****DOCUMENTATION TO BE PROVIDED TO AGENCY BY DEVELOPER FOR  
DETERMINATION OF CONSTRUCTION COSTS**

To assist AGENCY in determining the Construction Costs for a completed TUMF Improvement, Developer shall provide the following documents to AGENCY:

1. Plans, specifications and Developer’s civil engineer’s cost estimate;
2. List of bidders from whom bids were requested;
3. Construction schedules and progress reports;
4. Contracts, insurance certificates and change orders with each contractor or vendor;
5. Invoices received from all vendors;
6. Canceled checks for payments made to contractors and vendors (copy both front and back of canceled checks);
7. Spreadsheet showing total costs incurred in and related to the construction of each TUMF Improvement and the check number for each item of cost and invoice;
8. Final lien releases from each contractor and vendor; and
9. Such further documentation as may be reasonably required by AGENCY to evidence the completion of construction and the payment of each item of cost and invoice.

EXHIBIT C-1



For Use Between Public Agency and Developer  
"Master Agreement"

**EXHIBIT "D"**

**REIMBURSEMENT AGREEMENT  
TRANSPORTATION UNIFORM MITIGATION FEE PROGRAM**

**THIS REIMBURSEMENT AGREEMENT** ("Agreement") is entered into this \_\_\_ day of \_\_\_\_\_, 20\_\_\_, by and between the [INSERT "City" OR "County"] of \_\_\_\_\_, **\*\*INSERT "a California municipal corporation" FOR CITY OR "a subdivision of the State of California" FOR COUNTY\*\*** ("AGENCY"), and \_\_\_\_\_, a California **\*\*INSERT TYPE OF ENTITY - corporation, partnership, sole proprietorship or other legal entity\*\***, with its principal place of business at **\*\*ENTER ADDRESS\*\*** ("Developer"). AGENCY and Developer are sometimes hereinafter referred to individually as "Party" and collectively as "Parties".

**RECITALS**

WHEREAS, AGENCY and Developer are parties to an agreement dated \_\_\_\_\_, 20\_\_\_, entitled "Improvement and Credit Agreement - Transportation Uniform Mitigation Fee Program" (hereinafter "Credit Agreement");

WHEREAS, Sections 14.1 through 14.3 of the Credit Agreement provide that Developer is obligated to pay AGENCY the TUMF Obligation, as defined therein, but shall receive credit to offset the TUMF Obligation if Developer constructs and AGENCY accepts the TUMF Improvements in accordance with the Credit Agreement;

WHEREAS, Section 14.5 of the Credit Agreement provides that if the dollar amount of the credit to which Developer is entitled under the Credit Agreement exceeds the dollar amount of the TUMF Obligation, Developer may apply to AGENCY and WRCOG for a reimbursement agreement for the amount by which the credit exceeds the TUMF Obligation;

WHEREAS, Section 14.5 additionally provides that a reimbursement agreement executed pursuant to the Credit Agreement (i) shall be executed on the form attached to the Credit Agreement, (ii) shall contain the terms and conditions set forth therein, (iii) shall be subject to all terms and conditions of the Credit Agreement, and (iv) shall be attached upon execution to the Credit Agreement and incorporated therein as a material part of the Credit Agreement as though fully set forth therein; and

WHEREAS, AGENCY and WRCOG have consented to execute a reimbursement agreement with Developer pursuant to the Credit Agreement, (   insert appropriate reference for city or county   ), and the TUMF Administrative Plan adopted by WRCOG.

## For Use Between Public Agency and Developer "Master Agreement"

**NOW, THEREFORE, for the purposes set forth herein, and for good and valuable consideration, the adequacy of which is hereby acknowledged, the Parties hereby agree as follows:**

### TERMS

1.0 Incorporation of Recitals. The Parties hereby affirm the facts set forth in the Recitals above and agree to the incorporation of the Recitals as though fully set forth herein.

2.0 Effectiveness. This Agreement shall not be effective unless and until the Credit Agreement is effective and in full force in accordance with its terms.

3.0 Definitions. Terms not otherwise expressly defined in this Agreement, shall have the meaning and intent set forth in the Credit Agreement.

4.0 Amount of Reimbursement. Subject to the terms, conditions, and limitations set forth in this Agreement, the Parties hereby agree that Developer is entitled to receive the dollar amount by which the Actual Credit exceeds the dollar amount of the TUMF Obligation as determined pursuant to the Credit Agreement, (insert appropriate reference for city or county), and the TUMF Administrative Plan adopted by WRCOG ("Reimbursement"). The Reimbursement shall be subject to verification by WRCOG. AGENCY and Developer shall provide any and all documentation reasonably necessary for WRCOG to verify the amount of the Reimbursement. The Reimbursement shall be in an amount not exceeding [INSERT DOLLAR AMOUNT] ("Reimbursement Amount"). AGENCY shall be responsible for obtaining the Reimbursement Amount from WRCOG and transmitting the Reimbursement Amount to the Developer. In no event shall the dollar amount of the Reimbursement exceed the difference between the dollar amount of all credit applied to offset the TUMF Obligation pursuant to Section 14.3, 14.4, and 14.5 of the Credit Agreement, and one hundred (100%) of the approved unit awarded, as such assumptions are identified and determined in the Nexus Study and the TUMF Administrative Plan adopted by WRCOG.

5.0 Payment of Reimbursement; Funding Contingency. The payment of the Reimbursement Amount shall be subject to the following conditions:

5.1 Developer shall have no right to receive payment of the Reimbursement unless and until (i) the TUMF Improvements are completed and accepted by AGENCY in accordance with the Credit Agreement, (ii) the TUMF Improvements are scheduled for funding pursuant to the five-year Transportation Improvement Program adopted annually by WRCOG, (iii) WRCOG has funds available and appropriated for payment of the Reimbursement amount.

EXHIBIT D-2

## For Use Between Public Agency and Developer "Master Agreement"

5.2 Developer shall not be entitled to any interest or other cost adjustment for any delay between the time when the dollar amount of the Reimbursement is determined and the time when payment of the Reimbursement is made to Developer by WRCOG through AGENCY.

6.0 Affirmation of Credit Agreement. AGENCY and Developer represent and warrant to each other that there have been no written or oral modifications or amendments of the Credit Agreement, except by this Agreement. AGENCY and Developer ratify and reaffirm each and every one of their respective rights and obligations arising under the Credit Agreement. AGENCY and Developer represent and warrant that the Credit Agreement is currently an effective, valid, and binding obligation.

7.0 Incorporation Into Credit Agreement. Upon execution of this Agreement, an executed original of this Agreement shall be attached as Exhibit "D" to the Credit Agreement and shall be incorporated therein as a material part of the Credit Agreement as though fully set forth therein.

8.0 Terms of Credit Agreement Controlling. Each Party hereby affirms that all provisions of the Credit Agreement are in full force and effect and shall govern the actions of the Parties under this Agreement as though fully set forth herein and made specifically applicable hereto, including without limitation, the following sections of the Credit Agreement: Sections 10.0 through 10.3, Section 12.0, Sections 13.0 through 13.7, Sections 14.0 through 14.6, and Sections 15.0 through 15.17.

**[SIGNATURES OF PARTIES ON NEXT PAGE]**

EXHIBIT D-3

For Use Between Public Agency and Developer  
"Master Agreement"

**IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the day and year first above written.**

\_\_\_\_\_  
("Developer")

By: \_\_\_\_\_

Its: \_\_\_\_\_

ATTEST:

By: \_\_\_\_\_

Its: \_\_\_\_\_

[INSERT "City" OR "County") of \_\_\_\_\_

By: \_\_\_\_\_

Its: \_\_\_\_\_

ATTEST:

By: \_\_\_\_\_

Its: \_\_\_\_\_

## EXHIBIT "E"

## TUMF CREDIT / REIMBURSEMENT ELIGIBILITY PROCESS

1. Prior to the construction of any TUMF Improvement, Developer shall follow the steps listed below:
  - a. Prepare a separate bid package for the TUMF Improvements.
  - b. The plans, cost estimate, specifications and contract document shall require all contractors to pay prevailing wages and to comply with applicable provisions of the Labor Code, Government Code, and Public Contract Code relating to Public Works Projects.
  - c. Bids shall be obtained and processed in accordance with the formal public works bidding requirements of the AGENCY.
  - d. The contract(s) for the construction of TUMF Improvements shall be awarded to the lowest responsible bidder(s) for the construction of such facilities in accordance with the AGENCY's requirements and guidelines.
  - e. Contractor(s) shall be required to provide proof of insurance coverage throughout the duration of the construction.
2. Prior to the determination and application of any Credit pursuant to a TUMF Improvement and Credit Agreement executed between AGENCY and Developer ("Agreement"), Developer shall provide the AGENCY and WRCOG with the following:
  - a. Copies of all information listed under Item 1 above.
  - b. Surety Bond, Letter of Credit, or other form of security permitted under the Agreement and acceptable to the AGENCY and WRCOG, guaranteeing the construction of all applicable TUMF Improvements.
3. Prior to the AGENCY's acceptance of any completed TUMF Improvement, and in order to initiate the construction cost verification process, the Developer shall comply with the requirements as set forth in Sections 7, 14.2 and 14.3 of the Agreement, and the following conditions shall also be satisfied:
  - a. Developer shall have completed the construction of all TUMF Improvements in accordance with the approved Plans and Specifications.
  - b. Developer shall have satisfied the AGENCY's inspection punch list.
  - c. After final inspection and approval of the completed TUMF Improvements, the AGENCY shall have provided the Developer a final inspection release letter.
  - d. AGENCY shall have filed a Notice of Completion with respect to the TUMF Improvements pursuant to Section 3093 of the Civil Code with the County Recorder's Office, and provided a copy of filed Notice of Completion to WRCOG.
  - e. Developer shall have provided AGENCY a copy of the As-Built plans for the TUMF Improvements.
  - f. Developer shall have provided AGENCY copies of all permits or agreements that may have been required by various resource/regulatory agencies for construction, operation and maintenance of any TUMF Improvements.
  - g. Developer shall have submitted a documentation package to the AGENCY to determine the final cost of the TUMF Improvements, which shall include at a minimum, the following documents related to the TUMF Improvements:

EXHIBIT E-1

- i. Plans, specifications, and Developer's Civil Engineer's cost estimates; or Engineer's Report showing the cost estimates.
- ii. Contracts/agreements, insurance certificates and change orders with each vendor or contractor.
- iii. Invoices from all vendors and service providers.
- iv. Copies of cancelled checks, front and back, for payments made to contractors, vendors and service providers.
- v. Final lien releases from each contractor and vendor (unconditional waiver and release).
- vi. Certified contract workers payroll for AGENCY verification of compliance with prevailing wages.
- vii. A total cost summary, in spreadsheet format (MS Excel is preferred) and on disk, showing a breakdown of the total costs incurred. The summary should include for each item claimed the check number, cost, invoice numbers, and name of payee. See attached sample for details. [ATTACH SAMPLE, IF APPLICABLE; OTHERWISE DELETE REFERENCE TO ATTACHED SAMPLE]

EXHIBIT E-2

EXHIBIT "F"

RECONCILIATION EXAMPLES

All examples are based on a single family residential development project of 200 dwelling units: 200 SF dwelling units @ \$6,650 / dwelling unit = \$1,330,000 in fees (TUMF Obligation)

Example A: "TUMF BALANCE"

<b>CREDIT</b>			
TUMF Obligation:	\$1,330,000		
Estimated Credit: Bid (\$1,500,000) or unit Cost Assumption (\$1,600,000) whichever is less			<u>\$1,500,000</u>
Potential Reimbursement:	(\$170,000)		

<b>RECONCILIATION</b>			
TUMF Obligation:	\$1,330,000		
Actual Credit:	<u>\$1,200,000</u>		
TUMF Balance (Payment to TUMF):			<b>\$130,000</b>

Example B: "REIMBURSEMENT"

<b>CREDIT</b>			
TUMF Obligation:	\$1,330,000		
Estimated Credit: Bid (\$1,500,000) or unit Cost Assumption (\$1,600,000) whichever is less			<u>\$1,500,000</u>
Potential Reimbursement:	(\$170,000)		

<b>RECONCILIATION</b>			
TUMF Obligation:	\$1,330,000		
Actual Credit:	<u>\$1,500,000</u>		
Reimbursement Agreement with Developer (Based on Priority Ranking):			<b>(\$170,000)</b>

Example C: "TUMF OVERPAYMENT"

<b>CREDIT</b>			
TUMF Obligation:	\$1,330,000		
Estimated Credit: Bid (\$1,200,000) or unit Cost Assumption (\$1,500,000) whichever is less			<u>\$1,200,000</u>
Remaining TUMF Obligation:	\$130,000		
Prorated Fee: \$130,000 / 200 du =	\$650 / du		

<b>RECONCILIATION</b>			
Actual Credit:	\$1,300,000		
TUMF payments from Developer (\$650 per unit x 200 units)			<u>\$130,000</u>
Actual Credit plus TUMF Payment	\$1,430,000		
TUMF Obligation:	\$1,330,000		
Actual Credit plus TUMF Payment			<u>\$1,430,000</u>
TUMF Overpayment (Refund to Developer):			<b>(\$100,000)</b>



# WRCOG TUMF Credit/Reimbursement Manual

## ATTACHMENT B

### WRCOG TUMF Developer Credit and Reimbursement Master Agreement

Latest versions found at <http://www.wrcog.cog.ca.us/199/Administration-Fees>





# WRCOG TUMF Credit/Reimbursement Manual

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[INSERT PROJECT #]

## For Public Agency Use Only

**TRANSPORTATION UNIFORM MITIGATION FEE PROGRAM  
AGREEMENT TO REIMBURSE TUMF FUNDS  
[INSERT PROJECT NAME]**

THIS REIMBURSEMENT AGREEMENT (“Agreement”) is entered into as of this day of \_\_\_\_, 20\_\_, by and between the Western Riverside Council of Governments (“WRCOG”), a California joint powers authority and \_\_\_\_\_ [INSERT NAME OF AGENCY **EITHER:\*\***, a California municipal corporation or \_\_\_\_\_, a subdivision of the State (“AGENCY”)\*\*]. WRCOG and AGENCY are sometimes hereinafter referred to individually as “Party” and collectively as “Parties”.

**RECITALS**

A. WRCOG is the Administrator of the Transportation Uniform Mitigation Fee Program of Western Riverside County (“TUMF Program”).

B. WRCOG has identified and designated certain transportation improvement projects throughout Western Riverside County as projects of regional importance (“Qualifying Projects” or “Projects”). The Qualifying Projects are more specifically described in that certain WRCOG study titled “TUMF Nexus Study”, as may be amended from time to time. Qualifying Projects can have Regional or Zonal significance as further described in the TUMF Nexus Study.

C. The TUMF Program is funded by TUMF fees paid by new development in Western Riverside County (collectively, “TUMF Program Funds”). TUMF Program Funds are held in trust by WRCOG for the purpose of funding the Qualifying Projects.

D. The AGENCY proposes to implement a Qualifying Project, and it is the purpose of this Agreement to identify the project and to set forth the terms and conditions by which WRCOG will release TUMF Program Funds.

**AGREEMENT**

NOW, THEREFORE, in consideration of the mutual covenants and subject to the conditions contained herein, the Parties hereby agree as follows:

1. Description of the Qualifying Project. This Agreement is intended to distribute TUMF Program Funds to the AGENCY for \_\_\_\_\_ [**\*\*INSERT NAME OF PROJECT\*\***], (the “Project”), a Qualifying Project. The Work, including a timetable and a detailed scope of work, is more fully described in Exhibit “A” attached hereto and incorporated herein by reference and, pursuant to Section 20 below, is subject to modification if requested by the AGENCY and approved by WRCOG. The work shall be consistent with one or more of the defined WRCOG Call for Projects phases detailed herein as follows:

- 1) PA&ED – Project Approvals & Environmental Document
- 2) PS&E – Plans, Specifications and Estimates
- 3) R/W – Right of Way Acquisition and Utility Relocation
- 4) CON – Construction

[INSERT PROJECT #]

## For Public Agency Use Only

2. WRCOG Funding Amount. WRCOG hereby agrees to distribute to AGENCY, on the terms and conditions set forth herein, a sum not to exceed [INSERT DOLLAR AMOUNT IN TEXT FORM] (\$ \_\_\_\_\_) [INSERT DOLLAR AMOUNT IN NUMBER FORM], to be used for reimbursing the AGENCY for eligible Project expenses as described in Section 3 herein (“Funding Amount”). The Parties acknowledge and agree that the Funding Amount may be less than the actual cost of the Project. Nevertheless, the Parties acknowledge and agree that WRCOG shall not be obligated to contribute TUMF Program Funds in excess of the maximum TUMF share identified in the TUMF Nexus Study (“Maximum TUMF Share”), as may be amended from time to time.

3. Project Costs Eligible for Advance/Reimbursement. The total Project costs (“Total Project Cost”) may include the following items, provided that such items are included in the scope of work attached hereto as Exhibit “A” (“Scope of Work”): (1) AGENCY and/or consultant costs associated with direct Project coordination and support; (2) funds expended in preparation of preliminary engineering studies; (3) funds expended for preparation of environmental review documentation for the Project; (4) all costs associated with right-of-way acquisition, including right-of-way engineering, appraisal, acquisition, legal costs for condemnation procedures if authorized by the AGENCY, and costs of reviewing appraisals and offers for property acquisition; (5) costs reasonably incurred if condemnation proceeds; (6) costs incurred in the preparation of plans, specifications, and estimates by AGENCY or consultants; (7) AGENCY costs associated with bidding, advertising and awarding of the Project contracts; (8) construction costs, including change orders to construction contract approved by the AGENCY; (9) construction management, field inspection and material testing costs; and (10) any AGENCY administrative cost to deliver the Project.

4. Ineligible Project Costs. The Total Project Cost shall not include the following items which shall be borne solely by the AGENCY without reimbursement: (1) any AGENCY administrative fees attributed to the reviewing and processing of the Project; and (2) expenses for items of work not included within the Scope of Work in Exhibit “A”.

5. Procedures for Distribution of TUMF Program Funds to AGENCY.

(a) Initial Payment by the AGENCY. The AGENCY shall be responsible for initial payment of all the Project costs as they are incurred. Following payment of such Project costs, the AGENCY shall submit invoices to WRCOG requesting reimbursement of eligible Project costs. Each invoice shall be accompanied by detailed contractor invoices, or other demands for payment addressed to the AGENCY, and documents evidencing the AGENCY’s payment of the invoices or demands for payment. Documents evidencing the AGENCY’S payment of the invoices shall be retained for four (4) years and shall be made available for review by WRCOG. The AGENCY shall submit invoices not more often than monthly and not less often than quarterly.

(b) Review and Reimbursement by WRCOG. Upon receipt of an invoice from the AGENCY, WRCOG may request additional documentation or explanation of the Project costs for which reimbursement is sought. Undisputed amounts shall be paid by WRCOG to the AGENCY within thirty (30) days. In the event that WRCOG disputes the eligibility of the

[INSERT PROJECT #]

## For Public Agency Use Only

AGENCY for reimbursement of all or a portion of an invoiced amount, the Parties shall meet and confer in an attempt to resolve the dispute. If the meet and confer process is unsuccessful in resolving the dispute, the AGENCY may appeal WRCOG's decision as to the eligibility of one or more invoices to WRCOG's Executive Director. The WRCOG Executive Director shall provide his/her decision in writing. If the AGENCY disagrees with the Executive Director's decision, the AGENCY may appeal the decision of the Executive Director to the full WRCOG Executive Committee, provided the AGENCY submits its request for appeal to WRCOG within ten (10) days of the Executive Director's written decision. The decision of the WRCOG Executive Committee shall be final. Additional details concerning the procedure for the AGENCY's submittal of invoices to WRCOG and WRCOG's consideration and payment of submitted invoices are set forth in Exhibit "B", attached hereto and incorporated herein by reference.

(c) Funding Amount/Adjustment. If a post Project audit or review indicates that WRCOG has provided reimbursement to the AGENCY in an amount in excess of the Maximum TUMF Share of the Project, or has provided reimbursement of ineligible Project costs, the AGENCY shall reimburse WRCOG for the excess or ineligible payments within 30 days of notification by WRCOG.

6. Increases in Project Funding. The Funding Amount may, in WRCOG's sole discretion, be augmented with additional TUMF Program Funds if the TUMF Nexus Study is amended to increase the maximum eligible TUMF share for the Project. Any such increase in the Funding Amount must be approved in writing by WRCOG's Executive Director. In no case shall the amount of TUMF Program Funds allocated to the AGENCY exceed the then-current maximum eligible TUMF share for the Project. No such increased funding shall be expended to pay for any Project already completed. For purposes of this Agreement, the Project or any portion thereof shall be deemed complete upon its acceptance by WRCOG's Executive Director which shall be communicated to the AGENCY in writing.

7. No Funding for Temporary Improvements. Only segments or components of the construction that are intended to form part of or be integrated into the Project may be funded by TUMF Program Funds. No improvement which is temporary in nature, including but not limited to temporary roads, curbs, tapers or drainage facilities, shall be funded with TUMF Program Funds, except as needed for staged construction of the Project.

8. AGENCY's Funding Obligation to Complete the Project. In the event that the TUMF Program Funds allocated to the Project represent less than the total cost of the Project, the AGENCY shall provide such additional funds as may be required to complete the Project.

9. AGENCY's Obligation to Repay TUMF Program Funds to WRCOG; Exception For PA&ED Phase Work. Except as otherwise expressly excepted within this paragraph, in the event that: (i) the AGENCY, for any reason, determines not to proceed with or complete the Project; or (ii) the Project is not timely completed, subject to any extension of time granted by WRCOG pursuant to the terms of this Agreement; the AGENCY agrees that any TUMF Program Funds that were distributed to the AGENCY for the Project shall be repaid in full to WRCOG, and the Parties shall enter into good faith negotiations to establish a reasonable repayment schedule and repayment mechanism. If the Project involves work pursuant to a PA&ED phase,

[INSERT PROJECT #]

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AGENCY shall not be obligated to repay TUMF Program Funds to WRCOG relating solely to PA&ED phase work performed for the Project.

10. AGENCY’s Local Match Contribution. The AGENCY shall provide at least (\$ \_\_\_\_\_)[INSERT DOLLAR AMOUNT IN NUMBER FORM]of funding toward the Work, as shown in Exhibit “A” and as called out in the AGENCY’s Project Nomination Form submitted to WRCOG in response to its Call for Projects. **[IF NO LOCAL MATCH FUNDS ARE REQUIRED DELETE THE PRECEDING TEXT AND REPLACE IT WITH THE FOLLOWING:** “AGENCY local match funding is not required, as shown in Exhibit “A” and as called out in the AGENCY’s Project Nomination Form submitted to WRCOG in response to its Call for Projects.”]

11. Term/Notice of Completion. The term of this Agreement shall be from the date first herein above written until the earlier of the following: (i) the date WRCOG formally accepts the Project as complete, pursuant to Section 6; (ii) termination of this Agreement pursuant to Section 15; or (iii) the AGENCY has fully satisfied its obligations under this Agreement. All applicable indemnification provisions of this Agreement shall remain in effect following the termination of this Agreement.

12. Representatives of the Parties. WRCOG’s Executive Director, or his or her designee, shall serve as WRCOG’s representative and shall have the authority to act on behalf of WRCOG for all purposes under this Agreement. The AGENCY hereby designates [INSERT NAME AND TITLE], or his or her designee, as the AGENCY’s representative to WRCOG. The AGENCY’s representative shall have the authority to act on behalf of the AGENCY for all purposes under this Agreement and shall coordinate all activities of the Project under the AGENCY’s responsibility. The AGENCY shall work closely and cooperate fully with WRCOG’s representative and any other agencies which may have jurisdiction over or an interest in the Project.

13. Expenditure of Funds by AGENCY Prior to Execution of Agreement. Nothing in this Agreement shall be construed to prevent or preclude the AGENCY from expending funds on the Project prior to the execution of the Agreement, or from being reimbursed by WRCOG for such expenditures. However, the AGENCY understands and acknowledges that any expenditure of funds on the Project prior to the execution of the Agreement is made at the AGENCY’s sole risk, and that some expenditures by the AGENCY may not be eligible for reimbursement under this Agreement.

14. Review of Services. The AGENCY shall allow WRCOG’s Representative to inspect or review the progress of the Project at any reasonable time in order to determine whether the terms of this Agreement are being met.

15. Termination.  
(a) Notice. Either WRCOG or AGENCY may, by written notice to the other party, terminate this Agreement, in whole or in part, in response to a material breach hereof by the other Party, by giving written notice to the other party of such termination and specifying the effective date thereof. The written notice shall provide a 30 day period to cure any alleged

Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF)

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breach. During the 30 day cure period, the Parties shall discuss, in good faith, the manner in which the breach can be cured.

(b) Effect of Termination. In the event that the AGENCY terminates this Agreement, the AGENCY shall, within 180 days, repay to WRCOG any unexpended TUMF Program Funds provided to the AGENCY under this Agreement and shall complete any portion or segment of work for the Project for which TUMF Program Funds have been provided. In the event that WRCOG terminates this Agreement, WRCOG shall, within 90 days, distribute to the AGENCY TUMF Program Funds in an amount equal to the aggregate total of all unpaid invoices which have been received from the AGENCY regarding the Project at the time of the notice of termination; provided, however, that WRCOG shall be entitled to exercise its rights under Section 5(b), including but not limited to conducting a review of the invoices and requesting additional information. Upon such termination, the AGENCY shall, within 180 days, complete any portion or segment of work for the Project for which TUMF Program Funds have been provided. This Agreement shall terminate upon receipt by the non-terminating Party of the amounts due to it hereunder and upon completion of the segment or portion of Project work for which TUMF Program Funds have been provided.

(c) Cumulative Remedies. The rights and remedies of the Parties provided in this Section are in addition to any other rights and remedies provided by law or under this Agreement.

16. Prevailing Wages. The AGENCY and any other person or entity hired to perform services on the Project are alerted to the requirements of California Labor Code Sections 1770 et seq., which would require the payment of prevailing wages were the services or any portion thereof determined to be a public work, as defined therein. The AGENCY shall ensure compliance with these prevailing wage requirements by any person or entity hired to perform the Project. The AGENCY shall defend, indemnify, and hold harmless WRCOG, its officers, employees, consultants, and agents from any claim or liability, including without limitation attorneys, fees, arising from its failure or alleged failure to comply with California Labor Code Sections 1770 et seq.

17. Progress Reports. WRCOG may request the AGENCY to provide WRCOG with progress reports concerning the status of the Project.

18. Indemnification.

(a) AGENCY Responsibilities. In addition to the indemnification required under Section 16, the AGENCY agrees to indemnify and hold harmless WRCOG, its officers, agents, consultants, and employees from any and all claims, demands, costs or liability arising from or connected with all activities governed by this Agreement including all design and construction activities, due to negligent acts, errors or omissions or willful misconduct of the AGENCY or its subcontractors. The AGENCY will reimburse WRCOG for any expenditures, including reasonable attorneys' fees, incurred by WRCOG, in defending against claims ultimately determined to be due to negligent acts, errors or omissions or willful misconduct of the AGENCY.

[INSERT PROJECT #]

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(b) WRCOG Responsibilities. WRCOG agrees to indemnify and hold harmless the AGENCY, its officers, agents, consultants, and employees from any and all claims, demands, costs or liability arising from or connected with all activities governed by this Agreement including all design and construction activities, due to negligent acts, errors or omissions or willful misconduct of WRCOG or its sub-consultants. WRCOG will reimburse the AGENCY for any expenditures, including reasonable attorneys' fees, incurred by the AGENCY, in defending against claims ultimately determined to be due to negligent acts, errors or omissions or willful misconduct of WRCOG.

(c) Effect of Acceptance. The AGENCY shall be responsible for the professional quality, technical accuracy and the coordination of any services provided to complete the Project. WRCOG's review, acceptance or funding of any services performed by the AGENCY or any other person or entity under this Agreement shall not be construed to operate as a waiver of any rights WRCOG may hold under this Agreement or of any cause of action arising out of this Agreement. Further, the AGENCY shall be and remain liable to WRCOG, in accordance with applicable law, for all damages to WRCOG caused by the AGENCY's negligent performance of this Agreement or supervision of any services provided to complete the Project.

19. Insurance. The AGENCY shall require, at a minimum, all persons or entities hired to perform the Project to obtain, and require their subcontractors to obtain, insurance of the types and in the amounts described below and satisfactory to the AGENCY and WRCOG. Such insurance shall be maintained throughout the term of this Agreement, or until completion of the Project, whichever occurs last.

(a) Commercial General Liability Insurance. Occurrence version commercial general liability insurance or equivalent form with a combined single limit of not less than \$1,000,000.00 per occurrence. If such insurance contains a general aggregate limit, it shall apply separately to the Project or be no less than two times the occurrence limit. Such insurance shall:

(i) Name WRCOG and AGENCY, and their respective officials, officers, employees, agents, and consultants as insured with respect to performance of the services on the Project and shall contain no special limitations on the scope of coverage or the protection afforded to these insured;

(ii) Be primary with respect to any insurance or self-insurance programs covering WRCOG and AGENCY, and/or their respective officials, officers, employees, agents, and consultants; and

(iii) Contain standard separation of insured provisions.

(b) Business Automobile Liability Insurance. Business automobile liability insurance or equivalent form with a combined single limit of not less than \$1,000,000.00 per occurrence. Such insurance shall include coverage for owned, hired and non-owned automobiles.

[INSERT PROJECT #]

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(c) Professional Liability Insurance. Errors and omissions liability insurance with a limit of not less than \$1,000,000.00 Professional liability insurance shall only be required of design or engineering professionals.

(d) Workers' Compensation Insurance. Workers' compensation insurance with statutory limits and employers' liability insurance with limits of not less than \$1,000,000.00 each accident.

20. Project Amendments. Changes to the characteristics of the Project, including the deadline for Project completion, and any responsibilities of the AGENCY or WRCOG may be requested in writing by the AGENCY and are subject to the approval of WRCOG's Representative, which approval will not be unreasonably withheld, provided that extensions of time for completion of the Project shall be approved in the sole discretion of WRCOG's Representative. Nothing in this Agreement shall be construed to require or allow completion of the Project without full compliance with the California Environmental Quality Act (Public Resources Code Section 21000 *et seq.*; "CEQA") and the National Environmental Policy Act of 1969 (42 USC 4231 *et seq.*), if applicable, but the necessity of compliance with CEQA and/or NEPA shall not justify, excuse, or permit a delay in completion of the Project.

21. Conflict of Interest. For the term of this Agreement, no member, officer or employee of the AGENCY or WRCOG, during the term of his or her service with the AGENCY or WRCOG, as the case may be, shall have any direct interest in this Agreement, or obtain any present or anticipated material benefit arising therefrom.

22. Limited Scope of Duties. WRCOG's and the AGENCY's duties and obligations under this Agreement are limited to those described herein. WRCOG has no obligation with respect to the safety of any Project performed at a job site. In addition, WRCOG shall not be liable for any action of AGENCY or its contractors relating to the condemnation of property undertaken by AGENCY or construction related to the Project.

23. Books and Records. Each party shall maintain complete, accurate, and clearly identifiable records with respect to costs incurred for the Project under this Agreement. They shall make available for examination by the other party, its authorized agents, officers or employees any and all ledgers and books of account, invoices, vouchers, canceled checks, and other records or documents evidencing or related to the expenditures and disbursements charged to the other party pursuant to this Agreement. Further, each party shall furnish to the other party, its agents or employees such other evidence or information as they may require with respect to any such expense or disbursement charged by them. All such information shall be retained by the Parties for at least four (4) years following termination of this Agreement, and they shall have access to such information during the four-year period for the purposes of examination or audit.

24. Equal Opportunity Employment. The Parties represent that they are equal opportunity employers and they shall not discriminate against any employee or applicant of reemployment because of race, religion, color, national origin, ancestry, sex or age. Such non-



[INSERT PROJECT #]

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discrimination shall include, but not be limited to, all activities related to initial employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination.

25. Governing Law. This Agreement shall be governed by and construed with the laws of the State of California.

26. Attorneys' Fees. If either party commences an action against the other party arising out of or in connection with this Agreement, the prevailing party in such litigation shall be entitled to have and recover from the losing party reasonable attorneys' fees and costs of suit.

27. Time of Essence. Time is of the essence for each and every provision of this Agreement.

28. Headings. Article and Section Headings, paragraph captions or marginal headings contained in this Agreement are for convenience only and shall have no effect in the construction or interpretation of any provision herein.

29. Public Acknowledgement. The AGENCY agrees that all public notices, news releases, information signs and other forms of communication shall indicate that the Project is being cooperatively funded by the AGENCY and WRCOG TUMF Program Funds.

30. No Joint Venture. This Agreement is for funding purposes only and nothing herein shall be construed to make WRCOG a party to the construction of the Project or to make it a partner or joint venture with the AGENCY for such purpose.

31. Compliance With the Law. The AGENCY shall comply with all applicable laws, rules and regulations governing the implementation of the Qualifying Project, including, where applicable, the rules and regulations pertaining to the participation of businesses owned or controlled by minorities and women promulgated by the Federal Highway Administration and the Federal Department of Transportation.

32. Notices. All notices hereunder and communications regarding interpretation of the terms of this Agreement or changes thereto shall be provided by the mailing thereof by registered or certified mail, return receipt requested, postage prepaid and addressed as follows:

If to AGENCY:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Telephone: \_\_\_\_\_

Facsimile: \_\_\_\_\_

If to WRCOG:

Western Riverside Council of Governments  
Riverside County Administrative Center  
4080 Lemon Street, Third Floor  
Riverside, California 92501-3609  
Attention: Christopher Gray, Director of Transportation

[INSERT PROJECT #]

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Telephone: (951) 955-8304

Facsimile: (951) 787-7991

Any notice so given shall be considered served on the other party three (3) days after deposit in the U.S. mail, first class postage prepaid, return receipt requested, and addressed to the party at its applicable address. Actual notice shall be deemed adequate notice on the date actual notice occurred regardless of the method of service.

33. Integration; Amendment. This Agreement contains the entire agreement between the PARTIES. Any agreement or representation respecting matters addressed herein that are not expressly set forth in this Agreement is null and void. This Agreement may be amended only by mutual written agreement of the PARTIES.

34. Severability. If any term, provision, condition or covenant of this Agreement is held invalid or unenforceable, the remainder of this Agreement shall not be affected thereby.

35. Conflicting Provisions. In the event that provisions of any attached appendices or exhibits conflict in any way with the provisions set forth in this Agreement, the language, terms and conditions contained in this Agreement shall control the actions and obligations of the Parties and the interpretation of the Parties' understanding concerning the Agreement.

36. Independent Contractors. Any person or entities retained by the AGENCY or any contractor shall be retained on an independent contractor basis and shall not be employees of WRCOG. Any personnel performing services on the Project shall at all times be under the exclusive direction and control of the AGENCY or contractor, whichever is applicable. The AGENCY or contractor shall pay all wages, salaries and other amounts due such personnel in connection with their performance of services on the Project and as required by law. The AGENCY or consultant shall be responsible for all reports and obligations respecting such personnel, including, but not limited to: social security taxes, income tax withholding, unemployment insurance and workers' compensation insurance.

37. Effective Date. This Agreement shall not be effective until executed by both Parties. The failure of one party to execute this Agreement within forty-five (45) days of the other party executing this Agreement shall render any execution of this Agreement ineffective.

38. No Third Party Beneficiaries. There are no intended third party beneficiaries of any right or obligation assumed by the Parties.

[SIGNATURES ON FOLLOWING PAGE]

[INSERT PROJECT #]

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IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their duly authorized representatives to be effective on the day and year first above-written.

WESTERN RIVERSIDE COUNCIL  
OF GOVERNMENTS

[INSERT AGENCY NAME]

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Rick Bishop  
Executive Director

By: \_\_\_\_\_ Date: \_\_\_\_\_

Approved to Form:

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Steven C. DeBaun  
General Counsel

Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF)

[INSERT PROJECT #]

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**EXHIBIT "A"**

**SCOPE OF WORK**

**SCOPE OF WORK:** [DELETE THIS PARAGRAPH AND INSERT DETAIL THE PHASE(S) OF WORK TO BE PERFORMED UNDER THIS AGREEMENT. (Note: Detail the full Project description on Exhibit B.) Provide specific information regarding the Work to be performed, identify the reaches of the work and include a general location map and site map, if applicable.]

[INSERT PROJECT #]

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**EXHIBIT "A-1"**

**ESTIMATE OF COST**

<b>Phase</b>	<b>TUMF</b>	<b>LOCAL</b>	<b>TOTAL</b>
<b>PA&amp;ED</b>			
<b>PS&amp;E</b>			
<b>RIGHT OF WAY</b>			
<b>CONSTRUCTION</b>			
<b>TOTAL</b>			

Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF)

[INSERT PROJECT #]

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**EXHIBIT "A-2"****PROJECT SCHEDULE****TIMETABLE:**

**[DELETE THIS PARAGRAPH AND PROVIDE, AT A MINIMUM, THE BEGINNING AND ENDING DATES FOR EACH PHASE OF WORK INCLUDING MAJOR MILESTONES WITHIN A PHASE.]**

<b>Phase</b>	<b>Estimated Completion Date</b>	<b>Estimated Cost</b>	<b>Comments</b>
<b>PA&amp;ED</b>			
<b>PS&amp;E</b>			
<b>RIGHT OF WAY</b>			
<b>CONSTRUCTION</b>			
<b>TOTAL</b>			

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**Elements of Compensation**

**EXHIBIT “B”**

PROCEDURES FOR SUBMITTAL, CONSIDERATION AND PAYMENT OF INVOICES

1. For professional services, WRCOG recommends that the AGENCY incorporate this Exhibit “B-1” into its contracts with any subcontractors to establish a standard method for preparation of invoices by contractors to the AGENCY and ultimately to WRCOG for reimbursement of AGENCY contractor costs.
2. Each month the AGENCY shall submit an invoice for eligible Project costs incurred during the preceding month. The original invoice shall be submitted to WRCOG’s Executive Director with a copy to WRCOG’s Project Coordinator. Each invoice shall be accompanied by a cover letter in a format substantially similar to that of Exhibit “B-2”.
3. For jurisdictions with large construction projects (with the total construction cost exceeding \$10 million) under construction at the same time, may with the approval of WRCOG submit invoices to WRCOG for payment at the same time they are received by the jurisdiction. WRCOG must receive the invoice by the 5<sup>th</sup> day of the month in order to process the invoice within 30 days. WRCOG will retain 10% of the invoice until all costs have been verified as eligible and will release the balance at regular intervals not more than quarterly and not less than semi-annually. If there is a discrepancy or ineligible costs that exceed 10% of the previous invoice WRCOG will deduct that amount from the next payment.
4. Each invoice shall include documentation from each contractor used by the AGENCY for the Project, listing labor costs, subcontractor costs, and other expenses. Each invoice shall also include a monthly progress report and spreadsheets showing the hours or amounts expended by each contractor or subcontractor for the month and for the entire Project to date. Samples of acceptable task level documentation and progress reports are attached as Exhibits “B-4” and “B-5”. All documentation from the Agency’s contractors should be accompanied by a cover letter in a format substantially similar to that of Exhibit “B-3”.
5. If the AGENCY is seeking reimbursement for direct expenses incurred by AGENCY staff for eligible Project costs, the AGENCY shall provide the same level of information for its labor and any expenses as required of its contractors pursuant to Exhibit “B” and its attachments.
6. Charges for each task and milestone listed in Exhibit “A” shall be listed separately in the invoice.
7. Each invoice shall include a certification signed by the AGENCY Representative or his or her designee which reads as follows:

[INSERT PROJECT #]

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“I hereby certify that the hours and salary rates submitted for reimbursement in this invoice are the actual hours and rates worked and paid to the contractors or subcontractors listed.

Signed \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

Invoice No. \_\_\_\_\_

- 8. WRCOG will pay the AGENCY within 30 days after receipt by WRCOG of an invoice. If WRCOG disputes any portion of an invoice, payment for that portion will be withheld, without interest, pending resolution of the dispute, but the uncontested balance will be paid.
- 9. The final payment under this Agreement will be made only after: (I) the AGENCY has obtained a Release and Certificate of Final Payment from each contractor or subcontractor used on the Project; (ii) the AGENCY has executed a Release and Certificate of Final Payment; and (iii) the AGENCY has provided copies of each such Release to WRCOG.

Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF)



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**EXHIBIT "B-1"**  
**[Sample for Professional Services]**

For the satisfactory performance and completion of the Services under this Agreement, Agency will pay the Contractor compensation as set forth herein. The total compensation for this service shall not exceed (\_\_\_\_INSERT WRITTEN DOLLAR AMOUNT\_\_\_\_) (\$\_\_INSERT NUMERICAL DOLLAR AMOUNT\_\_) without written approval of Agency's City Manager [or applicable position] ("Total Compensation").

**1. ELEMENTS OF COMPENSATION.**

Compensation for the Services will be comprised of the following elements: 1.1 Direct Labor Costs; 1.2 Fixed Fee; and 1.3 Additional Direct Costs.

**1.1 DIRECT LABOR COSTS.**

Direct Labor costs shall be paid in an amount equal to the product of the Direct Salary Costs and the Multiplier which are defined as follows:

1.1.1 DIRECT SALARY COSTS

Direct Salary Costs are the base salaries and wages actually paid to the Contractor's personnel directly engaged in performance of the Services under the Agreement. (The range of hourly rates paid to the Contractor's personnel appears in Section 2 below.)

1.1.2 MULTIPLIER

The Multiplier to be applied to the Direct Salary Costs to determine the Direct Labor Costs is \_\_\_\_\_, and is the sum of the following components:

1.1.2.1 Direct Salary Costs \_\_\_\_\_

1.1.2.2 Payroll Additives \_\_\_\_\_

*The Decimal Ratio of Payroll Additives to Direct Salary Costs.* Payroll Additives include all employee benefits, allowances for vacation, sick leave, and holidays, and company portion of employee insurance and social and retirement benefits, all federal and state payroll taxes, premiums for insurance which are measured by payroll costs, and other contributions and benefits imposed by applicable laws and regulations.

1.1.2.3 Overhead Costs \_\_\_\_\_

[INSERT PROJECT #]

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The Decimal Ratio of Allowable Overhead Costs to the Contractor Firm's Total Direct Salary Costs. Allowable Overhead Costs include general, administrative and overhead costs of maintaining and operating established offices, and consistent with established firm policies, and as defined in the Federal Acquisitions Regulations, Part 31.2.

Total Multiplier \_\_\_\_\_  
(sum of 1.1.2.1, 1.1.2.2, and 1.1.2.3)

1.2 FIXED FEE.

1.2.1 The fixed fee is \$ \_\_\_\_\_.

1.2.2 A pro-rata share of the Fixed Fee shall be applied to the total Direct Labor Costs expended for services each month, and shall be included on each monthly invoice.

1.3 ADDITIONAL DIRECT COSTS.

Additional Direct Costs directly identifiable to the performance of the services of this Agreement shall be reimbursed at the rates below, or at actual invoiced cost.

Rates for identified Additional Direct Costs are as follows:

<u>ITEM</u>	<u>REIMBURSEMENT RATE</u>
	<u>[ __ insert charges __ ]</u>
Per Diem	\$ /day
Car mileage	\$ /mile
Travel	\$ /trip
Computer Charges	\$ /hour
Photocopies	\$ /copy
Blueline	\$ /sheet
LD Telephone	\$ /call
Fax	\$ /sheet
Photographs	\$ /sheet

Travel by air and travel in excess of 100 miles from the Contractor's office nearest to Agency's office must have Agency's prior written approval to be reimbursed under this Agreement.

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2. DIRECT SALARY RATES

Direct Salary Rates, which are the range of hourly rates to be used in determining Direct Salary Costs in Section 1.1.1 above, are given below and are subject to the following:

- 2.1 Direct Salary Rates shall be applicable to both straight time and overtime work, unless payment of a premium for overtime work is required by law, regulation or craft agreement, or is otherwise specified in this Agreement. In such event, the premium portion of Direct Salary Costs will not be subject to the Multiplier defined in Paragraph 1.1.2 above.
- 2.2 Direct Salary Rates shown herein are in effect for one year following the effective date of the Agreement. Thereafter, they may be adjusted annually to reflect the Contractor's adjustments to individual compensation. The Contractor shall notify Agency in writing prior to a change in the range of rates included herein, and prior to each subsequent change.

<u>POSITION OR CLASSIFICATION</u>	<u>RANGE OF HOURLY RATES</u>
-----------------------------------	------------------------------

[\_\_sample\_\_]

Principal	\$ .00 - \$ .00/hour
Project Manager	\$ .00 - \$ .00/hour
Sr. Engineer/Planner	\$ .00 - \$ .00/hour
Project Engineer/Planner	\$ .00 - \$ .00/hour
Assoc. Engineer/Planner	\$ .00 - \$ .00/hour
Technician	\$ .00 - \$ .00/hour
Drafter/CADD Operator	\$ .00 - \$ .00/hour
Word Processor	\$ .00 - \$ .00/hour

- 2.3 The above rates are for the Contractor only. All rates for subcontractors to the Contractor will be in accordance with the Contractor's cost proposal.

3. INVOICING.

- 3.1 Each month the Contractor shall submit an invoice for Services performed during the preceding month. The original invoice shall be submitted to Agency's Executive Director with two (2) copies to Agency's Project Coordinator.
- 3.2 Charges shall be billed in accordance with the terms and rates included herein, unless otherwise agreed in writing by Agency's Representative.
- 3.3 Base Work and Extra Work shall be charged separately, and the charges for each task and Milestone listed in the Scope of Services, shall be listed separately. The charges for each individual assigned by the Contractor under this Agreement shall be listed separately on an attachment to the invoice.

[INSERT PROJECT #]

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- 3.4 A charge of \$500 or more for any one item of Additional Direct Costs shall be accompanied by substantiating documentation satisfactory to Agency such as invoices, telephone logs, etc.
- 3.5 Each copy of each invoice shall be accompanied by a Monthly Progress Report and spreadsheets showing hours expended by task for each month and total project to date.
- 3.6 If applicable, each invoice shall indicate payments to DBE subcontractors or supplies by dollar amount and as a percentage of the total invoice.
- 3.7 Each invoice shall include a certification signed by the Contractor's Representative or an officer of the firm which reads as follows:

I hereby certify that the hours and salary rates charged in this invoice are the actual hours and rates worked and paid to the employees listed.

Signed \_\_\_\_\_  
 Title \_\_\_\_\_  
 Date \_\_\_\_\_  
 Invoice No. \_\_\_\_\_

4. PAYMENT

- 4.1 Agency shall pay the Contractor within four to six weeks after receipt by Agency of an original invoice. Should Agency contest any portion of an invoice, that portion shall be held for resolution, without interest, but the uncontested balance shall be paid.
- 4.2 The final payment for Services under this Agreement will be made only after the Contractor has executed a Release and Certificate of Final Payment.

[INSERT PROJECT #]

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**EXHIBIT B-2**  
**Sample Cover Letter to WRCOG**

Date  
Western Riverside Council of Governments  
Riverside County Administrative Center  
4080 Lemon Street, Third Floor  
Riverside, California 92501-3679  
Attention: Deputy Executive Director  
ATTN: Accounts Payable

Re: Project Title - Invoice #\_\_

Enclosed for your review and payment approval is the AGENCY’s invoice for professional and technical services that was rendered by our contractors in connection with the 2002 Measure “A” Local Streets and Roads Funding per Agreement No. \_\_\_\_\_ effective (Month/Day/Year). The required support documentation received from each contractor is included as backup to the invoice.

Invoice period covered is from Month/Date/Year to Month/Date/Year.

Total Authorized Agreement Amount:	\$0,000,000.00
Total Invoiced to Date:	\$0,000,000.00
Total Previously Invoiced:	\$0,000,000.00
Balance Remaining:	\$0,000,000.00

**Amount due this Invoice:** **\$0,000,000.00**  
=====

I certify that the hours and salary rates charged in this invoice are the actual hours and rates worked and paid to the contractors listed.

By: \_\_\_\_\_  
Name  
Title

cc:

Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF)

[INSERT PROJECT #]

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**EXHIBIT B-3**  
**Sample Letter from Contractor to AGENCY**

Month/Date/Year

Western Riverside Council of Governments  
Riverside County Administrative Center  
4080 Lemon Street, Third Floor  
Riverside, California 92501-3679  
Attention: Deputy Executive Director  
Attn: Accounts Payable

Invoice # \_\_\_\_\_

For **[type of services]** rendered by **[contractor name]** in connection with **[name of project]**  
This is per agreement No. XX-XX-XXX effective Month/Date/Year.

Invoice period covered is from Month/Date/Year to Month/Date/Year.

Total Base Contract Amount:	\$000,000.00
Authorized Extra Work (if Applicable)	\$000,000.00
	-----
<b>TOTAL AUTHORIZED CONTRACT AMOUNT:</b>	<b>\$000,000.00</b>
Total Invoice to Date:	\$000,000.00
Total Previously Billed:	\$000,000.00
Balance Remaining:	\$000,000.00
Amount Due this Invoice:	\$000,000.00
	=====

I certify that the hours and salary rates charged in this invoice are the actual hours and rates worked and paid to the employees listed,

By: \_\_\_\_\_  
Name  
Title

[INSERT PROJECT #]

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**EXHIBIT B-4  
SAMPLE TASK SUMMARY SCHEDULE  
(OPTIONAL)**

Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF)

[INSERT PROJECT #]

For Public Agency Use Only

**EXHIBIT B-5  
Sample Progress Report**

REPORTING PERIOD: Month/Date/Year to Month/Date/Year  
PROGRESS REPORT: #1

A. Activities and Work Completed during Current Work Periods

TASK 01 – 100% PS&E SUBMITTAL

- 1. Responded to Segment 1 comments from Department of Transportation
- 2. Completed and submitted Segment 1 final PS&E

B. Current/Potential Problems Encountered & Corrective Action

Problems	Corrective Action
None	None

C. Work Planned Next Period

TASK 01 – 100% PS&E SUBMITTAL

- 1. Completing and to submit Traffic Signal and Electrical Design plans
- 2. Responding to review comments



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# WRCOG TUMF Credit/Reimbursement Manual

## ATTACHMENT C

Checklist 1: Developer Credit Agreement to Construct TUMF Improvements  
List of Documents and Requirements Prior to Construction of TUMF Improvements



# WRCOG TUMF Credit/Reimbursement Manual

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# WRCOG TUMF Credit/Reimbursement Manual

## CHECKLIST 1

Developer Credit Agreement to Construct TUMF Improvements  
List of Documents and Requirements Prior to Construction of TUMF Improvements

### **DEVELOPER must provide the following:**

- € Bid package prepared per bidding processes and requirements of Public Agency public works department
- € Copies of plans, cost estimate, specifications, and contract documents showing that contractor will pay prevailing wages and comply with applicable provisions of the Labor Code, Governments Code, and Public Contract Code relating to Public Works Projects
- € Copies of the contract(s) for the construction of TUMF improvements awarded to the lower responsible bidder(s) for the construction of such facilities in accordance with the public agency's requirements and guidelines
- € Copies of contractor(s) proof of insurance coverage throughout the duration of construction
- € Copy of Surety Bond, Letter of Credit, or other form of security permitted under the Credit Agreement and acceptable to the Public Agency and WRCOG

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# WRCOG TUMF Credit/Reimbursement Manual

## ATTACHMENT D

### Checklist 2: Developer Credit Agreement to Construct TUMF Improvements List of Documents and Requirements to Initiate Construction Cost Verification Process



# WRCOG TUMF Credit/Reimbursement Manual

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# WRCOG TUMF Credit/Reimbursement Manual

## CHECKLIST 2

### Developer Credit Agreement to Construct TUMF Improvements List of Documents and Requirements to Initiate Construction Cost Verification Process

- € Complete construction by DEVELOPER of all TUMF Improvements in accordance with the approved Plans and Specifications
- € Satisfaction by DEVELOPER of the PUBLIC AGENCY's inspection punch list for constructed TUMF improvements
- € Final inspection release letter from PUBLIC AGENCY to DEVELOPER after final inspection and approval of completed TUMF improvements
- € Notice of Completion with respect to the TUMF Improvements pursuant to Section 3093 of the Civil Code filed by PUBLIC AGENCY at the County Recorder's Office; PUBLIC AGENCY should submit a copy of the Notice of Completion to WRCOG
- € DEVELOPER should submit copies of the As-Built plans for the TUMF improvements to the PUBLIC AGENCY
- € DEVELOPER should submit copies of all permits or agreements that may have been required by various resource/regulatory agencies for construction, operation, and maintenance of any TUMF Improvements to the PUBLIC AGENCY
- € DEVELOPER should submit a documentation package to the PUBLIC AGENCY to determine the final cost of the TUMF Improvements, which shall include, at a minimum, the following documents related to the TUMF Improvements:
  - Plans, specifications, and DEVELOPER's Civil Engineer's cost estimates; or Engineer's Report showing the cost estimates
  - Contracts/agreements, insurance certificates and change orders with each vendor or contractor
  - Invoices from all vendors and service providers
  - Copies of cancelled checks, front and back, for payments made to contractors, vendors, and service providers
  - Final lien releases from each contractor and vendor (unconditional waiver and release)
  - Certified contract workers' payroll for PUBLIC AGENCY verification of compliance with prevailing wages
  - A total cost summary, in spreadsheet (MS Excel), showing a breakdown of the total costs incurred; the summary should include for each item claimed, the check number, cost, invoice numbers, and name of payee



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# WRCOG TUMF Credit/Reimbursement Manual

Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF))

## ATTACHMENT E

### Checklist 3: Public Agency Reimbursement Invoice Packet Forms List



# WRCOG TUMF Credit/Reimbursement Manual

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# WRCOG TUMF Credit/Reimbursement Manual

## CHECKLIST 3

### Public Agency Reimbursement Invoice Packet Forms List

- € Invoice Cover Letter (FORM TEMPLATE 1)
- € Progress Report (FORM TEMPLATE 2)
- € Summary Invoice (FORM TEMPLATE 3)
- € Detailed Consultant/Contractor Invoices
- € Documents Showing Payment of Consultant/Contractor Invoices by Public Agency

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# WRCOG TUMF Credit/Reimbursement Manual

Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF))

## ATTACHMENT F Form Template 1: Invoice Cover Letter



# WRCOG TUMF Credit/Reimbursement Manual

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FORM TEMPLATE 1  
INVOICE COVER LETTER

Date  
Attention: Director of Transportation  
Western Riverside Council of Governments  
Riverside County Administrative Center  
4080 Lemon Street, Third Floor  
Riverside, California 92501-3679  
ATTN: Accounts Payable

Re: Project Title - Invoice #\_\_

Enclosed for your review and payment approval is the AGENCY's invoice for professional and technical services that was rendered by our contractors in connection with TUMF Agreement No. \_\_\_\_\_ effective (Month/Day/Year).

The required support documentation received from each contractor is included as backup to the invoice.

Invoice period covered is from Month/Date/Year to Month/Date/Year.

	TUMF Phase (PA&ED, PS&E, etc.)	TUMF TOTAL
Total Authorized Agreement Amount		
Total Invoiced to Date		
Total Previously Invoiced		
Balance Remaining		

**Amount due this Invoice:**

**\$0,000,000.00**  
=====

I certify that the hours and salary rates charged in this invoice are the actual hours and rates worked and paid to the contractors listed.

By: \_\_\_\_\_  
Name  
Title

cc:

Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF)



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# WRCOG TUMF Credit/Reimbursement Manual

Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF))

## ATTACHMENT G Form Template 2: Progress Report



# WRCOG TUMF Credit/Reimbursement Manual

Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF)

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**FORM TEMPLATE 2  
PROGRESS REPORT**

PROJECT TITLE: \_\_\_\_\_

TUMF AGREEMENT # \_\_\_\_\_

QUARTERLY PROGRESS REPORT # \_\_\_\_\_

DATE: \_\_\_\_\_ REPORTING PERIOD: From: \_\_\_\_\_ To: \_\_\_\_\_

PUBLIC AGENCY: \_\_\_\_\_

Quarterly Progress Report

A. Activities and Work Complete During Current Work Periods

- A.1
- A.2
- A.3
- Etc.

B. Current/Potential Problems Encountered and Corrective Action

- B.1
- B.2
- B.3
- Etc.

C. Work Planned Next Period

- C.1
- C.2
- C.3
- Etc.

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# WRCOG TUMF Credit/Reimbursement Manual

Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF)

## ATTACHMENT H Form Template 3: Reimbursement Invoice



# WRCOG TUMF Credit/Reimbursement Manual

Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF)

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**FORM TEMPLATE 3  
Reimbursement Invoice**

Project Title: \_\_\_\_\_

Agency: \_\_\_\_\_ Invoice Date: \_\_\_\_\_

To: Western Riverside Council of Governments  
4080 Lemon Street, 3rd Floor  
MS 1032  
Riverside, CA 92501-3609  
Attn: Accounts Payable

Invoice Number \_\_\_\_\_  
TUMF Agreement Number \_\_\_\_\_  
Total Reimbursement Requested \$ -

FOR PUBLIC AGENCY USE	
<i>Invoice Description</i>	<i>Summary Description of Invoice Project Tasks</i>
<i>Consultant/Contractor</i>	<i>Name of Consultant/Contractor Completing Project Tasks on Invoice</i>
<i>TUMF Phase</i>	<i>PA&amp;ED (Project Approvals &amp; Environmental Documentation); PS&amp;E (Plans, Specifications, and Estimates); R/W (Right-of-Way Acquisition); CON (Construction)</i>
<i>Total Invoice Amount</i>	<i>Total Amount Indicated on Invoice</i>
<i>Local Share Amount</i>	<i>Portion of Total Amount on Invoice Reimbursed through Local Share (if applicable)</i>
<i>Total Reimbursement Requested</i>	<i>Total Reimbursement Amount Requested minus Local Share</i>
FOR WRCOG USE	
<i>Invoice Approved</i>	<i>YES= Approved; NO= Denied; PARTIAL= Portion of invoice amount approved</i>
<i>Amount Approved</i>	<i>Amount of Submitted Invoice Approved by WRCOG</i>
<i>Reason for Denial of Invoice Amount</i>	<i>Reason(s) for Denial of Submitted Invoice Amounts</i>

FOR PUBLIC AGENCY USE					
Invoice Description	Consultant/Contractor	TUMF Phase	Total Invoice Amount	Local Share Amount	Total Reimbursement Requested
			\$ -	\$ -	\$ -
			\$ -	\$ -	\$ -
			\$ -	\$ -	\$ -
			\$ -	\$ -	\$ -
<b>Total Reimbursement Requested</b>			<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>

FOR WRCOG USE		
Invoice Approved? (YES, NO, PARTIAL)	Amount Approved	Reason(s) for Denial of Invoice Amounts
	\$ -	
	\$ -	
	\$ -	
	\$ -	
<b>Total Reimbursement Approved</b>	<b>\$ -</b>	

The invoice is a true, complete and correct statement of work performed, reimbursable costs and progress. The backup information included with the invoice is true, complete and correct in all material respects.

\_\_\_\_\_  
Signed

\_\_\_\_\_  
Date



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# WRCOG TUMF

## 7. Frequently Asked Questions (FAQ)

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## 7. Frequently Asked Questions (FAQ)

### 1. What is WRCOG's TUMF Program?

WRCOG's Transportation Uniform Mitigation Fee (TUMF) Program is a regional fee program designed to provide transportation and transit infrastructure that mitigates the impact of new growth in Western Riverside County. Each of WRCOG's member jurisdictions and the March JPA participates in the TUMF Program through an adopted ordinance, collects fees from new development, and remits the fees to WRCOG. As administrator of the TUMF Program, WRCOG allocates TUMF funds to the Riverside County Transportation Commission, the Riverside Transit Agency (RTA), the Western Riverside Regional Conservation Authority (RCA), and groupings of jurisdictions—referred to as TUMF zones. Collected fees are used for planning, engineering, right-of-way acquisition, and construction of eligible TUMF facilities and acquisition of open space.

### 2. How are TUMF fees determined?

For a fee program to be established, State law (Mitigation Fee Act) requires that a "Nexus Study" be prepared to establish the relationship between new growth in the region and the need for transportation improvements to mitigate the traffic impacts from new development. WRCOG prepares the Nexus Study that involves a multi-step process that examines, among other variables, future growth in the region, the road network needed to serve new development, and the estimated cost of needed improvements.

### 3. Are there exemptions to the TUMF fees?

Several development types are exempt from TUMF fees, as described in the TUMF Ordinance and Administrative Plan. Low-income residential housing, government and public buildings, public and private schools (K-12, non-profit), rehabilitation or reuse of an existing building, development agreements prior to July 2003, and the sanctuary building of a church or a house of worship are exempt from paying TUMF fees.

### 4. Where can I find the current TUMF fees?

The current TUMF fee schedule can be found on WRCOG's website (<http://www.wrcog.cog.ca.us/199/Administration-Fees>), and in the TUMF Nexus Study.

### 5. What is the TUMF Network?

The TUMF Network is the system of roadways that serve inter-community trips within Western Riverside County. The TUMF Network (also known as the Western Riverside County Regional System of Highways and Arterials) represents the extents of the network of highways and roadways that are eligible for TUMF funded improvements.

### 6. What is the Maximum TUMF Share?

The Maximum TUMF Share is the maximum amount of a project's total cost that is eligible for funding through the TUMF Program. The TUMF Nexus Study provides cost calculations for each segment on the TUMF Network along with the maximum TUMF share.



# WRCOG TUMF Credit/Reimbursement Manual

**7. Are all project costs eligible for TUMF reimbursement?**

The TUMF Administrative Plan provides a list of specific project costs eligible for TUMF reimbursement. These costs are also summarized in Section 2 of this TUMF Credit/Reimbursement Manual.

**8. Are Developers eligible for a TUMF reimbursement?**

Developers are eligible for TUMF reimbursement for the construction of TUMF facilities in certain instances. If a developer constructs TUMF improvements that cost more than the TUMF obligation, the developer may be reimbursed for eligible expenses based on actual project costs.

**9. When should a Public Agency submit invoices for TUMF reimbursement?**

Public agencies should submit reimbursement invoices to WRCOG quarterly beginning in September of each fiscal year.

# Item 6.A

## Proposed New TUMF Calculation Policy

# Attachment 7

## Draft TUMF Model Improvement and Credit Agreement

For Use Between Public Agency and Developer  
"Master Agreement"

**IMPROVEMENT AND CREDIT / REIMBURSEMENT AGREEMENT  
TRANSPORTATION UNIFORM MITIGATION FEE PROGRAM**

This **IMPROVEMENT AND CREDIT AGREEMENT** ("Agreement") is entered into this \_\_\_ day of \_\_\_\_\_, 20\_\_\_, (the "Effective Date") by and between the [\*\*INSERT "City" OR "County" of \_\_\_\_\_, [\*\*a California municipal corporation or a subdivision of the State of California \*\*] ("AGENCY"), and \_\_\_\_\_, a California [\*\*INSERT TYPE OF ENTITY - corporation, partnership, sole proprietorship or other legal entity\*\*], with its principal place of business at [\*\*ENTER ADDRESS\*\*] ("Developer"). AGENCY and Developer are sometimes hereinafter referred to individually as "Party" and collectively as "Parties".

**RECITALS**

**WHEREAS**, Developer owns \_\_\_ acres of real property located within the AGENCY of \_\_\_\_\_, California, which is more specifically described in the legal description set forth in Exhibit "A", attached hereto and incorporated herein by this reference ("Property");

**WHEREAS**, Developer has requested from AGENCY-certain entitlements and/or permits for the construction of improvements on the Property, which are more particularly described as \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ ("Project");

**WHEREAS**, the AGENCY is a member agency of the Western Riverside Council of Governments ("WRCOG"), a joint powers agency comprised of the County of Riverside and 18 cities located in Western Riverside County. WRCOG is the administrator for the Transportation Uniform Mitigation Fee ("TUMF") Program;

**WHEREAS**, as part of the TUMF Program, the AGENCY has adopted "Transportation Uniform Mitigation Fee Nexus Study: 2016 Update" ("2016 Nexus Study")

**WHEREAS**, as a condition to AGENCY's approval of the Project, AGENCY has required Developer to construct certain street and transportation system improvement(s) of regional importance ("TUMF Improvements");

**WHEREAS**, pursuant to the TUMF Program, the AGENCY requires Developer to pay the TUMF which covers the Developer's fair share of the costs to deliver those TUMF Improvements that help mitigate the Project's traffic impacts and burdens on the Regional System of Highways and Arterials (also known as the "TUMF Network"), generated by the Project and that are necessary to protect the safety, health and welfare of persons that travel to and from the Project using the TUMF Network;

**WHEREAS**, the TUMF Improvements have been designated as having Regional or Zonal Significance as further described in the 2016 Nexus Study and the 5 year Transportation Improvement Program as may be amended;

**WHEREAS**, AGENCY and Developer now desire to enter into this Agreement for the following purposes: (1) to provide for the timely delivery of the TUMF Improvements, (2) to ensure that delivery of the TUMF Improvements is undertaken as if the TUMF Improvements were constructed under the direction and authority of the AGENCY, (3) to provide a means by which the Developer’s costs for project delivery of the TUMF Improvements and related right-of-ways is offset against Developer’s obligation to pay the applicable TUMF for the Project in accordance with the TUMF Administrative Plan adopted by WRCOG, and (4) to provide a means, subject to the separate approval of WRCOG, for Developer to be reimbursed to the extent the actual and authorized costs for the delivery of the TUMF Improvements exceeds Developer’s TUMF obligation.

**NOW, THEREFORE, for the purposes set forth herein, and for good and valuable consideration, the adequacy of which is hereby acknowledged, Developer and AGENCY hereby agree as follows:**

**TERMS**

1.0 Incorporation of Recitals. The Parties hereby affirm the facts set forth in the Recitals above and agree to the incorporation of the Recitals as though fully set forth herein.

2.0 Construction of TUMF Improvements. Developer shall construct or have constructed at its own cost, expense, and liability certain street and transportation system improvements generally described as **INSERT TUMF IMPROVEMENTS**\_\_\_\_\_

\_\_\_\_\_, and as shown more specifically on the plans, profiles, and specifications which have been or will be prepared by or on behalf of Developer and approved by AGENCY, and which are incorporated herein by this reference (“TUMF Improvements”). Construction of the TUMF Improvements shall include any transitions and/or other incidental work deemed necessary for drainage or public safety. Developer shall be responsible for the replacement, relocation, or removal of any component of any existing public or private improvement in conflict with the construction or installation of the TUMF Improvements. Such replacement, relocation, or removal shall be performed to the complete satisfaction of AGENCY and the owner of such improvement. Developer further promises and agrees to provide all equipment, tools, materials, labor, tests, design work, and engineering services necessary to fully and adequately complete the TUMF Improvements.

2.1 Pre-approval of Plans and Specifications. Developer is prohibited from commencing work on any portion of the TUMF Improvements until all plans and specifications for the TUMF Improvements have been submitted to and approved by AGENCY. Approval by AGENCY shall not relieve Developer from ensuring that all TUMF Improvements conform with all other requirements and standards set forth in this Agreement.

2.2 Permits and Notices. Prior to commencing any work, Developer shall, at its sole cost, expense, and liability, obtain all necessary permits and licenses and give all necessary and



incidental notices required for the lawful construction of the TUMF Improvements and performance of Developer's obligations under this Agreement. Developer shall conduct the work in full compliance with the regulations, rules, and other requirements contained in any permit or license issued to Developer.

2.3 Public Works Requirements. In order to insure that the TUMF Improvements will be constructed as if they had been constructed under the direction and supervision, or under the authority of, AGENCY, Developer shall comply with all of the following requirements with respect to the construction of the TUMF Improvements:

(a) Developer shall obtain bids for the construction of the TUMF Improvements, in conformance with the standard procedures and requirements of AGENCY with respect to its public works projects, or in a manner which is approved by the Public Works Department.

(b) The contract or contracts for the construction of the TUMF Improvements shall be awarded to the responsible bidder(s) submitting the lowest responsive bid(s) for the construction of the TUMF Improvements.

(c) Developer shall require, and the specifications and bid and contract documents shall require, all such contractors to pay prevailing wages (in accordance with Articles 1 and 2 of Chapter 1, Part 7, Division 2 of the Labor Code) and to otherwise comply with applicable provisions of the Labor Code, the Government Code and the Public Contract Code relating to public works projects of cities/counties and as required by the procedures and standards of AGENCY with respect to the construction of its public works projects or as otherwise directed by the Public Works Department.

(d) All such contractors shall be required to provide proof of insurance coverage throughout the term of the construction of the TUMF Improvements which they will construct in conformance with AGENCY's standard procedures and requirements.

(e) Developer and all such contractors shall comply with such other requirements relating to the construction of the TUMF Improvements which AGENCY may impose by written notification delivered to Developer and each such contractor at any time, either prior to the receipt of bids by Developer for the construction of the TUMF Improvements, or, to the extent required as a result of changes in applicable laws, during the progress of construction thereof.

Developer shall provide proof to AGENCY, at such intervals and in such form as AGENCY may require that the foregoing requirements have been satisfied as to the TUMF Improvements.

2.4 Quality of Work; Compliance With Laws and Codes. The construction plans and specifications for the TUMF Improvements shall be prepared in accordance with all applicable federal, state and local laws, ordinances, regulations, codes, standards, and other requirements. The TUMF Improvements shall be completed in accordance with all approved maps, plans,

specifications, standard drawings, and special amendments thereto on file with AGENCY, as well as all applicable federal, state, and local laws, ordinances, regulations, codes, standards, and other requirements applicable at the time work is actually commenced.

2.5 Standard of Performance. Developer and its contractors, if any, shall perform all work required, constructing the TUMF Improvements in a skillful and workmanlike manner, and consistent with the standards generally recognized as being employed by professionals in the same discipline in the State of California. Developer represents and maintains that it or its contractors shall be skilled in the professional calling necessary to perform the work. Developer warrants that all of its employees and contractors shall have sufficient skill and experience to perform the work assigned to them, and that they shall have all licenses, permits, qualifications and approvals of whatever nature that are legally required to perform the work, and that such licenses, permits, qualifications and approvals shall be maintained throughout the term of this Agreement.

2.6 Alterations to TUMF Improvements. All work shall be done and the TUMF Improvements completed as shown on approved plans and specifications, and any subsequent alterations thereto. If during the course of construction and installation it is determined that the public interest requires alterations in the TUMF Improvements, Developer shall undertake such design and construction changes as may be reasonably required by AGENCY. Any and all alterations in the plans and specifications and the TUMF Improvements to be completed may be accomplished without first giving prior notice thereof to Developer's surety for this Agreement.

3.0 Maintenance of TUMF Improvements. AGENCY shall not be responsible or liable for the maintenance or care of the TUMF Improvements until AGENCY approves and accepts them. AGENCY shall exercise no control over the TUMF Improvements until accepted. Any use by any person of the TUMF Improvements, or any portion thereof, shall be at the sole and exclusive risk of Developer at all times prior to AGENCY's acceptance of the TUMF Improvements. Developer shall maintain all of the TUMF Improvements in a state of good repair until they are completed by Developer and approved and accepted by AGENCY, and until the security for the performance of this Agreement is released. It shall be Developer's responsibility to initiate all maintenance work, but if it shall fail to do so, it shall promptly perform such maintenance work when notified to do so by AGENCY. If Developer fails to properly prosecute its maintenance obligation under this section, AGENCY may do all work necessary for such maintenance and the cost thereof shall be the responsibility of Developer and its surety under this Agreement. AGENCY shall not be responsible or liable for any damages or injury of any nature in any way related to or caused by the TUMF Improvements or their condition prior to acceptance.

4.0 Fees and Charges. Developer shall, at its sole cost, expense, and liability, pay all fees, charges, and taxes arising out of the construction of the TUMF Improvements, including, but not limited to, all plan check, design review, engineering, inspection, sewer treatment connection fees, and other service or impact fees established by AGENCY.

5.0 AGENCY Inspection of TUMF Improvements. Developer shall, at its sole cost, expense, and liability, and at all times during construction of the TUMF Improvements, maintain

reasonable and safe facilities and provide safe access for inspection by AGENCY of the TUMF Improvements and areas where construction of the TUMF Improvements is occurring or will occur.

6.0 Liens. Upon the expiration of the time for the recording of claims of liens as prescribed by Sections 8412 and 8414 of the Civil Code with respect to the TUMF Improvements, Developer shall provide to AGENCY such evidence or proof as AGENCY shall require that all persons, firms and corporations supplying work, labor, materials, supplies and equipment to the construction of the TUMF Improvements, have been paid, and that no claims of liens have been recorded by or on behalf of any such person, firm or corporation. Rather than await the expiration of the said time for the recording of claims of liens, Developer may elect to provide to AGENCY a title insurance policy or other security acceptable to AGENCY guaranteeing that no such claims of liens will be recorded or become a lien upon any of the Property.

7.0 Acceptance of TUMF Improvements; As-Built or Record Drawings. If the TUMF Improvements are properly completed by Developer and approved by AGENCY, and if they comply with all applicable federal, state and local laws, ordinances, regulations, codes, standards, and other requirements, AGENCY shall be authorized to accept the TUMF Improvements. AGENCY may, in its sole and absolute discretion, accept fully completed portions of the TUMF Improvements prior to such time as all of the TUMF Improvements are complete, which shall not release or modify Developer's obligation to complete the remainder of the TUMF Improvements. Upon the total or partial acceptance of the TUMF Improvements by AGENCY, Developer shall file with the Recorder's Office of the County of Riverside a notice of completion for the accepted TUMF Improvements in accordance with California Civil Code sections 8182, 8184, 9204, and 9208 ("Notice of Completion"), at which time the accepted TUMF Improvements shall become the sole and exclusive property of AGENCY without any payment therefore. Notwithstanding the foregoing, AGENCY may not accept any TUMF Improvements unless and until Developer provides one (1) set of "as-built" or record drawings or plans to the AGENCY for all such TUMF Improvements. The drawings shall be certified and shall reflect the condition of the TUMF Improvements as constructed, with all changes incorporated therein.

8.0 Warranty and Guarantee. Developer hereby warrants and guarantees all the TUMF Improvements against any defective work or labor done, or defective materials furnished in the performance of this Agreement, including the maintenance of the TUMF Improvements, for a period of one (1) year following completion of the work and acceptance by AGENCY ("Warranty"). During the Warranty, Developer shall repair, replace, or reconstruct any defective or otherwise unsatisfactory portion of the TUMF Improvements, in accordance with the current ordinances, resolutions, regulations, codes, standards, or other requirements of AGENCY, and to the approval of AGENCY. All repairs, replacements, or reconstruction during the Warranty shall be at the sole cost, expense, and liability of Developer and its surety. As to any TUMF Improvements which have been repaired, replaced, or reconstructed during the Warranty, Developer and its surety hereby agree to extend the Warranty for an additional one (1) year period following AGENCY's acceptance of the repaired, replaced, or reconstructed TUMF Improvements. Nothing herein shall relieve Developer from any other liability it may have

under federal, state, or local law to repair, replace, or reconstruct any TUMF Improvement following expiration of the Warranty or any extension thereof. Developer's warranty obligation under this section shall survive the expiration or termination of this Agreement.

9.0 Administrative Costs. If Developer fails to construct and install all or any part of the TUMF Improvements, or if Developer fails to comply with any other obligation contained herein, Developer and its surety shall be jointly and severally liable to AGENCY for all administrative expenses, fees, and costs, including reasonable attorney's fees and costs, incurred in obtaining compliance with this Agreement or in processing any legal action or for any other remedies permitted by law.

#### 10.0 Default; Notice; Remedies.

10.1 Notice. If Developer neglects, refuses, or fails to fulfill or timely complete any obligation, term, or condition of this Agreement, or if AGENCY determines there is a violation of any federal, state, or local law, ordinance, regulation, code, standard, or other requirement, AGENCY may at any time thereafter declare Developer to be in default or violation of this Agreement and make written demand upon Developer or its surety, or both, to immediately remedy the default or violation ("Notice"). Developer shall substantially commence the work required to remedy the default or violation within five (5) days of the Notice. If the default or violation constitutes an immediate threat to the public health, safety, or welfare, AGENCY may provide the Notice verbally, and Developer shall substantially commence the required work within twenty-four (24) hours thereof. Immediately upon AGENCY's issuance of the Notice, Developer and its surety shall be liable to AGENCY for all costs of construction and installation of the TUMF Improvements and all other administrative costs or expenses as provided for in this Section 10.0 of this Agreement.

10.2 Failure to Remedy; AGENCY Action. If the work required to remedy the noticed default or violation is not diligently prosecuted to a completion acceptable to AGENCY within the time frame contained in the Notice, AGENCY may complete all remaining work, arrange for the completion of all remaining work, and/or conduct such remedial activity as in its sole and absolute discretion it believes is required to remedy the default or violation. All such work or remedial activity shall be at the sole and absolute cost, expense, and liability of Developer and its surety, without the necessity of giving any further notice to Developer or surety. AGENCY's right to take such actions shall in no way be limited by the fact that Developer or its surety may have constructed any of the TUMF Improvements at the time of AGENCY's demand for performance. In the event AGENCY elects to complete or arrange for completion of the remaining work and the TUMF Improvements, AGENCY may require all work by Developer or its surety to cease in order to allow adequate coordination by AGENCY.

10.3 Other Remedies. No action by AGENCY pursuant to this Section 10.0 *et seq.* of this Agreement shall prohibit AGENCY from exercising any other right or pursuing any other legal or equitable remedy available under this Agreement or any federal, state, or local law. AGENCY may exercise its rights and remedies independently or cumulatively, and AGENCY

may pursue inconsistent remedies. AGENCY may institute an action for damages, injunctive relief, or specific performance.

11.0 Security; Surety Bonds. Prior to the commencement of any work on the TUMF Improvements, Developer or its contractor shall provide AGENCY with surety bonds in the amounts and under the terms set forth below (“Security”). The amount of the Security shall be based on the estimated actual costs to construct the TUMF Improvements, as determined by AGENCY after Developer has awarded a contract for construction of the TUMF Improvements to the lowest responsive and responsible bidder in accordance with this Agreement (“Estimated Costs”). If AGENCY determines, in its sole and absolute discretion, that the Estimated Costs have changed, Developer or its contractor shall adjust the Security in the amount requested by AGENCY. Developer’s compliance with this Section 11.0 et seq. of this Agreement shall in no way limit or modify Developer’s indemnification obligation provided in Section 12.0 of this Agreement.

11.1 Performance Bond. To guarantee the faithful performance of the TUMF Improvements and all the provisions of this Agreement, to protect AGENCY if Developer is in default as set forth in Section 10.0 et seq. of this Agreement, and to secure the one-year guarantee and warranty of the TUMF Improvements, Developer or its contractor shall provide AGENCY a faithful performance bond in an amount which sum shall be not less than one hundred percent (100%) of the Estimated Costs. The AGENCY may, in its sole and absolute discretion, partially release a portion or portions of the security provided under this section as the TUMF Improvements are accepted by AGENCY, provided that Developer is not in default on any provision of this Agreement and the total remaining security is not less than \_\_\_\_\_ (\_\_\_%) of the Estimated Costs. All security provided under this section shall be released at the end of the Warranty period, or any extension thereof as provided in Section 11.0 of this Agreement, provided that Developer is not in default on any provision of this Agreement.

11.2 Labor & Material Bond. To secure payment to the contractors, subcontractors, laborers, materialmen, and other persons furnishing labor, materials, or equipment for performance of the TUMF Improvements and this Agreement, Developer or its contractor shall provide AGENCY a labor and materials bond in an amount which sum shall not be less than one hundred percent (100%) of the Estimated Costs. The security provided under this section may be released by written authorization of AGENCY after six (6) months from the date AGENCY accepts the TUMF Improvements. The amount of such security shall be reduced by the total of all stop notice or mechanic’s lien claims of which AGENCY is aware, plus an amount equal to twenty percent (20%) of such claims for reimbursement of AGENCY’s anticipated administrative and legal expenses arising out of such claims.

11.3 Additional Requirements. The surety for any surety bonds provided as Security shall have a current A.M. Best rating of at least “A” and FSC-VIII, shall be licensed to do business in California, and shall be satisfactory to AGENCY. As part of the obligation secured by the Security and in addition to the face amount of the Security, Developer, its contractor or the surety shall secure the costs and reasonable expenses and fees, including reasonable

attorney's fees and costs, incurred by AGENCY in enforcing the obligations of this Agreement. Developer, its contractor and the surety shall stipulate and agree that no change, extension of time, alteration, or addition to the terms of this Agreement, the TUMF Improvements, or the plans and specifications for the TUMF Improvements shall in any way affect its obligation on the Security.

11.4 Evidence and Incorporation of Security. Evidence of the Security shall be provided on the forms set forth in Exhibit "B", unless other forms are deemed acceptable by the AGENCY, and when such forms are completed to the satisfaction of AGENCY, the forms and evidence of the Security shall be attached hereto as Exhibit "B" and incorporated herein by this reference.

12.0 Indemnification. Developer shall defend, indemnify, and hold harmless AGENCY, the Western Riverside Council of Governments (WRCOG), their elected officials, board members, employees, and agents from any and all actual or alleged claims, demands, causes of action, liability, loss, damage, or injury to property or persons, including wrongful death, whether imposed by a court of law or by administrative action of any federal, state, or local governmental agency, arising out of or incident to any acts, omissions, negligence, or willful misconduct of Developer, its employees, contractors, or agents in connection with the performance of this Agreement, or arising out of or in any way related to or caused by the TUMF Improvements or their condition prior to AGENCY's approval and acceptance of the TUMF Improvements ("Claims"). This indemnification includes, without limitation, the payment of all penalties, fines, judgments, awards, decrees, attorneys fees, and related costs or expenses, and the reimbursement of AGENCY, WRCOG, their elected officials, board members, employees, and/or agents for all legal expenses and costs incurred by each of them. This indemnification excludes only such portion of any Claim which is caused solely and exclusively by the negligence or willful misconduct of AGENCY as determined by a court or administrative body of competent jurisdiction. Developer's obligation to indemnify shall survive the expiration or termination of this Agreement, and shall not be restricted to insurance proceeds, if any, received by AGENCY, WRCOG, their elected officials, board members, employees, or agents.

### 13.0 Insurance.

13.1 Types; Amounts. Developer shall procure and maintain, and shall require its contractors to procure and maintain, during performance of this Agreement, insurance of the types and in the amounts described below ("Required Insurance"). If any of the Required Insurance contains a general aggregate limit, such insurance shall apply separately to this Agreement or be no less than two times the specified occurrence limit.

13.1.1 General Liability. Occurrence form general liability insurance at least as broad as Insurance Services Office Form CG 00 01, or equivalent form, with an occurrence limit of Two Million Dollars (\$2,000,000) and aggregate limit of Four Million Dollars (\$4,000,000) for bodily injury, personal injury, and property damage.

13.1.2 Business Automobile Liability. Business automobile liability insurance at least as broad as Insurance Services Office Form CA 00 01 (coverage symbol 1 – any auto), or equivalent form, with a combined single limit of not less than One Million Dollars (\$1,000,000) per occurrence. Such insurance shall include coverage for the ownership, operation, maintenance, use, loading, or unloading of any auto owned, leased, hired, or borrowed by the insured or for which the insured is responsible.

13.1.3 Workers' Compensation. Workers' compensation insurance with limits as required by the Labor Code of the State of California and employers' liability insurance with limits of not less than One Million Dollars (\$1,000,000) per occurrence, at all times during which insured retains employees.

13.1.4 Professional Liability. For any consultant or other professional who will engineer or design the TUMF Improvements, liability insurance for errors and omissions with limits not less than Two Million Dollars (\$2,000,000) per occurrence, shall be procured and maintained for a period of five (5) years following completion of the TUMF Improvements. Such insurance shall be endorsed to include contractual liability.

13.2 Deductibles. Any deductibles or self-insured retentions must be declared to and approved by AGENCY. At the option of AGENCY, either: (a) the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects AGENCY, its elected officials, officers, employees, agents, and volunteers; or (b) Developer and its contractors shall provide a financial guarantee satisfactory to AGENCY guaranteeing payment of losses and related investigation costs, claims, and administrative and defense expenses.

13.3 Additional Insured; Separation of Insureds. The Required Insurance, except for the professional liability and workers' compensation insurance, shall name AGENCY, WRCOG, their elected officials, board members, officers, employees, and agents as additional insureds with respect to work performed by or on behalf of Developer or its contractors, including any materials, parts, or equipment furnished in connection therewith. For Required Insurance provided by Developer's contractors, WRCOG shall be added as an additional insured using ISO CG 2038 or an exact equivalent. The Required Insurance shall contain standard separation of insureds provisions, and shall contain no special limitations on the scope of its protection to AGENCY, WRCOG, their elected officials, board members, officers, employees, or agents.

13.4 Primary Insurance; Waiver of Subrogation. The Required Insurance, except for the professional liability and workers' compensation insurance shall be primary with respect to any insurance or self-insurance programs covering AGENCY, WRCOG, their elected officials, board members, officers, employees, or agents. The Required Insurance, except for the professional liability insurance, shall provide that the insurance company waives all right of recovery by way of subrogation against AGENCY and WRCOG in connection with any damage or harm covered by such policy.

13.5 Certificates; Verification. Developer and its contractors shall furnish AGENCY with original certificates of insurance and endorsements effecting coverage for the Required

Insurance. The certificates and endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf. All certificates and endorsements must be received and approved by AGENCY before work pursuant to this Agreement can begin. AGENCY reserves the right to require complete, certified copies of all required insurance policies, at any time.

13.6 Term; Cancellation Notice. Developer and its contractors shall maintain the Required Insurance for the term of this Agreement and shall replace any certificate, policy, or endorsement which will expire prior to that date. All policies shall be endorsed to provide that the Required Insurance shall not be suspended, voided, reduced, canceled, or allowed to expire except on thirty (30) days' prior written notice to AGENCY. If such notice of cancellation endorsements are unavailable, Developer shall provide such thirty (30) days' written notice of cancellation.

13.7 Insurer Rating. Unless approved in writing by AGENCY, all Required Insurance shall be placed with insurers licensed to do business in the State of California and with a current A.M. Best rating of at least "A" and FSC-VIII.

14.0 TUMF Credit.

14.1 Developer's TUMF Obligation. Developer hereby agrees and accepts that as of the date of this Agreement, the amount Developer is obligated to pay to AGENCY pursuant to Ordinance No. (insert appropriate reference for city or county) as part of the TUMF Program is **[INSERT DOLLAR VALUE OF TUMF REQUIREMENT]** (\$ \_\_\_\_\_) ("TUMF Obligation"). This TUMF Obligation shall be initially determined under the TUMF fee schedule in effect for the AGENCY at the time the Developer submits a building permit application for the TUMF Improvement. Notwithstanding, this TUMF Obligation does not have to be paid until the Certificate of Occupancy is obtained.

14.2 Fee Adjustments. Notwithstanding the foregoing, Developer agrees that this Agreement shall not estop AGENCY from adjusting the TUMF in accordance with the provisions of Ordinance No. (insert appropriate reference for city or county ).

14.3 Credit Offset Against TUMF Obligation. Pursuant to Ordinance No. (insert appropriate reference for city or county ) and in consideration for Developer's obligation under this Agreement for the delivery of TUMF Improvements, credit shall be applied by AGENCY to offset the TUMF Obligation ("Credit") subject to adjustment and reconciliation under Section 14.5 of this agreement. Developer hereby agrees that the amount of the Credit shall be applied after Developer has initiated the process of project delivery of TUMF Improvements to the lowest responsible bidder in accordance with this Agreement. Developer further agrees that the dollar amount of the Credit shall be equal to the lesser of: (A) the bid amount set forth in the contract awarded to the lowest responsible bidder, or (B) the unit cost assumptions for the TUMF Improvement in effect at the time of the contract award, as such assumptions are identified and



determined in the most recent TUMF Nexus Study and the TUMF Administrative Plan adopted by WRCOG (“Unit Cost Assumptions”).

The bid amount and the Unit Cost Assumptions shall hereafter be collectively referred to as “Estimated Credit”. At no time will the Credit exceed the Developer’s TUMF Obligation. If the dollar amount of the Estimated Credit exceeds the dollar amount of the TUMF Obligation, Developer will be deemed to have completely satisfied its TUMF Obligation for the Project and may apply for a reimbursement agreement, to the extent applicable, as provided in Section 14.6 of this Agreement. If the dollar amount of the Estimated Credit is less than the dollar amount of the TUMF Obligation, the Developer agrees the Credit shall be applied to offset the TUMF Obligation as follows:

(i) For residential units in the Project, the Credit shall be applied to all residential units to offset and/or satisfy the TUMF Obligation. The residential units for which the TUMF Obligation has been offset and/or satisfied by use of the Credit, and the amount of offset applicable to each unit, shall be identified in the notice provided to the Developer by AGENCY pursuant to this section.

(ii) For commercial and industrial structures in the Project, the Credit shall be applied to all commercial and industrial development to offset and/or satisfy the TUMF Obligation. The commercial or industrial structure(s) for which the TUMF Obligation has been offset and/or satisfied by use of the Credit, and the amount of offset applicable to such structure(s), shall be identified in the notice provided to the Developer by AGENCY pursuant to this section.

AGENCY shall provide Developer written notice of the determinations that AGENCY makes pursuant to this section, including how the Credit is applied to offset the TUMF Obligation as described above.

14.4 Verified Cost of the TUMF Improvements. Upon recordation of the Notice of Completion for the TUMF Improvements and acceptance of the TUMF Improvements by AGENCY, Developer shall submit to the AGENCY Public Works Director the information set forth in the attached Exhibit “C”. The AGENCY Public Works Director, or his or her designee, shall remit such information provided by Developer within five (5) days to the officer or staff-person at WRCOG responsible for calculating the total actual costs incurred by Developer in delivering the TUMF Improvements covered under this Agreement (“Verified Costs”). The AGENCY Public Works Director will use his or her best efforts to obtain the Verified Costs from WRCOG, as calculated by WRCOG, and provide Developer written notice thereof within thirty (30) calendar days of receipt by WRCOG of all the required information from the AGENCY Public Works Director. So long as AGENCY remits information provided by Developer to WRCOG within five (5) days of receipt of such information from Developer, neither AGENCY nor WRCOG shall be held responsible for any delay in delivery of the written notice required herein.

14.5 Reconciliation; Final Credit Offset Against TUMF Obligation. The Developer is aware of and accepts the fact that Credits are speculative and conceptual in nature. The actual amount of Credit calculated by WRCOG that shall be applied by AGENCY to offset the TUMF Obligation shall be equal to the lesser of: (A) the Verified Costs or (B) Unit Cost Assumptions for the TUMF Improvements as determined in accordance with Section 14.3 of this Agreement (“Actual Credit”). No Actual Credit will be awarded until the Verified Costs are determined through the reconciliation process. Please be advised that while a Developer may use an engineer’s estimates in order to estimate Credits for project planning purposes, the Actual Credit awarded will only be determined by the reconciliation process.

(a) TUMF Balance. If the dollar amount of the Actual Credit is less than the dollar amount of the TUMF Obligation, the AGENCY Public Works Director shall work with WRCOG to provide written notice to Developer of the amount of the difference owed (“TUMF Balance”) and Developer shall pay the TUMF Balance in accordance with (insert appropriate reference for city or county) to fully satisfy the TUMF Obligation (see Exhibit “F” - Example “A”).

(b) TUMF Reimbursement. If the dollar amount of the Actual Credit exceeds the TUMF Obligation, Developer will be deemed to have fully satisfied the TUMF Obligation for the Project and may apply for a reimbursement agreement, to the extent applicable, as provided in Section 14.6 of this Agreement. AGENCY shall work with WRCOG to provide Developer written notice of the determinations that AGENCY, in coordination with WRCOG, makes pursuant to this section (see Exhibit “F” - Example “B”).

(c) TUMF Overpayment. If the dollar amount of the Actual Credit exceeds the Estimated Credit, but is less than the TUMF Obligation, but the Actual Credit plus additional monies collected by or on behalf of AGENCY from Developer for the TUMF Obligation exceed the TUMF Obligation (“TUMF Overpayment”), Developer will be deemed to have fully satisfied the TUMF Obligation for the Project and may be entitled to a refund. The AGENCY’s Public Works Director shall work with WRCOG to provide written notice to WRCOG and the Developer of the amount of the TUMF Overpayment and AGENCY shall direct WRCOG to refund the Developer in accordance with (insert appropriate reference for city or county) (see Exhibit “F” - Example C).

14.6 Reimbursement Agreement. If authorized under either Section 14.3 or Section 14.5 Developer may apply to AGENCY and WRCOG for a reimbursement agreement for the amount by which the Actual Credit exceeds the TUMF Obligation, as determined pursuant to Section 14.3 of this Agreement, Ordinance No. (insert appropriate reference for city or county), and the TUMF Administrative Plan adopted by WRCOG (“Reimbursement Agreement”). If AGENCY and WRCOG agree to a Reimbursement Agreement with Developer, the Reimbursement Agreement shall be executed on the form set forth in Exhibit “D,” and shall contain the terms and conditions set forth therein. The Parties agree that the Reimbursement Agreement shall be subject to all terms and conditions of this Agreement, and that upon execution, an executed copy of the Reimbursement Agreement shall be attached hereto and shall be incorporated herein as a material part of this Agreement as though fully set forth herein.

15.0 Miscellaneous.

15.1 Assignment. Developer may, as set forth herein, assign all or a portion of its rights pursuant to this Agreement to a purchaser of a portion or portions of the Property ("Assignment"). Developer and such purchaser and assignee ("Assignee") shall provide to AGENCY such reasonable proof as it may require that Assignee is the purchaser of such portions of the Property. Any assignment pursuant to this Section shall not be effective unless and until Developer and Assignee have executed an assignment agreement with AGENCY in a form reasonably acceptable to AGENCY, whereby Developer and Assignee agree, except as may be otherwise specifically provided therein, to the following: (1) that Assignee shall receive all or a portion of Developer's rights pursuant to this Agreement, including such credit as is determined to be applicable to the portion of the Property purchased by Assignee pursuant to Section 14.0 et seq. of this Agreement, and (2) that Assignee shall be bound by all applicable provisions of this Agreement.

15.2 Relationship Between the Parties. The Parties hereby mutually agree that this Agreement shall not operate to create the relationship of partnership, joint venture, or agency between or among AGENCY, WRCOG and Developer. Developer's contractors are exclusively and solely under the control and dominion of Developer. Nothing herein shall be deemed to make Developer or its contractors an agent or contractor of AGENCY. This Agreement shall be interpreted and administered in a manner consistent with the TUMF Administrative Plan in effect at the time this Agreement is executed.

15.3 Warranty as to Property Ownership; Authority to Enter Agreement. Developer hereby warrants that it owns fee title to the Property and that it has the legal capacity to enter into this Agreement. Each Party warrants that the individuals who have signed this Agreement have the legal power, right, and authority make this Agreement and bind each respective Party.

15.4 Prohibited Interests. Developer warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for Developer, to solicit or secure this Agreement. Developer also warrants that it has not paid or agreed to pay any company or person, other than a bona fide employee working solely for Developer, any fee, commission, percentage, brokerage fee, gift, or other consideration contingent upon the making of this Agreement. For breach of this warranty, AGENCY shall have the right to rescind this Agreement without liability.

15.5 Notices. All notices, demands, invoices, and written communications shall be in writing and delivered to the following addresses or such other addresses as the Parties may designate by written notice:

To AGENCY: [INSERT "CITY" OR "COUNTY"] OF \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Fax No. (909) \_\_\_\_\_

To Developer: \_\_\_\_\_  
Attn: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Fax No. (\_\_\_\_) \_\_\_\_\_

Depending upon the method of transmittal, notice shall be deemed received as follows: by facsimile, as of the date and time sent; by messenger, as of the date delivered; and by U.S. Mail first class postage prepaid, as of 72 hours after deposit in the U.S. Mail.

15.6 Cooperation; Further Acts. The Parties shall fully cooperate with one another, and shall take any additional acts or sign any additional documents as may be necessary, appropriate, or convenient to attain the purposes of this Agreement.

15.7 Construction; References; Captions. It being agreed the Parties or their agents have participated in the preparation of this Agreement, the language of this Agreement shall be construed simply, according to its fair meaning, and not strictly for or against any Party. Any term referencing time, days, or period for performance shall be deemed calendar days and not work days. All references to Developer include all personnel, employees, agents, and contractors of Developer, except as otherwise specified in this Agreement. All references to AGENCY include its elected officials, officers, employees, agents, and volunteers except as otherwise specified in this Agreement. The captions of the various articles and paragraphs are for convenience and ease of reference only, and do not define, limit, augment, or describe the scope, content, or intent of this Agreement.

15.8 Amendment; Modification. No supplement, modification, or amendment of this Agreement shall be binding unless executed in writing and signed by both Parties.

15.9 Termination. This Agreement shall terminate 10 years after the Effective Date, unless extended in writing by the Parties. In addition, this Agreement shall terminate 5 years after the Effective Date in the event that the TUMF Improvements as specified in the Credit Agreement is not commenced within 5 years of the Effective Date.

15.9.1 Waiver. No waiver of any default shall constitute a waiver of any other default or breach, whether of the same or other covenant or condition. No waiver, benefit, privilege, or service voluntarily given or performed by a Party shall give the other Party any contractual right by custom, estoppel, or otherwise.

15.9.2 Binding Effect. Each and all of the covenants and conditions shall be binding on and shall inure to the benefit of the Parties, and their successors, heirs, personal representatives, or assigns. This section shall not be construed as an authorization for any Party to assign any right or obligation.

15.9.3 No Third Party Beneficiaries. There are no intended third party beneficiaries of any right or obligation assumed by the Parties.

15.9.4 Invalidity; Severability. If any portion of this Agreement is declared invalid, illegal, or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions shall continue in full force and effect.

15.9.5 Consent to Jurisdiction and Venue. This Agreement shall be construed in accordance with and governed by the laws of the State of California. Any legal action or proceeding brought to interpret or enforce this Agreement, or which in any way arises out of the Parties' activities undertaken pursuant to this Agreement, shall be filed and prosecuted in the appropriate California State Court in the County of Riverside, California. Each Party waives the benefit of any provision of state or federal law providing for a change of venue to any other court or jurisdiction including, without limitation, a change of venue based on the fact that a governmental entity is a party to the action or proceeding, or that a federal right or question is involved or alleged to be involved in the action or proceeding. Without limiting the generality of the foregoing waiver, Developer expressly waives any right to have venue transferred pursuant to California Code of Civil Procedure Section 394.

15.9.6 Time is of the Essence. Time is of the essence in this Agreement, and the Parties agree to execute all documents and proceed with due diligence to complete all covenants and conditions.

15.9.7 Counterparts. This Agreement may be signed in counterparts, each of which shall constitute an original and which collectively shall constitute one instrument.

15.9.8 Entire Agreement. This Agreement contains the entire agreement between AGENCY and Developer and supersedes any prior oral or written statements or agreements between AGENCY and Developer.

**[SIGNATURES OF PARTIES ON NEXT PAGE]**

**IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the day and year first above written.**

DEVELOPER:  
[\*\*INSERT NAME OF DEVELOPER\*\*]

By: \_\_\_\_\_

Its: \_\_\_\_\_

ATTEST:

By: \_\_\_\_\_

Its: \_\_\_\_\_

[\*\*INSERT "CITY" OR "COUNTY" OF  
\_\_\_\_\_\*\*]:

By: \_\_\_\_\_

Its: \_\_\_\_\_

ATTEST:

By: \_\_\_\_\_

Its: \_\_\_\_\_

**EXHIBIT "A"**  
**LEGAL DESCRIPTION OF PROPERTY**  
**[ATTACH BEHIND THIS PAGE]**

EXHIBIT A-1

20323.00004\31411091.1

**EXHIBIT “B”**  
**FORMS FOR SECURITY**  
**[ATTACHED BEHIND THIS PAGE]**

**Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF)**

EXHIBIT B-1



BOND NO. \_\_\_\_\_  
INITIAL PREMIUM: \_\_\_\_\_  
SUBJECT TO RENEWAL

**PERFORMANCE BOND**

WHEREAS, the [INSERT "City" OR "County"] of \_\_\_\_\_ ("AGENCY") has executed an agreement with \_\_\_\_\_ (hereinafter "Developer"), requiring Developer to perform certain work consisting of but not limited to, furnishing all labor, materials, tools, equipment, services, and incidentals for the construction of street and transportation system improvements (hereinafter the "Work");

WHEREAS, the Work to be performed by Developer is more particularly set forth in that certain TUMF Improvement and Credit/Reimbursement Agreement dated \_\_\_\_\_, (hereinafter the "Agreement"); and

WHEREAS, the Agreement is hereby referred to and incorporated herein by this reference; and

WHEREAS, Developer or its contractor is required by the Agreement to provide a good and sufficient bond for performance of the Agreement, and to guarantee and warranty the Work constructed thereunder.

NOW, THEREFORE, we the undersigned, \_\_\_\_\_, as Principal and \_\_\_\_\_, a corporation organized and existing under the laws of the State of \_\_\_\_\_ and duly authorized to transact business under the laws of the State of California, as Surety, are held and firmly bound unto the AGENCY in the sum of \_\_\_\_\_ (\$\_\_\_\_\_), said sum being not less than one hundred percent (100%) of the total cost of the Work as set forth in the Agreement, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such, that if Developer and its contractors, or their heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions, agreements, guarantees, and warranties in the Agreement and any alteration thereof made as therein provided, to be kept and performed at the time and in the manner therein specified and in all respects according to their intent and meaning, and to indemnify and save harmless AGENCY, its officers, employees, and agents, as stipulated in the Agreement, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

As part of the obligation secured hereby, and in addition to the face amount specified therefor, there shall be included costs and reasonable expenses and fees, including reasonable attorney's fees, incurred by AGENCY in successfully enforcing such obligation, all to be taxed as costs and included in any judgment rendered.

The said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or additions to the terms of the said Agreement or to the Work to be

EXHIBIT B-2

performed thereunder or the specification accompanying the same shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Agreement or to the Work.

IN WITNESS WHEREOF, we have hereto set our hands and seals this \_\_\_\_ day on \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Principal

By: \_\_\_\_\_  
President

\_\_\_\_\_  
Surety

By: \_\_\_\_\_  
Attorney-in-Fact

Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF)

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

CIVIL CODE §1189

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document, to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA )
COUNTY OF \_\_\_\_\_ )

On \_\_\_\_\_, before me, \_\_\_\_\_
Date Here Insert Name and Title of the Officer

personally appeared \_\_\_\_\_
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature \_\_\_\_\_
ture of Notary Public Signa

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title of Type of Document: \_\_\_\_\_ Document Date: \_\_\_\_\_
Number of Pages: \_\_\_\_\_ Signer(s) Other Than Named Above: \_\_\_\_\_

Capacity(ies) Claimed by Signer(s)

Signer's Name: \_\_\_\_\_ Signer's Name: \_\_\_\_\_

- Corporate Officer - Title(s):
Partner - Limited General
Individual Attorney in Fact
Trustee Guardian or Conservator

Other: \_\_\_\_\_ Other: \_\_\_\_\_

Signer is Representing: \_\_\_\_\_ Signer is Representing: \_\_\_\_\_

**CERTIFICATE AS TO CORPORATE PRINCIPAL**

I, \_\_\_\_\_, certify that I am the \_\_\_\_\_ Secretary of the corporation named as principal in the attached bond, that \_\_\_\_\_ who signed the said bond on behalf of the principal was then \_\_\_\_\_ of said corporation; that I know his signature, and his signature thereto is genuine; and that said bond was duly signed, sealed and attested for and in behalf of said corporation by authority of its governing Board.

(Corporate Seal)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

NOTE: A copy of the power of attorney to local representatives of the bonding company may be attached hereto.

Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF)

BOND NO. \_\_\_\_\_  
INITIAL PREMIUM: \_\_\_\_\_  
SUBJECT TO RENEWAL

**LABOR & MATERIAL BOND**

WHEREAS, the [INSERT "City" OR "County"] of \_\_\_\_\_ ("AGENCY") has executed an agreement with \_\_\_\_\_ (hereinafter "Developer"), requiring Developer to perform certain work consisting of but not limited to, furnishing all labor, materials, tools, equipment, services, and incidentals for the construction of street and transportation system improvements (hereinafter "Work");

WHEREAS, the Work to be performed by Developer is more particularly set forth in that certain Improvement and Credit / Reimbursement Agreement dated \_\_\_\_\_, (hereinafter the "Agreement"); and

WHEREAS, Developer or its contractor is required to furnish a bond in connection with the Agreement providing that if Developer or any of his or its contractors shall fail to pay for any materials, provisions, or other supplies, or terms used in, upon, for or about the performance of the Work contracted to be done, or for any work or labor done thereon of any kind, or for amounts due under the provisions of 3248 of the California Civil Code, with respect to such work or labor, that the Surety on this bond will pay the same together with a reasonable attorney's fee in case suit is brought on the bond.

NOW, THEREFORE, we the undersigned, \_\_\_\_\_, as Principal and \_\_\_\_\_, a corporation organized and existing under the laws of the State of \_\_\_\_\_ and duly authorized to transact business under the laws of the State of California, as Surety, are held and firmly bound unto the AGENCY and to any and all material men, persons, companies or corporations furnishing materials, provisions, and other supplies used in, upon, for or about the performance of the said Work, and all persons, companies or corporations renting or hiring teams, or implements or machinery, for or contributing to said Work to be done, and all persons performing work or labor upon the same and all persons supplying both work and materials as aforesaid, the sum of \_\_\_\_\_ (\$\_\_\_\_\_), said sum being not less than 100% of the total amount payable by Developer under the terms of the Agreement, for which payment well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if Developer or its contractors, or their heirs, executors, administrators, successors, or assigns, shall fail to pay for any materials, provisions, or other supplies or machinery used in, upon, for or about the performance of the Work contracted to be done, or for work or labor thereon of any kind, or fail to pay any of the persons named in California Civil Code Section 9100, or amounts due under the Unemployment Insurance Code with respect to work or labor performed by any such claimant, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of the contractor and his

EXHIBIT B-6

subcontractors pursuant to Section 13020 of the Unemployment Insurance Code with respect to such work and labor, and all other applicable laws of the State of California and rules and regulations of its agencies, then said Surety will pay the same in or to an amount not exceeding the sum specified herein.

In case legal action is required to enforce the provisions of this bond, the prevailing party shall be entitled to recover reasonable attorneys' fees in addition to court costs, necessary disbursements and other consequential damages. In addition to the provisions hereinabove, it is agreed that this bond will inure to the benefit of any and all persons, companies and corporations entitled to make claims under Sections 8024, 8400, 8402, 8404, 8430, 9100 of the California Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this bond.

The said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or additions to the terms of the Agreement or to the Work to be performed thereunder or the specification accompanying the same shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Agreement or to the Work.

IN WITNESS WHEREOF, we have hereto set our hands and seals this \_\_\_\_ day on \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Principal

By: \_\_\_\_\_  
President

\_\_\_\_\_  
Surety

By: \_\_\_\_\_  
Attorney-in-Fact

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

CIVIL CODE §1189

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA )
COUNTY OF \_\_\_\_\_ )

On \_\_\_\_\_, before me, \_\_\_\_\_
Date Here Insert Name and Title of the Officer

personally appeared \_\_\_\_\_
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature \_\_\_\_\_
ture of Notary Public Signa

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title of Type of Document: \_\_\_\_\_ Document Date: \_\_\_\_\_
Number of Pages: \_\_\_\_\_ Signer(s) Other Than Named Above: \_\_\_\_\_

Capacity(ies) Claimed by Signer(s)

Signer's Name: \_\_\_\_\_ Signer's Name: \_\_\_\_\_

- Corporate Officer - Title(s):
Partner - Limited General
Individual Attorney in Fact
Trustee Guardian or Conservator
Other:

Signer is Representing: \_\_\_\_\_ Signer is Representing: \_\_\_\_\_

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, \_\_\_\_\_, certify that I am the \_\_\_\_\_ Secretary of the corporation named as principal in the attached bond, that \_\_\_\_\_ who signed the said bond on behalf of the principal was then \_\_\_\_\_ of said corporation; that I know his signature, and his signature thereto is genuine; and that said bond was duly signed, sealed and attested for and in behalf of said corporation by authority of its governing Board.

(Corporate Seal)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

NOTE: A copy of the power of attorney to local representatives of the bonding company may be attached hereto.

Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF))



**EXHIBIT “C”****DOCUMENTATION TO BE PROVIDED TO AGENCY BY DEVELOPER FOR DETERMINATION OF CONSTRUCTION COSTS**

To assist AGENCY in determining the Construction Costs for a completed TUMF Improvement, Developer shall provide the following documents to AGENCY:

1. Plans, specifications and Developer’s civil engineer’s cost estimate;
2. List of bidders from whom bids were requested;
3. Construction schedules and progress reports;
4. Contracts, insurance certificates and change orders with each contractor or vendor;
5. Invoices received from all vendors;
6. Canceled checks for payments made to contractors and vendors (copy both front and back of canceled checks);
7. Spreadsheet showing total costs incurred in and related to the construction of each TUMF Improvement and the check number for each item of cost and invoice;
8. Final lien releases from each contractor and vendor; and
9. Such further documentation as may be reasonably required by AGENCY to evidence the completion of construction and the payment of each item of cost and invoice.

EXHIBIT C-1

**EXHIBIT “D”**

**REIMBURSEMENT AGREEMENT  
TRANSPORTATION UNIFORM MITIGATION FEE PROGRAM**

**THIS REIMBURSEMENT AGREEMENT** (“Agreement”) is entered into this \_\_\_ day of \_\_\_\_\_, 20\_\_\_, by and between the [INSERT “City” OR “County”] of \_\_\_\_\_, [\*\*INSERT “a California municipal corporation” FOR CITY OR “a subdivision of the State of California” FOR COUNTY\*\*] (“AGENCY”), and \_\_\_\_\_, a California [\*\*INSERT TYPE OF ENTITY - corporation, partnership, sole proprietorship or other legal entity\*\*], with its principal place of business at [\*\*ENTER ADDRESS\*\*] (“Developer”). AGENCY and Developer are sometimes hereinafter referred to individually as “Party” and collectively as “Parties”.

**RECITALS**

WHEREAS, AGENCY and Developer are parties to an agreement dated \_\_\_\_\_, 20\_\_\_, entitled “Improvement and Credit Agreement - Transportation Uniform Mitigation Fee Program” (hereinafter “Credit Agreement”);

WHEREAS, Sections 14.1 through 14.3 of the Credit Agreement provide that Developer is obligated to pay AGENCY the TUMF Obligation, as defined therein, but shall receive credit to offset the TUMF Obligation if Developer constructs and AGENCY accepts the TUMF Improvements in accordance with the Credit Agreement;

WHEREAS, Section 14.5 of the Credit Agreement provides that if the dollar amount of the credit to which Developer is entitled under the Credit Agreement exceeds the dollar amount of the TUMF Obligation, Developer may apply to AGENCY and WRCOG for a reimbursement agreement for the amount by which the credit exceeds the TUMF Obligation;

WHEREAS, Section 14.5 additionally provides that a reimbursement agreement executed pursuant to the Credit Agreement (i) shall be executed on the form attached to the Credit Agreement, (ii) shall contain the terms and conditions set forth therein, (iii) shall be subject to all terms and conditions of the Credit Agreement, and (iv) shall be attached upon execution to the Credit Agreement and incorporated therein as a material part of the Credit Agreement as though fully set forth therein; and

WHEREAS, AGENCY and WRCOG have consented to execute a reimbursement agreement with Developer pursuant to the Credit Agreement, (insert appropriate reference for city or county), and the TUMF Administrative Plan adopted by WRCOG.

**NOW, THEREFORE, for the purposes set forth herein, and for good and valuable consideration, the adequacy of which is hereby acknowledged, the Parties hereby agree as follows:**

## TERMS

1.0 Incorporation of Recitals. The Parties hereby affirm the facts set forth in the Recitals above and agree to the incorporation of the Recitals as though fully set forth herein.

2.0 Effectiveness. This Agreement shall not be effective unless and until the Credit Agreement is effective and in full force in accordance with its terms.

3.0 Definitions. Terms not otherwise expressly defined in this Agreement, shall have the meaning and intent set forth in the Credit Agreement.

4.0 Amount of Reimbursement. Subject to the terms, conditions, and limitations set forth in this Agreement, the Parties hereby agree that Developer is entitled to receive the dollar amount by which the Actual Credit exceeds the dollar amount of the TUMF Obligation as determined pursuant to the Credit Agreement, (insert appropriate reference for city or county), and the TUMF Administrative Plan adopted by WRCOG (“Reimbursement”). The Reimbursement shall be subject to verification by WRCOG. AGENCY and Developer shall provide any and all documentation reasonably necessary for WRCOG to verify the amount of the Reimbursement. The Reimbursement shall be in an amount not exceeding [INSERT DOLLAR AMOUNT] (“Reimbursement Amount”). AGENCY shall be responsible for obtaining the Reimbursement Amount from WRCOG and transmitting the Reimbursement Amount to the Developer. In no event shall the dollar amount of the Reimbursement exceed the difference between the dollar amount of all credit applied to offset the TUMF Obligation pursuant to Section 14.3, 14.4, and 14.5 of the Credit Agreement, and one hundred (100%) of the approved unit awarded, as such assumptions are identified and determined in the Nexus Study and the TUMF Administrative Plan adopted by WRCOG.

5.0 Payment of Reimbursement; Funding Contingency. The payment of the Reimbursement Amount shall be subject to the following conditions:

5.1 Developer shall have no right to receive payment of the Reimbursement unless and until (i) the TUMF Improvements are completed and accepted by AGENCY in accordance with the Credit Agreement, (ii) the TUMF Improvements are scheduled for funding pursuant to the five-year Transportation Improvement Program adopted annually by WRCOG, (iii) WRCOG has funds available and appropriated for payment of the Reimbursement amount.

5.2 Developer shall not be entitled to any interest or other cost adjustment for any delay between the time when the dollar amount of the Reimbursement is determined and the time when payment of the Reimbursement is made to Developer by WRCOG through AGENCY.

6.0 Affirmation of Credit Agreement. AGENCY and Developer represent and warrant to each other that there have been no written or oral modifications or amendments of the Credit Agreement, except by this Agreement. AGENCY and Developer ratify and reaffirm each and every one of their respective rights and obligations arising under the Credit Agreement. AGENCY and Developer represent and warrant that the Credit Agreement is currently an effective, valid, and binding obligation.

7.0 Incorporation Into Credit Agreement. Upon execution of this Agreement, an executed original of this Agreement shall be attached as Exhibit “D” to the Credit Agreement and shall be incorporated therein as a material part of the Credit Agreement as though fully set forth therein.

8.0 Terms of Credit Agreement Controlling. Each Party hereby affirms that all provisions of the Credit Agreement are in full force and effect and shall govern the actions of the Parties under this Agreement as though fully set forth herein and made specifically applicable hereto, including without limitation, the following sections of the Credit Agreement: Sections 10.0 through 10.3, Section 12.0, Sections 13.0 through 13.7, Sections 14.0 through 14.6, and Sections 15.0 through 15.17.

**[SIGNATURES OF PARTIES ON NEXT PAGE]**

**IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the day and year first above written.**

\_\_\_\_\_  
("Developer")

By: \_\_\_\_\_

Its: \_\_\_\_\_

ATTEST:

By: \_\_\_\_\_

Its: \_\_\_\_\_

[INSERT "City" OR "County") of \_\_\_\_\_

By: \_\_\_\_\_

Its: \_\_\_\_\_

ATTEST:

By: \_\_\_\_\_

Its: \_\_\_\_\_

Attachment: WRCOG Staff Report to Executive Committee 10/1/18 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF)

**EXHIBIT “E”****TUMF CREDIT / REIMBURSEMENT ELIGIBILITY PROCESS**

1. Prior to the construction of any TUMF Improvement, Developer shall follow the steps listed below:

- (a) Prepare a separate bid package for the TUMF Improvements.
- (b) The plans, cost estimate, specifications and contract document shall require all contractors to pay prevailing wages and to comply with applicable provisions of the Labor Code, Government Code, and Public Contract Code relating to Public Works Projects.
- (c) Bids shall be obtained and processed in accordance with the formal public works bidding requirements of the AGENCY.
- (d) The contract(s) for the construction of TUMF Improvements shall be awarded to the lowest responsible bidder(s) for the construction of such facilities in accordance with the AGENCY’s requirements and guidelines.
- (e) Contractor(s) shall be required to provide proof of insurance coverage throughout the duration of the construction.

2. Prior to the determination and application of any Credit pursuant to a TUMF Improvement and Credit Agreement executed between AGENCY and Developer ("Agreement"), Developer shall provide the AGENCY and WRCOG with the following:

- (a) Copies of all information listed under Item 1 above.
- (b) Surety Bond, Letter of Credit, or other form of security permitted under the Agreement and acceptable to the AGENCY and WRCOG, guaranteeing the construction of all applicable TUMF Improvements.

3. Prior to the AGENCY’s acceptance of any completed TUMF Improvement, and in order to initiate the construction cost verification process, the Developer shall comply with the requirements as set forth in Sections 7, 14.2 and 14.3 of the Agreement, and the following conditions shall also be satisfied:

- (a) Developer shall have completed the construction of all TUMF Improvements in accordance with the approved Plans and Specifications.
- (b) Developer shall have satisfied the AGENCY’s inspection punch list.
- (c) After final inspection and approval of the completed TUMF Improvements, the AGENCY shall have provided the Developer a final inspection release letter.

(d) AGENCY shall have filed a Notice of Completion with respect to the TUMF Improvements pursuant to Section 3093 of the Civil Code with the County Recorder's Office, and provided a copy of filed Notice of Completion to WRCOG.

(e) Developer shall have provided AGENCY a copy of the As-Built plans for the TUMF Improvements.

(f) Developer shall have provided AGENCY copies of all permits or agreements that may have been required by various resource/regulatory agencies for construction, operation and maintenance of any TUMF Improvements.

(g) Developer shall have submitted a documentation package to the AGENCY to determine the final cost of the TUMF Improvements, which shall include at a minimum, the following documents related to the TUMF Improvements:

(i) Plans, specifications, and Developer's Civil Engineer's cost estimates; or Engineer's Report showing the cost estimates.

(ii) Contracts/agreements, insurance certificates and change orders with each vendor or contractor.

(iii) Invoices from all vendors and service providers.

(iv) Copies of cancelled checks, front and back, for payments made to contractors, vendors and service providers.

(v) Final lien releases from each contractor and vendor (unconditional waiver and release).

(vi) Certified contract workers payroll for AGENCY verification of compliance with prevailing wages.

(vii) A total cost summary, in spreadsheet format (MS Excel is preferred) and on disk, showing a breakdown of the total costs incurred. The summary should include for each item claimed the check number, cost, invoice numbers, and name of payee. See attached sample for details. [ATTACH SAMPLE, IF APPLICABLE; OTHERWISE DELETE REFERENCE TO ATTACHED SAMPLE

## Ordinance \_\_\_\_\_

### AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MORENO VALLEY, CALIFORNIA, AMENDING CHAPTER 44 OF TITLE 3 TO TRANSFER THE RESPONSIBILITY FOR CALCULATION AND COLLECTION OF FEES UNDER THE WESTERN RIVERSIDE COUNTY TRANSPORTATION UNIFORM MITIGATION FEE PROGRAM TO WESTERN RIVERSIDE COUNCIL OF GOVERNMENTS

The City Council of the City of Moreno Valley does ordain as follows:

#### SECTION 1. GENERAL:

1.1 Western Riverside Council of Governments (WRCOG), upon the recommendation of the WRCOG Executive Committee, has adopted a revision to the Transportation Uniform Mitigation Fee (TUMF) calculation and collection process to provide an option in which WRCOG calculates and collects the TUMF Fee on behalf of member agencies that elect to participate.

1.2 The City Council desires to amend Chapter 44 of Title 3 of the Moreno Valley Municipal Code to permit WRCOG to calculate and collect the TUMF Fee on behalf of the City.

#### SECTION 2. FINDINGS:

2.1 The City is a member agency of the Western Riverside Council of Governments ("WRCOG"), a joint powers agency comprised of the County of Riverside and 18 cities located in Western Riverside County. Acting in concert, the WRCOG Member Agencies developed a plan whereby the shortfall in funds needed to enlarge the capacity of the Regional System of Highways and Arterials in Western Riverside County (the "Regional System") could be made up in part by a Transportation Uniform Mitigation Fee ("TUMF") on future residential, commercial and industrial development.

2.2 WRCOG, upon the recommendation of the WRCOG Executive Committee, now desires to adopt a process in which WRCOG calculates and collects TUMF on behalf of member agencies under the Western Riverside County Transportation Uniform Mitigation Fee Program Ordinance of 2018.

2.3 The City Council finds that this Ordinance is not a "project" as defined by CEQA.

2.4 The findings set forth in Ordinance No.925 remain true and correct, and by this reference are incorporated into this Ordinance as if set forth in full herein. This



Ordinance shall amend the provisions of Ordinance No. 925, and to the extent any provisions herein conflict with any provisions of Ordinance No. 925 or any other ordinance of the City, the City Council finds and determines that it is the intent of the City Council that the provisions herein shall control.

### SECTION 3. MUNICIPAL CODE AMENDED

3.1. Section 3.44.040 of Chapter 3.40, Title 3 of the City of Moreno Valley Municipal Code is hereby repealed and replaced to read as follows:

#### **“3.44.040 Establishment of the transportation uniform mitigation fee.**

A. Adoption of TUMF Schedule. The city council shall adopt an applicable TUMF schedule through a separate resolution, which may be amended from time to time.

B. Fee Calculation. The fees shall be calculated by WRCOG according to the calculation methodology fee set forth in the WRCOG TUMF Fee Calculation Handbook adopted July 14, 2003, as amended from time to time. In addition to data in the Fee Calculation Handbook, WRCOG staff and the local agency may consider the following items when establishing the appropriate fee calculation methodology:

1. Underlying zoning of the site;
2. Land-use classifications in the latest Nexus Study;
3. Project specific traffic studies;
4. Latest standardized reference manuals such as the Institute of Traffic Engineers Trip Generation Manual;
5. Previous TUMF calculations for similar uses;
6. WRCOG staff shall approve final draft credit or reimbursement agreement prior to execution.

WRCOG shall have final determination regarding the appropriate methodology to calculate the fee based on the information provided by the City of Moreno Valley. In case of any dispute among the applicant, WRCOG, or the local agency regarding the fee calculation methodology, the dispute resolution process in the TUMF administrative plan will apply.

C. Fee Adjustment. The fee schedule may be periodically reviewed and the amounts adjusted by the WRCOG executive committee. By amendment to the resolution reference in subsection A of this section, the fees may be increased or decreased to reflect the changes in actual and estimated costs of the regional system including, but not limited to, debt service, lease payments and construction costs. The adjustment of the fees may also reflect changes in the facilities required to be constructed, in estimated revenues received pursuant to this chapter, as well as the availability or lack thereof of other funds with which to construct the regional system.

WRCOG shall review the TUMF Program no less than every four years after the effective date of the ordinance codified in this chapter.

D. Purpose. The purpose of the TUMF is to fund those certain improvements to the regional system as depicted in Exhibit "A" and identified in the 2016 Nexus Study, Exhibit "B" incorporated by reference herein.

E. Applicability. The TUMF shall apply to all new development within the city, unless otherwise exempt hereunder.

F. Exemptions. The following types of new development shall be exempt from the provisions of this chapter and in the TUMF administrative plan:

1. Low-income residential housing as described in Section 3.44.030 of this chapter and in the TUMF administrative plan.
2. Government/public buildings, public schools, and public facilities as described in Section 3.44.030 of this chapter and in the TUMF administrative plan. Airports that are public use airports and are appropriately permitted by Caltrans or other state agency.
3. The rehabilitation and/or reconstruction of any habitable structure in use on or after January 1, 2000, provided that the same or fewer traffic trips are generated as a result thereof.
4. Development projects which are the subject of a public facilities development agreement entered into pursuant to Government Code Section 65864 et seq., prior to the effective date of Ordinance No. 623 Section 2.2, 2003, wherein the imposition of new fees are expressly prohibited, provided that if the term of such a development agreement is extended by amendment or by any other manner after the effective date of Ordinance No. 623 Section 2.2, 2003, the TUMF shall be imposed.
5. Guest dwellings as defined in the city of Moreno Valley Municipal Code.
6. Additional single-family residential units located on the same parcel pursuant to the provisions of any agricultural zoning classifications as defined in the city of Moreno Valley Municipal Code.
7. Kennels and catteries established in connection with an existing single-family residential unit.
8. Accessory Dwelling Units, detached second units and attached second units as defined in the City of Moreno Valley Municipal Code.
9. Any sanctuary, or other activity under the same roof of a church or other house of worship that is not revenue generating and is eligible for a property tax exemption (excluding concert venues, coffee/snack shops, book stores, for-profit pre-school day-cares, etc., which would be assessed TUMF).

10. Any nonprofit corporation or nonprofit organization offering and conducting full-time day school at the elementary, middle school or high school level for students between the ages of five and eighteen (18) years.
11. New single-family homes, constructed by nonprofit organizations, specially adapted and designed for maximum freedom of movement and independent living for qualified disabled veterans.
12. Other uses may be exempt as determined by the WRCOG executive committee as further defined in the TUMF administrative plan.

G. Credit. Regional system improvements may be credited toward the TUMF in accordance with the TUMF administrative plan and the following:

Regional Tier.

1. Arterial Credits. If a developer constructs arterial improvements identified on the regional system, the developer shall receive credit for all costs associated with the arterial component based on approved Nexus Study for the regional system effective at the time the credit agreement is entered into. WRCOG staff must pre-approve any credit agreements that deviate from the standard WRCOG approved format.
2. Other Credits. In special circumstances, when a developer constructs off-site improvements such as an interchange, bridge, or railroad grade separation, credits shall be determined by WRCOG and the city in consultation with the developer. All such credits must have prior written approval from WRCOG.
3. The amount of the development fee credit shall not exceed the maximum amount determined by the Nexus Study for the regional system at the time the credit agreement is entered into or actual costs, whichever is less.

Local Tier.

1. The local jurisdictions shall compare facilities in local fee programs against the regional system and eliminate any overlap in its local fee program except where a recognized financing district has been established.
2. If there is a recognized financing district established, the local agency may credit that portion of the facility identified in both programs against the TUMF in accordance with the TUMF administrative plan. (Ord. 925 § 2, 2017)

3.2 Section 3.44.060 of Chapter 3.40, Title 3 of the City of Moreno Valley Municipal Code is hereby repealed and replaced to read as follows:

**3.44.060 Procedures for the levy, collection and disposition of fees.**

- A. Authority of the Community Development Department. The director of community development, or designee, is hereby authorized to provide WRCOG with all necessary information concerning new Development Projects that are subject to the TUMF to enable WRCOG to calculate the TUMF fees in a manner consistent with the TUMF Administrative Plan.
- B. Payment and Collection. Payment of the TUMF fees shall be as follows:
1. All fees collected hereunder shall be calculated and collected by WRCOG for deposit, investment, accounting, and expenditure in accordance with the provisions of this chapter, the TUMF Administrative Plan and Mitigation Fee Act.
  2. The fees shall be paid at the time a certificate of occupancy is issued for the development project or upon final inspection, whichever comes first (the "payment date"). However, this section should not be construed to prevent payment of the fees prior to issuance of an occupancy permit or final inspection. Fees may be paid at the issuance of a building permit, and the fee payment shall be calculated based on the fee in effect at that time, provided the developer tenders the full amount of his or her TUMF obligation. If the developer makes only a partial payment prior to the payment date, the amount of the fee due shall be based on the TUMF fee schedule in place on the payment date. The fees shall be calculated according to fee schedule set forth in this chapter and the calculation methodology set forth in the Fee Calculation Handbook adopted July 14, 2003, as amended from time to time.
  3. The fees required to be paid shall be the fee amounts in effect at the time payment is due under this chapter, not the date the ordinance codified in this chapter was initially adopted. The city shall not enter into a development agreement which freezes future adjustments of the TUMF.
  4. If all or part of any Development Project is sold prior to payment of the fee, the property shall continue to be subject to the requirement for payment of the fee. The obligation to pay the fee shall run with the land and be binding on all the successors in interest to the property.
  5. Fees shall not be waived.
- C. Issuance of Certificate of Occupancy. The City shall not issue a certificate of occupancy for any Development Project until WRCOG has provided written confirmation to the City that it has collected the TUMF fee.
- D. Appeals. Appeals shall be filed with WRCOG in accordance with the provisions of the TUMF administrative plan. Appealable issues shall be the application of the fee, application of credits, application of reimbursement, application of the legal action stay and application of exemption.
- E. Reports to WRCOG. The director of community development, or designee, shall prepare and deliver to the executive director of WRCOG periodic reports as will be established in the administrative plan. (Ord. 925 § 2, 2017)

3.3 Section 3.44.070 of Chapter 3.40, Title 3 of the City of Moreno Valley Municipal Code is hereby repealed and replaced to read as follows:

### **3.44.070 Appointment of the TUMF administrator.**

WRCOG is hereby appointed as the administrator of the transportation uniform mitigation fee program. WRCOG is hereby authorized to collect all fees generated from the TUMF within the city, and to invest, account for and expend such fees in accordance with the provisions of this chapter and the Mitigation Fee Act. The detailed administrative procedures concerning the implementation of this chapter shall be contained in the TUMF administrative plan. Furthermore, the TUMF administrator shall use the Fee Calculation Handbook adopted July 14, 2003, as amended from time to time, for the purpose of calculating a developer's TUMF obligation. In addition to detailing the methodology for calculating all TUMF obligations of different categories of new development, the purpose of the Fee Calculation Handbook is to clarify for the TUMF administrator, where necessary, the definition and calculation methodology for uses not clearly defined in the respective TUMF ordinances.

WRCOG shall expend only that amount of the funds generated from the TUMF for staff support, audit, administrative expenses, and contract services that are necessary and reasonable to carry out its responsibilities and in no case shall the funds expended for salaries and benefits exceed one percent of the revenue raised by the TUMF Program. The TUMF administrative plan further outlines the fiscal responsibilities and limitations of the administrator.

#### SECTION 4. EFFECT

No provisions of this Ordinance shall entitle any person who has already paid the TUMF to receive a refund, credit or reimbursement of such payment. This Ordinance does not create any new TUMF.

#### SECTION 5. SEVERABILITY

If any one or more of the terms, provisions or sections of this Ordinance shall to any extent be judged invalid, unenforceable and/or voidable for any reason whatsoever by a court of competent jurisdiction, then each and all of the remaining terms, provisions and sections of this Ordinance shall not be affected thereby and shall be valid and enforceable.

#### SECTION 6. NO PROCEDURAL DEFENSES

Prohibition of Jurisdictions from raising procedural defenses, including without limitation a statute of limitations, laches, the California Government Tort Claims Act, and necessary parties in a dispute with WRCOG regarding the matters set forth herein.

#### SECTION 7. EFFECT OF ENACTMENT

Except as specifically provided herein, nothing contained in this ordinance shall be deemed to modify or supersede any prior enactment of the City Council, which addresses the same subject addressed herein.

SECTION 8. NOTICE OF ADOPTION

Within fifteen days after the date of adoption hereof, the City Clerk shall certify to the adoption of this ordinance and cause it to be posted in three public places within the city.

SECTION 9. EFFECTIVE DATE

This ordinance shall take effect on May 1, 2019.

INTRODUCED at a regular meeting of the City Council on February 19, 2019 and PASSED, APPROVED, and ADOPTED by the City Council on \_\_\_\_ the following roll call vote, to wit:

- AYES: Council Members -
- NOES: Council Members -
- ABSENT: Council Members -
- ABSTAIN: Council Members -

ATTEST:

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Pat Jacquez-Nares, CMC & CERA, City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
Martin D. Koczanowicz, City Attorney

Attachment: TUMF Ordfinaldraft0213 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF) Calculation and Collection



Redline copy of proposed Ordinance --- (redline)

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MORENO VALLEY, CALIFORNIA, AMENDING CHAPTER 44 OF TITLE 3 ~~TO INCLUDE A PROCESS FOR WESTERN RIVERSIDE COUNCIL OF GOVERNMENTS TO TRANSFER THE RESPONSIBILITY FOR CALCULATION AND COLLECTION OF FEES UNDER THE WESTERN RIVERSIDE COUNTY TRANSPORTATION UNIFORM MITIGATION FEE (TUMF) PROGRAM TO WESTERN RIVERSIDE COUNCIL OF GOVERNMENTS~~

The City Council of the City of Moreno Valley does ordain as follows:

SECTION 1. GENERAL:

1.1 Western Riverside Council of Governments (WRCOG), upon the recommendation of the WRCOG Executive Committee, has adopted a revision to the Transportation Uniform Mitigation Fee TUMF calculation and collection process to provide an option in which WRCOG calculates and collects the TUMF Fee on behalf of member agencies that elect to participate. ~~delegate the fee calculation and collection task to WRCOG;~~ and

1.2 The City Council desires to amend Chapter 44 of Title 3 of the Moreno Valley Municipal Code to permit WRCOG to calculate and collect the TUMF Fee on behalf of the City. ~~under the TUMF program~~

~~1.3 Pursuant to the provisions of the law, a public hearing was held before the City Council on February 19, 2019, for deliberations and decision.~~

~~1.34 The matter was fully discussed, and the public and other agencies presented testimony and documentation.~~

~~1.5 The City Council finds that this Ordinance is not a "project" as defined in CEQA Guidelines Section 15378 because the action being considered involves transferring the responsibility for the calculation and collection of fees under the Western Riverside County Transportation Uniform Mitigation Fee (TUMF) program (originally adopted on February 4, 2003) from the City of Moreno Valley to the Western Riverside Council of Government (WRCOG). WRCOG is ultimately responsible for overall management and administration of the TUMF. As such, this activity is not subject to CEQA pursuant to Section 15060(c)(3). This determination is predicated on Section 15004 of the guidelines, which provide direction to lead agencies on the appropriate timing for environmental review.~~

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## SECTION 2. FINDINGS:

2.1 The City is a member agency of the Western Riverside Council of Governments ("WRCOG"), a joint powers agency comprised of the County of Riverside and 18 cities located in Western Riverside County. Acting in concert, the WRCOG Member Agencies developed a plan whereby the shortfall in funds needed to enlarge the capacity of the Regional System of Highways and Arterials in Western Riverside County (the "Regional System") could be made up in part by a Transportation Uniform Mitigation Fee ("TUMF") on future residential, commercial and industrial development.

2.2 WRCOG, upon the recommendation of the WRCOG Executive Committee, now desires to adopt a process in which WRCOG calculates and collects TUMF on behalf of member agencies under the Western Riverside County Transportation Uniform Mitigation Fee Program Ordinance of 2018.

2.3 The City Council finds that this Ordinance is not a "project" as defined in CEQA.

~~2.43.~~ The findings set forth in Ordinance No. 925 remain true and correct, and by this reference are incorporated into this Ordinance as if set forth in full herein. This Ordinance shall amend the provisions of Ordinance No. 925, and to the extent any provisions herein conflict with any provisions of Ordinance No. 925 or any other ordinance of the City, the City Council finds and determines that it is the intent of the City Council that the provisions herein shall control.

## SECTION 3. MUNICIPAL CODE AMENDED

3.1. Chapter 3.44.040 of Title 3 of the City of Moreno Valley Municipal Code is hereby repealed and replaced to read as follows:

### **"3.44.040 Establishment of the transportation uniform mitigation fee.**

A. Adoption of TUMF Schedule. The city council shall adopt an applicable TUMF schedule through a separate resolution, which may be amended from time to time.

B. Fee Calculation. The fees shall be calculated by WRCOG (addition) according to the calculation methodology fee set forth in the WRCOG TUMF Fee Calculation Handbook adopted July 14, 2003, as amended from time to time. In addition to data in the Fee Calculation Handbook, WRCOG staff and the local agency may consider the following items when establishing the appropriate fee calculation methodology:

1. Underlying zoning of the site;
2. Land-use classifications in the latest Nexus Study;
3. Project specific traffic studies;

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4. Latest standardized reference manuals such as the Institute of Traffic Engineers Trip Generation Manual;
5. Previous TUMF calculations for similar uses;
6. WRCOG staff shall approve final draft credit / reimbursement agreement prior to execution.

WRCOG shall have final determination regarding the appropriate methodology to calculate the fee based on the information provided by the City of Moreno Valley (addition). In case of ~~any conflict-dispute between among~~ the applicant, WRCOG, ~~and~~ or the local agency regarding the fee calculation methodology, the dispute resolution process in the TUMF administrative plan will apply.

C. Fee Adjustment. The fee schedule may be periodically reviewed and the amounts adjusted by the WRCOG executive committee. By amendment to the resolution reference in subsection A of this section, the fees may be increased or decreased to reflect the changes in actual and estimated costs of the regional system including, but not limited to, debt service, lease payments and construction costs. The adjustment of the fees may also reflect changes in the facilities required to be constructed, in estimated revenues received pursuant to this chapter, as well as the availability or lack thereof of other funds with which to construct the regional system. WRCOG shall review the TUMF Program no less than every four years after the effective date of the ordinance codified in this chapter.

D. Purpose. The purpose of the TUMF is to fund those certain improvements to the regional system as depicted in Exhibit "A" and identified in the 2016 Nexus Study, Exhibit "B" incorporated by reference herein.

E. Applicability. The TUMF shall apply to all new development within the city, unless otherwise exempt hereunder.

F. Exemptions. The following types of new development shall be exempt from the provisions of this chapter and in the TUMF administrative plan:

1. Low-income residential housing as described in Section 3.44.030 of this chapter and in the TUMF administrative plan.
2. Government/public buildings, public schools, and public facilities as described in Section 3.44.030 of this chapter and in the TUMF administrative plan. Airports that are public use airports and are appropriately permitted by Caltrans or other state agency.
3. The rehabilitation and/or reconstruction of any habitable structure in use on or after January 1, 2000, provided that the same or fewer traffic trips are generated as a result thereof.
4. Development projects which are the subject of a public facilities development agreement entered into pursuant to Government Code Section 65864 et seq., prior to the effective date of Ordinance No. 623 Section 2.2, 2003, wherein the imposition of new fees are

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expressly prohibited, provided that if the term of such a development agreement is extended by amendment or by any other manner after the effective date of Ordinance No. 623 Section 2.2, 2003, the TUMF shall be imposed.

5. Guest dwellings as defined in the city of Moreno Valley Municipal Code.
6. Additional single-family residential units located on the same parcel pursuant to the provisions of any agricultural zoning classifications as defined in the city of Moreno Valley Municipal Code.
7. Kennels and catteries established in connection with an existing single-family residential unit.
8. Accessory Dwelling Units, detached second units and attached second units as defined in the City of Moreno Valley Municipal Code.
9. Any sanctuary, or other activity under the same roof of a church or other house of worship that is not revenue generating and is eligible for a property tax exemption (excluding concert venues, coffee/snack shops, book stores, for-profit pre-school day-cares, etc., which would be assessed TUMF).
10. Any nonprofit corporation or nonprofit organization offering and conducting full-time day school at the elementary, middle school or high school level for students between the ages of five and eighteen (18) years.
11. New single-family homes, constructed by nonprofit organizations, specially adapted and designed for maximum freedom of movement and independent living for qualified disabled veterans.
12. Other uses may be exempt as determined by the WRCOG executive committee as further defined in the TUMF administrative plan.

G. Credit. Regional system improvements may be credited toward the TUMF in accordance with the TUMF administrative plan and the following:

Regional Tier.

1. Arterial Credits. If a developer constructs arterial improvements identified on the regional system, the developer shall receive credit for all costs associated with the arterial component based on approved Nexus Study for the regional system effective at the time the credit agreement is entered into. WRCOG staff must pre-approve any credit agreements that deviate from the standard WRCOG approved format.
2. Other Credits. In special circumstances, when a developer constructs off-site improvements such as an interchange, bridge, or railroad grade separation, credits shall be determined by WRCOG and the city in consultation with the developer. All such credits must have prior written approval from WRCOG.

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3. The amount of the development fee credit shall not exceed the maximum amount determined by the Nexus Study for the regional system at the time the credit agreement is entered into or actual costs, whichever is less.

Local Tier.

1. The local jurisdictions shall compare facilities in local fee programs against the regional system and eliminate any overlap in its local fee program except where a recognized financing district has been established.
2. If there is a recognized financing district established, the local agency may credit that portion of the facility identified in both programs against the TUMF in accordance with the TUMF administrative plan. (Ord. 925 § 2, 2017)

3.23- Chapter 3.44.060 of Title 3 of the City of Moreno Valley Municipal Code is hereby amended to read as follows:

#### **3.44.060 Procedures for the levy, collection and disposition of fees.**

A. Authority of the Community Development Department. The director of community development, or designee, is hereby authorized to provide WRCOG with all necessary information concerning new Development Projects that are subject to the TUMF to enable WRCOG to calculate the TUMF fees in a manner consistent with the TUMF Administrative Plan. ~~(addition) levy and collect the TUMF and make all determinations required by this chapter.~~

B. Payment and Collection ~~(addition)~~. Payment of the TUMF ~~(addition)~~ fees shall be as follows:

1. All fees collected hereunder shall be calculated and collected by WRCOG for deposit, investment, accounting, and expenditure in accordance with the provisions of this chapter, the TUMF Administrative Plan and Mitigation Fee Act. ~~(addition)~~

~~4.~~ 2. The fees shall be paid at the time a certificate of occupancy is issued for the development project or upon final inspection, whichever comes first (the "payment date"). However, this section should not be construed to prevent payment of the fees prior to issuance of an occupancy permit or final inspection. Fees may be paid at the issuance of a building permit, and the fee payment shall be calculated based on the fee in effect at that time, provided the developer tenders the full amount of his or her TUMF obligation. If the developer makes only a partial payment prior to the payment date, the amount of the fee due shall be based on the TUMF fee schedule in place on the payment date. The fees shall be calculated according to fee schedule set forth in this chapter and the calculation methodology set forth in the Fee Calculation Handbook adopted July 14, 2003, as amended from time to time.

3. The fees required to be paid shall be the fee amounts in effect at the time payment is due under this chapter, not the date the ordinance codified in this chapter was initially adopted. The city shall not enter into a development agreement which freezes future adjustments of the TUMF.

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3- 4. If all or part of any Development Project is sold prior to payment of the fee, the property shall continue to be subject to the requirement for payment of the fee. The obligation to pay the fee shall run with the land and be binding on all the successors in interest to the property.

4- 5. Fees shall not be waived.

C. ~~Disposition of Fees~~ **Issuance of Certificate of Occupancy**. All fees collected hereunder shall be transmitted to the executive director of WRCOG along with a corresponding remittance report by the tenth (10th) day of the close of the month for the previous month in which the fees were collected for deposit, investment, accounting and expenditure in accordance with the provisions of this chapter, the TUMF administrative plan, and the Mitigation Fee Act. **The City shall not issue a certificate of occupancy for any Development Project until WRCOG has provided written confirmation to the City that it has collected the TUMF fee.**

D. Appeals. Appeals shall be filed with WRCOG in accordance with the provisions of the TUMF administrative plan. Appealable issues shall be the application of the fee, application of credits, application of reimbursement, application of the legal action stay and application of exemption.

E. Reports to WRCOG. The director of community development, or designee, shall prepare and deliver to the executive director of WRCOG periodic reports as will be established in the administrative plan. (Ord. 925 § 2, 2017)

3.4. Chapter 3.44.070 of Title 3 of the City of Moreno Valley Municipal Code is hereby replaced to read as follows:

#### **3.44.070 Appointment of the TUMF administrator.**

WRCOG is hereby appointed as the administrator of the transportation uniform mitigation fee program. WRCOG is hereby authorized to ~~receive~~ **collect** all fees generated from the TUMF within the city, and to invest, account for and expend such fees in accordance with the provisions of this chapter and the Mitigation Fee Act. The detailed administrative procedures concerning the implementation of this chapter shall be contained in the TUMF administrative plan. Furthermore, the TUMF administrator shall use the Fee Calculation Handbook adopted July 14, 2003, as amended from time to time, for the purpose of calculating a developer's TUMF obligation. In addition to detailing the methodology for calculating all TUMF obligations of different categories of new development, the purpose of the Fee Calculation Handbook is to clarify for the TUMF administrator, where necessary, the definition and calculation methodology for uses not clearly defined in the respective TUMF ordinances.

WRCOG shall expend only that amount of the funds generated from the TUMF for staff support, audit, administrative expenses, and contract services that are necessary and reasonable to carry out its responsibilities and in no case shall the funds expended for salaries and benefits exceed one percent of the revenue raised by the TUMF Program. The TUMF administrative plan further outlines the fiscal responsibilities and limitations of the administrator.

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SECTION 4. EFFECT

No provisions of this Ordinance shall entitle any person who has already paid the TUMF to receive a refund, credit or reimbursement of such payment. This Ordinance does not create any new TUMF.

SECTION 5. SEVERABILITY

If any one or more of the terms, provisions or sections of this Ordinance shall to any extent be judged invalid, unenforceable and/or voidable for any reason whatsoever by a court of competent jurisdiction, then each and all of the remaining terms, provisions and sections of this Ordinance shall not be affected thereby and shall be valid and enforceable.

SECTION 6. NO PROCEDURAL DEFENSES

Prohibition of Jurisdictions from raising procedural defenses, including without limitation a statute of limitations, laches, the California Government Tort Claims Act, and necessary parties in a dispute with WRCOG regarding the matters set forth herein.

SECTION 7. EFFECT OF ENACTMENT

Except as specifically provided herein, nothing contained in this ordinance shall be deemed to modify or supersede any prior enactment of the City Council, which addresses the same subject addressed herein.

SECTION 8. NOTICE OF ADOPTION

Within fifteen days after the date of adoption hereof, the City Clerk shall certify to the adoption of this ordinance and cause it to be posted in three public places within the city.

SECTION 9. EFFECTIVE DATE

This ordinance shall take effect on May 1, 2019.

INTRODUCED at a regular meeting of the City Council on February 19, 2019 and PASSED, APPROVED, and ADOPTED by the City Council on \_\_\_\_ the following roll call vote, to wit:

- AYES: Council Members -
- NOES: Council Members -
- ABSENT: Council Members -
- ABSTAIN: Council Members -

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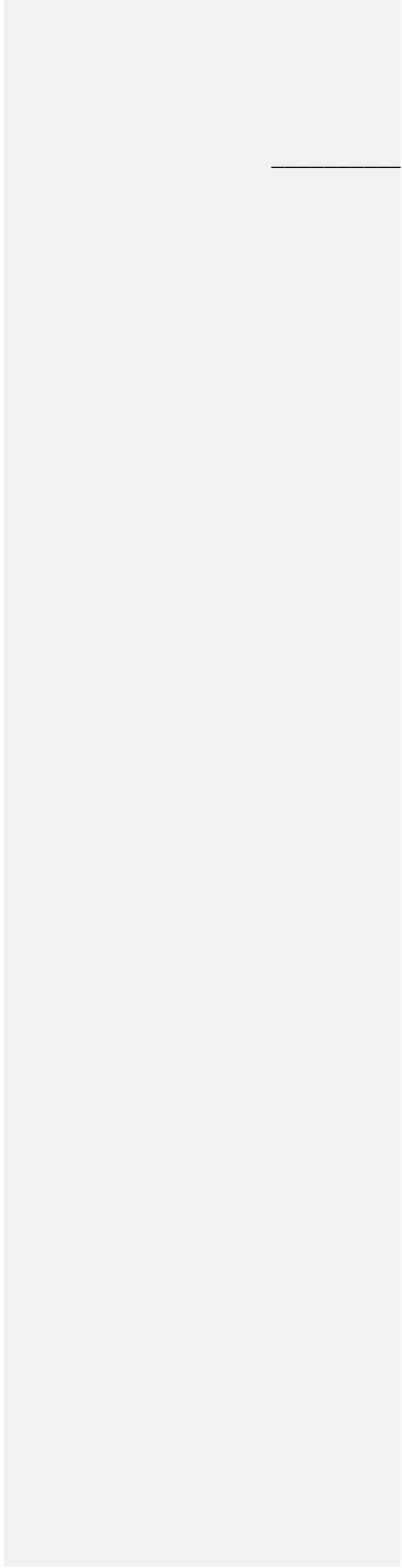
ATTEST:

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Pat Jacquez-Nares, CMC & CERA, City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
Martin D. Koczanowicz, City Attorney



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Attachment: TUMF Ordredline0213 (3428 : Streamlining the Transportation Uniform Mitigation Fee (TUMF) Calculation and Collection Process)

