



**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**

**March 15, 2016**

**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

Jeffrey J. Giba, Mayor Pro Tem  
Jesse L. Molina, Council Member

George E. Price, Council Member  
D. LaDonna Jempson, Council Member

**AGENDA**  
**CITY COUNCIL OF THE CITY OF MORENO VALLEY**  
**March 15, 2016**

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

**SPECIAL PRESENTATIONS**

1. Mayoral Proclamation - Landmark Middle School
  
2. Employee of the Quarter
  - a) Dale Mendenhall
  
3. Business Spotlight
  - a) Ranchitos Tacos Al Carbon

**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  
MARCH 15, 2016**

**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**

Rabi Shmuel M. Fuss, Chabab Jewish Community Center

**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 16, 2016 6:00 PM

**Recommendation:** Approve as submitted.

- A.3. APPROVAL OF THE FISCAL YEAR 2016/2017 STORM WATER PROTECTION PROGRAM BUDGET FOR COUNTY SERVICE AREA 152 (Report of: Public Works)

**Recommendations:**

1. Approve the County Service Area 152 Budget for Fiscal Year 2016/2017 in the amount of \$649,851.
2. Authorize the levy of County Service Area 152 Assessment at \$8.15 per Benefit Assessment Unit for FY 2016/2017.

- A.4. LIST OF PERSONNEL CHANGES (Report of: Administrative Services)

**Recommendation:**

1. Ratify the list of personnel changes as described.

- A.5. AUTHORIZE THE IMPLEMENTATION OF A COMMERCIAL VEHICLE SAFETY PROGRAM (Report of: Police Department)

**Recommendation:**

1. Approve the creation of a Commercial Vehicle Safety Program.
2. Approve budget adjustments to the adopted budget as set forth in the Fiscal Impact section of this report.

#### **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 FEBRUARY 16, 2016 (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 FEBRUARY 16, 2016 (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 FEBRUARY 16, 2016 (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. ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL SUBSTATION AND SWITCHYARD, PROJECT NO. 805 0027 (Report of: Financial & Management Services)

**Recommendations: That the City Council:**

1. Approve Resolution No. 2016-12. A Resolution of the City Council of the City of Moreno Valley, California, adopting a Mitigated Negative Declaration for the Kitching Electrical Substation and Switchyard Project No. 805 0027.

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

**G. REPORTS**

**G.1. CITY COUNCIL REPORTS ON REGIONAL ACTIVITIES**

(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

Southern California Association of Governments (SCAG)

Box Springs Mutual Water District (BSMWD)

**G.2. SIGNATURE AUTHORITY OF CITY MANAGER (Report of: Financial & Management Services)**

**Recommendations: That the City Council:**

1. Review the signature authority previously delegated to the City Manager by the City Council.
2. Take whatever action the City Council deems appropriate.

**G.3. DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING AGREEMENT BY AND BETWEEN CITY OF MORENO VALLEY AND RB BOULDER RIDGE, LP (Report of: Financial & Management Services)**

**Recommendations: That the City Council:**

1. Approve the Disposition and Development/Affordable Housing Agreement by and between the City of Moreno Valley and RB Boulder Ridge, LP.
2. Authorize the City Manager to execute the Disposition and Development/Affordable Housing Agreement which includes executing

documents necessary for the acquisition and disposition of the site, subject to the approval of the City Attorney.

3. Adopt Resolution 2016-13. A resolution of the City Council of the City of Moreno Valley, California, supporting the Boulder Ridge Affordable Housing Development and affirming its intention to provide financial assistance to Rancho Belago Developers, Inc. for the first phase.
4. Approve budget adjustments to the adopted budget as set forth in the Fiscal Impact section of this report.

#### **G.4. CITY MANAGER'S REPORT**

(Informational Oral Presentation - not for Council action)

#### **G.5. CITY ATTORNEY'S REPORT**

(Informational Oral Presentation - not for Council action)

#### **H. LEGISLATIVE ACTIONS**

##### **H.1. ORDINANCES - 1ST READING AND INTRODUCTION - NONE**

##### **H.2. ORDINANCES - 2ND READING AND ADOPTION - NONE**

##### **H.3. ORDINANCES - URGENCY ORDINANCES - NONE**

##### **H.4. RESOLUTIONS - NONE**

**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.**

#### **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.

#### **ADJOURNMENT**

**CERTIFICATION**

I, Jane Halstead, 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

Jane Halstead, CMC,  
City Clerk

Date Posted:



**MINUTES**  
**CITY COUNCIL REGULAR MEETING OF THE CITY OF MORENO VALLEY**  
**February 16, 2016**

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

**SPECIAL PRESENTATIONS**

1. Officer of the 4th Quarter - Officer Richard Reyes
2. Armada Elementary Mayoral Proclamation
3. Redemption Church Mayoral Proclamation
4. Jesus Holguin Proclamation

**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 16, 2016**

**CALL TO ORDER**

The 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 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**

The invocation was given by Pastor Phillip, Cross-Redemption Church.

**ROLL CALL**

Council:	Dr. Yxstian A. Gutierrez	Mayor
	Jeffrey J. Giba	Mayor Pro Tem
	George E. Price	Council Member
	D. LaDonna Jempson	Council Member

Absent: Jesse L. Molina Council Member

**INTRODUCTIONS**

Staff:	Michelle Dawson	City Manager
	Paul Early	Assistant City Attorney
	Jane Halstead	City Clerk
	Marshall Eyerman	Chief Financial Officer
	Thomas M. DeSantis	Assistant City Manager
	Ahmad Ansari	Public Works Director/City Engineer
	Joel Ontiveros	Police Chief
	Mark Williams	Battalion Chief
	Terrie Stevens	Administrative Services Director
	Gabriel Garcia	Parks & Community Services Director

Minutes Acceptance: Minutes of Feb 16, 2016 6:00 PM (CONSENT CALENDAR-CITY COUNCIL)

Mike Lee  
Allen Brock

Economic Development Director  
Community Development Director

**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**

Mayor Gutierrez announced there would be 30 minutes of public comment.

Public comments were received from:

Keith Overton

1. World Logistic Center

Sandra Murphy

1. Council doing a good job

Evan Morgan

1. City Matters
2. Referendum is insufficient

Karen Johnson

1. Moreno Valley Development
2. Growth of City

Tom Jerele, Sr.

1. Benefits of quality development

Santiago Hernandez

1. Congratulations to Moreno Valley
2. World Logistic Center

Frank Wright

1. Referendum

Roy Bleckert

1. Put differences aside
2. Quality of Life

Rafael Brugueras

1. City is moving forward

Darin Johnson

1. Drainage

2. Inadequate drainage

Gabe Colangelo

1. City issues

Item G.2 was moved prior to the Consent Calendar

JOINT CONSENT CALENDARS (SECTIONS A-D)

Mayor Gutierrez opened the agenda items for the Consent Calendars for public comments, Public comments were received from Chris Baca.

<b>RESULT:</b>	<b>APPROVED [UNANIMOUS]</b>
<b>MOVER:</b>	George E. Price, Council Member
<b>SECONDER:</b>	D. LaDonna Jempson, Council Member
<b>AYES:</b>	Dr. Yxstian A. Gutierrez, Jeffrey J. Giba, George E. Price, D. LaDonna Jempson
<b>ABSENT:</b>	Jesse L. Molina

Consent Calendar approved with the exception of item A.14 which was continued to a date uncertain.

**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. City Council - Joint Meeting - Jan 19, 2016 6:00 PM

**Recommendation:** Approve as submitted.

- A.3. APPROPRIATION OF ADDITIONAL FUNDS TO ADDRESS ENVIRONMENTAL MITIGATION IMPACT FEES FOR THE HEACOCK STREET CHANNEL PROJECT PROJECT NO. 804 0001 70 77 (Report of: Public Works)

**Recommendation:**

1. Authorize the re-appropriation of \$353,000 of Measure A funds (Fund 2001) from the Heacock Street / Perris Valley Storm Drain Lateral A to Cactus Avenue Project to the Heacock Street Channel Project.

- A.4. AUTHORIZE THE PROFESSIONAL SERVICE AGREEMENT WITH DISABILITY ACCESS CONSULTANTS (DAC) FOR ADA TRANSITION PLAN (Report of: Public Works)

**Recommendation:**

1. This report recommends to the City Council that the City Manager extend the agreement with Disability Access Consultants (DAC), a qualified ADA consultant to assist the City's ADA Coordinator in conducting a comprehensive review of the 1995 Transition Plan and 2010 ROW Plan and develop a single Comprehensive City-Wide Transition Plan that incorporates the elements of both Plans.
2. Approve budget adjustments to the adopted budget as set forth in the Fiscal Impact section of this report.

A.5. AWARD TO ALTEC FOR THE REPLACEMENT PURCHASE OF ONE FORD F-750 TREE MAINTENANCE BUCKET TRUCK (Report of: Public Works)

**Recommendations:**

1. Award to Altec, Inc of Creedmoor, NC, for the purchase of one 2016 Ford F-750 chassis truck with Articulating Aerial Bucket and Chip Dump Body, Altec Model LR7-60, and:
2. Authorize the Purchasing & Facilities Division Manager to issue a purchase order to Altec, Inc in the amount of \$142,457.

A.6. AUTHORIZE THE FIRST AMENDMENT TO AGREEMENT FOR PROFESSIONAL CONSULTANT SERVICES WITH PROACTIVE ENGINEERING CONSULTANTS FOR THE JOHN F. KENNEDY DRIVE STREET IMPROVEMENTS – PROJECT NO. 801 0060 (Report of: Public Works)

**Recommendations:**

1. Approve the First Amendment to the Agreement for Professional Consultant Services with Proactive Engineering Consultants (Proactive), 200 South Main St., Suite 300, Corona, CA 92882 to provide additional design support services during construction of the John F. Kennedy Drive Street Improvement Project.
2. Authorize the City Manager to execute the First Amendment to Agreement for Professional Consultant Services with Proactive in the form attached hereto.
3. Authorize an increase in the Purchase Order to Proactive in the amount of \$13,500.00 once the First Amendment to Agreement has been signed by all parties.

A.7. FOURTH AMENDMENT TO THE AGREEMENT WITH WILLDAN FINANCIAL SERVICES FOR ASSESSMENT ENGINEERING SERVICES (Report of: Public Works)

**Recommendations:**

1. Approve the Fourth Amendment to the Agreement for Professional Consultant Services Project No. Special Districts 2014-15 Levy CFD/LLD/LMD with Willdan Financial Services, 27368 Via Industria, Suite 110, Temecula, CA 92590-4856 to provide special tax and assessment engineering services.
2. Authorize the City Manager to execute the Fourth Amendment with Willdan Financial Services.
3. Authorize the issuance of a change order to the Purchase Order in the amount of \$20,000 for fiscal year 2015/16 to Willdan Financial Services and an increase to the not-to-exceed amount of the Agreement to \$131,495.
4. Authorize the City Manager to execute subsequent amendments to the Agreement, including the authority to approve purchase orders in accordance with the terms of the Agreement, provided sufficient funding appropriations have been granted by the City Council.

A.8. ACCEPTANCE OF CYCLE 7 HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) GRANT AND FUNDING APPROPRIATION FOR THE KITCHING STREET SAFETY IMPROVEMENT PROJECT (Report of: Public Works)

**Recommendations:**

1. Accept the California Department of Transportation (Caltrans) Highway Safety Improvement Program (HSIP) Cycle 7 grant award of up to \$140,000 in funds for implementing the project entitled "Kitching Street Road Safety Audit."
2. Authorize the Chief Financial Officer to appropriate \$140,000 as revenue and expense in the Capital Projects Reimbursements fund (Fund 2301).
3. Amend the Fiscal Year 15/16 Adopted Capital Improvement Plan to include the Ironwood Avenue Road Safety Audit as a funded project.

A.9. ACCEPTANCE OF CYCLE 7 HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) GRANT AND FUNDING APPROPRIATION FOR THE

IRONWOOD AVENUE SAFETY IMPROVEMENTS PROJECT (Report of: Public Works)

**Recommendations:**

1. Accept the California Department of Transportation (Caltrans) Highway Safety Improvement Program (HSIP) Cycle 7 grant award of up to \$350,000 in funds for implementing the project entitled "Ironwood Avenue Road Safety Audit."
2. Authorize the Chief Financial Officer to appropriate \$350,000 as revenue and expense in the Capital Projects Reimbursements fund (Fund 2301).
3. Amend the Fiscal Year 15/16 Adopted Capital Improvement Plan to include the Ironwood Avenue Road Safety Audit as a funded project.

A.10. ACCEPTANCE OF CYCLE 7 HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) GRANT AND FUNDING APPROPRIATION FOR THE ADVANCED DILEMMA ZONE DETECTION AT CERTAIN INTERSECTIONS PROJECT (Report of: Public Works)

**Recommendations:**

1. Accept the California Department of Transportation (Caltrans) Highway Safety Improvement Program (HSIP) Cycle 7 grant award of up to \$3,841,900 in funds for implementing the project entitled "Install Advanced Dilemma Zone Detection Systems at 65 Signalized Intersections Citywide."
2. Authorize the Chief Financial Officer to appropriate \$3,841,900 as revenue and expense in the Capital Projects Reimbursements fund (Fund 2301).
3. Amend the Fiscal Year 15/16 Adopted Capital Improvement Plan to include the Install Advanced Dilemma Zone Detection Systems at 65 Signalized Intersections Citywide as a funded project.

A.11. LIST OF PERSONNEL CHANGES (Report of: Administrative Services)

**Recommendation:**

1. Ratify the list of personnel changes as described.

A.12. AUTHORIZATION TO AWARD CONSTRUCTION CONTRACT FOR THE JOHN F. KENNEDY DRIVE STREET IMPROVEMENTS PROJECT NO. 801 0060 (Report of: Public Works)

**Recommendations:**

1. Award the construction contract to Wheeler Paving, Inc., 8432 63rd Avenue, Riverside, CA 92509, the lowest responsible bidder for the John F. Kennedy Drive Street Improvements Project.
2. Authorize the City Manager to execute a contract with Wheeler Paving, Inc.
3. Authorize the issuance of a Purchase Order to Wheeler Paving, Inc. in the amount of \$221,460.96 (\$184,550.80 bid amount plus 20% contingency) when the contract has been signed by all parties.
4. Authorize the Public Works Director/City Engineer to execute any subsequent related minor change orders to the contract with Wheeler Paving, Inc. up to, but not exceeding, the 20% contingency amount of \$36,910.16, subject to the approval of the City Attorney.

A.13. AUTHORIZATION TO AWARD CONSTRUCTION CONTRACT FOR THE ELSWORTH STREET AND SHERMAN AVENUE STREET IMPROVEMENTS PROJECT NO. 801 0059 (Report of: Public Works)

**Recommendations:**

1. Award the construction contract to Leonida Builders Inc., 1822-A E Route 66 #401, Glendora, CA 91740, the lowest responsible bidder for the Elsworth Street and Sherman Avenue Street Improvements Project.
2. Authorize the City Manager to execute a contract with Leonida Builders. Inc.
3. Authorize the issuance of a Purchase Order to Leonida Builders Inc. in the amount of \$263,450.00 (\$239,500.00 bid amount plus 10% contingency) when the contract has been signed by all parties.
4. Authorize the Public Works Director/City Engineer to execute any subsequent related minor change orders to the contract with Leonida Builders Inc. up to, but not exceeding, the 10% contingency amount of \$23,950.00, subject to the approval of the City Attorney.
5. Approve budget adjustments to the budget as set forth in the Fiscal Impact section of this report.

A.14. FUNDING APPROPRIATION FOR THE INTERIM COTTONWOOD BASIN PROJECT NO. 804 0013 (Report of: Public Works)



**Recommendation:**

1. Approve the appropriation of \$145,000 from the unencumbered General Fund fund balance to fund the interim Cottonwood Basin improvements: GL Account No. 1010-70-77-80004-720199, Project No. 804 0013-1010-99.
2. Approve budget adjustments as set forth in the Fiscal Impact section of this report.

**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 JANUARY 19, 2016 (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 JANUARY 19, 2016 (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 JANUARY 19, 2016 (See A.2)

**Recommendation:** Approve as submitted.

**E. PUBLIC HEARINGS**

E.1. ORDINANCE NO. 910. AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MORENO VALLEY, CALIFORNIA, AMENDING TITLE 9 OF THE CITY OF MORENO VALLEY MUNICIPAL CODE ESTABLISHING A DENSITY BONUS FOR MULTI-FAMILY PROJECTS THAT INCORPORATE GREEN BUILDING PRINCIPLES INTO THEIR DESIGN (Report of: Community Development)

Mayor Gutierrez opened the agenda item for public comments; there being none, public comments were closed.

**Recommendations:**

1. Introduce Ordinance No. 910. An Ordinance of the City Council of the City of Moreno Valley, California, amending Title 9 of the City of Moreno Valley Municipal Code establishing density bonus provisions for multi-family projects that incorporate green building principles into their design

<b>RESULT:</b>	<b>FIRST READING OF ORDINANCE [UNANIMOUS] Next: 3/1/2016 6:00 PM</b>
<b>MOVER:</b>	Jeffrey J. Giba, Mayor Pro Tem
<b>SECONDER:</b>	George E. Price, Council Member
<b>AYES:</b>	Dr. Yxstian A. Gutierrez, Jeffrey J. Giba, George E. Price, D. LaDonna Jempson
<b>ABSENT:</b>	Jesse L. Molina

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

**G. REPORTS**

**G.1. CITY COUNCIL REPORTS ON REGIONAL ACTIVITIES**

(Informational Oral Presentation - not for Council action)

March Joint Powers Commission (JPC)

Mayor Gutierrez provided an update from the January 20, 2016 March Joint Powers Commission meeting.

The Joint Powers Commission reviewed and approved the Airport Capital Improvement Program that prioritizes projects to be submitted to the FAA for grant application funding.

We received an update on the JPA's legislative priorities and approved a trip by some Commissioners to advocate on behalf of the JPA's priorities, which include:

Minutes Acceptance: Minutes of Feb 16, 2016 6:00 PM (CONSENT CALENDAR-CITY COUNCIL)

- Funding for infrastructure near the cemetery;
- Seeking a veterans' administration healthcare clinic; and
- Expressing the importance of the base to the surrounding communities, to help protect it from further downsizing and to encourage new missions to be assigned to March.

Finally, we approved a very limited cannabis cultivation ordinance to protect the JPA from new State legislation that could've threatened the JPA's local regulatory control of this important topic.

Riverside County Habitat Conservation Agency (RCHCA) - no report

Riverside County Transportation Commission (RCTC)

Mayor Gutierrez provided an update on the RCTC meeting.

In 2013, Governor Brown signed legislation creating the Active Transportation Program (ATP) in the Department of Transportation. The ATP consolidated various transportation programs, including the Transportation Alternatives Program, Bicycle Transportation Account, and State Safe Routes to School, into a single program with a focus to make California a national leader in active transportation.

On January 7th, the Southern California Association of Governments (SCAG) submitted the six county transportation commissions' recommendations for the Metropolitan Planning Organization (MPO) ATP Cycle 2 to the California Transportation Commission (CTC). As previously reported, RCTC's recommended list included Moreno Valley's project to build a 1.4-mile segment of the Juan Bautista De Anza Trail from Iris Avenue to El Potrero Park. I am pleased to report that the CTC approved the \$1.4 million funding allocation allowing our project to move forward.

Riverside Transit Agency (RTA) - no meeting

Western Riverside Council of Governments (WRCOG) - no meeting

Western Riverside County Regional Conservation Authority (RCA) - no meeting

School District/City Joint Task Force - no meeting

Southern California Association of Governments (SCAG) - no meeting

Item G.2 was moved prior to Consent Calendar.

G.2. APPOINTMENT TO THE LIBRARY COMMISSION (Report of: City Clerk)

Mayor Gutierrez opened the agenda item for public comments; there being none, public comments were closed.

**Recommendations:**

1. Appoint one member to the Library Commission with a term expiring June 30, 2017. The applicant that received the majority vote is Melissa Clark.
2. If vacancy is not filled by a majority vote of the City Council, authorize the City Clerk to re-advertise the position as vacant and carry over the current applications for reconsideration of appointments at a future date.

<b>RESULT:</b>	<b>CONTINUED [UNANIMOUS]</b>	<b>Next: 3/1/2016 6:00 PM</b>
<b>MOVER:</b>	D. LaDonna Jempson, Council Member	
<b>SECONDER:</b>	Jeffrey J. Giba, Mayor Pro Tem	
<b>AYES:</b>	Dr. Yxstian A. Gutierrez, Jeffrey J. Giba, George E. Price, D. LaDonna Jempson	
<b>ABSENT:</b>	Jesse L. Molina	

Motion by Mayor Pro Tem Giba to delay any voting until the item comes forward on March 15th.

Alternate Motion by Council Member Jempson to continue item to March 1, 2015.

### **G.3. CITY MANAGER'S REPORT**

(Informational Oral Presentation - not for Council action) - None

### **G.4. CITY ATTORNEY'S REPORT**

(Informational Oral Presentation - not for Council action) - None

### **H. LEGISLATIVE ACTIONS**

#### **H.1. ORDINANCES - 1ST READING AND INTRODUCTION - NONE**

#### **H.2. ORDINANCES - 2ND READING AND ADOPTION - NONE**

#### **H.3. ORDINANCES - URGENCY ORDINANCES - NONE**

#### **H.4. RESOLUTIONS - NONE**

**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 Jempson

Did a ride-along with traffic; encouraged Co-Council Members to please consider ride-alongs with Police and Fire; had a very busy day yesterday; only had 2 traffic officers

available in the city during the shift; reported she had to sit 2 hours due to a traffic mishap; appreciates discussions with officers; they do an awesome job and more officers are needed; will be at the check point; location had not been identified

#### Mayor Pro Tem Giba

Reported the BIA's Mayor's luncheon and update in Palm Desert, is pleased he gets to sit on regional councils, such as SCAG and League of California Cities; it's really a joy to work together with other Councils from other cities and serve on committees; always still learning; went to WRCOG Planning Director's Committee; very important, it was on special state planning and CEQA guidelines

Invited by Supervisor Benoit to go out to Indio for their President's Day breakfast and parade; Senator Stone was there; encouraged everyone to go out to the Date Festival

#### Council Member Price

He held a *Coffee with a Council Member* at Cupcake & Espresso Bar and about 40 or 50 people attended

Thanked Ahmad Ansari, Public Works/City Engineer and Mike Lee, Economic Development Director special recognition to Dave Slawson, bringing handouts; people had questions about Eastern Municipal Water District and County related; Jaime Hortado, Chief of Staff of Marion Ashley attended; appreciated it; was made aware of a sink hole on Cactus; thanked Dave Slawson and staff for their quick response

He is touring school districts, thanked staff; Mountain View Middle School which has a lot of special education students; nice to see the dedication of the students and teachers

The students had a special request for a skate park at Morrison Park

Attended a Chamber mixer at Hanger Trampoline Park; thanked staff for the tour

Heard a rumor that truck lanes in Badlands were being eliminated and asked staff to provide an answer

Next week he will be in Washington, will stop and see legislatures; the County elected will be in attendance

Thanked Mike Lee, Economic Development Director and Ahmad Ansari, Public Works Director/City Engineer for meeting with constituents

#### Mayor Gutierrez

Thanked the community for attending the Mayor's *Meet and Greet*

Congratulated Armada Elementary, also congratulated the Officer of the Quarter

Asked Marshall Eyerman, CFO what the status was on the *Hire Moval* part 2

Marshall Eyerman responded that currently a flyer was being worked on to inform the community and would be targeting smaller entities

### **ADJOURNMENT**

There being no further business to conduct, the Regular Meeting was adjourned at 7:35 p.m.

Submitted by:

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Jane Halstead, City Clerk, CMC  
 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  
 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:** Ahmad R. Ansari, P.E., Public Works Director/City Engineer

**AGENDA DATE:** March 15, 2016

**TITLE:** APPROVAL OF THE FISCAL YEAR 2016/2017 STORM WATER PROTECTION PROGRAM BUDGET FOR COUNTY SERVICE AREA 152

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### **RECOMMENDED ACTION**

#### **Recommendations:**

1. Approve the County Service Area 152 Budget for Fiscal Year 2016/2017 in the amount of \$649,851.
2. Authorize the levy of County Service Area 152 Assessment at \$8.15 per Benefit Assessment Unit for FY 2016/2017.

### **SUMMARY**

County Service Area (CSA) 152 was formed by Riverside County to offset a portion of the costs of the federally mandated National Pollutant Discharge Elimination System (NPDES) program. The County continues to manage the CSA program and applies parcel charges on the property tax bills of parcels which may benefit from the services. For the City to receive funding from the County, the City must prepare a CSA 152 Budget for submission to the County. This report recommends approval of the Fiscal Year (FY) 2016/2017 County Service Area 152 Budget in the amount of \$649,851, based on an assessment of \$8.15 per Benefit Assessment Unit (BAU).

### **DISCUSSION**

The CSA 152 program, as administered by the County, allows for the collection of revenues on the property tax bills to support the NPDES program. The County is the lead agency in administering CSA 152 and the City is a participating agency. In order to continue with the service provided under CSA 152, the City is required to approve the

CSA 152 budget for FY 2016/2017 in a specific amount (Attachment 1); and approve a CSA 152 Assessment per Benefit Assessment Unit (BAU) for FY 2016/2017.

Although costs may exceed the current revenues, Staff is not recommending an increase of the BAU assessment beyond the previously approved amount of \$8.15. Any increase to the BAU would require a mail ballot process under Proposition 218 and the approval of the property owners.

The County CSA 152 Administrative Services Agreement requires the City to adopt an annual CSA 152 Budget. To ensure the funding is secured and the assessment remains on the tax rolls for FY 2016/2017 staff is recommending Council adopt the CSA 152 budget as presented this evening. The County levies CSA 152 on the annual property tax bill on behalf of the City of Moreno Valley.

Failure by the City to enforce the NPDES program can result in penalties of up to \$37,500 per day for noncompliance and/or civil and criminal penalties. This is a federally mandated program administered by the State. **There has been neither State nor Federal monies allocated to local agencies to address these requirements.**

On February 10, 2016, the Finance Subcommittee reviewed and recommended to the City Council for approval the FY 2016/2017 CSA 152 Budget.

### **ALTERNATIVES**

1. Approve the CSA 152 Budget for FY 2016/2017 in the amount of \$649,851 and authorize the levy of CSA 152 Assessment at \$8.15 per BAU for FY 2016/2017. *Approval of this alternative assures that a portion of the funds necessary to support the various storm water management and maintenance programs for the City will continue to be collected.*
2. Do not approve the CSA 152 Budget for FY 2016/2017 in the amount of \$649,851 and do not authorize the levy of CSA 152 Assessment at \$8.15 per BAU for FY 2016/2017. *This alternative does not provide for the collection of the assessment on the annual tax rolls that are necessary to fund portions of the storm water management and maintenance programs and not authorizing either the budget or levy will interrupt the assessment and revenue collection process.*

### **FISCAL IMPACT**

Adoption of the recommended CSA 152 Budget and authorization of the annual levy will ensure that the City receives its authorized funding from this source. With the implementation of the federally mandated NPDES program, the City may use CSA 152 revenues together with other NPDES related revenues. However, in cases where the revenues do not fully fund program costs, the City's General Fund may be required to make up the shortfall. Approving the CSA 152 Budget will help mitigate the level of impact on the General Fund. **Funds collected from the CSA 152 annual levy are restricted for use only within the Storm Water Management programs.**



Due to the increasing difference between the projected CSA 152 revenue and the NPDES storm water program budgets, it may be necessary in the future to increase the CSA 152 assessment per BAU, identify and implement other funding sources, and/or continue to use the General Fund to make up program shortfalls.

**NOTIFICATION**

Publication of agenda.

**PREPARATION OF STAFF REPORT**

Prepared By:  
Rae Beimer  
Storm Water Program Manager

Department Head Approval:  
Ahmad R. Ansari, P.E.  
Public Works Director/City Engineer

Concurred By:  
Henry Ngo, P.E.  
Interim Engineering Division Manager

Concurred By:  
Marshall Eyeran  
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.

**Public Safety.** Provide a safe and secure environment for people and property in the community, control the number and severity of fire and hazardous material incidents, and provide protection for citizens who live, work and visit the City of Moreno Valley.

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

**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.

**ATTACHMENTS**

- 1. CSA 152 Budget FY 2016/2017

**APPROVALS**

Budget Officer Approval	<u>      ✓ Approved      </u>	3/02/16 9:40 AM
City Attorney Approval	<u>      ✓ Approved      </u>	3/01/16 1:02 PM
City Manager Approval	<u>      ✓ Approved      </u>	3/03/16 8:42 AM

**CITY OF MORENO VALLEY**  
**FISCAL YEAR 2016/2017 CSA 152 - BUDGET DETAIL**

	FY 2016/17
<b>1. STORM DRAINAGE SYSTEM INSPECTION (36" AND GREATER - 99,710 LF)</b>	
A.    Inspection	\$6,528.09
B.    Document Violations	\$1,450.69
C.    Inspection Preparation Plan	\$6,044.53
D.    Update Facilities Drawings	\$9,671.25
*****	
Sub-total =	\$23,694.56
<b>2. DRAINAGE AREA MANAGEMENT PLAN (DAMP)</b>	
A.    Catch Basin Maintenance	\$183,213.32
B.    Street Sweeping	\$289,429.00
C.    Development of Ordinances/Policies/BMPs	\$14,506.87
D.    Training Program Implementation	\$1,813.36
E.    Inspection of Illegal Connections and Dumping	\$6,044.53
F.    Development of Municipal Facilities Strategy	\$6,044.53
G.    Litter/Trash Characterization	\$6,044.53
*****	
Sub-total =	\$507,096.14
<b>3. PROGRAM ADMINISTRATION &amp; SUPERVISION</b>	
A.    Program Management	\$18,133.58
B.    Consultant's Fee (RCFC&WCD)	\$15,351.90
*****	
Sub-total =	\$33,485.48
<b>4. LEGAL MAILINGS</b>	
A.    Associate Environmental Engineer Cost	\$3,505.83
B.    Clerk's Cost	\$1,390.24
C.    Postage Cost	\$22,968.00
*****	
Sub-total =	\$27,864.07
<b>5. ASSESSOR CHARGE - \$0.25/parcel</b>	\$13,672.73
<b>6. COUNTY COMPUTER TIME</b>	\$5,046.97
<b>7. CSA 152 ADMINISTRATION FEE (6%)</b>	\$38,991.06
<b>TOTAL PROJECTED YEARLY COST (1. through 7.)</b>	<b>\$649,851.00</b>
 <b>ANNUAL ASSESSMENT</b>	
<hr style="width: 20%; margin-left: 0;"/>	
<b>COST</b>	\$649,851.00
<b>TOTAL BENEFIT ASSESSMENT UNITS</b>	79736.00
<b>ANNUAL ASSESSMENT PER BAU</b>	\$8.15



## Report to City Council

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**TO:** Mayor and City Council

**FROM:** Terrie Stevens, Administrative Services Director

**AGENDA DATE:** March 15, 2016

**TITLE:** LIST OF PERSONNEL CHANGES

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### **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 are presented for City Council ratification.

### **FISCAL IMPACT**

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

### **PREPARATION OF STAFF REPORT**

Prepared By:  
Terrie Stevens  
Administrative Services Director

Department Head Approval:  
Terrie Stevens  
Administrative Services Director

### **CITY COUNCIL GOALS**

None

### **ATTACHMENTS**

1. List of Personnel Changes

### **APPROVALS**

Budget Officer Approval	<u>✓ Approved</u>	3/03/16 3:44 PM
City Attorney Approval	<u>✓ Approved</u>	3/03/16 3:20 PM
City Manager Approval	<u>✓ Approved</u>	3/03/16 3:50 PM

**City of Moreno Valley  
Personnel Changes  
March 15, 2016**

**New Hires**

Victor Arreola  
Maintenance Worker I, Public Works

Jolene Thierry  
Senior Office Assistant, Community Development

**Promotions**

Yessenia Barajas  
From: Temp Recreation Aide, Parks & Community Services  
To: Recreation Program Leader, Parks & Community Services

Margret Linne  
From: Animal Services Assistant, Administrative Services  
To: Animal Rescue Coordinator, Administrative Services

**Transfers**

None

**Separations**

None



## Report to City Council

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**TO:** Mayor and City Council

**FROM:** Joel Ontiveros, Chief of Police

**AGENDA DATE:** March 15, 2016

**TITLE:** AUTHORIZE THE IMPLEMENTATION OF A COMMERCIAL VEHICLE SAFETY PROGRAM

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### **RECOMMENDED ACTION**

#### **Recommendation:**

1. Approve the creation of a Commercial Vehicle Safety Program.
2. Approve budget adjustments to the adopted budget as set forth in the Fiscal Impact section of this report.

### **SUMMARY**

This report recommends the City Council authorize the Moreno Valley Police Department to create the Commercial Vehicle Safety Program. The program will strive to decrease commercial vehicle collisions and stop offenders/drivers who violate vehicle and municipal codes within the Moreno Valley city limits as well as provide commercial vehicle safety and educational presentations. The Commercial Vehicle Safety Program implementation expenses will be paid by asset forfeiture funds held by the County of Riverside. This includes, but not limited to, the purchase of the truck, all modifications to the truck, additional required equipment, and officer training needed for the creation of this program. At this time there are no additional personnel costs as existing MVPD sworn officers will participate in the program.

### **DISCUSSION**

The City of Moreno Valley contains 489.8 roadway miles, over 1,100 lane miles and 180 intersections with tri-phase signal lights. In addition to passenger vehicles on city roads there are numerous commercial vehicles on the roadways. There are multiple

businesses in the city contributing to a high volume of commercial vehicle traffic. Adding to the commercial vehicle traffic is the proximity to the county dump and neighboring city business complexes. To address commercial vehicle concerns and traffic, the city has established truck routes and parking zones. The city designated the commercial vehicle routes and parking zones to increase public safety and enhance the quality of life for residents; however, the city has no commercial enforcement program to ensure commercial drivers adhere to the law.

Commercial Vehicles operating out of compliance on Moreno Valley roads pose a safety hazard. An 80,000 pound vehicle with a brake failure at any speed can be catastrophic. In addition, overloaded vehicles can significantly damage city roadways. The below statistics depict the need for enforcement of commercial vehicles.

Statistics:

- Total collisions involving large trucks (US): 333,000
- Total killed in crashes involving large trucks (CA): 244 (2<sup>nd</sup> highest behind Texas)
- Truck occupants killed: 697 (18% of total deaths)
- Occupants of other vehicles killed: 2,843 (73% of total deaths)
- Non-occupants killed (pedestrians, cyclists, etc.): 381 (10% of total deaths)
- Total injured in crashes involving large trucks: 104,000
- Occupants of other vehicles injured: 76,000 (73% of total injuries)
- Non-occupants injured (pedestrians, cyclists, etc.): 3,000 (3% of total injuries)
- Estimated costs of all collisions involving commercial vehicles in 2012: \$87 billion

**Large Trucks in Fatal Crashes by Truck Rating (2012):**

<u>Truck Weight Rating</u>	<u>Percentage of Large Truck Crash Fatalities</u>
6,001-10,000 lbs.	0.2%
10,001-14,000 lbs.	7.4%
14,001-16,000 lbs.	1.9%
16,001-19,500 lbs.	2.4%
19,501-26,000 lbs.	5.6%
26,001-33,000 lbs.	5.6%
33,001 lbs. or more	74.5%

On July 22, 2011, a driver was operating a commercial recreational vehicle on the roadways within Moreno Valley. The driver was traveling at an unsafe speed which led to him/her losing control of the vehicle. The commercial vehicle collided with a bicyclist causing him/her to be thrown approximately 36'. The bicyclist sustained fatal injuries due to the collision.

On September 4, 2014, a motorcyclist was driving at an unsafe speed on Moreno Valley roadways. The motorcyclist attempted to pass a vehicle and collided with a commercial truck illegally parked in the center divider. The motorcyclist succumbed to his injuries.

In December 2015, a driver was operating a commercial vehicle on the roadways within Moreno Valley. The driver of the commercial vehicle traveled outside of the designated truck route with the truck bed illegally raised. The driver's actions led to his vehicle colliding with a city traffic signal. The collision caused traffic congestion and about \$7,500 worth of damage.

Moreno Valley Police Department Officers currently possess minimal commercial enforcement training and have no testing equipment. Regardless of the lack of training and equipment, officers have issued 693 citations for commercial vehicles parking illegally throughout the city. A Commercial Vehicle Safety Program is needed to prevent the loss of life, injuries, and property damage.

The Moreno Valley Police Department recognized the need for local law enforcement participation in a Commercial Vehicle Safety Program. Commercial Enforcement Officers conduct inspections of commercial vehicles looking for unsafe conditions and equipment defects such as faulty brakes, steering, and structurally deficient trucks and trailers. Commercial Enforcement Officers also ensure commercial vehicles conform to weight requirements as set forth in the California Vehicle Code and Moreno Valley Municipal Code.

Many city streets are not designated as truck routes and are not large enough to allow proper passage of commercial vehicles. Overweight trucks damage roadway surfaces, and those exceeding length requirements often impede traffic and/or strike stationary objects such as posts, street signs, and fire hydrants.

Commercial trucks illegally parked in the city of Moreno Valley create a visual hazard for approaching vehicles and pedestrians. Collisions involving illegally parked commercial vehicles frequently lead to extensive vehicle damage and injuries. Additionally, the illegally parked commercial vehicles are targets for vehicle burglaries and thefts. Occasionally, the drivers illegally dump their trash and vehicle fluids onto city streets. These instances create a visual nuisance and can diminish property values.

Commercial Enforcement Officers duties would involve weighing and inspecting commercial vehicles, with regard to the condition of vehicle components and systems, registration requirements, loading, required equipment, and compliance with the California Vehicle Code and other laws, rules, and regulations governing these vehicles. Commercial Enforcement Officers will establish safe working practices; establish and maintain good communication with drivers; inspect driver license, log book, documents, and driver's physical condition. Officers will perform routine inspections on commercial type vehicles to determine if they comply with weight, size, load containment/securement, hazardous materials, safety, and equipment requirements. Also, officers will inspect and test various commercial vehicle components, their systems for compliance with the California Vehicle Code and other applicable laws and regulations.



The Commercial Enforcement Officer will operate scales to weigh commercial vehicles. Officers will ensure commercial drivers properly maintain their logs, document inspections, and complete other job-related forms. Officers will check the vehicle registration, permits, and shipping papers. During emergencies involving commercial vehicles, officers will provide directions and information to the public and allied agencies. As part of the educational function of the program, officers will attend patrol briefings to educate patrol officers and train new traffic personnel on how to conduct inspections. The Commercial Enforcement Officers will refer violators to the appropriate judicial entity.

Commercial Enforcement Officers will educate the public about various commercial vehicle related-issues such as designated truck routes, parking zones, legal updates, and safety requirements. Officers will meet with commercial vehicle owners, businesses, and others to provide safety presentations.

Officers currently assigned to the Moreno Valley Police Department Traffic Division would be utilized as Commercial Enforcement Officers. Sworn officer(s) would enforce commercial vehicle laws and conduct training as a collateral traffic duty. The department would strive to devote about forty hours a week on the commercial program. The addition of this program would increase safety for the city while not increasing the cost of police service. Asset forfeiture funds would be utilized to pay for the training and equipment to start the program. Therefore, the city will incur no additional expenses.

## **ALTERNATIVES**

The Council has the following alternatives:

1. Approve the recommendation for creation of a Commercial Vehicle Safety Program and budget adjustments to the adopted budget as set forth in the Fiscal Impact section of this report. ***Staff recommends this alternative as it will promote increased public safety and quality of life by mitigating the negative impact from commercial vehicle collisions and roadway damage in the city.***
2. Decline the creation for a Commercial Vehicle Safety Program and budget adjustments to the adopted budget as set forth in the Fiscal Impact section of this report. ***Staff does not recommend this alternative as it will prevent proactive enforcement of commercial vehicle laws which can have a negative impact on the residents of the city.***

## **FISCAL IMPACT**

The MVPD is requesting City Council to approve utilizing asset forfeiture funds held by the County of Riverside to pay for the equipment and training to support the Commercial Vehicle Safety Program. The use of asset forfeiture funds eliminates all costs to the

City. A basic summary of the expenses the asset forfeiture funds would cover are as follows:

- ¾ Ton truck purchase \$ 56,000
- Camper Shell \$ 5,362
- Emergency Vehicle lights, siren, radio and Installation of equipment \$ 24,000
- Purchase of four Haenni analog scales \$ 21,293
- Miscellaneous other equipment
- (Including tools, measuring devices and etc.) \$ 15,000
  
- Flight, hotel, rental car and per diem for two officers to attend: 40 hour training course on Hazardous Materials, 40 hour course on Commercial Vehicle Enforcement, and CHP Commercial Enforcement Class & Hazardous Material Class \$ 3,000

Total Expenses: \$124,655

An amount of \$124,655 from asset forfeiture funds held by the County of Riverside would cover the expenses of training and equipment. No additional expenses from sworn officer's salary would occur due to the use of existing personnel.

Revenue/Expenditure Appropriation

Description	Fund	GL Account No.	Type (Rev/Exp)	FY 2015/2016 Proposed Budget Amendment
Asset Forfeiture Revenue (from County)	1010	60-67-40210-480150	Rev	124,655
¾ Ton Truck Purchase	1010	60-67-40210-660312	Exp	56,000
Camper Shell	1010	60-67-40210-660398	Exp	5,362
Emergency Vehicle lights, siren radio, and installation of equipment	1010	60-67-40210-660398	Exp	24,000
Haenni Analog Scales (Sole Source)	1010	60-67-40210-660398	Exp	21,293
Tools, Measuring Devices, etc.	1010	60-67-40210-630320	Exp	15,000
Commercial Enforcement & Hazardous Material Class	1010	60-67-40210-620510	Exp	3,000

**NOTIFICATION**

Publication of the agenda.

**PREPARATION OF STAFF REPORT**

Prepared By:  
Name Eric Hernandez  
Title Lieutenant

Department Head Approval:  
Name Joel Ontiveros  
Title Chief of Police

**CITY COUNCIL GOALS**

**Public Safety.** Provide a safe and secure environment for people and property in the community, control the number and severity of fire and hazardous material incidents, and provide protection for citizens who live, work and visit the City of Moreno Valley.

**ATTACHMENTS**

None

**APPROVALS**

Budget Officer Approval	<u>✓ Approved</u>	3/02/16 10:15 AM
City Attorney Approval	<u>✓ Approved</u>	3/01/16 1:04 PM
City Manager Approval	<u>✓ Approved</u>	3/03/16 2:18 PM



## Report to City Council

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**TO:** Mayor and City Council

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

**AGENDA DATE:** March 15, 2016

**TITLE:** ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL SUBSTATION AND SWITCHYARD, PROJECT NO. 805 0027

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### **RECOMMENDED ACTION**

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

1. Approve Resolution No. 2016-12. A Resolution of the City Council of the City of Moreno Valley, California, adopting a Mitigated Negative Declaration for the Kitching Electrical Substation and Switchyard Project No. 805 0027.

### **SUMMARY**

This report recommends the adoption of a Mitigated Negative Declaration, and Mitigation Monitoring and Reporting Program associated with the Kitching Street Electrical Substation and Switchyard project in compliance with the California Environmental Quality Act (CEQA). The proposed substation and switchyard are located at the northwest corner of Kitching Street and Edwin Road in the City's south industrial area (Attachment 1). This project will provide electrical service to existing development and planned development of large industrial projects with approximately 8 million square feet of new industrial space consistent with the General Plan and Moreno Valley Industrial Area Plan. The project will also improve the reliability and operational flexibility of the electrical distribution system in the south industrial area of the City. The project is funded with 2015 Lease Revenue Bond monies, and has been approved in the 2014/2015 Capital Improvement Plan.

This item was presented to and approved by the Utilities Commission on February 19.

### **DISCUSSION**

#### **Environmental Determination**

On November 24, 2015, City Council approved the bid award for the design of the Kitching Street Electrical Substation to HDR, Inc. (HDR). An Agreement for Project Related Services (Agreement) with HDR was subsequently executed. In accordance with the Agreement and in compliance with CEQA and the City's Rules to Implement CEQA, HDR prepared an Initial Study. Several technical reports, studies, analysis, and calculations were performed to adequately address environmental concerns, including a Biological Resources and Multi-species Habitat Conservation Plan (MSHCP) Consistency Report, Cultural Resource Technical Report, Noise and Vibration Analysis, Air Quality Calculations, Geotechnical Investigation Report, Hydrology and Hydraulics Study, and Water Quality Management Plan. Based on HDR's findings, the adoption of a Mitigated Negative Declaration is recommended. A mitigation measure is proposed to ensure that a potential impact to two plant species is addressed consistent with the policies of the MSHCP. A focused survey for smooth tarplant and Coulter's goldfields will be conducted by a qualified biologist during the appropriate blooming season for these species (April – June). Based on the analysis included in the Initial Study, no other mitigation measures are required for the project.

#### CEQA Process

CEQA Section 15070 (Title 14 – California Code of Regulations), states that a Mitigated Negative Declaration (MND) may be prepared for a project when the Initial Study indicates that no significant effect on the environment will result from project implementation with the mitigation measures incorporated therein. The Resolution including the Mitigated Negative Declaration and the Initial Study/Environmental Checklist Form are attached (Attachment 2) for City Council adoption. A Mitigation Monitoring and Reporting Program is also attached (Attachment 3).

### **ALTERNATIVES**

1. Approve Resolution No. 2016-XX. A Resolution of the City Council of the City of Moreno Valley, California, adopting a Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program for the Kitching Street Electrical Substation and Switchyard Project No. 805 0027. *This is the recommended alternative as the project will not result in significant environmental impacts in compliance with CEQA, a state requirement.*
2. Do not approve Resolution No. 2016-XX. A Resolution of the City Council of the City of Moreno Valley, California, adopting a Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program for the Kitching Street Electrical Substation and Switchyard Project No. 805 0027. *This alternative is not recommended as it will delay the completion of the project.*

### **FISCAL IMPACT**

The project is being funded with 2015 Lease Revenue Funds, and has been approved in the 2014/2015 Capital Improvement Plan. There is no impact to the General Fund.

**NOTIFICATION**

A notice was published on February 20, 2016 in the Press Enterprise advising the public of the preparation of a Mitigated Negative Declaration, and included the time and place where the environmental documents could be inspected. The notice identified that the City Council would consider the Mitigated Negative Declaration for the project on March 15, 2016. This notice advised that the comment period for written correspondence would conclude on March 11, 2016.

**PREPARATION OF STAFF REPORT**

Prepared By:  
Clement Jimenez  
Senior Engineer, P.E.

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

Concurred By:  
Jeannette Olko  
Electric Utility Division Manager

Department Head Approval:  
Allen Brock  
Community Development Director/Building Official

**CITY COUNCIL GOALS**

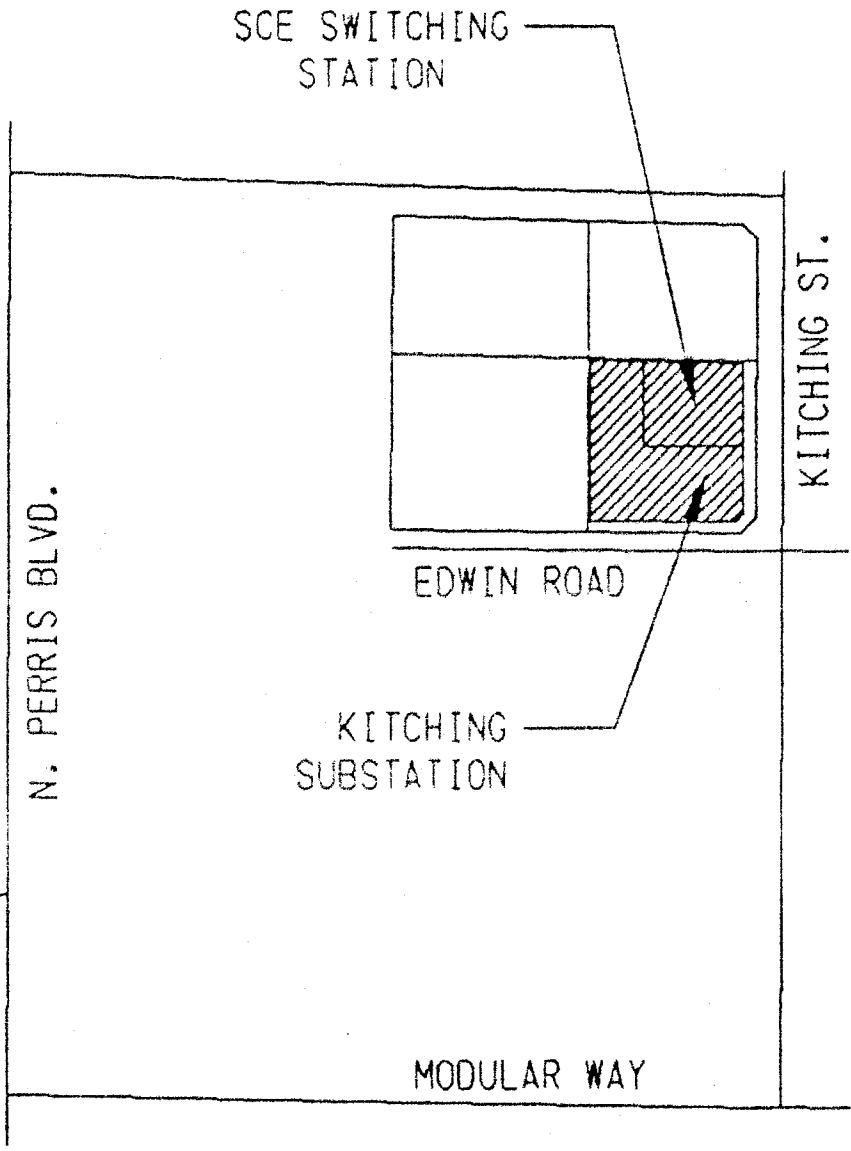
**Public Facilities and Capital Projects.** Ensure that needed public facilities, roadway improvements, and other infrastructure improvements are constructed and maintained.

**ATTACHMENTS**

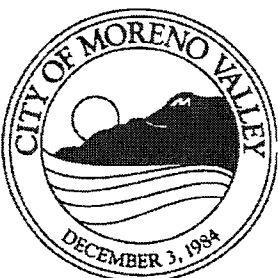
- 1. Location Map
- 2. Resolution 2016-12
- 3. MND\_IS\_MMRP\_03.03.17

**APPROVALS**

Budget Officer Approval	<u>✓ Approved</u>	2/29/16 1:01 PM
City Attorney Approval	<u>✓ Approved</u>	3/02/16 4:10 PM
City Manager Approval	<u>✓ Approved</u>	3/03/16 8:42 AM



# LOCATION MAP



Financial & Management  
 Services Department  
 Electric Utility Division

ATTACHMENT 1

KITCHING STREET ELECTRICAL SUBSTATION  
 AND SWITCHYARD  
 PROJECT NO. 805 0027

Attachment: Location Map (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL SUBSTATION AND

## RESOLUTION NO. 2016-12

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MORENO VALLEY, CALIFORNIA, ADOPTING A MITIGATED NEGATIVE DECLARATION AND MITIGATION MONITORING AND REPORTING PROGRAM FOR THE KITCHING STREET ELECTRICAL SUBSTATION AND SWITCHYARD PROJECT No. 805 0027

WHEREAS, the City considered and analyzed the Kitching Street Electrical Substation and Switchyard Project ("Project") and determined that the Project was subject to the California Environmental Quality Act (CEQA); and

WHEREAS, HDR, Inc., the design and environmental consultant for the City, prepared the Initial Study for the Project, which was reviewed by the Community Development Department - Planning Division, and concluded that the mitigation measures identified in the Initial Study/Mitigated Negative Declaration will reduce environmental impacts to a less than significant level; and

WHEREAS, a Mitigation Monitoring and Reporting Program (MMRP) was prepared to ensure compliance with the identified mitigation measures during Project implementation, pursuant to Title 14 of the California Code of Regulations, Section 15000 et seq. (CEQA Guidelines), and

WHEREAS, the City completed the required public notice for the Mitigated Negative Declaration as described in the CEQA Guidelines, and the Mitigated Negative Declaration and MMRP were available to the public during the review period; and

WHEREAS, all legal prerequisites to the adoption of this Resolution have occurred;

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

1. The Project has been independently reviewed and analyzed, together with comments received during public review and other information, and has considered this information.
2. An Initial Study and Mitigated Negative Declaration was prepared published, circulated and reviewed in accordance with the requirements of CEQA and CEQA Guidelines, and constitutes an adequate, accurate, & objective analysis addressing all issues of the Project

1  
Resolution No. 2016 -12  
Date Adopted: March 15, 2016



- 3. The Initial Study evaluated and analyzed the consistency of the Project with the Western Riverside County Multi-species Habitat Conservation Plan (WRC-MSHCP), and concluded that the Project will be consistent with the MSHCP. Further, the Project will be required to pay MSHCP mitigation fees if applicable.
- 4. Based on the whole record, there is no substantial evidence that the Project as proposed and mitigated will have a significant impact on the environment.
- 5. Further, the Mitigated Negative Declaration reflects the independent judgment and analysis of the City.
- 6. The City Council hereby approves Resolution No. 2016-XX, based on the preparation of an Initial Study and consideration of any public comments received on the Initial Study/Mitigated Negative Declaration:
- 7. The City Council hereby adopts a Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program for the Kitching Street Electrical Substation and Switchyard Project as identified in the attached Mitigated Negative Declaration/Initial Study included as Exhibit A, and Mitigation Monitoring and Reporting Program included as Exhibit B

APPROVED AND ADOPTED this 15<sup>th</sup> day of March, 2016.

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

ATTEST:

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

APPROVED AS TO FORM:

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

2  
Resolution No. 2016 - 12  
Date Adopted: March 15, 2016

Attachment: Resolution 2016-12 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

**RESOLUTION JURAT**

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

I, Jane Halstead, City Clerk of the City of Moreno Valley, California, do hereby certify that Resolution No. 2016 -12 was duly and regularly adopted by the City Council of the City of Moreno Valley at a regular meeting thereof held on the 15<sup>th</sup> day of March, 2016 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

(Council Members, Mayor Pro Tem and Mayor)

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

(SEAL)

Resolution No. 2016 - 12 <sup>3</sup>  
Date Adopted: March 15, 2016

Attachment: Resolution 2016-12 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



Draft Mitigated Negative Declaration

# Kitching Street Electrical Substation and Switchyard

*Moreno Valley, California*

February 2016

HDR, Inc.  
3230 El Camino Real, Suite 200  
Irvine, CA 92602

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



## 1.0 INTRODUCTION

### 1.1 Purpose

This document is a Mitigated Negative Declaration/Initial Study for evaluation of environmental impacts resulting from implementation of the Kitching Street Electrical Substation and Switchyard project. For purposes of this document, this proposed development as described in Section 2.0, Project Description, will be called the “proposed project.”

### 1.2 California Environmental Quality Act Compliance

The City of Moreno Valley is the California Environmental Quality Act (CEQA) lead agency responsible for the review and approval of the proposed Kitching Street Electrical Substation and Switchyard project. Based on the findings of the Initial Study, the City of Moreno Valley has made the determination that a Mitigated Negative Declaration (MND) is the appropriate environmental document to be prepared in compliance with CEQA (California Public Resources Code, Section 21000 et seq.). As stated in CEQA Section 21064, an MND may be prepared for a project subject to CEQA when an Initial Study has identified no potentially significant effects on the environment.

The purpose of the MND and the Initial Study checklist is to determine if any potentially significant impacts are associated with the proposed project and to incorporate mitigation measures into the project design as necessary to reduce or eliminate the significant or potentially significant effects of the project.

### 1.4 List of Discretionary Actions

Approval of the following discretionary actions will be required in order to implement the proposed project:

- Improvement Plans – City of Moreno Valley
- Plot Plan – City of Moreno Valley

Other approvals:

- Grading Permit – City of Moreno Valley
- Water Quality Management Plan (WQMP) – City of Moreno Valley
- Storm Water Pollution Prevention Plan (SWPPP) – City of Moreno Valley

### 1.5 Public Review Process

In accordance with CEQA, a good-faith effort has been made during the preparation of this MND to contact affected agencies, organizations, and persons who may have an interest in this project.

In reviewing the MND, affected public agencies and the interested public should focus on the sufficiency of the document in identifying and analyzing the project's potential impacts on the environment. A copy of the Draft MND and related documents are available for review at the City of Moreno Valley.

## 2.0 PROJECT DESCRIPTION

### 2.1 Project Location

The 1.87-acre site is located in the southern portion of the City of Moreno Valley, approximately 12 miles southeast from the City of Riverside and 0.8 miles from the City of Perris. Figure 1 depicts the regional location of the project site. The project site is located on vacant land identified as Assessor Parcel Number (APN) 312-250-016 (Figure 2).

As seen in Figure 3, the project site is located within the boundaries of the Moreno Valley Industrial Area Plan (MVIAP) (Specific Plan 208). This specific plan area comprises approximately 1,540 acres of land in southwestern Moreno Valley. The purpose of the Moreno Valley Industrial Area Plan is to provide guidelines and standards for development within the City's industrial area.

The project site is located on publicly owned land and is located at the northwest corner of Kitching Street and Edwin Road. It is bordered to the east by Kitching Street and the Eastern Municipal Water District's Moreno Valley Regional Water Reclamation Facility, automotive businesses to the north and west, and vacant industrial land to the south.

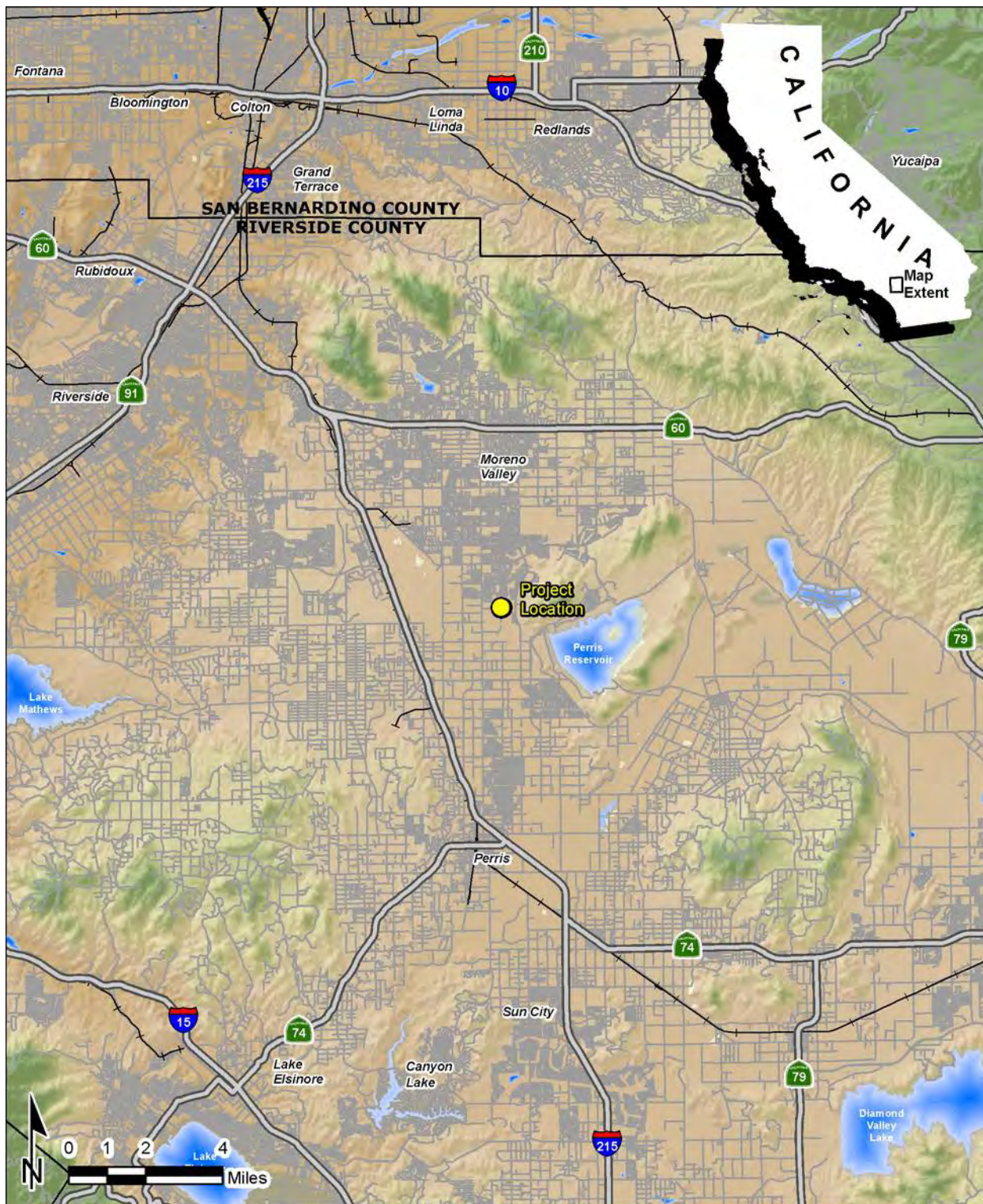
### 2.2 Environmental Setting and Surrounding Land Uses

The project site is located on a vacant lot designated as Business Park/Light Industrial (Figure 4). Land uses surrounding the immediate area of the project site include a towing company to the north, the Fisker Automotive factory to the west, vacant land to the south (currently approved for an approximately 1.1 million square foot warehouse), and the Eastern Municipal Water District's Moreno Valley Regional Water Reclamation Facility to the east. Land uses located further north include the Perris Valley Storm Drain Channel (Lateral A) and residences. The March Air Reserve Base is located approximately 1.8 miles northwest of the project site.

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



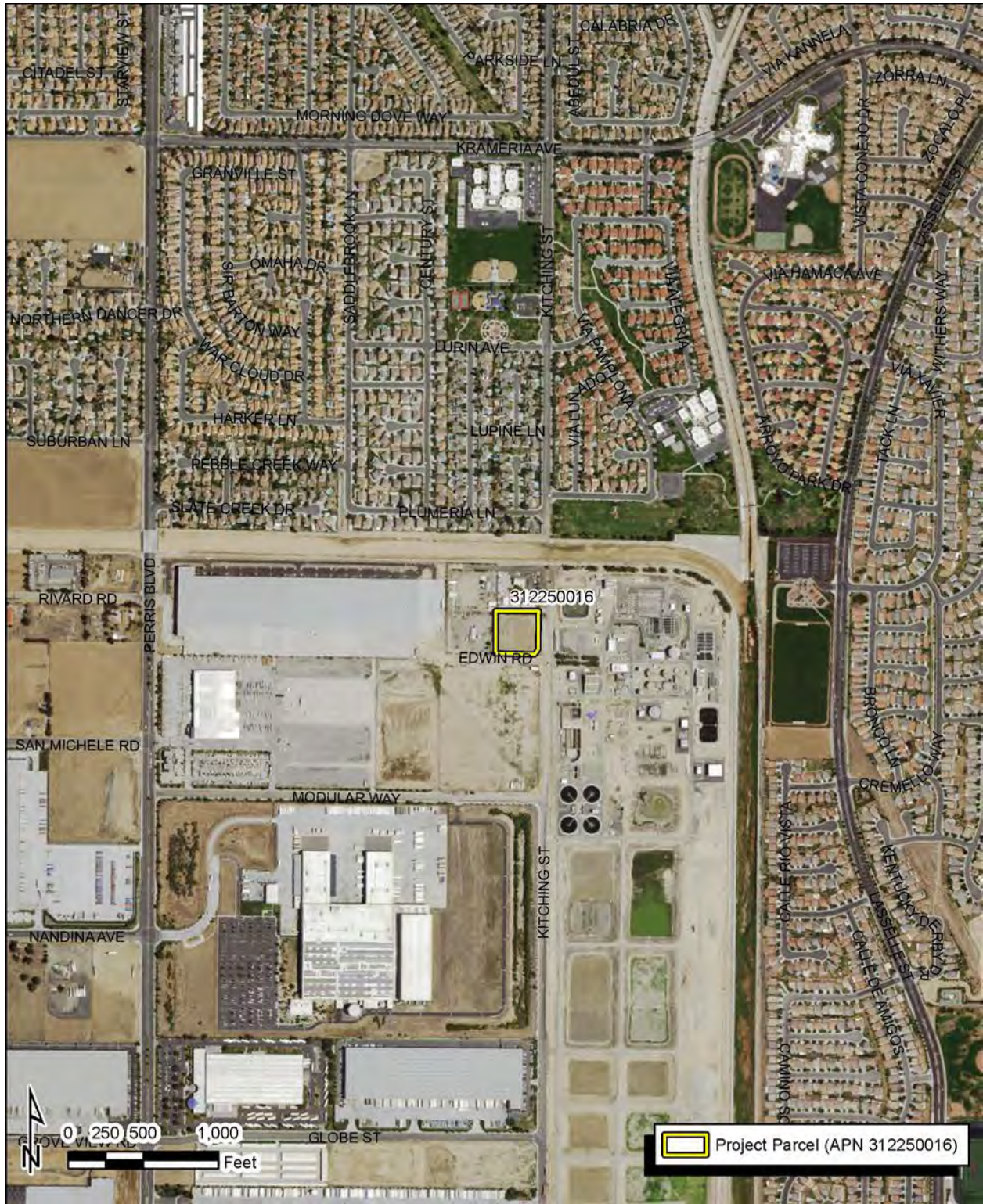
Figure 1. Project Location



G:\GIS\_Production\Projects\CityofMorenaValley\_201067\Kitching\_Substation\_271253\7.2\_Work\_In\_Progress\map\_docs\mxd\BTR\Regional.mxd-aburvall-12/28/2015

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

Figure 2. Project Vicinity

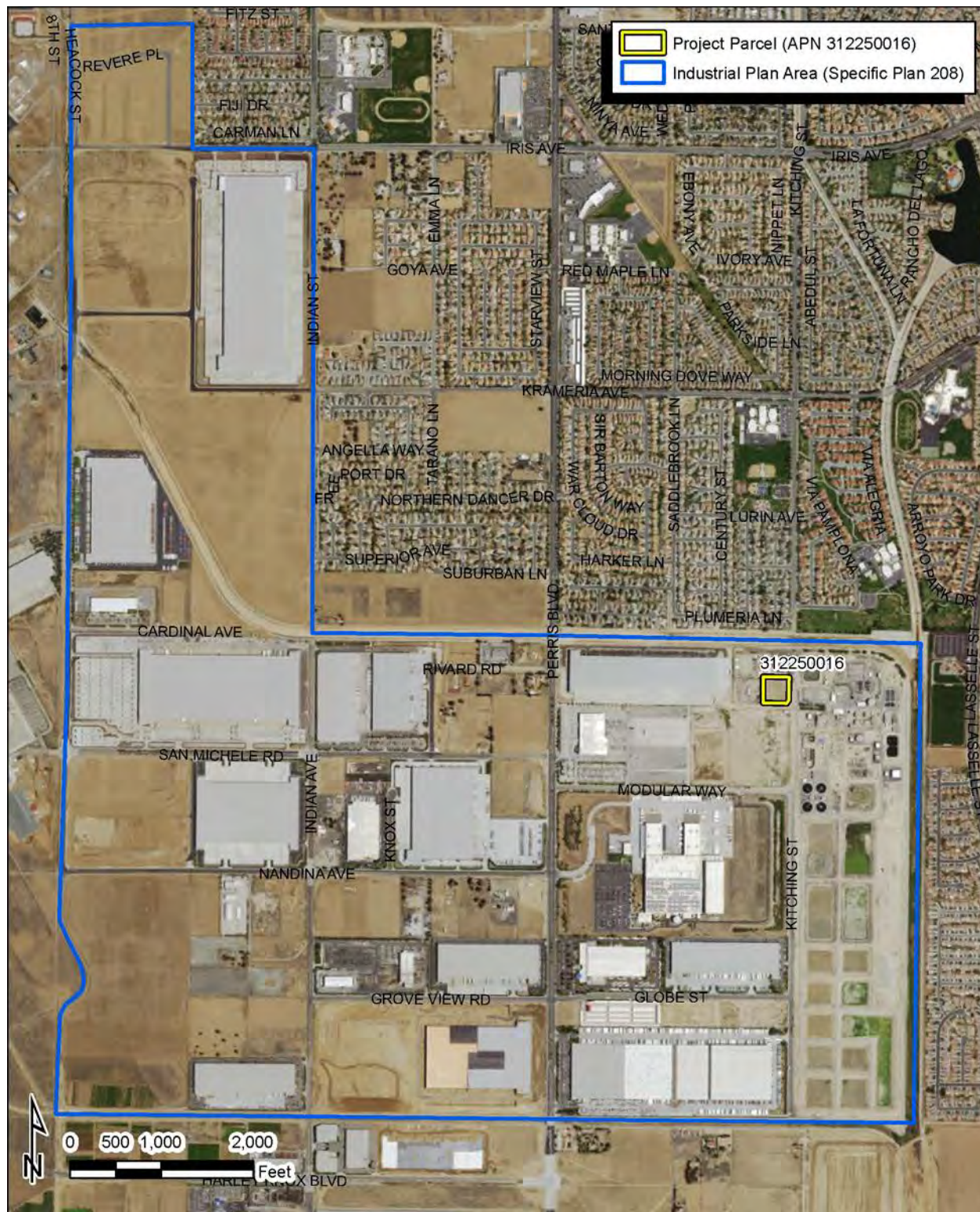


Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL





Figure 3. Project Location within MVIAP (Specific Plan 208)



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Figure 4. Land Use



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## 2.3 Project Characteristics

Moreno Valley Electric Utility (MVU) is proposing to construct an electrical substation and switchyard on approximately 1.87 acres of land owned by the City at the northwest corner of the Kitching Street and Edwin Road intersection (Figure 5). The switchyard would be located within the northeastern portion of the project site and the substation would be located within the southern portion of the project site. The new substation will consist of 115 kilovolt (kV) group operated disconnect switches, 115kV circuit breakers, CCVT pedestal mounts, 115/12 kV 37 megavolt amperes (MVA) transformers, a 15kV switchgear building, pad mounted equipment (PME)10, and 10 MCAR 12 kV capacitor banks. The adjacent switchyard will include a mechanical and electrical equipment room (MEER), 115 kV circuit breakers arranged in bus configuration, and a 115kV potential transformer.

### Setbacks

Pursuant to the MVIAP development standards, the proposed project would be setback 15 feet from Kitching Street and 10 feet from Edwin Road. No development would be constructed within these setbacks.

### Access/Transportation

Vehicular access to the project site is readily available from Kitching Street. However, no paved access points into the site currently exist. As shown in Figure 5, two (2) paved driveways are proposed along Kitching Street in order to accommodate vehicular access to the substation and switchyard, and one along Edwin Road.

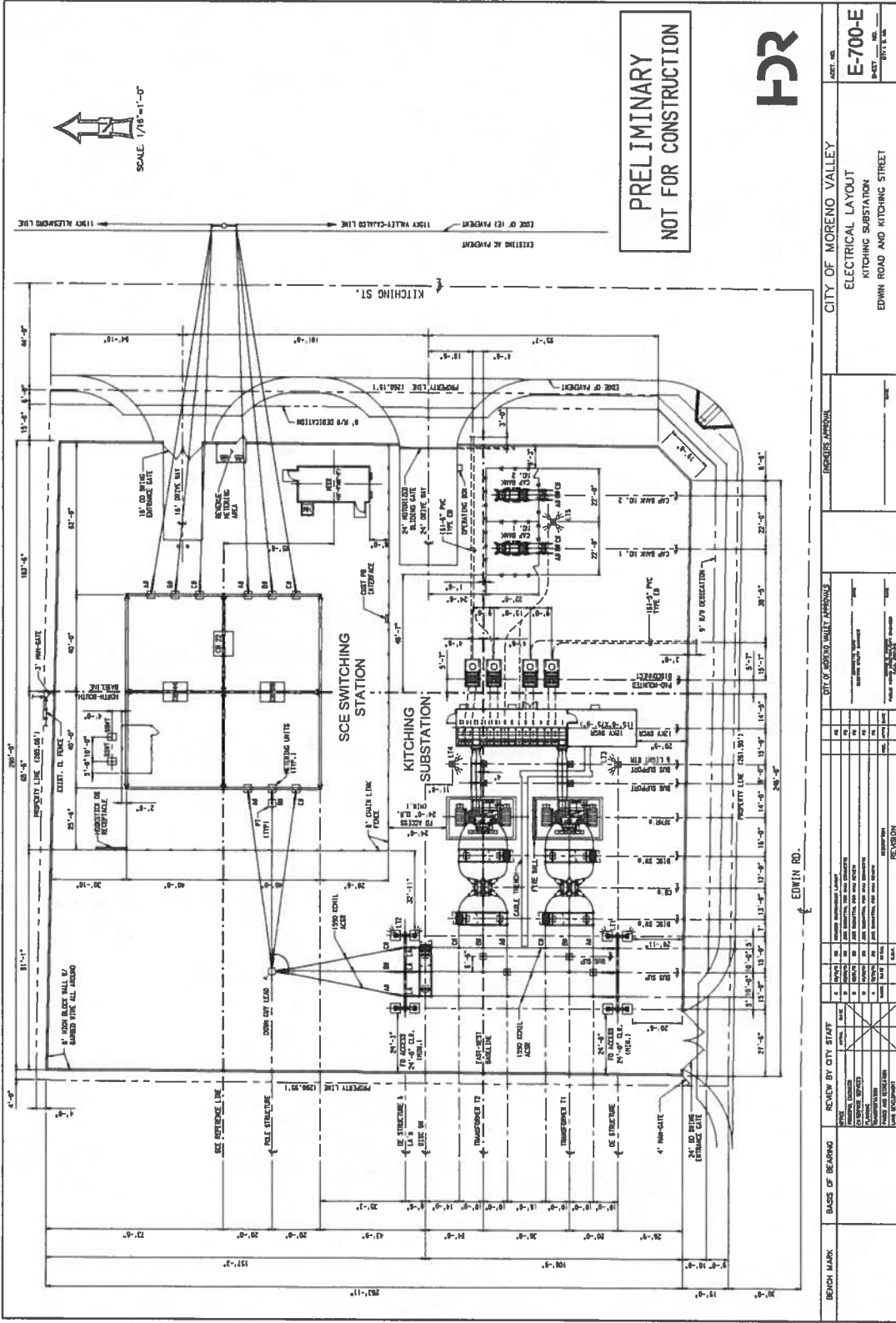
### Site Security

As shown in Figure 5, an 8-foot high block wall with barbed wire would be installed along the northern and western property line of the project site, and along the section of the substation and switchyard that face Kitching Street and Edwin Road. Additionally, an 8-foot high chain-link fence would be installed to separate the substation and switchyard. The two (2) 10MVAR 12 kV capacitor banks would be enclosed by a 6-foot high chain link fence.

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Figure 5. Plot Plan



### Off-Site Improvements

Off-site improvements include street right-of-way (ROW) dedications, street widening, and landscape improvements. The proposed project would install landscaping and irrigation within proposed landscape areas along Edwin Road and Kitching Street. The proposed project would be required to develop the total half width street improvements along the project frontage for both Edwin Road and Kitching Street. Edwin Road has an existing half-street ROW of 30 feet. As shown in Figure 5, the project would dedicate nine feet of ROW along Edwin Road to meet the total half-street ROW of 39 feet. Kitching Street has an existing half-street ROW of 44 feet. As shown in Figure 5, the project would dedicate six (6) feet of ROW along Kitching Street to meet the total half-street ROW of 50 feet. Additional ROW is also required at the northwest corner of Kitching Street and Edwin Road (diagonal cut off area).

### 2.4 Project Construction

MVU has an interconnection agreement with SCE to energize the substation by May 2017. This equates to 18 months to design, permit, procure materials, build, and energize the substation. Construction activities are anticipated to take up to 9 months (between September 2016 and May 2017). Construction of the proposed project will occur between the hours of 6:00 a.m. and 8:00 p.m. on weekdays, and 7:00 a.m. and 8:00 p.m. on weekends, in accordance with the City of Moreno Valley Ordinance standards, Chapter 8.14.040. Construction of the proposed project will not require more than 25 on-site workers on any given day during the construction period. Construction of the proposed project includes grading and installation of electric utility infrastructure, landscape improvements, and minimal paving. Construction equipment is anticipated to include graders, cranes, trucks, and various hand held equipment. Staging for the proposed project will be on-site for the duration of construction.

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### INITIAL STUDY

1. **Project Title:** Kitching Street Electrical Substation and Switchyard
2. **Lead Agency Name and Address:** City of Moreno Valley’s Electric Utility Division, 14177 Frederick Street, Moreno Valley, CA 92553
3. **Contact Person and Phone Number:** Clement Jimenez, P.E., Senior Engineer, City of Moreno Valley, (951)413-3513.
4. **Project Location:**  
  
The project site is located on publicly owned land and is located at the corner of Kitching Street and Edwin Road. It is bordered to the east by Kitching Street and the Eastern Municipal Water District’s Moreno Valley Regional Water Reclamation Facility, automotive businesses to the north and west, and vacant industrial land to the south. The 1.87-acre site is located in the southern portion of the City of Moreno Valley, approximately 12 miles southeast from the City of Riverside and 0.8 miles from the City of Perris.
5. **Project Sponsor’s Name and Address:** City of Moreno Valley Electric Utility Division, 14331 Frederick Street, Suite 2, Moreno Valley, CA 92553.
6. **General Plan Designation:** Business Park/Light Industrial
7. **Zoning:** Specific Plan 208 – I (Moreno Valley Industrial Area Plan - Industrial)
8. **Project Characteristics:** Please see Section 2.0 for project description.
9. **Surrounding Land Uses and Setting:** Please see Section 2.0 for project description.
10. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):**
  - Southern California Edison – Point of Interconnect

### 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.

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Aesthetics                      | <input type="checkbox"/> Agriculture & Forest Resources | <input type="checkbox"/> Air Quality                        |
| <input checked="" type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources             | <input type="checkbox"/> Geology/Soils                      |
| <input type="checkbox"/> Greenhouse Gas Emissions        | <input type="checkbox"/> Hazards & Hazardous Materials  | <input type="checkbox"/> Hydrology/Water Quality            |
| <input type="checkbox"/> Land Use/Planning               | <input type="checkbox"/> Mineral Resources              | <input type="checkbox"/> Noise                              |
| <input type="checkbox"/> Population/Housing              | <input type="checkbox"/> Public Services                | <input type="checkbox"/> Recreation                         |
| <input type="checkbox"/> Transportation/Traffic          | <input type="checkbox"/> Utilities/Service Systems      | <input type="checkbox"/> Mandatory Findings of Significance |



**DETERMINATION (To be completed by the Lead Agency):**

On the basis of this initial evaluation:

- I find that the 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.
- I find that 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 "potentially 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 adequately in an earlier EIR or Negative Declaration pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to an earlier EIR or Negative Declaration, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

*Chris Drmsby*  
Signature

2/17/16  
Date

Chris Drmsby  
Printed Name

City of Moreno Valley  
For [Agency]



## 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 Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than 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 analyses may be cross-referenced, as discussed below).
- 5) Earlier analyses 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 explanation of each issue should identify:
  - a) The significance criteria or threshold, if any, used to evaluate each question; and
  - b) The mitigation measure identified, if any, to reduce the impact to less than significance.





	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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**Issues:**

**I. AESTHETICS.** Would the project:

- a) Have a substantial adverse effect on a scenic vista?

The project site is located within the City of Moreno Valley which lies within a relative flat valley floor surrounded by rugged hills and mountains. Topographic features of Moreno Valley are defined by Box Springs Mountains and Reche Canyon area to the north, the Badlands to east and Mount Russell area to the south. According to the City's General Plan Conservation Element Figure 7-2, *Major Scenic Resources*, the proposed project site is not located within a view corridor for the Box Springs Mountains, Reche Canyon, the Badlands or Mount Russell. No scenic vista has been identified within or near the project site. Therefore, no impact is identified for this issue area.

- b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

According to the California Department of Transportation's (CALTRANS) Officially Designated State Scenic Highways list (Caltrans, 2015), no designated scenic highways are located in proximity to the site; therefore, the proposed project will not have a substantial adverse effect on scenic resources within a state scenic highway. The project site is located approximately 2.6 miles east of Interstate 215 and 4.6 miles south of State Route 60. The site is located in an area designated for light industrial uses, and is currently vacant land. There are no mature trees that would be impacted, nor does the site contain rock outcroppings or historic buildings.

Therefore, the proposed project will not have a substantial affect on a scenic highway. Thus, no impact is identified for this issue area.

- c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Implementation of the proposed project would develop previously vacant land with an electrical substation, switchyard, driveways, utility infrastructure, landscaping, and exterior lighting.

The proposed project is located in a portion of the City of Moreno Valley that is developing as a center for distribution warehousing and light industrial land uses. Land uses surrounding the immediate area of the project site include a towing company to the north, the Fisker Automotive factory to the west, vacant land to the south (currently approved for an approximately 1.1 million square foot warehouse), and the Eastern Municipal Water District's Moreno Valley Regional Water Reclamation Facility to the east. Existing overhead lines run along Kitching Street and Edwin Road. The proposed project would be compatible with the existing industrial uses in the immediate vicinity.

Although the project would change the property from undeveloped, vacant land to land that is developed with an industrial use, the visual character of the site's surroundings is dominated by warehouse buildings and undeveloped properties designed for future industrial development.

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	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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Similar to the Eastern Municipal Water District's Moreno Valley Regional Water Reclamation Facility to the east, the proposed project would include a block wall along the perimeter of the project site. The proposed project would also install landscaping as required by the City and in accordance with the MVIAP. Based on these considerations, the proposed project's potential to substantially degrade the existing visual character or quality of the site and its surroundings is considered to be less than significant.

- d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

The project site is located on vacant land and does not contain any artificial light sources or sources of glare under existing conditions. The proposed project would include only minimal exterior dual luminaire lighting for maintenance and security purposes. The proposed project will adhere to the lighting requirements as set forth in the Moreno Valley Industrial Area Plan (MVIAP) SP 208 and the City of Moreno Municipal Code. The MVIAP includes lighting standards for properties within the MVIAP's boundaries. The MVIAP standards dictate that: "Exterior light fixtures shall be designed and placed so as not to provide light spillage on adjacent properties or public rights-of way," (City of Moreno Valley, 2002). The City of Moreno Valley Municipal Code Chapter 9.08.100 establishes that all outdoor lighting associated with non- residential uses shall not blink, flash, or oscillate or be of an unusually high intensity or brightness. All lighting shall be shielded fully and directed away from surrounding residential uses to reduce glare and light trespass, and shall not exceed one-quarter-foot- candle minimum maintained lighting measured from within five (5) feet of any property line.

The project site is located in an industrial area and is surrounded by existing and planned industrial uses. No residential uses are located in proximity to the site. The proposed project will not produce a new source of substantial light or glare from artificial lighting sources that would adversely affect day or nighttime views in the area.

Regarding daytime glare impacts, the materials that will be used to construct the project do not have characteristics or finishes that would result in glare. The proposed project will not adversely affect daytime views of any surrounding properties, including motorists on adjacent roadways and the March Air Reserve Base. Additionally an 8-foot high perimeter block wall will be built for the section of the substation and switchyard that face Kitching Street and Edwin Road, providing screening. Therefore, the proposed project would not adversely affect daytime views in the area. A less than significant impact is identified for this issue area.

**II. AGRICULTURE AND FOREST 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

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	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and the forest carbon measurement methodology provided in the Forest Protocols adopted by the California Air Resources Board. 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 nonagricultural use?

According to City of Moreno Valley General Plan FEIR Figure 5.8-1, *Important Farmlands*, and mapping available from the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP), the proposed project site contains lands classified as "other." The proposed project site does not contain any lands mapped by the State Department of Conservation as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (State of California Department of Conservation, 2010). As such, the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Therefore, no impact is identified for this issue area.

- b) Conflict with existing zoning for agricultural use or a Williamson Act Contract?

No land within the City of Moreno Valley is currently under a Williamson Act contract (City of Moreno Valley, 2006). The proposed project site is zoned "Industrial" and surrounding land uses are zoned "Industrial" (to the east, west, north, and south). The proposed project site is not located on or adjacent to land zoned for agricultural use and is also not subject to a Williamson Act contract. The proposed project has no potential to conflict with existing zoning for agricultural use or a Williamson Act contract. Therefore, no impact is identified for this issue area.

- c) 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

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	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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(as defined by Government Code section 51104(g))?

The project site is not located on forest land as defined in PRC Section 1220 (g). There are no existing forest lands, timberlands, or timberland zoned Timberland Production either on-site or in the immediate vicinity; therefore, the project would not conflict with existing zoning of forest land or cause rezoning of any forest land. Additionally, the site is not zoned as forest, timberland or for Timberland Production. Therefore, no impact is identified for this issue area.

- d) Result in the loss of forest land or conversion of forest land to non-forest use?

There are no existing forest lands either on-site or in the immediate vicinity of the site. Therefore, the proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. Therefore, no impact is identified for this issue area.

- 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 or conversion of forest land to non-forest use?

As discussed in response II.a, the proposed project site does not contain any lands mapped by the State Department of Conservation as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The project site is vacant and is not used for agricultural production. The implementation of the project would not convert any Farmland to non-agricultural uses. Therefore, no impact is identified for this issue area.

**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?

The City of Moreno Valley is located within the South Coast Air Basin (Basin). Air quality within the South Coast Air Basin is regulated by the South Coast Air Quality Management District (SCAQMD). Standards for air quality are documented in the SCAQMD's Air Quality Management Plan (AQMP), adopted in December 2012. The proposed project would result in emission of pollutants into the Basin during short-term construction activities. No long-term emissions during operation are anticipated. The pollutant levels emitted by the proposed project's construction will not exceed the daily significance thresholds established by the SCAQMD. Therefore, the project does not conflict with the AQMP. No impact is identified for this issue area.

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	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Air quality within the Basin is regulated by SCAQMD and standards for air quality are documented in the SCAQMD AQMP adopted in 2012. SCAQMD is designated as a non-attainment area for federal and state ozone and PM<sub>10</sub> standards, meaning that air quality standards are being exceeded. The air quality conditions of Moreno Valley are monitored by the Perris and Riverside Rubidoux stations. The Perris station monitors ozone and particulate matter levels, while the Riverside-Rubidoux station monitors ozone, particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide levels.

**Construction Emissions**

The proposed project would result in minor pollutant emissions into the Basin during short-term construction activities. Operation of construction equipment such as graders, cranes, trucks, would generate air emissions. Also, emissions would be generated by material delivery vehicles and workers' vehicles to and from the project site. Construction emissions would occur on a short-term basis and would cease upon completion of all construction activities (9 month construction period is anticipated). Potential air quality emissions associated with construction have been calculated and are provided in Appendix A.

During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by site preparation, clearing, excavation, grading, hauling, paving roadway surfaces, and other construction activities. Emissions from construction equipment also are anticipated and would include carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), reactive organic compounds (ROCs), PM<sub>2.5</sub> and PM<sub>10</sub> (particulate matter less than 2.5 microns and 10 microns, respectively, in size), and toxic air contaminants such as diesel exhaust particulate matter.

Specific criteria for determining whether the potential air quality impacts of a project are significant are set forth in the SCAQMD's CEQA *Air Quality Handbook (2011)*. The following daily thresholds for construction emissions have been established by the SCAQMD and were used in the analysis of air quality impacts for the proposed project to determine significance:

- 75 pounds per day (lbs/day) of ROCs
- 100 lbs/day of NO<sub>x</sub>
- 550 lbs/day of CO
- 150 lbs/day of PM<sub>10</sub>
- 55 lbs/day of PM<sub>2.5</sub>
- 150 lbs/day of sulfur oxides (SO<sub>x</sub>)

Projects in the Basin with construction-related emissions that exceed any of the emission thresholds above are considered potentially significant by the SCAQMD.

The most recent version of the CalEEMod model (Version 2013.2.2) was used to calculate the construction emissions. The construction-related emissions generated during peak construction days for each phase of construction of the proposed project are present in Table 1. The PM<sub>10</sub> and

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PM<sub>2.5</sub> emissions incorporate 55 percent control of fugitive dust as a result of watering and associated dust-control measures. The emissions presented in Table 1 are based on the best information available at the time of calculations and specify that the schedule for all improvements is anticipated to take approximately 9 months, beginning in September 2016 and ending in May 2017.

**Table 1: Maximum Project Construction Emissions (pounds per day)**

Project Phases	ROG	CO	NO <sub>x</sub>	SO <sub>x</sub>	Total PM <sub>10</sub>	Total PM <sub>2.5</sub>
Site Preparation	2.47	16.97	25.81	0.02	4.31	2.66
Import of Fill and Site Grading	4.39	39.26	58.66	0.10	6.94	3.94
Building and Construction	3.52	17.78	21.83	0.03	1.85	1.46
Paving	1.34	9.83	13.24	0.02	0.95	0.78
<b>Peak Daily Emissions</b>	<b>4.86</b>	<b>39.26</b>	<b>58.66</b>	<b>0.10</b>	<b>6.94</b>	<b>3.94</b>
<b>SCAQMD Thresholds</b>	<b>75</b>	<b>550</b>	<b>100</b>	<b>150</b>	<b>150</b>	<b>55</b>
<b>Exceeds Daily SCAQMD Threshold?</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>

Source: HDR, January 2016.

Note: Peak emissions include overlapping building and construction and paving phases.

Because construction operations on-site must comply with dust control and other measures prescribed by SCAQMD Rules 402 and 403 to ensure that short-term construction impacts are minimized, compliance with these rules is assumed in Table 1.

As shown in Table 1, short-term emissions during project construction would not exceed the SCAQMD daily construction emissions thresholds, and are considered less than significant. No mitigation measures are required. However, as noted above, the construction activities are required to comply with SCAQMD Rules 402 and 403.

**Localized Significance Thresholds.** In addition to the significance thresholds listed above, SCAQMD also requires analysis of localized air quality impacts. For this project, the appropriate Source Receptor Area (SRA) for localized significance thresholds (LSTs) is the Perris Valley (SRA No. 24), according to the SRA/City Table on the SCAQMD LST website (SCAQMD, 2014).

The closest sensitive receptors to the project site are residences located along Plumeria Lane at a distance of approximately 500 feet. Therefore, the following LST construction thresholds, for a 2-acre site, apply for this project:

- 322 lbs/day of NO<sub>x</sub> at 150 m
- 3,684 lbs/day of CO at 150 m
- 57 lbs/day of PM<sub>10</sub> at 150 m
- 17 lbs/day of PM<sub>2.5</sub> at 150 m

Table 2 shows the construction-related emissions of CO, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> compared to the localized significance thresholds (LSTs) for the Perris Valley area at a distance of 150 m. As required by the SCAQMD's LST Methodology (Final Localized Significance Threshold Methodology, July 2008), only the on-site construction emissions are included in Table 2.

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**Less Than Significant Impact**     
**No Impact**

**Table 2: Summary of On-Site Construction Emissions, Localized Significance by Task**

Project Phases	Emission Rates (lbs/day)			
	CO	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Site Preparation	16.51	25.77	4.22	2.64
Import of Fill and Site Grading	17.83	27.51	4.33	2.87
Building and Construction	14.71	20.55	1.37	1.32
Paving	9.09	13.21	0.81	0.74
<b>Peak Daily Emissions</b>	<b>23.80</b>	<b>33.75</b>	<b>4.33</b>	<b>2.87</b>
<b>SCAQMD Thresholds</b>	<b>3,684</b>	<b>322</b>	<b>57</b>	<b>17</b>
<b>Exceeds Daily SCAQMD Threshold?</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>

Source: HDR, January 2016.

Notes: Peak emissions include overlapping building and construction and paving phases.

Table 2 shows that the calculated emissions rates for the proposed on-site construction activities are below the LSTs for CO, NOX, PM10, and PM2.5. Therefore, the proposed project would not cause any short-term localized air quality impacts, and no mitigation is required.

Due to the relatively limited scale of construction required for the proposed project, construction related emissions will not exceed the daily significant thresholds established by the SCAQMD. Therefore, construction activities with the proposed project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. A less than significant impact is identified for this issue area.

**Operational Emissions**

Following construction, the proposed project would not result in long-term operational emissions. The proposed project does not include an Operation and Maintenance building, which typically requires workers to travel on-site daily. No on-site stationary source emissions will be generated in association with project operation. Very minimal maintenance is required for operation of the facility amounting to only a few employee related trips to the facility annually. The project would not contribute substantially to an existing or projected air quality violation. Therefore, a less than significant impact is identified for this issue area.

- c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

As discussed in response III.b, the proposed project would result in short-term temporary air emissions associated with the construction phase. However, due to the relatively limited scale of construction required for the proposed project, the level of emissions generated during the construction phase would not exceed SCAQMD significance thresholds. Furthermore, the proposed

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project would not generate substantial emissions during operations due to minimal mobile emissions associated with maintenance and monitoring activities. There are two currently approved projects within 1 mile of the project, one of which includes a 1.1 million square foot warehouse immediately south of the proposed project and another 1.4 million square foot warehouse southwest of the proposed project. Construction of the two warehouses may overlap with construction of the proposed project; however, both projects would be required to comply with standards as documented in the AQMP. Based on these considerations, the proposed project would not contribute to a cumulatively considerable net increase of any criteria pollutant that the project region is non-attainment under (ozone and PM<sub>10</sub>) and a less than significant impact is identified.

- d) Expose sensitive receptors to substantial pollutant concentrations?

The SCAQMD defines sensitive receptors or sites (land uses) as including schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, hospitals, retirement homes, and residences. The proposed project is located in an industrial area, and no sensitive receptors are located in proximity to the project site. The closest sensitive receptors are located approximately 0.10 miles north of the project site (residential); however, this area is not located downwind of the prevailing wind pattern and is located at a distance where these residences would not be exposed to high pollutant concentrations. A less than significant impact is identified for this issue area.

- e) Create objectionable odors affecting a substantial number of people?

The SCAQMD lists land uses primarily associated with odor complaints as waste transfer and recycling stations, wastewater treatment plants, landfills, composting operations, petroleum operations, food and byproduct processes, factories, and agricultural activities, such as livestock operations. The proposed project does not include any of these land uses.

The proposed project could produce odors during proposed construction activities resulting from construction equipment exhaust and application of asphalt. However, standard construction practices would minimize the odor emissions and their associated impacts. Furthermore, any odors emitted during construction are temporary, short-term, and intermittent in nature, and would cease upon the completion of construction. Additionally construction activities would be required to comply with SCAQMD Rule 402, which prohibits the discharge of odorous emissions that would create a public nuisance. The proposed project will not create objectionable odors affecting a substantial number of people during construction, and short-term impacts would be less than significant.

No objectionable odors affecting a substantial number of people are anticipated during long term operation. The operation of the project does not involve odor-generating uses. A less than significant impact is identified for this issue area.

**IV. BIOLOGICAL RESOURCES.** Would the project:

- a) Have a substantial adverse effect, either directly or through habitat modifications,

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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 Wildlife or U.S. Fish and Wildlife Service?

The proposed project site is located within the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) and within the MSHCP's Criteria Area Species Survey Area (CASSA) 3a. However, the proposed project is not located within a MSHCP Criteria Area Cell. According to the Regional Conservation Authority (RCA), the proposed project site is not within an amphibian, owl, mammal or narrow endemic plant survey area. No suitable habitat for federally- or state-threatened or endangered species was identified within the survey area. The nearest critical habitat in the vicinity of the study area is for spreading navarretia (*Navarretia fosallis*) 4 miles southeast of the study area.

The following information is summarized from the General Biological Resources and MSHCP Consistency Report prepared by HDR, dated January 2016. This report is provided as Appendix B of this Initial Study.

**Botanical Species**

A biological survey for plants and wildlife was conducted on December 14, 2015, for the substation facility. The purpose of the survey was to identify general site conditions, vegetation communities, and suitability of habitat for various special-status species. The land cover has been identified as: Disturbed Habitat. Based on historic aerial photographs (Historic Aerials, 1966, 1967, 1978, 1997 and Google Earth (2003-2014)), the survey area was cleared of vegetation prior to 1978 for agricultural use and has been cleared of vegetation regularly since that time. Thus, the site is highly disturbed and no longer supports native habitat.

The project site does contain suitable soils and supports marginally suitable habitat for two plant species within the CASSA: smooth tarplant (*Centromadia pungens ssp. laevis*) and Coulter's goldfields (*Lasthenia glabrata ssp. coulteri*). However, their potential to occur within the survey area based on the available soils and marginally suitable habitat are low. Both species' status are considered to be rare, threatened, or endangered in California; and are covered by the MSHCP. Per requirements of the MSHCP, a survey will be conducted as early as April during the appropriate blooming season (April through June) and prior to the start of construction.

If either of these species is identified on-site, the project will be required to comply with MSHCP requirements of 90% conservation of all populations with long-term conservation value. However, the site would not be considered to provide long-term conservation value to either of these species, since the site is not within the MSHCP Criteria Area, is surrounded by development, and is currently subject to routine disturbance. Additionally, the site is isolated from other known populations of these species and existing or proposed MSHCP Conservation Areas.

If long-term conservation is not feasible, suitable mitigation measures will be identified in a Determination of Biologically Equivalent or Superior Preservation (DBESP) report that will be subject

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to the approval of the City of Moreno Valley and the Western Riverside County Conservation Authority. Potential project impacts to smooth tarplant or Coulter's goldfields, if identified during the focused survey, would be significant without mitigation incorporated. Measure BIO-1 is provided to address potential project impacts to CASSA species.

**Avoidance and Minimization Measure**

**BIO-1.** A focused survey for smooth tarplant and Coulter's goldfields shall be conducted by a qualified biologist during the appropriate blooming season for these species (April – June). The loss of any individuals observed within the project area would be mitigated through location and preservation of populations that are not already proposed for conservation in the MSHCP, and/or restoration or enhancement of existing populations within the proposed conservation area. Per MSHCP requirements, proposed mitigation would be evaluated in a Determination of Biologically Equivalent or Superior Preservation (DBESP) Report and subject to approval by the city and RCA.

Because the project will comply with the MSHCP, any potential impacts to smooth tarplant or Coulter's goldfields would be less than significant following implementation of BIO-1.

**Avian Species**

Avian species common to disturbed areas was observed using the site. These include European starling (*Sturnus vulgaris*), American crow (*Corvus brachyrhynchos*), and mourning dove (*Zenaida macroura*). No wildlife other than birds were observed during the field survey. Although, no raptors were observed during the site visit, the undeveloped land provides foraging habitat for raptors, such as hawks and owls, among other resident and other avian species. No habitat to support nesting birds occurs within the project site and direct take of active nests, as define by the MBTA is not anticipated. The MSHCP Conservation Area was designed to provide adequate foraging habitat for all species covered under the MSHCP. Therefore, compliance with the MSHCP will ensure that the project will not have a significant impact to raptor foraging habitat.

**Conclusion**

The proposed project will not substantially affect any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulation or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish Wildlife Service (USFWS). If tarplant or Coulter's goldfields are identified during the focused survey, the potential project impacts would be addressed through compliance with the policies of the MSHCP. Therefore, a less than significant impact is identified for this issue area.

- b) Have a substantial 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 Wildlife or U.S. Fish and Wildlife Service?

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As previously stated the proposed project site is within the CASSA 3a but is not located within any other special survey areas and does not contain riparian habitat that would require additional surveys. Riparian areas are lands that contain habitat dominated by trees, shrubs, and persistent emergent species that occur close to or depend upon soil moisture from a nearby water source; or areas with fresh water flowing during all of a portion of the year. Unvegetated drainages (ephemeral streams) may be included if alterations to that drainage have the potential to affect Covered Species and Conservation Areas. None of these features are located on the project site. Additionally, because the site is highly disturbed it does not support native vegetation communities.

The potential for the proposed project to affect riparian or other sensitive natural communities in local or regional plans, policies, regulations, or by the CDFW and USFWS is minimal. A finding of less than significant is identified for this issue area.

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 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 other means? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Although the Perris Valley Storm Drain Channel is under the jurisdiction of the U.S. Army Corps of Engineers, the proposed project will not include any type of drainage structures that would connect to the Perris Valley Storm Drain Channel. The project site does not support any areas that would be considered jurisdictional under Sections 401 and 404 of the Clean Water Act or Section 1602 of the California Fish and Game Code. Additionally, no areas that meet the MSHCP's definition of Riparian/Riverine occur within the site. Therefore, a finding of no impact is identified for this issue area.

- |   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|

The surrounding area consists of land that is mostly developed, paved roads, and fencing that would inhibit wildlife movement from all directions. Additionally the proposed project site itself will be surrounded by an 8-foot block wall along the boundary of the substation and switchyard. The project site is also not near any potential wildlife corridors. Wildlife movement includes seasonal migration along corridors, as well as daily movements for foraging and reaching water sources. Migration corridors may include areas of unobstructed movement for deer, riparian corridors providing cover for migrating birds, routes between breeding waters and upland habitat for amphibians, and between roosting and feeding areas for birds.

Development of the project site will not result in the loss of any potential wildlife movement areas, wildlife corridors or nursery sites. Therefore, no permanent or temporary impacts would occur with the implementation of the proposed project. No impact is identified for this issue area.

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e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The proposed project would not violate any tree preservation ordinances as there are no existing trees on site. The site is within the MSHCP area and will comply with the requirements of the MSHCP. Other adopted HCPs in the area include the Stephen's Kangaroo Rat (SKR) Habitat Conservation Plan and Fee Assessment Area. The City's SKR fee ordinance establishes that all applicants for development permits within the boundaries of the Fee Assessment Area shall pay a mitigation fee of \$500.00 per gross acre of the parcels proposed for development.

The SKR is native to open grasslands and sparse coastal sage scrub. Non-native grassland within the survey area contains marginally suitable habitat for SKR but is not likely to support this species due to its isolation from other areas of potential habitat. However, in order to comply with the requirements of the SKR HCP, the project proponent will pay the required mitigation fee prior to project development. Therefore, a less than significant impact is identified for this issue area.

f) Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?

The proposed project is subject to the Western Riverside County MSHCP; however it is not within a MSHCP Criteria Area Cell. Therefore, the project is not subject to the Joint Project Review (JPR) process or the Habitat Evaluation and Acquisition Negotiation Strategy (HANS) process. The project is subject to the SKR Habitat Conservation Plan and located within the MSHCP's CASSA 3a; however, the proposed project does not conflict with any local ordinance or conservation plan protecting biological resources. Therefore, no impact is identified for this issue area.

**V. CULTURAL RESOURCES.** Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?

A Cultural Resources Technical Report (January, 2016), completed by HDR, Inc. was prepared for the proposed project, and is included as part of this CEQA Initial Study in Appendix C. On December 10, 2015, the Eastern Information Center (EIC) was contacted to perform a records search of all archaeological and historical resources within 0.5 miles of the project area of potential effect (APE) (HDR, 2015). The records search found no archeological or historic resources within the project APE or within 0.5 mile of the APE. The proposed project site is vacant with no structures on-site. Additionally, according to the City of Moreno Valley General Plan FEIR Figure 5.10-1, *Locations of Listed Historic Resource Inventory Structures*, the proposed project site is not identified as containing a historic resource as part of the historic resource inventory. Therefore, no impact is identified for this issue area.

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b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

The proposed project is not part of any known Native American Village and does not contain any prehistoric resources (City of Moreno Valley, 2006). As previously discussed in response V.a., no cultural resources were identified as part of the records search and pedestrian cultural resource survey conducted on December 23, 2015. A less than significant impact is identified for this issue area.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Please refer to response V.a. The proposed project does not contain unique geologic features. According to the City of Moreno General Plan FEIR Figure 5.10-3, *Paleontological Resource Sensitive Areas*, the potential of the site containing unique paleontological resources is low. Also, the project will not involve significant excavations of soils. A less than significant impact is identified for this issue area.

d) Disturb any human remains, including those interred outside of formal cemeteries?

The proposed project site does not contain a known cemetery. It is not anticipated that human remains will be discovered during project grading. In the event that human remains are discovered, the proposed project would comply with the applicable provisions of the California Health and Safety Code §7050.5 as well as Public Resource Code §5097 et. seq. Compliance with these measures is mandatory in the event that human remains are discovered during construction activities in order to ensure that the remains are appropriately treated. A less than significant impact is identified for this issue area.

**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.

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The *Geotechnical Investigation Report (December 2015)*, completed by Twining, Inc. was prepared for the proposed project, and is included in Appendix D of this Initial Study. The Geotechnical Investigation Report evaluated the subsurface conditions at the site and provides preliminary geotechnical engineering and engineering geology recommendations for the proposed project. The site is located in a seismically active area, as is the majority of southern California, and the potential for strong ground motion in the project area is considered high during the design life of the proposed structure (Twining, 2015). The nearest known active fault corresponds to the San Jacinto Valley (Anza segment) fault system located approximately 6 miles northeast of the site. This system has the potential to be the dominant source of strong ground motion.

However, no known active faults pass through or near the proposed project site. Therefore, the likelihood of fault rupture occurring at the site during the design life of the proposed improvements is considered low (Twining, 2015). The greatest seismic hazard likely to affect the site is seismic shaking. A less than significant impact is identified for this issue area.

- ii) Strong seismic ground shaking?

As previously discussed in response VI.i., the project site is located in a seismically active area of southern California, and is expected to experience moderate to severe ground shaking during the design life of the proposed project. As a standard condition of project approval, the proposed project would be required to construct the MEER in accordance with the California Building Standards Code (CBSC), also known as California Code of Regulations (CCR), Title 24 (Part 2), and the City of Moreno Valley Building Code, which is based on the CBSC with local amendments.

According to the City of Moreno Valley General Plan FEIR, no known active faults pass through the proposed project site. A finding of less than significant impact is identified for this issue area.

- iii) Seismic-related ground failure, including liquefaction?

As part of the geologic investigation, liquefaction analyses, in accordance with the National Center for Earthquake Engineering Research (NCEER) procedure, were performed for the project site. The analyses indicated that liquefaction may occur at localized layers within the 50-foot soil column and estimated that liquefaction-induced ground settlement at the site is less than ¼ inch during a seismic event (Twining, 2015). It is anticipated that differential seismic settlement at the site will be negligible.

Additionally, the General Plan FEIR Figure 5.6-2, *Seismic Hazards*, shows that the proposed project is not located in an area with the potential for liquefaction. The City of Moreno Valley will also require that the property be developed in accordance with the latest applicable seismic safety guidelines, including the standard requirements of the City of Moreno Valley Building Code. Therefore, the project's impacts to exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving seismic-related ground failure, including liquefaction would be less than significant for this issue area.

- iv) Landslides?

Review of geologic maps, literature, topographic maps, aerial photographs, and subsurface evaluation were completed as part of the geotechnical investigation. No landslides or related features underlie or are adjacent to the project site (Twining, 2015). The proposed project site is flat

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in topography. There are no hillsides or steep slopes in the vicinity of the project site. Additionally the project site is not within a landslide zone (USGS, 2015). The development of the proposed project would not expose people or structures to potential substantial adverse effects from landslides. No impact is identified for this issue area.

- b) Result in substantial soil erosion or the loss of topsoil?

Grading and construction will temporarily increase erosion susceptibility. In the long-term, development of the site would slightly increase the extent of impervious surface cover (although a majority of the site will be composed of a pervious gravel condition) and landscaping, thereby reducing the potential for erosion and loss of topsoil. The project would be required to adhere to standard regulatory requirements, including, but not limited to, requirements imposed by the City of Moreno Valley's National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit (State Water Resources Control Board Order No. 99-08-DWQ) and a Project Specific Water Quality Management Plan (WQMP) that includes Best Management Practices (BMPs) to minimize water pollutants including sedimentation in stormwater runoff. With mandatory compliance with the City of Moreno Valley's NPDES Municipal Stormwater Permit and the project's WQMP, the project's potential to result in substantial soil erosion or the loss of topsoil would be less than significant for this issue area.

- 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 offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

During subsurface evaluation of the project site, geologic units consisting of young alluvial valley deposits (Qyv) and very old alluvial fan deposits (Qvof) were encountered (Twining, 2015). Young alluvial deposits are described as unconsolidated to moderately consolidated silt, sand, pebbly cobbly sand, and boulder deposits having slight to moderately dissected surfaces. They were encountered in all exploratory borings to depth of approximately 20 feet below ground surface (bgs) (Twining, 2015). Very old alluvial fan deposits consist of moderately to well consolidated silt, sand, gravel, and conglomerate. Very old alluvial fan deposits are anticipated to underlie the project area, and were encountered in all exploratory borings to depths of approximately 51 ½ feet bgs (Twining, 2015). In its current condition, the upper portion of the alluvial soils is considered compressible and not suitable for support of the building slab. Furthermore, with the granular nature of the materials on site and the presence of groundwater (at approximate depths of 25 to 27 feet bgs), caving during trench excavation and drilling of piers should be anticipated (Twining, 2015). Recommendations include removal of soil, recompaction, and fill. Detailed shoring and methods of stabilization are provided in Appendix D, *Geologic Investigation Report* of this Initial Study.

As discussed in response IV.a.iii-iv, development of the proposed project would result in a less than significant impact involving ground failure, including liquefaction, and no impact involving landslides. Therefore, the potential impact associated with unstable geologic units or soil is considered less than significant for this issue area.

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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?

Expansive soils are characterized by their ability to undergo significant volume changes due to variations in moisture content. As described in response VI.c. Dv – domino silt loam, saline-alkali soil is found in basin areas with up to 2 percent slope. Soil testing and evaluation conducted for the project site found that the near-surface materials encountered at the site exhibited very low expansion potential (Twining, 2015). However, expansive clays and silts may be encountered if excavations exceed depths of 20 feet. In this case recommendations include segregating and transporting the expansive soils offsite for disposal (Twining, 2015). Therefore, the proposed project would not be substantially affected by expansive soils and a less than significant impact is identified for this issue area.

[Note: Response VI.d is based on Appendix G of the CEQA Guidelines and references Table 18-1-B of the 1994 Uniform Building Code (UBC). This Table no longer exists. The Building Code currently in effect, the 2013 CBC, references ASTM D-4829, a standard procedure for testing and evaluating the expansion index (or expansion potential) of soils established by ASTM International, which was formerly known as the American Society for Testing and Materials (ASTM).]

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?

The proposed project would not install septic tanks or alternative wastewater disposal systems on the project site. Therefore, no impact is identified for this issue area.

**VII. GREENHOUSE GAS EMISSIONS.**

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The greenhouse gas (GHG) emissions associated with the proposed project would primarily be associated with project-related construction activities. There would be only minimal energy consumption, water consumption, and solid waste generation associated with project operation. The City of Moreno Valley has not adopted any numerical thresholds of significance for GHG emissions.

**Climate Change**

14 CCR 15064.4 of the CEQA Guidelines presents guidelines for determining the significance of impacts from greenhouse gas emissions. The specific language from the regulation is reproduced below:

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The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in Section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project.

In 2008, the California Air Resources Board (CARB) suggested a CEQA greenhouse gas (GHG) significance threshold for industrial projects. CARB used a representative small project (a standard sized industrial boiler) to define the threshold. Using that benchmark, CARB proposed a significance threshold of 7,000 metric tons of carbon dioxide equivalent emissions (CO<sub>2</sub>e) per year for operational emissions (excluding transportation). Projects with GHG emissions below the threshold are presumed to have a non-significant impact on climate change.

Review of proposed projects is facilitated if a numeric threshold of significance has been defined by the responsible air district. Several air districts in California have defined numeric GHG significance thresholds ranging from 900 to 25,000 metric tons per year. The value defined by local air districts varies, depending upon the level of further analysis and/or mitigation that is triggered by surpassing the threshold. SCAQMD has defined a GHG significance threshold of 10,000 metric tons of CO<sub>2</sub>e for industrial (not transportation) projects (SCAQMD, 2011).

During construction of the project, GHG emissions would be emitted through the operation of construction equipment, on-site heavy duty vehicles, equipment hauling materials to and from the project site, grading, utility engines, and asphalt paving, each of which typically uses fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O). Furthermore, CH<sub>4</sub> is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

The most recent version of the CalEEMod model (Version 2013.2.2) was used to calculate the construction emissions. The construction-related GHG emissions generated during peak construction days for each phase of construction of the proposed project are presented in Table 3.

**Table 3: Peak-Day and Total CO<sub>2</sub>e Construction Emissions**

Project Phases	Peak Daily CO <sub>2</sub> e Emissions	Total CO <sub>2</sub> e Emissions in Metric Tons
Site Preparation	1,881.22	–
Import of Fill and Site Grading	10,120.48	–
Building and Construction	2,708.69	–
Paving	1,521.32	–
<b>Peak Daily Emissions</b>	<b>10,120.48</b>	–
<b>Total Construction</b>	–	<b>308.9</b>

**Source:** HDR, January 2016.

**Notes:** Peak emissions include overlapping building and construction and paving phases.



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SCAQMD's GHG emissions policy for construction activities is to amortize emissions over a 30-year lifetime. When amortized, the project's annual construction emissions would be 10.3 metric tons. Therefore, the estimated construction GHG emissions from the proposed project are well below significance thresholds thus far suggested (e.g., SCAQMD's 10,000 metric tons/year threshold for industrial project, 2011 or the 7,000 metric tons/year threshold suggested by the ARB, October 2008) and are not anticipated to directly result in a significant impact.

The proposed project would not result in a substantial population growth, as the number of employees required to operate and maintain the facility is minimal (no new employees are required for project operations). Approximately 2 workers will be entering the site for maintenance activities approximately 2 times per year. This would result in a maximum of 8 trips to and from the site if 2 automobiles are utilized. The proposed project would not substantially increase traffic conditions within the project area, resulting in substantial contribution of greenhouse gas emissions. Therefore, a less than significant impact is identified for this issue area.

- b) Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

AB 32 is the primary plan, policy or regulation adopted in the State of California to reduce GHG Emissions. As described above the proposed project would not substantially increase traffic conditions in the project area. Also, the project would not otherwise result in the generation of GHG emissions as a result of operational activities, and does not conflict with the City's Energy Efficiency and Climate Action Strategy. The oil contained within the transformers for cooling and insulation purposes will not enter the atmosphere. Therefore, the implementation of the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG. No impact is identified for this issue area.

**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?

The project site is vacant and does not contain any structures. The site appears previously undeveloped and no hazardous conditions are known on-site. Therefore, the project site has no substantial hazards or hazardous materials that are expected to be disposed of. During construction of the proposed project, a limited amount of hazardous materials would be transported to, stored, and used on the property (fuel, paint, etc.) that are typical with construction activity and do not create a significant hazard to the public or environment.

During operation, the project will not involve the use or production of any hazardous waste material in significant quantities to create a significant hazard. There will be transformer oil used

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in the transformers for cooling and insulation purposes. The transformer oil is contained within the equipment and will not enter the atmosphere or soil. A less than significant impact is identified for this issue area.

- 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?

As previously stated in response VIII.a, the project during construction will utilize materials that are typically used during construction activities. However, the use of these materials does not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions. Additionally, during operation the oil used to cool and insulate the transformers will be contained in the equipment and will not be emitted into the atmosphere or soil. While the transformers have the potential to result in a fire, the risk is considered low, and the facility is designed to accommodate fire department vehicle access. Furthermore, the transformers have an oil retainment around the perimeter for oil spills. In the event that one of the transformers catch fire, a fire wall between the two transformers, as seen in Figure 5, will provide protection and prevent the fire from spreading to the adjacent transformer. Therefore, a less than significant impact is identified for this issue area.

- c) Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

EI Potrero Preschool is located 0.23 miles northeast of the proposed project site. The project will not use material that is atypical during construction and the transformer oil used for cooling and insulation purposes will be contained in the equipment. Additionally, there is no direct roadway connection between the proposed project and school; therefore, the transport of material during construction will not create a possibility for significant hazard to the school. Therefore, a less than significant impact is identified for this issue area.

- d) Be located on a site that 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?

Based on a review of the Cortese List data resources (DTSC EnviroStor database; DTSC corrective action sites; leaking underground storage tanks sites from the State Water Resources Control Board [SWRCB] GeoTracker database; Solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside the waste management unit; and "Active" cease and desist orders and cleanup abatement orders from SWRCB), the project site

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is not listed as a hazardous materials site pursuant to Code Section 65962.5 (California Department of Toxic Substances Control, 2012). Therefore, no impact is identified for this issue area.

- 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?
- 

The proposed project is located approximately 1.5 miles east of the March Air Reserve Base. According to the City of Moreno Valley General Plan FEIR Figure 5.5-3, *City Areas affected by Aircraft Hazard Zones*, the proposed project is not located within an Accident Potential or Clear Zone. Additionally, the project area is within Zone E of the March Air Reserve Base/ Inland Port Air Land Use Compatibility Plan, which is considered the outer limits of the airport influence area at 14,000 feet from the runway centerline (see Figure 6). Lands within Zone E are subject to noise and accident potential risks associated with aircraft operations at March Air Reserve Base/Inland Port Air. However, because the project site is not located with the Accidental Potential or Clear Zone, implementation would not result in a safety hazard for people living or working in the project area. Also, the proposed project will not introduce additional populations to the area. A less than significant impact is identified for this issue area.

- 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?
- 

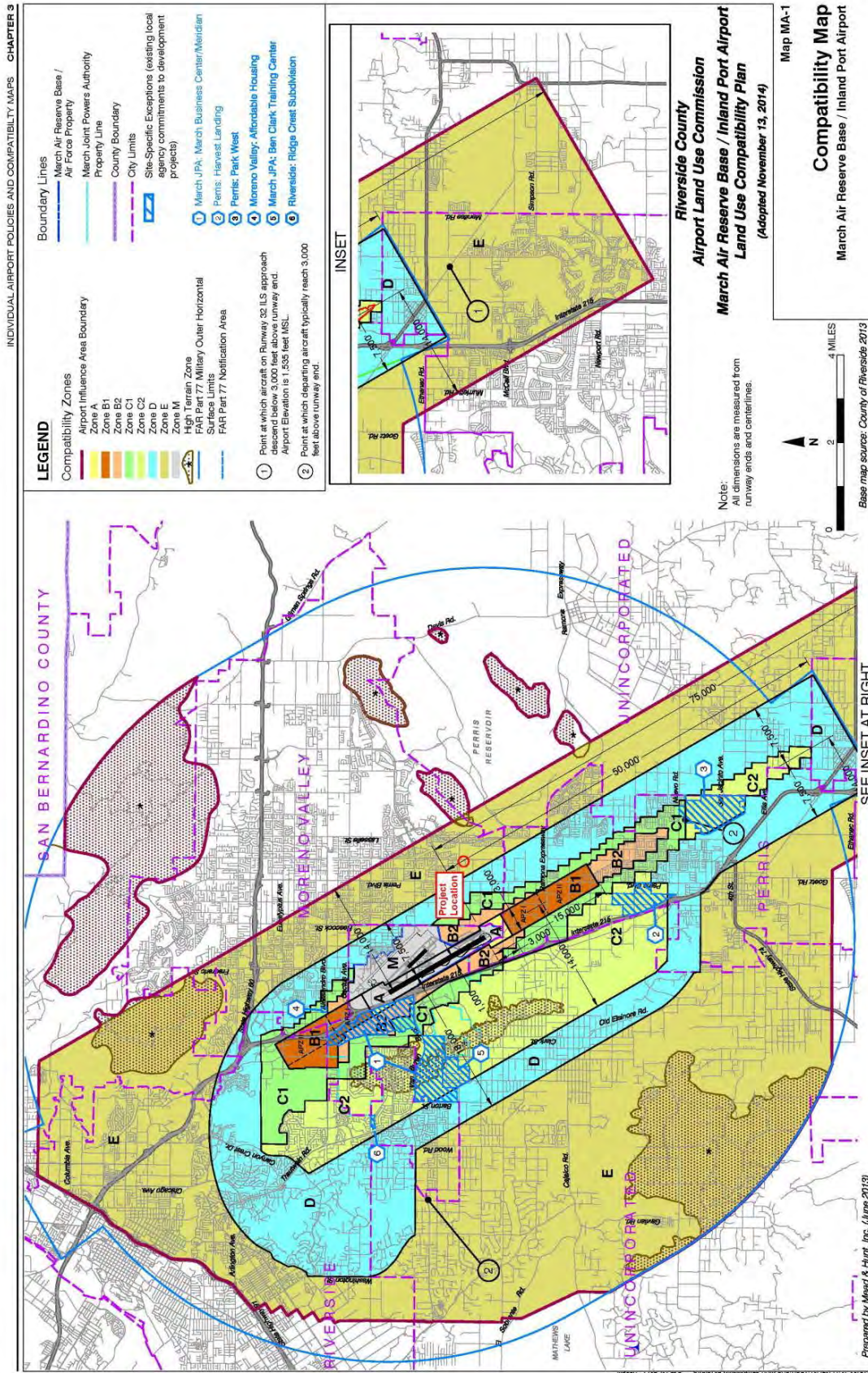
The proposed project is not located within the vicinity of a private airstrip or airfield. Therefore, there is no impact with the implementation of the proposed project that would result in a safety hazard for people residing or working in the project area. No impact is identified for this issue area.

- g) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?
- 

The proposed project site does not contain any emergency facilities, nor does it serve as an emergency evacuation route. During construction activities and operation, the proposed project would be required to maintain adequate access for emergency vehicles as required by the City. The proposed project will not interfere with an adopted emergency response or evacuation plan. Therefore, a less than significant impact is identified for this issue area.



Figure 6. March Air Reserve Base/Inland Port Airport Land Use Compatibility Map





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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

According to the City of Moreno Valley General Plan FEIR Figure 5.5-2, *Floodplains and High Fire Hazard Areas*, the proposed project site is not located in an area of substantial or high fire risk. No wildlands are located on or adjacent to the project site. The site is also largely devoid of vegetation and is surrounded by vacant lots to the south, the Eastern Municipal Water District's Moreno Valley Regional Water Reclamation Facility to the east, the Perris Valley storm drain to the north, and automotive uses and warehousing to the north and west. Implementation of the proposed project would not 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. No impact is identified for this issue area.

**IX. HYDROLOGY AND WATER QUALITY.** Would the project:

a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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The *Preliminary Hydrology and Hydraulics Study for Kitching Substation* (January, 2016) completed by JLC Engineering and Consulting, Inc., was prepared for the proposed project, and is included as part of this CEQA Initial Study in Appendix E. The surface water quality within the City of Moreno Valley is regulated by the Santa Ana Regional Water Quality Control Board (RWQCB). The Santa Ana Regional Water Quality Control Board Basin Plan (Basin Plan) establishes the water quality standards for all the ground and surface waters of the region (City of Moreno Valley, 2006).

A Project Specific Water Quality Management Plan (WQMP) has been prepared to document project compliance with the Santa Ana RWQCB and the requirements of the City of Moreno Valley Ordinance No. 827 (see Appendix F of this Initial Study). Along with the Geotechnical Report, the WQMP evaluated the infiltration feasibility of the project site, and will utilize two infiltration trenches to treat the required  $V_{BMP}$  (water quality volume) generated by the project site, and ensure that the project site does not adversely impact the existing downstream storm drain facilities or property owners. Low Impact Development (LID) Principles and LID BMPs have also been incorporated into the site design to fully address all Drainage Management Areas.

Construction would involve grading, paving, building construction, and landscaping installation, which would result in the generation of potential water quality pollutants such as silt, debris, and chemical paints that have the potential to affect water quality. A Storm Water Pollution Prevention Plan (SWPPP) will also be prepared for the proposed project in order to comply with applicable stormwater management requirements for pollution prevention. The construction contractor would be required to comply with the NPDES General Construction Permit and implement Source

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Control Best Management Practices (BMPs) during construction. This will include erosion control, spill prevention and control, solid and hazardous waste management, and dust control to reduce the discharge of pollutants from construction areas to the stormwater system. Long-term operation of the project will not generate or discharge any pollutants. Based on these considerations, the proposed project would not violate any water quality standards or waste discharge requirements, and a less than significant impact is identified for this issue area.

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 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 that would not support existing land uses or planned uses for which permits have been granted)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

As shown on the City of Moreno Valley General Plan FEIR Figure 5.7-2, *Groundwater Basins*, the proposed project is within the Perris North Groundwater Basin. The proposed project does not require the use of any potable groundwater. Also, a majority of the site will remain in a pervious condition, as a gravel surface is proposed (with the exception of the asphalt driveways). Domestic water supplies are not reliant on groundwater as a primary source in the City (City of Moreno Valley, 2006). Therefore, a less than significant impact is identified for this issue area.

- |   |                          |                          |                                     |                          |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 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 that would result in substantial erosion or siltation on site or off site? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

Although the site is currently vacant land that is composed mostly of compacted dirt, construction of the site will not involve mass grading and the proposed project is not anticipated to generate a significant increase in the amount of runoff water. As previously discussed in response IX.b, the proposed project will only slightly increase the amount of impervious surface cover associated with the driveways. According to the WQMP, post-construction, the site will be approximately 9% impervious; thus, water will continue to percolate through the ground. The proposed project would not substantially alter the existing drainage pattern of the site, substantially increase the rate of runoff, or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems. Furthermore, the site is relatively level, limiting the opportunity for rapid stormwater runoff, and therefore would not exacerbate the erosion potential of the site. A less than significant impact is identified for this issue area.

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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 amount of surface runoff in a manner that would result in flooding on site or off site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The project site currently collects flows from the northerly project at the north project boundary. The offsite area to the west is tributary to the project site at the southwesterly corner. As part of the First Thirty Logistics Center Project (Plot Plan P12-146), a storm drain system was constructed at the intersection of Edwin Road and Kitching Street. This storm drain system was constructed as an outlet system to convey the flows associated with the First Thirty Six Logistics Center Project and street improvements on Edwin Road.

The existing storm drain system within Edwin Road and Kitching Street was not designed to intercept offsite flows, or flows generated from the proposed project. Therefore, an alternative solution was developed for preventing downstream impacts. Because connecting to the existing storm drain system for the 100-year storm event is not feasible, the project site would retain the volume up to the 100-year, 24-hour storm via one of two onsite infiltration trenches, where the volume would pond and eventually infiltrate into the underlain soil.

Infiltration Trench B1 would be located at the northwesterly project boundary and consist of 4 feet of surface storage and 1 feet of trench storage. The surface storage has a capacity of 14,373 cu. ft., and the gravel trench area has a storage capacity of 893 cu. ft. This gravel trench area was determined by taking the surface area (2,232 sq. ft.) multiplied by the 1 foot depth, and 40% void ratio. The resulting total storage volume within Infiltration Trench B1 is 15,266 cu. ft. The flows tributary from the west will be conveyed along the southerly project boundary within a pervious swale to the intersection of Kitching Street and Edwin Road, where the flows will enter Edwin Road via a proposed parkway drain. The swale has sufficient capacity for the tribute flow rate. With existing conditions, a total of 7.11 acres of area contributes flow to Edwin Road, just west of the Kitching Street Intersection. After the project is completed, only 4.31 acres will contribute to flows at this location since the project site will retain the flows from the other 2.8 acres of area onsite in the infiltration basins.

Infiltration Trench B2 would be located at the southeasterly project boundary and consists of 3 feet of surface storage and 2 feet of trench storage. The surface storage has a capacity of 5,859 cu. ft., and the gravel trench area has a storage capacity of 286 cu. ft. This gravel trench area was determined by taking the surface area (716 sq. ft.) multiplied by the 1 foot depth, and 40% void ratio. The resulting total storage volume within Infiltration Trench B2 is 7,975 cu. ft. As shown in Table 4, the proposed infiltration trenches will adequately retain the volume associated with the 100-year, 24-hour storm duration for the onsite area. Because the project site will be retaining all onsite flows, the project site will not adversely impact downstream properties, and will provide a net benefit to the current flooded condition at Edwin Road and Kitching Street (JLC, 2016). A less than significant impact is identified for this issue area.

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**Table 4: 100-Year, 24-Hour Volumes**

Drainage Management Area (DMA)	100-Year, 24-Hour Volume	100-Year, 24-Hour Volume	Volume Provide in Infiltration Trench
DMA B1	0.1856ac-ft	8,085cu. ft.	15,266cu. ft.
DMA B2	0.0838 ac-ft	3,651 cu. Ft.	7,975cu. ft.

e) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?                       

Refer to response IX.c.

f) Otherwise substantially degrade water quality?                       

Refer to response IX.a.

g) Place housing within a 100-year flood hazard area as mapped on a federal flood hazard boundary or flood insurance rate map or other flood hazard delineation map?                       

The proposed project consists of a substation and switchyard, and does not propose any housing. Because the proposed project does not propose housing, there is no potential for the project to place housing within a 100-year floodplain. Thus, no impact is identified for this issue area.

h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?                       

According to the City of Moreno Valley General Plan FEIR Figure 5.5-2, *Floodplains and High Fire Hazards Areas*, the proposed project site is not located within a 100 –year floodplain. Additionally, according to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (Area No. 06065C1430H), the project site is within Zone X, which corresponds to areas with low-to-moderate flood hazards that have a greater than 0.2% annual chance of flood, 1% annual chance of flood with average depths of less than 1 foot, or with drainage areas less than 1 square mile; and are protected by levees from 1% annual chance flood. Therefore, no impact is identified for this issue area.

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?                       

The nearest dam to the proposed project is Lake Perris, located approximately 1.3 miles southeast of the project site. According to the Moreno Valley General Plan FEIR Figure 5.5-2, *Floodplains and High Fire Hazards Areas*, the proposed project site is not located in an identified dam

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inundation area. Additionally, no levees occur in the proposed project's vicinity. Therefore, no impact is identified for this issue area.

- j) Contribute to inundation by seiche, tsunami, or mudflow?

The Pacific Ocean is located more than 40 miles from the proposed project's site. Therefore, there is no potential for tsunamis to impact the project site. In addition, the proposed project site and surrounding area does not contain steep hillsides subject to mudflow. The potential for the site to be adversely impacted by earthquake induced seiches, is negligible due to the lack of any significant enclosed bodies of water located in the vicinity of the site. No impact is identified for this issue.

**X. LAND USE AND PLANNING.** Would the project:

- a) Physically divide an established community?

The project site consists of vacant and undeveloped land that is located within the geographical limits of the MVIAP. The proposed project site is zoned for industrial uses and "Public Safety and Utility Services" and "Utility Facilities" are a permitted use in the zone. "Public Safety and Utility Services" includes "electrical substations." "Utility Facilities" include "electrical, gas and oil transmission." Development of the project site with a substation and switchyard would not physically disrupt or divide the arrangement of an established community. The property is proposed to be developed in accordance with its assigned land use and zoning designations. Properties to the north, east and west have been developed into industrial uses and to the south is vacant industrially zoned land. To the north along Kitching Street are residential uses zoned R5. However, Kitching Street is bisected by the Perris Valley Storm Drain Channel. Thus, there is currently no direct access between the proposed project site and the residential community. Ultimately, Kitching Street may connect to this residential area via a bridge; however, there is adequate distance and physical separation between the project site, and the residential area to the north.

The MVIAP requires that a buffer of at least 300 feet be provided between residential and industrial development. The proposed project site is separated from the residential community by a lot that contains a towing business, and then the Perris Valley Storm Drain Channel further north. The distance from the proposed project and nearest resident is approximately (0.10 miles or 514.43 feet). The storm drain channel also acts as a significant buffer between the proposed project and residential community. The project is located outside the 300 foot buffer as depicted on Map III-1 of the MVIAP.

Therefore, the proposed project would not isolate the residential neighborhood to the east from any neighboring communities. Division of an established community would not occur. A finding of no impact is identified for this issue area.

- b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project

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(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?				
The proposed project will consist of a substation and switchyard which would be consistent with the "Business Park/Light Industrial" land use designation and the "Industrial" zoning designation applied to the site. The proposed project does not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project. Also, the project is consistent with the Western Riverside MSHCP (see item IV.f). A finding of no impact is identified for this issue area.				
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Please refer to response IV.f.				

**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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

According to the City of Moreno Valley General Plan FEIR, Mineral Resources, no regionally, locally, or statewide significant mineral resources are located in the City. Therefore, the implementation of the project would not result in the loss of availability of a significant mineral resource. No impact is identified for this issue area.

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

Please refer to response XI.a.

**XII. NOISE.** Would the project result in:

- |   |                          |                          |                                     |                          |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Exposure of persons to, or generate, noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|

Construction noise, although temporary, can be a source of concern for sensitive receptors, such as nearby residences. Construction is anticipated to take approximately 9 months, beginning in September 2016 and ending in May 2017. Construction of the project will require the use of heavy

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equipment that may be periodically audible at off-site locations. Received sound levels will fluctuate, depending on the construction activity, equipment type, and distance between noise source and receiver. Additionally, sound from construction equipment will vary dependent on the construction phase and the number and class of equipment at a location at any given time.

Table 5 (see Appendix G) lists typical construction equipment noise levels recommended for noise impact assessments based on a distance of 50 feet between a piece of equipment and a noise receptor.

The noisiest activities for the proposed project would be during the site clearing and grading phases when graders, loaders, and dozers would be used. Based on the noise levels listed in Table 5 in Appendix G, the construction equipment associated with these activities would generate noise levels of up to 85 dBA  $L_{max}$  at 50 ft. Although unlikely, two pieces of construction equipment could operate at their maximum noise level simultaneously. For every doubling of acoustic energy the noise level, measured in dBA, increases by 3. Therefore, two pieces of equipment, each operating at a noise level of 85 dBA, would generate a noise level of 88 dBA  $L_{max}$  at 50 ft.

However, project-related construction activities will not expose persons in the vicinity of the proposed project site to noise levels in excess of standards established by the City's General Plan and Chapter 11.80, Noise Regulation, of the City's Municipal Code. As restricted by Chapter 11.80.030, no person shall operate any tools (except power tools) or equipment used in construction, drilling, repair, alteration or demolition work between 7 a.m. and 8 p.m. Additionally, in accordance with Chapter 8.14.040, construction will only occur between the hours of 6:00 a.m. and 8:00 p.m. on weekdays, and 7:00 a.m. and 8:00 p.m. on weekends.

During operation, the transformers at the facility will generate only minimal operational noise, which is comparable to typical transformers located on other electrical utility infrastructure. Also the proposed 8-foot high perimeter block wall will also reduce any noise generation from the site associated with operation and maintenance facilities. No sensitive receptors are located in proximity to the site. Therefore, a less than significant impact is identified for this issue area.

- b) Exposure of persons to or generate excessive groundborne vibration or groundborne noise levels?

Please refer to response XII.a. Construction activities on the project site may produce groundborne vibration or groundborne noise levels during earthwork/grading and/or during the operation of heavy machinery. Construction activities generate groundborne vibration when heavy equipment travels over unpaved surfaces or when it is engaged in soil movement. The effects of groundborne vibration include discernible movement of building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. Vibration-related problems generally occur due to resonances in the structural components of a building because structures amplify groundborne vibration.

Table 6 (see Appendix G) lists the vibration source amplitudes for construction equipment. As pile driving is not required, the highest reference peak particle velocity (PPV) for the proposed project would be 0.210 inches per second (in/sec) associated with on-site vibration rollers.

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However, the topography of the site is relatively flat and soils are suitable for grading; therefore, grading activities required for the project construction are not extensive and ground vibration is anticipated to be minimal. Additionally, there are no sensitive receptors within the vicinity of the project, and the distance. The closest sensitive receptors are located approximately .10 miles north of the project site. Distance attenuation would reduce the construction vibration levels from the proposed project to 0.008 in/sec. This level is much lower than the 0.04 in/sec level considered to be barely perceptible to humans for transient sources (Caltrans, 2013). Long-term operation of the proposed project is not anticipated to result in perceptible levels of groundborne vibration or groundborne noise. Therefore, a less than significant impact is identified for this issue area.

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

The proposed transformers at the facility will generate only minimal operational noise. Operation and cooling fans may also emit noticeable noise within the enclosed substation. The proposed perimeter block wall will attenuate any noise to acceptable standards as prescribed by the City's General Plan and Chapter 11.80, Noise Regulation, of the City's Municipal Code. Also, no sensitive noise receptors are located in proximity to the project site. Therefore, a less than significant impact is identified for this issue area.

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

Please refer to response XII.a. During project-related construction activities, there may be a temporary or periodic increase in ambient noise levels in the proposed project's vicinity. During operation, the proposed project will not result in a significant temporary or periodic increase in ambient noise levels. A less than significant impact is identified in this issue area.

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|

According to the City of Moreno Valley General Plan FEIR Figure 5.4-1, *March Reserve Air Base Noise Impact Area*, the proposed project site is located outside of the 60 dBA CNEL noise contour and would not be subjected to excessive noise levels due to operation of the March Air Reserve Base. The proposed project site is also located within Zone E of the March Air Reserve Base/ Inland Port Air Land Use Compatibility Plan. Noise impacts are considered low, and beyond the interior 55-CNEL (Mead and Hunt, 2014). The proposed project would not expose people residing

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or working in the vicinity of the project to excessive noise levels due to its location within two (2) miles of a public airport. Therefore, a less than significant impact is identified for this issue area.

- f) For a project located within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

The proposed project site is not located near any private airfields or airstrips. Therefore, the proposed project does not have the potential to expose people to excessive noise levels associated with operations at a private airstrip. No impact is identified for this issue.

**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)?

The proposed project involves the development of the subject property into a substation and switchyard in accordance with the "Business Park/Light Industrial" land use designation applied by the City of Moreno Valley General Plan and the "Industrial" zoning designation applied to the site by the MVIAP. Accordingly, the proposed project would not result in a substantial population growth as no new residential uses are proposed. Construction and operation of the proposed project will not involve a substantial amount of employees. Furthermore, the proposed project would not induce growth through the development of housing or the extension or expansion of major capital infrastructure. No impact is identified for this issue area.

- b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

The proposed project site is currently vacant undeveloped land and does not contain any residential structures. Therefore, the implementation of the proposed project would not displace a substantial number of existing housing (i.e., no housing would be displaced), and the project would not necessitate the construction of replacement housing elsewhere. No impact is identified for this issue area.

- c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

Please refer to response XIII.b.

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**XIV. PUBLIC SERVICES.** Would the project:

- a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or to other performance objectives for any of the public services:

i) Fire protection?

Fire protection services to the proposed project site are provided by the Moreno Valley Fire Department (MVFD). The closest fire station is College Park Fire Station (Station No. 91) and is located approximately 3.0 miles northeast of the subject site at 16110 Lasselle Street, Moreno Valley, CA 92551. Secondary service would be provided by the Kennedy Park Station (Station No. 65) which is located approximately 3.6 miles north of the subject site at 15111 Indian Avenue, Moreno Valley, CA 92551. Due to construction of warehousing and distribution centers in the southern region in the City within the MVIAP, the MVFD has plans to construct the Industrial Fire Station which will be located at San Michele Road, between Perris Boulevard and Indian Avenue. This future fire station would be approximately 1 mile west of the proposed project, and would provide adequate fire and emergency medical response coverage to the MVIAP area. This new fire station is already planned and land for the future fire station has already been acquired (Moreno Valley Fire Department, 2011). However, construction of the new fire station is dependent on funding collected through the Moreno Valley's Development Impact Fee (DIF) Ordinance (Ordinance No. 695), where each new development is assessed a fee to cover its share of cost of new fire facilities (City of Moreno Valley, 2006).

The proposed project will be constructed pursuant to all applicable standards, thus minimizing potential adverse service calls to the site. Furthermore, the proposed project would receive adequate fire protection service and the project would not result in an increase in the need of fire protection that would require new or significant fire facilities to be constructed. Therefore, a less than significant impact is identified for this issue area.

ii) Police protection?

Police protection service to the proposed project is provided by the City of Moreno Valley Police Department. The proposed project will be secured by an 8-foot high perimeter block wall with barb wire. The wall will deter unauthorized persons from the site. The development of the proposed project does not introduce new buildings to the site. The proposed project would receive adequate police protection service. Therefore, the proposed project is not anticipated to

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result in an increase in the need for police protection that would require new or significant police facilities to be constructed. No impact is identified for this issue area.

iii) Schools?

The proposed project does not include the development of residential land uses that would result in an increase in population or student generation. Additionally, the proposed project is not subject to the Level 1 school fee associated with Government Code Section 65995(b)(3) (SB 50) as there are no enclosed spaces on-site that would trigger payment of the impact fee. Therefore, no impact is identified for this issue area.

iv) Parks?

Because no residential uses are proposed, the proposed project would not increase population, generating an increase in demand on existing public or private parks or other recreational facilities that would either result in or increase physical deterioration of the facility. Therefore, no impact is identified for this issue area.

v) Other public facilities?

The proposed project does not include the development of residential land uses that would result in an increase in population. Thus, the proposed project is not anticipated to adversely affect other public facilities (such as post offices). Therefore, no impact is identified for this issue area.

**XV. RECREATION.** Would the project:

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The proposed project is to develop the site with an industrial use. No housing is proposed as part of the project; therefore, the proposed project would not increase population, generating an increase in demand to existing public or private parks or other recreational facilities that would either result in or increase physical deterioration of the facility. Therefore, no impact is identified for this issue area.

b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

The proposed project consists of a substation and switchyard, and would not include recreational facilities or require the construction or expansion of recreational facilities. No impact is identified for this issue area.

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**XVI. TRANSPORTATION AND TRAFFIC.**

Would the project:

- a) Conflict with an applicable plan, ordinance,, or policy establishing measures of effectiveness for the performance of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

The proposed project would result in a minor increase in vehicular trips associated with the arrival of construction workers to the site. The proposed project would require no more than 25 on-site workers on any given day during the construction period. Trucks would also be required during construction for the import of fill. It is anticipated that there would be a maximum of 25 cars traveling back and forth to and from the project site during the 9 month construction period. These trips would be temporary and short-term during project construction. Furthermore, with the completion of project construction, the impact to the area in regard to traffic is negligible because the substation project is not a destination for any reason other than maintenance. During operation only, approximately 2 workers will be entering the site for maintenance activities approximately 2 times a year. Thus, the proposed project would not substantially increase traffic conditions during construction and operation of the substation. A less than significant impact is identified for this issue area.

- 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?

Please refer to response XVI.a.

- c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

The proposed project does not include air transportation. The transformers and breakers will not exceed 20 feet in height. The site will also include multiple poles providing support for lighting and/or connections between the substation and switchyard. The poles will not exceed a height of 40 feet. Additionally, the proposed project is located in Zone E. As such, the proposed project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. Therefore, no impact is identified for this issue area.

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d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No public roadways are proposed as part of the project. The proposed project proposes to widen and continue to use the existing access roads (Kitching Street and Edwin Road). The proposed project does include an off-street Street Improvement Plan. The project proposes the addition of three driveways to allow adequate access to and from the proposed project site. This includes an 18-foot wide paved driveway and a 24-foot wide paved driveway along Kitching Street, and another 24-foot wide driveway along Edwin Road. All improvements planned as part of the proposed project would be in conformance with applicable standards set by the City of Moreno Valley, and would not result in any hazards due to a design feature. Therefore, no impact is identified for this issue area.

e) Result in inadequate emergency access?

As described in response XVI.d, the proposed project would include the addition of three driveways to allow adequate access to and from the site; thus, enhancing emergency access. Access within the project site will be in accordance within the City's Fire Department Standards. Therefore, no impact is identified for this issue area.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

The existing surrounding circulation network would not change with the implementation of the proposed project. Public transit, bicycle, and pedestrian facilities are not located in proximity to the project site. As such, the proposed project would not conflict with any adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. Therefore, no impact is identified for this issue area.

**XVII. UTILITIES AND SERVICE**

**SYSTEMS.** Would the project:

a) Exceed wastewater treatment requirements of the applicable regional water quality control board?

The proposed project is the installation of a small substation and switchyard facility and does not include an operation and maintenance building that would require water and sewer services. Because the proposed project does not include an O&M building, no wastewater would be generated and no onsite sewage disposal is necessary. Based on this consideration, the proposed project would not exceed wastewater treatment requirements of the Regional Water Quality Control Board. Therefore, no impact is identified for this issue area.

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b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

As described above in response XVII.a, the proposed project does not include an O&M facility and is not anticipated to result in a significant increase in water demand/use. The proposed project will not require any water or sewer service during operation that would increase the need for new infrastructure. Therefore, the proposed project would not require the construction of new water facilities or expansion of existing facilities. No impact is identified for this issue area.

c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

The proposed project will increase the amount of impervious surface cover; however, water will continue to percolate through the ground, as a majority of the surfaces of the project site will remain pervious. The proposed project would not substantially alter the existing drainage pattern of the site, substantially increase the rate of runoff, or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems. With the exception of on-site drainage improvements and storm drain lateral connections, the proposed project does not require and will not result in the construction of new stormwater drainage facilities or the expansion of existing facilities. Therefore, a less than significant impact is identified for this issue area.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?

The proposed project would require minimal water during construction. During operations, the substation will require limited water resources (approximately 289,000 gallons per year) for the maintenance of perimeter landscaping. Therefore, a less than significant impact is identified for this issue area.

e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Please refer to response XVII.a.

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f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

During construction of the proposed project, solid waste generation will be minor. Solid waste will be disposed of using a locally licensed waste hauling service and taken to the Waste Management of Badlands Sanitary Landfill located at 31125 Ironwood Avenue. This is an active solid waste operation facility that accepts construction/demolition. The Badlands Sanitary Landfill is a Class III facility that is permitted to accept 4,000 tons of solid waste per day waste (CalRecycle, 2010). The landfill has a remaining capacity of 14,730,025 cubic yards and has a January 1, 2024 cease operation date.

Due to the minimal amount of workers required to operate and maintain the facility, a nominal amount of solid waste is anticipated during operation of the proposed project. Therefore, there is ample landfill capacity to receive the project's minor amount of solid waste generated by project construction and operation. A less than significant impact is identified for this issue area.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

During construction and operation of the proposed project, solid waste generation would be minor. The proposed project would continue to comply with federal, state and local regulations related to solid waste and recycling. Therefore, no impact is identified for this issue area.

**XVIII. MANDATORY FINDINGS OF SIGNIFICANCE**

a) Does the project have the potential to 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 eliminate a plant or animal community, substantially 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?

As detailed in section IV, Biological Resources, and section V, Cultural Resources, the implementation of the Kitching electrical substation and switchyard will not result in significant direct or indirect impacts to biological and cultural resources. As previously mentioned in response IV.a., the project site is highly disturbed and no longer supports native habitat. However, the project site does contain soils that can support marginally suitable habitat for two

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plant species within the CASSA: smooth tarplant and Coulter’s goldfields. The potential for these species to occur in the survey area is low; however, mitigation measure BIO-1 is provided to address potential project impacts to CASSA species and to reduce impacts to a less than significant level. BIO-1 requires a focused survey to be conducted for smooth tarplant and Coulter’s goldfields during blooming season (April – June). The survey will occur prior to the start of construction (September 2016). If found on-site, a DBESP Report detailing avoidance, minimization or mitigation measures will be provided to the City and RCA.

Thus, construction of the proposed project will not result in a loss of open space habitat (row and field crops) and associated wildlife; will not threaten a plant or animal community; will not reduce the number or restrict the range of a rare or endangered plant or animal; or eliminate important examples of major periods of California history or prehistory. A finding of less than significant is identified for this issue area.

- b) Does the project have impacts that are individually limited, but cumulatively considerable? (‘‘Cumulatively considerable’’ means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Based on the analysis contained in this Initial Study, the proposed project would not result in significant impacts to aesthetics, agricultural and forestry resources, air quality, geology and soils, green house gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation and traffic, and utilities and service systems.

Mitigation measures recommended for biological resources would reduce impacts to below a level of significance. The proposed project would incrementally contribute to cumulative impacts for projects occurring within the vicinity of the project. However, with mitigation, no residually significant impacts would result with implementation of the project either directly or indirectly. In the absence of residually significant impacts, the incremental accumulation of effects would not be cumulatively considerable. Therefore, a finding of less than significant is identified for this issue area.

- c) Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?

Based on the analysis contained in this Initial Study, all impacts related to the proposed project can be mitigated to a level below significance. Therefore, substantial adverse impacts on human beings would not occur as a result of the proposed project. A less than significant impact is identified for this issue area.

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# APPENDIX A

## Air Quality Calculations During Construction

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## Kitching Substation

### Short-term Emissions Analysis

#### Peak Daily Construction Emissions (lb/day)

	ROG	NOX	CO	SO2	PM10	PM2.5	CO2e
On-site	4.58	33.75	23.80	0.04	4.33	2.87	3,433.34
Off-site	1.79	31.15	21.44	0.08	2.61	1.07	8,211.95
<b>Total</b>	<b>4.86</b>	<b>58.66</b>	<b>39.26</b>	<b>0.10</b>	<b>6.94</b>	<b>3.94</b>	<b>10,120.48</b>
<b>SCAQMD Threshold</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>	<b>NA</b>
<b>Exceed?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>NA</b>

#### Construction Localized Significance Threshold (LST) Analysis

Disturbed Area (acres)	2	
Source Receptor Area	24	Perris Valley
Distance to nearest receptor (ft) =	500	Residences along Plumeria Lane
Distance to nearest receptor (m) =	152.4	if less than 25 m use 25 m

	NOX	CO	PM10	PM2.5
LST Emissions (on-site only)	33.75	23.80	4.33	2.87
<b>SCAQMD Threshold</b>	<b>322</b>	<b>3684</b>	<b>57</b>	<b>17</b>
<b>Exceed?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

#### Greenhouse Gas Emissions (metric Tons/year)

	CO2e
Construction	10.3 * Amortized over a 30 year lifetime

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

## Kitching - Emission Summary

### Construction - Summer Emissions

#### Phase 1 - Site Preparation

	ROG	NOX	CO	SO2	PM10	PM2.5	CO2e
On-site	2.44	25.77	16.51	0.02	4.22	2.64	1,792.37
Off-site	0.03	0.04	0.45	0.00	0.09	0.02	88.85
<b>Total</b>	<b>2.47</b>	<b>25.81</b>	<b>16.97</b>	<b>0.02</b>	<b>4.31</b>	<b>2.66</b>	<b>1,881.22</b>

#### Phase 2 - Fill and Grading

	ROG	NOX	CO	SO2	PM10	PM2.5	CO2e
On-site	2.60	27.51	17.83	0.02	4.33	2.87	1,908.53
Off-site	1.72	30.01	19.59	0.08	2.61	1.07	8,211.95
<b>Total</b>	<b>4.32</b>	<b>57.51</b>	<b>37.41</b>	<b>0.10</b>	<b>6.94</b>	<b>3.94</b>	<b>10,120.48</b>

#### Phase 3a - Building and Construction 2016

	ROG	NOX	CO	SO2	PM10	PM2.5	CO2e
On-site	3.29	20.55	14.71	0.02	1.37	1.32	2,056.39
Off-site	0.23	1.24	3.07	0.01	0.49	0.15	652.30
<b>Total</b>	<b>3.52</b>	<b>21.79</b>	<b>17.78</b>	<b>0.03</b>	<b>1.85</b>	<b>1.46</b>	<b>2,708.69</b>

#### Phase 3b - Building and Construction 2017

	ROG	NOX	CO	SO2	PM10	PM2.5	CO2e
On-site	2.95	19.11	14.31	0.02	1.23	1.18	2,043.25
Off-site	0.21	1.13	2.80	0.01	0.48	0.14	632.70
<b>Total</b>	<b>3.16</b>	<b>20.24</b>	<b>17.11</b>	<b>0.03</b>	<b>1.71</b>	<b>1.33</b>	<b>2,675.95</b>

#### Phase 4a - Paving 2016

	ROG	NOX	CO	SO2	PM10	PM2.5	CO2e
On-site	1.29	13.21	9.09	0.01	0.81	0.74	1,376.95
Off-site	0.05	0.06	0.74	0.00	0.15	0.04	144.38
<b>Total</b>	<b>1.34</b>	<b>13.27</b>	<b>9.83</b>	<b>0.02</b>	<b>0.95</b>	<b>0.78</b>	<b>1,521.32</b>

#### Phase 4b - Paving 2017

	ROG	NOX	CO	SO2	PM10	PM2.5	CO2e
On-site	1.19	12.10	9.03	0.01	0.73	0.68	1,356.17
Off-site	0.04	0.05	0.66	0.00	0.15	0.04	138.66
<b>Total</b>	<b>1.23</b>	<b>12.15</b>	<b>9.69</b>	<b>0.02</b>	<b>0.88</b>	<b>0.71</b>	<b>1,494.82</b>

**Construction - Winter Emissions****Phase 1 - Site Preparation**

	<b>ROG</b>	<b>NOX</b>	<b>CO</b>	<b>SO2</b>	<b>PM10</b>	<b>PM2.5</b>	<b>CO2e</b>
On-site	2.44	25.77	16.51	0.02	4.22	2.64	1,792.37
Off-site	0.03	0.04	0.39	0.00	0.09	0.02	81.20
<b>Total</b>	<b>2.47</b>	<b>25.81</b>	<b>16.91</b>	<b>0.02</b>	<b>4.31</b>	<b>2.66</b>	<b>1,873.57</b>

**Phase 2 - Fill and Grading**

	<b>ROG</b>	<b>NOX</b>	<b>CO</b>	<b>SO2</b>	<b>PM10</b>	<b>PM2.5</b>	<b>CO2e</b>
On-site	2.60	27.51	17.83	0.02	4.33	2.87	1,908.53
Off-site	1.79	31.15	21.44	0.08	2.61	1.07	8,184.34
<b>Total</b>	<b>4.39</b>	<b>58.66</b>	<b>39.26</b>	<b>0.10</b>	<b>6.94</b>	<b>3.94</b>	<b>10,092.87</b>

**Phase 3a - Building and Construction 2016**

	<b>ROG</b>	<b>NOX</b>	<b>CO</b>	<b>SO2</b>	<b>PM10</b>	<b>PM2.5</b>	<b>CO2e</b>
On-site	3.29	20.55	14.71	0.02	1.37	1.32	2,056.39
Off-site	0.23	1.28	2.96	0.01	0.49	0.15	617.42
<b>Total</b>	<b>3.52</b>	<b>21.83</b>	<b>17.67</b>	<b>0.03</b>	<b>1.85</b>	<b>1.46</b>	<b>2,673.81</b>

**Phase 3b - Building and Construction 2017**

	<b>ROG</b>	<b>NOX</b>	<b>CO</b>	<b>SO2</b>	<b>PM10</b>	<b>PM2.5</b>	<b>CO2e</b>
On-site	2.95	19.11	14.31	0.02	1.23	1.18	2,043.25
Off-site	0.21	1.16	2.71	0.01	0.48	0.14	599.10
<b>Total</b>	<b>3.16</b>	<b>20.27</b>	<b>17.03</b>	<b>0.03</b>	<b>1.71</b>	<b>1.33</b>	<b>2,642.35</b>

**Phase 4a - Paving 2016**

	<b>ROG</b>	<b>NOX</b>	<b>CO</b>	<b>SO2</b>	<b>PM10</b>	<b>PM2.5</b>	<b>CO2e</b>
On-site	1.29	13.21	9.09	0.01	0.81	0.74	1,376.95
Off-site	0.05	0.06	0.64	0.00	0.15	0.04	131.95
<b>Total</b>	<b>1.33</b>	<b>13.27</b>	<b>9.72</b>	<b>0.01</b>	<b>0.95</b>	<b>0.78</b>	<b>1,508.90</b>

**Phase 4b - Paving 2017**

	<b>ROG</b>	<b>NOX</b>	<b>CO</b>	<b>SO2</b>	<b>PM10</b>	<b>PM2.5</b>	<b>CO2e</b>
On-site	1.19	12.10	9.03	0.01	0.73	0.68	1,356.17
Off-site	0.04	0.06	0.57	0.00	0.15	0.04	126.70
<b>Total</b>	<b>1.23</b>	<b>12.15</b>	<b>9.60</b>	<b>0.01</b>	<b>0.88</b>	<b>0.71</b>	<b>1,482.87</b>

**Construction - Annual Emissions****Phase 1 - Site Preparation**

	<b>ROG</b>	<b>NOX</b>	<b>CO</b>	<b>SO2</b>	<b>PM10</b>	<b>PM2.5</b>	<b>CO2e</b>
On-site	0.00	0.03	0.02	0.00	0.00	0.00	1.63
Off-site	0.00	0.00	0.00	0.00	0.00	0.00	0.07
<b>Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>1.70</b>

**Phase 2 - Fill and Grading**

	<b>ROG</b>	<b>NOX</b>	<b>CO</b>	<b>SO2</b>	<b>PM10</b>	<b>PM2.5</b>	<b>CO2e</b>
On-site	0.01	0.14	0.09	0.00	0.02	0.01	8.66
Off-site	0.01	0.16	0.11	0.00	0.01	0.01	37.18
<b>Total</b>	<b>0.02</b>	<b>0.30</b>	<b>0.20</b>	<b>0.00</b>	<b>0.03</b>	<b>0.02</b>	<b>45.84</b>

**Phase 3a - Building and Construction 2016**

	<b>ROG</b>	<b>NOX</b>	<b>CO</b>	<b>SO2</b>	<b>PM10</b>	<b>PM2.5</b>	<b>CO2e</b>
On-site	0.12	0.77	0.55	0.00	0.05	0.05	69.96
Off-site	0.01	0.05	0.11	0.00	0.02	0.01	21.21
<b>Total</b>	<b>0.13</b>	<b>0.82</b>	<b>0.67</b>	<b>0.00</b>	<b>0.07</b>	<b>0.05</b>	<b>91.17</b>

**Phase 3b - Building and Construction 2017**

	<b>ROG</b>	<b>NOX</b>	<b>CO</b>	<b>SO2</b>	<b>PM10</b>	<b>PM2.5</b>	<b>CO2e</b>
On-site	0.16	1.03	0.77	0.00	0.07	0.06	100.09
Off-site	0.01	0.06	0.15	0.00	0.03	0.01	29.64
<b>Total</b>	<b>0.17</b>	<b>1.10</b>	<b>0.92</b>	<b>0.00</b>	<b>0.09</b>	<b>0.07</b>	<b>129.73</b>

**Phase 4a - Paving 2016**

	<b>ROG</b>	<b>NOX</b>	<b>CO</b>	<b>SO2</b>	<b>PM10</b>	<b>PM2.5</b>	<b>CO2e</b>
On-site	0.00	0.03	0.02	0.00	0.00	0.00	3.12
Off-site	0.00	0.00	0.00	0.00	0.00	0.00	0.30
<b>Total</b>	<b>0.00</b>	<b>0.03</b>	<b>0.02</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.43</b>

**Phase 4b - Paving 2017**

	<b>ROG</b>	<b>NOX</b>	<b>CO</b>	<b>SO2</b>	<b>PM10</b>	<b>PM2.5</b>	<b>CO2e</b>
On-site	0.03	0.33	0.25	0.00	0.02	0.02	33.83
Off-site	0.00	0.00	0.02	0.00	0.00	0.00	3.20
<b>Total</b>	<b>0.03</b>	<b>0.33</b>	<b>0.26</b>	<b>0.00</b>	<b>0.02</b>	<b>0.02</b>	<b>37.04</b>

## Kitching Substation Construction Riverside-South Coast County, Summer

### 1.0 Project Characteristics

#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	1.87	Acre	1.87	81,457.20	0

#### 1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2017

Utility Company      Southern California Edison

CO2 Intensity (lb/MW/hr)	630.89	CH4 Intensity (lb/MW/hr)	0.029	N2O Intensity (lb/MW/hr)	0.006
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### 1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use -
- Construction Phase - Phasing based on draft schedule
- Off-road Equipment -
- Off-road Equipment - Import and grade fill material
- Off-road Equipment -
- Grading - project site is 1.87 acres
- Construction Off-road Equipment Mitigation -
- Off-road Equipment -

Table Name	Column Name	Default Value	New Value
tbiConstructionPhase	NumDays	200.00	183.00
tbiConstructionPhase	NumDays	4.00	10.00
tbiConstructionPhase	NumDays	10.00	60.00
tbiConstructionPhase	PhaseEndDate	8/23/2017	3/17/2017
tbiConstructionPhase	PhaseStartDate	9/17/2016	9/19/2016
tbiConstructionPhase	PhaseStartDate	9/3/2016	9/5/2016
tbiConstructionPhase	PhaseStartDate	6/1/2017	12/26/2016
tbiGrading	AcresOfGrading	5.00	1.87
tbiGrading	AcresOfGrading	1.00	1.87
tbiGrading	MaterialImported	0.00	9,050.00
tbiOffRoadEquipment	UsageHours	6.00	8.00
tbiOffRoadEquipment	UsageHours	6.00	8.00
tbiOffRoadEquipment	UsageHours	7.00	8.00
tbiProjectCharacteristics	OperationalYear	2014	2017

## 2.0 Emissions Summary

### 2.1 Overall Construction (Maximum Daily Emission)

#### Unmitigated Construction

Year	lb/day											lb/day				
	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
2016	4.8599	57.5115	37.4112	0.0998	8.3974	2.1976	10.4256	3.9131	2.0839	5.779	0	10,107.31	10,107.31	0.8795	0	10,125.78
2017	4.3928	32.3872	26.8018	0.0443	0.6071	1.9811	2.5882	0.1627	1.8782	2.0409	0	4,152.83	4,152.83	0.8544	0	4,170.77



Total	9.2527	89.8986	64.213	0.1442	9.0045	4.1787	13.0138	4.0758	3.962	7.8198	0	14,260.14	14,260.14	1.7339	0	14,296.55
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**Mitigated Construction**

Year	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
lb/day																
2016	4.8599	57.5115	37.4112	0.0998	4.9131	2.1976	6.9413	2.0712	2.0839	3.937	0	10,107.31	10,107.31	0.8795	0	10,125.78
2017	4.3928	32.3872	26.8018	0.0443	0.6071	1.9811	2.5882	0.1627	1.8782	2.0409	0	4,152.83	4,152.83	0.8544	0	4,170.77
Total	9.2527	89.8986	64.213	0.1442	5.5202	4.1787	9.5295	2.2338	3.962	5.9779	0	14,260.14	14,260.14	1.7339	0	14,296.55

Percent Reduction	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
lb/day																
0	0	0	0	0	38.69	0	26.77	45.19	0	23.55	0	0	0	0	0	0

**2.2 Overall Operational**

**Unmitigated Operational**

Category	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
lb/day																
Area	2.1301	0	1.90E-04	0		0	0		0	0		4.10E-04	4.10E-04	0		4.30E-04
Energy	0	0	0	0		0	0		0	0		0	0	0	0	0



4	Paving	12/26/2016	3/17/2017	5	60
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Acres of Grading (Site Preparation Phase): 1.87

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8	174	0.41
Site Preparation	Rubber Tired Dozers	1	7	255	0.4
Site Preparation	Tractors/Loaders/Backhoes	1	8	97	0.37
Fill and Grading	Graders	1	8	174	0.41
Fill and Grading	Rubber Tired Dozers	1	8	255	0.4
Fill and Grading	Tractors/Loaders/Backhoes	1	8	97	0.37
Building Construction	Cranes	1	6	226	0.29
Building Construction	Forklifts	1	6	89	0.2
Building Construction	Generator Sets	1	8	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6	97	0.37
Building Construction	Welders	3	8	46	0.45
Paving	Cement and Mortar Mixers	1	6	9	0.56
Paving	Pavers	1	6	125	0.42
Paving	Paving Equipment	1	8	130	0.36
Paving	Rollers	1	7	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8	97	0.37

**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
Site Preparation	3	8	0	0	14.7	6.9	20	LD_Mix	HDT_Mix	HHDT
Fill and Grading	3	8	0	1,131.00	14.7	6.9	20	LD_Mix	HDT_Mix	HHDT
Building Construction	7	34	13	0	14.7	6.9	20	LD_Mix	HDT_Mix	HHDT
Paving	5	13	0	0	14.7	6.9	20	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Site Preparation - 2016**

**Unmitigated Construction On-Site**

Category	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
Fugitive Dust					6.2609	0	6.2609	3.0035	0	3.0035			0			0
Off-Road	2.4428	25.7718	16.5144	0.0171		1.3985	1.3985	1.2866	1.2866	1.2866		1,781.09	1,781.09	0.5372		1,792.37
<b>Total</b>	<b>2.4428</b>	<b>25.7718</b>	<b>16.5144</b>	<b>0.0171</b>	<b>6.2609</b>	<b>1.3985</b>	<b>7.6594</b>	<b>3.0035</b>	<b>1.2866</b>	<b>4.2901</b>		<b>1,781.09</b>	<b>1,781.09</b>	<b>0.5372</b>		<b>1,792.37</b>

**Unmitigated Construction Off-Site**

Category	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Worker	0.0307	0.0362	0.4537	1.07E-03	0.0894	5.60E-04	0.0237	5.10E-04	0.0242	88.7665	88.7665	88.7665	3.83E-03		88.8469
<b>Total</b>	<b>0.0307</b>	<b>0.0362</b>	<b>0.4537</b>	<b>1.07E-03</b>	<b>0.0894</b>	<b>5.60E-04</b>	<b>0.0237</b>	<b>5.10E-04</b>	<b>0.0242</b>	<b>88.7665</b>	<b>88.7665</b>	<b>88.7665</b>	<b>3.83E-03</b>		<b>88.8469</b>

**Mitigated Construction On-Site**

Category	lb/day										lb/day						
Fugitive Dust											2.8174	0	2.8174	1.3516	0	1.3516	0
Off-Road	2.4428	25.7718	16.5144	0.0171	1.3985	1.3985	1.2866	1.2866	1.2866	0	1,781.09	1,781.09	0.5372	1,781.09	0.5372	1,792.37	1,792.37
<b>Total</b>	<b>2.4428</b>	<b>25.7718</b>	<b>16.5144</b>	<b>0.0171</b>	<b>1.3985</b>	<b>1.3985</b>	<b>1.2866</b>	<b>1.2866</b>	<b>1.2866</b>	<b>0</b>	<b>1,781.09</b>	<b>1,781.09</b>	<b>0.5372</b>	<b>1,781.09</b>	<b>0.5372</b>	<b>1,792.37</b>	<b>1,792.37</b>

**Mitigated Construction Off-Site**

Category	lb/day										lb/day						
Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Worker	0.0307	0.0362	0.4537	1.07E-03	0.0894	5.60E-04	0.09	0.0237	5.10E-04	0.0242	88.7665	88.7665	3.83E-03	88.7665	88.7665	3.83E-03	88.7665	88.7665	88.8469
<b>Total</b>	<b>0.0307</b>	<b>0.0362</b>	<b>0.4537</b>	<b>1.07E-03</b>	<b>0.0894</b>	<b>5.60E-04</b>	<b>0.09</b>	<b>0.0237</b>	<b>5.10E-04</b>	<b>0.0242</b>	<b>88.7665</b>	<b>88.7665</b>	<b>3.83E-03</b>	<b>88.7665</b>	<b>88.7665</b>	<b>3.83E-03</b>	<b>88.7665</b>	<b>88.7665</b>	<b>88.8469</b>

**3.3 Fill and Grading - 2016**

**Unmitigated Construction On-Site**

Category	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
lb/day																
Fugitive Dust					6.335	0	6.335	3.349	0	3.349			0			0
Off-Road	2.5976	27.5057	17.8251	0.0182		1.4792	1.4792		1.3608	1.3608		1.896.52	1.896.52	0.5721		1,908.53
<b>Total</b>	<b>2.5976</b>	<b>27.5057</b>	<b>17.8251</b>	<b>0.0182</b>	<b>6.335</b>	<b>1.4792</b>	<b>7.8142</b>	<b>3.349</b>	<b>1.3608</b>	<b>4.7098</b>		<b>1,896.52</b>	<b>1,896.52</b>	<b>0.5721</b>		<b>1,908.53</b>

**Unmitigated Construction Off-Site**

Category	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
lb/day																
Hauling	1.6938	29.9696	19.1325	0.0805	1.9729	0.5485	2.5214	0.5404	0.5045	1.0449		8,122.03	8,122.03	0.0513		8,123.11
Vendor	0	0	0	0	0	0	0	0	0	0		0	0	0		0
Worker	0.0307	0.0362	0.4537	1.07E-03	0.0894	5.60E-04	0.09	0.0237	5.10E-04	0.0242		88.7665	88.7665	3.83E-03		88.8469

Total	1.7244	30.0058	19.5861	0.0816	2.0624	0.5491	2.6114	0.5641	0.505	1.0692	8,210.80	8,210.80	0.0551	8,211.95
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**Mitigated Construction On-Site**

Category	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
lb/day																
Fugitive Dust					2.8508	0	2.8508	1.5071	0	1.5071			0			0
Off-Road	2.5976	27.5057	17.8251	0.0182		1.4792	1.4792		1.3608	1.3608	0	1,896.52	1,896.52	0.5721		1,908.53
<b>Total</b>	<b>2.5976</b>	<b>27.5057</b>	<b>17.8251</b>	<b>0.0182</b>	<b>2.8508</b>	<b>1.4792</b>	<b>4.3299</b>	<b>1.5071</b>	<b>1.3608</b>	<b>2.8679</b>	<b>0</b>	<b>1,896.52</b>	<b>1,896.52</b>	<b>0.5721</b>		<b>1,908.53</b>

**Mitigated Construction Off-Site**

Category	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
lb/day																
Hauling	1.6938	29.9696	19.1325	0.0805	1.9729	0.5485	2.5214	0.5404	0.5045	1.0449			8,122.03	0.0513		8,123.11
Vendor	0	0	0	0	0	0	0	0	0	0			0	0		0
Worker	0.0307	0.0362	0.4537	1.07E-03	0.0894	5.60E-04	0.09	0.0237	5.10E-04	0.0242			88.7665	3.83E-03		88.8469
<b>Total</b>	<b>1.7244</b>	<b>30.0058</b>	<b>19.5861</b>	<b>0.0816</b>	<b>2.0624</b>	<b>0.5491</b>	<b>2.6114</b>	<b>0.5641</b>	<b>0.505</b>	<b>1.0692</b>			<b>8,210.80</b>	<b>0.0551</b>		<b>8,211.95</b>

**3.4 Building Construction - 2016**

**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															
Off-Road	3.2915	20.5459	14.7074	0.022		1.3656	1.3656		1.3176	1.3176		2.046.94	2.046.94	0.4499		2,056.39
<b>Total</b>	<b>3.2915</b>	<b>20.5459</b>	<b>14.7074</b>	<b>0.022</b>		<b>1.3656</b>	<b>1.3656</b>		<b>1.3176</b>	<b>1.3176</b>		<b>2.046.94</b>	<b>2.046.94</b>	<b>0.4499</b>		<b>2,056.39</b>

**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															
Hauling	0	0	0	0	0	0	0	0	0	0		0	0	0		0
Vendor	0.1011	1.0909	1.1423	2.74E-03	0.0818	0.0212	0.103	0.0234	0.0195	0.0428		274.6642	274.6642	1.79E-03		274.7018
Worker	0.1303	0.1538	1.9282	4.56E-03	0.38	2.38E-03	0.3824	0.1008	2.18E-03	0.103		377.2578	377.2578	0.0163		377.5995
<b>Total</b>	<b>0.2314</b>	<b>1.2447</b>	<b>3.0705</b>	<b>7.30E-03</b>	<b>0.4618</b>	<b>0.0236</b>	<b>0.4854</b>	<b>0.1242</b>	<b>0.0217</b>	<b>0.1458</b>		<b>651.922</b>	<b>651.922</b>	<b>0.0181</b>		<b>652.3012</b>

**Mitigated Construction On-Site**



Category	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
	lb/day															
Off-Road	3.2915	20.5459	14.7074	0.022	1.3656	1.3656	1.3656	1.3176	1.3176	1.3176	0	2,046.94	2,046.94	0.4499		2,056.39
<b>Total</b>	<b>3.2915</b>	<b>20.5459</b>	<b>14.7074</b>	<b>0.022</b>	<b>1.3656</b>	<b>1.3656</b>	<b>1.3656</b>	<b>1.3176</b>	<b>1.3176</b>	<b>1.3176</b>	<b>0</b>	<b>2,046.94</b>	<b>2,046.94</b>	<b>0.4499</b>		<b>2,056.39</b>

**Mitigated Construction Off-Site**

Category	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
	lb/day															
Hauling	0	0	0	0	0	0	0	0	0	0		0	0	0		0
Vendor	0.1011	1.0909	1.1423	2.74E-03	0.0818	0.0212	0.103	0.0234	0.0195	0.0428		274.6642	274.6642	1.79E-03		274.7018
Worker	0.1303	0.1538	1.9282	4.56E-03	0.38	2.38E-03	0.3824	0.1008	2.18E-03	0.103		377.2578	377.2578	0.0163		377.5995
<b>Total</b>	<b>0.2314</b>	<b>1.2447</b>	<b>3.0705</b>	<b>7.30E-03</b>	<b>0.4618</b>	<b>0.0236</b>	<b>0.4854</b>	<b>0.1242</b>	<b>0.0217</b>	<b>0.1458</b>		<b>651.922</b>	<b>651.922</b>	<b>0.0181</b>		<b>652.3012</b>

**3.4 Building Construction - 2017**

**Unmitigated Construction On-Site**

Category	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
	lb/day															

Off-Road	2.9546	19.1088	14.311	0.022	1.2257	1.1823	1.1823	2,034.29	2,034.29	0.4268	2,043.25
<b>Total</b>	<b>2.9546</b>	<b>19.1088</b>	<b>14.311</b>	<b>0.022</b>	<b>1.2257</b>	<b>1.1823</b>	<b>1.1823</b>	<b>2,034.29</b>	<b>2,034.29</b>	<b>0.4268</b>	<b>2,043.25</b>

**Unmitigated Construction Off-Site**

Category	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
	lb/day															
Hauling	0	0	0	0	0	0	0	0	0	0		0	0	0		0
Vendor	0.0912	0.9895	1.0662	2.73E-03	0.0818	0.019	0.1008	0.0234	0.0175	0.0408		270.0265	270.0265	1.72E-03		270.0626
Worker	0.1167	0.138	1.7316	4.56E-03	0.38	2.31E-03	0.3824	0.1008	2.13E-03	0.1029		362.3231	362.3231	0.0149		362.6366
<b>Total</b>	<b>0.2079</b>	<b>1.1275</b>	<b>2.7979</b>	<b>7.29E-03</b>	<b>0.4618</b>	<b>0.0213</b>	<b>0.4831</b>	<b>0.1242</b>	<b>0.0196</b>	<b>0.1437</b>		<b>632.3496</b>	<b>632.3496</b>	<b>0.0166</b>		<b>632.6992</b>

**Mitigated Construction On-Site**

Category	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
	lb/day															
Off-Road	2.9546	19.1088	14.311	0.022	1.2257	1.2257	1.2257	1.1823	1.1823	1.1823	0	2,034.29	2,034.29	0.4268		2,043.25
<b>Total</b>	<b>2.9546</b>	<b>19.1088</b>	<b>14.311</b>	<b>0.022</b>	<b>1.2257</b>	<b>1.2257</b>	<b>1.2257</b>	<b>1.1823</b>	<b>1.1823</b>	<b>1.1823</b>	<b>0</b>	<b>2,034.29</b>	<b>2,034.29</b>	<b>0.4268</b>		<b>2,043.25</b>

**Mitigated Construction Off-Site**

Category	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
lb/day																
Hauling	0	0	0	0	0	0	0	0	0	0		0	0	0		0
Vendor	0.0912	0.9895	1.0662	2.73E-03	0.0818	0.019	0.1008	0.0234	0.0175	0.0408		270.0265	270.0265	1.72E-03		270.0626
Worker	0.1167	0.138	1.7316	4.56E-03	0.38	2.31E-03	0.3824	0.1008	2.13E-03	0.1029		362.3231	362.3231	0.0149		362.6366
<b>Total</b>	<b>0.2079</b>	<b>1.1275</b>	<b>2.7979</b>	<b>7.29E-03</b>	<b>0.4618</b>	<b>0.0213</b>	<b>0.4831</b>	<b>0.1242</b>	<b>0.0196</b>	<b>0.1437</b>		<b>632.3496</b>	<b>632.3496</b>	<b>0.0166</b>		<b>632.6992</b>

**3.5 Paving - 2016**

**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	1.2872	13.2076	9.088	0.0133		0.8075	0.8075		0.7438	0.7438		1,368.44	1,368.44	0.4053		1,376.95
Paving	0					0	0		0	0			0			0
<b>Total</b>	<b>1.2872</b>	<b>13.2076</b>	<b>9.088</b>	<b>0.0133</b>		<b>0.8075</b>	<b>0.8075</b>		<b>0.7438</b>	<b>0.7438</b>		<b>1,368.44</b>	<b>1,368.44</b>	<b>0.4053</b>		<b>1,376.95</b>

**Unmitigated Construction Off-Site**

Category	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
lb/day																
Hauling	0	0	0	0	0	0	0	0	0	0		0	0	0		0
Vendor	0	0	0	0	0	0	0	0	0	0		0	0	0		0
Worker	0.0498	0.0588	0.7372	1.74E-03	0.1453	9.10E-04	0.1462	0.0385	8.40E-04	0.0394		144.2456	144.2456	6.22E-03		144.3763
<b>Total</b>	<b>0.0498</b>	<b>0.0588</b>	<b>0.7372</b>	<b>1.74E-03</b>	<b>0.1453</b>	<b>9.10E-04</b>	<b>0.1462</b>	<b>0.0385</b>	<b>8.40E-04</b>	<b>0.0394</b>		<b>144.2456</b>	<b>144.2456</b>	<b>6.22E-03</b>		<b>144.3763</b>

**Mitigated Construction On-Site**

Category	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
lb/day																
Off-Road	1.2872	13.2076	9.088	0.0133		0.8075	0.8075		0.7438	0.7438	0	1,368.44	1,368.44	0.4053		1,376.95
Paving	0					0	0		0	0			0			0
<b>Total</b>	<b>1.2872</b>	<b>13.2076</b>	<b>9.088</b>	<b>0.0133</b>		<b>0.8075</b>	<b>0.8075</b>		<b>0.7438</b>	<b>0.7438</b>	<b>0</b>	<b>1,368.44</b>	<b>1,368.44</b>	<b>0.4053</b>		<b>1,376.95</b>

**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															
Hauling	0	0	0	0	0	0	0	0	0	0		0	0	0		0
Vendor	0	0	0	0	0	0	0	0	0	0		0	0	0		0
Worker	0.0498	0.0588	0.7372	1.74E-03	0.1453	9.10E-04	0.1462	0.0385	8.40E-04	0.0394	144.2456	144.2456	144.2456	6.22E-03		144.3763
<b>Total</b>	<b>0.0498</b>	<b>0.0588</b>	<b>0.7372</b>	<b>1.74E-03</b>	<b>0.1453</b>	<b>9.10E-04</b>	<b>0.1462</b>	<b>0.0385</b>	<b>8.40E-04</b>	<b>0.0394</b>	<b>144.2456</b>	<b>144.2456</b>	<b>144.2456</b>	<b>6.22E-03</b>		<b>144.3763</b>

**3.5 Paving - 2017**

**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															
Off-Road	1.1857	12.0981	9.0308	0.0133		0.7333	0.7333		0.6755	0.6755		1,347.66	1,347.66	0.4052		1,356.17
Paving	0					0	0		0	0			0			0
<b>Total</b>	<b>1.1857</b>	<b>12.0981</b>	<b>9.0308</b>	<b>0.0133</b>		<b>0.7333</b>	<b>0.7333</b>		<b>0.6755</b>	<b>0.6755</b>		<b>1,347.66</b>	<b>1,347.66</b>	<b>0.4052</b>		<b>1,356.17</b>

**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															

Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Worker	0.0446	0.0528	0.6621	1.74E-03	0.1453	8.80E-04	0.1462	0.0385	8.10E-04	0.0394	138.5353	138.5353	5.71E-03	138.5353	138.5353	5.71E-03	138.6552	138.6552	5.71E-03
<b>Total</b>	<b>0.0446</b>	<b>0.0528</b>	<b>0.6621</b>	<b>1.74E-03</b>	<b>0.1453</b>	<b>8.80E-04</b>	<b>0.1462</b>	<b>0.0385</b>	<b>8.10E-04</b>	<b>0.0394</b>	<b>138.5353</b>	<b>138.5353</b>	<b>5.71E-03</b>	<b>138.5353</b>	<b>138.5353</b>	<b>5.71E-03</b>	<b>138.6552</b>	<b>138.6552</b>	<b>5.71E-03</b>

**Mitigated Construction On-Site**

Category	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	
Off-Road	1.1857	12.0981	9.0308	0.0133		0.7333	0.7333		0.6755	0.6755	0	1,347.66	1,347.66	0.4052		1,356.17	
Paving	0					0	0		0	0			0				0
<b>Total</b>	<b>1.1857</b>	<b>12.0981</b>	<b>9.0308</b>	<b>0.0133</b>		<b>0.7333</b>	<b>0.7333</b>		<b>0.6755</b>	<b>0.6755</b>	<b>0</b>	<b>1,347.66</b>	<b>1,347.66</b>	<b>0.4052</b>		<b>1,356.17</b>	

**Mitigated Construction Off-Site**

Category	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
Hauling	0	0	0	0	0	0	0	0	0	0			0	0		0
Vendor	0	0	0	0	0	0	0	0	0	0			0	0		0

Worker	0.0446	0.0528	0.6621	1.74E-03	0.1453	8.80E-04	0.1462	0.0385	8.10E-04	0.0394	138.5353	138.5353	5.71E-03	138.6552
<b>Total</b>	<b>0.0446</b>	<b>0.0528</b>	<b>0.6621</b>	<b>1.74E-03</b>	<b>0.1453</b>	<b>8.80E-04</b>	<b>0.1462</b>	<b>0.0385</b>	<b>8.10E-04</b>	<b>0.0394</b>	<b>138.5353</b>	<b>138.5353</b>	<b>5.71E-03</b>	<b>138.6552</b>

#### 4.0 Operational Detail - Mobile

#### 4.1 Mitigation Measures Mobile

Category	lb/day										lb/day				CO2e	
	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
Mitigated	0	0	0	0	0	0	0	0	0	0		0	0	0		0
Unmitigated	0	0	0	0	0	0	0	0	0	0		0	0	0		0

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		

#### 4.3 Trip Type Information

Land Use	Miles		Trip %		Trip Purpose %	
	H-W or C-W	H-S or C-C	H-W or C-NW	H-S or C-C	Primary	Diverted
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.460962	0.069557	0.176974	0.170659	0.045477	0.007383	0.012841	0.043558	0.000954	0.001056	0.006454	0.000884	0.0003242

**5.0 Energy Detail**

**4.4 Fleet Mix**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Category	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
NaturalGas Mitigated	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NaturalGas Unmitigated	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

Land Use	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
Other Non-Asphalt Surfaces	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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**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	KB TU/yr																	
Other Non-Asphalt Surfaces	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Category	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
Mitigated	2.1301	0	1.90E-04	0	0	0	0	0	0	0	0	4.10E-04	4.10E-04	0	0	4.30E-04
Unmitigated	2.1301	0	1.90E-04	0	0	0	0	0	0	0	0	4.10E-04	4.10E-04	0	0	4.30E-04

**6.2 Area by SubCategory**  
**Unmitigated**

SubCategory	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
lb/day																
Consumer Products	1.6129					0	0		0	0			0			0
Landscaping	2.00E-05	0	1.90E-04	0		0	0		0	0		4.10E-04	4.10E-04	0		4.30E-04
Architectural Coating	0.5172					0	0		0	0			0			0
<b>Total</b>	<b>2.1301</b>	<b>0</b>	<b>1.90E-04</b>	<b>0</b>		<b>0</b>	<b>0</b>		<b>0</b>	<b>0</b>		<b>4.10E-04</b>	<b>4.10E-04</b>	<b>0</b>		<b>4.30E-04</b>

**Mitigated**

SubCategory	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
lb/day																
Consumer Products	1.6129					0	0		0	0			0			0
Landscaping	2.00E-05	0	1.90E-04	0		0	0		0	0		4.10E-04	4.10E-04	0		4.30E-04
Architectural Coating	0.5172					0	0		0	0			0			0
<b>Total</b>	<b>2.1301</b>	<b>0</b>	<b>1.90E-04</b>	<b>0</b>		<b>0</b>	<b>0</b>		<b>0</b>	<b>0</b>		<b>4.10E-04</b>	<b>4.10E-04</b>	<b>0</b>		<b>4.30E-04</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**10.0 Vegetation**

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**Kitching Substation Construction**  
Riverside-South Coast County, Winter

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	1.87	Acre	1.87	81,457.20	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>	2017
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	630.89	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

**1.3 User Entered Comments & Non-Default Data**

- Project Characteristics -
- Land Use -
- Construction Phase - Phasing based on draft schedule
- Off-road Equipment -
- Off-road Equipment - Import and grade fill material
- Off-road Equipment -
- Grading - project site is 1.87 acres
- Construction Off-road Equipment Mitigation -
- Off-road Equipment -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	200.00	183.00
tblConstructionPhase	NumDays	4.00	10.00
tblConstructionPhase	NumDays	10.00	60.00
tblConstructionPhase	PhaseEndDate	8/23/2017	3/17/2017
tblConstructionPhase	PhaseStartDate	9/17/2016	9/19/2016
tblConstructionPhase	PhaseStartDate	9/3/2016	9/5/2016
tblConstructionPhase	PhaseStartDate	6/1/2017	12/26/2016
tblGrading	AcresOfGrading	5.00	1.87
tblGrading	AcresOfGrading	1.00	1.87
tblGrading	MaterialImported	0.00	9,050.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2017

**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

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Year	lb/day										lb/day					
2016	4.8583	58.6558	39.261	0.0996	8.3974	2.1978	10.4267	3.9131	2.084	5.78	0	10,079.68	10,079.68	0.8795	0	10,098.15
2017	4.3908	32.4235	26.6252	0.0438	0.6071	1.9812	2.5884	0.1627	1.8783	2.041	0	4,107.28	4,107.28	0.8545	0	4,125.22
<b>Total</b>	<b>9.2491</b>	<b>91.0793</b>	<b>65.8862</b>	<b>0.1433</b>	<b>9.0045</b>	<b>4.179</b>	<b>13.0151</b>	<b>4.0758</b>	<b>3.9624</b>	<b>7.821</b>	<b>0</b>	<b>14,186.96</b>	<b>14,186.96</b>	<b>1.734</b>	<b>0</b>	<b>14,223.37</b>

**Mitigated Construction**

Year	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
2016	4.8583	58.6558	39.261	0.0996	4.9131	2.1978	6.9424	2.0712	2.084	3.9381	0	10,079.68	10,079.68	0.8795	0	10,098.15
2017	4.3908	32.4235	26.6252	0.0438	0.6071	1.9812	2.5884	0.1627	1.8783	2.041	0	4,107.28	4,107.28	0.8545	0	4,125.22
<b>Total</b>	<b>9.2491</b>	<b>91.0793</b>	<b>65.8862</b>	<b>0.1433</b>	<b>5.5202</b>	<b>4.179</b>	<b>9.5308</b>	<b>2.2338</b>	<b>3.9624</b>	<b>5.9791</b>	<b>0</b>	<b>14,186.96</b>	<b>14,186.96</b>	<b>1.734</b>	<b>0</b>	<b>14,223.37</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
<b>Percent Reduction</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>38.69</b>	<b>0</b>	<b>26.77</b>	<b>45.19</b>	<b>0</b>	<b>23.55</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**2.2 Overall Operational**

**Unmitigated Operational**

Category	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
Area	2.1301	0	1.90E-04	0	0	0	0	0	0	0	0	4.10E-04	4.10E-04	0	0	4.30E-04
Energy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mobile	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>2.1301</b>	<b>0</b>	<b>1.90E-04</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4.10E-04</b>	<b>4.10E-04</b>	<b>0</b>	<b>0</b>	<b>4.30E-04</b>

**Mitigated Operational**

Category	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
Area	2.1301	0	1.90E-04	0	0	0	0	0	0	0	0	4.10E-04	4.10E-04	0	0	4.30E-04
Energy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mobile	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>2.1301</b>	<b>0</b>	<b>1.90E-04</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4.10E-04</b>	<b>4.10E-04</b>	<b>0</b>	<b>0</b>	<b>4.30E-04</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
<b>Percent Reduction</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

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**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	9/1/2016	9/2/2016	5	2	
2	Fill and Grading	Grading	9/5/2016	9/16/2016	5	10	
3	Building Construction	Building Construction	9/19/2016	5/31/2017	5	183	
4	Paving	Paving	12/26/2016	3/17/2017	5	60	

Acres of Grading (Site Preparation Phase): 1.87

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8	174	0.41
Site Preparation	Rubber Tired Dozers	1	7	255	0.4
Site Preparation	Tractors/Loaders/Backhoes	1	8	97	0.37
Fill and Grading	Graders	1	8	174	0.41
Fill and Grading	Rubber Tired Dozers	1	8	255	0.4
Fill and Grading	Tractors/Loaders/Backhoes	1	8	97	0.37
Building Construction	Cranes	1	6	226	0.29
Building Construction	Forklifts	1	6	89	0.2
Building Construction	Generator Sets	1	8	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6	97	0.37
Building Construction	Welders	3	8	46	0.45
Paving	Cement and Mortar Mixers	1	6	9	0.56
Paving	Pavers	1	6	125	0.42
Paving	Paving Equipment	1	8	130	0.36
Paving	Rollers	1	7	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8	97	0.37

**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
Site Preparation	3	8	0	0	14.7	6.9	20	LD_Mix	HDT_Mix	HHDT
Fill and Grading	3	8	0	1,131.00	14.7	6.9	20	LD_Mix	HDT_Mix	HHDT
Building Construction	7	34	13	0	14.7	6.9	20	LD_Mix	HDT_Mix	HHDT
Paving	5	13	0	0	14.7	6.9	20	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Site Preparation - 2016**

**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

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Category	lb/day										lb/day				
Fugitive Dust					6.2609	0	6.2609	3.0035	0	3.0035			0		0
Off-Road	2.4428	25.7718	16.5144	0.0171			1.3985	1.3985		1.2866	1.2866	1,781.09	1,781.09	0.5372	1,792.37
<b>Total</b>	<b>2.4428</b>	<b>25.7718</b>	<b>16.5144</b>	<b>0.0171</b>	<b>6.2609</b>	<b>1.3985</b>	<b>7.6594</b>	<b>3.0035</b>	<b>1.2866</b>	<b>4.2901</b>	<b>1,781.09</b>	<b>1,781.09</b>	<b>0.5372</b>	<b>1,792.37</b>	

**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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Worker	0.0292	0.0386	0.3909	9.80E-04	0.0894	5.60E-04	0.09	0.0237	5.10E-04	0.0242	81.119	81.119	81.119	3.83E-03		81.1994
<b>Total</b>	<b>0.0292</b>	<b>0.0386</b>	<b>0.3909</b>	<b>9.80E-04</b>	<b>0.0894</b>	<b>5.60E-04</b>	<b>0.09</b>	<b>0.0237</b>	<b>5.10E-04</b>	<b>0.0242</b>	<b>81.119</b>	<b>81.119</b>	<b>81.119</b>	<b>3.83E-03</b>		<b>81.1994</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					2.8174	0	2.8174	1.3516	0	1.3516			0			0
Off-Road	2.4428	25.7718	16.5144	0.0171			1.3985	1.3985		1.2866	1.2866	0	1,781.09	1,781.09	0.5372	1,792.37
<b>Total</b>	<b>2.4428</b>	<b>25.7718</b>	<b>16.5144</b>	<b>0.0171</b>	<b>2.8174</b>	<b>1.3985</b>	<b>4.2159</b>	<b>1.3516</b>	<b>1.2866</b>	<b>2.6382</b>	<b>0</b>	<b>1,781.09</b>	<b>1,781.09</b>	<b>0.5372</b>		<b>1,792.37</b>

**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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Worker	0.0292	0.0386	0.3909	9.80E-04	0.0894	5.60E-04	0.09	0.0237	5.10E-04	0.0242	81.119	81.119	81.119	3.83E-03		81.1994
<b>Total</b>	<b>0.0292</b>	<b>0.0386</b>	<b>0.3909</b>	<b>9.80E-04</b>	<b>0.0894</b>	<b>5.60E-04</b>	<b>0.09</b>	<b>0.0237</b>	<b>5.10E-04</b>	<b>0.0242</b>	<b>81.119</b>	<b>81.119</b>	<b>81.119</b>	<b>3.83E-03</b>		<b>81.1994</b>

**3.3 Fill and Grading - 2016**

**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					

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Fugitive Dust					6.335	0	6.335	3.349	0	3.349			0			0
Off-Road	2.5976	27.5057	17.8251	0.0182		1.4792	1.4792		1.3608	1.3608		1,896.52	1,896.52	0.5721		1,908.53
<b>Total</b>	<b>2.5976</b>	<b>27.5057</b>	<b>17.8251</b>	<b>0.0182</b>	<b>6.335</b>	<b>1.4792</b>	<b>7.8142</b>	<b>3.349</b>	<b>1.3608</b>	<b>4.7098</b>		<b>1,896.52</b>	<b>1,896.52</b>	<b>0.5721</b>		<b>1,908.53</b>

**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	1.7627	31.1116	21.0451	0.0804	1.9729	0.5496	2.5226	0.5404	0.5056	1.046		8,102.04	8,102.04	0.0521		8,103.14
Vendor	0	0	0	0	0	0	0	0	0	0		0	0	0		0
Worker	0.0292	0.0386	0.3909	9.80E-04	0.0894	5.60E-04	0.09	0.0237	5.10E-04	0.0242		81.119	81.119	3.83E-03		81.1994
<b>Total</b>	<b>1.7919</b>	<b>31.1501</b>	<b>21.436</b>	<b>0.0813</b>	<b>2.0624</b>	<b>0.5502</b>	<b>2.6125</b>	<b>0.5641</b>	<b>0.5061</b>	<b>1.0702</b>		<b>8,183.16</b>	<b>8,183.16</b>	<b>0.0559</b>		<b>8,184.34</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					2.8508	0	2.8508	1.5071	0	1.5071			0			0
Off-Road	2.5976	27.5057	17.8251	0.0182		1.4792	1.4792		1.3608	1.3608	0	1,896.52	1,896.52	0.5721		1,908.53
<b>Total</b>	<b>2.5976</b>	<b>27.5057</b>	<b>17.8251</b>	<b>0.0182</b>	<b>2.8508</b>	<b>1.4792</b>	<b>4.3299</b>	<b>1.5071</b>	<b>1.3608</b>	<b>2.8679</b>	<b>0</b>	<b>1,896.52</b>	<b>1,896.52</b>	<b>0.5721</b>		<b>1,908.53</b>

**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	1.7627	31.1116	21.0451	0.0804	1.9729	0.5496	2.5226	0.5404	0.5056	1.046		8,102.04	8,102.04	0.0521		8,103.14
Vendor	0	0	0	0	0	0	0	0	0	0		0	0	0		0
Worker	0.0292	0.0386	0.3909	9.80E-04	0.0894	5.60E-04	0.09	0.0237	5.10E-04	0.0242		81.119	81.119	3.83E-03		81.1994
<b>Total</b>	<b>1.7919</b>	<b>31.1501</b>	<b>21.436</b>	<b>0.0813</b>	<b>2.0624</b>	<b>0.5502</b>	<b>2.6125</b>	<b>0.5641</b>	<b>0.5061</b>	<b>1.0702</b>		<b>8,183.16</b>	<b>8,183.16</b>	<b>0.0559</b>		<b>8,184.34</b>

**3.4 Building Construction - 2016**

**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	3.2915	20.5459	14.7074	0.022		1.3656	1.3656		1.3176	1.3176		2,046.94	2,046.94	0.4499		2,056.39

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Total	3.2915	20.5459	14.7074	0.022		1.3656	1.3656		1.3176	1.3176		2,046.94	2,046.94	0.4499		2,056.39
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**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	0	0	0	0	0	0	0	0	0		0	0	0		0
Vendor	0.1078	1.1183	1.2989	2.71E-03	0.0818	0.0214	0.1032	0.0234	0.0197	0.043		272.2872	272.2872	1.85E-03		272.326
Worker	0.1243	0.1639	1.6614	4.16E-03	0.38	2.38E-03	0.3824	0.1008	2.18E-03	0.103		344.7556	344.7556	0.0163		345.0973
<b>Total</b>	<b>0.232</b>	<b>1.2822</b>	<b>2.9603</b>	<b>6.87E-03</b>	<b>0.4618</b>	<b>0.0237</b>	<b>0.4856</b>	<b>0.1242</b>	<b>0.0218</b>	<b>0.146</b>		<b>617.0427</b>	<b>617.0427</b>	<b>0.0181</b>		<b>617.4232</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	3.2915	20.5459	14.7074	0.022		1.3656	1.3656		1.3176	1.3176	0	2,046.94	2,046.94	0.4499		2,056.39
<b>Total</b>	<b>3.2915</b>	<b>20.5459</b>	<b>14.7074</b>	<b>0.022</b>		<b>1.3656</b>	<b>1.3656</b>		<b>1.3176</b>	<b>1.3176</b>	<b>0</b>	<b>2,046.94</b>	<b>2,046.94</b>	<b>0.4499</b>		<b>2,056.39</b>

**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	0	0	0	0	0	0	0	0	0		0	0	0		0
Vendor	0.1078	1.1183	1.2989	2.71E-03	0.0818	0.0214	0.1032	0.0234	0.0197	0.043		272.2872	272.2872	1.85E-03		272.326
Worker	0.1243	0.1639	1.6614	4.16E-03	0.38	2.38E-03	0.3824	0.1008	2.18E-03	0.103		344.7556	344.7556	0.0163		345.0973
<b>Total</b>	<b>0.232</b>	<b>1.2822</b>	<b>2.9603</b>	<b>6.87E-03</b>	<b>0.4618</b>	<b>0.0237</b>	<b>0.4856</b>	<b>0.1242</b>	<b>0.0218</b>	<b>0.146</b>		<b>617.0427</b>	<b>617.0427</b>	<b>0.0181</b>		<b>617.4232</b>

**3.4 Building Construction - 2017**

**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	2.9546	19.1088	14.311	0.022		1.2257	1.2257		1.1823	1.1823		2,034.29	2,034.29	0.4268		2,043.25
<b>Total</b>	<b>2.9546</b>	<b>19.1088</b>	<b>14.311</b>	<b>0.022</b>		<b>1.2257</b>	<b>1.2257</b>		<b>1.1823</b>	<b>1.1823</b>		<b>2,034.29</b>	<b>2,034.29</b>	<b>0.4268</b>		<b>2,043.25</b>

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**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	0	0	0	0	0	0	0	0	0		0	0	0		0
Vendor	0.0971	1.0136	1.2269	2.71E-03	0.0818	0.0191	0.1009	0.0234	0.0176	0.041		267.6822	267.6822	1.78E-03		267.7196
Worker	0.111	0.1469	1.4877	4.16E-03	0.38	2.31E-03	0.3824	0.1008	2.13E-03	0.1029		331.0686	331.0686	0.0149		331.382
<b>Total</b>	<b>0.2081</b>	<b>1.1605</b>	<b>2.7146</b>	<b>6.87E-03</b>	<b>0.4618</b>	<b>0.0215</b>	<b>0.4833</b>	<b>0.1242</b>	<b>0.0197</b>	<b>0.1439</b>		<b>598.7508</b>	<b>598.7508</b>	<b>0.0167</b>		<b>599.1016</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	2.9546	19.1088	14.311	0.022		1.2257	1.2257		1.1823	1.1823	0	2,034.29	2,034.29	0.4268		2,043.25
<b>Total</b>	<b>2.9546</b>	<b>19.1088</b>	<b>14.311</b>	<b>0.022</b>		<b>1.2257</b>	<b>1.2257</b>		<b>1.1823</b>	<b>1.1823</b>	<b>0</b>	<b>2,034.29</b>	<b>2,034.29</b>	<b>0.4268</b>		<b>2,043.25</b>

**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	0	0	0	0	0	0	0	0	0		0	0	0		0
Vendor	0.0971	1.0136	1.2269	2.71E-03	0.0818	0.0191	0.1009	0.0234	0.0176	0.041		267.6822	267.6822	1.78E-03		267.7196
Worker	0.111	0.1469	1.4877	4.16E-03	0.38	2.31E-03	0.3824	0.1008	2.13E-03	0.1029		331.0686	331.0686	0.0149		331.382
<b>Total</b>	<b>0.2081</b>	<b>1.1605</b>	<b>2.7146</b>	<b>6.87E-03</b>	<b>0.4618</b>	<b>0.0215</b>	<b>0.4833</b>	<b>0.1242</b>	<b>0.0197</b>	<b>0.1439</b>		<b>598.7508</b>	<b>598.7508</b>	<b>0.0167</b>		<b>599.1016</b>

**3.5 Paving - 2016**

**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	1.2872	13.2076	9.088	0.0133		0.8075	0.8075		0.7438	0.7438		1,368.44	1,368.44	0.4053		1,376.95
Paving	0					0	0		0	0		0	0			0
<b>Total</b>	<b>1.2872</b>	<b>13.2076</b>	<b>9.088</b>	<b>0.0133</b>		<b>0.8075</b>	<b>0.8075</b>		<b>0.7438</b>	<b>0.7438</b>		<b>1,368.44</b>	<b>1,368.44</b>	<b>0.4053</b>		<b>1,376.95</b>

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**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	0	0	0	0	0	0	0	0	0		0	0	0		0
Vendor	0	0	0	0	0	0	0	0	0	0		0	0	0		0
Worker	0.0475	0.0627	0.6352	1.59E-03	0.1453	9.10E-04	0.1462	0.0385	8.40E-04	0.0394		131.8183	131.8183	6.22E-03		131.949
<b>Total</b>	<b>0.0475</b>	<b>0.0627</b>	<b>0.6352</b>	<b>1.59E-03</b>	<b>0.1453</b>	<b>9.10E-04</b>	<b>0.1462</b>	<b>0.0385</b>	<b>8.40E-04</b>	<b>0.0394</b>		<b>131.8183</b>	<b>131.8183</b>	<b>6.22E-03</b>		<b>131.949</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	1.2872	13.2076	9.088	0.0133		0.8075	0.8075		0.7438	0.7438	0	1,368.44	1,368.44	0.4053		1,376.95
Paving	0					0	0		0	0			0			0
<b>Total</b>	<b>1.2872</b>	<b>13.2076</b>	<b>9.088</b>	<b>0.0133</b>		<b>0.8075</b>	<b>0.8075</b>		<b>0.7438</b>	<b>0.7438</b>	<b>0</b>	<b>1,368.44</b>	<b>1,368.44</b>	<b>0.4053</b>		<b>1,376.95</b>

**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	0	0	0	0	0	0	0	0	0		0	0	0		0
Vendor	0	0	0	0	0	0	0	0	0	0		0	0	0		0
Worker	0.0475	0.0627	0.6352	1.59E-03	0.1453	9.10E-04	0.1462	0.0385	8.40E-04	0.0394		131.8183	131.8183	6.22E-03		131.949
<b>Total</b>	<b>0.0475</b>	<b>0.0627</b>	<b>0.6352</b>	<b>1.59E-03</b>	<b>0.1453</b>	<b>9.10E-04</b>	<b>0.1462</b>	<b>0.0385</b>	<b>8.40E-04</b>	<b>0.0394</b>		<b>131.8183</b>	<b>131.8183</b>	<b>6.22E-03</b>		<b>131.949</b>

**3.5 Paving - 2017**

**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	1.1857	12.0981	9.0308	0.0133		0.7333	0.7333		0.6755	0.6755		1,347.66	1,347.66	0.4052		1,356.17
Paving	0					0	0		0	0			0			0
<b>Total</b>	<b>1.1857</b>	<b>12.0981</b>	<b>9.0308</b>	<b>0.0133</b>		<b>0.7333</b>	<b>0.7333</b>		<b>0.6755</b>	<b>0.6755</b>		<b>1,347.66</b>	<b>1,347.66</b>	<b>0.4052</b>		<b>1,356.17</b>

**Unmitigated Construction Off-Site**

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

	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	0	0	0	0	0	0	0	0	0		0	0	0		0
Vendor	0	0	0	0	0	0	0	0	0	0		0	0	0		0
Worker	0.0425	0.0562	0.5688	1.59E-03	0.1453	8.80E-04	0.1462	0.0385	8.10E-04	0.0394		126.585	126.585	5.71E-03		126.7049
<b>Total</b>	<b>0.0425</b>	<b>0.0562</b>	<b>0.5688</b>	<b>1.59E-03</b>	<b>0.1453</b>	<b>8.80E-04</b>	<b>0.1462</b>	<b>0.0385</b>	<b>8.10E-04</b>	<b>0.0394</b>		<b>126.585</b>	<b>126.585</b>	<b>5.71E-03</b>		<b>126.7049</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	1.1857	12.0981	9.0308	0.0133		0.7333	0.7333		0.6755	0.6755	0	1,347.66	1,347.66	0.4052		1,356.17
Paving	0					0	0		0	0			0			0
<b>Total</b>	<b>1.1857</b>	<b>12.0981</b>	<b>9.0308</b>	<b>0.0133</b>		<b>0.7333</b>	<b>0.7333</b>		<b>0.6755</b>	<b>0.6755</b>	<b>0</b>	<b>1,347.66</b>	<b>1,347.66</b>	<b>0.4052</b>		<b>1,356.17</b>

**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	0	0	0	0	0	0	0	0	0		0	0	0		0
Vendor	0	0	0	0	0	0	0	0	0	0		0	0	0		0
Worker	0.0425	0.0562	0.5688	1.59E-03	0.1453	8.80E-04	0.1462	0.0385	8.10E-04	0.0394		126.585	126.585	5.71E-03		126.7049
<b>Total</b>	<b>0.0425</b>	<b>0.0562</b>	<b>0.5688</b>	<b>1.59E-03</b>	<b>0.1453</b>	<b>8.80E-04</b>	<b>0.1462</b>	<b>0.0385</b>	<b>8.10E-04</b>	<b>0.0394</b>		<b>126.585</b>	<b>126.585</b>	<b>5.71E-03</b>		<b>126.7049</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

	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	0	0	0	0	0	0	0	0	0		0	0	0		0
Unmitigated	0	0	0	0	0	0	0	0	0	0		0	0	0		0

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>		

**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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.460962	0.069557	0.176974	0.170659	0.045477	0.007383	0.012841	0.043558	0.000954	0.001056	0.006454	0.000884	0.003242

**5.0 Energy Detail**

**4.4 Fleet Mix**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Category	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
	lb/day										lb/day					
NaturalGas Mitigated	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NaturalGas Unmitigated	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

**5.2 Energy by Land Use - NaturalGas**

Unmitigated

Land Use	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
	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>0</b>	<b>0</b>		<b>0</b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Mitigated

Land Use	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
	kBTU/yr	lb/day										lb/day					
Other Non-Asphalt Surfaces	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>0</b>	<b>0</b>		<b>0</b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

6.0 Area Detail

6.1 Mitigation Measures Area

	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	2.1301	0	1.90E-04	0		0	0		0	0		4.10E-04	4.10E-04	0		4.30E-04
Unmitigated	2.1301	0	1.90E-04	0		0	0		0	0		4.10E-04	4.10E-04	0		4.30E-04

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					
Consumer Products	1.6129					0	0		0	0			0			0
Landscaping	2.00E-05	0	1.90E-04	0		0	0		0	0		4.10E-04	4.10E-04	0		4.30E-04
Architectural Coating	0.5172					0	0		0	0			0			0
<b>Total</b>	<b>2.1301</b>	<b>0</b>	<b>1.90E-04</b>	<b>0</b>		<b>0</b>	<b>0</b>		<b>0</b>	<b>0</b>		<b>4.10E-04</b>	<b>4.10E-04</b>	<b>0</b>		<b>4.30E-04</b>

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					
Consumer Products	1.6129					0	0		0	0			0			0
Landscaping	2.00E-05	0	1.90E-04	0		0	0		0	0		4.10E-04	4.10E-04	0		4.30E-04
Architectural Coating	0.5172					0	0		0	0			0			0
<b>Total</b>	<b>2.1301</b>	<b>0</b>	<b>1.90E-04</b>	<b>0</b>		<b>0</b>	<b>0</b>		<b>0</b>	<b>0</b>		<b>4.10E-04</b>	<b>4.10E-04</b>	<b>0</b>		<b>4.30E-04</b>

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

## Kitching Substation Construction Riverside-South Coast County, Annual

### 1.0 Project Characteristics

#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	1.87	Acre	1.87	81,457.20	0

#### 1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2017

Utility Company      Southern California Edison

CO2 Intensity (lb/MW/hr)	630.89	CH4 Intensity (lb/MW/hr)	0.029	N2O Intensity (lb/MW/hr)	0.006
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### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Phasing based on draft schedule

Off-road Equipment -

Off-road Equipment - Import and grade fill material

Off-road Equipment -

Grading - project site is 1.87 acres

Construction Off-road Equipment Mitigation -

Off-road Equipment -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	200.00	183.00
tblConstructionPhase	NumDays	4.00	10.00
tblConstructionPhase	NumDays	10.00	60.00
tblConstructionPhase	PhaseEndDate	8/23/2017	3/17/2017
tblConstructionPhase	PhaseStartDate	9/17/2016	9/19/2016
tblConstructionPhase	PhaseStartDate	9/3/2016	9/5/2016
tblConstructionPhase	PhaseStartDate	6/1/2017	12/26/2016
tblGrading	AcresOfGrading	5.00	1.87
tblGrading	AcresOfGrading	1.00	1.87
tblGrading	MaterialImported	0.00	9,050.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2017

## 2.0 Emissions Summary

### 2.1 Overall Construction Unmitigated Construction

Year	tons/yr											MIT/yr				
	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
2016	0.1595	1.1744	0.9064	1.64E-03	0.0656	0.0657	0.1312	0.0272	0.0627	0.0899	0	141.7093	141.7093	0.0202	0	142.1333
2017	0.2041	1.4303	1.1886	1.97E-03	0.0285	0.0875	0.116	7.65E-03	0.0835	0.0912	0	166.0971	166.0971	0.032	0	166.7687



Total	0.3636	2.6046	2.095	3.61E-03	0.094	0.1532	0.2472	0.0349	0.1462	0.1811	0	307.8064	307.8064	0.0522	0	308.902
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**Mitigated Construction**

Year	tons/yr											MT/yr				
	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
2016	0.1595	1.1744	0.9064	1.64E-03	0.0447	0.0657	0.1104	0.0164	0.0627	0.0791	0	141.7092	141.7092	0.0202	0	142.1332
2017	0.2041	1.4303	1.1886	1.97E-03	0.0285	0.0875	0.116	7.65E-03	0.0835	0.0912	0	166.0969	166.0969	0.032	0	166.7685
Total	0.3636	2.6046	2.095	3.61E-03	0.0732	0.1532	0.2264	0.024	0.1462	0.1702	0	307.8062	307.8062	0.0522	0	308.9017

Percent Reduction	tons/yr											MT/yr				
	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
0	0	0	0	0	22.18	0	8.44	31.13	0	6	0	0	0	0	0	0

**2.2 Overall Operational  
Unmitigated Operational**

Category	tons/yr											MT/yr				
	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
Area	0.3887	0	2.00E-05	0		0	0		0	0	0	5.00E-05	5.00E-05	0	0	5.00E-05
Energy	0	0	0	0		0	0		0	0	0	0	0	0	0	0

Mobile	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Waste																					0
Water																					0
<b>Total</b>	<b>0.3887</b>	<b>0</b>	<b>2.00E-05</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5.00E-05</b>

**Mitigated Operational**

Category	tons/yr											MT/yr					
	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	
Area	0.3887	0	2.00E-05	0			0			0		5.00E-05	5.00E-05	0	0	0	5.00E-05
Energy	0	0	0	0			0			0		0	0	0	0	0	0
Mobile	0	0	0	0			0			0		0	0	0	0	0	0
Waste																	
Water																	
<b>Total</b>	<b>0.3887</b>	<b>0</b>	<b>2.00E-05</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5.00E-05</b>	<b>5.00E-05</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5.00E-05</b>

Percent Reduction	PM2.5											Total CO2				CO2e		
	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		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

**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	9/1/2016	9/2/2016	5	2	
2	Fill and Grading	Grading	9/5/2016	9/16/2016	5	10	
3	Building Construction	Building Construction	9/19/2016	5/31/2017	5	183	
4	Paving	Paving	12/26/2016	3/17/2017	5	60	

**Acres of Grading (Site Preparation Phase): 1.87**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8	174	0.41
Site Preparation	Rubber Tired Dozers	1	7	255	0.4
Site Preparation	Tractors/Loaders/Backhoes	1	8	97	0.37
Fill and Grading	Graders	1	8	174	0.41
Fill and Grading	Rubber Tired Dozers	1	8	255	0.4
Fill and Grading	Tractors/Loaders/Backhoes	1	8	97	0.37
Building Construction	Cranes	1	6	226	0.29
Building Construction	Forklifts	1	6	89	0.2
Building Construction	Generator Sets	1	8	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6	97	0.37
Building Construction	Welders	3	8	46	0.45
Paving	Cement and Mortar Mixers	1	6	9	0.56
Paving	Pavers	1	6	125	0.42

Paving	Paving Equipment	1	8	130	0.36
Paving	Rollers	1	7	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8	97	0.37

**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
Site Preparation	3	8	0	0	14.7	6.9	20	LD_Mix	HDT_Mix	HHDT
Fill and Grading	3	8	0	1,131.00	14.7	6.9	20	LD_Mix	HDT_Mix	HHDT
Building Construction	7	34	13	0	14.7	6.9	20	LD_Mix	HDT_Mix	HHDT
Paving	5	13	0	0	14.7	6.9	20	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Site Preparation - 2016**

**Unmitigated Construction On-Site**

Category	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
	tons/yr															
	MT/yr															
Fugitive Dust					6.26E-03	0	6.26E-03	3.00E-03	0	3.00E-03	0	0	0	0	0	0
Off-Road	2.44E-03	0.0258	0.0165	2.00E-05	1.40E-03	1.40E-03	1.40E-03	1.29E-03	1.29E-03	1.29E-03	0	1.6158	1.6158	4.90E-04	0	1.626
<b>Total</b>	<b>2.44E-03</b>	<b>0.0258</b>	<b>0.0165</b>	<b>2.00E-05</b>	<b>6.26E-03</b>	<b>1.40E-03</b>	<b>7.66E-03</b>	<b>3.00E-03</b>	<b>1.29E-03</b>	<b>4.29E-03</b>	<b>0</b>	<b>1.6158</b>	<b>1.6158</b>	<b>4.90E-04</b>	<b>0</b>	<b>1.626</b>

**Unmitigated Construction Off-Site**

Category	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
	tons/yr							MT/yr								
Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Worker	3.00E-05	4.00E-05	4.10E-04	0	9.00E-05	0	9.00E-05	2.00E-05	0	2.00E-05	0	0.0746	0.0746	0	0	0.0747
<b>Total</b>	<b>3.00E-05</b>	<b>4.00E-05</b>	<b>4.10E-04</b>	<b>0</b>	<b>9.00E-05</b>	<b>0</b>	<b>9.00E-05</b>	<b>2.00E-05</b>	<b>0</b>	<b>2.00E-05</b>	<b>0</b>	<b>0.0746</b>	<b>0.0746</b>	<b>0</b>	<b>0</b>	<b>0.0747</b>

**Mitigated Construction On-Site**

Category	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
	tons/yr							MT/yr								
Fugitive Dust					2.82E-03	0	2.82E-03	1.35E-03	0	1.35E-03	0	0	0	0	0	0
Off-Road	2.44E-03	0.0258	0.0165	2.00E-05		1.40E-03	1.40E-03		1.29E-03	1.29E-03	0	1.6158	1.6158	4.90E-04	0	1.626
<b>Total</b>	<b>2.44E-03</b>	<b>0.0258</b>	<b>0.0165</b>	<b>2.00E-05</b>	<b>2.82E-03</b>	<b>1.40E-03</b>	<b>4.22E-03</b>	<b>1.35E-03</b>	<b>1.29E-03</b>	<b>2.64E-03</b>	<b>0</b>	<b>1.6158</b>	<b>1.6158</b>	<b>4.90E-04</b>	<b>0</b>	<b>1.626</b>

**Mitigated Construction Off-Site**

Category	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
	tons/yr															
	MT/yr															
Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Worker	3.00E-05	4.00E-05	4.10E-04	0	9.00E-05	0	9.00E-05	2.00E-05	0	2.00E-05	0	0.0746	0.0746	0	0	0.0747
<b>Total</b>	<b>3.00E-05</b>	<b>4.00E-05</b>	<b>4.10E-04</b>	<b>0</b>	<b>9.00E-05</b>	<b>0</b>	<b>9.00E-05</b>	<b>2.00E-05</b>	<b>0</b>	<b>2.00E-05</b>	<b>0</b>	<b>0.0746</b>	<b>0.0746</b>	<b>0</b>	<b>0</b>	<b>0.0747</b>

**3.3 Fill and Grading - 2016**

**Unmitigated Construction On-Site**

Category	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
	tons/yr															
	MT/yr															
Fugitive Dust					0.0317	0	0.0317	0.0167	0	0.0167	0	0	0	0	0	0
Off-Road	0.013	0.1375	0.0891	9.00E-05	7.40E-03	7.40E-03	7.40E-03	6.80E-03	6.80E-03	6.80E-03	0	8.6025	8.6025	2.59E-03	0	8.6569
<b>Total</b>	<b>0.013</b>	<b>0.1375</b>	<b>0.0891</b>	<b>9.00E-05</b>	<b>0.0317</b>	<b>7.40E-03</b>	<b>0.0391</b>	<b>0.0167</b>	<b>6.80E-03</b>	<b>0.0235</b>	<b>0</b>	<b>8.6025</b>	<b>8.6025</b>	<b>2.59E-03</b>	<b>0</b>	<b>8.6569</b>

**Unmitigated Construction Off-Site**

Category	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
	tons/yr															
	MT/yr															

Hauling	8.79E-03	0.158	0.1078	4.00E-04	9.72E-03	2.74E-03	0.0125	2.67E-03	2.52E-03	5.19E-03	0	36.8028	36.8028	2.30E-04	0	36.8078
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Worker	1.40E-04	2.00E-04	2.03E-03	0	4.40E-04	0	4.40E-04	1.20E-04	0	1.20E-04	0	0.373	0.373	2.00E-05	0	0.3733
<b>Total</b>	<b>8.93E-03</b>	<b>0.1582</b>	<b>0.1089</b>	<b>4.00E-04</b>	<b>0.0102</b>	<b>2.74E-03</b>	<b>0.0129</b>	<b>2.79E-03</b>	<b>2.52E-03</b>	<b>5.31E-03</b>	<b>0</b>	<b>37.1758</b>	<b>37.1758</b>	<b>2.50E-04</b>	<b>0</b>	<b>37.1811</b>

**Mitigated Construction On-Site**

Category	tons/yr											MT/yr				
	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
Fugitive Dust					0.0143	0	0.0143	7.54E-03	0	7.54E-03	0	0	0	0	0	0
Off-Road	0.013	0.1375	0.0891	9.00E-05		7.40E-03	7.40E-03		6.80E-03	6.80E-03	0	8.6024	8.6024	2.59E-03	0	8.6569
<b>Total</b>	<b>0.013</b>	<b>0.1375</b>	<b>0.0891</b>	<b>9.00E-05</b>	<b>0.0143</b>	<b>7.40E-03</b>	<b>0.0217</b>	<b>7.54E-03</b>	<b>6.80E-03</b>	<b>0.0143</b>	<b>0</b>	<b>8.6024</b>	<b>8.6024</b>	<b>2.59E-03</b>	<b>0</b>	<b>8.6569</b>

**Mitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	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
Hauling	8.79E-03	0.158	0.1078	4.00E-04	9.72E-03	2.74E-03	0.0125	2.67E-03	2.52E-03	5.19E-03	0	36.8028	36.8028	2.30E-04	0	36.8078
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Worker	1.40E-04	2.00E-04	2.03E-03	0	4.40E-04	0	4.40E-04	1.20E-04	0	1.20E-04	0	0.373	0.373	2.00E-05	0	0.3733
<b>Total</b>	<b>8.93E-03</b>	<b>0.1582</b>	<b>0.1099</b>	<b>4.00E-04</b>	<b>0.0102</b>	<b>2.74E-03</b>	<b>0.0129</b>	<b>2.79E-03</b>	<b>2.52E-03</b>	<b>5.31E-03</b>	<b>0</b>	<b>37.1758</b>	<b>37.1758</b>	<b>2.50E-04</b>	<b>0</b>	<b>37.1811</b>

**3.4 Building Construction - 2016**

Unmitigated Construction On-Site

Category	tons/yr											MT/yr				
	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
Off-Road	0.1234	0.7705	0.5515	8.20E-04		0.0512	0.0512		0.0494	0.0494	0	69.6358	69.6358	0.0153	0	69.9573
<b>Total</b>	<b>0.1234</b>	<b>0.7705</b>	<b>0.5515</b>	<b>8.20E-04</b>		<b>0.0512</b>	<b>0.0512</b>		<b>0.0494</b>	<b>0.0494</b>	<b>0</b>	<b>69.6358</b>	<b>69.6358</b>	<b>0.0153</b>	<b>0</b>	<b>69.9573</b>

Unmitigated Construction Off-Site

Category	tons/yr											MT/yr				
	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
Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vendor	4.00E-03	0.0428	0.05	1.00E-04	3.02E-03	8.00E-04	3.82E-03	8.70E-04	7.30E-04	1.60E-03	0	9.31	9.31	6.00E-05	0	9.3113
Worker	4.38E-03	6.41E-03	0.0646	1.60E-04	0.014	9.00E-05	0.0141	3.72E-03	8.00E-05	3.80E-03	0	11.8883	11.8883	5.50E-04	0	11.8999
<b>Total</b>	<b>8.38E-03</b>	<b>0.0492</b>	<b>0.1146</b>	<b>2.60E-04</b>	<b>0.017</b>	<b>8.90E-04</b>	<b>0.0179</b>	<b>4.59E-03</b>	<b>8.10E-04</b>	<b>5.40E-03</b>	<b>0</b>	<b>21.1983</b>	<b>21.1983</b>	<b>6.10E-04</b>	<b>0</b>	<b>21.2112</b>



**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	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
Off-Road	0.1234	0.7705	0.5515	8.20E-04		0.0512	0.0512		0.0494	0.0494	0	69.6358	69.6358	0.0153	0	69.9572
<b>Total</b>	<b>0.1234</b>	<b>0.7705</b>	<b>0.5515</b>	<b>8.20E-04</b>		<b>0.0512</b>	<b>0.0512</b>		<b>0.0494</b>	<b>0.0494</b>	<b>0</b>	<b>69.6358</b>	<b>69.6358</b>	<b>0.0153</b>	<b>0</b>	<b>69.9572</b>

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	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
Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vendor	4.00E-03	0.0428	0.05	1.00E-04	3.02E-03	8.00E-04	3.82E-03	8.70E-04	7.30E-04	1.60E-03	0	9.31	9.31	6.00E-05	0	9.3113
Worker	4.38E-03	6.41E-03	0.0646	1.60E-04	0.014	9.00E-05	0.0141	3.72E-03	8.00E-05	3.80E-03	0	11.8883	11.8883	5.50E-04	0	11.8999
<b>Total</b>	<b>8.38E-03</b>	<b>0.0492</b>	<b>0.1146</b>	<b>2.60E-04</b>	<b>0.017</b>	<b>8.90E-04</b>	<b>0.0179</b>	<b>4.59E-03</b>	<b>8.10E-04</b>	<b>5.40E-03</b>	<b>0</b>	<b>21.1983</b>	<b>21.1983</b>	<b>6.10E-04</b>	<b>0</b>	<b>21.2112</b>

**3.4 Building Construction - 2017**

**Unmitigated Construction On-Site**

Category	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
	tons/yr															
	MT/yr															
Off-Road	0.1596	1.0319	0.7728	1.19E-03		0.0662	0.0662		0.0638	0.0638	0	99.6556	99.6556	0.0209	0	100.0947
<b>Total</b>	<b>0.1596</b>	<b>1.0319</b>	<b>0.7728</b>	<b>1.19E-03</b>		<b>0.0662</b>	<b>0.0662</b>		<b>0.0638</b>	<b>0.0638</b>	<b>0</b>	<b>99.6556</b>	<b>99.6556</b>	<b>0.0209</b>	<b>0</b>	<b>100.0947</b>

**Unmitigated Construction Off-Site**

Category	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
	tons/yr															
	MT/yr															
Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vendor	5.19E-03	0.0558	0.068	1.50E-04	4.36E-03	1.03E-03	5.38E-03	1.25E-03	9.50E-04	2.19E-03	0	13.1798	13.1798	9.00E-05	0	13.1816
Worker	5.63E-03	8.27E-03	0.0832	2.30E-04	0.0202	1.20E-04	0.0203	5.36E-03	1.20E-04	5.47E-03	0	16.4398	16.4398	7.30E-04	0	16.4552
<b>Total</b>	<b>0.0108</b>	<b>0.0641</b>	<b>0.1513</b>	<b>3.80E-04</b>	<b>0.0245</b>	<b>1.15E-03</b>	<b>0.0257</b>	<b>6.61E-03</b>	<b>1.07E-03</b>	<b>7.66E-03</b>	<b>0</b>	<b>29.6196</b>	<b>29.6196</b>	<b>8.20E-04</b>	<b>0</b>	<b>29.6368</b>

**Mitigated Construction On-Site**

Category	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	0.1596	1.0319	0.7728	1.19E-03	0.0662	0.0662	0.0638	0.0638	0	99.6554	99.6554	0.0209	0
<b>Total</b>	<b>0.1596</b>	<b>1.0319</b>	<b>0.7728</b>	<b>1.19E-03</b>	<b>0.0662</b>	<b>0.0662</b>	<b>0.0638</b>	<b>0.0638</b>	<b>0</b>	<b>99.6554</b>	<b>99.6554</b>	<b>0.0209</b>	<b>0</b>	<b>100.0946</b>

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr							
	Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vendor	5.19E-03	0.0558	0.068	1.50E-04	4.36E-03	1.03E-03	5.38E-03	1.25E-03	9.50E-04	2.19E-03	13.1798	9.00E-05	0	13.1798	13.1798	9.00E-05	0	13.1816
Worker	5.63E-03	8.27E-03	0.0832	2.30E-04	0.0202	1.20E-04	0.0203	5.36E-03	1.20E-04	5.47E-03	16.4398	7.30E-04	0	16.4398	16.4398	7.30E-04	0	16.4552
<b>Total</b>	<b>0.0108</b>	<b>0.0641</b>	<b>0.1513</b>	<b>3.80E-04</b>	<b>0.0245</b>	<b>1.15E-03</b>	<b>0.0257</b>	<b>6.61E-03</b>	<b>1.07E-03</b>	<b>7.66E-03</b>	<b>29.6196</b>	<b>8.20E-04</b>	<b>0</b>	<b>29.6196</b>	<b>29.6196</b>	<b>8.20E-04</b>	<b>0</b>	<b>29.6368</b>

**3.5 Paving - 2016**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr							
	Off-Road	3.22E-03	0.033	0.0227	3.00E-05	2.02E-03	2.02E-03	1.86E-03	1.86E-03	1.86E-03	1.86E-03	3.1036	9.20E-04	0	3.1036	3.1036	9.20E-04	0

Paving	0				0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>3.22E-03</b>	<b>0.033</b>	<b>3.00E-05</b>	<b>2.02E-03</b>	<b>2.02E-03</b>	<b>1.86E-03</b>	<b>0</b>	<b>3.1036</b>	<b>3.1036</b>	<b>9.20E-04</b>	<b>0</b>	<b>3.1229</b>		

**Unmitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	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
Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Worker	1.10E-04	1.60E-04	1.65E-03	0	3.60E-04	0	3.60E-04	9.00E-05	0	1.00E-04	0	0.303	0.303	1.00E-05	0	0.3033
<b>Total</b>	<b>1.10E-04</b>	<b>1.60E-04</b>	<b>1.65E-03</b>	<b>0</b>	<b>3.60E-04</b>	<b>0</b>	<b>3.60E-04</b>	<b>9.00E-05</b>	<b>0</b>	<b>1.00E-04</b>	<b>0</b>	<b>0.303</b>	<b>0.303</b>	<b>1.00E-05</b>	<b>0</b>	<b>0.3033</b>

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	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
Off-Road	3.22E-03	0.033	0.0227	3.00E-05	2.02E-03	2.02E-03	2.02E-03	1.86E-03	1.86E-03	1.86E-03	0	3.1036	3.1036	9.20E-04	0	3.1229
Paving	0					0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>3.22E-03</b>	<b>0.033</b>	<b>0.0227</b>	<b>3.00E-05</b>	<b>2.02E-03</b>	<b>2.02E-03</b>	<b>2.02E-03</b>	<b>1.86E-03</b>	<b>1.86E-03</b>	<b>1.86E-03</b>	<b>0</b>	<b>3.1036</b>	<b>3.1036</b>	<b>9.20E-04</b>	<b>0</b>	<b>3.1229</b>

**Mitigated Construction Off-Site**

Category	tons/yr											MT/yr				
	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
Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Worker	1.10E-04	1.60E-04	1.65E-03	0	3.60E-04	0	3.60E-04	9.00E-05	0	1.00E-04	0	0.303	0.303	1.00E-05	0	0.3033
<b>Total</b>	<b>1.10E-04</b>	<b>1.60E-04</b>	<b>1.65E-03</b>	<b>0</b>	<b>3.60E-04</b>	<b>0</b>	<b>3.60E-04</b>	<b>9.00E-05</b>	<b>0</b>	<b>1.00E-04</b>	<b>0</b>	<b>0.303</b>	<b>0.303</b>	<b>1.00E-05</b>	<b>0</b>	<b>0.3033</b>

**3.5 Paving - 2017**

**Unmitigated Construction On-Site**

Category	tons/yr											MT/yr				
	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
Off-Road	0.0326	0.3327	0.2484	3.70E-04		0.0202	0.0202		0.0186	0.0186	0	33.6208	33.6208	0.0101	0	33.8331
Paving	0					0	0		0	0	0	0	0	0	0	0
<b>Total</b>	<b>0.0326</b>	<b>0.3327</b>	<b>0.2484</b>	<b>3.70E-04</b>		<b>0.0202</b>	<b>0.0202</b>		<b>0.0186</b>	<b>0.0186</b>	<b>0</b>	<b>33.6208</b>	<b>33.6208</b>	<b>0.0101</b>	<b>0</b>	<b>33.8331</b>

**Unmitigated Construction Off-Site**

Category	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
	tons/yr															
	MT/yr															
Hauling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Worker	1.10E-03	1.61E-03	0.0162	4.00E-05	3.93E-03	2.00E-05	3.95E-03	1.04E-03	2.00E-05	1.07E-03	0	3.2011	3.2011	1.40E-04	0	3.2041
<b>Total</b>	<b>1.10E-03</b>	<b>1.61E-03</b>	<b>0.0162</b>	<b>4.00E-05</b>	<b>3.93E-03</b>	<b>2.00E-05</b>	<b>3.95E-03</b>	<b>1.04E-03</b>	<b>2.00E-05</b>	<b>1.07E-03</b>	<b>0</b>	<b>3.2011</b>	<b>3.2011</b>	<b>1.40E-04</b>	<b>0</b>	<b>3.2041</b>

**Mitigated Construction On-Site**

Category	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
	tons/yr															
	MT/yr															
Off-Road	0.0326	0.3327	0.2484	3.70E-04		0.0202	0.0202		0.0186	0.0186	0	33.6208	33.6208	0.0101	0	33.8331
Paving	0					0	0		0	0	0	0	0	0	0	0
<b>Total</b>	<b>0.0326</b>	<b>0.3327</b>	<b>0.2484</b>	<b>3.70E-04</b>		<b>0.0202</b>	<b>0.0202</b>		<b>0.0186</b>	<b>0.0186</b>	<b>0</b>	<b>33.6208</b>	<b>33.6208</b>	<b>0.0101</b>	<b>0</b>	<b>33.8331</b>

**Mitigated Construction Off-Site**

Category	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vendor	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Worker	1.10E-03	1.61E-03	0.0162	4.00E-05	3.93E-03	2.00E-05	3.95E-03	1.04E-03	2.00E-05	1.07E-03	3.2011	3.2011	1.40E-04	0	3.2041	0
<b>Total</b>	<b>1.10E-03</b>	<b>1.61E-03</b>	<b>0.0162</b>	<b>4.00E-05</b>	<b>3.93E-03</b>	<b>2.00E-05</b>	<b>3.95E-03</b>	<b>1.04E-03</b>	<b>2.00E-05</b>	<b>1.07E-03</b>	<b>3.2011</b>	<b>3.2011</b>	<b>1.40E-04</b>	<b>0</b>	<b>3.2041</b>	<b>0</b>

### 4.0 Operational Detail - Mobile

#### 4.1 Mitigation Measures Mobile

Category	tons/yr										MT/yr					
	Mitigated	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unmitigated	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

#### 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Annual VMT	
	Weekday	Saturday	Sunday	Unmitigated	Mitigated
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0	0
<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0</b>	<b>0</b>

#### 4.3 Trip Type Information

		Miles		Trip %		Trip Purpose %	
Land Use		H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C- H-S or C-C	H-O or C-NW	Pass-by
Other Non-Asphalt Surfaces		16.60	8.40	6.90	0.00	0.00	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.460962	0.069557	0.176974	0.170659	0.045477	0.007383	0.012841	0.043558	0.000954	0.001056	0.006454	0.000884	0.003242

**5.0 Energy Detail**

**4.4 Fleet Mix**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

Category	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	
	tons/yr																
Electricity Mitigated						0	0		0	0	0	0	0	0	0	0	0
Electricity Unmitigated						0	0		0	0	0	0	0	0	0	0	0
NaturalGas Mitigated	0	0	0	0		0	0		0	0	0	0	0	0	0	0	0
NaturalGas Unmitigated	0	0	0	0		0	0		0	0	0	0	0	0	0	0	0

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**



	NaturalGas Use KBTU/yr	ROG	NOx	CO	SO2	Fugitive PM10 tons/yr	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	INBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use																		
Other Non-Asphalt Surfaces	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

**Mitigated**

	NaturalGas Use KBTU/yr	ROG	NOx	CO	SO2	Fugitive PM10 tons/yr	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	INBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use																		
Other Non-Asphalt Surfaces	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

Electricity Use	Total CO2	CH4	N2O	CO2e

Land Use	KWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0	0	0	0
<b>Total</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	KWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0	0	0	0
<b>Total</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Category	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
	tons/yr															
	MT/yr															

Mitigated	0.3887	0	2.00E-05	0			0	0	0	0	0	0	5.00E-05	5.00E-05	0	0	5.00E-05
Unmitigated	0.3887	0	2.00E-05	0			0	0	0	0	0	0	5.00E-05	5.00E-05	0	0	5.00E-05

**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	tons/yr											MT/yr					
	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	
Architectural Coating	0.0944					0	0		0	0	0	0	0	0	0	0	0
Consumer Products	0.2944					0	0		0	0	0	0	0	0	0	0	0
Landscaping	0	0	2.00E-05	0		0	0		0	0	0	5.00E-05	5.00E-05	0	0	0	5.00E-05
<b>Total</b>	<b>0.3887</b>	<b>0</b>	<b>2.00E-05</b>	<b>0</b>		<b>0</b>	<b>0</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>5.00E-05</b>	<b>5.00E-05</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5.00E-05</b>

**Mitigated**

SubCategory	tons/yr											MT/yr					
	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	
Consumer Products	0.2944					0	0		0	0	0	0	0	0	0	0	0
Landscaping	0	0	2.00E-05	0		0	0		0	0	0	5.00E-05	5.00E-05	0	0	0	5.00E-05

Architectural Coating	0.0944																				0
<b>Total</b>	<b>0.3887</b>	<b>0</b>	<b>2.00E-05</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5.00E-05</b>	<b>5.00E-05</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5.00E-05</b>

### 7.0 Water Detail

### 7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0	0	0	0
Unmitigated	0	0	0	0

### 7.2 Water by Land Use

#### Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal				
Other Non-Asphalt Surfaces	0.70	0	0	0	0
<b>Total</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0/0	0	0	0	0
<b>Total</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0	0	0	0
Unmitigated	0	0	0	0

**8.2 Waste by Land Use**

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MIT/yr			
Other Non-Asphalt Surfaces	0	0	0	0	0
<b>Total</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MIT/yr			
Other Non-Asphalt Surfaces	0	0	0	0	0
<b>Total</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

**10.0 Vegetation**

# APPENDIX B

## General Biological Resources and MSHCP Consistency Report

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL







## Kitching Substation Project

### EXECUTIVE SUMMARY

- A. Report Date:** February 5, 2016
- B. Report Title:** General Biological Resources and MSHCP Consistency Report
- C. Project Site Location:** The Moreno Valley Kitching Substation and Switchyard Project is located at the northwest corner of Kitching Street and Edwin Road in the City of Moreno Valley. The project area is located in Section 32, Township 3 South, Range 3 West of the United States Geological Survey (USGS) 7.5-minute series *Perris, California* quadrangle.
- D. Project Proponent:** City of Moreno Valley  
Electric Utility Division  
14177 Frederick Street,  
Moreno Valley, California 92553  
Contact: Clement Jimenez  
Phone: (951) 413-3513
- E. Principal Investigator:** HDR, Inc.  
2280 Market Street, Suite 100  
Riverside, California 92501  
Phone (951) 320-7300  
Report Preparer: Sarah Barrera
- F. Report Summary:**

This report transmits the results of an assessment of biological resources in compliance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) regarding the Moreno Valley Kitching Substation and Switchyard Project (Project) located in the City of Riverside in Riverside County, California (Exhibit 1, Regional Map). Moreno Valley Electric Utility (MVE) is proposing to construct a substation and switchyard on approximately 1.87 acres of land at the northwest corner of Kitching Street and Edwin Road (Figure 2).

HDR biologist Sarah Barrera reviewed relevant background information and then visited the site to assess the Study Area for existing biological resources. HDR then reviewed the proposed project in order to determine potential project impacts to these resources.

The project is located within the Riverside County General Plan's Reche Canyon/Badlands Area Plan. The proposed Project is not located within a MSHCP Criteria Area Cell. Therefore, the project is not subject to the Joint Project Review (JPR) process or the Habitat Evaluation and Acquisition Negotiation Strategy (HANS) process. The project is located within the MSHCP's



Criteria Area Species Survey Area (CASSA) 3a but is not located within any other special survey areas and does not contain riparian habitat that would require additional surveys.

The project site contains suitable soils and supports marginally suitable habitat for two plant species within the CASSA, smooth tarplant (*Centromadia pungens* ssp. *laevis*) and Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*). Surveys conducted during the appropriate blooming season (April through June) will be required to determine if these species are present on the site. If either of these species is identified on-site, the project will be required to comply with MSHCP requirements of 90% conservation of all populations with long-term conservation value. If this is not feasible, suitable mitigation measures will be identified in a Determination of Biologically Equivalent or Superior Preservation (DBESP) report that will be subject to the approval of the City of Moreno Valley and the Western Riverside County Conservation Authority.



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## 1.0 INTRODUCTION

Moreno Valley Electric Utility (MVU) proposes to construct a substation and switchyard on a 1.87-acre undeveloped lot [Assessor's Parcel Number (APN) 312-250-016] in the City of Moreno Valley (City), California. As depicted in Figure 1, the project site is located at the northeast corner of Kitching Street and Edwin Road.

The project site is bounded on the north and west by existing light industrial development, on the east by the Eastern Municipal Water District's (EMWD) Moreno Valley Regional Water Reclamation Facility, and on the south by vacant land (Figure 2). The project site is currently a vacant lot.

**Table 1: On-site and Adjacent Land Use Designations**

Proximity to Site	Existing Land Use	General Plan Designation <sup>1</sup>
On-site	Vacant land	Business Park / Light Industrial
North	Existing rail line and State Route 91 (SR-91)	Business Park / Light Industrial
South	Single Family Residential (Riverwalk Vista development)	Business Park / Light Industrial
East	Bowling Alley	Public Facilities
West	La Sierra Metrolink Station and parking lot	Business Park / Light Industrial

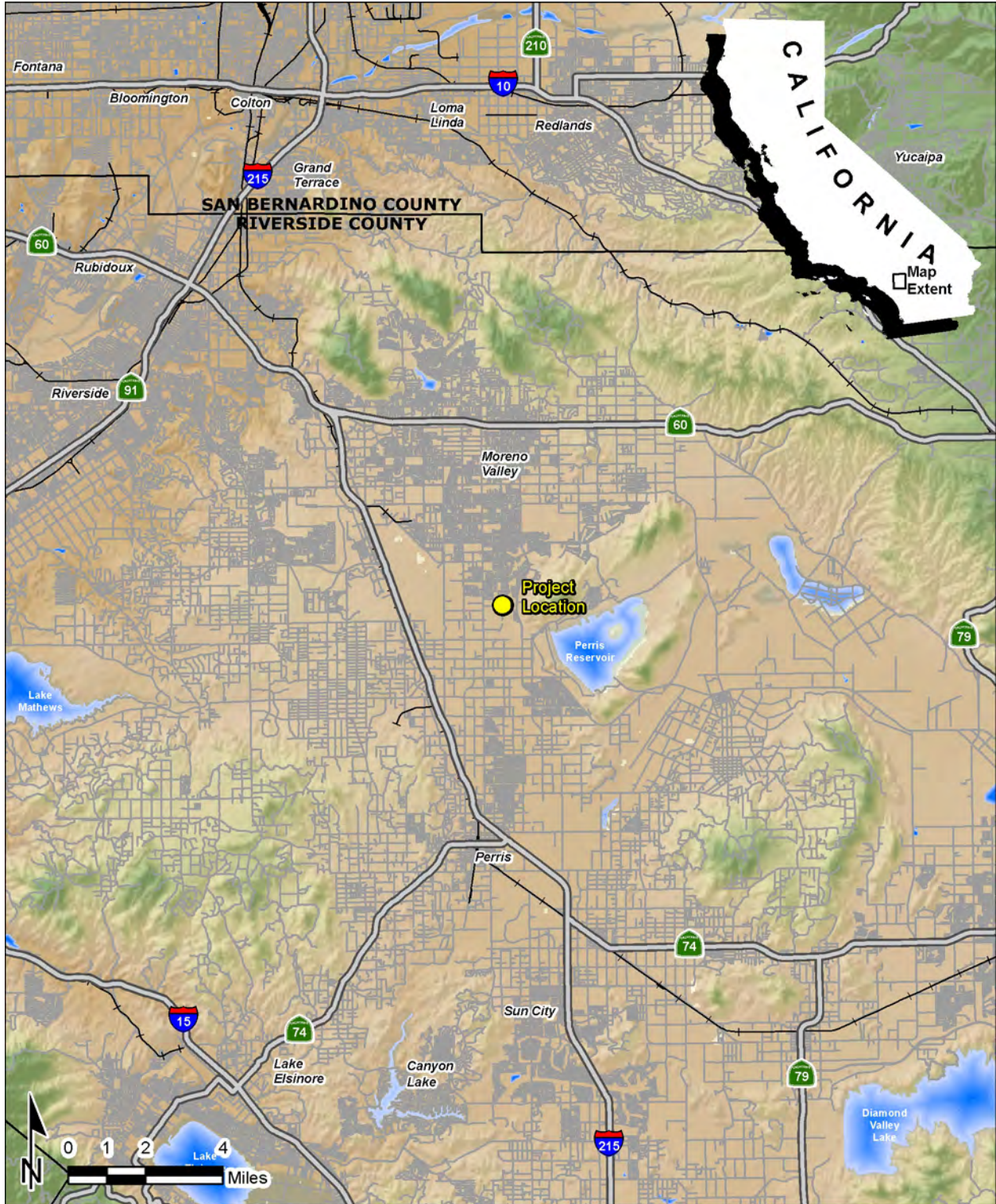
Notes: <sup>1</sup> Figure 2-2 Adopted Land Use Map. City of Moreno Valley General Plan. 2014

This report provides the results of an assessment of biological resources in compliance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

### 1.1 Project Location

The proposed project is located in the southern portion of the City of Moreno Valley, approximately 2.5 miles east of Interstate 215 (I-215), and 1.25 miles northwest of Lake Perris. The Project is located in Section 32, Township 3 South, Range 3 West of the United States Geological Survey (USGS) 7.5-minute series Perris, California quadrangle. The project site is located within the boundaries of the Moreno Valley Industrial Area Plan (MVIAP) (Specific Plan 208). This specific plan area comprises approximately 1,540 acres of land in southwestern Moreno Valley. The purpose of the MVIAP is to provide guidelines and standards for development within the City's industrial area.

The project site is located within the MSHCP's Reche Canyon/Badlands Area Plan. The entire study area is located within the MSHCP Criteria Area Species Survey Area 9. However, the project site is not located within a Criteria Cell or any other MSHCP Survey Areas.



G:\GIS\_Production\Projects\CityofMorenoValley\_201067\Kitching\_Substation\_271253\7.2\_Work\_In\_Progress\map\_docs\mxd\BTR\Regional.mxd-aburvall-12/28/2015

Regional and Project Location  
FIGURE 1

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



Study Area and Surrounding Land Uses  
FIGURE 2

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## 1.2 Project Description

As depicted in Figure 3, the switchyard would be located within the northeastern portion of the project site and the substation would be located within the southern portion of the project site.

Pursuant to the MVIAP development standards, the proposed project would be setback 15 feet from Kitching Street and 10 feet from Edwin Road. No development would be constructed within these setbacks.

An 8-foot high block wall with barbed wire would be installed along the northern and eastern property line of the project site, and along the section of the substation and switchyard that face Kitching Street and Edwin Road. Additionally, an 8-foot high chain-link fence would be installed to separate the substation and switchyard. The two (2) 10MVAR 12 kV capacitor banks would be enclosed by a 6-foot high chain link fence.

The project also includes street right-of-way (ROW) dedications and landscape improvements.

## 2.0 REGULATORY BACKGROUND

The proposed project is subject to state and federal regulations associated with a number of regulatory programs. These programs often overlap and were developed to protect natural resources, including: state and federally listed plants and animals; aquatic resources including rivers and creeks, ephemeral streambeds, wetlands, and areas of riparian habitat; other special-status species which are not listed as threatened or endangered by the state or federal governments; and other special-status vegetation communities.

### 2.1 State and/or Federally Listed Plants or Animals

#### 2.1.1 State of California Endangered Species Act

California's Endangered Species Act (CESA) defines an endangered species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease." The State defines a threatened species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985 is a threatened species." Candidate species are defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list." Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the FESA, CESA does not list invertebrate species.



E.1.c

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Packet Pg. 169

City of Moreno Valley | Kitching Substation Project



PRELIMINARY  
NOT FOR CONSTRUCTION



BASE OF BEARING REVIEW BY CITY STAFF DATE PROJECT NUMBER SHEET NUMBER SHEET TOTAL DRAWN BY CHECKED BY DATE AND TIME OF REVIEW DATE AND TIME OF APPROVAL	CITY OF MORENO VALLEY ELECTRICAL LAYOUT KITCHING SUBSTATION EDMUN ROAD AND KITCHING STREET	PROJECT NO. SHEET NO. DATE
	CITY OF MORENO VALLEY ENGINEER'S APPROVAL	E-700-E DATE

Conceptual Site Plan  
FIGURE 3

5



Article 3, Sections 2080 through 2085, of the CESA addresses the taking of threatened, endangered, or candidate species by stating “No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided.” Under the CESA, “take” is defined as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” Exceptions authorized by the state to allow “take” require permits or memoranda of understanding and can be authorized for endangered species, threatened species, or candidate species for scientific, educational, or management purposes and for take incidental to otherwise lawful activities. Sections 1901 and 1913 of the California Fish and Game Code provide that notification is required prior to disturbance.

### **2.1.2 Federal Endangered Species Act**

The FESA of 1973 defines an endangered species as “any species that is in danger of extinction throughout all or a significant portion of its range.” A threatened species is defined as “any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” Under provisions of Section 9(a)(1)(B) of the FESA it is unlawful to “take” any listed species. “Take” is defined in Section 3(18) of FESA: “...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Further, the United States Fish and Wildlife Service (USFWS), through regulation, has interpreted the terms “harm” and “harass” to include certain types of habitat modification that result in injury to, or death of species as forms of “take.” These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a Federal agency for an action that could affect a federally listed plant and animal species, the property owner and agency are required to consult with USFWS. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants.

### **2.1.3 State and Federal Take Authorizations for Listed Species**

Federal or state authorizations of impacts to or incidental take of a listed species by a private individual or other private entity would be granted in one of the following ways:

- Section 7 of the FESA stipulates that any federal action that may affect a species listed as threatened or endangered requires a formal consultation with USFWS to ensure that the action is not likely to jeopardize the continued existence of the listed species or result in destruction or adverse modification of designated critical habitat. 16 U.S.C. 1536(a)(2).
- In 1982, the FESA was amended to give private landowners the ability to develop Habitat Conservation Plans (HCP) pursuant to Section 10(a) of the FESA. Upon development of an HCP, the USFWS can issue incidental take permits for listed species where the HCP specifies at minimum, the following: (1) the level of impact that will result from the taking, (2) steps that will minimize and mitigate the impacts, (3) funding necessary to implement the plan, (4) alternative actions to the taking considered by the applicant and the reasons why such alternatives were not chosen, and (5) such other measures that the Secretary of the Interior may require as being necessary or appropriate for the plan.



Sections 2090-2097 of the California Endangered Species Act (CESA) require that the state lead agency consult with California Department of Fish and Wildlife (CDFW) on projects with potential impacts on state-listed species. These provisions also require CDFW to coordinate consultations with USFWS for actions involving federally listed as well as state-listed species. In certain circumstances, Section 2080.1 of the California Fish and Game Code allows CDFW to adopt the federal incidental take statement or the 10(a) permit as its own based on its findings that the federal permit adequately protects the species under state law.

#### **2.1.4 Take Authorizations Pursuant to the MSHCP**

The Western Riverside County MSHCP was adopted on June 17, 2003, and an Implementing Agreement (IA) was executed between the Federal and State Wildlife Agencies (USFWS and CDFW) and participating entities. The MSHCP is a comprehensive habitat conservation-planning program for western Riverside County. The intent of the MSHCP is to preserve native vegetation and meet the habitat needs of multiple species, rather than focusing preservation efforts on one species at a time. As such, the MSHCP is intended to streamline review of individual projects with respect to the species and habitats addressed in the MSHCP, and to provide for an overall Conservation Area that would be of greater benefit to biological resources than would result from a piecemeal regulatory approach. The MSHCP provides coverage (including take authorization for listed species) for special-status plant and animal species, as well as mitigation for impacts to sensitive species.

Through agreements with the USFWS and the CDFW, the MSHCP designates approximately 146 special-status animal and plant species that receive some level of coverage under the plan. Of the 146 covered species designated under the MSHCP, the majority of these species have no additional survey/ conservation requirements. In addition, the MSHCP provides mitigation for project-specific impacts to these species so that the impacts would be reduced to below a level of significance pursuant to the California Environmental Quality Act (CEQA). Beyond the fully covered species, there are species with additional survey/ conservation requirements. These include fourteen (14) Narrow Endemic Plant Species, as identified by the Narrow Endemic Plant Species Survey Areas (NEPSSA); thirteen (13) Criteria Area Plant Species identified by the Criteria Area Species Survey Areas (CASSA); seven (7) animals species as identified by survey area; six (6) species associated with riparian/riverine areas and vernal pool habitats (*Section 6.1.2 of the MSHCP document*); and an additional 28 species (*Table 9.3 of the MSHCP document*) not yet adequately conserved.

#### **2.1.5 Migratory Bird Treaty Act**

The Migratory Bird Treaty Act (MBTA) of 1928 makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 C.F.R. Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 C.F.R.21). In addition, sections 3505, 3503.5, and 3800 of the California Department of Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs.



## 2.2 California Environmental Quality Act

### 2.2.1 CEQA Guidelines Section 15380

The California Environmental Quality Act (CEQA) requires evaluation of a project's impacts on biological resources and provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts. Sections 5.1.1 and 5.2.2 below set forth these thresholds and guidelines. Furthermore, pursuant to the CEQA Guidelines Section 15380, CEQA provides protection for non-listed species that could potentially meet the criteria for state listing. For plants, CDFW recognizes that plants on Lists 1A, 1B, or 2 of the California Native Plant Society (CNPS) *Inventory of Rare and Endangered Plants in California* may meet the criteria for listing and should be considered under CEQA.

## 3.0 METHODOLOGY

### 3.1 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 *Perris, California; El Casco, California; Lake Elsinore, California; Lakeview, California; Romoland, California; Steele Peak, California; Sunnymead, California; Winchester, California* and *Riverside East, California* USGS 7.5-minute series quadrangles were searched on December 15, 2015, using the CDFW Natural Diversity Data Base *Rarefind 5* online application (version 5, dated December 1, 2015) and the California Native Plant Society's *Online Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2015. v8-02, <http://www.cnps.org/inventory>). An aerial photograph (Google Earth 2014) was reviewed and the USFWS Online Critical Habitat Mapper was used to determine the locations of critical habitats relative to the project site. Volume 1, Parts 1 and 2 of the *Western Riverside County Multiple Species Habitat Conservation Plan* were also used to prepare the biological resources report. Soil information was taken from *Soil Survey of Western Riverside Area, California* (Soil Conservation Service 1971) and electronic data available through the USDA's Web Soil Survey Online Application (NRCS 2015).

### 3.2 Field Surveys

HDR Biologist Sarah Barrera conducted a site visit on December 14, 2015 in order to identify general site conditions, vegetation communities, and suitability of habitat for various special-status species. The entire project site was surveyed by foot. All plant species encountered during the field surveys were identified and recorded following the guidelines adopted by CNPS (2001). A complete list of the plant species observed is provided in Appendix A. Scientific nomenclature and common names used in this report follow Hickman (1993) and Roberts (2004).

A Habitat Assessment (HA) for plant species identified for CASSA Survey Area 3a was conducted at the time of the general biological resources survey.



## 4.0 RESULTS

### 4.1 Existing and Adjacent Land Use

The survey area is a vacant lot surrounded by development on the north, east, and west and by vacant land to the south. The site is relatively flat and with an approximate elevation of 1,470 feet AMSL. Existing land uses adjacent to the site include light industrial to the west and north, and a water reclamation facility to the east.

### 4.2 Vegetation, Soils, and Disturbance

Based on a review of historic aerial photographs (Historic Aerials, 1966, 1967, 1978, 1997 and Google Earth (2003-2014) the survey area was cleared of vegetation prior to 1978 for agricultural use and has been cleared of vegetation regularly since that time. As a result, the site is highly disturbed and no longer supports native habitat.

Only one land cover types occurs within the survey area: Disturbed Habitat. The site is dominated by Russian thistle (*Salsola tragus*) with few other species present. A complete list of plant species observed on the site is included as Appendix A. Photographs of the site are included in Figure 4.

Soils mapped within the study area, as depicted in Figure 5, are entirely Domino silt loam, saline-alkali.

### 4.3 Wildlife

Avian species common to disturbed areas was observed using the site. These include European starling (*Sturnus vulgaris*), American crow (*Corvus brachyrhynchos*), and mourning dove (*Zenaidura macroura*). No wildlife other than birds was observed during the field survey. A complete list of wildlife species observed on the site is included in Appendix A.

### 4.4 Potential Jurisdictional Wetlands and Streambeds

The project site does not support any areas that would be considered jurisdictional under Sections 401 and 404 of the Clean Water Act or Section 1602 of the California Fish and Game Code. Additionally, no areas that meet the MSHCP's definition of Riparian/Riverine occur within the site. No further studies to determine potential USACE, CDFW, RWQCB jurisdiction within the project site are required.

## 5.0 MSHCP COMPLIANCE

Specific survey requirements and conservation measures have been developed for this project site in accordance with its location within the MSHCP Planning Area. These survey requirements and conservation measures were identified by conducting a search of the online Riverside County Integrated Project (RCIP) Conservation Summary Report Generator (accessed December 11, 2015, [http://www.rctlma.org/online/content/rcip\\_report\\_generator.aspx](http://www.rctlma.org/online/content/rcip_report_generator.aspx)) and a review of general conservation requirements identified in Volume 1 of the MSHCP. Figure 6 shows MSHCP survey



**Photo 1:** View of survey area from southeastern corner towards northwest, showing Disturbed Habitat throughout entire survey area. Photo taken 12-14-2015.



**Photo 2:** View of survey area from southwestern corner towards northeast, showing Disturbed Habitat and vehicle tracks throughout entire survey area. Photo taken 12-14-2015.

**Site Photographs  
FIGURE 4**

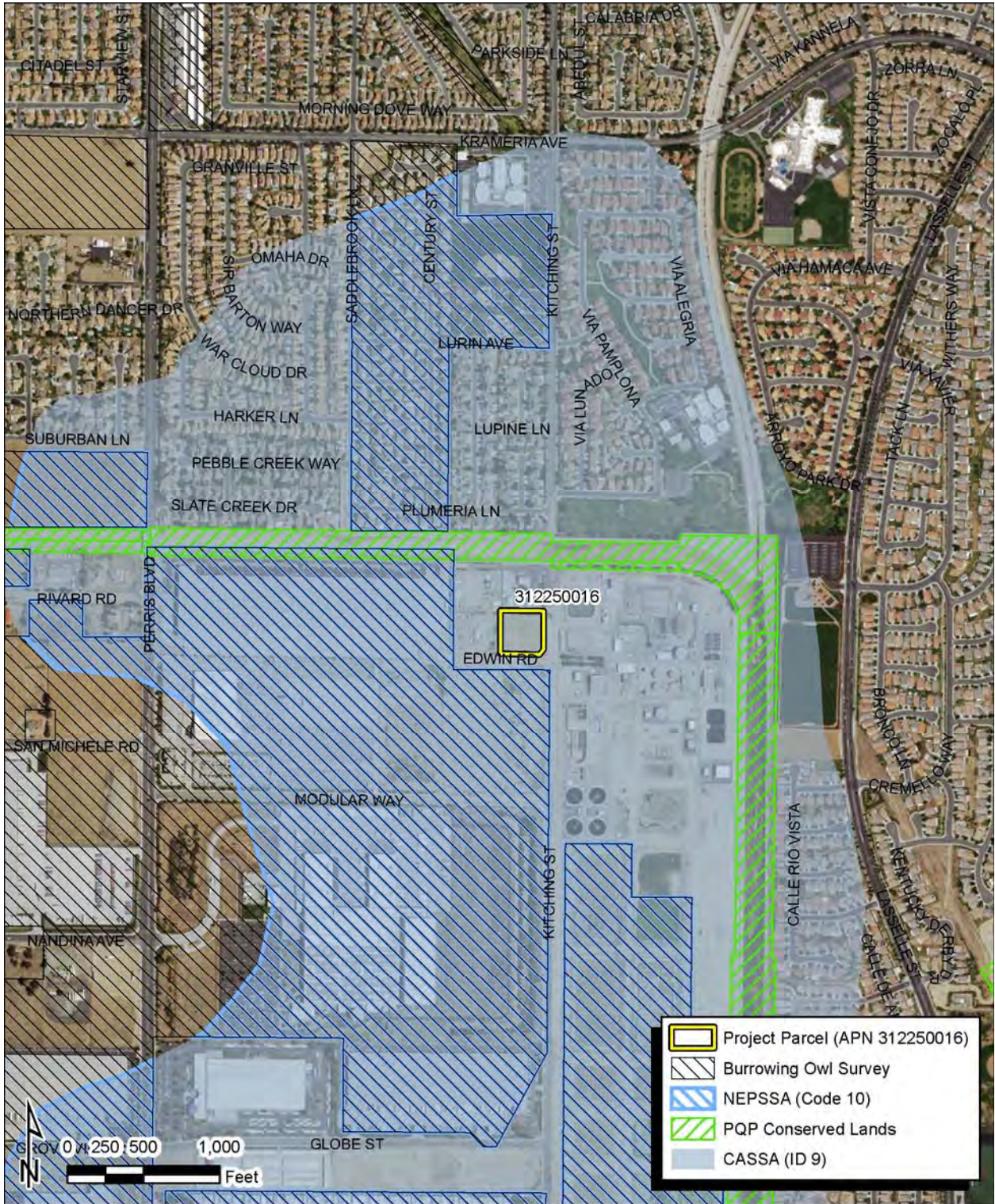
Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



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NRCS Mapped Soils  
FIGURE 5

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



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MSHCP Survey Areas and PQP Lands  
FIGURE 6

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL





areas and PQP Lands. Table 2 summarizes the MSHCP Project Review Checklist to determine surveys and conservation measures necessary for MSHCP Compliance.

**Table 2: MSHCP Project Review Checklist**

	Yes	No
Is the project located in a Criteria Area or Public/Quasi-Public Land?		✓
Is the project located in Criteria Area Plant Survey Area?	✓	
Is the project located in Criteria Area Amphibian Survey Area?		✓
Is the project located in Criteria Area Mammal Survey Area?		✓
Is the project located adjacent to MSHCP Conservation Areas?		✓
Is the project located in Narrow Endemic Plant Species Survey Area?		✓
Are riverine/riparian/wetland habitats or vernal pools present?		✓
Is the project located in Burrowing Owl Survey Area?		✓

## 5.1 Consistency with MSHCP Survey Requirements

### 5.1.1 Riparian/Riverine and Vernal Pool Requirements

Riparian/riverine areas are lands that contain habitat dominated by trees, shrubs, and persistent emergents that occur close to or depend upon soil moisture from a nearby water source; or areas with fresh water flowing during all of a portion of the year. Unvegetated drainages (ephemeral streams) may be included if alterations to that drainage have the potential to affect Covered Species and Conservation Areas.

As discussed in Section 4.4, above, the site does not contain any areas that meet the MSHCP definition of Riparian/Riverine areas.

### 5.1.2 Narrow Endemic and Criteria Area Plant Species Survey Area

The project site is not located within any MSHCP Narrow Endemic Plant Species Survey Areas. It is located within Criteria Area Species Survey Area (CASSA) 3a, which includes Coulter's Goldfields, Davidson's saltscale, Little Mousetail, Mud Nama, Parish's brittlescale, Round-leaved filaree, San Jacinto Valley Crownscale, Smooth Tarplant, Thread-leaved brodiaea. Per the MSHCP, if potential habitat for these species occurs within the study area, focused surveys may be required during the appropriate season. Table 3 shows the habitat requirements for the species, and potential for these species to occur within the project site.

Two species, smooth tarplant and Coulter's goldfields, have a low potential to occur within the survey area based on the presence of suitable soils and marginally suitable habitat. Both of these species are known to occur within disturbed areas as long as suitable soils are present. Per the MSHCP, a focused survey during the appropriate blooming season will be required in order to determine the presence/absence of this species on site.

**Table 3: Habitat Requirements and Occurrence Probability for CASSA 3a Plant Species**

Species	Status	Habitat and Distribution	Blooming Period	Occurrence Probability
<i>Atriplex coronata</i> var. <i>notatior</i> <b>San Jacinto Valley crownscale</b>	US: FE CA: 1B MSHCP: S	Highly alkaline silty-clay soils in association with the Traver-Domino-Willows soil association in floodplains (seasonal wetlands) dominated by alkali scrub, alkali playas, vernal pools, and, to a lesser extent, alkali grasslands. The majority (approx. 80%) of the populations are associated with Willows soils.	Blooms April through May (annual herb)	Not Expected: The site does not contain suitable habitat to support this species.
<i>Atriplex parishii</i> <b>Parish's brittlescale</b>	US: – CA: 1B MSHCP: S	Per the MSHCP, this species occurs in Domino, Willows and Traver soils in alkali vernal pools, alkali annual grassland, alkali playa, and alkali scrub components of alkali vernal plains.	June through October (annual herb)	Not Expected: The site does not contain suitable habitat to support this species.
<i>Atriplex serenana</i> var. <i>davidsonii</i> <b>Davidson's saltscale</b>	US: – CA: 1B MSHCP: S	Per the MSHCP, this species occurs in Domino, Willows and Traver soils in alkali vernal pools, alkali annual grassland, alkali playa, and alkali scrub components of alkali vernal plains.	Blooms April through October (annual herb)	Not Expected: The site does not contain suitable habitat to support this species.
<i>Brodiaea filifolia</i> <b>Thread-leaved brodiaea</b>	US: FT CA: SE/1B MSHCP: S	Clay or alkaline silty-clay soils in semi-alkaline mudflats, vernal pools, mesic southern needlegrass grassland, mixed native - nonnative grassland and alkali grassland.	Blooms March through June (perennial herb)	Not Expected: The site does not contain suitable habitat to support this species.
<i>California macrophylla</i> <b>Round-leaved filaree</b>	US: – CA: 1B MSHCP: S	The MSHCP account for this species states that it is restricted to "very friable clay soils. Within the Plan Area, two of the mapped localities occur on Bosanko clay soils" and that "this species tends to be associated primarily with wild oats ( <i>Avena fatua</i> )."	Blooms March through May (annual herb)	Not Expected. The site does not contain suitable soils to support this species.
<i>Centromadia pungens</i> ssp. <i>laevis</i> <b>Smooth tarplant</b>	US: – CA: 1B MSHCP: S	Per the MSHCP, suitable habitat for the smooth tarplant includes alkali scrub, alkali playas, and grasslands with alkaline affinities.	Blooms April through November (annual herb)	Low Potential: Alkaline soils in the southwestern area of the site could support this species, which is often found in disturbed areas.  A focused survey will be required to determine the presence/absence of this species on site.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i> <b>Coulter's goldfields</b>	US: – CA: 1B MSHCP: S	Traver, Domino or (usually) Willows soils in alkali scrub, alkali playas, vernal pools, and alkali grasslands.  The MSHCP account for this species states that "Coulter's	Blooms February through June (annual herb)	Low Potential: Alkaline soils in the southwestern area of the site could support this species but high level of disturbance may exclude this plant from the site.



Species	Status	Habitat and Distribution	Blooming Period	Occurrence Probability
		goldfields is restricted to clay and alkaline, silty-clay soils."		A focused survey will be required to determine the presence/absence of this species on site.
<i>Myosurus minimus</i> ssp. <i>apus</i> <b>Little mousetail</b>	US: – CA: 3.1 MSHCP: S	Alkaline soils in vernal pools and vernal plains.  The MSHCP account for this species states that "little mousetail is found in areas that have semi-regular inundation."	Blooms March through June (annual herb)	Not Expected: The site does not contain suitable habitat to support this species.
<i>Nama stenocarpum</i> <b>Mud nama</b>	US: - CA: 2B MSHCP: S	Muddy embankments of marshes and swamps, and within lake margins and riverbanks.	Blooms January through July (annual or perennial herb)	Not Expected: The site does not contain suitable habitat to support this species.
<i>Orcuttia californica</i> <b>California Orcutt grass</b>	US: FE CA: SE/1B MSHCP: S	Found in southern basaltic claypan vernal pools at the Santa Rosa Plateau, and alkaline vernal pools as at Skunk Hollow and at Salt Creek west of Hemet.	Blooms April through August (annual grass)	Not Expected: The site does not contain suitable habitat to support this species.

**Legend**

**US: Federal Classifications**

- FE Taxa listed as Endangered.
- FT Taxa listed as Threatened

**CA: State Classifications**

- SE Taxa State-listed as Endangered.
- ST Taxa State-listed as Threatened

**CNPS Rare Plant Rank\***

- 1A Presumed extinct in CA
- 1B Rare, threatened, or endangered in CA and elsewhere
- 2B Rare, threatened, or endangered in CA but more common elsewhere
- 3 More information is needed to determine threat status

\*California Rare Plant Ranks are assigned by a committee of government agency and non-governmental botanical experts and are not official State designations of rarity status.

**MSHCP**

- S – Species is covered under the MSHCP but surveys are required in MSHCP-identified areas.
- CA – Species is covered under the MSHCP and will be adequately conserved when MSHCP specified conservation requirements are met.

The MSHCP requires that impacts to 90% of CASSA plant populations with long-term conservation value shall be avoided until it is demonstrated that conservation goals for the particular species are met. The site would not be considered to provide long-term conservation value to either of these species, since the site is not within the MSHCP Criteria Area, is surrounded by development, and is currently subject to routine disturbance. Additionally, the site is isolated from other known populations of these species and existing or proposed MSHCP Conservation



Areas. If long-term conservation is not feasible, the MSHCP requires avoidance, minimization and/or mitigation for impacts to identified species within the CASSA.

Potential project impacts to smooth tarplant or Coulter's goldfields, if identified during the focused survey, would be significant without mitigation incorporated. Measure BIO-1 is provided in Section 8.0 to address potential project impacts to CASSA species.

### **5.1.3 Burrowing Owl Survey Area**

The project site is not located within the MSHCP Burrowing Owl Survey Area. Therefore, although the site supports marginally suitable habitat for this species, focused surveys for burrowing owl are not required. No additional measures aside from compliance with the MSHCP are required to ensure that project effects to burrowing owl are not significant.

### **5.1.4 Other MSHCP Survey Requirements**

The project site is not within any other designated MSHCP survey areas and does not contain suitable habitat to require any additional MSHCP surveys. Therefore, no surveys for other plant or animal species are necessary for MSHCP consistency.

## **6.0 CONSISTENCY WITH MSHCP OBJECTIVES FOR RESERVE ASSEMBLY**

The MSHCP consists of Area Plans divided into Subunits and broken down further into Criteria Cells with specific conservation objectives identified for each. Conservation objectives include target conservation acreages, along with a description of the Planning Species, Biological Issues and Considerations, and Criteria for each Subunit and Criteria Cell.

### **6.1 Area Plan and Criteria Cells**

The study area is located within the Reche Canyon/Badlands Area Plan but is not located within any Criteria Cells. Conservation objectives identified for MSHCP Area Plan's only need to be considered for projects within the Criteria Area; therefore, the proposed project does not require evaluation with regard to potential impacts to Planning Species or Criteria Cells.

### **6.2 Cores and Linkages**

A Linkage is a connection between Core Areas with adequate size, configuration, and vegetation characteristics to generally provide for "Live-In" habitat and/or provide for genetic flow for identified planning species. A Core is a block of habitat that supports the life history requirements of Covered Species. The proposed project site is not within any areas identified for existing or potential use as Cores or Linkages.

### **6.3 Urban/Wildlands Interface Requirements**

Any development in proximity to the MSHCP Conservation Area may result in edge effects that could adversely affect biological resources within the MSHCP Conservation Area. To minimize



such edge effects, projects adjacent to the MSHCP Conservation Area are required to comply with guidelines provided in MSHCP Section 6.1.4 (Guidelines Pertaining to the Urban/Wildlands Interface). The project is not located adjacent to any lands within or proposed for inclusion within the MSHCP Conservation Area. Therefore, the project will not conflict with Urban/Wildlands Interface Requirements.

## 7.0 CEQA COMPLIANCE

### 7.1 Adopted Habitat Conservation Plans

As previously discussed, the project site is within the MSHCP area and will comply with the requirements of the MSHCP. Other adopted HCPs in the area include the Stephen's Kangaroo Rat Habitat Conservation Plan and Fee Assessment Area. The City's SKR fee ordinance establishes that all applicants for development permits within the boundaries of the Fee Assessment Area shall pay a mitigation fee of \$500.00 per gross acre of the parcels proposed for development.

The SKR is native to open grasslands and sparse coastal sage scrub. Non-native grassland within the survey area contains marginally suitable habitat for SKR but is not likely to support this species due to its isolation from other areas of potential habitat. However, in order to comply with the requirements of the SKR HCP, the project proponent will pay the required mitigation fee prior to project development.

### 7.2 Threatened and Endangered Species

No suitable habitat for federally- or state-threatened or endangered species was identified within the survey area. The nearest critical habitat in the vicinity of the study area is for spreading navaretia (*Navarettia fosallis*) 4 miles southeast of the study area.

### 7.3 Other Special Status Species

The special status species listed in Table 4 may be expected to occur in the general project vicinity but are not covered under the MSHCP or require additional conservation measures before being considered adequately conserved by the MSHCP. None of the species identified in Table 4 was observed during any of the site surveys. Since the site is highly disturbed, does not support native vegetation communities, and is isolated from other undeveloped areas, the survey area is not expected to support any of these species.

#### 7.3.1 Raptors and Other Avian Species

Although no raptors were observed during the site visit, the undeveloped land provides foraging habitat for raptors, such as hawks and owls, among other resident and other avian species. No habitat to support nesting birds occurs within the project site and direct take of active nests, as defined by the MBTA, is not anticipated.

**Table 4. Special Interest Species Potentially Occurring in the Project Vicinity that are not Adequately Covered by the MSHCP**

Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
<b>PLANTS</b>				
<b>Bryophytes</b>				
<i>Tortula californica</i> <b>California screw-moss</b>	US: – CA: – CRPR: 1B MSHCP: NC	Moss of sandy soils in chenopod scrub and valley and foothill grassland at 10 to 1,460 meters (30 to 4,800 feet) elevation. Known only from Modoc, Kern, and western Riverside Counties, California.	Seasonally following rains	Not Expected. No suitable habitat on site.
<b>Dicots</b>				
<i>Abronia villosa</i> var. <i>aurita</i> <b>Chaparral sand-verbena</b>	US: – CA: – CRPR: 1B MSHCP: NC	Sandy areas (generally flats and benches along washes) in chaparral and coastal sage scrub, and improbably in desert dunes or other sandy areas, below 1,600 meters (5,300 feet) elevation. In California, reported from Riverside, San Diego, Imperial, Los Angeles, and Ventura Counties. Believed extirpated from Orange County. Also reported from Arizona and Mexico (Baja California). Plants reported from desert communities are likely misidentified.	Blooms mostly March through August (annual or perennial herb)	Low Potential: Site contains suitable sandy areas in buckwheat scrub however habitat on site is subject to high levels of disturbance.
<i>Arenaria paludicola</i> <b>Marsh sandwort</b>	US: FE CA: SE/IB MSHCP: NC	Sandy soils in marshes from 3 to 170 meters (10 to 560 feet) elevation, where it grows up through mats of <i>Typha</i> , <i>Juncus</i> , <i>Scirpus</i> , etc. Known to presently occur only in San Luis Obispo County. Believed extirpated from Los Angeles, San Francisco, Santa Cruz, Riverside, and San Bernardino Counties, and from the State of Washington. The last known record of this species in Riverside, San Bernardino, or Los Angeles Counties is from 1900.	Blooms May through August (perennial herb)	Not Expected. No suitable habitat within project site.
<i>Calochortus weedii</i> var. <i>intermedius</i> <b>Intermediate mariposa lily</b>	US: – CA: 1B MSHCP: A*	Dry, open rocky slopes and rock outcrops in chaparral, coastal sage scrub, and grassland, at 105 to 855 meters (340 to 2,800 feet) elevation. Known only from Los Angeles, Orange, Riverside, and San Bernardino Counties, California. In the western Riverside County area, this species is known from the hills and valleys west of Lake Skinner and Vail Lake ( <i>The Vascular Plants of Western Riverside County, California</i> . F.M. Roberts et al., 2004).	Blooms May through July (perennial herb)	Not Expected. No suitable habitat within project site.



Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
<i>Centromadia parryi</i> ssp. <i>australis</i> <b>Southern tarplant</b>	US: – CA: 1B MSHCP: NC	In vernal wet areas such as edges of marshes and vernal pools, at edges of roads and trails, and in other areas of compacted, poorly drained, or alkaline soils where competition from other plants is limited, often due to disturbance, below 425 meters (1,400 feet) elevation. In California, known only from Santa Barbara, Ventura, Los Angeles, Orange and San Diego Counties. Also occurs in Mexico.	Blooms May through November (annual herb)	Not Expected. No suitable habitat within project site.
<i>Chloropyron (Cordylanthus) maritimum</i> spp. <i>maritimum</i> <b>Salt marsh bird's beak</b>	US: FE CA: SE/IB MSHCP: NC	Coastal dunes and salt marshes below 30 meters (100 feet) elevation. In California, known from Los Angeles, Orange, Santa Barbara, San Bernardino, San Diego, San Luis Obispo, and Ventura Counties. Historical collections referred to this taxon from alkaline meadow in vicinity of San Bernardino Valley are intermediate to <i>C. maritimum</i> ssp. <i>canescens</i> . Also occurs in Mexico.	Blooms May through October (annual herb)	Not Expected. No suitable habitat within project site.
<i>Chorizanthe parryi</i> var. <i>parryi</i> <b>Parry's spineflower</b>	US: – CA: – CRPR: 1B MSHCP: A*	Sandy or rocky soils in chaparral, coastal scrub, or woodlands at 40 to 1,705 meters (100 to 5,600 feet) elevation. Known only from Los Angeles, Riverside, and San Bernardino Counties.	Blooms April through June (annual herb)	Not Expected: No suitable habitat on site.
<i>Sidalcea neomexicana</i> <b>Salt Spring checkerbloom</b>	US: – CA: 2B MSHCP: NC	Alkaline springs and brackish marshes below 1,530 meters (5,000 feet) elevation. In California, known only from Kern, Orange, Riverside, San Bernardino, San Diego, and Ventura Counties. Believed extirpated from Los Angeles County. Also known from Arizona, New Mexico, Nevada, Utah, and Mexico.	Blooms March through June (perennial herb)	Not Expected. No suitable habitat within project site.
<i>Symphotrichum defoliatum</i> <b>San Bernardino aster</b>	US: – CA: – CRPR: 1B MSHCP: NC	Vernally wet sites (such as ditches, streams, and springs) in many plant communities below 2,040 meters (6,700 feet) elevation. In California, known from Ventura, Kern, San Bernardino, Los Angeles, Orange, Riverside, and San Diego Counties. May also occur in San Luis Obispo County. In the western Riverside County area, this species is scarce, and documented only from Temescal and San Timoteo Canyons ( <i>The Vascular Plants of Western Riverside County, California</i> . F.M. Roberts et al., 2004).	Blooms July through November (perennial herb)	Not Expected: No vernal wet areas on site.



Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
<b>BIRDS</b>				
<i>Charadrius alexandrinus nivosus</i> (nesting) <b>Western snowy plover</b>	US: FT (coastal population) CA: SSC MSHCP: NC	Sandy coastal beaches, lakes, alkaline playas. Scattered locations along coastal California and Channel Islands, inland at Salton Sea and at various alkaline lakes.	Coast: Year-round Inland lakes: April through September	Not Expected: Site does not contain any water bodies or shorelines to support this species.
<b>MAMMALS</b>				
<i>Antrozous pallidus</i> <b>Pallid bat</b>	US: – CA: SSC MSHCP: NC	Most common in open, dry habitats with rocky areas for roosting. Day roosts in caves, crevices, rocky outcrops, tree hollows or crevices, mines and occasionally buildings, culverts, and bridges. Night roosts may be more open sites, such as porches and open buildings. Grasslands, shrublands, woodlands, and forest in western North America.	Year-round; nocturnal	Not Expected: No roosting areas on site. No water sources to support foraging.
<i>Eumops perotis californicus</i> <b>Western mastiff bat</b>	US: – CA: SSC MSHCP: NC	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc.; roosts in crevices in vertical cliff faces, high buildings, and tunnels, and travels widely when foraging.	Year-round; nocturnal	Not Expected: No roosting habitat. No water sources to support foraging.
<i>Lasiurus xanthinus</i> <b>Western yellow bat</b>	US: – CA: SSC MSHCP: NC	Found mostly in desert and desert riparian areas of the southwest US, but also expanding its range with the increased usage of native and non-native ornamental palms in landscaping. Individuals typically roost amid dead fronds of palms in desert oases, but have also been documented roosting in cottonwood trees. Forage over many habitats.	Year-round; nocturnal	Not Expected: No roosting habitat. No water sources to support foraging.
<i>Nyctinomops femorosaccus</i> <b>Pocketed free-tailed bat</b>	US: – CA: SSC MSHCP: NC	Usually associated with cliffs, rock outcrops, or slopes. May roost in buildings (including roof tiles) or caves. Rare in California, where it is found in Riverside, San Diego, Imperial and possibly Los Angeles Counties. More common in Mexico.	Year-round; nocturnal	Not Expected: No roosting habitat. No water sources to support foraging.
<i>Chaetodipus californicus femoralis</i> <b>Dulzura pocket mouse</b>	US: – CA: SSC MSHCP: NC	Found in a variety of habitats including coastal sage scrub, chaparral and grassland in northern Baja California, San Diego and extreme southwestern and western Riverside Counties. Limit of range to northwest (at interface with <i>C. c. dispar</i> ) unclear.	Year-round	Not Expected. No suitable habitat within project site. Not likely due to high level of disturbance.
<i>Onychomys torridus ramona</i> <b>Southern grasshopper mouse</b>	US: – CA: SSC MSHCP: NC	Believed to inhabit sandy or gravelly valley floor habitats with friable soils in open and semi-open scrub, including coastal sage scrub, mixed chaparral, low sagebrush, riparian scrub, and annual grassland with scattered shrubs, preferring low to moderate shrub cover. More susceptible to small- and large-	Nocturnal, active year-round	Not Expected. No suitable habitat within project site. Not likely due to high level of disturbance.





Species	Status	Habitat and Distribution	Activity Period	Occurrence Probability
<i>Taxidea taxus</i>	US: – CA: SSC MSHCP: NC	scale habitat loss and fragmentation than most other rodents. Primary habitat requirements seem to be sufficient food and friable soils in relatively open uncultivated ground in grasslands, woodlands, and desert. Widely distributed in North America.	Year-round	Not Expected. No suitable habitat within project site. Not likely due to high level of disturbance.

**Legend**

**US: Federal Classifications**

FE Taxa listed as Endangered.

**CA: State Classifications**

SE Taxa State-listed as Endangered.

SSC California Species of Special Concern. Refers to animals with vulnerable or seriously declining populations.

SA Special Animal. Refers to any other animal monitored by the Natural Diversity Data Base, regardless of its legal or protection status.

**CNPS Rare Plant Rank\***

1A Presumed extinct in CA

1B Rare, threatened, or endangered in CA and elsewhere

2B Rare, threatened, or endangered in CA but more common elsewhere

\*California Rare Plant Ranks are assigned by a committee of government agency and non-governmental botanical experts and are not official State designations of rarity status.

**MSHCP**

NC – Species is not covered under the MSHCP – likely due to lack of habitat or range in MSHCP Plan Area.

S – Species is covered under the MSHCP but surveys are required in MSHCP-identified areas.

A\* – Species is covered under the MSHCP and will be adequately conserved when MSHCP specified conservation requirements are met.



The MSHCP Conservation Area was designed to provide adequate foraging habitat for all species covered under the MSHCP. Therefore, compliance with the MSHCP will ensure that the project will not have a significant impact to raptor foraging habitat.

#### **7.4 Wildlife Movement, Corridors, and Nursery Sites**

Wildlife movement includes seasonal migration along corridors, as well as daily movements for foraging and reaching water sources. Migration corridors may include areas of unobstructed movement for deer, riparian corridors providing cover for migrating birds, routes between breeding waters and upland habitat for amphibians, and between roosting and feeding areas for birds. The project site is surrounded completely by development and is not near any potential wildlife corridors. Development of the project site will not result in the loss of any potential wildlife movement areas, wildlife corridors or nursery sites.

#### **7.5 Special-Status Natural Communities**

Vegetation communities with State ranks of S1-S3, are considered to be highly imperiled. Riparian habitats, oak woodlands, wetlands, aquatic sites, and vernal pools are among the natural communities of interest to the CDFW. The study area supports only Disturbed Habitat, which is not considered sensitive or of special concern to the CDFW or USFWS.

#### **7.6 Wetlands**

There are no jurisdictional wetlands within the proposed project activity limits. Therefore, the proposed project will not result in any impacts to potentially jurisdictional wetlands.

#### **7.7 Local Policies and Ordinances Protecting Biological Resources**

County General Plans and development ordinances may include regulations or policies governing biological resources. For example, policies may include tree preservation, locally designated species survey areas, local species of interest, and significant ecological areas. There are no local ordinances applicable to biological resources on site except for code provisions related to the MSHCP mitigation fee and land credits. The project will not be in conflict with any local policies or ordinances applicable to existing biological resources on site.

#### **7.8 Indirect Effects**

Indirect effects on surrounding areas as a result of the project may include, but are not limited to, increased dust, noise, lighting, traffic, and storm water runoff. The study area is completely surrounded by developed areas that do not support any special status biological resources. Therefore, the project will not have any indirect effects on biological resources in the surrounding area.



## 7.9 Cumulative Effects

Cumulative impacts potentially include habitat fragmentation, increased edge effects, reduced habitat quality, and increased mortality of some common wildlife species. The study area consists of disturbed habitat that supports limited biological resources. Should the site support smooth tarplant, coulter's goldfields or raptor foraging the loss of 1.86 acres would not be significant in the context of 500,000 acres of local MSHCP Conservation Area.

## 8.0 AVOIDANCE AND MINIMIZATION MEASURES

In order to ensure that the project is in compliance with the MSHCP and project effects on biological resources are less than significant with respect to CEQA, the following avoidance and minimization measures should be implemented:

**BIO-1.** A focused survey for smooth tarplant and Coulter's goldfields shall be conducted by a qualified biologist during the appropriate blooming season for these species (April – June). The loss of any individuals observed within the project area would be mitigated through location and preservation of populations that are not already proposed for conservation in the MSHCP, and/or restoration or enhancement of existing populations within the proposed conservation area. The proposed mitigation would be evaluated in a DBESP and subject to approval by the city and RCA.

Since long-term conservation of any smooth tarplant or Coulter's goldfields populations that may be found on the site would not be feasible, the MSHCP would require avoidance, minimization or mitigation if these species are identified during focused surveys. If needed, these measures would be provided in a Determination of Biologically Equivalent or Superior Preservation (DBESP) Report. The DBESP Report would demonstrate that equivalent or superior conservation for the species would be achieved through either relocation and/or preservation of populations that are not already proposed for conservation in the MSHCP, and/or restoration or enhancement of existing populations within the proposed conservation area. The DBESP Report and the measures included in it would be subject to the approval of the City and RCA. Since the project will comply with the MSHCP, any potential impacts to smooth tarplant or Coulter's goldfields would be less than significant following implementation of BIO-1.



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## APPENDIX A

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### COMPLETE LIST OF FLORA AND FAUNA OBSERVED DURING SITE SURVEYS



## APPENDIX A. COMPLETE LIST OF FLORA AND FAUNA OBSERVED

Scientific Name	Common Name
<b>FLORA</b>	
<b>MAGNOLIAPHYTA: MAGNOLIOPSIDA</b>	<b>DICOT FLOWERING PLANTS</b>
<b>Asteraceae</b>	<b>Sunflower Family</b>
<i>Ambrosia artemisiifolia</i>	common ragweed
<i>Heterotheca grandiflora</i>	telegraph weed
<b>Brassicaceae</b>	<b>Mustard Family</b>
* <i>Hirschfeldia incana</i>	shortpod mustard
* <i>Sisymbrium sp.</i>	mustard species
<b>Chenopodiaceae</b>	<b>Goosefoot Family</b>
* <i>Salsola tragus</i>	Russian thistle
<b>Euphorbiaceae</b>	<b>Spurge Family</b>
* <i>Ricinus communis</i>	castor-bean
<b>Lamiaceae</b>	<b>Mint family</b>
<i>Marrubium vulgare*</i>	Horehound
<b>Solanaceae</b>	<b>Nightshade Family</b>
<i>Datura wrightii</i>	jimsonweed
<b>Zygophyllaceae</b>	<b>Caltrop Family</b>
<i>Tribulus terrestris</i>	puncture vine
<b>MAGNOLIOPHYTA: LILIOPSIDA</b>	<b>MONOCOT FLOWERING PLANTS</b>
<b>Poaceae</b>	<b>Grass Family</b>
<i>Avena sp.*</i>	Oat
* <i>Bromus sp.</i>	brome sp.
* <i>Hordeum sp.</i>	barley sp.
* <i>Schismus barbatus</i>	Mediterranean schismus
<b>FAUNA</b>	
<b>AVES</b>	<b>BIRDS</b>
<b>Columbidae</b>	<b>Pigeons and Doves</b>
<i>Zenaidura macroura</i>	Mourning Dove
<b>Corvidae</b>	<b>Crows and Ravens</b>
<i>Corvus brachyrhynchos</i>	American crow
<b>Mimidae</b>	<b>Mockingbirds and Thrashers</b>
<i>Mimus polyglottos</i>	Northern mockingbird
<b>Sturnidae</b>	<b>Starlings</b>
* <i>Sturnus vulgaris</i>	European starling
<b>Fringillidae</b>	<b>Finches</b>
<i>Carpodacus mexicanus</i>	House Finch

\* Denotes non-native species

# APPENDIX C

## Cultural Resources Technical Report

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL





Cultural Resources  
Technical Report  
for the  
Kitching Street Electrical  
Substation and  
Switchyard Project

City of Moreno Valley, California

February 2016



**PREPARED BY**

HDR, Inc.

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Electric Utility Division

**LOCATION**

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**PROJECT DIRECTOR**

Wayne Glenny, MS

# Cultural Resources Technical Report for the Kitching Street Electrical Substation and Switchyard Project

City of Moreno Valley, California

Electric Utility Division Project No. 805 0027

February 2016



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# Acronyms and Abbreviations

APE	area of potential effect
BP	before present
CEQA	California Environmental Quality Act
CRHR	California Register of Historical Resources
Dv	Domino silt loam, saline-alkali
EIC	Eastern Information Center
ft	feet
GIS	geographic information systems
GPS	global positioning system
HDR	HDR Inc.
kV	kilovolt
m	meter
NAHC	Native American Heritage Commission
NETR	Nationwide Environmental Title Research, LLC
RPA	Register of Professional Archaeologists
PRC	Public Resources Code
USGS	United States Geological Service

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# 1 Management Summary

The Kitching Street Electrical Substation and Switchyard Project is in southern California in the City of Moreno Valley, Riverside County. The project is about 1.5 miles northwest of the Perris Reservoir and 1.5 miles east of March Air Reserve Base. The project area is bounded on the east by Kitching Street, on the south by Edwin Road, and on the north and west by private property, junk yards, and a towing company. The project consists of designing a new 115 kilovolt (kV)/12 kV substation with a single overhead 115 kV interconnection and ten 12 kV underground feeders.

On December 10, 2015, the Eastern Information Center (EIC) was contacted to perform a records search of all archaeological and historical resources within one-half mile of the project area of potential effect (APE). The records search returned no archaeological resources within the project APE or within one-half mile of the APE. On December 10, 2015, a request was submitted to the Native American Heritage Commission (NAHC) for a search of their Sacred Lands File. The NAHC indicates no areas of concern within the one-half mile radius. The search includes a contact list of 19 Native American individuals or organizations that may have additional information regarding sacred resources in the area. Letters were mailed to each of the 19 individuals/groups on January 7, 2016 and follow-up phone calls were completed on January 22, 2016. To date four tribal bands have deferred consultation to the band nearest the project APE. A copy of the NAHC consultation and the consultation response spreadsheet is included in Appendix B of this report.

Preliminary efforts consisted of the records search information review and the generation of project maps using geographic information systems (GIS). HDR Inc. (HDR) archaeologists Kristin Tennesen and Jordan Menvielle conducted the pedestrian cultural resource survey for the Kitching Street Electrical Substation and Switchyard Project on December 23, 2015. The HDR archaeologists used a systematic detailed field inspection to identify any unknown cultural resources within the APE. No new cultural resources were found during the survey. A review of an online database of historic imagery, Nationwide Environmental Title Research, LLC site (NETR 2016), was completed on January 4, 2016 and showed no evidence of any historical architecture.

No cultural resources were present within the APE of this project. Therefore, a determination of *No Impact* under California Environmental Quality Act (CEQA) Guidelines Section 15064.5 is appropriate and recommended for this project. Due to the lack of any cultural resources within the project APE, the possibility of encountering subsurface cultural material within the APE is extremely small. No further cultural resource considerations are recommended for the project.

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## 2 Introduction

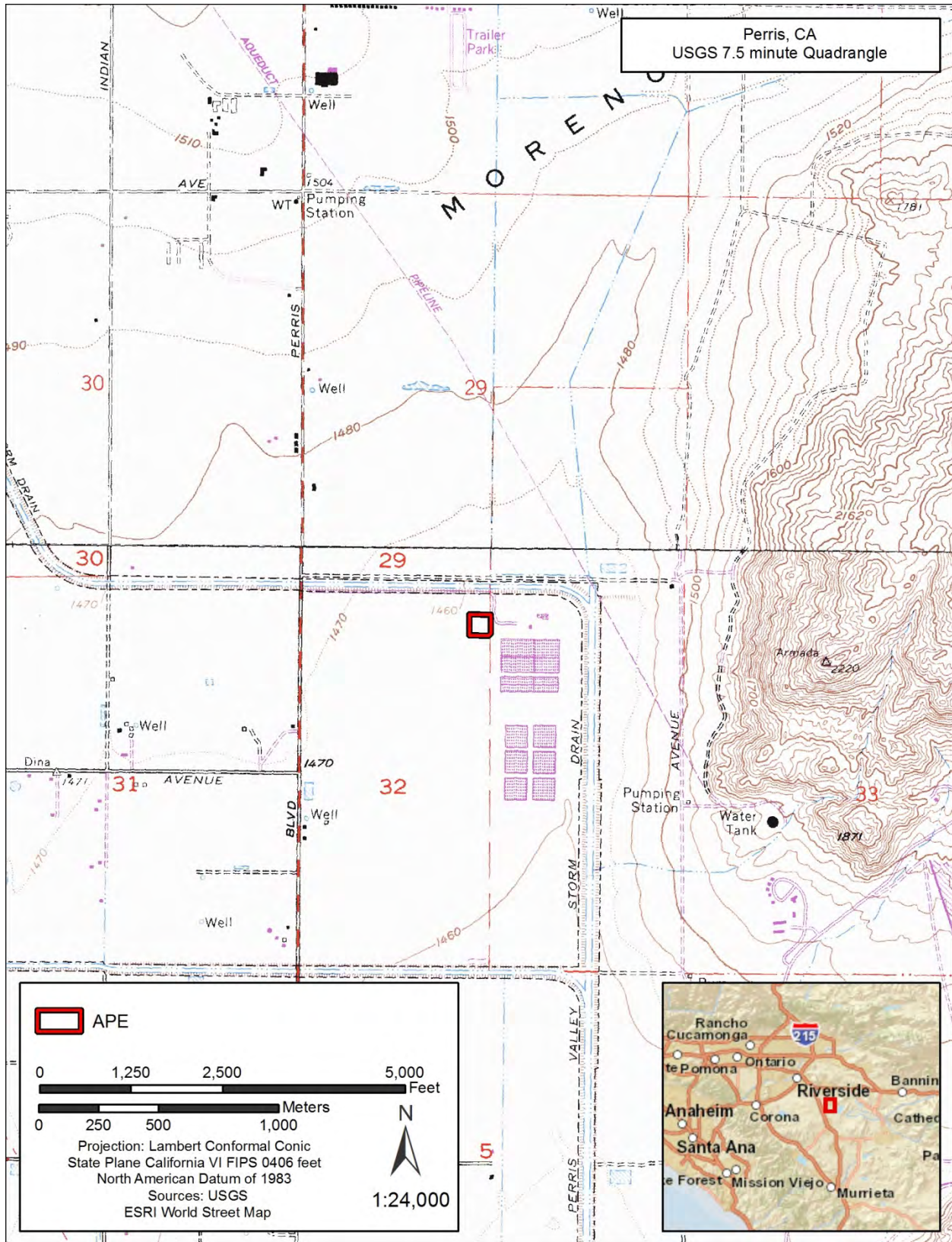
### 2.1 Project Description

The proposed project consists of designing a substation on a vacant lot measuring approximately 1.8 acres. The project area is east of March Air Reserve Base, west of the Eastern Municipal Water District's Moreno Valley Regional Water Reclamation Facility and is bounded by Kitching Street and Edwin Road (Figure 2-1 and Figure 2-2). The substation will consist of two 37MVA 115 kV/12 kV transformers, two 115 kV breakers, 15 15 kV breakers, five PME10 15 kV switchgears, two 10MVAR multistage 12 kV capacitor banks, a mechanical electrical equipment room, four 115 kV disconnects, all related 115 kV and 12 kV buswork supports, conductors, and connectors, all related relay protection devices, all related SCADA devices, all related concrete foundations, concrete cable trench, perimeter station enclosure/fencing with gates, perimeter landscaping and offside street improvements.

### 2.2 Project Personnel

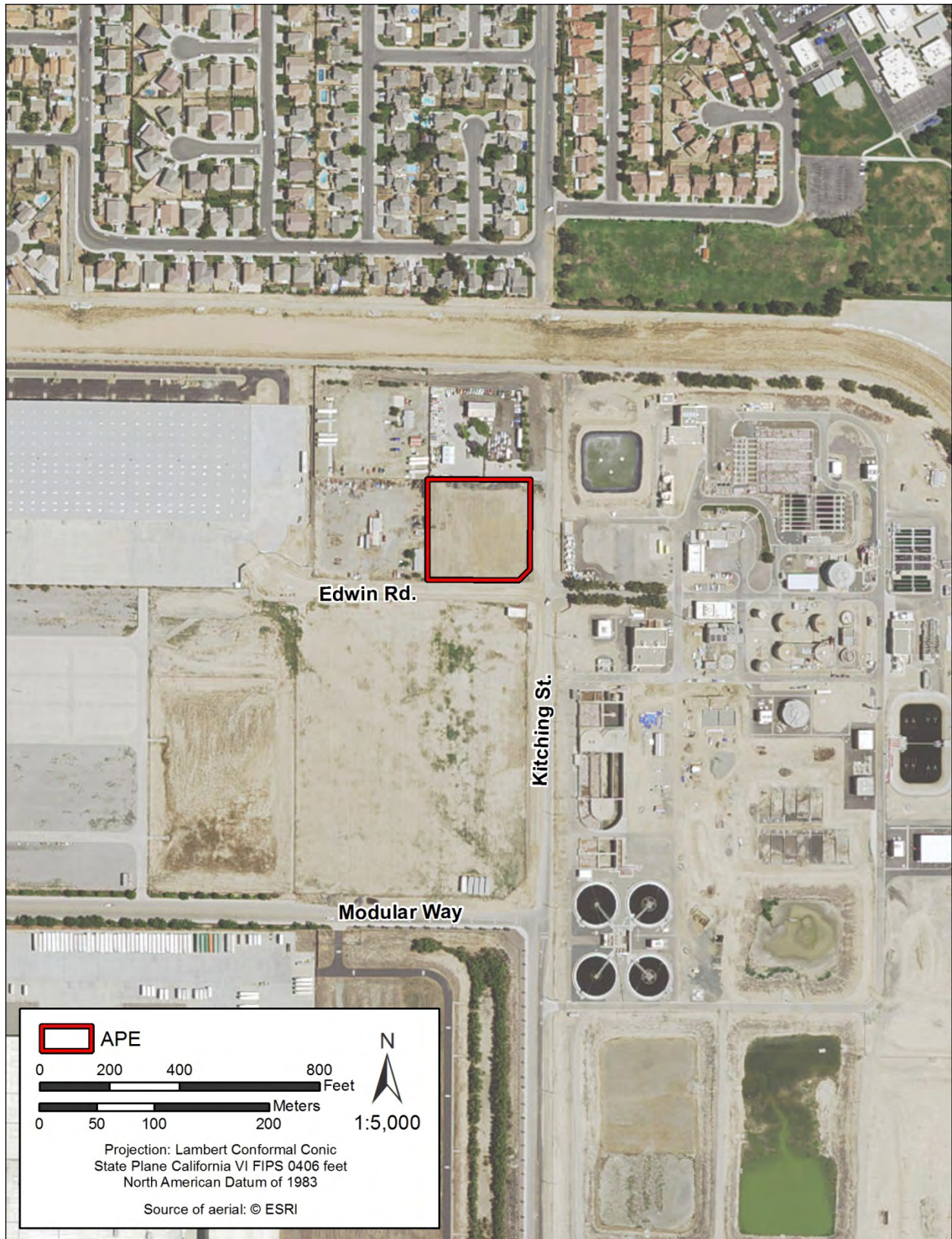
Professional services were performed by individuals who meet the Secretary of the Interior's Professional Qualifications Standards (Federal Register Notice, Vol. 48, No. 190, pp. 44738–44739, 1983). All cultural resource management work performed in association with this project was under the direct supervision of a member of the Register of Professional Archaeologists (RPA). The Principal Investigator was Wayne Glenny M.S., RPA. HDR project director Kristin Tennesen provided the field management, historical research, and report preparation. Ms. Tennesen possesses a Masters of Arts degree, ten years of experience in archaeological field work within California, and is a member of the RPA. HDR staff archaeologist Jordan Menvielle provided additional field labor during the cultural survey. Resumes for key personnel are found in Appendix A.

Figure 2-1. Project area shown on the Perris USGS 7.5' quadrangle



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Figure 2-2. Aerial overview of project area



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### 3 Regulatory Framework

This study was prepared to comply with requirements of CEQA as they apply to cultural resources. Per the guidelines, it is necessary for the lead agency to determine if a proposed project can cause significant impacts on “historical resources.”

#### 3.1 State Regulations

Under CEQA, a proposed project is considered to have a significant effect on the environment if it is expected to “cause a substantial adverse change in the significance of an historical resource” (CEQA Guidelines, Section 15064.5[b]). An historical resource is a resource listed, or determined eligible for listing, on the California Register of Historical Resources (CRHR), a resource included in a local register of historical resources (Section 15064.5[a][2]), or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (Section 15064.5[a][3]).

Public Resources Code (PRC) section 5024.1(c)(1-4) states that a resource is considered historically significant if it retains “substantial integrity” and meets at least one of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage
2. Is associated with the lives of persons important in our past
3. Embodies the distinctive characteristics of a type, period, region or method of installation, or represents the work of an important creative individual, or possess high artistic value
4. Has yielded, or may be likely to yield, information important in prehistory or history

Determining integrity of a resource lies in the authenticity of that resource’s physical identity. It is judged by the survival of characteristics that were present during the resource’s period of significance. Integrity is evaluated regarding the retention of location, design setting, materials, workmanship, feeling, and association.

A “substantial adverse change” in an historic resource is a change that includes “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired” (CEQA Guidelines, Section 15382).

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## 4 Background

### 4.1 Environment

The project APE was mostly bare with the only vegetation consisting of tumbleweeds (Russian thistle, *Kali tragus*) and some nonnative grasses. The project APE is approximately 472 meters (m) (1,549 feet [ft]) above mean sea level and is composed of flat, disturbed, open ground.

Geologically, the project APE lies on bedrock known as the Perris Block. The Perris Block is within the Peninsular Range Geomorphic Province, between the Elsinore fault, the San Jacinto fault, the Santa Ana River, and a non-defined southeast boundary. The materials are characterized by Pliocene-Pleistocene alluvium overlaying the granitic bedrock (City of Moreno Valley 2006b).

The soil present in the APE is made up entirely of Domino silt loam, saline-alkali (Dv). The profile of Domino silt loam soils is two horizons of silt loam (encompassing 0–27 inches in depth), one cemented horizon (27–36 inches), and one horizon of loam or sandy loam (36–63 inches). The Dv parent material is alluvium derived from granite (USDA 2015).

### 4.2 Paleoenvironmental Change

During the warming and cooling periods associated with the Miocene and Pliocene epochs (23.03 to 2.6 million years ago), most of southern California went through periods of submersion. During the Pleistocene epoch, from 2.6 million to 11,700 years ago, movement of and collision between tectonic plates formed hills and mountains where the ocean bottom and valleys once existed. Erosion cut through these older sediments as they were uplifted from the terrain that now exists, creating the valleys and the mountain ranges surrounding them.

Due to the combined effects of a rise in sea level and global climate fluctuation, dramatic environmental changes have occurred during the Holocene era (11,700 years ago to present) in the coastal portion of southern California. While the extent to which these changes affected human land use is still investigated, research has shown that the effects of these environmental changes on the subsistence and settlement patterns of the prehistoric inhabitants of the area were significant. The effects of post-glacial sea level changes (Shumway et al. 1961; Warren and Pavesic 1963) and periods of high climatic variability (Larson and Michaelson 1989; Raab and Larson 1997; Jones et al. 1999) on coastal ecosystems have been examined as possible causes of the broad scale changes observed in the cultural patterns of prehistoric groups in this area during the Late Holocene. Some of the ways these environmental changes appear to have affected the subsistence and settlement patterns of prehistoric and historic human populations in southern California are briefly discussed below.

The climate of the Early Holocene in coastal southern California was marked by pronounced warming and increased aridity between approximately 7,800 and 5,000 years before present (BP) (Carbone 1991), during the widely recognized climatic interval known as the Altithermal. It has long been recognized that Holocene climate shifts resulted in dynamic ecosystem changes. For coastal populations in the region, perhaps the most important of these was the evolution of the coastal lagoon/estuary systems at the mouths of the major drainages in this area. At the close of the Pleistocene, the coastal plain was crossed by a series of deeply incised drainages. As sea levels

rose, these drainages began to flood, forming deep embayments that formed highly productive estuaries.

The warm and arid Altithermal period was followed by a cool, moist interval that persisted until about 2,000 BP in coastal southern California. This period, known as the Middle Holocene, is documented by incursions of fresh water at San Joaquin Marsh at approximately 3800 BP, 2800 BP, and 2300 BP (Davis 1992). Climate changes in coastal southern California during the last 2,000 years or the Late Holocene are better understood, due largely to the more recent and apparent nature of their impact on the local environment. Among the clearest of these more recent climatic records is a 1,600-year-old tree ring record reported by Larson and Michaelson (1989) for the transverse ranges, and the pollen record produced from samples at San Joaquin Marsh. The early period of the reconstructed climate produced by the tree ring study (AD 500 to 1000) documented a high degree of variability in yearly precipitation levels during this period. Progressively lower yearly precipitation levels from AD 500 to 750 resulted in extreme drought conditions from AD 750 to 770. This drought period was followed by a 200-year period (AD 800 to 1000) that was characterized by the highest precipitation levels of the entire 1,600-year reconstruction (Larson and Michaelson 1989).

Paleo-climatic records from a wide variety of contexts consistently indicate that generally higher temperatures and extreme droughts characterized the period between AD 1000 and 1300. This event, known as the Medieval Warm period or the Medieval Climatic Anomaly, has interpretive importance because it coincides with important cultural changes observed in the archaeological record throughout California (Raab and Larson 1997; Jones et al. 1999; Stine 1990, 1994). True and Waugh (1982) note that these dry conditions may have contributed to the seasonal settlement shift to upland summer camps. The winter camps positioned along the lower flanks of the mountains would likely experience decreasing water supplies, forcing inhabitants to move to locales with a more reliable water supply.

These warm, dry conditions reversed sharply by about 600 years ago, correlating with the beginning of the climatic event known as the Little Ice Age (Grove 1986). A variety of data from southern California indicates both generally lower temperatures and increased precipitation during this interval. In a review of historic records, Engstrom (1996) provided evidence that the cold, wet climatic conditions characteristic of the Little Ice Age persisted into the early decades of the nineteenth century in coastal southern California. "Southeasters," intense extra-tropical cyclones, brought severe gales, high waves, and high levels of precipitation to the coastal region during the winter months of this period. For the Late Prehistoric and Early Historic occupants, this likely meant more frequent and severe floods than are seen today, as well as generally increased stream flow. Such climatic events may have reopened and kept some of the local estuaries open to the sea for sustained periods. Archaeological evidence of this phenomenon includes the presence of bay mollusks at several Late Prehistoric archaeological sites that are on what were the margins of several lagoons along the southern California coast (Masters and Gallegos 1997) and the presence of habitation areas along more inland water courses, which date to the Late Prehistoric period.

### 4.3 Cultural Setting

Several decades of archaeological research in southern California have resulted in a broad outline of prehistoric developments in this region. Much of this research has emphasized the relationship between human cultural adaptations and environmental systems. In the following section, some of the aspects of southern Californian prehistory relevant to the current project are outlined, with



particular emphasis placed on the cultural changes that have occurred during the past few hundred years.

The earliest evidence of human occupations in southern California dates to the Terminal Pleistocene/Early Holocene period. This interval is characterized by a long period of adaptation to environmental changes brought about by the transition from the Late Pleistocene to the Early Holocene (12,000 to 7500 BP) During the Middle Holocene period (7500 to 5000 BP), general settlement-subsistence patterns were exemplified by a greater emphasis on seed gathering (Beedle et al. 2008). Adaptation to various ecological niches, further population growth, and an increase in sedentism typify the subsequent periods of cultural history in southern California. This orientation toward a growing dependence on both hunting and plant gathering continued into the Historic period.

During the Middle to Late Holocene (5000 to 1500 BP), cultural patterns remained similar; however, artifacts at many coastal sites became more elaborate, reflecting an increase in sociopolitical complexity and efficiency in subsistence strategies (Beedle et al. 2008). One example of such a strategy is the introduction of the bow and arrow for hunting. A reliance on the bow and arrow for hunting along with the use of bedrock mortars and milling slicks occurred during the Late Holocene (1500 B.P. to present). Elaborate mortuary customs along with generous use of asphaltum and the development of extensive trade networks are also characteristic of this period. The Late Horizon appears to represent increases in population size, economic and social complexity, and the appearance of social ranking (Beedle et al. 2008).

This project APE falls within the ethnographic boundaries of the Cahuilla group of Native Americans. The APE is in the northwest portion of the Cahuilla territory and about 10 miles from the approximate boundary between the Cahuilla and two neighboring groups, the Gabrieliño and the Juaneño. Only the background of the Cahuilla tribal band is given below.

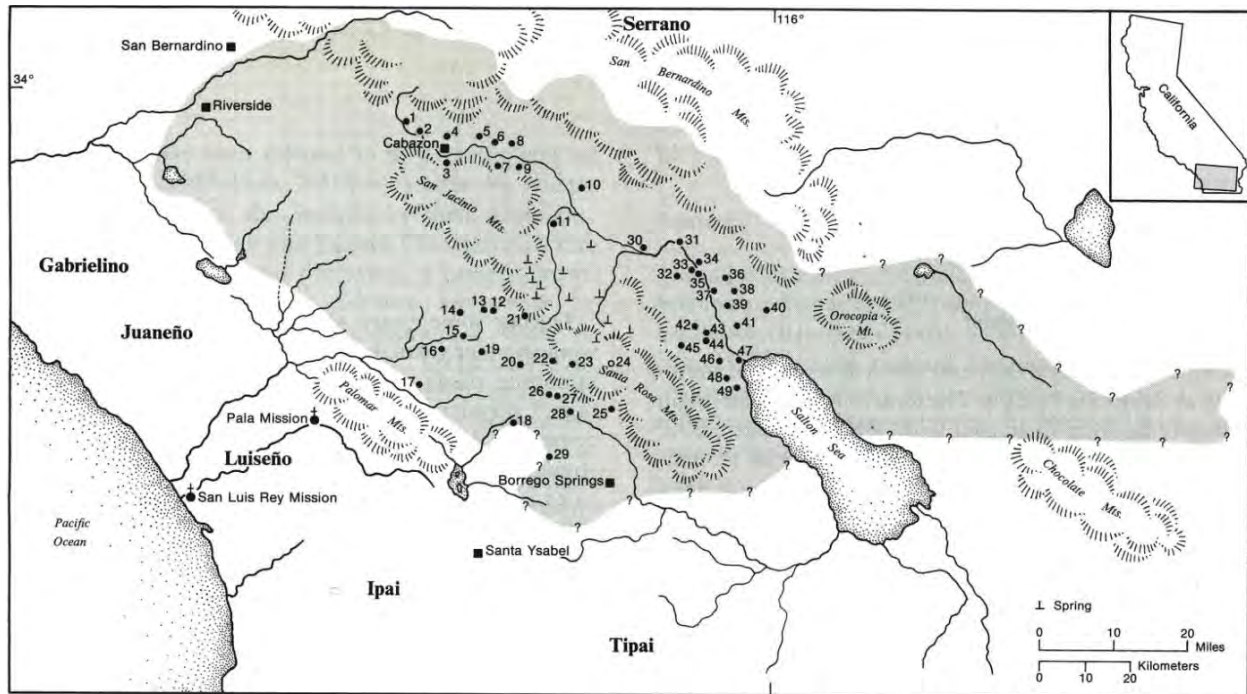
### 4.3.1 Cahuilla

The Cahuilla group of Native Americans lived at the geographic center of southern California, allowing access to three major trade routes including the Cocopa-Maricopa Trail, a major route that bisected Cahuilla territory. The Colorado Desert separated the Cahuilla from other native bands to the east and south, and the “mountains, hills, and plains separated them from the Luiseño, Serrano, and Gabrieleño” bands to the north and west (Figure 4-1) (Bean 1978). Cahuilla territory included different types of terrain including mountain ranges, passes, canyons, valleys, and desert. Cahuilla occupied land from the “summit of the San Bernardino Mountains in the north to Borrego Springs and the Chocolate Mountains in the south, a portion of the Colorado Desert west of Orocopia Mountain to the east, and the San Jacinto Plain near Riverside and the eastern slopes of Palomar Mountain to the west” (Bean 1978).

The Cahuilla language belongs to the Cupan subgroup of the Takic family of the Uto-Aztecan stock. The Cahuillan language is more similar to Cupeño than to Luiseño (Bean 1978). Tribal cosmology and history were recorded in song, which accompanied games, secular dances, shamanistic activities, and hunting and food gathering. The Cahuilla were a nonpolitical, cultural nationality who spoke a common language and recognized two nonpolitical, non-territorial patrimoieties (translated as the Wildcats and the Coyotes). Their political organization consisted of clans of 3–10 lineages, with different dialects and a common genitor. The office of lineage leader was usually inherited from father to eldest son (Bean 1978).

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Figure 4-1. Map of Cahuilla territory with village locations



Adapted from *Handbook of North American Indians* by Lowell Bean, 1978

Cahuilla villages were usually positioned in canyons or on alluvial fans near adequate sources of water and food materials in the hopes of protecting the village from the seasonal extremes of temperature, precipitation, and especially wind. Buildings varied in size from brush shelters to dome-shaped or rectangular houses 15–20 ft long. A chief's house, a communal men's sweathouse, several granaries, and ceremonial houses were also usually part of the village (Bean 1978).

Cahuilla men were tasked with the hunting, butchering, and skinning of prey, while the women cooked the food. The Cahuilla used several hundred species of native plants for food, manufacture, and medicine. Some of these included acorns, mesquite and screw beans, piñon nuts, the bulbs of Cacti, seeds, wild fruits and berries, tubers, roots, and succulent greens (Bean 1978). Like their neighboring Colorado River tribes, the Cahuilla used marginal agriculture techniques to grow corn, beans, squash, and melon. Stone mortars and pestles were used to process acorns and dried berries, manos and metates were used to grind seeds and soft nuts, and wooden mortars were used to pound fibrous food like mesquite. Grass baskets, sometimes decorated with cosmological symbols or significant beings, were coiled flat for winnowing, shallow for food receptacles, deep for carrying with a net, or globular for small utensils. Pottery was also part of the Cahuilla tradition and it was often painted and incised. Pottery was used as cooking pots, open bowls, dishes, or pipes. Soapstone arrow makers, bows, and ceremonial instruments are also known part of the Cahuilla tradition.

According to A. L. Kroeber (1925), the early twentieth century ethnographer, unlike many of their neighbors, the Cahuilla were never completely brought under the control of the mission fathers, probably due to their more remote locations in the eastern desert. Kroeber believes that those Cahuilla living on the western side of their territory "may have been partially affiliated with the submission at San Bernardino, and those from the vicinity Cahuilla Valley, or some of them, seem to have been within the sphere of San Luis Ray or its station at Pala." However, during Kroeber's



contact with the Cahuilla the band extensively spoke Spanish and self-identified as Catholic. Kroeber says that this could be because after the secularization of the missions, “many of the Cahuilla entered into relations with the Spaniards on the grants in the fertile portion of southern California, either as seasonal visitors or as more permanent peons” (Kroeber 1925).

## 4.4 History

The history of southern California can be broken down into three major periods: Spanish (1769–1822, Mexican (1822–1848), and American (1848–present). The Spanish colonization of California was achieved through a program of military-civilian-religious conquest. Under this system, soldiers secured areas for settlement by suppressing Native and foreign resistance and established fortified structures (presidios) from which the colony would be governed. The Catholic priests of the Franciscan order established religious outposts (missions) to expand Christianity among the Native Americans. Civilians established towns (pueblos) and stock-grazing operations (ranchos) that supported the settlements and provided products for export. Ultimately, four presidios and 21 missions were established in Spanish California between 1769 and 1821. During this period, Spain claimed all of California and Mexico. Moreno Valley is nearly equidistant (55 to 65 miles) from three of the 21 missions: Mission San Luis Rey, Mission San Juan Capistrano, and Mission San Gabriel. In the late eighteenth century, the Spanish mission fathers of San Gabriel (Los Angeles County), San Juan Capistrano (Orange County), and San Luis Rey (San Diego County) began colonizing the land and gradually used the interior valley in what is now western Riverside County for raising grain and cattle (County of Riverside 2015).

In 1821, after more than a decade of revolutionary struggle, Mexico achieved independence from Spain, and California became a distant outpost of the Mexican Republic. Under a law adopted by the Mexican congress in 1833, the mission lands were secularized and subdivided into land grants, or ranchos, sold to prominent military and politicians. The missions were given 10 years to complete their indoctrination of the Native Americans before the enactment of the Secularization Act of 1833. This act privatized the Franciscans’ landholdings, redistributing the lands and holdings through land grants (McBurney and Milholland 2009). This land redistribution resulted in the presence of several major ranchos in the region, including Rancho San Jacinto Nuevo y Potrero (approximately 3 miles east of the project APE) and Rancho Jurupa (approximately 11 miles northwest of the project APE).

Beginning in the early 1840s, Mexico’s hold on California was threatened by the steady overland migration of American settlers into the region. War between the United States and Mexico commenced in May 1846. The United States eventually prevailed, and the American victory over Mexico was formalized in February 1848 with the Treaty of Guadalupe Hidalgo. Under the treaty, Mexico ceded to the United States the present states of California, Nevada, Utah, New Mexico, Arizona, and parts of Wyoming and Colorado (City of Simi Valley 2012). The Treaty of Guadalupe Hidalgo honored the Mexican and Spanish land grants. As required by the Land Act of 1851, a claim for each rancho was filed with the Public Land Commission, and the grant was patented to private citizens.

In January 1848, just a few days before the Treaty of Guadalupe Hidalgo was signed, James Marshall discovered gold on the American River in Sacramento. Marshall’s discovery triggered the gold rush, a massive influx of fortune-seekers into California that led to the creation of major cities and numerous smaller settlements (City of Simi Valley 2012). The influx of settlers also caused a large increase in the demand for beef. This demand for cattle to feed the gold rush miners resulted in a search for easier access to the lands north of Los Angeles and east into the Mojave Desert

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(Wlodarski 1999). The sudden and enormous growth of California's population brought about by the gold rush resulted in a movement for statehood that culminated in the state constitutional convention at Monterey in 1849 and the establishment of California as a state in 1850. In 1862, President Lincoln signed the Homestead Act encouraging western migration by offering 160 acres in exchange for a small fee, encouraging settlement in the area.

In the 1880s, Riverside County followed a pattern that had occurred throughout southern California of large Spanish or Mexican land grants sold and developed for small-scale agriculture (Beedle et al. 2008). Riverside County was officially established in May of 1893 in a referendum of voters living within an area carved from San Bernardino and San Diego Counties. The county's early years were linked to agriculture; however, commerce, construction, manufacturing, transportation, and tourism also thrived in the area (County of Riverside 2015). Recent years have brought dramatic population growth in the County of Riverside. Between 1980 and 1990, the number of residents grew by over 76 percent, making Riverside the fastest-growing county in California. By 1992, the county was home to over 1.3 million residents. Since 1992, the population has nearly doubled.

#### 4.4.1 Moreno Valley History

The first Europeans to explore what is now Moreno Valley were the explorers in the Anza expedition. The journey, led by Spanish Lieutenant Colonel Juan Bautista de Anza, began in 1776 and was the first colonizing expedition from New Spain to come overland into California. Approximately 240 men, women, and children traveled more than 1,800 miles from Sonora Mexico to present day San Francisco, California. The group passed through Moreno Valley on December 31, 1775 (NPS 2016).

After California became part of the United States the Spanish Rancho San Jacinto Nuevo y Potrero became public land. The land was developed by ranchers and traveled over by John Butterfield's Overland Mail Company. The stage route went from Tucson to San Francisco travelling through Moreno Valley. In 1883 Frank E. Brown formed the Bear Valley Land and Water Company and built a dam at Bear Valley. The water supported the communities of Moreno and Alessandro. Moreno Valley was named after Frank E. Brown, "moreno" translating to "brown" in Spanish. After an 1899 lawsuit against the Water Company, compounded by a drought, most of the agriculture in Moreno Valley failed and the residents fled. The few that remained focused on dry farming hay, grain, and grapes (City of Moreno Valley 2006a).

In 1918, as the United States prepared for the potential entry into World War I, March Field was built on 640 acres of ranch land and used to train fighter pilots. The field was briefly closed from 1922 to 1927, at which point it became a light training school. Eventually, March Field became a permanent military facility encompassing more than 7,000 acres. In 1996 March Air Force Base was realigned as an Air Reserve Base. The base greatly influenced the growth of Moreno Valley. At the height of its activity the base supported 85,000 troops (City of Moreno Valley 2006a).

Over the mid- to late-twentieth century the valley experienced explosive growth. Attractive land prices lured residential and commercial developers. The below-market home prices and proximity to the nearby mountains and desert brought many families looking for alternatives to the large cities. The three valley communities of Edgemont, Sunnymead, and Moreno were incorporated as the City of Moreno Valley in December 1983 (City of Moreno Valley 2006a).





## 5 Methods

### 5.1 Pre-field Research

On December 10, 2015, HDR contacted the EIC to perform a records search of all archaeological and historical resources within one-half mile of the project APE (Figure 5-1). On December 10, 2015, a request was submitted to the NAHC for a search of Sacred Lands File. A review of an online database of historic imagery, Nationwide Environmental Title Research, LLC site (NETR 2016), was also completed. Aerial photographs (1966, 1967, 1978, 1997, 2002, 2005, 2009, 2010, and 2012) and United States Geological Service (USGS) topographic maps (1901, 1905, 1909, 1913, 1924, 1936, 1941, 1948, 1954, 1961, 1963, 1965, 1969, 1975, and 1980) were reviewed. The results of these searches and the consultation with the appropriate Native American groups are discussed below.

#### 5.1.1 Previously Recorded Resources

The records search completed by the EIC indicates no known archaeological resources within the project APE and no other previously recorded resources within one-half mile of the project APE. The review of historic imagery showed no evidence of any historical architecture in the project APE.

### 5.2 Initial Native American Coordination

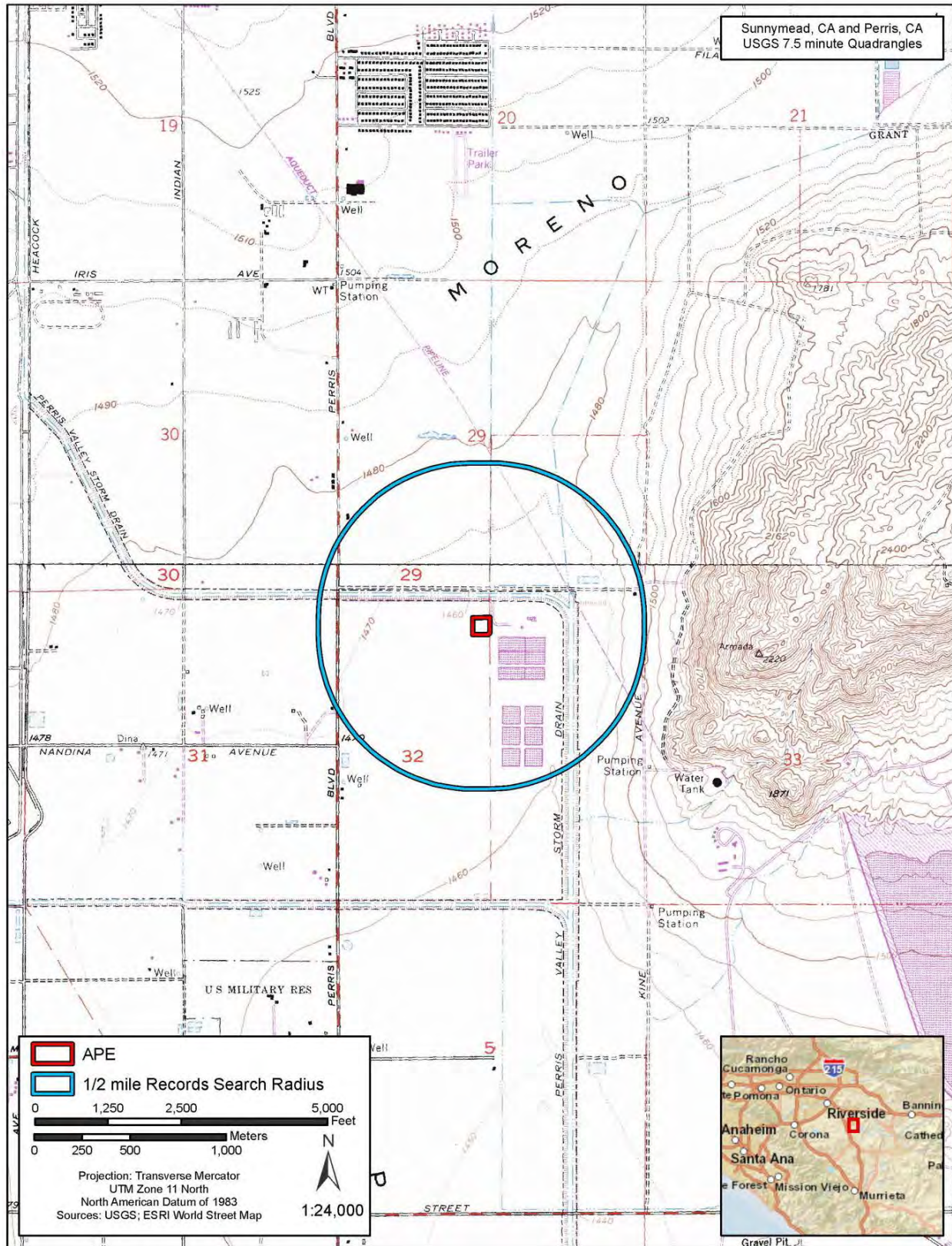
On December 10, 2015, a request was submitted to the NAHC for a search of their Sacred Lands File. The results of the NAHC Sacred Land File search were received on January 6, 2016. The NAHC indicates no areas of concern within the one-half mile radius. The search includes a contact list of 19 Native American individuals or organizations that may have additional information regarding sacred resources in the area. Letters were mailed to each of the 19 individuals/groups on January 7, 2016 and follow-up phone calls were completed on January 22, 2016. To date four tribal bands have deferred consultation to the band nearest the project APE. A copy of the NAHC consultation and the consultation response spreadsheet is included in Appendix B of this report.

### 5.3 Field Methods

HDR archaeologists Kristin Tennesen and Jordan Menvielle conducted the cultural resource survey of the Kitching Street Electrical Substation and Switchyard Project on December 23, 2015. Preliminary efforts consisted of the reviewing records within the project area and the generating a project map using GIS.

The HDR archaeologists used a systematic detailed field inspection to identify any unknown cultural resources within the APE. The archaeologists surveyed 100 percent of the project APE in linear transects with 5 m spacing. Attempts were made to survey areas up to 10 m outside the APE but it could not be completed due to fenced private property or paved roads. The project APE is accessible from Kitching Street; the boundary follows the delineation of the unpaved lot. The HDR archaeologists provided an exhaustive ground inspection of the APE, which was surveyed in east-west transects. The APE was photographed with a digital camera and mapped with a Trimble Geo7X submeter global positioning system (GPS) unit.

Figure 5-1. Area of potential effect and one-half mile record search radius



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## 6 Results, Assessment, and Recommendations

### 6.1 Survey Results

No previously-recorded archaeological resources or historical sites are within the APE for this project. Additionally, no previously recorded archaeological sites or historical sites have been recorded outside the APE and within the one-half mile record search boundary. Tumbleweeds (Russian thistle) limited visibility to 50 percent in portions of the APE, whereas the majority of the APE had 75–100 percent visibility (Figure 6-1). Modern trash was observed on the east side of the APE (Figure 6-2). Pin flags and spray paint was observed marking out existing underground Verizon and water lines (Figure 6-3).

As a result of the pedestrian survey of the full APE, no new archaeological or historical sites were discovered.

Figure 6-1. Overview of limited ground visibility, facing north



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Figure 6-2. Overview of modern trash within area of potential effect, facing southeast



Figure 6-3. Overview of underground utility mark out, facing north



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## 6.2 Impact Assessment

A project is considered to have significant impact on the environment if it

- causes a substantial adverse change in the significance of an historical resource;
- causes a substantial adverse change in the significance of an archaeological resource;
- disturbs any human remains, including those interred outside of formal cemeteries.

CEQA Guidelines Section 15064.5 defines a substantial adverse change to mean physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource is materially impaired. To avoid an adverse change, CEQA recommends preservation of the historical resource through avoidance; when a resource can not be avoided by project activities, the effects must be addressed and mitigated as outlined in PRC 15126.4 and 15331. The criteria applied to determine impacts are:

- potentially significant impact
- less than significant impact with mitigation
- less than significant impact
- no impact

### 6.2.1 Impacts

Both direct and indirect impacts were considered for this project. Direct impacts result from construction related activities such as vegetation clearing, trenching, and installing structures, among other activities. Indirect impacts can occur as a result of changing the use of the landscape. For example, increased public access to a remote location can result in unauthorized recreational use and vandalism. Although the project location is not remote and the public currently has access to the property, therefore no indirect impacts are expected for this project.

Potential direct impacts of the Kitching Street Electrical Substation and Switchyard Project on cultural resources would generally be related to physical destruction of a resource or changes in the visual setting. Although physical destruction can occur to both archaeological and architectural resources, visual impacts are typically only considered for architectural resources. No architectural resources lie within the project APE. Additionally, no archaeological resources or historic properties lie within the project APE that could be impacted by physical destruction. Therefore, a determination of *No Impact* under CEQA Guidelines Section 15064.5 is appropriate and recommended for this project.

## 6.3 Recommendations

Based on the lack of resources identified in the pre-field research, the lack of resources identified in the pedestrian survey, and the minimal likelihood of any potential subsurface, unidentified resources the project is given a determination of *No Impact* under CEQA. HDR has no further cultural resource recommendations for this project.

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# Appendix A. Resumes of Key Personnel

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# Kristin Tennesen

## Archaeology Project Director

Ms. Tennesen's experience includes many phases of project planning and execution including background/record checks, survey/excavation, management recommendations, report preparation, editing, and production. She has participated in numerous survey, testing, and mitigation level cultural resource projects (data recovery and monitoring) in compliance with various city requirements, county requirements, CEQA, CEQA-Plus, NEPA, NAGPRA, SB-18, and Sections 106 and 110 of the National Historic Preservation Act (NHPA) for federal, state, and local agencies throughout southern California. Through her previous work at the South Coastal Information Center, Ms. Tennesen gained knowledge of record search procedures and requirements, referencing USGS maps, and the processing of cultural resource investigation reports and archaeological site forms. She also has experience in local faunal analysis and the identification and exhumation of human remains.

### EDUCATION

Master of Arts, Anthropology  
(Emphasis in Archaeology), San Diego State University, 2010

Bachelor of Arts, Anthropology  
(Minor in Chemistry), San Diego State University, 2007

### REGISTRATIONS

Registered Professional  
Archaeologist, United States  
National Registration Issued:  
02/21/2013

Bureau of Land Management (BLM)  
Certified Field Supervisor

e-RAILSAFE Trained – RWP, BNSF,  
UPRR

MetroLink Roadway Worker Trained

OSHA 10-Hour Construction Safety,  
United States National Registration  
Issued: 07/28/2010

CPR Certified by the American Red  
Cross, United States National  
Registration Issued: 09/19/2013,  
Expires: 09/19/2015

Standard First Aid - American Red  
Cross, United States National  
Registration Issued: 09/19/2013,  
Expires: 09/19/2015

### PROFESSIONAL MEMBERSHIPS

Phi Kappa Phi Academic Honor  
Society

San Diego County Archaeological  
Society

Society for Historical Archaeology

### INDUSTRY TENURE

9 years

### HDR TENURE

### RELEVANT EXPERIENCE

**Riverside County Transportation Commission, Cultural Resources Monitoring in Support of the Perris Valley Line Construction Project, Riverside County, CA, 2014-2015.** Staff Archaeologist. Provide on-site archaeological monitoring for the construction project. Assists with Native American monitoring contract coordination and monitoring as well as archaeological monitoring coordination.

**Valley Center Municipal Water District, San Diego County, CA, September 2014.** Project Director. CEQA-Plus level cultural resources study of proposed improvements within the Valley Center Municipal Water District including lift stations, reclamation systems, collection systems, and force main. Responsibilities included background record search, Native American consultation, and contributions to final report preparation.

**Riverside County Public Utilities Department, Pellissier Ranch Solar Development Project EIR, Riverside County, CA, April 2014-September 2014.** Project Director. Working with the Riverside PUD, completed an EIR and supporting studies for construction of a solar farm on a city owned parcel of land. Supporting studies include research on cultural resources and a historic archaeology Phase II study, wildlife surveys, and permitting activities.

**The City of Anaheim, La Palma Safe Routes to School, April 2014 – August 2014.** Project Director. CEQA level environmental study for a CalTrans Local Assistance Program focused on closing a sidewalk gap and constructing new sidewalk, curb, and gutter. Responsibilities included background record search, Native American consultation, field surveys, historical research, and preparation of final report.

**Union Pacific Railroad, Kern Junction Interchange, Kern County, March 2014 - April 2014.** Project Director. Phase I pre-construction survey to determine impacts to known archaeological sites and to determine if new archaeological sites are present within the APE. Responsibilities included



4 years

**OFFICE LOCATION**

San Diego, CA

**PUBLICATIONS**

No data has been entered.

**AWARDS**

No data has been entered.

background record search, leading the pedestrian survey, and technical report preparation.

**San Diego Gas & Electric (SDG&E) On-Call Cultural Resources, San Diego County, 2010-Present.** Project Director. Supported the undertakings of SDG&E for new construction, ongoing maintenance, and repair projects by conducting cultural resources oversight for various projects throughout the company service territory. As a project director, specific responsibilities included accounting, budgeting, cost proposals, records search review, survey, field excavations, CEQA site evaluations, preconstruction and construction meetings, preparation of final reports, and recommendations for resource significance and stewardship. Coordinated with other cultural resources staff, clients, and their subcontractors to implement, organize, conduct, and complete numerous small- to large-scale projects for Sempra Energy/SDG&E. Examples of projects include:

- Wood to Steel Pole Conversion TL 649, San Diego County
- Wood to Steel Pole Conversion TL 690c, Marine Corps Base, Camp Pendleton
- Wood to Steel Pole Conversion TL 698, San Diego County
- Wood to Steel Pole Conversion TL 6910, San Diego County
- Wood to Steel Pole Conversion TL 6914, Marine Corps Base, Camp Pendleton
- Palomar College Relocation, 4 areas, North of Pala Rd, San Diego County
- Los Coches Substation Expansion, Lakeside, San Diego County
- 4 Camp Pendleton Helicopter Platforms, Marine Corps Base, Camp Pendleton
- TCM Access Road Grading, San Diego County
- Pala Energy Storage Battery (500kW), Pala Substation, San Diego County
- Intrusive Inspections, 4206 Poles, SANT Subarea, San Diego County
- Long Span 4-Pole Replacement, Marine Corps Base, Camp Pendleton
- 5-Pole Replacement and Cross Arm Change Outs, Marine Corps Base, Camp Pendleton
- Circuit 237: P615374-P116565, Long Span, Ramona, San Diego County
- Remove from Service 5 poles, Install 5 new poles, Otay Mesa, San Diego County
- CMP Pole Replacement, 5 poles, Campo, San Diego County
- Path to 2 Poles, Ramona, San Diego County
- Anchor Rod Installation, Marine Corps Base, Camp Pendleton, San Diego County
- Remove and Replace San Mateo Creek Tower, Marine Corps Base, Camp Pendleton

**Indefinite Delivery Indefinite Quantity for cultural resources related services at various locations in California, Arizona, Colorado, Nevada, New Mexico, and Utah, 2012-Present.** Crew Chief and Project Director. Supported the undertakings of Naval Facilities Engineering Command Southwest (NAVFAC SW) for new construction, ongoing maintenance, and repair projects by conducting cultural resources oversight for various projects throughout the Naval Southwest Division. Responsibilities included preconstruction and construction monitoring, supervising a crew of

archaeologists, attending preconstruction and management meetings, creation of project work plans, leading an excavation project, and writing technical reports. Coordinated with other cultural resources staff, clients, and their subcontractors to implement, organize, conduct, and complete numerous large-scale projects with overlapping schedules. Examples of projects include:

- P-1040 – Wire Mountain Road/Vandegrift Boulevard Intersection Improvements, Marine Corps Base, Camp Pendleton
- P-1045 – Northern Region Tertiary Treatment Plant, Marine Corps Base, Camp Pendleton
- P-1046 – Connection of Northern and Southern Water Systems, Marine Corps Base, Camp Pendleton
- P-1048 – Upgrades to Electrical Systems and Associated Facilities, Marine Corps Base, Camp Pendleton
- National Register Eligibility Determinations for Three Prehistoric Sites, Silver Strand Training Complex, Naval Base Coronado
- Cultural Resource Investigation at CA-SDI-14791, Marine Corps Base, Camp Pendleton
- Significant Archaeological Sites Special Studies, Marine Corps Base, Camp Pendleton

**Element High Desert Solar Project, Kern County, CA, August 2010.** Staff Archaeologist. Performed Phase II testing in support of a proposal by Element Power for the installation of a solar facility. Responsibilities included subsurface testing, site mapping (manual and GPS), artifact inventory, site photos, drafting site update forms and submitting formal documentation.

**Level 3 – BTOP – Archaeological Survey, California, August 2010.** Staff Archaeologist. Class III intensive survey for portions of proposed state-wide utility improvements to fiber optics hardware. Responsibilities included conducting background research and a pedestrian survey.

**Calexico Town Center, City of Calexico, Imperial County, August-September 2010.** Staff Archaeologist. Phase I survey for a proposed road re-alignment and roadway improvements. Responsibilities included conducting background research and a pedestrian survey.

**City of Los Angeles Solid Waste Plan, October 2010.** Staff Archaeologist. Co-wrote the historical resources section for the Solid Waste Integrated Resources Plan developed by Recovering Energy, Natural Resources, and Economic Benefit from Waste for L.A. (RENEW L.A.). This section included discussion on the environmental setting, regulatory setting, existing conditions, thresholds of significance, and mitigation measures for the city of Los Angeles plus a 100-mile buffer zone.

**Macho Springs Wind Energy, Luna County, New Mexico, November 2010.** Staff Archaeologist. Phase I pedestrian survey for the proposed development of a utility scale wind energy project in Luna County, New Mexico.

**Calexico Border Patrol Station, City of Calexico, Imperial County, November-December 2010.** Staff Archaeologist. Phase I survey for proposed off-site improvements including sewer and water line improvements. Responsibilities included conducting background research, reviewing archaeological records search information, pedestrian survey, and



final report preparation.

**Rowland Water District, County of Los Angeles, December 2010.** Staff Archaeologist. Phase I survey in compliance with CEQA-Plus for the proposed recycled water infrastructure improvements in the City of Industry and unincorporated community of Rowland Heights, Los Angeles County, California. Responsibilities included conducting background research, reviewing archaeological records search information, completed a pedestrian survey, and wrote the final report for the Rowland Water District's pipeline improvements.

**Otay Mesa Tunnel Remediation, City of San Diego, California, February 2011.** Staff Archaeologist. Monitored the Otay Mesa Tunnel Remediation project which consisted of drilling boreholes and filling with concrete two tunnels passing under the U.S.-Mexico border in the community of Otay Mesa.

**Old Brulay Plantation, Cameron County, Texas, March 2011.** Staff Archaeologist. Analyzed the faunal remains collected during the significance testing of a portion of the Old Brulay Plantation along the Rio Grande River in Texas. Animal remains were separated, identified, and analyzed. A report documenting the findings was presented to the project manager for inclusion in the final testing report.

**ON Line, Nevada, March 2011-June 2011.** Staff Archaeologist. One Nevada Transmission Line Project for NV Energy. Monitored the pre-construction and construction phases of a 250+ mile transmission line throughout the state of Nevada. These phases include the activities of structure staking, brush clearing, road grading, digging, drilling, and tower construction.

**Lake Elsinore Boat Launch Facility Improvements, City of Lake Elsinore, California, August 2011-December 2011.** Staff Archaeologist. Monitored the Lake Elsinore Boat Launch Facility Improvements project which consisted of vegetation clearing, tree removal and replanting, temporary fence installation, soil loading and hauling, and soil over-excavation and compaction in order to construct a boat launch ramp, dock system, parking lot, restroom facility, picnic area, and boarding floats in the City of Lake Elsinore.

**Comprehensive Tactical Infrastructure Maintenance and Repair (CTIMR) Phase 2 NEPA Clearance Project, Yuma Sector, California, September 2011.** Staff Archaeologist. Class III cultural resources survey for proposed maintenance and repair of existing access roads by U.S. Border Patrol along the U.S./Mexico international border near Andrade, California. Responsibilities included conducting background research, reviewing archaeological records search information, pedestrian survey, and final report preparation.

**Dickinson Bypass, Dickinson, North Dakota, November 2011.** Staff Archaeologist. Phase I pedestrian survey and Phase II testing for proposed roadway development in Dickinson, North Dakota.

**Polo Club at Vista Valley Project, San Diego County, California, January 2011-January 2012.** Staff Archaeologist. Class I cultural resources inventory and Class III intensive field survey for the proposed development of single-family residences in northern San Diego County. Responsibilities





included pedestrian survey, subsurface testing, site mapping (manual and GPS), artifact inventory, and site photos.

**1900/1912 Spindriff Drive Project, March 2012-December 2012.** Staff Archaeologist. Cultural Materials Inventory Program (CMIP) and Archaeological Data Recovery Program (ADRP) for property and landscaping improvements to an existing structure at 1900 Spindriff Drive and demolition of an existing structure, construction of new two-story structure, construction of a new swimming pool, and landscaping improvements at 1912 Spindriff Drive, within a known, significant archaeological site. Responsibilities included monitoring ground disturbance activities, dry screening and wet screening all disturbed soil, drying and sorting recovered cultural material, assisting in identification of possible Native American human remains, and either collecting and cataloging or repatriating the recovered cultural material to Kumeyaay representatives in accordance with CEQA and City of San Diego Historical Resources Guidelines.

**Construction, Operation, and Maintenance of Tactical Infrastructure for Customs and Border Protection, San Diego Sector, California, April 2012.** Staff Archaeologist. Monitored activities related to the maintenance of tactical infrastructure consisting of fencing, patrol roads, and access roads along the U.S./Mexico international border in southeastern San Diego County.

**Survey and National Register Evaluation of Archaeological Sites on White Sands Missile Range, New Mexico, May 2013.** Staff Archaeologist. Assisted in a Phase I pedestrian survey of over 12,000 acres within White Sands Missile Range, New Mexico.

**Vincent Station Siding Extension and Second Platform Project, Acton, Los Angeles County, California, December 2013-February 2014.** Project Archaeologist. Phase I cultural resources survey for proposed railroad improvements including siding extension and addition of a second platform. Responsibilities included background research, archaeological records search, leading the pedestrian survey, and preparation of final report.

#### NON-HDR EXPERIENCE

**South Coastal Information Center, 2008-2010.** Research Assistant. Processed archaeological survey reports and archaeological site forms in Access databases for San Diego and Imperial counties. Mapped surveys and sites on USGS maps. Assisted clients with record searches. Performed research for San Diego State University archaeology projects such as the Whaley House Historical Archaeology Project.

**The Nate Harrison Historical Archaeology Project, San Diego County, CA, San Diego State University, 2007-2009.** Crew member for excavation of a 19<sup>th</sup> century Palomar Mountain, San Diego County homestead. Responsibilities included excavation, identification of historic artifacts and buried features, faunal analysis, and soil chemistry analysis.

**El Presidio de Santa Barbara Historical Archaeology Project, Santa Barbara, CA, Cal Poly San Luis Obispo, 2005.** Crew member for excavation of the 18<sup>th</sup> century Santa Barbara Presidio. Responsibilities included excavation and identification of historic artifacts, stone walls, foundations, and buried features.

# Wayne Glenny

Archaeology Program Manager

Mr. Glenny has over 15 years of experience in cultural resource management. He has successfully conducted various field research and managed projects reviewed under guidelines of the California Environmental Quality Act (CEQA) as well as those specified in Section 106 of the National Historic Preservation Act (NHPA) and the National Heritage Resources Act (NHRA) of South Africa. Specific duties include archival research, field preparation, research design development, proposal and budget development, project design and management, staff management, eligibility determinations, direction of projects for federal clients, utility companies and state agencies, field evaluations, survey and excavations, and report writing in a wide range of regulatory and geographic settings. Mitigation program duties include archaeological data recovery and historic data recovery. Mr. Glenny's training is in biological anthropology and his specialized skills include human osteology, primate/human evolution, and faunal analysis; isotopic, lithic, and ceramic analyses; and archaeological resource identification. Mr. Glenny has complemented his work by publishing the results of his research in regional forums; presenting papers at academic conferences; and participating in a number of public outreach efforts relating to cultural resources in South Africa.

## EDUCATION

Master of Science, Biological Anthropology (Anthropology and Archaeology), University of the Witwatersrand, South Africa, 2005

Bachelor of Arts, Anthropology (Anthropology and Archaeology), University of Cape Town, South Africa, 2003

## REGISTRATIONS

Register of Professional Archaeologists, (RPA)

OSHA 30 Hour Construction Safety, California, United States, No. 34-600744012

Pilot License, Rotorcraft – Helicopter, California, United States, No. 3557787

Commercial Diver Class IV

## PROFESSIONAL MEMBERSHIPS

South African Archaeological Society

Society for California Archaeology

Association of Southern African Professional Archaeologists

## INDUSTRY TENURE

15 years

## HDR TENURE

0 years

## OFFICE LOCATION

San Diego, CA

## PUBLICATIONS

Report on the Micromammal Assemblage Analysis from Sibudu Cave, KwaZulu-Natal. South African

## RELEVANT EXPERIENCE

**Sempra Energy/SDG&E, On-Call Cultural Resources, San Diego and Imperial Counties, California. 2012-2015.** Senior Archaeologist. Supported SDG&E for new construction, on-going maintenance, and repair projects by conducting cultural resources inventories and services for numerous projects throughout San Diego and Imperial counties on both private and public lands. Coordinated with other cultural resources staff, clients and other subcontractors to implement, organize and complete these projects.

**NAVFAC SW, Archaeological Monitoring to Support the P-1019 Project MCB Camp Pendleton, San Diego County, California. 2012-2014.** Project Manager/Senior Archaeologist. Provided monitoring and field support for the P-1019 project on Camp Pendleton. Responsibilities included contract and budget management, monitoring coordination for both archaeology and native monitoring, and quality assurance for project and technical report review.

**NAVFAC SW, Archaeological Monitoring to Support the Lake O'Neil Project, MCB Camp Pendleton, San Diego County, California. 2012-2014.** Project Manager/Senior Archaeologist/Native American Liaison. Provided monitoring and field support for the Lake O'Neil project on Camp Pendleton. Responsibilities included contract and budget management, monitoring coordination for both archaeology and native monitoring, and quality assurance for project and technical report review.

**NAVFAC SW, Archaeological Testing and Mitigation of Numerous**



Humanities 18:279-288, 2006  
 Pacifist and Fascist views of World War I: A Comparative Study of 'All Quiet on the Western Front' and 'The Storm of Steel'. Historical Approaches Vol: 1: 71-82, 2002

Results of M.Sc. research, SASQUA Conference, 2007

Poster presentation of Honors project, SAA Conference, 2003

#### AWARDS

**Archaeological Sites in Support of the Basewide Infrastructure Project, MCB Camp Pendleton, San Diego County, California. 2013-2015.** Co-Project Manager/Senior Archaeologist/Field Director for long-term excavations of numerous sites as part of the P-1043 project on Camp Pendleton. Responsibilities included project management, field excavations, laboratory analysis, and preparation of report and treatment plan.

**NAVFAC SW, Archaeological Testing and Mitigation of the P-1043 Project, MCB Camp Pendleton, San Diego County, California. 2010-2013.** Co-Project Manager/Senior Archaeologist/Field Director/Native American Liaison for cultural excavations on Guacamole Road and STP 11. Responsibilities included project and budget development, project management, work plans/research design, field excavations, preparation of final report, and recommendations for site protection and National Register eligibility.

**NAVFAC SW, Archaeological Testing and Mitigation of the Piedra de Lumbre Quarry Site, MCB Camp Pendleton, San Diego County, California. 2011.** Co-Project Manager responsibilities included budget management, field coordination, work plans/research design, field excavations, preparation of final report, and recommendations for site protection.

**NAVFAC SW, Archaeological Testing and Mitigation of Archaeological Sites in the San Mateo/Ysidora Basin, MCB Camp Pendleton, San Diego County, California. 2011.** Co-Project Manager/Senior Archaeologist responsibilities included budget management, field coordination, work plans, field excavations, and preparation of final report.

**Confidential Project, Blythe, Riverside County, California. 2011.** Senior Archaeologist/Field Director/Native American Liaison for cultural survey and excavation of cultural sites in an area west of Blythe for proposed solar farm. Responsibilities included field support, staffing and travel logistics, coordination of both archaeological crew and native monitors, coordination with California Energy Commission (CEC), and excavation of cultural resources.

**NAVFAC SW, Survey and Archaeological Testing in Support of 3P EIS Project, MCB Camp Pendleton, San Diego County, California. 2010.** Co-Project Manager/Senior Archaeologist/Field Director for a long-term, multi-phase cultural survey and excavation of numerous sites on Camp Pendleton in support of 3P EIS Project. Responsibilities included field support, staffing and travel logistics, coordination of archaeological crew and native monitors, excavation, evaluation and laboratory analysis, and final report.

**Topanga Library, Topanga, Los Angeles County, California. 2010.** Staff Archaeologist/Field Director for the excavation of a single site in Topanga Canyon. Responsibilities included field support, staffing and travel logistics, coordination of archaeological crew and native monitors, excavation, and technical document review.

**NAVFAC SW, Survey and Archaeological Testing in Support of Grow the Force Project, MCB Camp Pendleton, San Diego County, California. 2009-2010.** Co-Project Manager/Senior Archaeologist/Field Director for a



long-term, multi-phase cultural survey and excavation of numerous sites on Camp Pendleton in support of Grow the Force Project. Responsibilities included field support, staffing and travel logistics, coordination of archaeological crew and native monitors, excavation, evaluation and laboratory analysis, and final report.

**Confidential Project, Palen, Riverside County, California. 2009.** Senior Archaeologist/Field Director/Native American Liaison for a large cultural survey and site recordation of an area west of Blythe for proposed solar farm. Responsibilities included field support, staffing and travel logistics, coordination of both archaeological crew and native monitors, coordination with California Energy Commission (CEC), and recordation of cultural resources.

**Confidential Project, Blythe, Riverside County, California. 2009.** Senior Archaeologist/Field Director/Native American Liaison for the continuation of a large cultural survey and site recordation of an area west of Blythe for proposed solar farm. Responsibilities included field support, staffing and travel logistics, coordination of both archaeological crew and native monitors, coordination with California Energy Commission (CEC), and recordation of cultural resources.

**Camp Billy Machen, Imperial County, California. 2009.** Staff Archaeologist for a large cultural survey at Camp Billy Machen, Chocolate Mountain Aerial Gunnery Range for proposed geothermal testing. Responsibilities included survey, field survey supervisor, and final technical report.

**NAVFAC SW, Survey and Archaeological Testing in Support of Base Utilities Infrastructure, MCB Camp Pendleton, San Diego County, California. 2008-2009.** Senior Archaeologist/Field Director/Native American Liaison for a long-term, multi-phase cultural survey and excavation of numerous sites on Camp Pendleton in support of Base Utilities Infrastructure Project. Responsibilities included field support, staffing and travel logistics, coordination of archaeological crew and native monitors, excavation, evaluation and laboratory analysis, and final report.

**Imperial Irrigation District, Dixieland Transmission Line, Imperial County, California. 2008.** Staff Archaeologist for a cultural survey and site recordation in the Yuha Basin area of Imperial Valley. Responsibilities included field support, staffing and travel logistics, coordination of both archaeological crew and native monitors, and recordation of cultural resources.

**Confidential Project, Blythe, Riverside County, California. 2008.** Senior Archaeologist/Field Director/Native American Liaison for a large cultural survey and site recordation of an area west of Blythe for proposed solar farm. Responsibilities included field support, staffing and travel logistics, coordination of both archaeological crew and native monitors, coordination with California Energy Commission (CEC), and recordation of cultural resources.

**Confidential Project, Ridgecrest, Kern County, California. 2007-2008.** Staff Archaeologist for a cultural survey, site recordation and testing of



numerous sites in the Ridgecrest area for a proposed solar farm. Responsibilities included field support, staffing and travel logistics, coordination of both archaeological crew and native monitors, recordation of cultural resources, excavation, evaluation and laboratory analysis, and final report.

#### **SOUTH AFRICAN EXPERIENCE**

##### **Institute of Cultural Resource Management, South Africa. 2005-2007.**

Division Leader/Contract/Project Manager/Heritage Agency Liaison in the Institute of Cultural Resource Management at the Natal Museum. Responsibilities included contract and budget development, project management, work plan/research design and development, field excavations, laboratory analysis, and preparation of final technical reports and treatment plans of numerous CRM contracts throughout KwaZulu-Natal.

##### **Ladysmith Municipality: Ladysmith KwaZulu-Natal, South Africa. 2005-2006.**

Contract/Project Manager for a cultural survey and site recordation of an Anglo-Boer War (1900-1903) site around the city of Ladysmith. Responsibilities included project and budget development, project management, work plans/research design, field recordation, preparation of final report, and recommendations for site protection and National Register eligibility.

##### **Department of Transportation KwaZulu-Natal DOT (KZN) Richmond KwaZulu-Natal, South Africa. 2005.**

Contract/Project Manager/Heritage Agency Liaison for a cultural survey and monitoring the construction of bridge footprints. Responsibilities included project and budget development, project management, field logistical support, work plans/research design, preparation of final report.

##### **Charlestown Burial Relocation, Charlestown Zululand, South Africa.**

**2004.** Project Manager/Senior Archaeologist/Heritage Agency Liaison. Contracted for the emergency excavation and relocation of five historical burials discovered during road construction. Responsibilities included field support, staffing and travel logistics, coordination of archaeological crew, excavation, evaluation and laboratory analysis, and final report.

##### **Steam Rail Project: KwaZulu-Natal, South Africa. 2003-2004.**

Project Manager/Senior Archaeologist/Heritage Agency Liaison. Contracted to document the historic steam-train rail lines between numerous historic towns in the province of KwaZulu-Natal. Responsibilities included project and budget development, project management, work plans/research design, field recordation, preparation of final report, and recommendations for site protection.

##### **The University of Cape Town Prestwich Place, Cape Town, South**

**Africa. 2003-2004.** Staff Archaeologist for a long-term excavation of over 600 historic burials for a construction project in Cape Town. Responsibilities included field support, excavation, reinterring the remains, conducting osteological and isotopic analyses of selected remains, preparation of final report, and recommendations for site protection.



**Holbaai: Vredenburg Peninsula, Western Cape, South Africa. 2003.** Staff Archaeologist for a project that involved an extensive survey and recordation of cultural resources on Private Property. Responsibilities included survey, surface collection, mapping of the site with EDM, site recordation, statistical analysis of shell remains from middens, an analysis of Khoisan ceramics (hunter-gatherer), and a spatial analysis and interpretation of several sites and their landscape distribution.

**Ottosdal: North-West Province, South Africa. 2003.** Staff Archaeologist for a project that involved an extensive survey and recordation of several hundred petroglyphs on privately owned land. Responsibilities included survey, mapping of the site with EDM, site recordation, spatial analysis and interpretation of several petroglyph sites, their landscape distribution, and final report.

**Steelpoort: Messina, Northern Province, South Africa. 2002-2003.** Staff Archaeologist for a long-term, multi-phase cultural resource project that included cultural survey, recordation and excavation of numerous Iron Age sites. Responsibilities included survey, mapping of the site with EDM, site recordation, spatial analysis, and excavation of early Bantu Iron Age sites, final report and recommendations for site protection.

**Klipriviersburg: Gauteng Province, South Africa. 2002.** Staff Archaeologist for a long-term, multi-phase cultural resource project that included cultural survey, recordation and excavation of numerous Iron Age sites. Responsibilities included survey, mapping of the site with EDM, site recordation, spatial analysis, and excavation of early Bantu Iron Age sites, final report and recommendations for site protection.

**Thabazimbi: Thabazimbi, Northern Province, South Africa. 2002-2003.** Staff Archaeologist for a long-term, multi-phase cultural resource project that included cultural survey, recordation and excavation of numerous Iron Age sites. Responsibilities included survey, mapping of the site with EDM, site recordation, spatial analysis, and excavation of early Bantu Iron Age sites, final report and recommendations for site protection.

**DOT (KZN), Zululand/KwaZulu-Natal, South Africa. 2002.** Staff Archaeologist for a long-term, multi-phase cultural resource project that included cultural survey and recordation of numerous historic roads for the Department of Transport. Responsibilities included project and budget development, project management, work plans/research design, field survey and recordation, preparation of final report, and recommendations for site protection.

#### TEACHING EXPERIENCE

San Diego Community College 2007-2008.

University of the Witwatersrand, South Africa. 2006-2007.

University of Cape Town, South Africa. 2004-2006.



## **MILITARY**

South African National Defense Force, South Africa. 1994-1999.  
Officer/Instructor. Held the rank of Lieutenant in the South African Armored Corps. Instructor of junior candidate officers on various armored weapon systems. Honorably discharged in January 1999.

## **ACHIEVEMENTS AND HONORS**

Graduated with Honors, University of Cape Town, South Africa.

## **OUTREACH EFFORTS**

Field Schools: Various Locations, South Africa

Participated in numerous public outreach programs. These programs were mostly funded by tertiary educational institutions and were geared towards raising awareness of South Africa's rich heritage amongst economically disadvantaged youth groups. Responsibilities included presentations, teaching, anthropological field schools, coordination and field support, staffing and travel logistics. Field schools: Cederburg (2000), Eastern Cape (2002), Makapansgat (UCT/Arizona State Univ., 2003), Sibudu (Wits, 2004), and Limpopo Valley (2004).

## **PUBLICATIONS AND PRESENTATIONS**

### **Academic**

Report on the Micromammal Assemblage Analysis from Sibudu Cave, KwaZulu-Natal. South African Humanities 18:279-288, 2006

Pacifist and Fascist views of World War I: A Comparative Study of 'All Quiet on the Western Front' and 'The Storm of Steel'. Historical Approaches Vol: 1: 71-82, 2002

Results of M.Sc. research, SASQUA Conference, 2007

Poster presentation of Honors project, SAA Conference, 2003







# Appendix B. Consultation Results

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL





December 10, 2015

Native American Heritage Commission  
1550 Harbor Blvd, Suite 100  
West Sacramento, CA 95691

**Reference: Cultural Resources Study, Kitching Substation Project, Sacred Lands  
File Search Request**

Dear NAHC:

I am requesting a review of the Sacred Lands File for the Cultural Resources Study for the Kitching Substation Project in Riverside County, California. The project Area of Potential Effect (APE) is shown in the attached map and lies within the Township 3 South, Range 3 West, section 32 of the *Perris* USGS 7.5 minute topographic map. The proposed project consists of designing a new 115kV/12kV substation on a vacant lot measuring approximately 3 acres. The project area is located at the intersection of Kitching Street and Edwin Road.

Please indicate if there are any known sites or areas of concern in the vicinity of this project and provide a list of appropriate Native American contacts. Results can be faxed to (858) 712-8333 or emailed directly to Kristin Tennesen at [kristin.tennesen@hdrinc.com](mailto:kristin.tennesen@hdrinc.com). If there are any questions regarding the information provided in this letter or if additional information is needed, please contact me at the HDR San Diego office (858) 712-8277.

Thank you for your assistance in this matter.

Sincerely,

Kristin Tennesen  
Staff Archaeologist

[hdrinc.com](http://hdrinc.com)

8690 Balboa Avenue, Suite 200, San Diego, CA 92123  
T 858.712.8400 F 858.712.8333

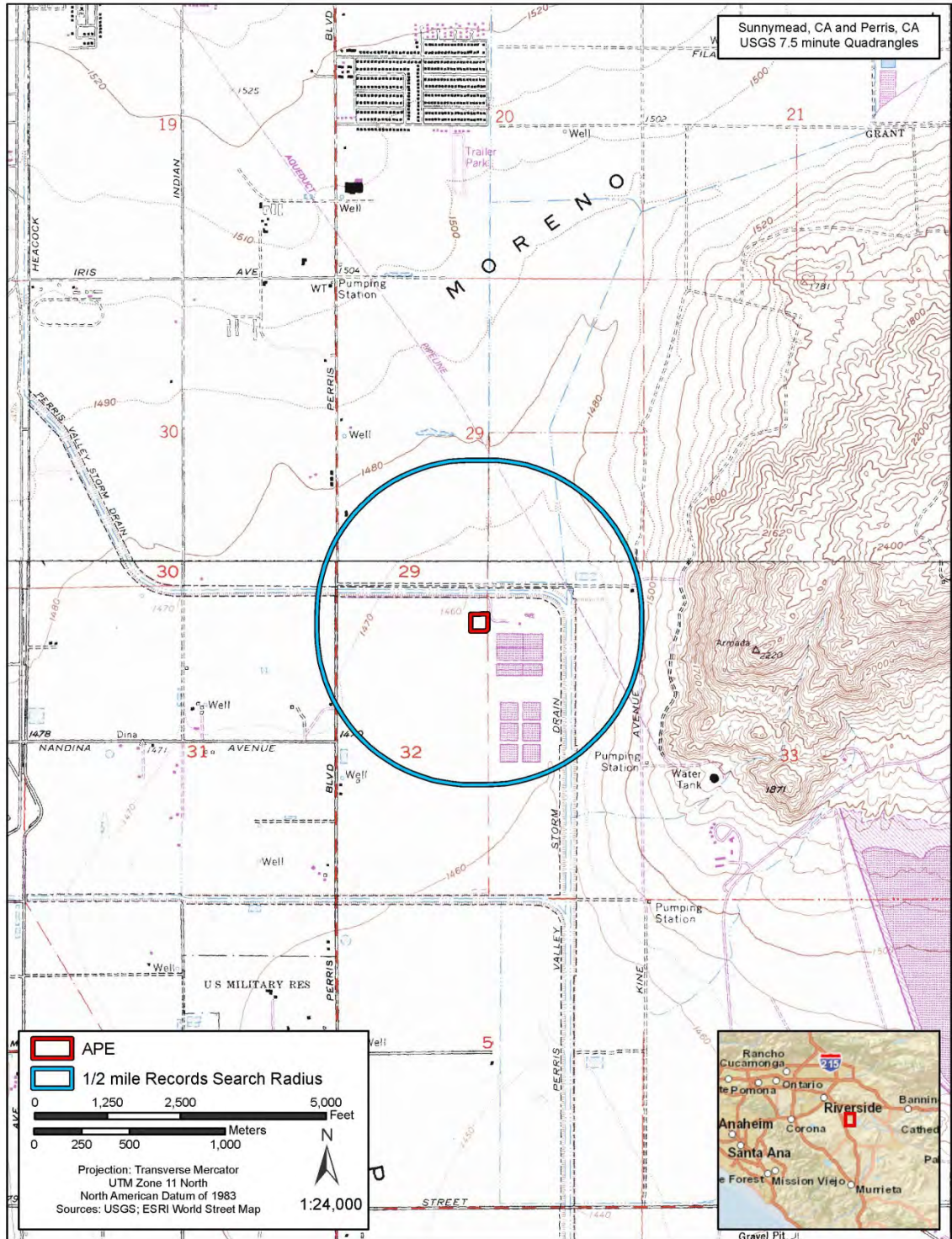


Figure 1. Kitching Substation Project APE

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



Figure 2. Aerial overview of project area

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

**NATIVE AMERICAN HERITAGE COMMISSION**

1550 Harbor Blvd., Suite 100  
 West Sacramento, CA 95691  
 (916) 373-3710  
 (916) 373-5471 FAX



January 5, 2016

Kristin Tennesen  
 Staff Archaeologist  
 HDR  
 8690 Balboa Ave., Suite 200  
 San Diego, CA 92123

Sent by Email: Kristin.tennesen@hdrinc.com  
 Number of Pages: 4

RE: Kitching Substation Project, Perris USGS Quadrangle, Riverside County

Dear Ms. Tennesen:

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced counties. Please note that the intent above reference codes is to mitigate impacts to tribal cultural resources, as defined, for California Environmental Quality Act (CEQA) projects.

As of July 1, 2015, Public Resources Code Sections 21080.1, 21080.3.1 and 21080.3.2 require public agencies to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose mitigating impacts to tribal cultural resources:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section. (Public Resources Code Section 21080.1(d))

The law does not preclude agencies from initiating consultation with the tribes that are culturally and traditionally affiliated with their jurisdictions. The NAHC believes that in fact that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

In accordance with Public Resources Code Section 21080.1(d), formal notification must include a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation. The NAHC believes that agencies should also include with their notification letters information regarding any cultural resources assessment that has been completed on the APE, such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:
  - A listing of any and all known cultural resources have already been recorded on or adjacent to the APE;
  - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
  - If the probability is low, moderate, or high that cultural resources are located in the APE.
  - Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the potential APE; and

- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.
2. The results of any archaeological inventory survey that was conducted, including:
    - Any report that may contain site forms, site significance, and suggested mitigation measurers.

All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code Section 6254.10.

3. The results of any Sacred Lands File (SFL) check conducted through Native American Heritage Commission. A SFL search was completed with negative results.
4. Any ethnographic studies conducted for any area including all or part of the potential APE; and
5. Any geotechnical reports regarding all or part of the potential APE.

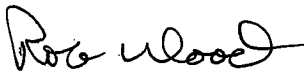
Lead agencies should be aware that records maintained by the NAHC and CHRIS is not exhaustive, and a negative response to these searches does not preclude the existence of a cultural place. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the case that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance we are able to assure that our consultation list contains current information.

If you have any questions, please contact me at my email address: [rob.wood@nahc.ca.gov](mailto:rob.wood@nahc.ca.gov).

Sincerely,



Rob Wood  
Associate Environmental Planner

**Native American Heritage Commission  
Tribal Consultation List  
Riverside County  
January 5, 2016**

Cabazon Band of Mission Indians  
Doug Welmas, Chairperson  
84-245 Indio Springs Parkway Cahuilla  
Indio , CA 92203  
(760) 342-2593

Soboba Band of Luiseno Indians  
Rosemary Morillo, Chairperson; Attn: Carrie Garcia  
P.O. Box 487 Luiseno  
San Jacinto , CA 92581 Cahuilla  
carrieg@soboba-nsn.gov  
(951) 654-2765

Los Coyotes Band of Mission Indians  
Shane Chapparosa, Chairman  
P.O. Box 189 Cahuilla  
Warner Springs , CA 92086  
Chapparosa@msn.com  
(760) 782-0712

Torres-Martinez Desert Cahuilla Indians  
Mary Resvaloso, Chairperson  
P.O. Box 1160 Cahuilla  
Thermal , CA 92274  
tmchair@torresmartinez.org  
(760) 397-0300

Pala Band of Mission Indians  
Shasta Gaughen, PhD, THPO  
PMB 50, 35008 Pala Temecula Rd. Luiseno  
Pala , CA 92059 Cupeno  
sgaughen@palatribe.com  
(760) 891-3515

Santa Rosa Band of Mission Indians  
John Marcus, Chairman  
P.O. Box 391820 Cahuilla  
Anza , CA 92539  
(951) 659-2700

Pauma & Yuima Reservation  
Temet Aguilar, Chairperson  
P.O. Box 369, Ext. 303 Luiseno  
Pauma Valley , CA 92061  
(760) 742-1289

Augustine Band of Cahuilla Mission Indians  
Mary Ann Green, Chairperson  
P.O. Box 846 Cahuilla  
Coachella , CA 92236  
(760) 398-4722  
(760) 369-7161 Fax

Ramona Band of Cahuilla Mission Indians  
Joseph Hamilton, Chairman  
P.O. Box 391670 Cahuilla  
Anza , CA 92539  
admin@ramonatribe.com  
(951) 763-4105

Rincon Band of Mission Indians  
Bo Mazzetti, Chairperson  
1 West Tribal Road Luiseno  
Valley Center , CA 92082  
bomazzetti@aol.com  
(760) 749-1051

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list applicable only for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed Kitching Substation Project, Perris USGS Quadrangle, Riverside County.

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



**Native American Heritage Commission  
Tribal Consultation List  
Riverside County  
January 5, 2016**

San Luis Rey Band of Mission Indians  
Tribal Council  
1889 Sunset Drive Luiseno  
Vista, CA 92081  
cjmojado@slrmissionindians.org  
(760) 724-8505

Agua Caliente Band of Cahuilla Indians THPO  
Patricia Garcia-Plotkin Tribal Historic Perservation Officer  
5401 Dinah Shore Drive Cahuilla  
Palm Springs, CA 92264  
ACBCI-THPO@aguacliente.net  
(760) 699-6907

Agua Caliente Band of Cahuilla Indians  
Jeff Grubbe, Chairperson  
5401 Dinah Shore Drive Cahuilla  
Palm Springs, CA 92264  
lavilesaguacliente.net  
(760) 699-6800

Cahuilla Band of Indians  
Luther Salgado, Chairperson  
P.O. Box 391760 Cahuilla  
Anza, CA 92539  
Chairman@cahuilla.net  
(760) 763-5549  
(760) 763-2631 Tribal EPA

Morongo Band of Mission Indians  
Robert Martin, Chairperson  
12700 Pumarra Road Cahuilla  
Banning, CA 92220 Serrano  
(951) 849-8807  
(951) 755-5200  
(951) 922-8146 Fax

Pala Band of Mission Indians  
Robert H. Smith, Chairperson  
PMB 50, 35008 Pala Temecula Rd. Luiseno  
Pala, CA 92059 Cupeno  
rsmith@palatribe.com  
(760) 891-3500

Pechanga Band of Mission Indians  
Mark Macarro, Chairperson  
P.O. Box 1477 Luiseno  
Temecula, CA 92593  
mgoodhart@pechanga-nsn.  
(951) 770-6100

Torres-Martinez Desert Cahuilla Indians  
Michael Mirelez, Cultural Resource Coordinator  
P.O. Box 1160 Cahuilla  
Thermal, CA 92274  
mmirelez@tmdci.org  
(760) 399-0022, Ext. 1213

La Jolla Band of Luiseno Indians  
Thomas Rodrigues, Chairperson  
22000 Highway 76 Luiseno  
Pauma Valley, CA 92061  
thomas.rodrigues@lajolla-nsn.  
(760) 742-3771

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list applicable only for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed Kitching Substation Project, Perris USGS Quadrangle, Riverside County.

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

### Kitching Street Electrical Substation and Switchyard Project - Native American Correspondence

Tribal Affiliation	Individual Contacted	Method of Contact	Date of Contact	Response Received
<b>California Native American Heritage Commission</b>	Rob Wood 1550 Harbor Blvd, Suite 100, West Sacramento, CA 95691	Email: nahc@nahc.ca.gov	12/10/2015	Yes (1/5/2016): No known sacred sites within the project area. Recommends contacting local tribal entities.
<b>Cahuilla</b>	Doug Welmas, Chairperson Cabazon Band of Mission Indians	<ul style="list-style-type: none"> <li>• USPS Letter</li> <li>• Phone</li> </ul>	1/7/2016 1/22/2016	No response to letter. No answer, no voicemail.
<b>Cahuilla</b>	Shane Chapparosa, Chairman, Los Coyotes Band of Mission Indians	<ul style="list-style-type: none"> <li>• USPS Letter</li> <li>• Phone</li> </ul>	1/7/2016 1/22/2016	No response to letter. Left voicemail message.
<b>Cahuilla</b>	Joseph Hamilton, Chairman, Ramona Band of Cahuilla Mission Indians	<ul style="list-style-type: none"> <li>• USPS Letter</li> <li>• Phone</li> </ul>	1/7/2016 1/22/2016	No response to letter. Left voicemail message.
<b>Cahuilla</b>	Mary Resvaloso, Chairperson, Torres- Martinez Desert Cahuilla Indians	<ul style="list-style-type: none"> <li>• USPS Letter</li> <li>• Phone</li> </ul>	1/7/2016 1/22/2016	No response to letter. Left voicemail message.
<b>Cahuilla</b>	John Marcus, Chairman, Santa Rosa Band of Mission Indians	<ul style="list-style-type: none"> <li>• USPS Letter</li> <li>• Phone</li> <li>• Email</li> </ul>	1/7/2016 1/22/2016 1/22/2016	No response to letter. Spoke with Alexis, told to email the Environmental lead Gabriella Rubalcava. No email response

Tribal Affiliation	Individual Contacted	Method of Contact	Date of Contact	Response Received
<b>Cahuilla</b>	Mary Ann Green, Chairperson, Augustine Band of Cahuilla Mission Indians	<ul style="list-style-type: none"> <li>• USPS Letter</li> <li>• Phone</li> </ul>	1/7/2016 1/22/2016	No response to letter. Spoke with her assistant Heather, she transferred me to David, left voicemail message.
<b>Cahuilla</b>	Michael Mirelez, Cultural Resources Coordinator, Torres- Martinez Desert Cahuilla Indians	<ul style="list-style-type: none"> <li>• USPS Letter</li> <li>• Phone</li> </ul>	1/7/2016 1/22/2016	No response to letter. No answer, voicemail box full, cannot accept messages.
<b>Cahuilla</b>	Jeff Grubbe, Chairperson, Agua Caliente Band of Cahuilla Indians (ACBCI)	<ul style="list-style-type: none"> <li>• USPS Letter</li> <li>• Phone</li> </ul>	1/7/2016 1/22/2016	No response to letter. Left message with his assistant Laura. See response from THPO below.
<b>Cahuilla</b>	Patricia Garcia, THPO, Agua Caliente Band of Cahuilla Indians (ACBCI)	<ul style="list-style-type: none"> <li>• USPS Letter</li> <li>• Phone</li> </ul>	1/7/2016 1/22/2016	Received letter from current THPO (Katie Croft). Project is not in ACBCI boundary but within the Cahuilla traditional area. Records search completed and no resources identified. They request proper protocols be followed in the case that human remains are found.
<b>Cahuilla</b>	Luther Salgado, Chairperson, Cahuilla Band of Mission Indians	<ul style="list-style-type: none"> <li>• USPS Letter</li> <li>• Phone</li> </ul>	1/7/2016 1/22/2016	No response to letter. No voicemail option for Mr. Salgado or the Cahuilla Band EPA office.
<b>Cahuilla, Serrano</b>	Robert Martin, Chairperson, Morongo Band of Mission Indians	<ul style="list-style-type: none"> <li>• USPS Letter</li> <li>• Phone</li> </ul>	1/7/2016 1/22/2016	No response to letter. Left voicemail message with his assistant Christina.
<b>Luiseno</b>	Temet Aguilar, Chairperson Pauma & Yuima Reservation	<ul style="list-style-type: none"> <li>• USPS Letter</li> <li>• Phone</li> </ul>	1/7/2016 1/22/2016	No response to letter. Left voicemail message.

Tribal Affiliation	Individual Contacted	Method of Contact	Date of Contact	Response Received
<b>Luiseno</b>	Bo Mazzetti, Chairperson, Rincon Band of Mission Indians	<ul style="list-style-type: none"> <li>• USPS Letter</li> <li>• Phone</li> </ul>	1/7/2016 1/22/2016	Received letter 1/27/2016 from Vincent Whipple Cultural Resources Department Manager, project is in Luiseno Aboriginal Territory but not within Rincon's boundaries, they defer to Pechanga or Soboba who are both closer to project.
<b>Luiseno</b>	Tribal Council, San Luis Rey Band of Mission Indians	<ul style="list-style-type: none"> <li>• USPS Letter</li> <li>• Phone</li> </ul>	1/7/2016 1/22/2016	No response to letter. Spoke with Cami Mojado, project is not in their tribal area, San Luis Rey defers and recommends the agency consult with nearest tribal band.
<b>Luiseno</b>	Mark Macarro, Chairperson, Pechanga Band of Mission Indians	<ul style="list-style-type: none"> <li>• USPS Letter</li> <li>• Phone</li> </ul>	1/7/2016 1/22/2016	No response to letter. Left message with admin assistant (Sally), she will pass the info on to the legal department and they will contact us if they have any concerns.
<b>Luiseno</b>	Thomas Rodrigues, Chairperson, La Jolla Band of Mission Indians	<ul style="list-style-type: none"> <li>• USPS Letter</li> <li>• Phone</li> </ul>	1/7/2016 1/22/2016	No response to letter. Left voicemail message.
<b>Luiseno, Cahuilla</b>	Rosemary Morillo, Chairperson, Soboba Band of Mission Indians	<ul style="list-style-type: none"> <li>• USPS Letter</li> <li>• Phone</li> </ul>	1/7/2016 1/22/2016	No response to letter. Left voicemail message.
<b>Luiseno, Cupeno</b>	Shasta Gaughen, THPO, Pala Band of Mission Indians	<ul style="list-style-type: none"> <li>• USPS Letter</li> <li>• Phone</li> </ul>	1/7/2016 1/22/2016	Email response received 1/27/2016. The project is outside the tribal boundaries. No objection and they defer to the tribes closer to the project
<b>Luiseno, Cupeno</b>	Robert H. Smith, Chairperson, Pala band of Mission Indians	<ul style="list-style-type: none"> <li>• USPS Letter</li> <li>• Phone</li> </ul>	1/7/2016 1/22/2016	No response to letter. Left message with assistant. See response from Shasta above.

# APPENDIX D

## Geotechnical Investigation Report

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL





# Geotechnical Investigation Report

Kitching Street Electrical Substation  
NW Corner of Kitching Street and Edwin Road  
Moreno Valley, California

Prepared for:

City of Moreno Valley - Project No. 805-0027  
14177 Frederick Street  
Moreno Valley, CA 92553

December 21, 2015  
Project No.: 150817.3

December 21, 2015  
Project No. 150817.3

Mr. Clement Jimenez  
Senior Engineer, P.E.  
Financial & Management Services  
City of Moreno Valley  
14177 Frederick Street  
Moreno Valley, CA 92553

Subject: Geotechnical Investigation Report  
Kitching Street Electrical Substation  
NW Corner of Kitching Street and Edwin Road  
Moreno Valley, California

Dear Mr. Jimenez:

In accordance with your request and authorization, we are presenting our Geotechnical Investigation report for the proposed Kitching Street Electrical Substation in Moreno Valley, California. The purpose of this investigation has been to evaluate the subsurface conditions at the site and to provide preliminary geotechnical engineering and engineering geology recommendations for the proposed project.

Based on our findings, the proposed project is geotechnically feasible, provided that the recommendations in this report are incorporated into the design and are implemented during construction of the project.

We appreciate the opportunity to be of service on this project. Should you have any questions regarding this report or if we can be of further service, please do not hesitate to contact the undersigned.

Respectfully submitted,  
**TWINING, INC.**

Andres Bernal, RCE 62366, GE 2715  
Sr. Geotechnical Engineer

Richard S. Hazen, PG 4371, CEG 1712  
Principal Engineering Geologist

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Sr. Staff Engineer

AB/AM/RSH/ln

Distribution: (1) Addressee



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## 1. INTRODUCTION

This report presents the results of the geotechnical engineering and engineering geology evaluation performed by Twining, Inc. (Twining) for the proposed Kitching Street Electrical Substation in Moreno Valley, California. Descriptions of the site and the proposed development are provided in the following section. Our geotechnical evaluation was performed in conformance with Chapter 18 of Title 24, Part 2, Volume 2 of the 2013 California Building Code (CBC). The objectives of this study were to evaluate the subsurface conditions of the site, and to provide geotechnical engineering and engineering geology recommendations for the design and construction of the proposed development, including recommendations for foundations and earthwork.

## 2. SITE DESCRIPTION AND PROPOSED DEVELOPMENT

The project site consists of a square parcel limited to the north by Moreno Valley Tow, to the east by Kitching Street, to the south by Edwin Road and to the west by a junkyard in Moreno Valley, California. A water reclamation facility of the Eastern Municipal Water District (EMWD) is located to the east of the site across Kitching Street. The proposed substation will be constructed in an L-shaped section of the parcel occupying approximately 44,300 square feet as depicted on Figure 1, Site Location Map. The approximate substation coordinates are latitude 33.8721°N and longitude 117.2182°W. The site is relatively level, with surface elevations varying from approximate El. 1,472 feet above mean sea level (msl) in the northwest corner to El. 1,470 feet msl at the southeast corner. Drainage at the site is directed to the southeast. The site is currently vacant with low vegetation consisting of grass, weeds and shrubs. As part of this project, Twining will provide design recommendations for the widening of Kitching Street and paving of Edwin Road which is currently unpaved.

Based on information provided by the City, the project consists of a new 115kV/12kV substation with a single overhead 115kV interconnection and ten 12 kV underground feeders. The 115kV interconnection with Southern California Edison will occur at the adjoining proposed switchyard for which Twining is also providing a geotechnical investigation report. The substation is currently being designed and detailed project plans were not available for our review at the time of this report.

## 3. SCOPE OF SERVICES

Our scope of services for this project consisted of the following:

- We reviewed readily available background data including previous geotechnical reports for the site vicinity. We also reviewed in-house geotechnical data, geologic maps, topographic maps, and aerial photographs relevant to the subject site.
- We performed a geotechnical site reconnaissance in order to observe the general surface conditions at the site and to select exploratory locations. After the planned locations were delineated, Underground Service Alert (USA) was notified a minimum of 48 hours prior to excavation.
- We performed a subsurface evaluation, including the excavation, logging, and sampling of seven exploratory hollow-stem auger borings. We obtained samples of earth materials from the borings and transported them to our in-house laboratory for examination and testing.

- We excavated five hand-auger borings to evaluate the existing pavement sections on Kitching Street and Edwin Road and sampled the subgrade materials for use in pavement design.
- Our subcontractor, Southwest Geophysics, performed an electrical resistivity survey of the substation site.
- We performed laboratory testing on selected samples of earth materials in order to evaluate the geotechnical engineering properties of the on-site soils.
- We compiled and analyzed the data collected from our site reconnaissance, subsurface evaluation, and laboratory testing. Specifically, our analyses included the following:
  - Evaluation of general subsurface conditions and description of types, distribution, and engineering characteristics of subsurface materials;
  - Evaluation of geologic hazards and engineering seismology, including evaluation of fault rupture hazard, seismic shaking hazard, liquefaction and seismic settlement potential;
  - Evaluation of seismic design parameters in accordance with 2013 California Building Code;
  - Evaluation of current and historical groundwater conditions at the site and potential impact on design and construction;
  - Evaluation of expansion potential of the on-site soils;
  - Evaluation of project feasibility and suitability of on-site soils for foundation support;
  - Development of general recommendations for earthwork, including requirements for placement of compacted fill;
  - Evaluation of design parameters for shallow and deep foundations, estimated settlement, and lateral resistance;
  - Recommendations for concrete slab-on-grade support;
  - Recommendations for temporary excavations;
  - Evaluation of existing pavement sections and pavement design recommendations; and,
  - Evaluation of the potential for the on-site materials to corrode buried concrete and metals.
- We prepared this report to present the work performed and data acquired and summarize our conclusions and geotechnical recommendations for the design and construction of the proposed improvements.

#### 4. FIELD EXPLORATION AND LABORATORY TESTING

##### 4.1. Field Exploration

Our subsurface exploration was conducted on November 18 and 19, 2015. The subsurface conditions were evaluated by advancing seven 8-inch-diameter hollow-stem auger borings at various locations across the subject site. The borings were advanced to approximate depths ranging from 26½ to 51½ feet below existing ground surface (bgs) using a CME-55 truck-mounted drill rig. Driven samples of the soil were obtained using Standard Penetration Test (SPT) and modified California split spoon

samplers. The samplers were driven using a 140-pound, automatic-drop hammer falling approximately 30 inches. The blow counts were recorded, and the materials encountered in the borings were logged by our field personnel. In addition, we advanced five hand-augered cores/borings to a depth of 3 feet for pavement evaluation of Kitching Street and Edwin Road. Upon completion of drilling, the borings were backfilled by the drilling subcontractor using soil derived from the cuttings. The approximate locations of the borings are shown on Figure 2, Boring Location Map. The boring logs are presented in Appendix A, Field Exploration.

#### **4.2. Electrical Resistivity Survey**

Our subcontractor, Southwest Geophysics, performed a geophysical survey on November 6, 2015 for the proposed electrical substation located at the corner of Kitching Street and Edwin Road in Moreno Valley, California. The purpose of their services was to collect in-situ electrical resistivity measurements for use in the design and construction of the proposed Substation. The electrical resistivity report including the survey methodology, equipment used, analysis, and results is presented in Appendix D.

#### **4.3. Laboratory Testing**

Laboratory tests were performed on selected samples obtained from the borings in order to aid in the soil classification and to evaluate the engineering properties of the foundation soils. Laboratory tests included in-situ moisture content and dry density, grain size analysis, Atterberg limits, expansion index, maximum density and optimum moisture content, direct shear, consolidation, R-value, and soil corrosivity. The in-situ moisture content and dry density data are presented on the boring logs in Appendix A. The remaining laboratory test results are presented in Appendix B.

### **5. GEOLOGY AND SUBSURFACE CONDITIONS**

Our discussion of the geologic conditions at the site is based on our current field exploration and review of available geotechnical and geologic literature. Our findings regarding regional and local geology, including faulting, seismicity, and groundwater conditions at the subject site are provided in the following sections.

#### **5.1. Regional Geologic Setting**

The project area is situated within the Peninsular Ranges Geomorphic Province. This geomorphic province encompasses an area that extends approximately 900 miles from the Transverse Ranges and the Los Angeles Basin to the southern tip of Baja California (Norris and Webb, 1990; Harden, 1998). The materials within the project area are characterized by Pliocene - Pleistocene alluvium ranging from relatively thin (20 feet to 200 feet) to intermediate thickness (up to 2,000 feet).

The site is located in the Perris Valley at an elevation of approximately 1,470 feet above mean sea level (USGS, 1967). The topography slopes to the east-southeast, towards an ancient riverbed that now contains the Perris Valley Storm Drain. The San Jacinto River is located approximately five miles to the south-southeast. The Bernasconi Hills are located approximately 2.8 miles to the east of the Site. In this area of the Perris Valley, surficial deposits consist of young alluvial-valley deposits (Qyv) and very old alluvial-fan deposits (Qvof). The Qyv is comprised of gray and brown, unconsolidated silty to sandy alluvium that are Holocene and late Pleistocene in age. The Qvof is comprised of well-dissected, well-indurated, reddish brown sands that are early Pleistocene in age. To the east are exposures of the underlying bedrock, which consist of granitic rocks (Khg) (Morton, 2003). The regional geology is presented in Figure 3, Regional Geologic Map.

The Peninsular Ranges Province is traversed by a group of sub-parallel faults and fault zones trending roughly northwest-southeast. Several of these faults, which are shown on Figure 4, Fault Location Map are considered active including the San Jacinto and San Andreas faults located northeast of the project area, and the Elsinore fault located southwest of the project area. Major tectonic activity associated with these and other faults within this regional tectonic framework consists of strike-slip thrust and reverse movement.

## 5.2. Site Geology

Geologic units encountered during our subsurface evaluation consisted of young alluvial deposits and very old alluvial fan deposits. The young alluvial deposits are described in the Geologic Map of San Bernardino and Santa Ana as unconsolidated to moderately consolidated silt, sand, pebbly cobbly sand, and bouldery deposits having slightly to moderately dissected surfaces. Very old alluvial fan deposits consisting of moderately to well consolidated silt, sand, gravel, and conglomerate are anticipated to underlie the project area. Detailed descriptions of the earth materials encountered in the exploratory borings are presented in Appendix A. The near-surface geology is shown on Figure 2, Exploration Location and Geologic Map. Cross sections depicting the project limits and geologic units underlying the site are presented in Figures 5A and 5B. The following section provides a generalized description of the materials encountered.

### 5.2.1. Young Alluvial Valley Deposits (Qyv)

Young alluvial valley deposits were encountered in all exploratory borings to depths of approximately 20 feet bgs. The young alluvial materials generally consisted of light brown to brown, loose to dense, dry to moist, sandy silt to silty sand and clayey sand with some gravel.

### 5.2.2. Very Old Alluvial Fan Deposits (Qvof)

Very old alluvial fan deposits were encountered in all exploratory borings to depths of approximately 51½ feet bgs. The alluvial materials generally consisted of reddish brown to brown, medium dense to very dense, wet to saturated, sandy silt to silty sand and clayey sand with some gravel.

## 5.3. Groundwater

Groundwater was encountered at approximate depths of 25 to 27 feet below ground surface (bgs) in the exploratory borings corresponding to Elevation 1445 feet (msl). Based on our review of State of California Department of Water Resources data for a well located within the adjacent EMWD facility, the historical high groundwater level was located at Elevation 1448 feet (msl). For liquefaction analyses presented below, we have applied the historical high groundwater at Elevation at 1448 feet (msl). Groundwater conditions may vary across the site due to stratigraphic and hydrologic conditions, and may change over time as a consequence of seasonal and meteorological fluctuations, or of activities by humans at this and nearby sites.

## 5.4. Geologic Hazard Zones

Based on our review of the City of Moreno Valley General Plan (2006) and the State of California Seismic Hazards Zones Map (California Department of Conservation, Division of Mines and Geology, 1999), the site is not located within a zone of required investigation for liquefaction. A portion of the Seismic Hazard Zones Map is reproduced as Figure 6, Geologic Hazards Map. Liquefaction hazard is discussed further in Sections 6.4 and 6.5, below.

**5.5. Rippability**

Based on our subsurface exploration, the onsite alluvial materials should be generally excavatable with heavy-duty earthwork equipment in good working condition.

**5.6. Caving Potential**

Due to the granular nature of the materials onsite and the presence of groundwater, caving during trench excavations and drilling of piers should be anticipated. Shoring is recommended for trench excavations. Drilling mud or casing may be needed to stabilize drilled holes for piers.

**5.7. Expansive Soils**

Expansive soils are characterized by their ability to undergo significant volume changes (shrink or swell) due to variations in moisture content. According to our laboratory testing, the near-surface materials encountered at the site exhibit very low expansion potential. However, expansive clays and silts may be encountered if excavations extend below an approximate depth of 20 feet. If encountered, it is recommended that expansive soils be segregated and transported offsite for disposal.

**6. ENGINEERING SEISMOLOGY AND DESIGN**

The subject site is not located within a State of California Earthquake Fault Zone (formerly known as an Alquist-Priolo Special Studies Zone (Hart and Bryant, 1997). However, the site is located in a seismically active area, as is the majority of southern California, and the potential for strong ground motion in the project area is considered high during the design life of the proposed structure. The hazards associated with seismic shaking at the site are discussed in the following sections.

**6.1. Active Faulting**

Active faults are defined as those that have experienced surface displacement within Holocene time (approximately the last 11,000 years). The nearest known active fault corresponds to the San Jacinto Valley (Anza segment) fault system located approximately 6 miles northeast of the site. This system has the potential to be the dominant source of strong ground motion. Table 1 lists selected known active faults within a search radius of 80 km (50 miles), approximate fault-to-site distances, maximum moment magnitude ( $M_{max}$ ), and fault type as published by the 2008 USGS National Seismic Hazard Maps website (USGS, 2008b). The approximate site location relative to the major faults in the southern California region is presented in Figure 4, Fault Location Map.

**Table 1  
Principal Active Faults**

Fault	Fault to Site Distance (miles) <sup>1</sup>	Maximum Moment Magnitude ( $M_{max}$ ) <sup>2</sup>	Fault Type
San Jacinto Valley (Anza segment)	6.4	7.0	A
San Jacinto (San Jacinto Valley segment)	6.6	7.0	A
San Jacinto (San Bernardino segment)	10.1	7.1	A
Elsinore (Glen Ivy segment)	15.7	6.9	A
Elsinore (Temecula segment)	17.2	7.1	A

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**Table 1 (continued)**  
**Principal Active Faults**

Fault	Fault to Site Distance (miles) <sup>1</sup>	Maximum Moment Magnitude ( $M_{max}$ ) <sup>2</sup>	Fault Type
San Andreas (San Bernardino South segment)	17.4	6.9	A
San Andreas (San Bernardino North segment)	19.2	6.9	A
Chino, alt 2	20.3	6.8	B
Elsinore (Whittier segment)	21.6	7.0	A
Chino, alt 1	21.9	6.7	B
Cucamonga	24.8	6.7	B
Cleghorn	27.8	6.8	B
North Frontal (West)	30.8	7.2	B
Pinto Mountain	31.2	7.3	B
San Jose	31.9	6.7	B
San Joaquin Hills	32.4	7.1	B
Sierra Madre	34.6	7.2	B
Southern San Andreas (Mojave South segment)	36.0	7.3	A
Puente Hills (Coyote Hills)	37.4	6.9	B
Elsinore (Julian segment)	38.5	7.4	A
Helendale - South Lockhart	38.8	7.4	B
North Frontal (East)	40.0	7.0	B
Newport-Inglewood (offshore segment)	41.7	7.0	B
Clamshell-Sawpit	44.1	6.7	B
Newport-Inglewood (alt. 1)	45.0	7.2	B
Puente Hills (Santa Fe Springs)	46.2	6.7	B
Lenwood-Lockhart-Old Woman Springs	46.6	7.5	B
Burnt Mountain	47.7	6.8	B
San Jacinto (connected)	48.4	7.8	A
Raymond	48.7	6.8	B
Landers	50.0	7.4	B
Notes: <sup>1</sup> United States Geological Survey (2008b)			
<sup>2</sup> Ellsworth Relation, United States Geological Survey (2008b)			

## 6.2. Surface Fault Rupture

Based on our field observations and review of published geologic literature, active faults do not pass through or near the site, nor do the surface traces of any known active or potentially active faults project towards the site. Therefore, the likelihood of fault rupture occurring at the site during the design life of the proposed improvements is considered to be low. The greatest seismic hazard likely to affect the site is seismic shaking which is accommodated for in our seismic design parameters presented in this report.



### 6.3. Liquefaction

Liquefaction is the phenomenon in which loosely deposited granular soils with silt and clay contents of less than approximately 35 percent, and non-plastic silts located below the water table undergo rapid loss of shear strength when subjected to strong earthquake-induced ground shaking. Ground shaking of sufficient duration results in the loss of grain-to-grain contact due to a rapid rise in pore water pressure and causes the soil to behave as a fluid for a short period of time. Based on the presence of granular alluvial deposits and the shallow groundwater level, the project site is considered potentially liquefiable. Evaluation of the seismic settlement due to liquefaction is presented in Section 6.6.

### 6.4. Landslides

Based on our review of the referenced geologic maps, literature, topographic maps, aerial photographs, and our subsurface evaluation, no landslides or related features underlie or are adjacent to the subject site. Due to the relatively level nature of the site and surrounding areas, the potential for landslides at the project site is considered negligible.

### 6.5. Flooding, Seiches and Tsunamis

The Federal Emergency Management Agency (FEMA) has prepared flood insurance rate maps (FIRMs) for use in managing the National Flood Insurance Program. An excerpt of the flood insurance rate map covering the project site is presented in Figure 8, FEMA FIRM Map. Based on our review of the FEMA flood map (United States Federal Emergency Management Agency, 2009b), the site is subject to flooding by the 0.2% annual chance (500-year) flood.

Seiches are standing wave oscillations of an enclosed water body after the original driving force has dissipated. The potential for the site to be adversely impacted by earthquake-induced seiches is considered to be negligible due to the lack of any significant enclosed bodies of water located in the vicinity of the site.

### 6.6. Seismic Settlement Potential

Seismic settlement can occur when loose to medium dense granular materials densify during seismic shaking and liquefaction. Seismically-induced settlement may occur in dry, unsaturated, as well as saturated soils. Liquefaction is generally known to occur in loose, saturated, relatively clean, fine-grained cohesionless soils at depths shallower than approximately 50 feet. Factors to consider in the evaluation of soil liquefaction potential include groundwater conditions, soil type, grain size distribution, relative density, degree of saturation, and both the intensity and duration of ground motion. Other phenomena associated with soil liquefaction include sand boils, ground oscillation, and loss of foundation bearing capacity.

Liquefaction analyses were performed in accordance with the National Center for Earthquake Engineering Research (NCEER) procedure by Youd et al., (2001) using the computer program LiquefyPro (Civiltech, 2012b) and the site data obtained from our boring B-5. The analyses considered an earthquake moment magnitude of 7.58, peak ground acceleration  $PGA_M$  of 0.527g, and a historic high groundwater level at 22 feet depth. Our analyses indicate that liquefaction may occur at localized layers within the 50-foot soil column.

Based on our analyses, the estimated liquefaction-induced ground settlement at the site is less than 1/4 inch during a seismic event as shown in Appendix C, Figures C-1 through C-3. It is anticipated that differential seismic settlement at the site will be negligible.

**6.7. CBC Seismic Design Parameters**

Our recommendations for seismic design parameters have been developed in accordance with 2013 CBC and ASCE 7-10 (ASCE, 2010) standards. Based on the results of our field investigation, the applicable Site Class is D, consisting of a stiff soil profile with average SPT N between 15 and 50 blows per foot. Table 2 presents the seismic design parameters for the site in accordance with 2013 CBC and mapped spectral acceleration parameters (United States Geological Survey, 2011).

**Table 2  
2013 California Building Code Design Parameters**

Design Parameters	Value
Site Class	D
Mapped Spectral Acceleration Parameter at Period of 0.2-Second, $S_s$	1.500g
Mapped Spectral Acceleration Parameter at Period 1-Second, $S_1$	0.600g
Site Coefficient, $F_a$	1.0
Site Coefficient, $F_v$	1.5
Adjusted $MCE_R^1$ Spectral Response Acceleration Parameter at Short Period, $S_{MS}$	1.500g
1-Second Period Adjusted $MCE_R^1$ Spectral Response Acceleration Parameter, $S_{M1}$	0.900g
Short Period Design Spectral Response Acceleration Parameter, $S_{DS}$	$2/3 S_{MS} = 1.000g$
1-Second Period Design Spectral Response Acceleration Parameter, $S_{D1}$	$2/3 S_{M1} = 0.600g$
Peak Ground Acceleration, $PGA_M^2$	0.527g
Seismic Design Category	D
Notes: <sup>1</sup> Risk-Targeted Maximum Considered Earthquake <sup>2</sup> Peak Ground Acceleration adjusted for site effects	

**7. DESIGN RECOMMENDATIONS**

Based on the results of the field exploration and engineering analyses, it is our opinion that the proposed construction is feasible from a geotechnical standpoint, provided that the recommendations in this report are incorporated into the design plans and are implemented during construction.

Our geotechnical engineering analyses performed for this report were based on the earth materials encountered during the subsurface exploration for the site. If the design substantially changes, then our geotechnical engineering recommendations would be subject to revision based on our evaluation of the changes. The following sections present our conclusions and recommendations pertaining to the engineering design for this project.

**7.1. Earthwork and Site Preparation**

In general, earthwork should be performed in accordance with the recommendations presented in this report. Twining should be contacted for questions regarding the recommendations or guidelines presented herein.

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### 7.1.1. Site Preparation

Site preparation should begin with the removal of utility lines, asphalt, concrete, vegetation, and other deleterious debris from areas to be graded. Tree stumps and roots should be removed to such a depth that organic material is generally not present. Clearing and grubbing should extend to the outside edges of the proposed excavation and fill areas. We recommend that unsuitable materials such as organic matter or oversized material be selectively removed and disposed offsite. The debris and unsuitable material generated during clearing and grubbing should be removed from areas to be graded and disposed at a legal dump site away from the project area.

### 7.1.2. Removals and Overexcavation

The upper portion of the alluvial soils is considered compressible and not suitable for support of the building slab in its present condition. Therefore, for support of equipment pads and building slabs we recommend removal of loose alluvial soils to a depth of 5 feet from existing grade or 2 feet below the bottom of footing elevation, whichever is deeper, extending at least 5 feet outside the building envelope. The extent and depths of removal should be evaluated by Twining's representative in the field based on the materials exposed. Additional removals may be recommended if excessively loose or soft soils are exposed during grading.

### 7.1.3. Materials for Fill

On-site soils with "low" expansion potential (expansion index of 50 or less) and organic content of less than 3 percent by volume (or 1 percent by weight) are suitable for use as fill. Soil material to be used as fill should not contain contaminated materials, rocks, or lumps over 4 inches in largest dimension, and not more than 40 percent larger than ¾ inch. Utility trench backfill material should not contain rocks or lumps over 3 inches in largest dimension. Larger chunks, if generated during excavation, may be broken into acceptably sized pieces or may be disposed offsite. Any imported fill material should have a "very low" expansion potential (expansion index of 20 or less) granular soil. Import material should also have low corrosion potential (chloride content less than 500 parts per million [ppm], soluble sulfate content of less than 0.1 percent, and pH of 5.5 or higher). Materials to be used as fill should be evaluated by a Twining representative prior to importing or filling. Expansive soil cuttings generated from drilling operations will not be suitable as fill below structures, pavements or flatwork and should be exported offsite.

### 7.1.4. Compacted Fill

Prior to placement of compacted fill, the contractor should request an evaluation of the exposed ground surface by Twining. Unless otherwise recommended, the exposed ground surface should then be scarified to a depth of approximately 8 inches and watered or dried, as needed, to achieve generally consistent moisture contents at or near the optimum moisture content. The scarified materials should then be compacted to 90 percent relative compaction in accordance with the latest version of ASTM Test Method D1557. The evaluation of compaction by Twining should not be considered to preclude any requirements for observation or approval by governing agencies. It is the contractor's responsibility to notify Twining and the appropriate governing agency when project areas are ready for observation, and to provide reasonable time for that review.

Fill materials should be moisture conditioned to near optimum moisture content prior to placement. The optimum moisture content will vary with material type and other factors. Moisture conditioning of fill soils should be generally consistent within the soil mass. Prior to placement of additional compacted fill material following a delay in the grading operations, the exposed surface of

previously compacted fill should be prepared to receive fill. Preparation may include scarification, moisture conditioning, and recompaction.

Compacted fill should be placed in horizontal lifts of approximately 6 to 8 inches in loose thickness. Prior to compaction, each lift should be watered or dried as needed to achieve near optimum moisture condition, mixed, and then compacted by mechanical methods, using sheepsfoot rollers, multiple-wheel pneumatic-tired rollers, or other appropriate compacting rollers, to a relative compaction of 90 percent as evaluated by the latest version of ASTM D1557. Successive lifts should be treated in a like manner until the desired finished grades are achieved.

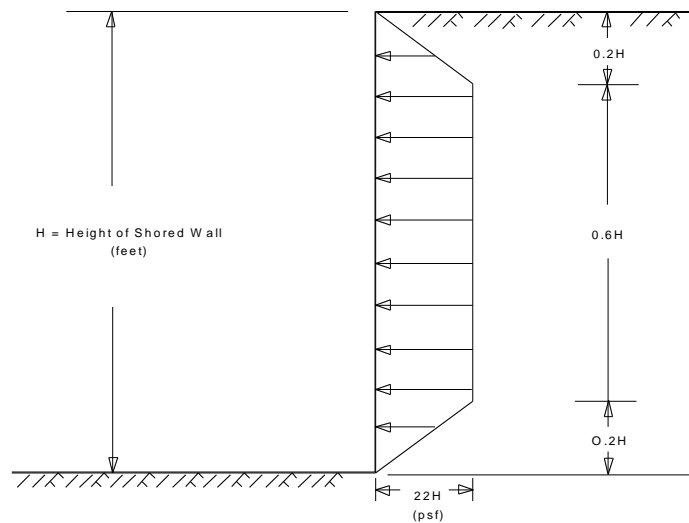
#### 7.1.5. Excavations and Shoring

CalOSHA regulations provide trench sloping and shoring design parameters for trenches up to 20 feet deep based on a description of the soil types encountered. Trenches over 20 feet deep should be designed by the contractor's engineer based on site-specific geotechnical analyses. For planning purposes, we recommend that OSHA Type C soil classification be used for excavations in artificial fill and alluvial deposits. Upon making the excavations, the soil classification and excavation performance should be evaluated in the field by Twining in accordance with OSHA regulations. For trench or other temporary excavations, OSHA requirements regarding personnel safety should be met by laying back the slopes to a gradient no steeper than 1.5:1 (horizontal:vertical) for fill and alluvial materials.

Where sloped excavations are created, the tops of the slopes should be barricaded so that vehicles and storage loads do not encroach within 10 feet of the tops of the excavated slopes. A greater setback may be necessary when considering heavy vehicles, such as concrete trucks and cranes. Twining should be advised of such heavy vehicle loadings so that specific setback requirements can be established. If the temporary construction slopes are to be maintained during the rainy season, berms are recommended to be graded along the tops of the slopes in order to prevent runoff water from entering the excavation and eroding the slope faces. We recommend that excavated areas be backfilled as soon as practicable. The stability of the excavations decreases over time as the soil dries and weathers.

For vertical excavations less than approximately 15 feet in height, cantilevered shoring may be used. For design of cantilevered shoring, a triangular distribution of lateral earth pressure may be used. It may be assumed that the drained soils, with a level surface behind the cantilevered shoring, will exert an equivalent fluid pressure of 35 pcf.

Tied-back or braced shoring should be designed to resist a trapezoidal distribution of lateral earth pressure. The recommended pressure distribution, for the case where the grade is level behind the shoring, is illustrated in the following diagram with the maximum pressure equal to 22H in psf, where H is the height of the shored wall in feet.



Any surcharge (live, including traffic, or dead load) located within a 1:1 plane drawn upward and outward from the base of the shored excavation, including adjacent structures, should be added to the lateral earth pressures. The lateral contribution of a uniform surcharge load located immediately behind the temporary shoring may be calculated by multiplying the vertical surcharge pressure by 0.35. Lateral load contributions of surcharges located at a distance behind the shored wall may be provided once the load configurations and layouts are known. As a minimum, a 300 psf vertical uniform surcharge is recommended to account for nominal construction and/or traffic loads.

#### 7.1.6. Excavation Bottom Stability

We anticipate that the bottoms of the excavations will be stable. If encountered, unstable bottom conditions may be mitigated by overexcavation of the bottom by approximately 10 inches and replacement with a 10-inch layer of crushed aggregate base on top of Tensar TX130 geogrid or similar material. Recommendations for stabilizing excavation bottoms should be based on evaluation in the field by the geotechnical consultant at the time of construction.

#### 7.1.7. Construction Dewatering

Although not anticipated, dewatering measures may be necessary during excavation operations. If needed, considerations for construction dewatering should include anticipated drawdown, volume of pumping, potential for settlement of nearby structures, and groundwater discharge. Disposal of groundwater should be performed in accordance with guidelines of the Regional Water Quality Control Board.

## 7.2. Foundation System

Based upon the recommended removal and recompaction of alluvial materials, the proposed structure may be supported on continuous strip or isolated footings designed in accordance with the recommendations presented below.

**7.2.1. Shallow Foundations**

Based on our understanding of the project, it is anticipated that the proposed equipment pads and structures will be supported on continuous strip or isolated footings designed using the geotechnical design parameters presented in Table 3. Footings should be reinforced in accordance with the recommendations of the structural engineer and should conform to the 2013 California Building Code.

**Table 3  
Geotechnical Design Parameters for Continuous and Isolated Spread Footings**

<b>Minimum Footing Dimensions</b>	<ul style="list-style-type: none"> <li>• At least 12 inches in width and 18 inches in depth for continuous footings.</li> <li>• At least 24 inches in width and 24 inches in depth for square footings.</li> </ul>
<b>Allowable Bearing Pressure</b>	<ul style="list-style-type: none"> <li>• Footings should be supported on compacted fill.</li> <li>• For foundations with the minimum dimensions shown above, an allowable bearing pressure of 2,500 pounds per square foot (psf) can be used.</li> <li>• Bearing capacity may be increased 250 psf for each additional foot of width, and 500 psf for each additional foot of depth to a maximum allowable capacity of 3,000 psf.</li> <li>• The allowable bearing values may be increased by one-third for transient live loads from wind or earthquake.</li> </ul>
<b>Estimated Total and Differential Static Settlement</b>	<ul style="list-style-type: none"> <li>• Approximately 1 inch of total static settlement. Differential settlement approximately ½ inch over 40 feet, which will occur during construction.</li> </ul>
<b>Coefficient of Friction</b>	<ul style="list-style-type: none"> <li>• 0.35 (soil/concrete)</li> </ul>
<b>Unfactored Lateral Passive Resistance</b>	<ul style="list-style-type: none"> <li>• 200 pcf (equivalent fluid pressure)</li> </ul>
<p>Note: The total allowable lateral resistance can be taken as the sum of the friction resistance and passive resistance, provided that the passive resistance does not exceed two-thirds of the total allowable resistance.</p>	

**7.3. Concrete Slabs**

Slabs should be supported at grade on engineered fill in accordance with the recommendations of this report. For design of concrete slabs, a modulus of subgrade reaction (*k*) of 150 pounds per cubic inch (pci) may be used for slabs on compacted, engineered fill.

Floor slabs should be designed and reinforced in accordance with the structural engineer’s recommendations. However, for slabs not supporting heavy loads, we recommend that the concrete should have a thickness of at least 4 inches, a 28-day compressive strength of at least 3,000 pounds per square inch (psi), a water-cement ratio of 0.50 or less, and a slump of 4 inches or less. Slabs should be reinforced with at least No. 3 reinforcing bars placed longitudinally at 18 inches on center.

The reinforcement should be extended through the control joints to reduce the potential for differential movement. Control joints should be constructed in accordance with recommendations from the structural engineer or architect. For slabs supporting equipment, a minimum thickness of 5 inches is recommended. Additional thickness and reinforcement recommendations may be provided by the structural engineer.

The topmost 8 inches below the slab subgrade should be maintained in a moisture condition of approximately 0 to 2 percent above optimum moisture content. The slab subgrade should be tested for moisture and compaction immediately prior to placement of the gravel or sand base, if any. All underslab materials should be adequately compacted prior to the placement of concrete. Care should be taken during placement of the concrete to prevent displacement of the underslab materials. The underslab material should be dry or damp and should not be saturated prior to the placement of concrete. The concrete slab should be allowed to cure properly and should be tested for moisture transmission prior to placing vinyl or other moisture-sensitive floor covering.

Table 4 provides recommendations for various levels of protection against vapor transmission through concrete floor slabs placed over a properly prepared subgrade. Care should be taken not to puncture the plastic membrane during placement of the membrane itself and the overlying silty sand.

The recommendations presented below are intended to reduce the potential for cracking of slabs; however, even with the incorporation of the recommendations presented herein, slabs may still exhibit some cracking. The occurrence of concrete shrinkage cracks is independent of the supporting soil characteristics.

**Table 4**  
**Options for Subgrade Preparation below Concrete Floor Slabs**

Primary Objective	Recommendation
<p><b>Enhanced protection against vapor transmission</b></p>	<ul style="list-style-type: none"> <li>• Concrete floor slab-on-grade placed directly on a 15-mil-thick moisture vapor retarder that meets the requirements of ASTM E1745 Class C (Stego Wrap or similar)</li> <li>• The moisture vapor retarder membrane should be placed directly on the subgrade (ACI302.1R-67); if required for either leveling of the subgrade or for protection of the membrane from protruding gravel, then place about 2 inches of silty sand<sup>1</sup> under the membrane</li> </ul>
<p><b>Above-standard protection against vapor transmission</b></p>	<p>This option is available if the slab perimeter is bordered by continuous footings at least 24 inches deep, OR if the area adjacent and extending at least 10 feet from the slab is covered by hardscape without planters:</p> <ul style="list-style-type: none"> <li>• 2 inches of dry silty sand<sup>1</sup>; over</li> <li>• Waterproofing plastic membrane 10 mils in thickness; over</li> <li>• At least 4 inches of ¾-inch crushed rock<sup>2</sup> or clean gravel<sup>3</sup> to act as a capillary break</li> </ul>

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**Table 4 (continued)**  
**Options for Subgrade Preparation below Concrete Floor Slabs**

Primary Objective	Recommendation
<b>Standard protection against vapor transmission</b>	<ul style="list-style-type: none"> <li>• 2 inches of dry silty sand<sup>1</sup>; over</li> <li>• Waterproofing plastic membrane 10 mils in thickness</li> <li>• If required for either leveling of the subgrade or for protection of the membrane from protruding gravel, place at least 2 inches of silty sand<sup>1</sup> under the membrane.</li> </ul>
<p>Notes:</p> <p><sup>1</sup> The silty sand should have a gradation between approximately 15 and 40 percent passing the No. 200 sieve and a plasticity index of less than 4. The on-site sandy soils appear to meet these criteria.</p> <p><sup>2</sup> The ¾-inch crushed rock should conform to Section 200-1.2 of the latest edition of the “Greenbook” Standard Specifications for Public Works Construction (Public Works Standards, Inc., 2012).</p> <p><sup>3</sup> The gravel should contain less than 10 percent of material passing the No. 4 sieve and less than 3 percent passing the No. 200 sieve.</p>	

**7.3.1. Light Pole Foundations**

Light poles may be supported on 18-inch diameter or larger drilled piers extending at least four feet below finish grade. Axial capacity can be calculated using allowable shaft friction of 200 psf. A lateral bearing pressure of 200 psf/ft may be used for design.

**7.4. Retaining Walls**

**7.4.1. Lateral Earth Pressure**

For retaining walls less than 6 feet in height, the following recommendations can be used for structural design. The values presented below assume that the supported grade is level and that surcharge loads are not applied. The recommended design lateral earth pressure is calculated assuming that a drainage system will be installed behind the retaining walls and that external hydrostatic pressure will not develop behind the walls.

Walls that are supporting earth that has adequate drainage, and are restrained against rotation at the top (such as by a floor deck), may be designed for the “at-rest” earth pressure equivalent to a fluid weighing 55 pcf. For walls that are free to rotate at the top (such as cantilevered walls), the lateral earth pressure may be designed for the “active” equivalent fluid pressure of 35 pcf. Where adequate drainage is not provided behind walls, further evaluation should be conducted by the geotechnical engineer.

Vertical surcharge loads within a 1:1 (horizontal:vertical) projection upward from the bottom of the wall distributed over retained soils should be considered as additional uniform horizontal pressure acting on the wall. The additional horizontal pressure acting on the wall can be estimated as approximately 35% and 50% of the magnitude of the vertical surcharge pressure for the “active” and “at-rest” conditions, respectively. All permanent surcharge loading conditions should be evaluated on a case-by-case basis by the geotechnical engineer. For walls taller than 6 feet in

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height, detailed wall information should be reviewed by Twining to provide further recommendations.

#### 7.4.2. Seismic Lateral Earth Pressure

In addition to the above-mentioned static lateral earth pressures, rigid basement walls should be designed to support seismic pressure. CBC 2013 requires that foundation walls retaining more than 6 feet of soil be designed for seismic lateral earth pressure. The additional seismic pressure should be modeled as a rectangular pressure distribution with a maximum pressure equal to  $26H$  psf where  $H$  is the wall height in feet. To evaluate wall design, this pressure should be added to active earth pressure component only and does not need to be added to at-rest pressure.

#### 7.4.3. Backfill and Drainage of Walls

The backfill material behind walls should consist of granular non-expansive material and should be approved by the project geotechnical engineer. Based on the soil materials encountered during our exploration, the near surface materials include non-expansive soils that meet this requirement.

Retaining walls should be waterproofed and adequately drained in order to limit hydrostatic buildup behind walls. Wall drainage may be provided by a geosynthetic drainage composite such as TerraDrain®, MiraDrain®, or equivalent, attached to the outside perimeter of the wall. The drain should be placed continuously along the back of the wall and connected to a 4-inch-diameter perforated pipe sloped at least 1% and surrounded by 1 cubic foot per foot of ¾-inch crushed rock wrapped in suitable non-woven filter fabric (Mirafi® 140NL or equivalent). The crushed rock should meet the requirements defined in Section 200-1.2 of the latest edition of The "Greenbook" Standard Specifications for Public Works Construction (Public Works Standards, 2012). The drain should discharge through a solid pipe to an appropriate outlet.

#### 7.5. Concrete Flatwork

Exterior concrete flatwork should be 4 inches or more in thickness and should be reinforced with No. 3 reinforcing bars placed at 24 inches on-center both ways. To reduce the potential manifestation of distress to exterior concrete flatwork due to movement of the underlying soil, we recommend that such flatwork be constructed with crack control joints at 10-foot spacing or as designed by the structural engineer along with keeping pad grade soils at an elevated moisture content. Positive drainage should be established and maintained adjacent to flatwork. A uniform moisture content should be maintained throughout the year to reduce differential heave of concrete flatwork.

#### 7.6. Pavement Recommendations

As indicated in Figure 2, Boring Location Map, Twining performed five cores and hand auger borings on Kitching Street and Edwin Road to evaluate the existing pavement sections and recover samples of subgrade materials. The pavement section data and results of R-value tests performed on the subgrade materials are presented in Table 5 below. Additional details are shown in the boring logs in Appendix A.

**Table 5  
Pavement Sections and R-value Test Results**

Core Location	Street	Existing Pavement Section		Subgrade Soil	R-value
		Asphalt Concrete (inches)	Aggregate Base (inches)		
C-1	Kitching Street	5	11	Sandy Silt	16
C-2	Kitching Street	4	12		
B-9 (Bulk: 0 - 5 feet)				Sandy Silt	29
C-3	Edwin Road	NE	NE	Silty Sand	37
C-4	Edwin Road	NE	NE		
C-5	Edwin Road	NE	NE		
B-7 (Bulk: 0 - 5 feet)				Silty Sand	33
Note: NE - not encountered.					

Based on the results of R-value testing on samples of subgrade material from the site, we have used R-value of 16 and 33 for the design of new flexible pavement sections on Kitching Street and Edwin Road, respectively. Actual pavement recommendations should be based on R-value tests performed on bulk samples of soils exposed at finished subgrade elevations in areas to be paved once grading operations have been completed. For design we have used Traffic Index (TI) of 10 for industrial collector streets as indicated by the City of Moreno Valley in Table 6 below. Additional pavement section recommendations for different traffic indices can be provided by Twining if requested.

**Table 6  
Pavement Recommendations**

Street	Type	Traffic Index	Design R-value	Asphalt Concrete (inches)	Aggregate Base (inches)
Kitching Street	Industrial Collector	10.0	16	6.0	20.0
Edwin Road	Industrial Collector	10.0	33	6.0	14.0

The aggregate base and upper 12 inches of the subgrade materials should be compacted to a relative compaction of 95 percent as evaluated by ASTM D 1557. We suggest that consideration be given to using Portland cement concrete (PCC) pavements in areas where dumpsters will be stored and where buses and garbage trucks will stop and load. We recommend that in these areas, 6½ -inch thick PCC pavement with a flexural strength of 600 psi, be placed over 6 inches of aggregate base compacted to a relative compaction of 95 percent as evaluated by ASTM D 1557.

**7.7. Drainage Control**

The control of surface water is essential to the satisfactory performance of site improvements. Surface water should be controlled so that conditions of uniform moisture are maintained beneath the improvements, even during periods of heavy rainfall. The following recommendations are considered minimal:

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- Ponding and areas of low flow gradients should be avoided.
- If bare soil within 5 feet of the structure is not avoidable, then a gradient of 5 percent or more should be provided sloping away from the improvement. Corresponding paved surfaces should be provided with a gradient of at least 1 percent.
- The remainder of the unpaved areas should be provided with a drainage gradient of at least 2 percent.
- Positive drainage devices, such as graded swales, paved ditches, and/or catch basins should be employed to accumulate and to convey water to appropriate discharge points.
- Concrete walks and flatwork should not obstruct the free flow of surface water.
- Brick flatwork should be sealed by mortar or be placed over an impermeable membrane.
- Area drains should be recessed below grade to allow free flow of water into the basin.
- Enclosed raised planters should be sealed at the bottom and provided with an ample flow gradient to a drainage device. Recessed planters and landscaped areas should be provided with area inlet and subsurface drain pipes.
- Planters should not be located adjacent to the structures wherever possible. If planters are to be located adjacent to the structures, the planters should be positively sealed, should incorporate a subdrain, and should be provided with free discharge capacity to a drainage device.
- Planting areas at grade should be provided with positive drainage. Wherever possible, the grade of exposed soil areas should be established above adjacent paved grades. Drainage devices and curbing should be provided to prevent runoff from adjacent pavement or walks into planted areas.
- Gutter and downspout systems should be provided to capture discharge from roof areas. The accumulated roof water should be conveyed to off-site disposal areas by a pipe or concrete swale system.
- Landscape watering should be performed judiciously to preclude either soaking or desiccation of soils. The watering should be such that it just sustains plant growth without excessive watering. Sprinkler systems should be checked periodically to detect leakage and they should be turned off during the rainy season.

#### 7.8. Corrosion

Laboratory testing was performed on four representative samples of on-site soils to evaluate pH and electrical resistivity, as well as chloride and sulfate contents. The pH and electrical resistivity tests were performed in accordance with California Test 643 and the sulfate and chloride tests were performed in accordance with California Tests 417 and 422, respectively.

The results of corrosivity testing indicated electrical resistivity values ranging from 1,000 and 2,700 ohm-cm, soil pH values ranging from 7.6 and 7.8, chloride content ranging from 183 to 349 parts per million (ppm), and sulfate content ranging from 0.009 and 0.033 percent (i.e., 91 ppm and 337 ppm).. Based on Caltrans (2003) corrosion criteria, the onsite soils would not be classified as corrosive, which is defined as soils with more than 500 ppm chlorides, more than 0.2 percent sulfates, or a pH

less than 5.5. The resistivity values indicate that there is severe corrosion potential for metal pipes. Laboratory test results are presented in Appendix B.

### **7.9. Concrete**

Concrete in contact with soil or water that contains high concentrations of soluble sulfates can be subject to chemical deterioration. Laboratory testing indicated sulfate content ranging from 0.009 and 0.033 percent for the samples tested, which corresponds to sulfate exposure Class S0 – Not Applicable (sulfate content less than 0.1%), according to ACI 318-11. Although the results of the sulfate tests were not significantly high, due to the variability of on-site soils and the potential future use of reclaimed water at the site, we recommend that 3 inches of concrete cover be provided over reinforcing steel, and that Type II/V cement be used for cast-in-place structures in contact with soil. In addition, we recommend a water to cement ratio of no more than 0.50. A corrosion specialist may be consulted regarding suitable types of piping and appropriate protection for underground metal conduits.

## **8. DESIGN REVIEW**

Geotechnical review of plans and specifications is of paramount importance in engineering practice. The poor performance of many structures has been attributed to inadequate geotechnical review of construction documents. Additionally, observation of excavations will be important to the performance of the proposed development. The following sections present our recommendations relative to the review of construction documents and the monitoring of construction activities.

### **8.1. Plans and Specifications**

The design plans and specifications should be reviewed by Twining prior to bidding and construction, as the geotechnical recommendations may need to be reevaluated in the light of the actual design configuration and loads. This review is necessary to evaluate whether the recommendations contained in this report and future reports have been properly incorporated into the project plans and specifications. Based on the work already performed, this office is best qualified to provide such review.

### **8.2. Construction Monitoring**

Site preparation, removal of unsuitable soils, assessment of imported fill materials, fill placement, foundation installation, and other site grading operations should be observed and tested. The substrata exposed during the construction may differ from that encountered in the test excavations. Continuous observation by a representative of Twining during construction allows for evaluation of the soil conditions as they are encountered, and allows the opportunity to recommend appropriate revisions where necessary.

The project geologist should be notified prior to exposure of subgrades. It is critically important that the geologist be provided with an opportunity to observe and/or map all exposed subgrades prior to burial or covering.

## **9. LIMITATIONS**

The recommendations and opinions expressed in this report are based on information obtained from our field exploration for the entire site. In the event that any of our recommendations conflict with

recommendations provided by other design professionals, we should be contacted to aid in resolving the discrepancy.

Due to the limited nature of our field explorations, conditions not observed and described in this report may be present on the site. Uncertainties relative to subsurface conditions can be reduced through additional subsurface exploration. Additional subsurface evaluation and laboratory testing can be performed upon request. It should be understood that conditions different from those anticipated in this report may be encountered during excavation operations, for example, the presence of unsuitable soil, and that additional effort may be required to mitigate them.

Site conditions, including groundwater elevation, can change over time as a result of natural processes or the activities of man at the subject site or at nearby sites. Changes to the applicable laws, regulations, codes, and standards of practice may occur as a result of government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Twining has no control.

Twining's recommendations for this site are, to a high degree, dependent upon appropriate quality control of foundation construction. Accordingly, the recommendations are made contingent upon the opportunity for Twining to observe foundation excavations for the proposed construction. If parties other than Twining are engaged to provide such services, such parties must be notified that they will be required to assume complete responsibility as the geotechnical engineer of record for the geotechnical phase of the project by concurring with the recommendations in this report and/or by providing alternative recommendations.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Twining should be contacted if the reader requires additional information or has questions regarding the content, interpretations presented, or completeness of this document.

This report has been prepared for the exclusive use by the client and its agents for specific application to the proposed design and construction of the project described herein. Any party other than the client who wishes to use this report for an adjacent or nearby project, shall notify Twining of such intended use. Land use, site conditions, or other factors may change over time, and additional work may be required with the passage of time. Based on the intended use of this report and the nature of the project, Twining may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or any other party will release Twining from any liability resulting from the use of this report by any unauthorized party.

Twining has endeavored to perform its evaluation using the degree of care and skill ordinarily exercised under similar circumstances by reputable geotechnical professionals with experience in this area in similar soil conditions. No other warranty, either expressed or implied, is made as to the conclusions and recommendations contained in this report.

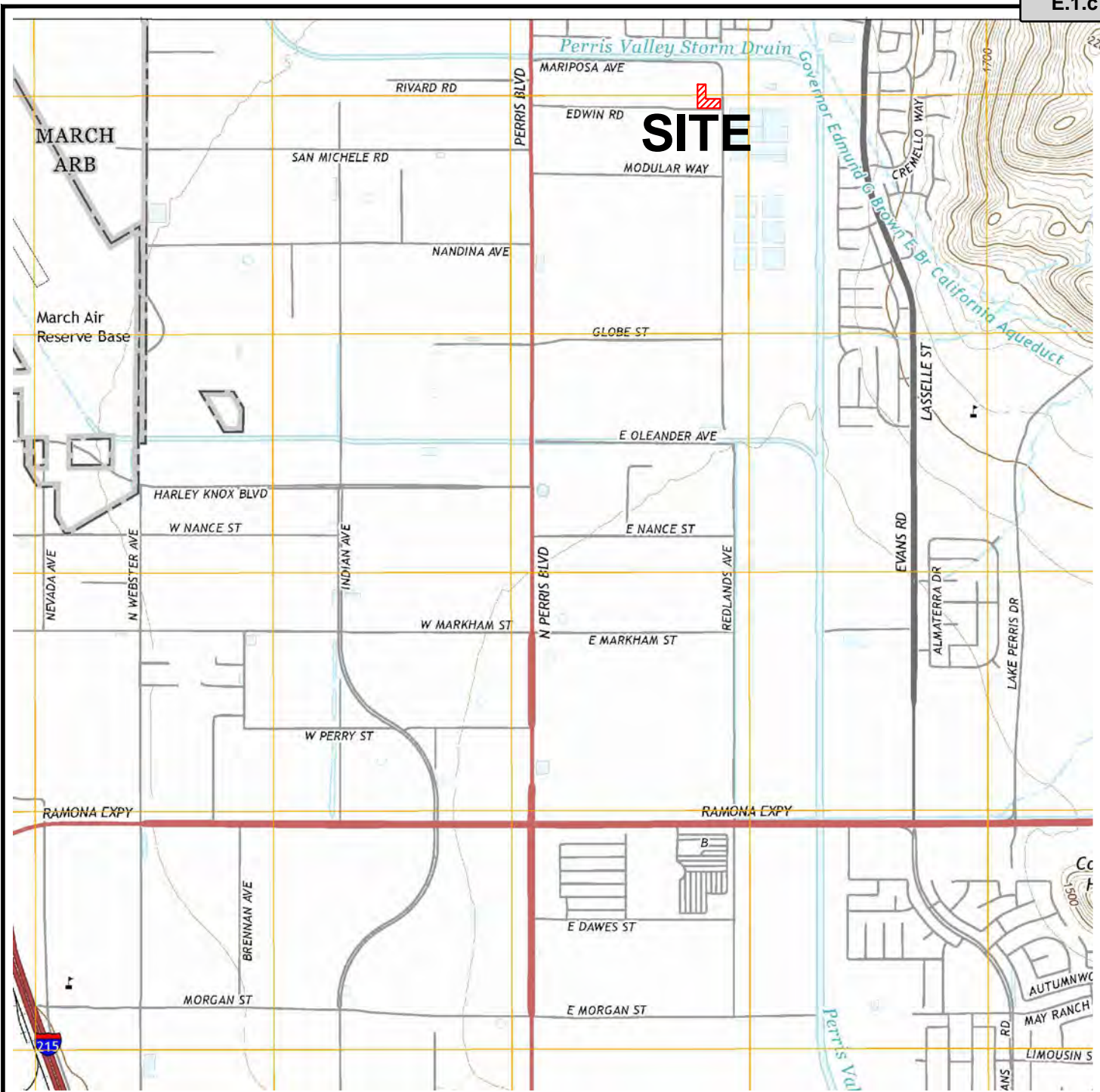
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# FIGURES



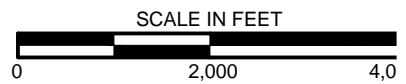


SITE COORDINATES  
 LATITUDE: 33.8720°N  
 LONGITUDE: 117.2181°W



AREA ENLARGED IN FIGURE 2

REFERENCE: UNITED STATES GEOLOGICAL SURVEY (2015)



**SITE LOCATION MAP**

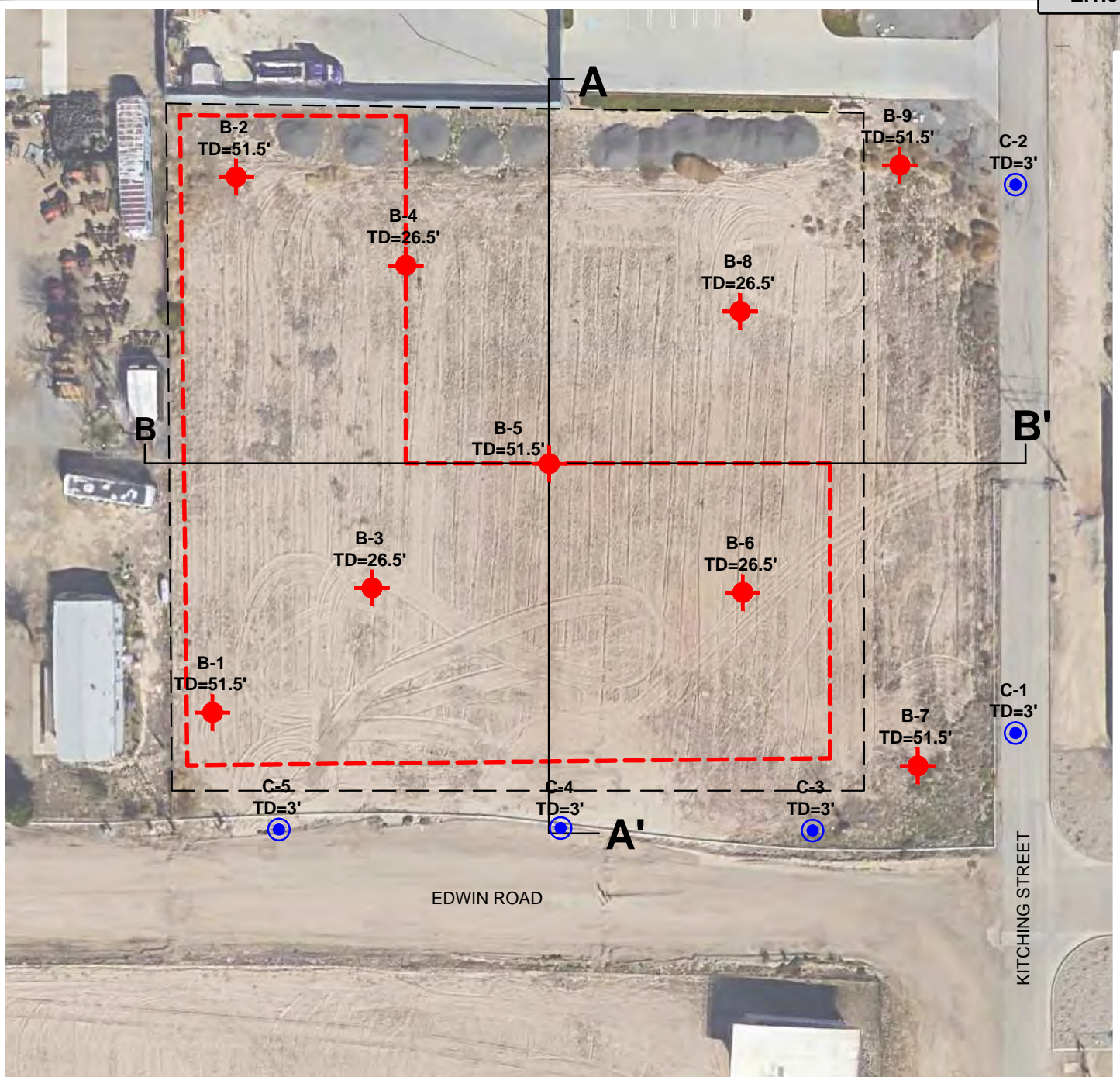
Kitching Street Electrical Substation  
 Moreno Valley, California



PROJECT NO.  
150817.3

REPORT DATE  
December 2015

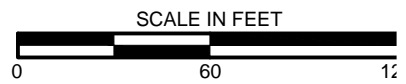
FIGURE 1



**LEGEND**

- B-1 TD=51.5' APPROXIMATE LOCATION OF BORING TOTAL DEPTH IN FEET
- C-1 TD=3' APPROXIMATE LOCATION OF PAVEMENT EVALUATION BORING TOTAL DEPTH IN FEET
- APPROXIMATE LOCATION OF PROPOSED ELECTRICAL SUBSTATION
- APPROXIMATE LOCATION OF PROPERTY LINE
- LOCATION OF GEOLOGIC CROSS SECTION

REFERENCE: GOOGLE EARTH (2015)



**BORING LOCATION MAP**

Kitching Street Electrical Substation  
Moreno Valley, California

PROJECT NO.  
150817.3

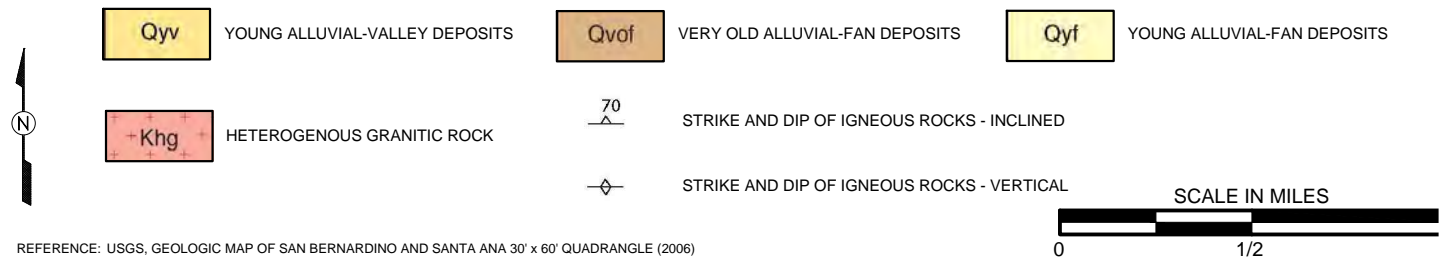
REPORT DATE  
December 2015

FIGURE 2





LEGEND



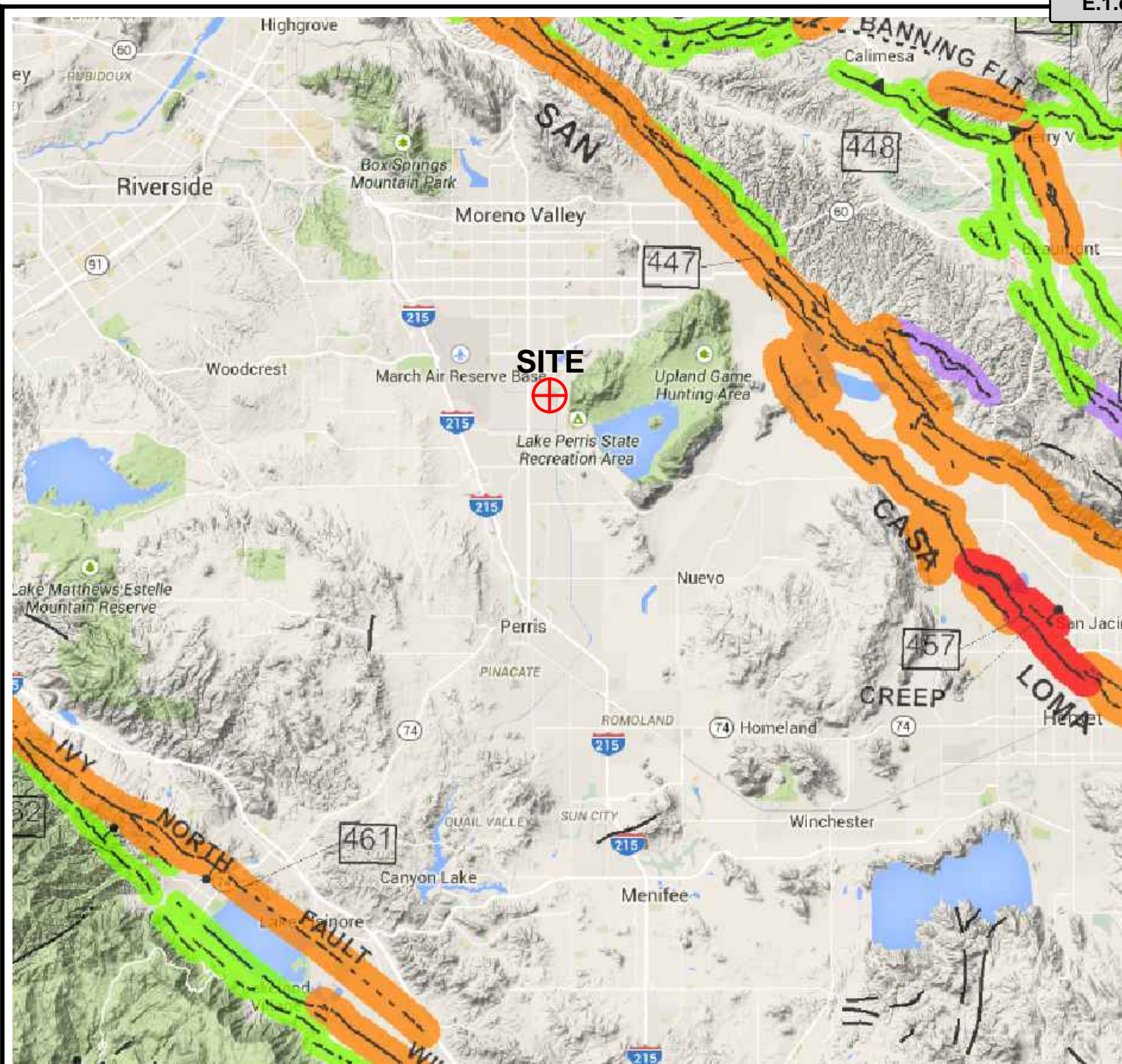
REGIONAL GEOLOGIC MAP

Kitching Street Electrical Substation  
Moreno Valley, California





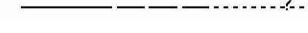
PROJECT NO.  
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FIGURE 3



**LEGEND**

-  FAULT ALONG WHICH HISTORIC DISPLACEMENT HAS OCCURRED
-  HOLOCENE FAULT DISPLACEMENT
-  LATE QUATERNARY FAULT DISPLACEMENT
-  QUATERNARY FAULT DISPLACEMENT
-  PRE-QUATERNARY FAULT DISPLACEMENT



REFERENCE: CALIFORNIA GEOLOGICAL SURVEY (2010)



**FAULT LOCATION MAP**

Kitching Street Electrical Substation  
Moreno Valley, California

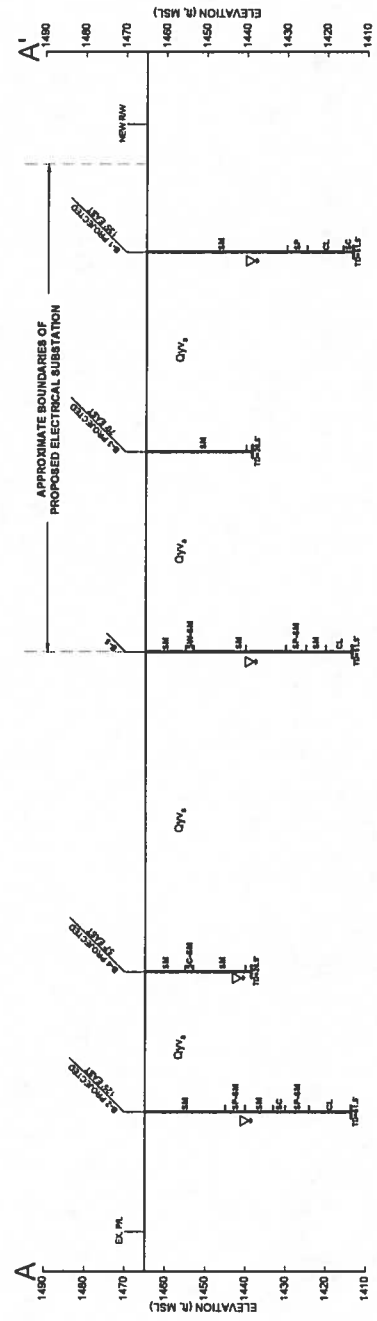
PROJECT NO.  
150803.3

REPORT DATE  
December 2015

FIGURE 4



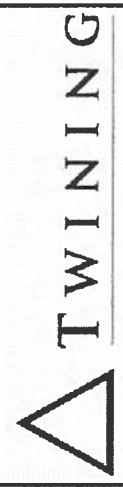
N-S



**LEGEND**

- Qy1s ALLUVIAL VALLEY DEPOSITS
- EXISTING GRADE
- B-1 APPROXIMATE LOCATION OF EXPLORATORY BORING OR CPT
- TD=S1.5' TD = TERMINATION DEPTH IN FEET
- ▽ APPROXIMATE DEPTH OF GROUNDWATER OBSERVED DURING DRILLING

NOTE: All dimensions, locations, and directions are approximate.

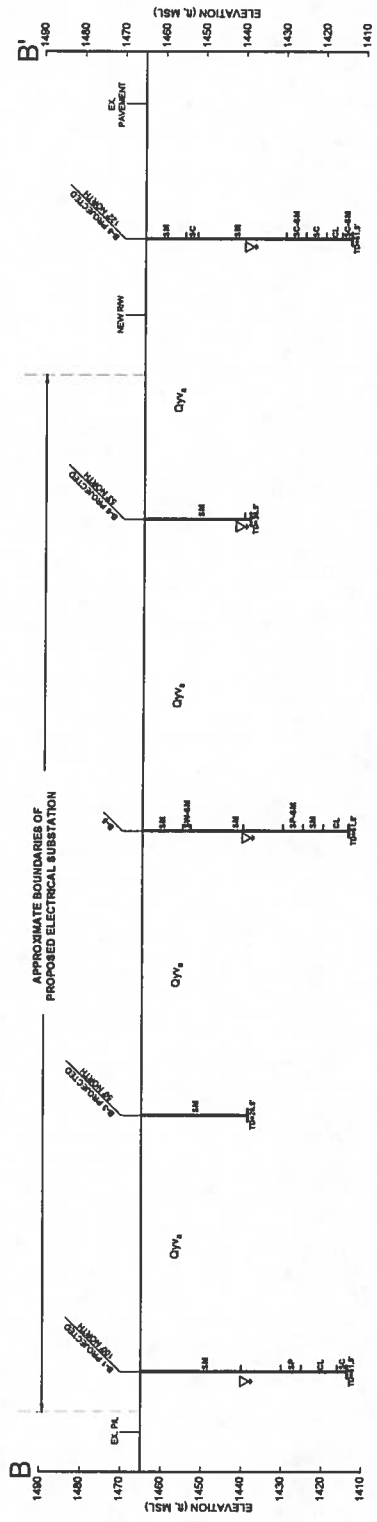


**CROSS SECTION A-A'**

Kitching Street Electrical Substation  
Moreno Valley, California

PROJECT NO. 150817.3	REPORT DATE December 2015	FIGURE 5A
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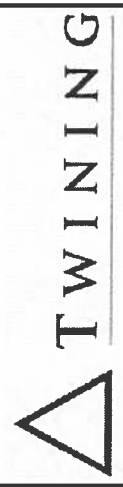
W-E



- LEGEND**
- QY<sub>s</sub> ALLUVIAL VALLEY DEPOSITS
  - EXISTING GRADE
  - B-1 APPROXIMATE LOCATION OF EXPLORATORY BORING OR CPT
  - TD=51.5' TD = TERMINATION DEPTH IN FEET
  - ▽ APPROXIMATE DEPTH OF GROUNDWATER OBSERVED DURING DRILLING



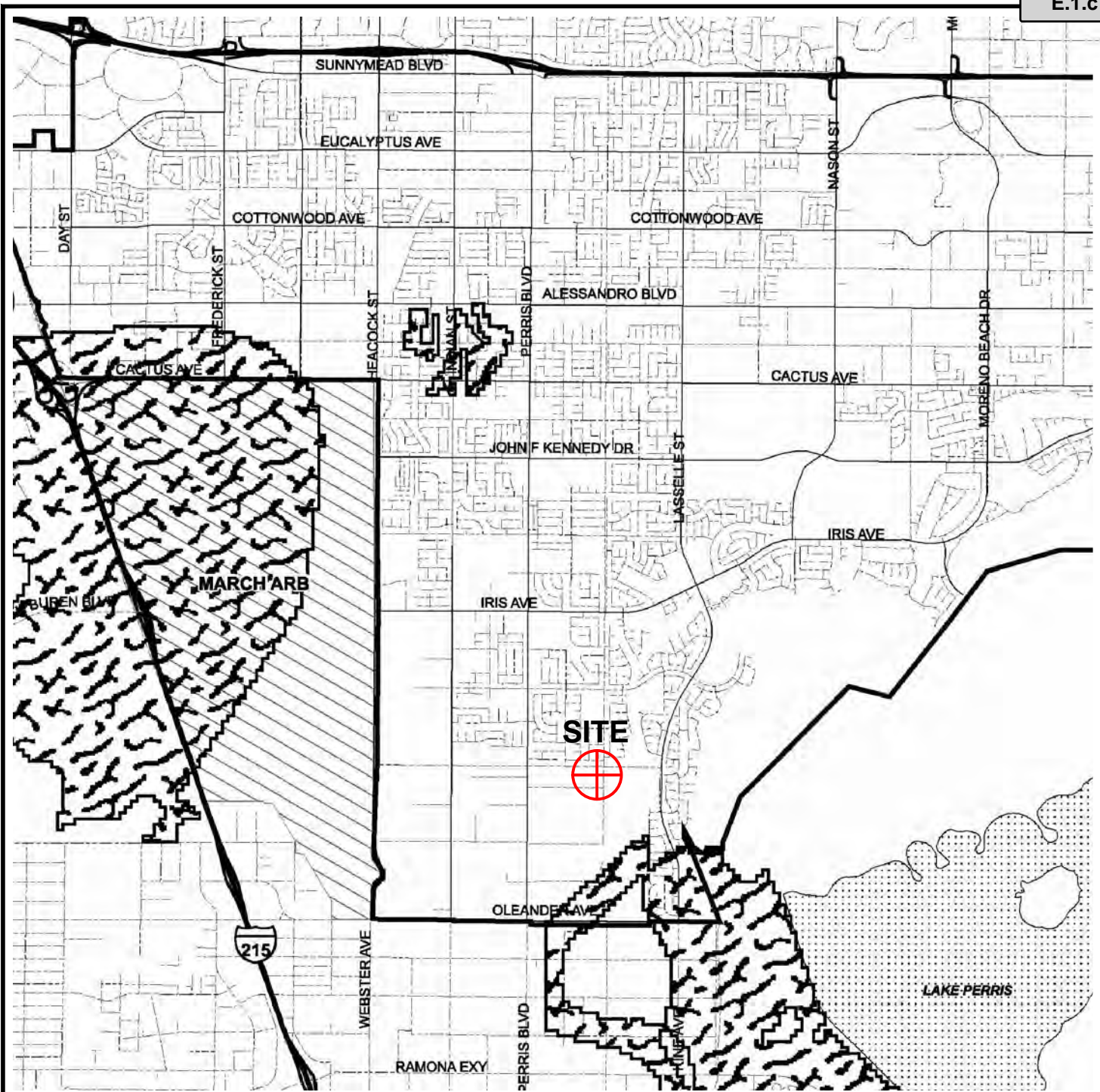
NOTE: All dimensions, locations, and directions are approximate.



**CROSS SECTION B-B'**

Kitching Street Electrical Substation  
Moreno Valley, California

PROJECT NO. 150817.3	REPORT DATE December 2015	FIGURE 5B
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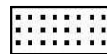
LEGEND



ZONE OF POTENTIAL LIQUEFACTION

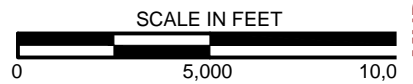


MARCH AIR FORCE BASE



BODY OF WATER

REFERENCE: CITY OF MORENO VALLEY GENERAL PLAN, SEISMIC HAZARDS (2006)



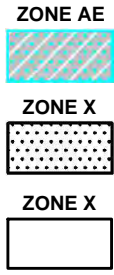
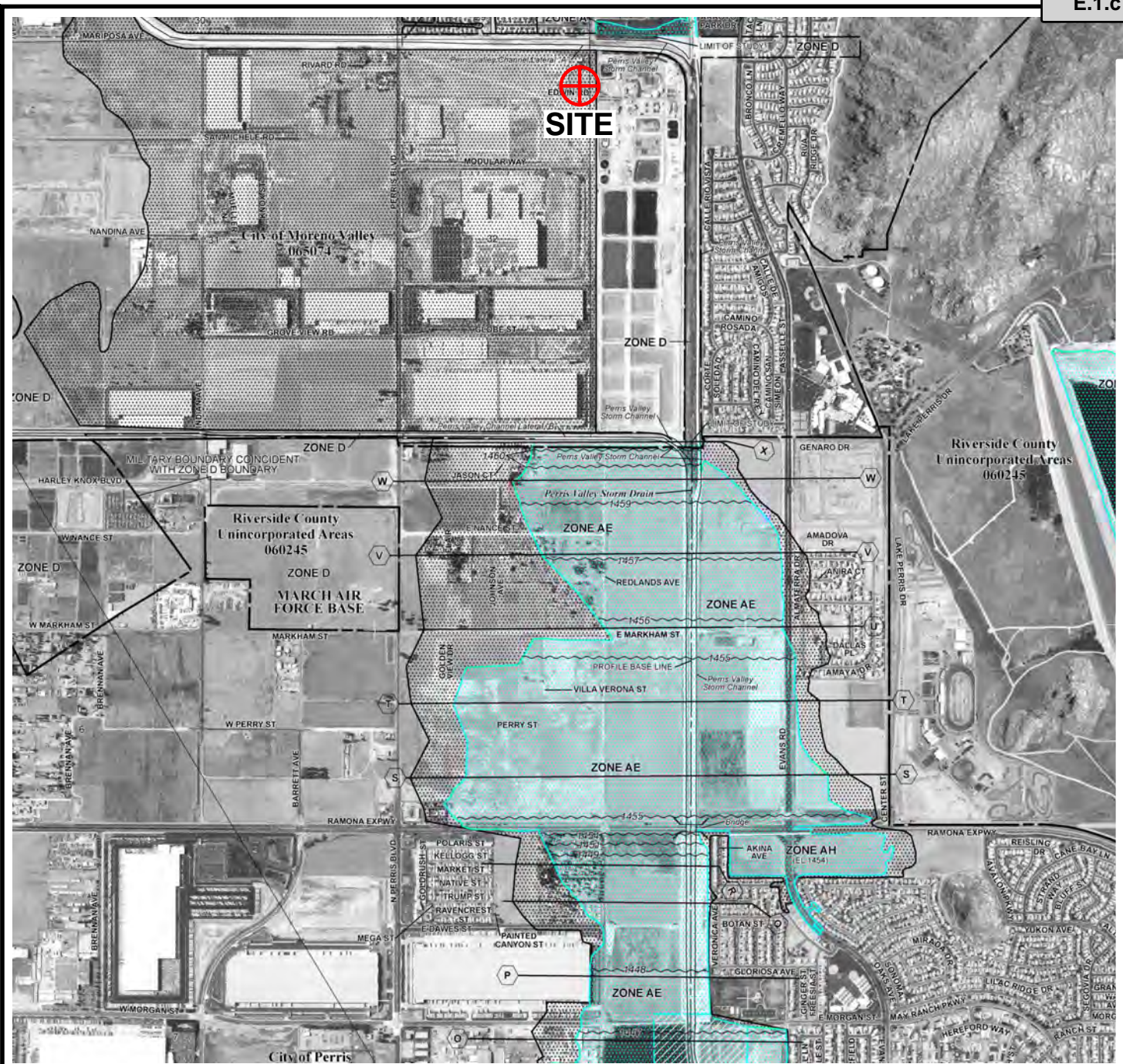
GEOLOGIC HAZARDS MAP

Kitching Street Electrical Substation  
Moreno Valley, California

PROJECT NO.  
150803.3

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December 2015

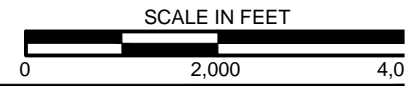
FIGURE 6



**ZONE AE**  
 AREAS SUBJECT TO FLOODING BY THE 1% ANNUAL CHANCE FLOOD

**ZONE X**  
 AREAS SUBJECT TO FLOODING BY THE 0.2% ANNUAL CHANCE FLOOD

**ZONE X**  
 AREAS OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN



REFERENCE: FEMA, FIRM FLOOD INSURANCE RATE MAP, PANEL 1430H, RIVERSIDE COUNTY, CA (2014).

	<b>FEMA FIRM Map</b>	
	Kitching Street Electrical Substation Moreno Valley, California	
PROJECT NO. 150803.3	REPORT DATE December 2015	FIGURE 7

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



# APPENDIX A FIELD EXPLORATION

## Appendix A Field Exploration

### General

The subsurface exploration program for the proposed project included drilling and logging nine 8-inch diameter exploratory borings. The 8-inch diameter exploratory borings were advanced using a truck-mounted CME-75 hollow-stem-auger drill rig. The borings reached depths of approximately 26½ to 51½ feet below the existing grades. Additionally, five hand-auger borings were excavated to a depth of approximately 3 feet in order to perform a pavement evaluation of the adjacent streets. Upon completion of the borings, the boreholes were backfilled with soil from the cuttings.

### Drilling and Sampling

The Boring Logs are presented as Figures A-2 through A-15. An explanation of these logs is presented as Figure A-1. The Boring Logs describe the earth materials encountered, samples obtained, and show the field and laboratory tests performed. The log also shows the boring number, drilling date, and the name of the logger and drilling subcontractor. The borings were logged by a Twining, Inc. engineer using the Unified Soil Classification System. The boundaries between soil types shown on the logs are approximate because the transition between different soil layers may be gradual. Drive and bulk samples of representative earth materials were obtained from the borings.

A California modified sampler was used to obtain drive samples of the soil encountered. This sampler consists of a 3-inch outside diameter (O.D.), 2.4-inch inside diameter (I.D.) split barrel shaft that is driven a total of 18-inches into the soil at the bottom of the boring. The soil was retained in brass rings for laboratory testing. Additional soil from each drive remaining in the cutting shoe was usually discarded after visually classifying the soil. The number of blows required to drive the sampler the final 12 inches is presented on the boring logs.

Disturbed samples were obtained using a Standard Penetration Sampler (SPT). This sampler consists of a 2-inch O.D., 1.4-inch I.D. split barrel shaft that is advanced into the soil at the bottom of the drilled hole a total of 18 inches. The number of blows required to drive the sampler the final 12 inches is presented on the boring logs. Soil samples obtained by the SPT were retained in plastic bags.

Both the California modified and the SPT sampler were driven by an automatic-trip hammer weighing 140 pounds at a drop height of approximately 30 inches.

**UNIFIED SOIL CLASSIFICATION CHART**

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
<b>COARSE GRAINED SOILS</b>  MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	<b>GRAVEL AND GRAVELLY SOILS</b>  MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	<b>CLEAN GRAVELS</b>  (LITTLE OR NO FINES)		<b>GW</b>	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				<b>GP</b>	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		<b>GRAVELS WITH FINES</b>  (APPRECIABLE AMOUNT OF FINES)		<b>GM</b>	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				<b>GC</b>	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	<b>SAND AND SANDY SOILS</b>  MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	<b>CLEAN SANDS</b>  (LITTLE OR NO FINES)		<b>SW</b>	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				<b>SP</b>	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		<b>SANDS WITH FINES</b>  (APPRECIABLE AMOUNT OF FINES)		<b>SM</b>	SILTY SANDS, SAND - SILT MIXTURES
				<b>SC</b>	CLAYEY SANDS, SAND - CLAY MIXTURES
<b>FINE GRAINED SOILS</b>  MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	<b>SILTS AND CLAYS</b>  LIQUID LIMIT LESS THAN 50			<b>ML</b>	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				<b>CL</b>	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				<b>OL</b>	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	<b>SILTS AND CLAYS</b>  LIQUID LIMIT GREATER THAN 50			<b>MH</b>	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				<b>CH</b>	INORGANIC CLAYS OF HIGH PLASTICITY
				<b>OH</b>	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
<b>HIGHLY ORGANIC SOILS</b>				<b>PT</b>	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

**COARSE-GRAINED SOILS**

**FINE-GRAINED SOILS**

Relative Density	SPT (blows/ft)	Relative Density (%)	Consistency	SPT (blows/ft)
Very Loose	<4	0 - 15	Very Soft	<2
Loose	4 - 10	15 - 35	Soft	2 - 4
Medium Dense	10 - 30	35 - 65	Medium Stiff	4 - 8
Dense	30 - 50	65 - 85	Stiff	8 - 15
Very Dense	>50	85 - 100	Very Stiff	15 - 30
			Hard	>30

NOTE: SPT blow counts based on 140 lb. hammer falling 30 inches

**LABORATORY TESTING ABBREVIATIONS**

- ATT Atterberg Limits
- C Consolidation
- CORR Corrosivity Series
- DS Direct Shear
- EI Expansion Index
- GS Grain Size Distribution
- K Permeability
- MAX Moisture/Density (Modified Proctor)
- O Organic Content
- RV Resistance Value
- SE Sand Equivalent
- SG Specific Gravity
- TX Triaxial Compression
- UC Unconfined Compression

Sample Symbol	Sample Type	Description
	SPT	1.4 in I.D., 2.0 in. O.D. driven sampler
	California Modified	2.4 in. I.D., 3.0 in. O.D. driven sampler
	Bulk	Retrieved from soil cuttings
	Thin-Walled Tube	Pitcher or Shelby Tube

**EXPLANATION FOR LOG OF BORINGS**



Kitching Street Electrical Substation  
Moreno Valley, California

PROJECT NO.  
150817.3

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FIGURE A-1

Packet Pg. 291

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

STANDARD LOG EXPLANATION 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ\_TWINING LABS.GDT 12/18/15

DATE DRILLED 11/18/15 LOGGED BY AM BORING NO. B-1  
 DRIVE WEIGHT 140 lbs. DROP 30 inches DEPTH TO GROUNDWATER (ft.) 27  
 DRILLING METHOD 8" hollow stem auger DRILLER Baja Drilling SURFACE ELEVATION (ft.) 1470 ±(MSL)

ELEVATION (feet)	DEPTH (feet)	SAMPLES		BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	ADDITIONAL TESTS	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
		Bulk	Driven							
					26.8		SA, CORR, MAX, DS		ML	<u>YOUNG ALLUVIAL-VALLEY DEPOSITS:</u> SILT with sand, light brown, dry, fine-grained sand, trace gravel
1465	5			26	14.3	89.5	CONSOL			-- damp, medium dense  -- yellow-brown
1460	10			29					SM	-- medium brown, damp, medium dense, some coarse-grained sand
1455	15			55	6.0	125.0			SM	<u>VERY OLD ALLUVIAL-FAN DEPOSITS:</u> Silty SAND, reddish-brown, damp, dense
1450	20			17						-- medium brown, medium dense, fine-grained sand
1445	25			53	12.0	125.4				-- wet, fine- to coarse-grained sand, dense
1440	30			40						▼ -- groundwater encountered at 27'  -- saturated
1435	35									

BORING LOG 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ TWINING LABS.GDT 12/21/15

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



## LOG OF BORING

Kitching Street Electrical Substation  
 Moreno Valley, California

PROJECT NO.  
150817.3

REPORT DATE  
December 2015

DATE DRILLED 11/18/15 LOGGED BY AM BORING NO. B-1  
 DRIVE WEIGHT 140 lbs. DROP 30 inches DEPTH TO GROUNDWATER (ft.) 27  
 DRILLING METHOD 8" hollow stem auger DRILLER Baja Drilling SURFACE ELEVATION (ft.) 1470 ±(MSL)

ELEVATION (feet)	DEPTH (feet)	SAMPLES		BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	ADDITIONAL TESTS	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
		Bulk	Driven							
				43					SP	Poorly graded SAND, medium brown, saturated, dense, medium-grained sand
1430	40			17			ATT		CL	Lean CLAY, light brown, saturated, hard
1425	45			17						-- same
1420	50			46					SC	Clayey SAND, medium brown, saturated, dense, medium-grained sand
1415	55	Total Depth = 51.5 feet Backfilled on 11/18/2015 Backfilled with soil from cuttings								
1410	60									
1405	65									
1400	70									

BORING LOG 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ TWINING LABS.GDT 12/21/15



## LOG OF BORING

Kitching Street Electrical Substation  
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DATE DRILLED 11/18/15 LOGGED BY AM BORING NO. B-2  
 DRIVE WEIGHT 140 lbs. DROP 30 inches DEPTH TO GROUNDWATER (ft.) 26  
 DRILLING METHOD 8" hollow stem auger DRILLER Baja Drilling SURFACE ELEVATION (ft.) 1470 ±(MSL)

ELEVATION (feet)	DEPTH (feet)	SAMPLES		BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	ADDITIONAL TESTS	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
		Bulk	Driven							
1465	5			15			CORR, MAX		ML	<u>YOUNG ALLUVIAL-VALLEY DEPOSITS:</u> SILT with sand, light brown, dry, fine-grained sand, trace gravel  -- dense -- damp, medium dense -- yellow-brown
1460	10			63	6.4	123.2	DS		SM	<u>VERY OLD ALLUVIAL-FAN DEPOSITS:</u> Silty SAND, reddish-brown, damp, dense  -- increase in clay content, medium brown  -- medium dense, fine- to medium-grained sand
1455	15			25			SA			-- some clay, medium- to coarse-grained sand
1450	20			47	3.8	123.7			SP-SM	Poorly graded SAND with silt, reddish-brown, damp, medium dense, medium- to coarse-grained sand
1445	25			55					SM	▼ Silty SAND, reddish brown, wet, very dense, fine- to coarse-grained sand -- groundwater encountered at 26'
1440	30			63	13.1	118.2				-- saturated, dense
1435	35								SC	Clayey SAND, reddish-brown, saturated, medium- to coarse-grained sand

BORING LOG 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ TWINING LABS.GDT 12/21/15



## LOG OF BORING

Kitching Street Electrical Substation  
 Moreno Valley, California

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DATE DRILLED 11/18/15 LOGGED BY AM BORING NO. B-2  
 DRIVE WEIGHT 140 lbs. DROP 30 inches DEPTH TO GROUNDWATER (ft.) 26  
 DRILLING METHOD 8" hollow stem auger DRILLER Baja Drilling SURFACE ELEVATION (ft.) 1470 ±(MSL)

ELEVATION (feet)	DEPTH (feet)	SAMPLES		BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	ADDITIONAL TESTS	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
		Bulk	Driven							
				51					SP-SM	Poorly graded SAND with silt, medium brown, saturated, very dense, medium- to coarse-grained sand
1430	40			16						-- grades to poorly graded SAND
1425	45			24					CL	Sandy CLAY, light brown to white, saturated, hard, some coarse-grained sand
1420	50			53						-- medium brown, some fine-grained sand
										-- very hard
1415	55									Total Depth = 51.5 feet Backfilled on 11/18/2015 Backfilled with soil from cuttings
1410	60									
1405	65									
1400	70									

BORING LOG 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ TWINING LABS.GDT 12/21/15



## LOG OF BORING

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DATE DRILLED 11/19/15 LOGGED BY AM BORING NO. B-3  
 DRIVE WEIGHT 140 lbs. DROP 30 inches DEPTH TO GROUNDWATER (ft.) N/A  
 DRILLING METHOD 8" hollow stem auger DRILLER Baja Drilling SURFACE ELEVATION (ft.) 1470 ±(MSL)

ELEVATION (feet)	DEPTH (feet)	SAMPLES		BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
		Bulk	Driven						
1465	5			26	20.8	83.1		ML	<u>YOUNG ALLUVIAL-VALLEY DEPOSITS:</u> SILT with sand, light brown, dry, fine-grained sand  -- moist, medium dense
1460	10			26				SM	Silty SAND, medium brown, moist, medium dense  -- fine- to medium-grained sand
1455	15			31	11.8	121.5		SM	<u>VERY OLD ALLUVIAL-FAN DEPOSITS:</u> Silty SAND, reddish-brown, wet, medium dense, fine- to medium-grained sand  -- medium brown, fine-grained sand
1445	25			61	15.1	117.8			-- hard, fine- to medium-grained
1440	30	Total Depth = 26.5 feet Backfilled on 11/19/2015 Backfilled with soil from cuttings							
1435	35								

BORING LOG 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ TWINING LABS.GDT 12/21/15



## LOG OF BORING

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DATE DRILLED 11/19/15 LOGGED BY AM BORING NO. B-4  
 DRIVE WEIGHT 140 lbs. DROP 30 inches DEPTH TO GROUNDWATER (ft.) 25  
 DRILLING METHOD 8" hollow stem auger DRILLER Baja Drilling SURFACE ELEVATION (ft.) 1470 ±(MSL)

ELEVATION (feet)	DEPTH (feet)	SAMPLES		BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	ADDITIONAL TESTS	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
		Bulk	Driven							
1465	5			10					ML	<u>YOUNG ALLUVIAL-VALLEY DEPOSITS:</u> SILT with sand, light brown, dry, fine-grained sand  -- loose
1460	10			66	6.0	124.0	ATT		SM	Silty SAND, medium brown, damp  -- medium brown mottled with white, dense, some clay
1455	15			22					SM	<u>VERY OLD ALLUVIAL-FAN DEPOSITS:</u> Silty SAND, reddish-brown, moist, medium dense, fine- to medium-grained sand
1450	20			69	5.3	114.9				-- damp, dense
1445	25			16						▼ -- groundwater encountered at 25' -- increase in clay content, medium dense, fine-grained sand
1440	30									Total Depth = 26.5 feet Backfilled on 11/19/2015 Backfilled with soil from cuttings
1435	35									

BORING LOG 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ TWINING LABS.GDT 12/21/15



# LOG OF BORING

Kitching Street Electrical Substation  
 Moreno Valley, California

PROJECT NO. 150817.3	REPORT DATE December 2015	FIGURE NO. A-1
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Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

DATE DRILLED 11/18/15 LOGGED BY AM BORING NO. B-5  
 DRIVE WEIGHT 140 lbs. DROP 30 inches DEPTH TO GROUNDWATER (ft.) 27  
 DRILLING METHOD 8" hollow stem auger DRILLER Baja Drilling SURFACE ELEVATION (ft.) 1470 ±(MSL)

ELEVATION (feet)	DEPTH (feet)	SAMPLES		BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	ADDITIONAL TESTS	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
		Bulk	Driven							
1465	5			36			Et, CORR, MAX		ML	<u>YOUNG ALLUVIAL-VALLEY DEPOSITS:</u> SILT with sand, light brown, dry, fine-grained sand, trace gravel  -- dense
1460	10			63	1.3	119.1	SA		SM	Silty SAND, medium brown, dry
1455	15			22					SW-SM	<u>VERY OLD ALLUVIAL-FAN DEPOSITS:</u> Well graded SAND with silt, reddish-brown, dry, dense, few gravel
1450	20			50	13.1	119.0			SM	Silty SAND, dark brown, moist, some coarse-grained sand  -- medium dense
1445	25			25						-- wet, dense, fine- to medium-grained sand
1440	30			32						-- wet, medium dense  ▼ -- groundwater encountered at 27'
1435	35									-- saturated, dense, medium-grained sand

BORING LOG 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ TWINING LABS.GDT 12/21/15

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## LOG OF BORING

Kitching Street Electrical Substation  
 Moreno Valley, California

PROJECT NO.  
150817.3

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December 2015

DATE DRILLED 11/18/15 LOGGED BY AM BORING NO. B-5  
 DRIVE WEIGHT 140 lbs. DROP 30 inches DEPTH TO GROUNDWATER (ft.) 27  
 DRILLING METHOD 8" hollow stem auger DRILLER Baja Drilling SURFACE ELEVATION (ft.) 1470 ±(MSL)

ELEVATION (feet)	DEPTH (feet)	SAMPLES		BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	ADDITIONAL TESTS	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
		Bulk	Driven							
				50					SP-SM	Poorly graded SAND with silt, medium brown, saturated, dense, medium- to coarse-grained sand
1430	40			32					SM	-- grades to silty SAND Silty SAND, medium brown, saturated, dense, medium-grained sand
1425	45			20					CL	Lean CLAY with sand, light brown to white, saturated, hard
1420	50			48						-- very hard
1415	55									Total Depth = 51.5 feet Backfilled on 11/18/2015 Backfilled with soil from cuttings
1410	60									
1405	65									
1400	70									

BORING LOG 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ TWINING LABS.GDT 12/21/15



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DATE DRILLED 11/19/15 LOGGED BY AM BORING NO. B-6  
 DRIVE WEIGHT 140 lbs. DROP 30 inches DEPTH TO GROUNDWATER (ft.) 25  
 DRILLING METHOD 8" hollow stem auger DRILLER Baja Drilling SURFACE ELEVATION (ft.) 1470 ±(MSL)

ELEVATION (feet)	DEPTH (feet)	SAMPLES		BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	ADDITIONAL TESTS	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
		Bulk	Driven							
1465	5			7					ML	<u>YOUNG ALLUVIAL-VALLEY DEPOSITS:</u> SILT with sand, light brown, dry, fine-grained sand, trace gravel  -- loose
1460	10			51	6.5	112.6			SM	<u>VERY OLD ALLUVIAL-FAN DEPOSITS:</u> Silty SAND, reddish-brown, damp, dense, fine- to medium-grained sand
1455	15			35						-- medium brown
1450	20			49	2.7	112.0	CONSOL			-- fine- to coarse-grained sand
1445	25			11						▼ -- groundwater encountered at 25' -- increase in clay content, saturated, medium dense, fine-grained sand Total Depth = 26.5 feet Backfilled on 11/19/2015 Backfilled with soil from cuttings
1440	30									
1435	35									

BORING LOG 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ TWINING LABS.GDT 12/21/15

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DATE DRILLED 11/18/15 LOGGED BY AM BORING NO. B-7  
 DRIVE WEIGHT 140 lbs. DROP 30 inches DEPTH TO GROUNDWATER (ft.) 27  
 DRILLING METHOD 8" hollow stem auger DRILLER Baja Drilling SURFACE ELEVATION (ft.) 1470 ±(MSL)

ELEVATION (feet)	DEPTH (feet)	SAMPLES		BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	ADDITIONAL TESTS	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
		Bulk	Driven							
1465	5			18	20.3	85.7	RV DS		SM	<u>YOUNG ALLUVIAL-VALLEY DEPOSITS:</u> Silty SAND, light brown, dry, trace gravel  -- medium brown, moist  -- medium dense
1460	10			16					SC	Clayey SAND, medium brown mottled with white, moist, medium dense
1455	15			39	8.8	124.7			SM	<u>VERY OLD ALLUVIAL-FAN DEPOSITS:</u> Silty SAND, medium brown, moist, fine- to medium-grained sand  -- medium dense
1450	20			26						-- light brown, moist, medium-grained sand
1445	25			37	16.7	113.3	CONSOL			-- wet
1440	30			31						-- groundwater encountered at 27'  -- saturated, dense
1435	35									

BORING LOG 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ, TWINING LABS.GDT 12/21/15



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DATE DRILLED 11/18/15 LOGGED BY AM BORING NO. B-7  
 DRIVE WEIGHT 140 lbs. DROP 30 inches DEPTH TO GROUNDWATER (ft.) 27  
 DRILLING METHOD 8" hollow stem auger DRILLER Baja Drilling SURFACE ELEVATION (ft.) 1470 ±(MSL)

ELEVATION (feet)	DEPTH (feet)	SAMPLES		BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	ADDITIONAL TESTS	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
		Bulk	Driven							
				22					SC-SM	Silty clayey SAND, medium brown, wet, medium dense
1430	40			30					SC	Clayey SAND, medium brown mottled with white, wet, medium dense
1425	45			20					CL	Lean CLAY, medium brown, wet, hard
1420	50			30					SC-SM	Silty clayey SAND, medium brown, wet, medium dense
1415	55	Total Depth = 51.5 feet Backfilled on 11/18/2015 Backfilled with soil from cuttings								
1410	60									
1405	65									
1400	70									

BORING LOG 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ TWINING LABS.GDT 12/21/15



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DATE DRILLED 11/19/15 LOGGED BY AM BORING NO. B-8  
 DRIVE WEIGHT 140 lbs. DROP 30 inches DEPTH TO GROUNDWATER (ft.) N/A  
 DRILLING METHOD 8" hollow stem auger DRILLER Baja Drilling SURFACE ELEVATION (ft.) 1470 ±(MSL)

ELEVATION (feet)	DEPTH (feet)	SAMPLES		BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	ADDITIONAL TESTS	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
		Bulk	Driven							
1465	5			27					ML	<u>YOUNG ALLUVIAL-VALLEY DEPOSITS:</u> SILT with sand, light brown, dry, fine-grained sand  -- medium dense
1460	10			46	3.9	106.8	CONSOL		SM	Silty SAND, medium brown, damp, medium- to coarse-grained sand, some clay  -- medium dense
1455	15			38						-- dense
1450	20			44	4.2	114.4	DS		SM	<u>VERY OLD ALLUVIAL-FAN DEPOSITS:</u> Silty SAND, reddish-brown, damp, medium dense, fine- to medium-grained sand
1445	25			18						-- groundwater encountered at 25' -- saturated
1440	30									Total Depth = 26.5 feet Backfilled on 11/19/2015 Backfilled with soil from cuttings
1435	35									

BORING LOG 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ TWINING LABS.GDT 12/21/15



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DATE DRILLED 11/18/15 LOGGED BY AM BORING NO. B-9  
 DRIVE WEIGHT 140 lbs. DROP 30 inches DEPTH TO GROUNDWATER (ft.) 27  
 DRILLING METHOD 8" hollow stem auger DRILLER Baja Drilling SURFACE ELEVATION (ft.) 1470 ±(MSL)

ELEVATION (feet)	DEPTH (feet)	SAMPLES		BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	ADDITIONAL TESTS	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
		Bulk	Driven							
1465	5			43	14.5	87.7	Et, CORR, RV		ML	<u>YOUNG ALLUVIAL-VALLEY DEPOSITS:</u> Sandy SILT, light brown, dry, fine-grained sand, trace gravel  -- damp, medium dense  -- yellow-brown
1460	10			65					SM	Silty SAND, yellow-brown, damp, very dense, medium- to coarse-grained sand  -- medium brown
1455	15			50/5"	5.3	115.0			SM	<u>VERY OLD ALLUVIAL-FAN DEPOSITS:</u> Silty SAND, reddish-brown, damp, very dense  -- dark brown
1450	20			25			SA			-- reddish-brown, moist, medium dense, medium- to coarse-grained sand
1445	25			41	13.2	122.9			SM	-- medium brown, saturated, fine- to coarse-grained sand  ▼ -- groundwater encountered at 27'
1440	30			19						-- increase in clay content, saturated
1435	35									

BORING LOG 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ TWINING LABS.GDT 12/21/15

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DATE DRILLED 11/18/15 LOGGED BY AM BORING NO. B-9  
 DRIVE WEIGHT 140 lbs. DROP 30 inches DEPTH TO GROUNDWATER (ft.) 27  
 DRILLING METHOD 8" hollow stem auger DRILLER Baja Drilling SURFACE ELEVATION (ft.) 1470 ±(MSL)

ELEVATION (feet)	DEPTH (feet)	SAMPLES		BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	ADDITIONAL TESTS	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
		Bulk	Driven							
				20					SM	-- medium brown, saturated, fine- to coarse-grained sand (continued) -- fine- to medium-grained sand
1430	40			15					CL	Lean CLAY with sand, light brown, saturated, stiff
1425	45			18						-- hard
1420	50			34						-- very hard
										Total Depth = 51.5 feet Backfilled on 11/18/2015 Backfilled with soil from cuttings
1415	55									
1410	60									
1405	65									
1400	70									

BORING LOG 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ TWINING LABS.GDT 12/21/15



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DATE DRILLED 11/18/15 LOGGED BY AM BORING NO. C-1  
 DRIVE WEIGHT 140 lbs. DROP 30 inches DEPTH TO GROUNDWATER (ft.) N/A  
 DRILLING METHOD Hand Auger DRILLER Baja Drilling SURFACE ELEVATION (ft.) 1470 ±(MSL)

ELEVATION (feet)	DEPTH (feet)	SAMPLES		BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	ADDITIONAL TESTS	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
		Bulk	Driven							
										ASPHALT CONCRETE:5 inches
									SM	FILL:11 inches Silty SAND, tan, moist, some gravel, compacted
							RV		ML	Sandy SILT, light brown, moist, fine-grained sand
										Total Depth = 3.0 feet Backfilled on 11/18/2015 Backfilled with soil from cuttings Surface patched with rapid set concrete
1465	5									
1460	10									

BORING LOG 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ TWINING LABS.GDT 12/21/15



# LOG OF BORING

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PROJECT NO. 150817.3	REPORT DATE December 2015	FIGURE NO. 1-11
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DATE DRILLED 11/18/15 LOGGED BY AM BORING NO. C-2  
 DRIVE WEIGHT 140 lbs. DROP 30 inches DEPTH TO GROUNDWATER (ft.) N/A  
 DRILLING METHOD Hand Auger DRILLER Baja Drilling SURFACE ELEVATION (ft.) 1470 ±(MSL)

ELEVATION (feet)	DEPTH (feet)	SAMPLES		BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	ADDITIONAL TESTS	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
		Bulk	Driven							
										ASPHALT CONCRETE: 4 inches
									SM	FILL: 12 inches Silty SAND, tan, moist, some gravel, compacted
							RV		SM	Sandy SILT, light brown, moist, fine-grained sand
										Total Depth = 3.0 feet Backfilled on 11/18/2015 Backfilled with soil from cuttings Surface patched with rapid set concrete
1465	5									
1460	10									

BORING LOG 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ\_TWINING LABS.GDT 12/21/15



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DATE DRILLED 11/19/15 LOGGED BY AM BORING NO. C-3  
 DRIVE WEIGHT 140 lbs. DROP 30 inches DEPTH TO GROUNDWATER (ft.) N/A  
 DRILLING METHOD Hand Auger DRILLER Baja Drilling SURFACE ELEVATION (ft.) 1470 ±(MSL)

ELEVATION (feet)	DEPTH (feet)	SAMPLES		BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	ADDITIONAL TESTS	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
		Bulk	Driven							
1465	5						RV		SM	Silty SAND, light brown, moist, fine-grained sand
1460	10									Total Depth = 3.0 feet Backfilled on 11/19/2015 Backfilled with soil from cuttings

BORING LOG 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ\_TWINING LABS.GDT 12/21/15



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DATE DRILLED 11/19/15 LOGGED BY AM BORING NO. C-4  
 DRIVE WEIGHT 140 lbs. DROP 30 inches DEPTH TO GROUNDWATER (ft.) N/A  
 DRILLING METHOD Hand Auger DRILLER Baja Drilling SURFACE ELEVATION (ft.) 1470 ±(MSL)

ELEVATION (feet)	DEPTH (feet)	SAMPLES		BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	ADDITIONAL TESTS	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
		Bulk	Driven							
1465	5						RV		SM	Silty SAND, light brown, moist, fine-grained sand
1460	10									Total Depth = 3.0 feet Backfilled on 11/19/2015 Backfilled with soil from cuttings

BORING LOG 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ\_TWINING LABS.GDT 12/21/15



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DATE DRILLED 11/19/15 LOGGED BY AM BORING NO. C-5  
 DRIVE WEIGHT 140 lbs. DROP 30 inches DEPTH TO GROUNDWATER (ft.) N/A  
 DRILLING METHOD Hand Auger DRILLER Baja Drilling SURFACE ELEVATION (ft.) 1470 ±(MSL)

ELEVATION (feet)	DEPTH (feet)	SAMPLES		BLOWS / FOOT	MOISTURE (%)	DRY DENSITY (pcf)	ADDITIONAL TESTS	GRAPHIC LOG	U.S.C.S. CLASSIFICATION	DESCRIPTION
		Bulk	Driven							
1465	5						RV		SM	Silty SAND, light brown, moist, fine-grained sand
1460	10									Total Depth = 3.0 feet Backfilled on 11/19/2015 Backfilled with soil from cuttings

BORING LOG 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ\_TWINING LABS.GDT 12/21/15



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# APPENDIX B LABORATORY TESTING

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

## Appendix B Laboratory Testing

### Laboratory Moisture Content and Density Tests

The moisture content and dry densities of selected driven samples obtained from the exploratory borings were evaluated in general accordance with the latest version of ASTM D2937. The test results are presented on the logs of the exploratory borings in Appendix A and also summarized in Table B-1.

**Table B-1  
Laboratory Moisture Content and Dry Density**

Boring No.	Depth (feet)	Moisture Content (%)	Dry Unit Weight (pcf)
B-1	5	14.3	89.5
B-1	15	6.0	125.0
B-1	25	12.0	125.4
B-2	10	6.4	123.2
B-2	20	3.8	123.7
B-2	30	13.1	118.2
B-3	5	20.8	83.1
B-3	15	11.8	121.5
B-3	25	15.1	117.8
B-4	10	6.0	124.0
B-4	20	5.3	114.9
B-5	10	1.3	119.1
B-5	20	13.1	119.0
B-6	10	6.5	112.6
B-6	20	2.7	112.0
B-7	5	20.3	85.7
B-7	15	8.8	124.7
B-7	25	16.7	113.3
B-8	10	3.9	106.8
B-8	20	4.2	114.4
B-9	5	14.5	87.7
B-9	15	5.3	115.0
B-9	25	13.2	122.9

### Atterberg Limits

Atterberg limits tests were performed on selected soil samples to evaluate plasticity characteristics and to aid in the classification of the soil. The tests were performed in general accordance with ASTM D4318. The results are presented in Figure B-1.

### Sieve Analyses

The grain-size distribution of selected soil samples was evaluated in general accordance with ASTM C136/C117. Test results are presented on Figures B-2 through B-5.

### Expansion Index Test



The expansion index of a selected soil sample was evaluated in general accordance with ASTM D4829. The specimen was molded under a specified compactive energy at approximately 50 percent saturation. The prepared 1-inch-thick by 4-inch-diameter specimen was loaded with a surcharge of 144 pounds per square foot and was inundated with tap water. Readings of volumetric swell were made for a period of 24 hours. The results of the Expansion Index test are presented on Table B-2.

**Table B-2**  
**Expansion Index Test Results**

Boring No.	Depth (feet)	Expansion Index	Expansion Potential
B-5	0 - 5	1	Very Low
B-9	0 - 5	0	Very Low

#### Maximum Dry Density-Optimum Moisture Content

A selected bulk soil sample was tested to evaluate maximum dry density and optimum moisture content. The test was performed in general accordance with ASTM test method D 1557. The results are presented on Figures B-6 through B-8.

#### Direct Shear Test

A direct shear test was performed on a selected relatively undisturbed soil sample in general accordance with ASTM D3080 to evaluate the shear strength characteristics of the material. The samples were inundated during shearing to represent adverse field conditions. Test results are presented on Figures B-9 through B-12.

#### Consolidation Test

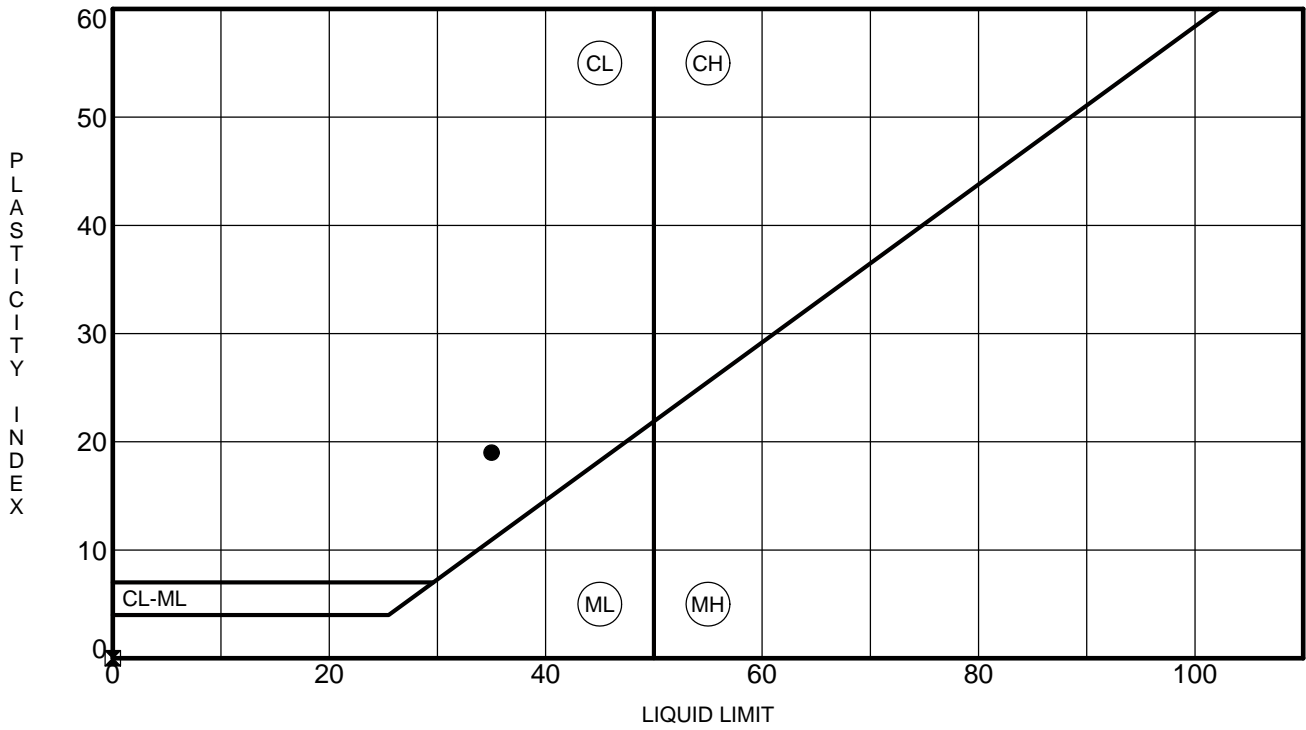
A consolidation test was performed on a selected sample in general accordance with the latest version of ASTM D2435. The sample was inundated during testing to represent adverse field conditions. The percent consolidation for each load cycle was recorded as a ratio of the amount of vertical compression to the original height of the sample. The test results are presented on Figures B-13 through B-16.

#### Corrosivity

Soil pH and resistivity tests were performed by Anaheim Test Laboratories on a representative soil sample in general accordance with the latest version of California Test Method 643. The chloride content of the selected sample was evaluated in general accordance with the latest version of California Test Method 422. The sulfate content of the selected sample was evaluated in general accordance with the latest version of California Test Method 417. The test results are presented on Table B-3.

**Table B-3**  
**Corrosivity Test Results**

Boring No.	Depth (feet)	pH	Water Soluble Sulfate (ppm)	Water Soluble Chloride (ppm)	Minimum Resistivity (ohm-cm)
B-1	0 - 5	7.6	136	183	2,700
B-2	0 - 5	7.7	91	205	2,400
B-5	0 - 5	7.8	160	255	2,500
B-9	0 - 5	7.8	337	349	1,000



Sample Location	LL	PL	PI	U.S.C.S. Classification
● B-1 at 40 ft	35	16	19	Lean CLAY
☒ B-5 at 10 ft	NP	NP	NP	Silty SAND

ATTERBERG LIMITS 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ TWINING LABS.GDT 12/18/15

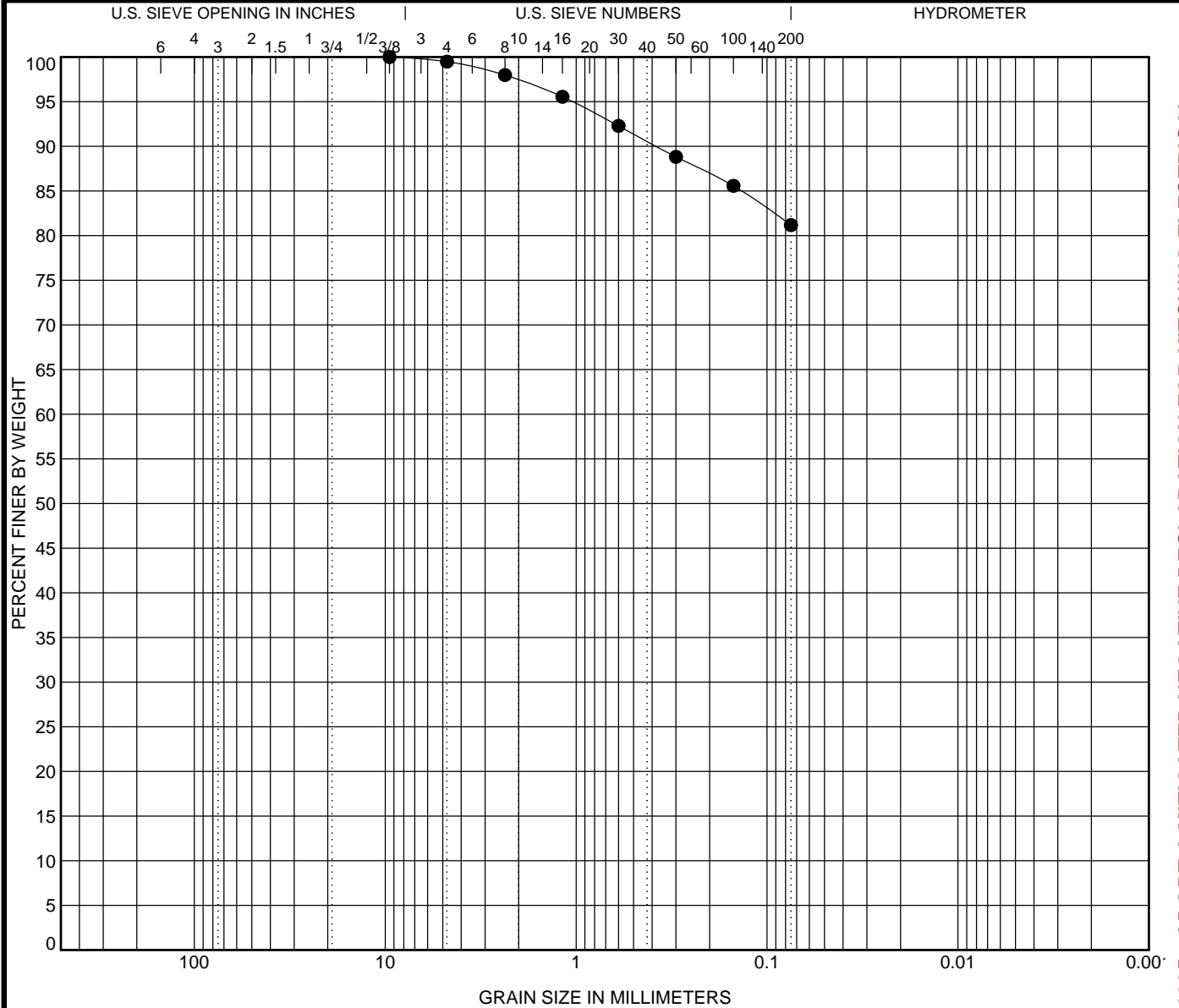


**ATTERBERG LIMITS**

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COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Sample Location	U.S.C.S. Classification						Cc	Cu
● B-1 at 0 - 5 ft	ML - SILT with sand							
D <sub>100</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>10</sub>	%Gravel	%Sand	%Silt	%Clay
9.5					0.5	18.3	81.2	

GRAIN SIZE 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ TWINING LABS.GDT 12/18/15

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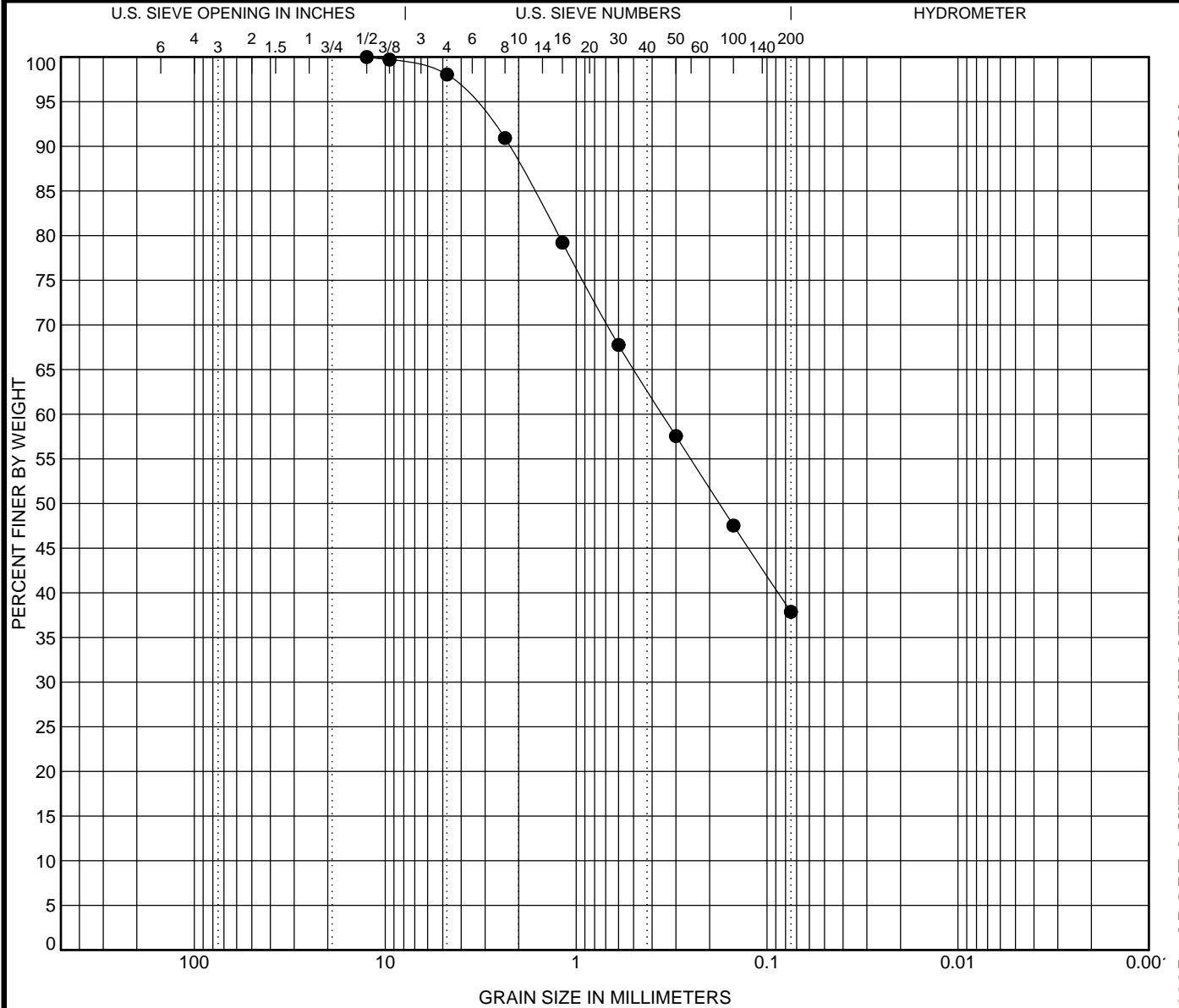
### GRAIN SIZE DISTRIBUTION

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December 2015

FIGURE B- 2



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Sample Location	U.S.C.S. Classification						Cc	Cu
● B-2 at 15 ft	<b>SM - Silty SAND</b>							
D <sub>100</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>10</sub>	%Gravel	%Sand	%Silt	%Clay
12.5	0.354	0.178			2.0	60.2	37.9	

GRAIN SIZE 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ TWINING LABS.GDT 12/18/15

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



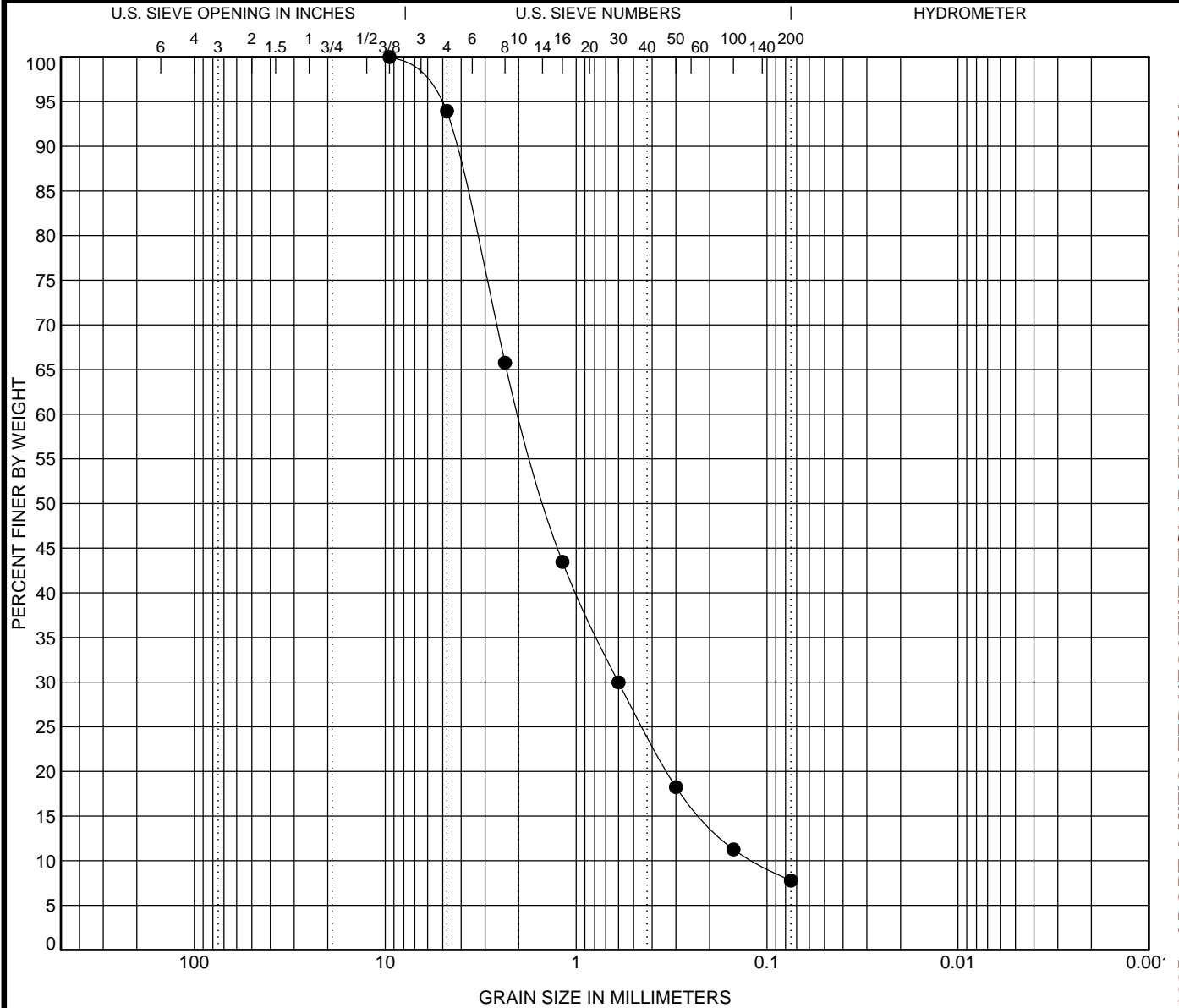
### GRAIN SIZE DISTRIBUTION

Kitching Street Electrical Substation  
Moreno Valley, California

PROJECT NO.  
150817.3

REPORT DATE  
December 2015

FIGURE B- 3



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Sample Location	U.S.C.S. Classification						Cc	Cu
● B-5 at 10 ft	SW-SM - Well graded SAND with silt						1.57	16.8
D <sub>100</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>10</sub>	%Gravel	%Sand	%Silt	%Clay
9.5	1.973	1.446	0.601	0.117	6.0	86.2	7.8	

GRAIN SIZE 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ TWINING LABS.GDT 12/18/15

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



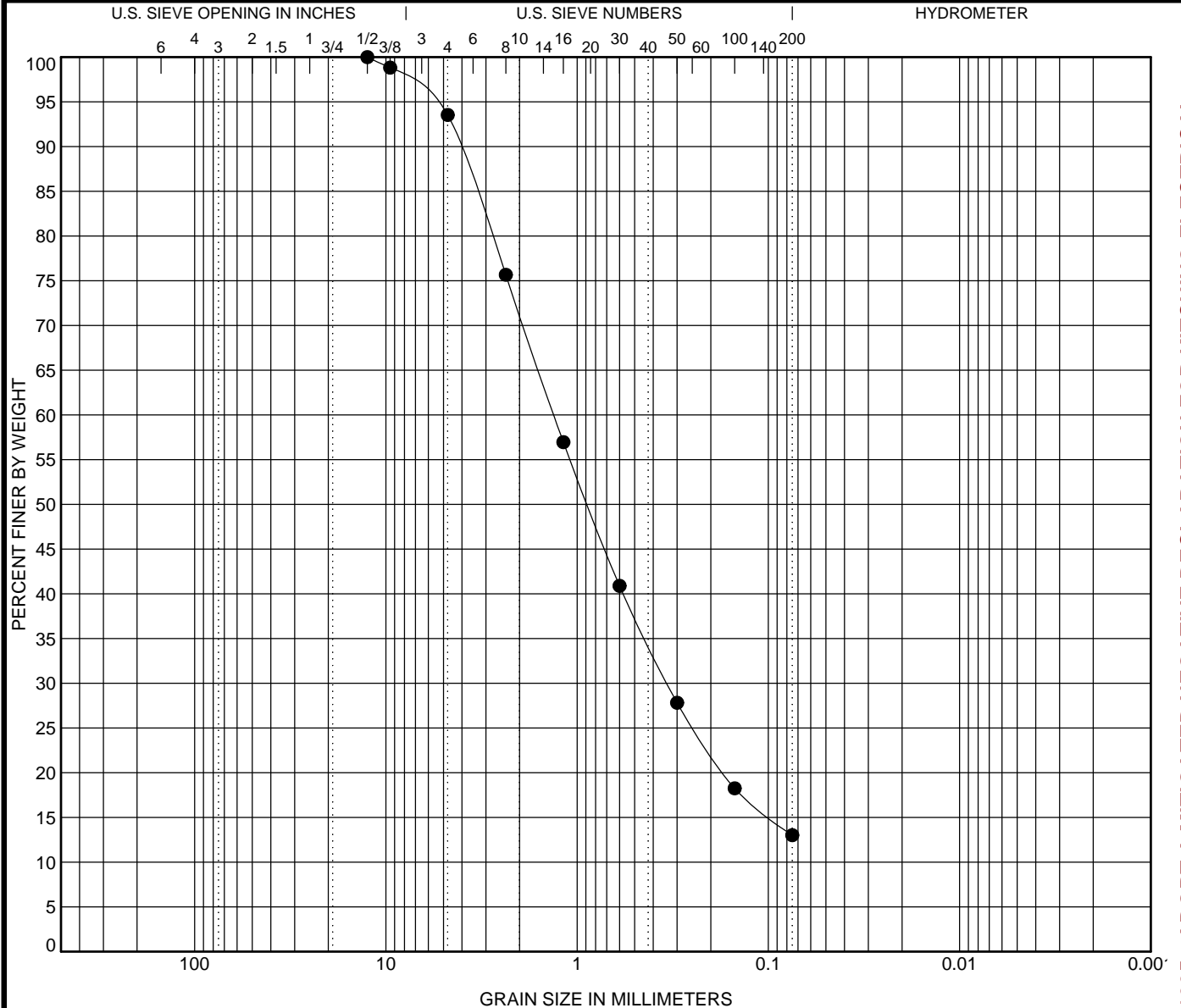
### GRAIN SIZE DISTRIBUTION

Kitching Street Electrical Substation  
Moreno Valley, California

PROJECT NO.  
150817.3

REPORT DATE  
December 2015

FIGURE B- 4



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Sample Location	U.S.C.S. Classification						Cc	Cu
● B-9 at 20 ft	SM - Silty SAND							
D <sub>100</sub>	D <sub>60</sub>	D <sub>50</sub>	D <sub>30</sub>	D <sub>10</sub>	%Gravel	%Sand	%Silt	%Clay
12.5	1.321	0.88	0.337		6.5	80.5	13.0	

GRAIN SIZE 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ TWINING LABS.GDT 12/18/15

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



### GRAIN SIZE DISTRIBUTION

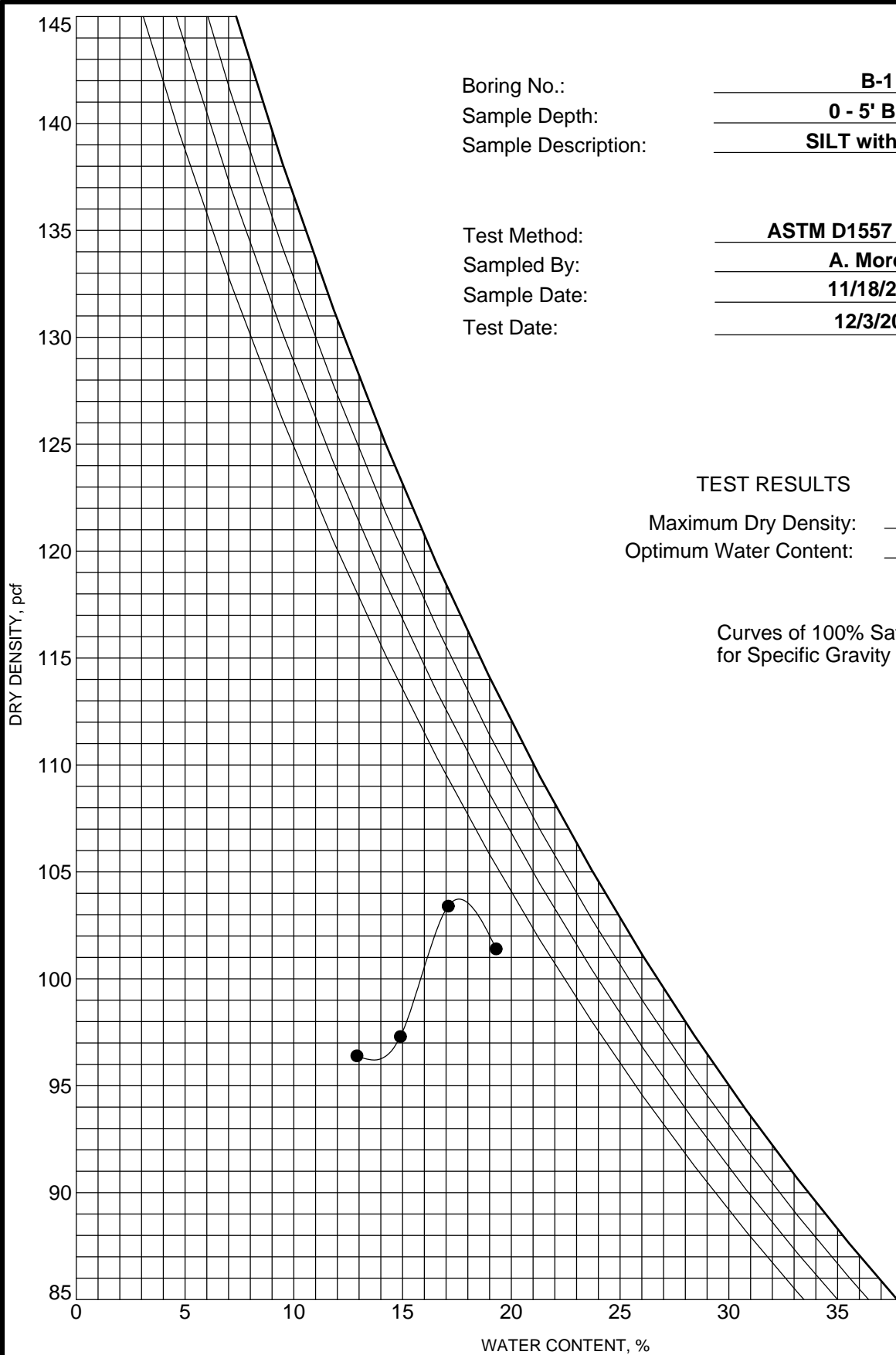
Kitching Street Electrical Substation  
Moreno Valley, California

PROJECT NO.  
150817.3

REPORT DATE  
December 2015

FIGURE B- 5

COMPACTION (MODIFIED BY PAUL)\_150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ\_TWINING LABS.GDT\_12/18/15



Boring No.: B-1  
 Sample Depth: 0 - 5' Bulk  
 Sample Description: SILT with sand

Test Method: ASTM D1557 Method A  
 Sampled By: A. Moreno  
 Sample Date: 11/18/2015  
 Test Date: 12/3/2015

**TEST RESULTS**  
 Maximum Dry Density: 103.7 pcf  
 Optimum Water Content: 17.6 %

Curves of 100% Saturation  
 for Specific Gravity Equal to:  
 2.80  
 2.70  
 2.60  
 2.50



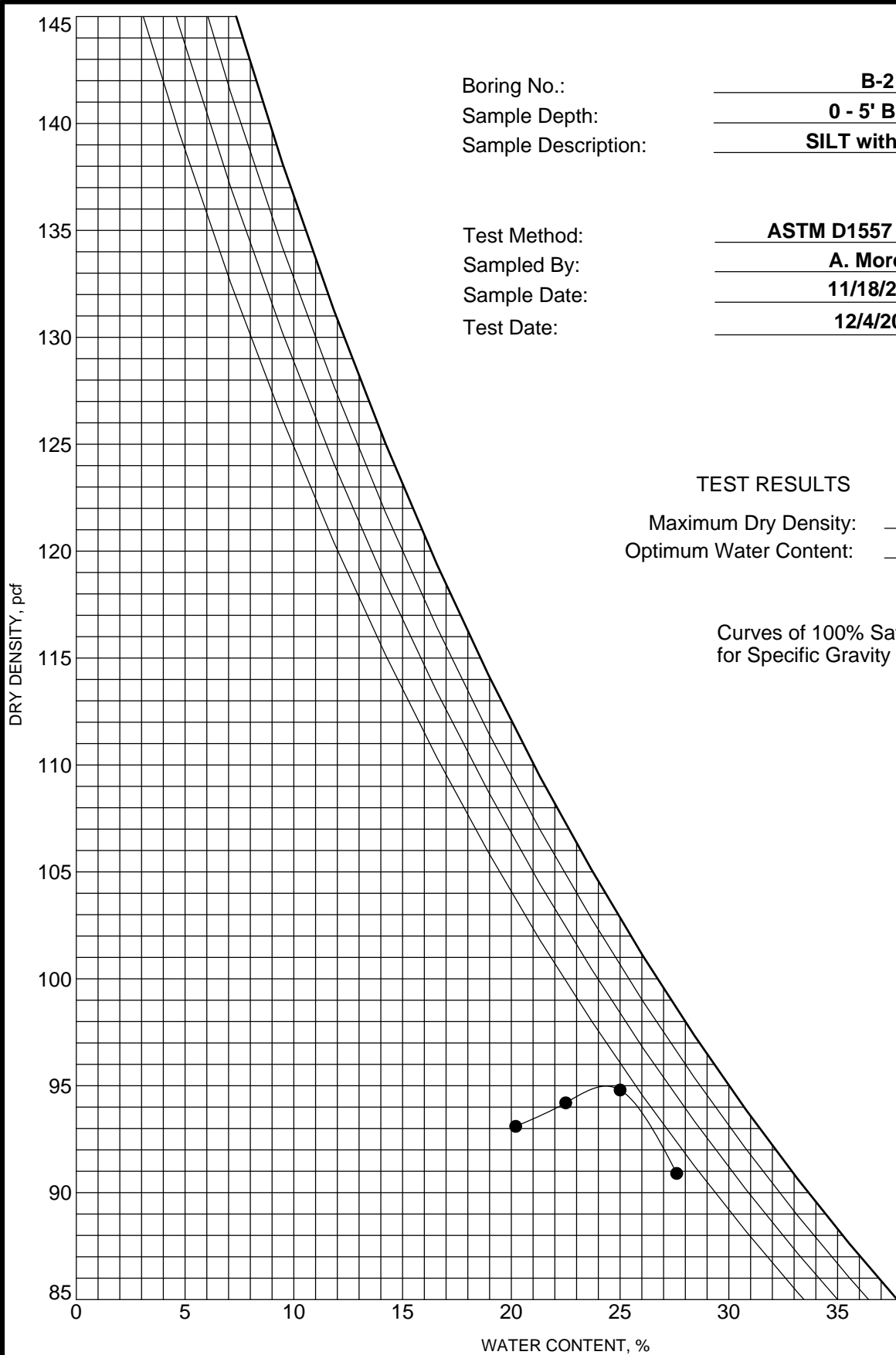
**MOISTURE-DENSITY RELATIONSHIP**

Kitching Street Electrical Substation  
 Moreno Valley, California

PROJECT NO. 150817.3	REPORT DATE December 2015	FIGURE B-6
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Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

COMPACTION (MODIFIED BY PAUL)\_150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ\_TWINING LABS.GDT\_12/18/15



Boring No.: B-2  
 Sample Depth: 0 - 5' Bulk  
 Sample Description: SILT with sand

Test Method: ASTM D1557 Method A  
 Sampled By: A. Moreno  
 Sample Date: 11/18/2015  
 Test Date: 12/4/2015

**TEST RESULTS**  
 Maximum Dry Density: 95.0 pcf  
 Optimum Water Content: 24.4 %

Curves of 100% Saturation  
 for Specific Gravity Equal to:  
 2.80  
 2.70  
 2.60  
 2.50



**MOISTURE-DENSITY RELATIONSHIP**

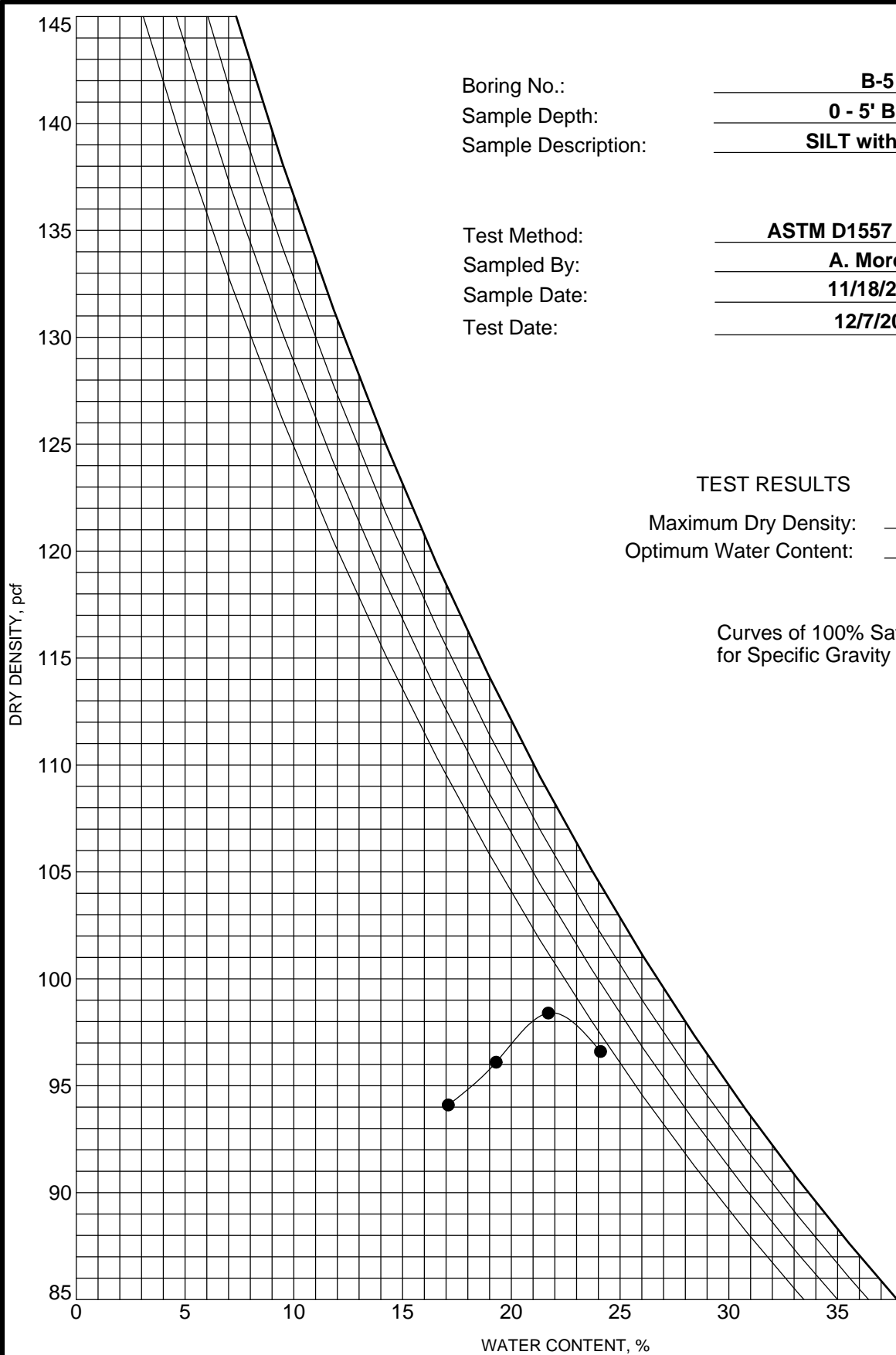
Kitching Street Electrical Substation  
 Moreno Valley, California

PROJECT NO. 150817.3	REPORT DATE December 2015	FIGURE B-7
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Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



COMPACTION (MODIFIED BY PAUL)\_150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ\_TWINING LABS.GDT\_12/18/15



Boring No.: B-5  
 Sample Depth: 0 - 5' Bulk  
 Sample Description: SILT with sand

Test Method: ASTM D1557 Method A  
 Sampled By: A. Moreno  
 Sample Date: 11/18/2015  
 Test Date: 12/7/2015

**TEST RESULTS**  
 Maximum Dry Density: 98.4 pcf  
 Optimum Water Content: 21.8 %

Curves of 100% Saturation  
 for Specific Gravity Equal to:  
 2.80  
 2.70  
 2.60  
 2.50

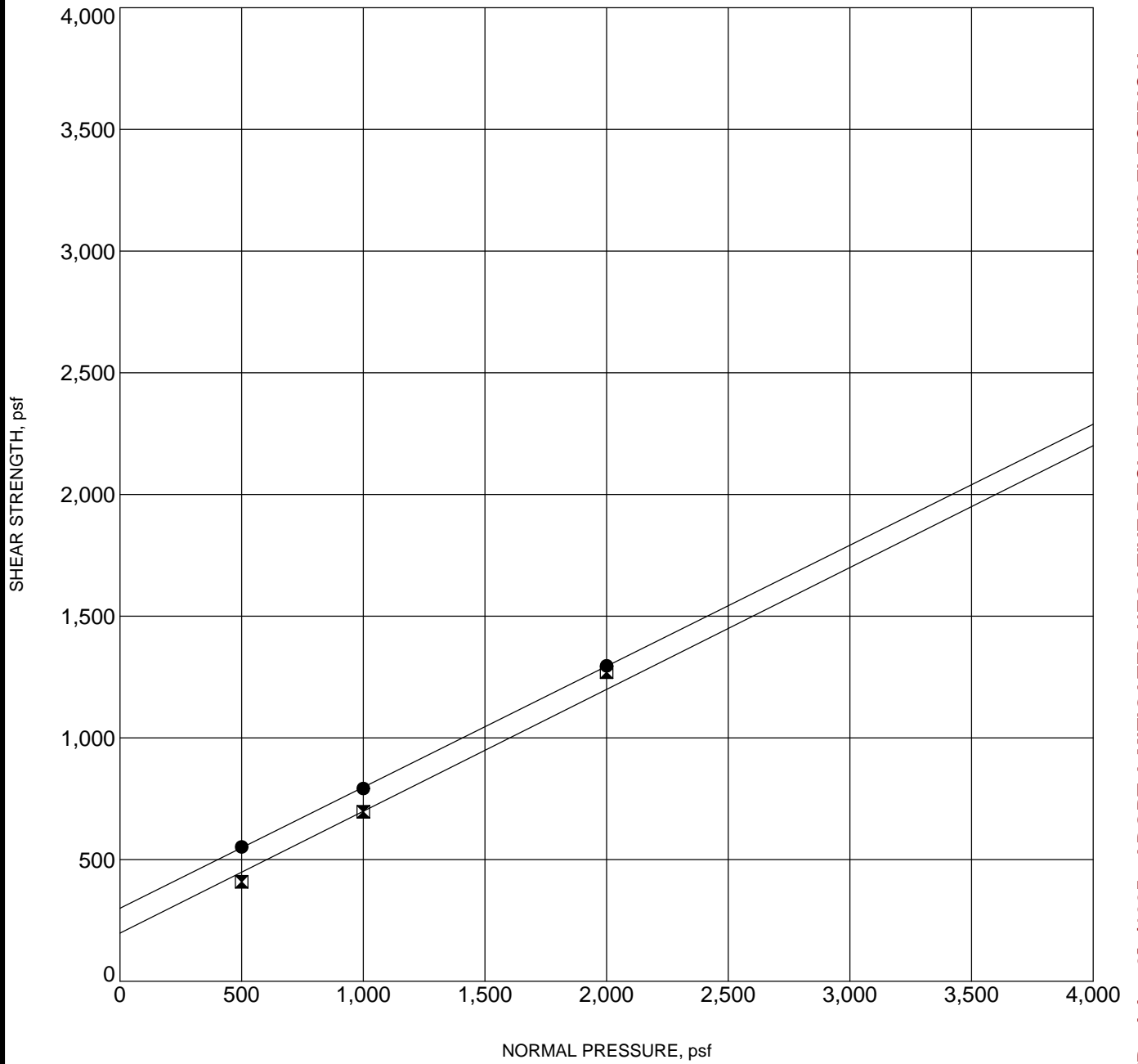


**MOISTURE-DENSITY RELATIONSHIP**

Kitching Street Electrical Substation  
 Moreno Valley, California

PROJECT NO. 150817.3	REPORT DATE December 2015	FIGURE B-8
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Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



DIRECT SHEAR 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ TWINING LABS.GDT 12/21/15

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

<b>Boring No.:</b> B-1		<b>Shear Strength Parameters</b>	
<b>Sample Depth (ft):</b> 0 - 5'		<b>Peak</b> ●	<b>Ultimate</b> ✕
<b>Sample Description:</b> SILT with sand		<b>Cohesion, C (psf):</b> 300	200
<b>Strain Rate (in./min):</b> 0.005		<b>Friction Angle, Ø (deg):</b> 26	26
<b>Dry Density (pcf):</b> 93.2		<b>Initial Moisture (%):</b> 17.6	
<b>Relative Compaction (%):</b> 90		<b>Final Moisture (%):</b> 26.8	



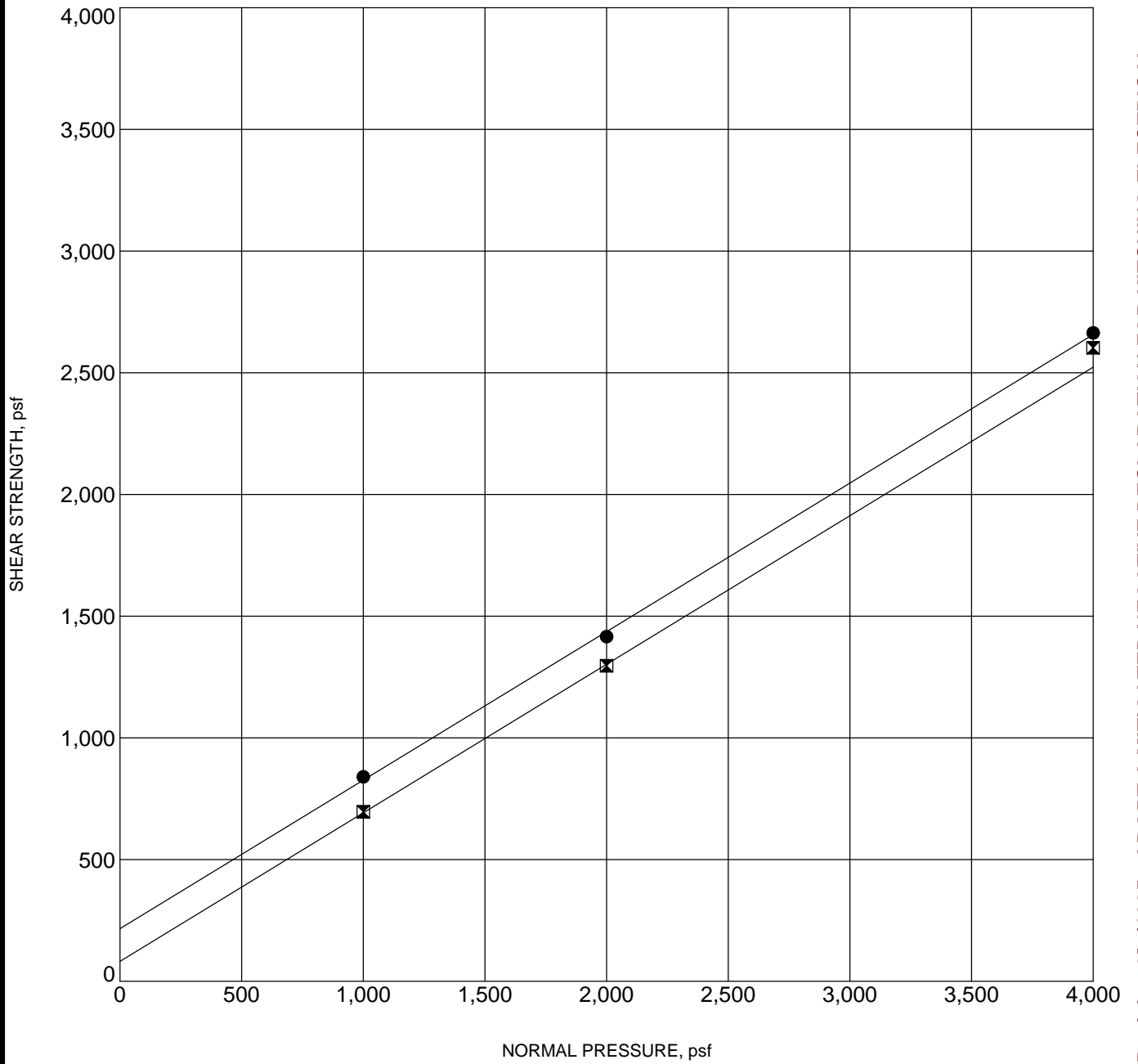
**REMOLDED DIRECT SHEAR TEST**

Kitching Street Electrical Substation  
Moreno Valley, California

PROJECT NO.  
150817.3

REPORT DATE  
December 2015

FIGURE B-9



**Boring No.:** B-2  
**Sample Depth (ft):** 10  
**Sample Description:** Silty SAND  
**Strain Rate (in./min):** 0.005  
**Dry Density (pcf):** 123.2

**Shear Strength Parameters**  
**Peak** ● **Ultimate** ✕  
**Cohesion, C (psf):** 215      85  
**Friction Angle,  $\phi$  (deg):** 31      31  
**Initial Moisture (%):** 6.4  
**Final Moisture (%):** 12.2

DIRECT SHEAR 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ TWINING LABS.GDT 12/21/15

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



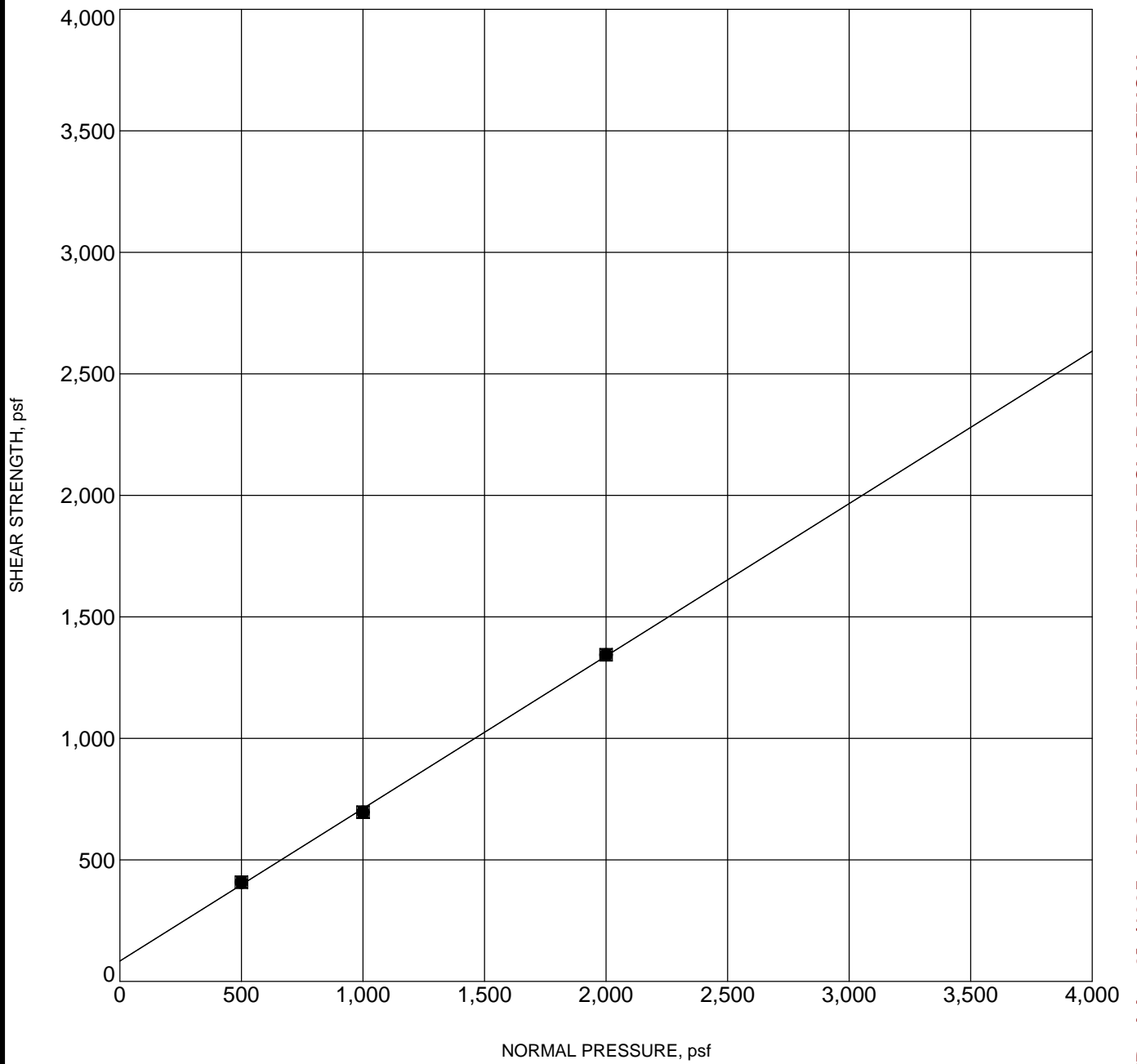
**DIRECT SHEAR TEST**

Kitching Street Electrical Substation  
 Moreno Valley, California

PROJECT NO.  
150817.3

REPORT DATE  
December 2015

FIGURE B-10



**Boring No.:** B-7  
**Sample Depth (ft):** 5  
**Sample Description:** Silty SAND  
**Strain Rate (in./min):** 0.005  
**Dry Density (pcf):** 85.7

**Shear Strength Parameters**  
 Peak ● Ultimate ◻  
**Cohesion, C (psf):** 85      85  
**Friction Angle,  $\phi$  (deg):** 32      32  
**Initial Moisture (%):** 20.3  
**Final Moisture (%):** 34.6

DIRECT SHEAR 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ TWINING LABS.GDT 12/21/15

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



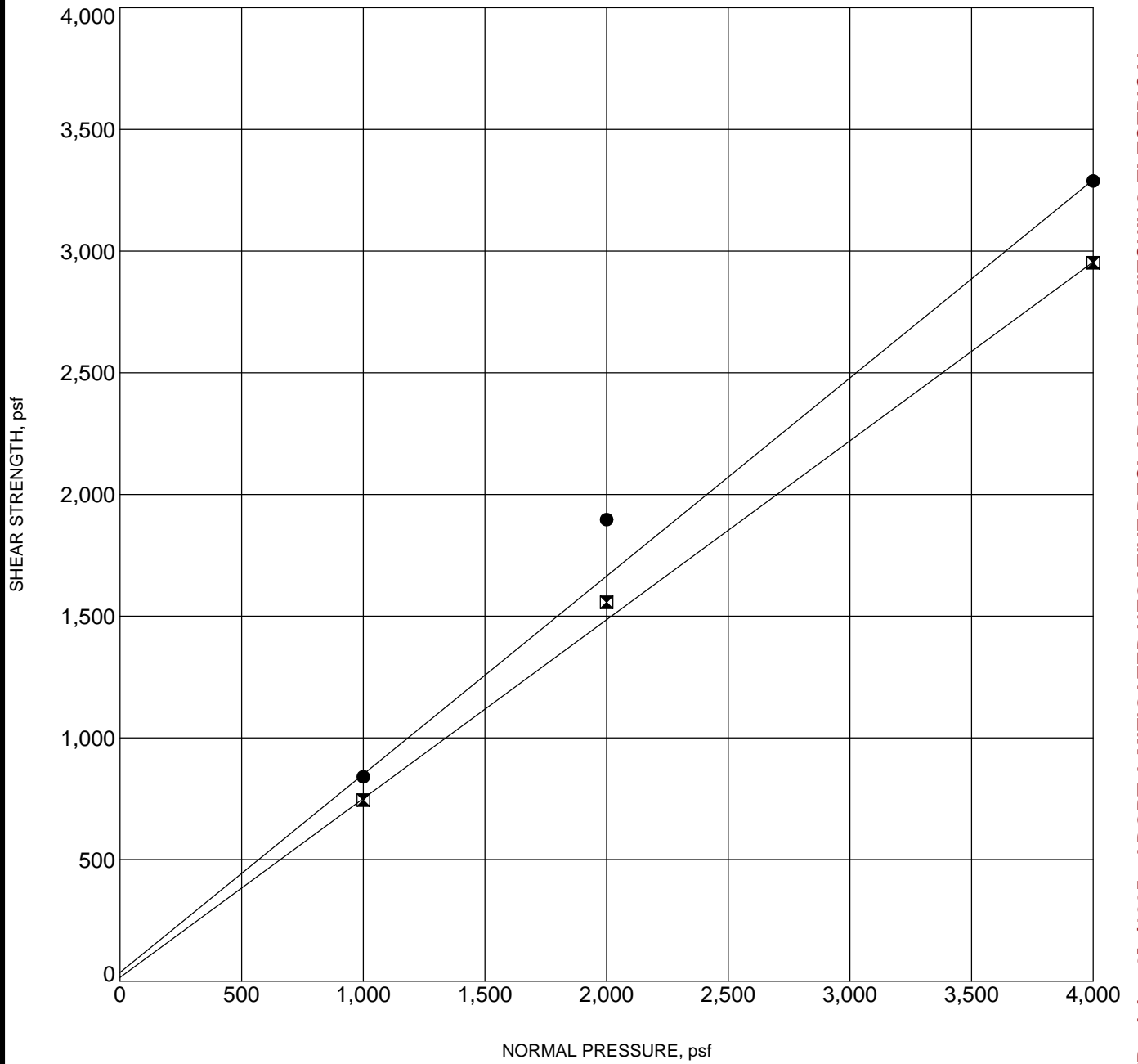
**DIRECT SHEAR TEST**

Kitching Street Electrical Substation  
 Moreno Valley, California

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150817.3

REPORT DATE  
December 2015

FIGURE B-11



DIRECT SHEAR 150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ TWINING LABS.GDT 12/21/15

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

**Boring No.:** B-8  
**Sample Depth (ft):** 20  
**Sample Description:** Silty SAND  
**Strain Rate (in./min):** 0.005  
**Dry Density (pcf):** 114.4

**Shear Strength Parameters**  
**Peak** ● **Ultimate** ✕  
**Cohesion, C (psf):** 140      15  
**Friction Angle,  $\phi$  (deg):** 38      36  
**Initial Moisture (%):** 4.2  
**Final Moisture (%):** 15.3



**DIRECT SHEAR TEST**

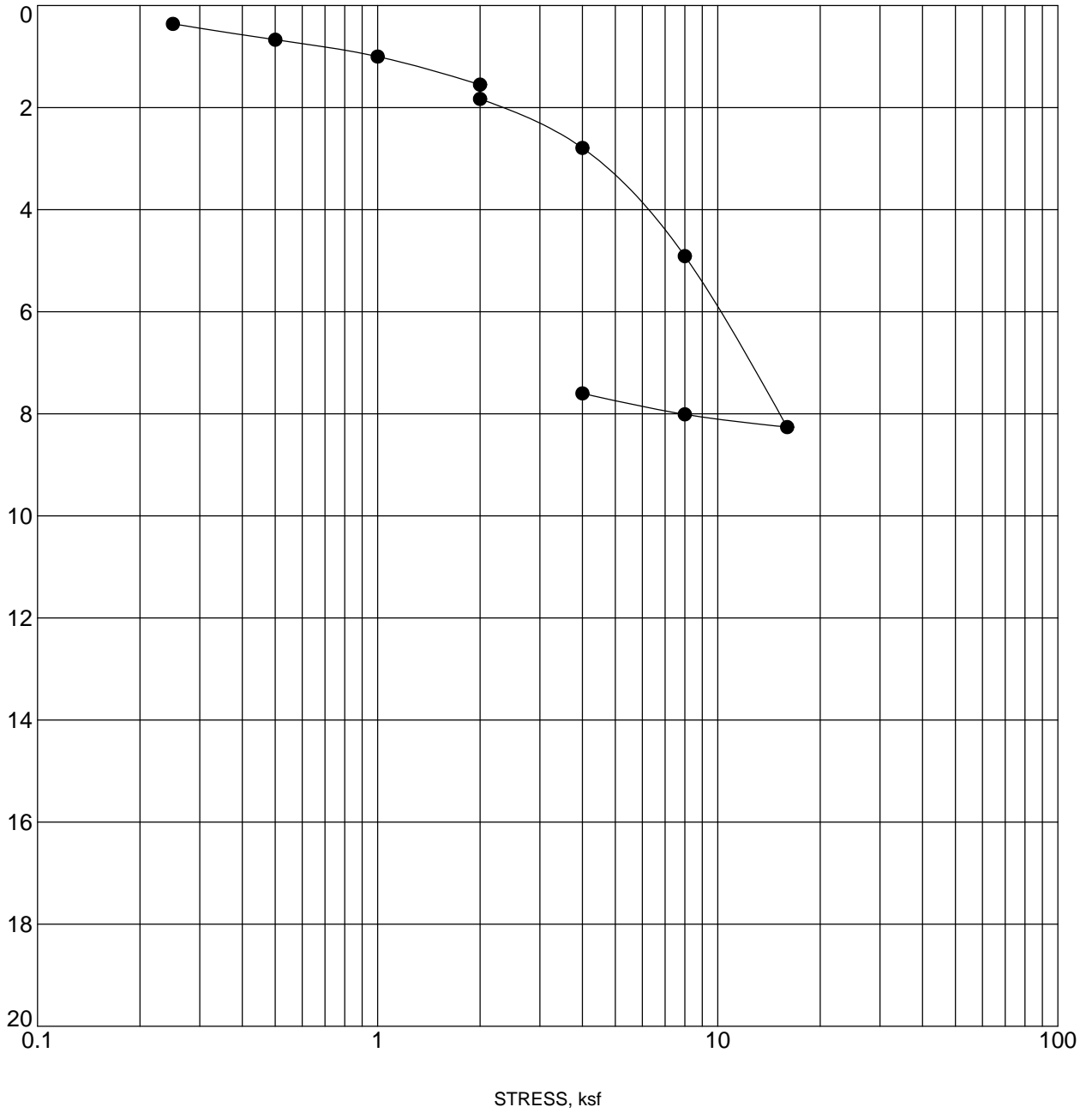
Kitching Street Electrical Substation  
Moreno Valley, California

PROJECT NO.  
150817.3

REPORT DATE  
December 2015

FIGURE B-12

STRAIN, %



Sample Location	Soil Description	Dry Density (pcf)	Moisture Content (%)
● B-1 at 5 ft	SILT with sand	87.9	14.3

CONSOL-STRAIN\_150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ\_TWINING LABS.GDT\_12/21/15



**CONSOLIDATION TEST**

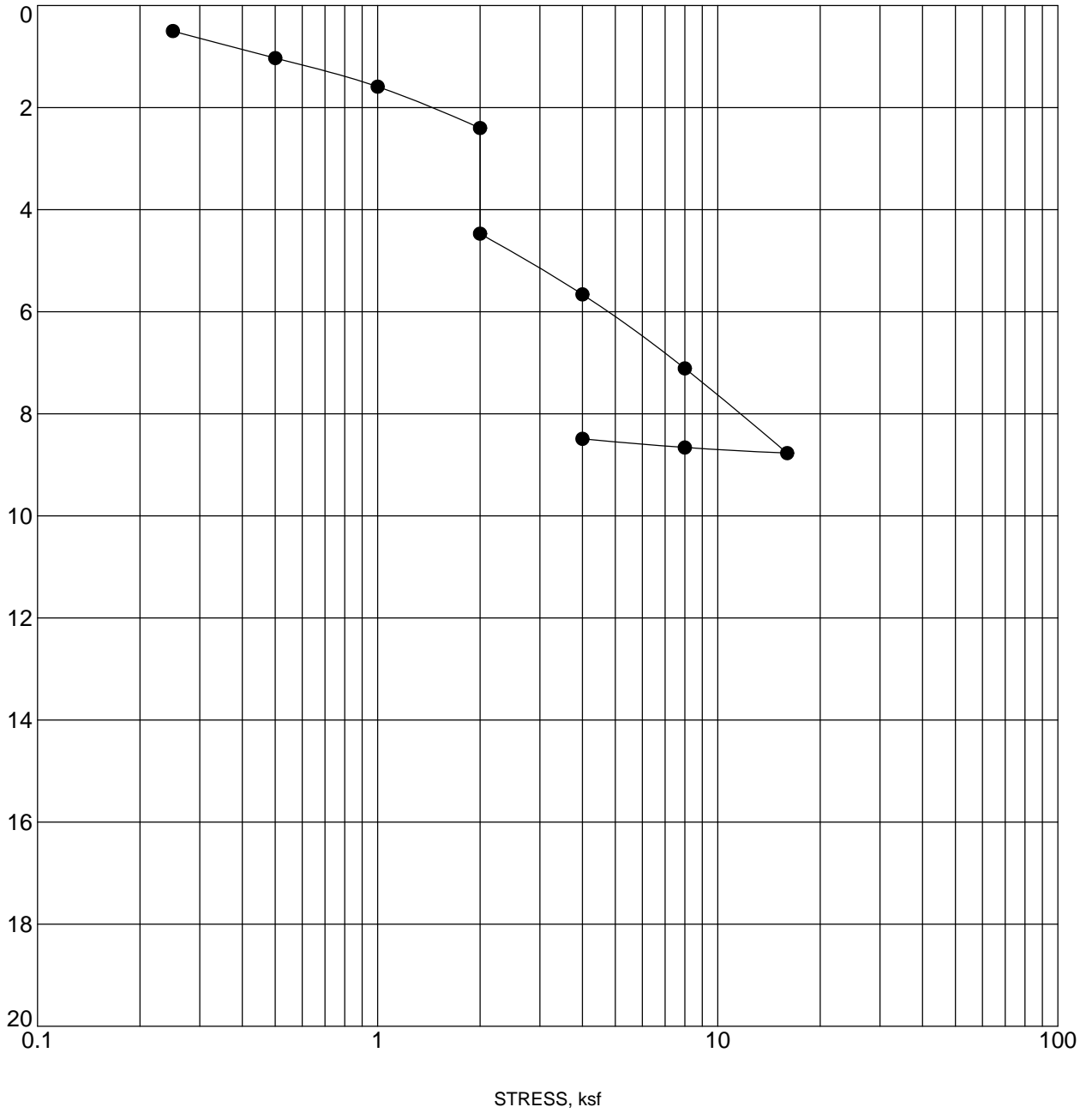
Kitching Street Electrical Substation  
Moreno Valley, California

PROJECT NO.  
150817.3

REPORT DATE  
December 2015

FIGURE B-13

STRAIN, %



Sample Location	Soil Description	Dry Density (pcf)	Moisture Content (%)
● B-6 at 20 ft	Silty SAND	110.9	2.7

CONSOL STRAIN\_150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ\_TWINING LABS.GDT\_12/21/15



**CONSOLIDATION TEST**

Kitching Street Electrical Substation  
Moreno Valley, California

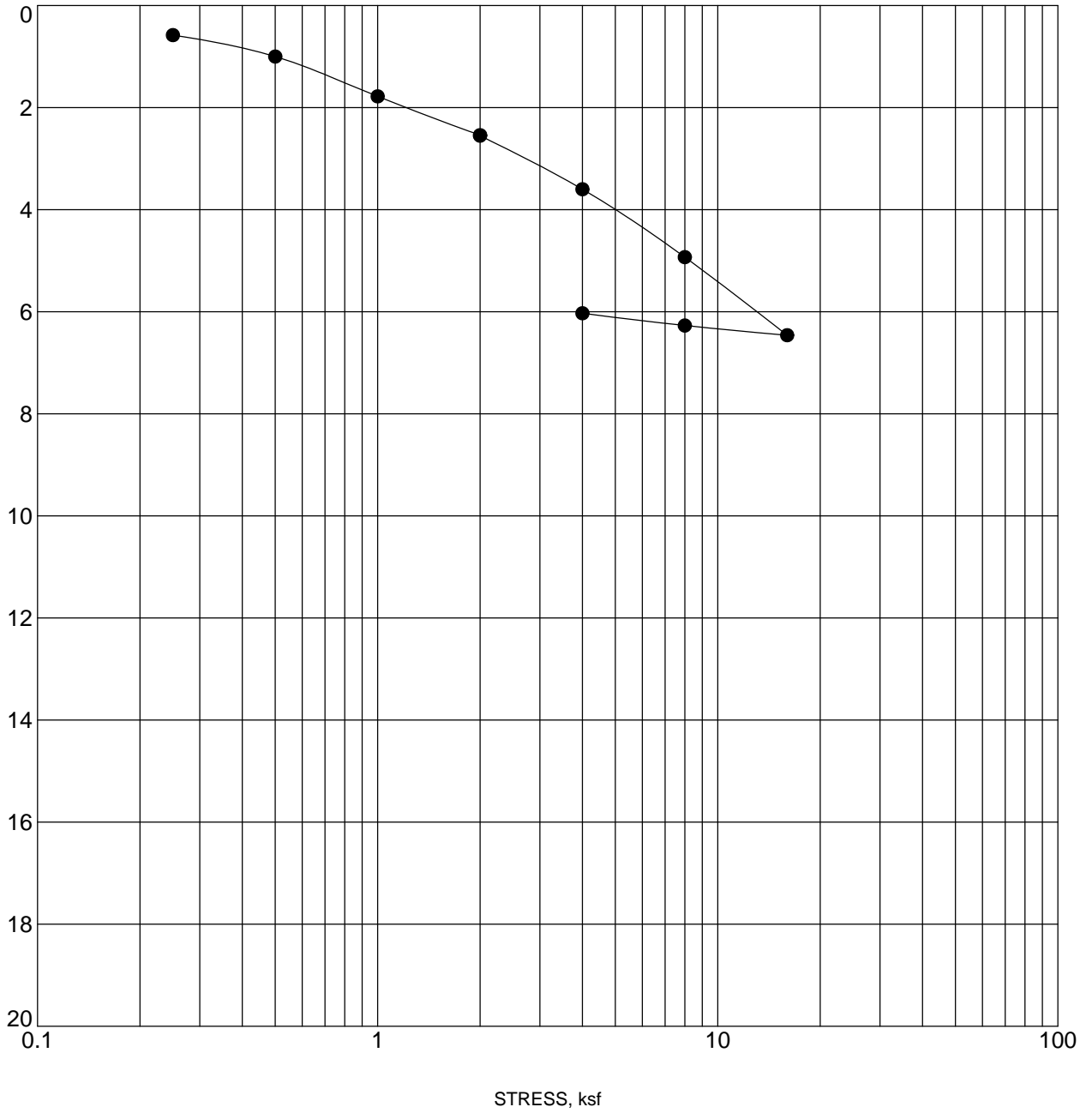
PROJECT NO.  
150817.3

REPORT DATE  
December 2015

FIGURE B-14

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

STRAIN, %



Sample Location	Soil Description	Dry Density (pcf)	Moisture Content (%)
● B-7 at 25 ft	Silty SAND	111.6	16.7

CONSOL STRAIN\_150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ\_TWINING LABS.GDT\_12/21/15



**CONSOLIDATION TEST**

Kitching Street Electrical Substation  
Moreno Valley, California

PROJECT NO.  
150817.3

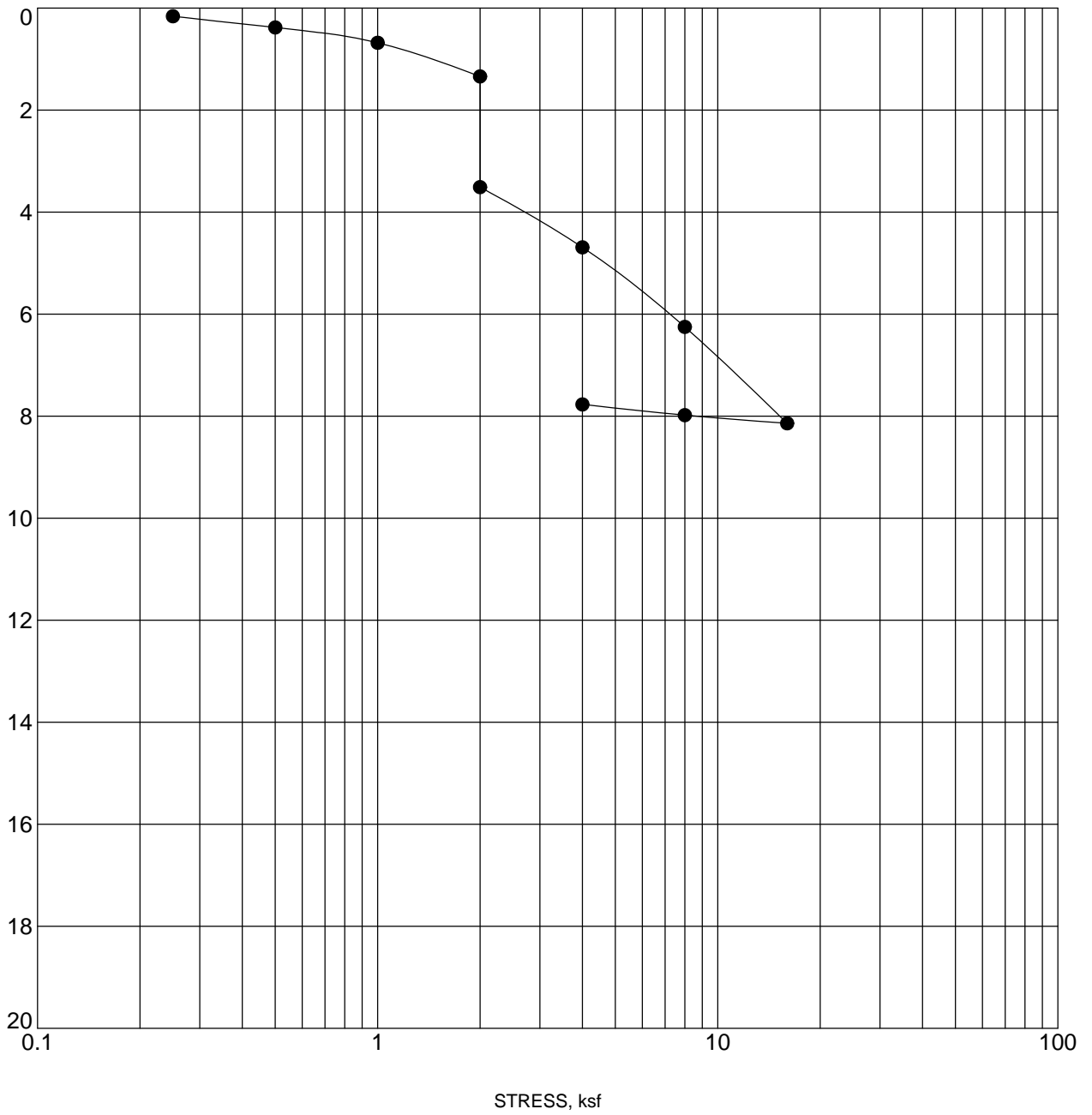
REPORT DATE  
December 2015

FIGURE B-15

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



STRAIN, %



Sample Location	Soil Description	Dry Density (pcf)	Moisture Content (%)
● B-8 at 10 ft	Silty SAND	105.6	3.9

CONSOL-STRAIN\_150817.3 - KITCHING STREET ELECTRICAL SUBSTATION.GPJ\_TWINING LABS.GDT\_12/21/15



**CONSOLIDATION TEST**

Kitching Street Electrical Substation  
Moreno Valley, California

PROJECT NO.  
150817.3

REPORT DATE  
December 2015

FIGURE B-16

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

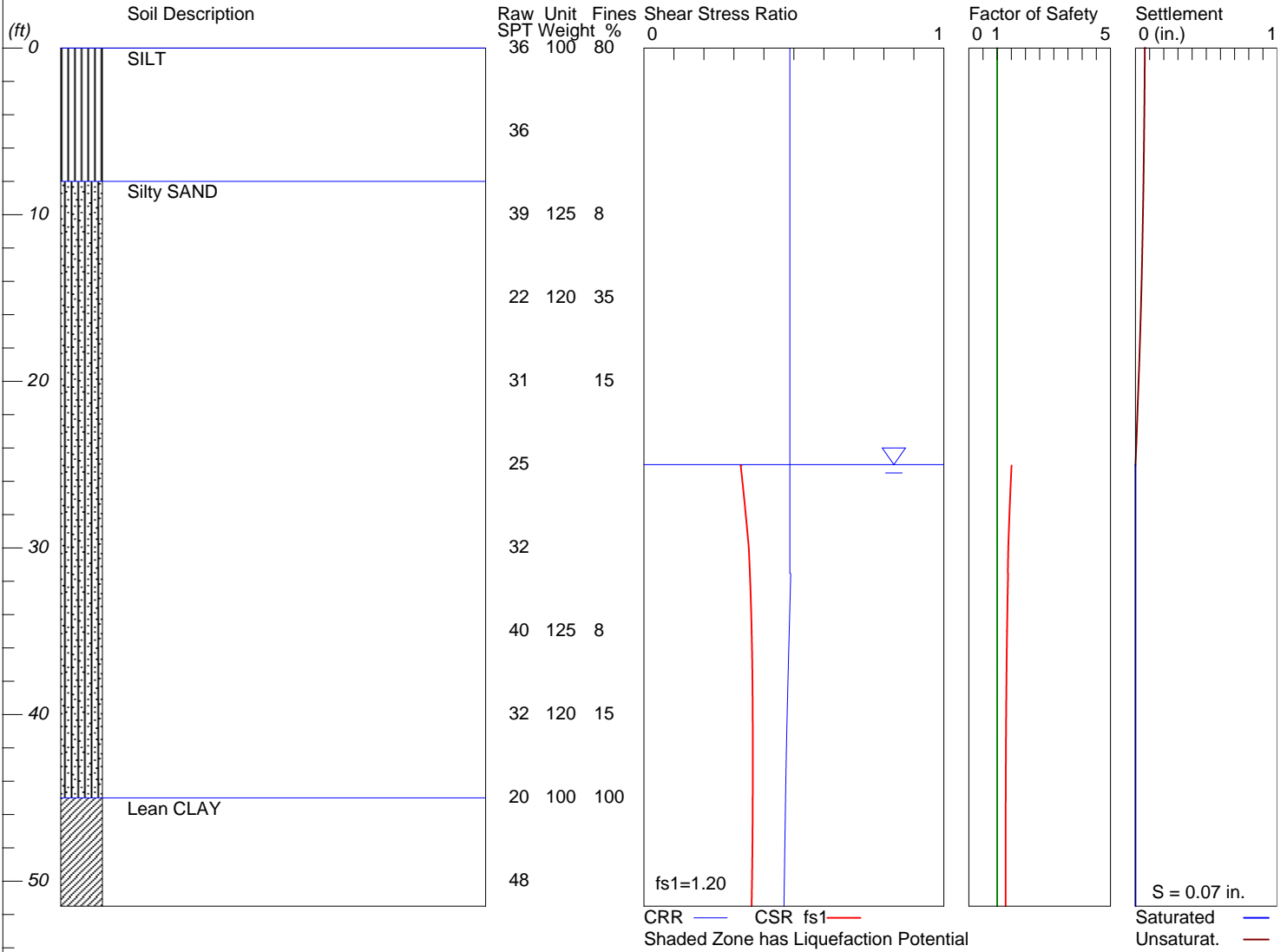
# APPENDIX C LIQUEFACTION ANALYSES

# LIQUEFACTION ANALYSIS

## Kitching Street Electrical Substation

Hole No.=5 Water Depth=25 ft

Magnitude=7.58  
Acceleration=0.527g



Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

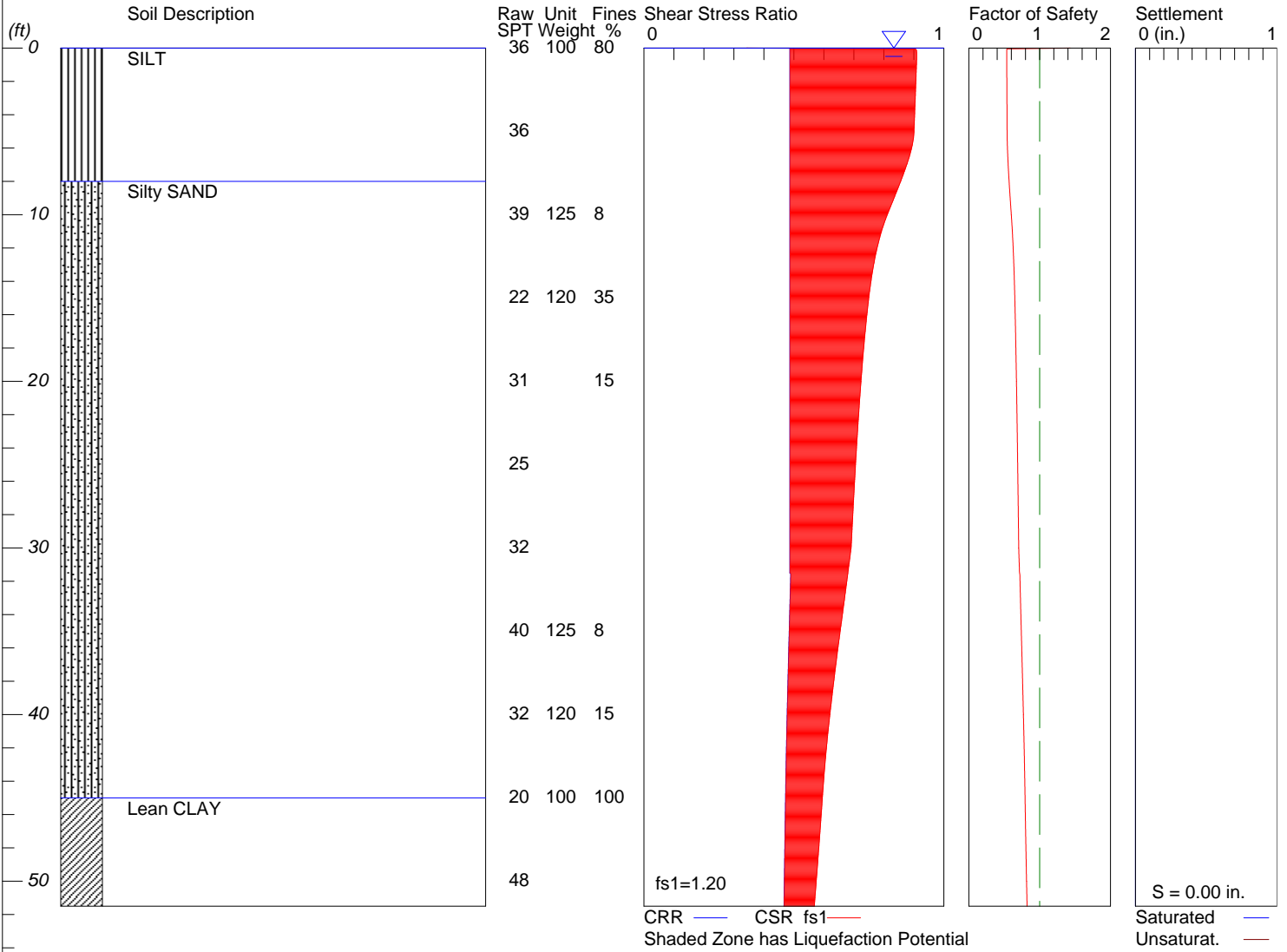
LiquefyPro CivilTech Software USA www.civiltech.com

# LIQUEFACTION ANALYSIS

## Kitching Street Electrical Substation

Hole No.=5 Water Depth=0 ft

Magnitude=7.58  
Acceleration=0.527g



Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

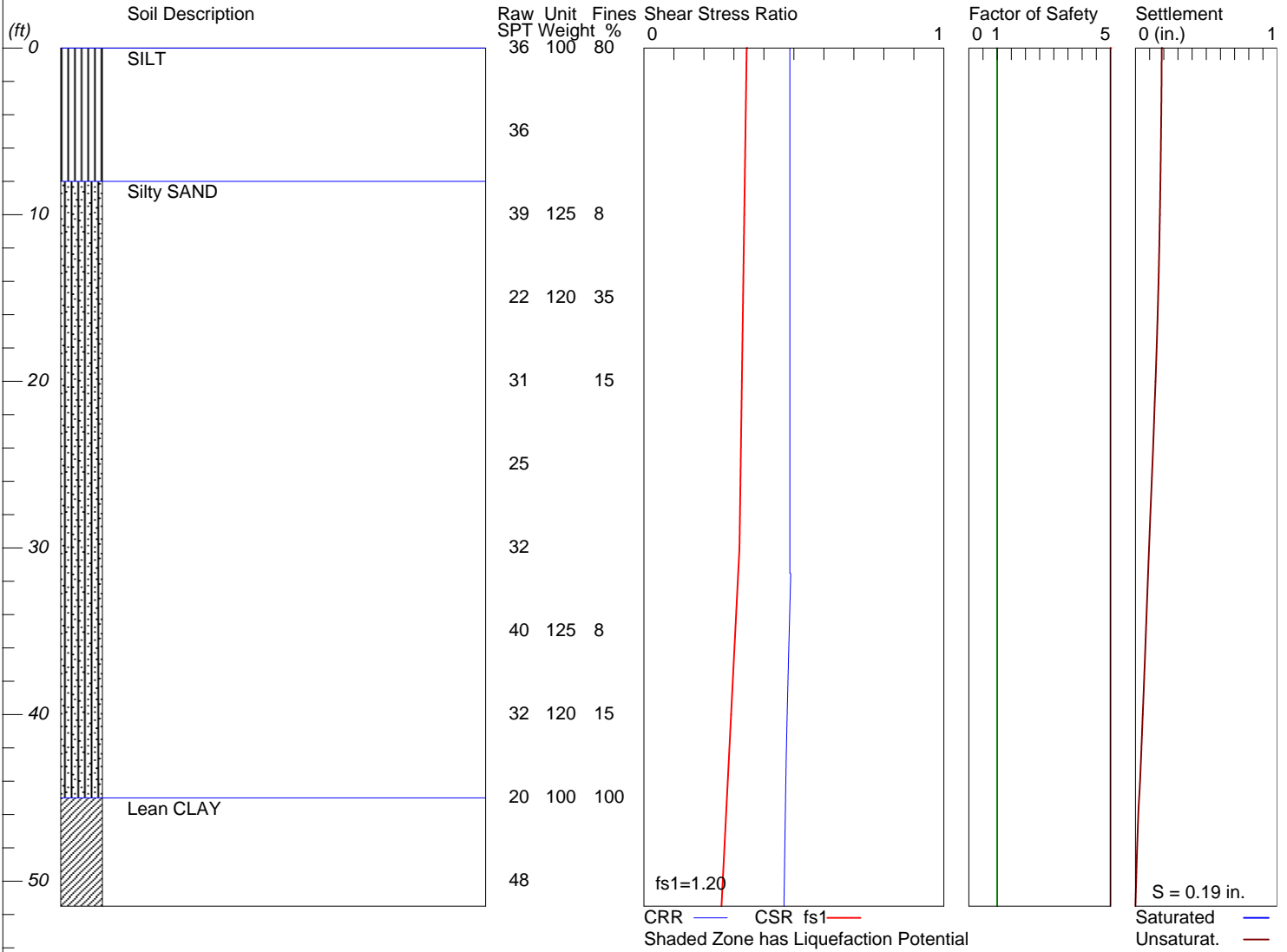
LiquefyPro CivilTech Software USA www.civiltech.com

# LIQUEFACTION ANALYSIS

## Kitching Street Electrical Substation

Hole No.=5 Water Depth=100 ft

Magnitude=7.58  
Acceleration=0.527g



Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

LiquefyPro CivilTech Software USA www.civiltech.com

# APPENDIX D

## ELECTRICAL RESISTIVITY SURVEY



November 20, 2015  
Project No. 115546a

Mr. Andres Bernal  
Twining, Inc.  
2883 East Spring Street, Suite 300  
Long Beach, CA, 90806

Subject: Geophysical Evaluation  
Kitching Street Electrical Substation  
Moreno Valley, California

Dear Mr. Bernal:

In accordance with your authorization, we have performed geophysical survey services pertaining to the proposed electrical substation located at the corner of Kitching Street and Edwin Road in Moreno Valley, California (Figure 1). The purpose of our services was to collect in-situ electrical resistivity measurements for use in the design and construction of the proposed Substation. Our services were conducted on November 6<sup>th</sup>, 2015. This report presents the survey methodology, equipment used, analysis, and results.

Our scope of services for the project included collection of electrical resistivity data at the site, compilation of the data collected, and preparation of this data report. Specifically, we conducted two crossing, nearly orthogonal resistivity soundings at one location (R-1) onsite for a total of 2 lines. The north-south trending line is given an “a” designation (R-1a) and the east-west line is given a “b” designation (R-1b). Figure 2 illustrates the approximate sounding locations, and Figure 3 illustrates the conditions in the study area.

The data were collected in general accordance with ASTM G57 using an Advanced Geosciences, Inc. (AGI) MiniSting earth resistivity meter and four steel electrodes in a Wenner configuration. For the one location, soil resistance measurements were collected at several electrode spacings, which were designated by your office, along the two lines with the middle of each sounding generally located at a common center point. The stainless steel electrodes were hammered into place and the soils surrounding the electrodes were moistened with water where necessary.

The results of the electrical resistivity survey are presented in Figure 4. The measurements collected along each of the soundings are generally consistent (with slight variations in the near

Kitching Street Electrical Substation  
Moreno Valley, California

November 20, 2015  
Project No. 115546a

surface readings) indicating that the subsurface conditions are fairly uniform with respect to resistivity.

The field services and geophysical analyses presented in this report have been conducted in general accordance with current practice and the standard of care exercised by consultants performing similar tasks in the project area. No warranty, express or implied, is made regarding the conclusions presented in this report. Please also note that our evaluation was limited to measuring in-situ apparent soil resistivity at one location selected by your office. Southwest Geophysics, Inc. should be contacted if the reader has questions regarding the content, interpretations presented, or completeness of this document. This report is intended exclusively for use by the client. Any use or reuse of this report by parties other than the client is undertaken at said parties' sole risk.

We appreciate the opportunity to be of service on this project. Should you have any questions related to this report, please contact the undersigned at your convenience.

Sincerely,

**SOUTHWEST GEOPHYSICS, INC.**



Timothy W. Brandt  
Staff Geophysicist



Hans van de Vrugt, C.E.G., P.Gp.  
Principal Geologist/Geophysicist

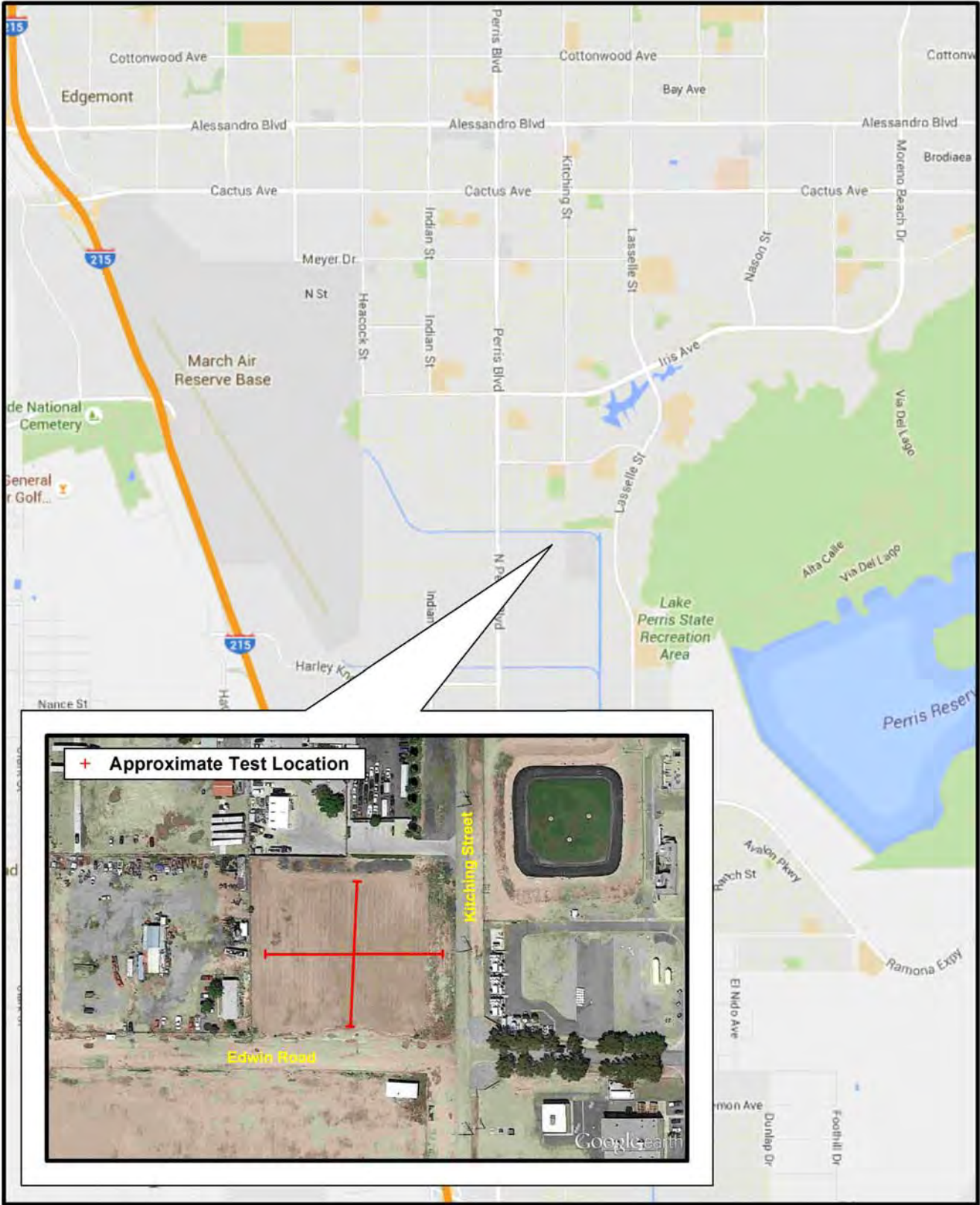
TWB/HV/hv

Attachments: Figure 1 – Site Location Map  
Figure 2 – Line Location Map  
Figure 3 – Site Photographs  
Figure 4 – Electrical Resistivity Results

Distribution: Addressee (electronic)







# SITE LOCATION MAP



Kitching Street Electrical Substation  
 Moreno Valley, California

Project No.: 115546a

Date: 11/15



Figure 1

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

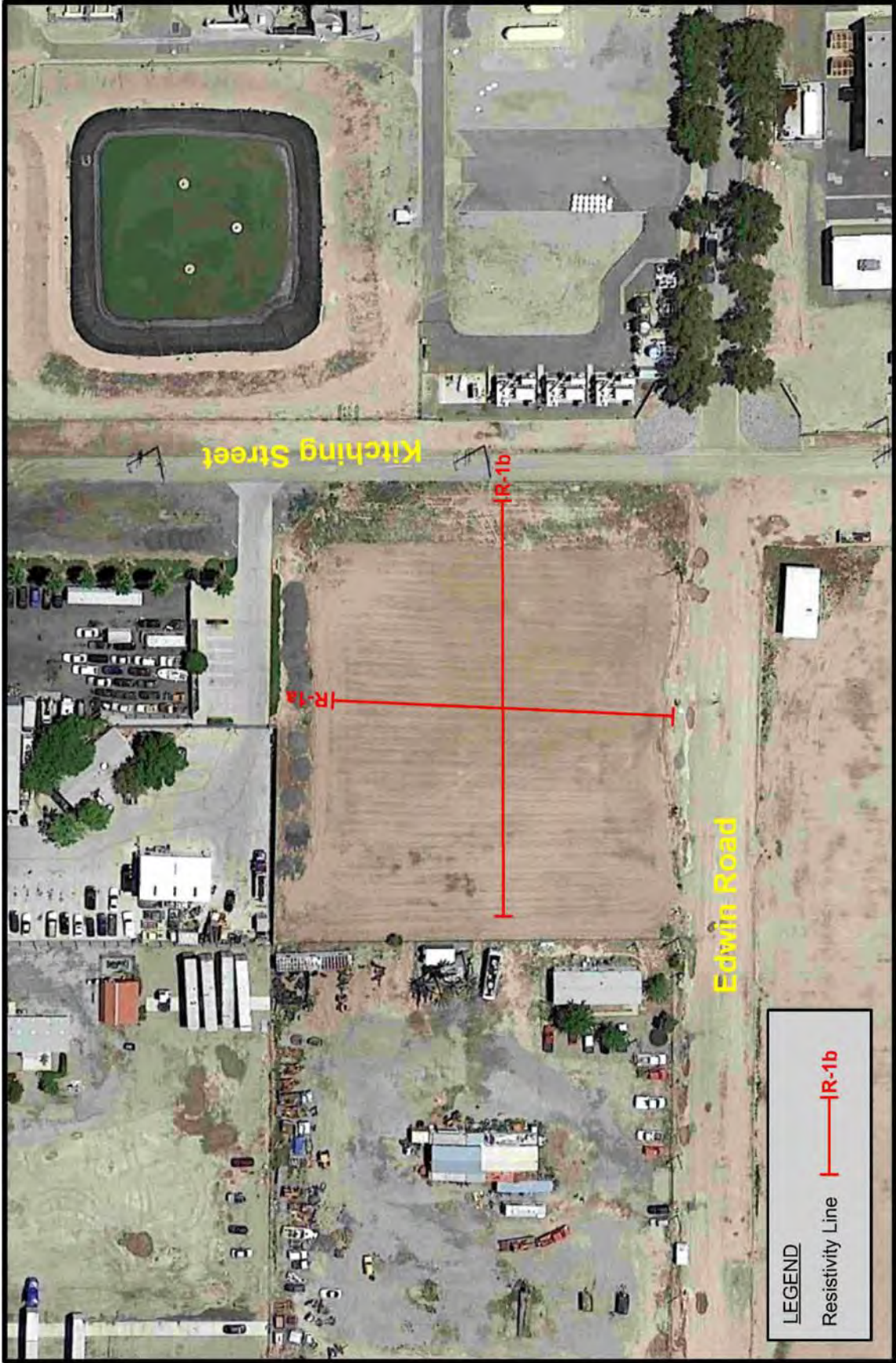


Figure 2

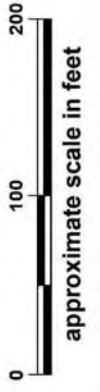
Kitching Street Electrical Substation  
 Moreno Valley, California

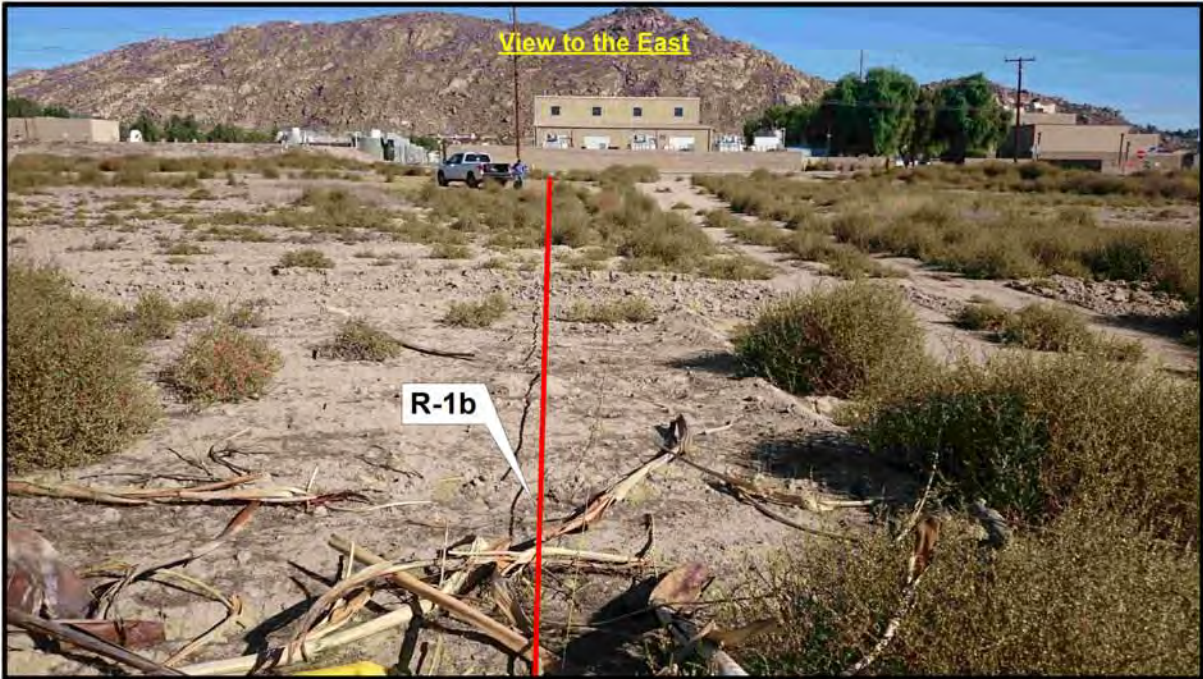
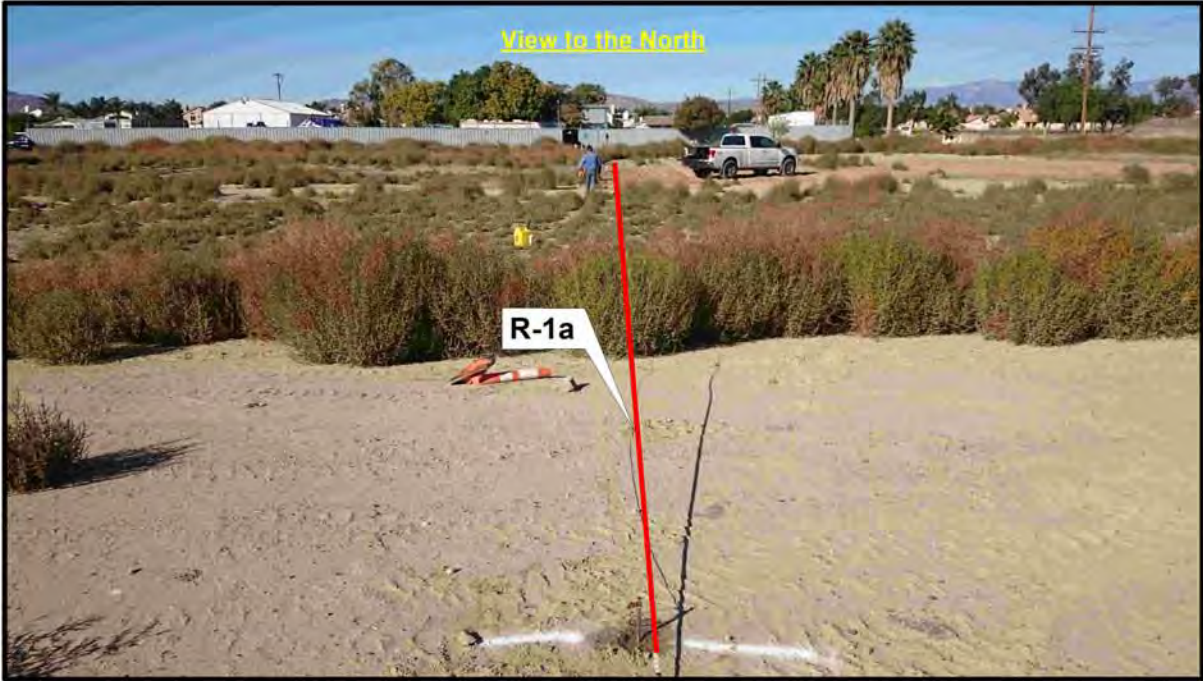
Project No.: 115546a Date: 11/15



**LINE LOCATION MAP**  
 (R-1a and R-1b)

**LEGEND**  
 Resistivity Line — R-1a — R-1b





<b>SITE PHOTOGRAPHS</b>	Kitching Street Electrical Substation Moreno Valley, California		 Figure 3
	Project No.: 115546a	Date: 11/15	

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

Line No. (Orientation)	Spacing (ft)	Current (mA)	Resistance (Ohms)	Error (%)	Apparent Resistivity	
					(ohm-cm)	(ohm-ft)
R-1a	2	20	42.190	0.0	16160	530
(N-S)	4	20	8.990	0.0	6887	226
	6	50	4.971	0.0	5712	187
	8	20	3.415	0.0	5232	172
	10	50	2.544	0.0	4872	160
	15	20	1.656	0.1	4757	156
	20	50	1.113	0.0	4263	140
	30	20	0.563	0.1	3232	106
	50	100	0.244	0.0	2339	77
	80	50	0.114	0.1	1751	57
R-1b	2	20	44.160	0.0	16914	555
(E-W)	4	20	10.260	0.0	7860	258
	6	50	4.863	0.0	5588	183
	8	50	3.680	0.0	5638	185
	10	50	2.721	0.0	5211	171
	15	20	1.689	0.0	4852	159
	20	50	1.026	0.0	3930	129
	30	20	0.532	0.1	3055	100
	50	50	0.248	0.1	2378	78
	80	50	0.112	0.1	1713	56
	100	50	0.077	0.0	1469	48

**ELECTRICAL RESISTIVITY RESULTS**

Kitching Street Electrical Substation  
Moreno Valley, California

Project No.: 115546a

Date: 11/15



Figure 4

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

Project No. 150817.3  
February 8, 2016

Mr. Clement Jimenez  
Senior Engineer, PE  
Financial & Management Services  
City of Moreno Valley  
14177 Frederick Street  
Moreno Valley, CA 92553

Subject: Percolation Testing Report  
Kitching Street Electrical Substation  
NW Corner of Kitching Street and Edwin Road  
Moreno Valley, California

Reference: Riverside County Low Impact Development BMP Design Handbook, Appendix A –  
Infiltration Testing Guidelines, dated September 2011.

Twining, Inc., 2015, "Draft Geotechnical Investigation Report, Kitching Street  
Electrical Substation, NW Corner of Kitching Street and Edwin Road, Moreno Valley,  
California," Twining Project No. 150817.3, dated December 21.

Dear Mr. Jimenez:

Twining, Inc., is pleased to present the results of our percolation testing for the subject project. Percolation testing was performed at two locations within the proposed Kitching Street Electrical Substation site along Edwin Road in Moreno Valley, California. The percolation testing locations were provided to us by the project hydrological engineer and are presented on the attached Figure 2, Exploration Location Map. The purpose of our testing was to evaluate design infiltration rates of site subgrade soils and determine the feasibility of implementing water quality best management practices (bmps).

### Field Exploration

As indicated above, two percolation test borings were hand-excavated using a 5.5-inch diameter auger on January 8, 2015 at the project site. The first boring was excavated approximately 14 feet north of the existing Edwin Road right-of-way line at a proposed water quality bmp and extended to 30 inches below existing ground surface (bgs). The second boring was excavated approximately 27 feet north of the existing Edwin Road right-of-way line at another proposed water quality bmp location and extended to 56 inches bgs. The borings exposed damp to moist, light brown, sandy silt at both locations in conformance with previous geotechnical borings performed at the site.

Groundwater was not encountered during percolation testing. According to the referenced geotechnical report, during our subsurface investigation in November 2015 we observed the groundwater table at depths ranging between 25 to 27 feet bgs in the vicinity of the test locations. It is important to note that according to the referenced Riverside County guidelines (2011), the invert elevation of the infiltration system should be a minimum of 10 feet above the groundwater table elevation. Based on our review, the proposed water quality bmps will be located more than 10 feet above the groundwater table.



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**Percolation Testing**

Percolation testing was performed in general conformance with the referenced Riverside County guidelines (2011). As indicated above, borings P-1 and P-2 had an approximate diameter of 5.5-inches and were excavated to depths of 30 inches and 56 inches bgs, respectively. At the completion of excavation, approximately 2 inches of coarse gravel was placed at the bottom of the boreholes to prevent scouring during testing. Perforated PVC pipe sections were inserted in the boreholes and coarse gravel was used as backfill around the pipes. The boreholes were presoaked prior to testing during two 25-minute intervals in accordance with Riverside County guidelines for sandy soil materials.

After the completion of presoaking, the borings were filled with water to a level at least 5 times greater than the radius of the boring. Measurements were taken at 10-minute intervals for a total of 6 readings. After a stable reading was observed, the drop that occurred during the final 10 minutes was used to determine the percolation rate at each test location.

The following conversion equation was used for the final 10-minute interval to calculate the infiltration rate:

$$\text{Infiltration Rate} = I_f = \Delta H(60r) / [\Delta t(r + 2H_{avg})], \text{ where:}$$

- $\Delta t$  = time interval (in minutes) = 10 minutes
- $r$  = test hole radius =  $d/2 = 2.75$  inches
- $D_0$  = initial depth to water
- $D_f$  = final depth to water
- $D_T$  = total depth of test hole
- $H_0$  = initial height of water at the selected time interval =  $D_T - D_0$
- $H_f$  = final height of water at the selected time interval =  $D_T - D_f$
- $\Delta H = \Delta D$  = change in height over the time interval =  $H_0 - H_f$
- $H_{avg} = (H_0 + H_f) / 2$

The design infiltration rate was calculated from the measured infiltration by applying a factor of safety of 2.0, as required by the referenced specifications. A summary of the test results is presented in Table 1. Additional test details are presented in the Appendix.

**Table 1 - Summary of Percolation Test Results**

Test Location	Depth of Test Hole (in.)	$\Delta H$ (in.)	$H_{avg}$ (in.)	Time Interval, $\Delta t$ (min.)	Measured Infiltration Rate (in/hr)	Design Infiltration Rate (in/hr)
P-1	30	3.75	23.4	10	1.25	0.63
P-2	56	15.00	27.1	10	4.36	2.18

**Recommendations**

Based on the results of our testing and analyses, the installation of the proposed water quality bmps is feasible. We recommend a design infiltration rate of 0.63 inches per hour. It is also recommended that the proposed water quality bmps comply with the setback requirements presented in Table 2.

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Table 2: Recommended Infiltration Facility Setback Requirements

Setback from	Distance
Property lines and public right of way	5 feet
Any foundation	15 feet or within 1:1 plane drawn up from the bottom of foundation, whichever is greater
Face of any slope	H/2, 5 feet minimum (H is height of slope)
Water wells used for drinking water	100 feet

**Limitations**

Due to the limited nature of our field exploration, conditions not observed and described in this report may be present on the site. Uncertainties relative to subsurface conditions can be reduced through additional subsurface exploration. Additional subsurface evaluation can be performed upon request. It should be understood that conditions different from those anticipated in this report may be encountered during construction.

Site conditions, including groundwater elevation, can change with time as a result of natural processes or that activities of man at the subject site or at nearby sites. Changes to applicable laws, regulations, codes, and standards of practice may occur as a result of government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Twining, Inc. has no control.

We have endeavored to perform our evaluation using the degree of care and skill ordinarily exercised under similar circumstances by engineering professionals with experience in this area. No other warranty, either expressed or implied, is made as to the conclusions contained in this report.

**Closure**

We appreciated the opportunity to be of service on this project. If you have any questions regarding this report, or if we can be of further service, please do not hesitate to contact the undersigned at (562) 426-3355.

Respectfully submitted,  
**TWINING, INC.**

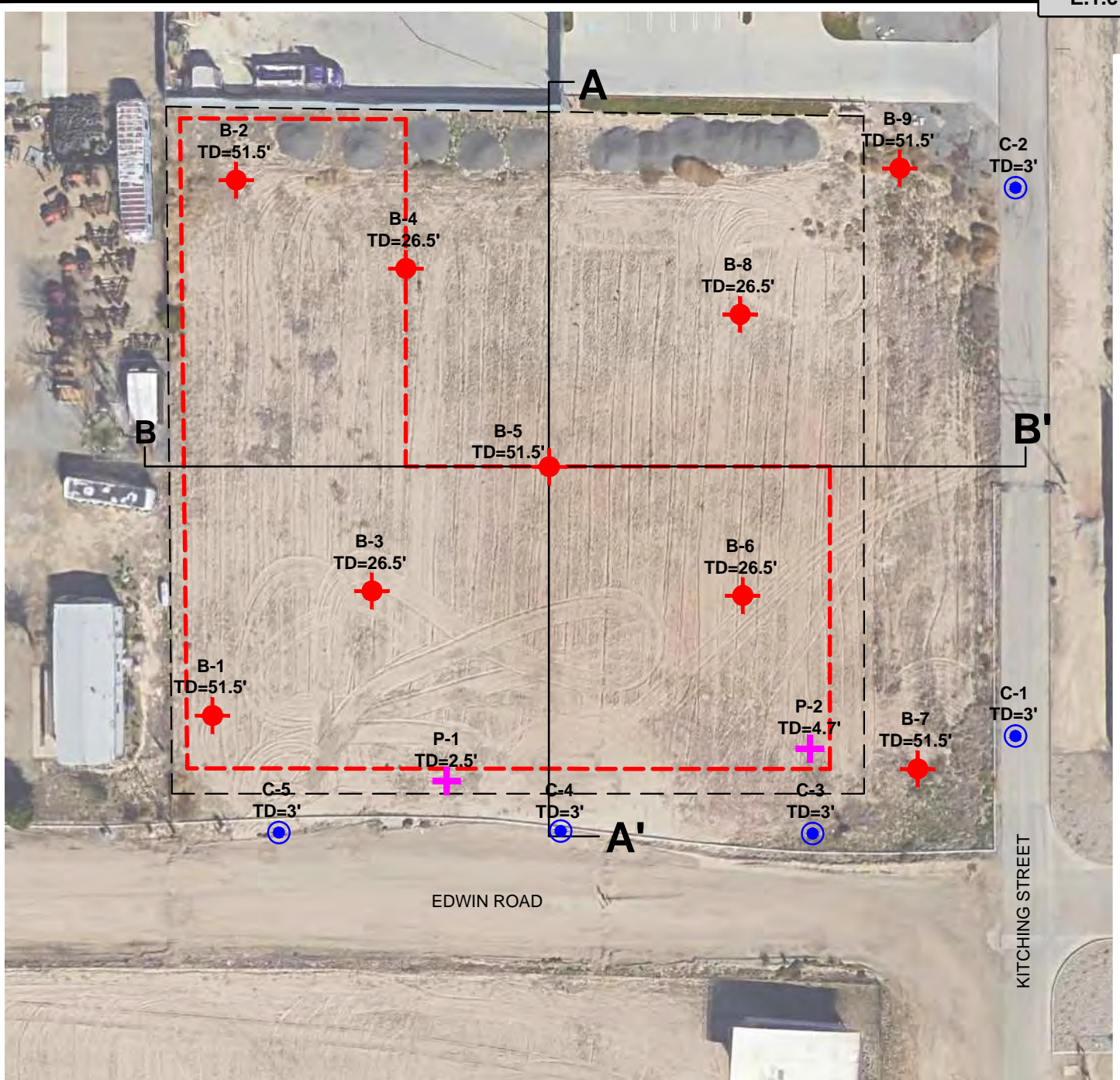
*Adrian Moreno*  
 Adrian Moreno, EIT  
 Staff Engineer

*Andres Bernal*  
 Andres Bernal, RCE 62366, GE 2715  
 Senior Geotechnical Engineer



Attachments: Figure 2 – Test Location Map  
 Appendix – Percolation Test Data

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**B-1**  
TD=51.5'  
APPROXIMATE LOCATION OF BORING  
TOTAL DEPTH IN FEET

**C-1**  
TD=3'  
APPROXIMATE LOCATION OF  
PAVEMENT EVALUATION BORING  
TOTAL DEPTH IN FEET

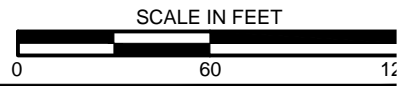
**P-1**  
TD=2.5'  
APPROXIMATE LOCATION OF  
INFILTRATION TEST  
TOTAL DEPTH IN FEET

**LEGEND**

APPROXIMATE LOCATION OF PROPOSED ELECTRICAL SUBSTATION

APPROXIMATE LOCATION OF PROPERTY LINE

LOCATION OF GEOLOGIC CROSS SECTION



REFERENCE: GOOGLE EARTH (2015)



**EXPLORATION LOCATION MAP**

Kitching Street Electrical Substation  
Moreno Valley, California

PROJECT NO.  
150817.3

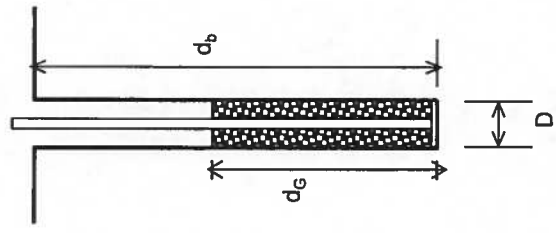
REPORT DATE  
December 2015

FIGURE 2



**PERCOLATION TEST DATA**

Project No.: 150817.3  
 Project Name: Kitching Street Electrical Substation  
 Test Date: January 8, 2016  
 Test Boring No.: P-1  
 Diameter of Boring (D): 0.46 feet  
 Depth of Boring (d<sub>b</sub>): 2.5 feet  
 Test Performed by: AM



**Sandy Soil Criteria Test**

Start Time	Time of Testing		Water Level Measurements				Greater than or Equal to 6"?
	Stop Time	Time Interval	Initial depth to water	Final depth to water	Drop of water column	Drop of water column	
T <sub>i</sub>	T <sub>f</sub>	ΔT (min)	d <sub>1</sub> (feet)	d <sub>2</sub> (feet)	d <sub>1</sub> - d <sub>2</sub> (inches)	d <sub>f</sub> (feet)	(Yes/No)
10:31:00 AM	10:56:00 AM	25.00	0.46	2.06	19.25	19.25	Yes
11:00:00 AM	11:25:00 AM	25.00	0.71	1.77	12.75	12.75	Yes

Start Time	Stop Time	Time Interval	Water Level Measurements				Water Level Calculations			Infiltration Rate Calculations		
			Initial depth to water	Final depth to water	Initial height of water column	Final height of water column	Drop of water column	Tested Infiltration Rate	Infiltration Rate w/ Factor of Safety of 2			
T <sub>i</sub>	T <sub>f</sub>	ΔT (min)	d <sub>1</sub> (feet)	d <sub>2</sub> (feet)	d <sub>i</sub> (feet)	d <sub>f</sub> (feet)	Δd = d <sub>i</sub> - d <sub>f</sub> (inches)	I <sub>t</sub> (inch/hr)	I <sub>t</sub> / 2 (inch/hr)			
<b>Percolation Test</b>												
11:36:00 AM	11:46:00 AM	10.00	0.52	0.98	1.98	1.52	5.50	2.03	1.01			
11:47:00 AM	11:57:00 AM	10.00	0.48	0.81	2.02	1.69	4.00	1.40	0.70			
11:58:00 AM	12:08:00 PM	10.00	0.40	0.79	2.10	1.71	4.75	1.62	0.81			
12:11:00 PM	12:21:00 PM	10.00	0.50	0.73	2.00	1.77	2.75	0.95	0.47			
12:24:00 PM	12:34:00 PM	10.00	0.31	0.73	2.19	1.77	5.00	1.64	0.82			
12:35:00 PM	12:45:00 PM	10.00	0.40	0.71	2.10	1.79	3.75	1.25	0.63			

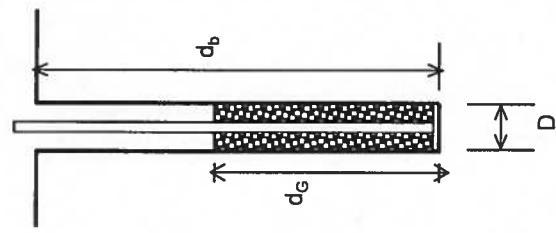
\*Infiltration Rate: **0.63** (inch/hr)

Reference: Riverside LID BMP Design Handbook, 2011.  
 \*Based on the last dropped obtained in the final 10 minutes

**PERCOLATION TEST DATA**

Project No.: 150817.3  
 Project Name: Kitching Street Electrical Substation  
 Test Date: January 8, 2016

Test Boring No.: P-2  
 Diameter of Boring (D): 0.46 feet  
 Depth of Boring (d<sub>b</sub>): 4.7 feet  
 Test Performed by: AM



**Sandy Soil Criteria Test**

Start Time	Time of Testing		Water Level Measurements				Greater than or Equal to 6"? (Yes/No)
	Stop Time	Time Interval (min)	Initial depth to water (d <sub>1</sub> ) (feet)	Final depth to water (d <sub>2</sub> ) (feet)	Drop of water column (Δd = d <sub>1</sub> - d <sub>2</sub> ) (inches)	Drop of water column (Δd = d <sub>1</sub> - d <sub>2</sub> ) (inches)	
T <sub>i</sub>	T <sub>f</sub>	ΔT (min)					
10:58:00 AM	11:23:00 AM	25.00	1.96	4.02	24.75	24.75	Yes
11:25:00 AM	11:50:00 AM	25.00	1.94	3.73	21.50	21.50	Yes

Start Time	Stop Time	Time Interval (min)	Water Level Measurements		Water Level Calculations		Infiltration Rate Calculations		
			Initial depth to water (d <sub>1</sub> ) (feet)	Final depth to water (d <sub>2</sub> ) (feet)	Initial height of water column (d <sub>i</sub> ) (feet)	Final height of water column (d <sub>f</sub> ) (feet)	Drop of water column (Δd = d <sub>i</sub> - d <sub>f</sub> ) (inches)	Drop of water column (Δd = d <sub>i</sub> - d <sub>f</sub> ) (inches)	Tested Infiltration Rate (I <sub>t</sub> ) (inch/hr)
T <sub>i</sub>	T <sub>f</sub>	ΔT (min)							
Percolation Test									
11:54:00 AM	12:04:00 PM	10.00	1.79	3.60	2.88	1.06	21.75	7.18	3.59
12:05:00 PM	12:15:00 PM	10.00	2.21	3.54	2.46	1.13	16.00	5.77	2.89
12:16:00 PM	12:26:00 PM	10.00	1.94	3.42	2.73	1.25	17.75	5.80	2.90
12:27:00 PM	12:37:00 PM	10.00	1.85	3.06	2.81	1.60	14.50	4.29	2.15
12:38:00 PM	12:48:00 PM	10.00	1.79	3.06	2.88	1.60	15.25	4.45	2.23
12:59:00 PM	1:09:00 PM	10.00	1.79	3.04	2.88	1.63	15.00	4.36	2.18

\*Infiltration Rate: **2.18** (inch/hr)

Reference: Riverside LID BMP Design Handbook, 2011.  
 \*Based on the last dropped obtained in the final 10 minutes

December 28, 2015  
Project No. 150817.3

Mr. Clement Jimenez  
Senior Engineer, P.E.  
Financial & Management Services  
City of Moreno Valley  
14177 Frederick Street  
Moreno Valley, CA 92553

Subject: Memorandum – Drilled Pier Foundation Design Parameters  
Kitching Street Electrical Substation  
NW Corner of Kitching Street and Edwin Road  
Moreno Valley, California



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Dear Mr. Jimenez:

Based on your email on December 22, 2015, the followings are the drilled pier foundation design parameters per HDR's request:

Drilled Pier foundation Design Parameters		
1.	Soil Density (upper 10 feet of soil)	
	a. Moist	102 pcf
	b. Saturated	118 pcf
	c. Submerged	56 pcf
2.	Ultimate Bearing Capacity	
	a. At Surface – moist	2,000 psf
	b. Rate of increase per foot – moist	1,500 psf
	c. Rate of increase per foot – submerged	1,000 psf
	d. Maximum not to exceed	12,000 psf
3.	Ultimate Moist Skin Friction at a Depth of 10 feet	650 psf
4.	Estimated Depth To Ground Water	22 feet
5.	Friction Angle of Soil	31 degrees
6.	Ratio of Submerged to Moist Skin Friction	0.55
7.	Estimated Depth to Bedrock	>50 feet
8.	Passive Pressure Multiplier Factor (PPM)	3.0 (Passive Pressure Coefficient)
9.	Ultimate Lateral Soil Pressure at a Depth of 10 feet	3,000 psf (Passive Earth Pressure)

Should you have any questions regarding this report or if we can be of further service, please do not hesitate to contact the undersigned.

Respectfully submitted,

TWINING, INC.

Sean Lin, P.E. 67109, G.E. 2921  
Chief Geotechnical Engineer



# APPENDIX E

## Preliminary Hydrology and Hydraulics Study

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



# PRELIMINARY HYDROLOGY AND HYDRAULICS STUDY FOR KITCHING SUBSTATION

APN 312-250-016

CITY OF MORENO VALLEY  
CALIFORNIA

*PREPARED FOR:*

CITY OF MORENO VALLEY  
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**JANUARY 29, 2016**

**REVISED:**

**FEBRUARY 8, 2016**

**FEBRUARY 11, 2016**

**PRELIMINARY HYDROLOGY AND HYDRAULICS STUDY FOR  
KITCHING SUBSTATION  
MORENO VALLEY, CA**

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This report has been prepared by or under the direction of the following registered civil engineer who attests to the technical information contained herein. The registered civil engineer has also judged the qualifications of any technical specialists providing engineering data upon which recommendations, conclusions, and decisions are based.



01/29/2016



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Joseph L. Castaneda RCE 59835  
Registered Civil Engineer

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Date

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Seal

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



**PRELIMINARY HYDROLOGY AND HYDRAULICS STUDY FOR  
KITCHING SUBSTATION  
MORENO VALLEY, CA**

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**FIGURE 1: VICINITY MAP**

**APPENDICES**

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APPENDIX A.1:	RATIONAL METHOD ANALYSIS, AREA “A” – 100-YEAR STORM EVENT
APPENDIX A.2:	RATIONAL METHOD ANALYSIS, AREA “B1” – 100-YEAR STORM EVENT
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<b>APPENDIX C:</b>	<b>WATER QUALITY</b>
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APPENDIX C.2:	SANTA ANA WATERSHED BMP DESIGN VOLUME SPREADSHEETS
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<b>APPENDIX E:</b>	<b>HYDRAULIC CALCULATIONS</b>
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APPENDIX E.2:	18” PIPE MAXIMUM FLOW RATE CALCULATIONS

**PRELIMINARY HYDROLOGY AND HYDRAULICS STUDY FOR  
KITCHING SUBSTATION  
MORENO VALLEY, CA**

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**EXCERPTS**

- EXCERPT A: STREET IMPROVEMENT PLANS AND STORM DRAIN IMPROVEMENT PLANS FOR PLOT PLAN P12-146 (PA06-0017) – FIRST THIRTY SIX LOGISTICS CENTER
- EXCERPT B: EXCERPTS FROM UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE NATIONAL ENGINEERING HANDBOOK, PART 630 – HYDROLOGY, CHAPTER 9 – HYDROLOGIC SOIL-COVER COMPLEXES

**EXHIBITS**

- EXHIBIT A: RATIONAL METHOD HYDROLOGY MAP
- EXHIBIT B: UNIT HYDROGRAPH HYDROLOGY MAP
- EXHIBIT C: DRAINAGE FACILITIES MAP
- EXHIBIT D: HYDROLOGIC SOILS MAP
- EXHIBIT E: RAINFALL MAPS

**PRELIMINARY HYDROLOGY AND HYDRAULICS STUDY FOR  
KITCHING SUBSTATION  
MORENO VALLEY, CA**

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## **I. PURPOSE AND SCOPE**

The City of Moreno Valley is proposing to construct a substation defined as the Kitching Substation on APN 312-250-016. The project site is currently undeveloped. The purpose of this study is to determine the necessary drainage and increased runoff mitigation improvements required for the Kitching Substation. The proposed condition will remain mostly pervious, with the exception of paved roads, concrete footings, and a small electrical room.

The scope of the study includes the following:

1. Determination of points of flow concentration and watershed subareas for the onsite and offsite area.
2. Determination 100-year peak storm flows based upon the post-project condition utilizing the Rational Method as outlined in the Riverside County Hydrology Manual.
3. Determine the required storage volume to be provided in order to retain the volume associated with the 100-year, 24-hour storm duration.
4. Preparation of a hydrology report, which consists of hydrological and analytical results and exhibits.

## **II. PROJECT SITE AND DRAINAGE AREA OVERVIEW**

The City of Moreno Valley is constructing an electrical substation on APN 312-250-016. The proposed project will construct access roads, concrete footings for the substation frame, a small electrical room, two infiltration trenches, and street improvements for Kitching Street and Edwin Road. The project site is approximately 1.60 acres net (1.87 gross) and is roughly bounded by industrial development to the north and west, Edwin Road to the south and Kitching Street to the east.

The project site currently collects flows from the northerly project at the north project boundary. Offsite area to the west is tributary to the project site at the south westerly corner. The flows tributary from the north will be intercepted by a ditch along the northerly project boundary and conveyed to the east. The flows will then be conveyed to the intersection of Kitching Street and Edwin Road. The flows tributary from the west will be conveyed along the southerly project boundary within a pervious swale to the intersection of Kitching Street and Edwin Road, where the flows will enter Edwin Road via a proposed parkway drain. Since the project site will be retaining all onsite flows, the project site will not adversely impact downstream properties, and will provide a net benefit to the current flooded condition at Edwin Road and Kitching Street.

An existing storm drain system was constructed within Edwin Road and Kitching Street as part of the Storm Drain Plans for Plot Plan P12-146 (PA06-0017) – First Thirty Six Logistics Center (See Excerpt A for improvement plans). This storm drain system was constructed as an outlet system to convey the flows associated with the First Thirty Six Logistics Center and street improvements on Edwin Road. However, this storm drain system was not designed to intercept offsite flows beyond the high point within Edwin Road, and therefore cannot accept

**PRELIMINARY HYDROLOGY AND HYDRAULICS STUDY FOR  
KITCHING SUBSTATION  
MORENO VALLEY, CA**

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peak flow rates associated with the Kitching Substation or offsite flows. Therefore the solution to retain flows from the onsite area would lessen the existing flooding, and remediate the need for a storm drain system to discharge flows from the project site.

### III. HYDROLOGY

The Riverside County Hydrology Manual (Reference 1), was used to develop the hydrological parameters for the hydrology analyses. The rational method and unit hydrograph calculations were performed using the computer program developed by Civil Cadd/Civil Design.

The existing soil classification for the area consists of Hydrologic Soil Group "C", as shown in Exhibit C. Exhibit C is a Soils Map obtained from the Riverside County Hydrology Manual. An Antecedent Moisture Condition (AMC) II was utilized for the 100-year storm event, as recommended by the Riverside County Hydrology Manual.

For the rational method analyses, user defined land cover is not available for initial areas, therefore a corresponding pre-defined land cover had to be determined for Areas A, B1, B2 and C. For the offsite area A, the actual impervious percentage is 10-20%, with a runoff index equivalent to barren (89). The rational method calculations utilized a pre-defined land cover of ½ acre residential, which has an impervious percentage of 40% with a runoff index number of 69. The increase in impervious area and the decrease in runoff index number is a fair representation of the westerly offsite area. Area B1 has an impervious percentage of 6% and a runoff index number of 89. The runoff index number of 89 was obtained from the USDA National Engineering Handbook, Part 630, Chapter 9 for Gravel land cover. This reference has been included as Excerpt B. The rational method calculations utilized a pre-defined land cover of 1 acre residential, which uses an impervious percentage of 20% and a runoff index number of 69. Area B2 has an impervious percentage of 15% and runoff index number of 89, therefore the calculations used a pre-defined land cover of 1 acre single family residential, which has 20% impervious area and a runoff index number of 69. Area C was analyzed as commercial land cover, which is an accurate representation since area C has an impervious percentage of 86% and the pre-defined land cover of commercial in the rational method calculations utilizes a 90% impervious percentage.

The unit hydrograph calculations were performed for Areas B1 and B2. The calculations utilized 80% of the time of concentration that was determined in the rational method calculations. The actual impervious areas and runoff index numbers for the areas were entered, and are summarized below:

Area	Impervious %	Runoff Index
B1	6%	89
B2	15%	89

**PRELIMINARY HYDROLOGY AND HYDRAULICS STUDY FOR  
KITCHING SUBSTATION  
MORENO VALLEY, CA**

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The rational method calculations have been included in Appendix A, and the rational method hydrology map has been included as Exhibit A. The unit hydrograph hydrology calculations have been included in Appendix B, and the unit hydrograph watersheds have been included as Exhibit B.

#### **IV. WATER QUALITY**

The project site will treat the required  $V_{BMP}$  (water quality volume) generated by the project site using infiltration trenches.

The required water quality volume was determined by using the Santa Ana Watershed BMP Design Volume Spreadsheets. Based upon the Design Volume Spreadsheets, DMA B1 has a  $V_{BMP}$  of 733 cu. ft., and DMA B2 has a  $V_{BMP}$  of 380 cu. ft.

The water quality volume will be treated within one of the two infiltration trenches. Infiltration Trench B1 is located at the north westerly project boundary and consists of 4 feet of surface storage and 1 foot of trench storage. The surface storage has a capacity of 14,373 cu. ft., and the gravel trench area has a storage capacity of 893 cu. ft. This gravel trench area was determined by taking the surface area (2,232 sq. ft.) multiplied by the 1 foot depth, and 40% void ratio. The resulting total storage volume within Infiltration Trench B1 is 15,266 cu.ft., which is more than sufficient for the  $V_{BMP}$ . HCOC mitigation is discussed in Section F.

Infiltration Trench B2 is located at the south easterly project boundary and consists of 3 feet of surface storage and 2 feet of trench storage. The surface storage has a capacity of 5,859 cu. ft., and the gravel trench area has a storage capacity of 286 cu. ft. This gravel trench area was determined by taking the surface area (716 sq. ft.) multiplied by the 1 foot depth, and 40% void ratio. The resulting total storage volume within Infiltration Trench B1 is 7,975 cu.ft., which is more than sufficient for the  $V_{BMP}$ .

The water quality volume calculations have been included in Appendix C.

#### **V. INCREASED RUNOFF MITIGATION**

The project site will retain the entire volume associated with the 100-year, 24-hour post-project unit hydrograph calculations. By retaining the entire volume associated with the 100-year, 24-hour, the project will ensure that mitigation for increased runoff is provided. Additionally, the project will lessen the existing flooding within Edwin Road and Kitching Street.

The existing storm drain system within Edwin Road and Kitching Street was not designed to intercept offsite flows, or flows generated from the Kitching Substation. Therefore, an alternative solution was developed for preventing downstream impacts. Since connecting to the existing storm drain system for the 100-year storm event was not

**PRELIMINARY HYDROLOGY AND HYDRAULICS STUDY FOR  
KITCHING SUBSTATION  
MORENO VALLEY, CA**

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feasible, the project site will retain the volume up to the 100-year, 24-hour storm duration. The project will retain the volume within one of two onsite infiltration trenches, where the volume will pond and eventually infiltrate into the underlain soil.

Infiltration Trench B1 provides a total of 15,266 cu. ft. of volume and Infiltration Trench B2 provides a total of 7,975 cu. ft. of volume (see Section IV for discussion of volume calculations), which is sufficient volume to retain the entire 100-year, 24-hour volume. The following table summarizes the results:

DMA	100-Year, 24-Hour Volume	100-Year, 24-Hour Volume	Volume Provided in Infiltration Trench
DMA B1	0.1856 ac-ft	8,085 cu. ft.	15,266 cu. ft.
DMA B2	0.0838 ac-ft	3,651 cu. ft.	7,975 cu. ft.

The infiltration trench storage volumes have been included in Appendix D.

## VI. HYDRAULICS

The project site will utilize a pervious swale along the southerly boundary of the project site to convey the flows tributary to the south west corner of the project site. A parkway drain will be provided at the downstream point of the swale (at the intersection of Edwin Road and Kitching Street) that will convey the flows back into the street.

The pervious swale is a trapezoidal channel, with a base width of 2 feet, 3:1 side slopes on the north side and 4:1 side slopes on the south side. The swale has a minimum depth of 1.3 feet and a longitudinal slope of 0.10%. Using this criteria, the maximum capacity for the swale is 9.37 ft<sup>3</sup>/s, and the total 100-year flow rate (based upon the rational method calculations at Node 103) is 7.42 ft<sup>3</sup>/s. Therefore the swale has sufficient capacity for the tributary flow rate. It should be noted that the flow rate at Node 103 includes the north side of Edwin Road, which will not enter the swale, however, to be conservative during the preliminary stages, this area was accounted for in the swale sizing calculations. The flows at the downstream end of the swale will pond and outlet through a proposed parkway drain into Edwin Road just west of Kitching Street. In the pre-project condition, a total of 7.11 acres of area contributes flow to Edwin Road at this location just west of the Kitching Street intersection. In the post-project condition, only 4.31 acres (areas A1 and A2) will contribute flows to this location since the project site will retain the flows from the other 2.80 acres of area onsite in the infiltration basins.

A concrete v-ditch will be constructed along the northerly and westerly project boundaries. The v-ditch is 2 feet wide, 0.33 feet deep with 3:1 side slopes. The purpose of this ditch is to convey the tributary offsite flows around the project site to either Kitching Street or Edwin Road.

## PRELIMINARY HYDROLOGY AND HYDRAULICS STUDY FOR KITCHING SUBSTATION MORENO VALLEY, CA

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Flows along Kitching Street (and a portion of Edwin Road) will be conveyed via an 18" storm drain, with a minimum slope of 0.4%. The maximum flow rate that can be conveyed by the 18" pipes is 6.64 ft<sup>3</sup>/s.

Details of the swale, v-ditch and parkway drain, in addition to the infiltration trenches, will be provided during final engineering.

### VII. FINDINGS

The hydrology and hydraulic analyses evaluated the proposed development to determine the necessary drainage improvements required to mitigate flows for increased runoff. It has been concluded that:

1. The proposed infiltration trenches will adequately retain the volume associated with the 100-year, 24-hour storm duration for the onsite area.
2. The project site will not adversely impact downstream facilities or properties.

### VII. REFERENCES

1. Riverside County Flood Control and Water Conservation District Hydrology Manual, April 1978.
2. Riverside County Flood Control and Water Conservation District Design Handbook for Low Impact Development Best Management Practices, June 2011

**FIGURES**

---



**FIGURE 1: VICINITY MAP**

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**KITCHING SUBSTATION  
VICINITY MAP**



36263 CALLE LOBO  
MURRIETA, CA 92562  
PH. 951.304.9552 FAX 951.304.3568

**FIGURE 1**

**APPENDICES**

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**APPENDIX A: POST-PROJECT CONDITION RATIONAL METHOD HYDROLOGY**

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**APPENDIX A.1: RATIONAL METHOD ANALYSIS, AREA “A” – 100-YEAR STORM EVENT**

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Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0  
Rational Hydrology Study Date: 01/27/16 File:ARAP100.out

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KITCHING SUBSTATION POST-PROJECT CONDITION HYDROLOGY  
OFFSITE AREA TRIBUTARY TO EDWIN AND KITCHING (WEST AND SOUTH OF PROJECT)  
RATIONAL METHOD ANALYSIS, 100-YEAR STORM EVENT  
FILENAME: ARAP100  
-----

\*\*\*\*\* Hydrology Study Control Information \*\*\*\*\*

English (in-lb) Units used in input data file  
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Program License Serial Number 6279  
-----

Rational Method Hydrology Program based on  
Riverside County Flood Control & Water Conservation District  
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 2

2 year, 1 hour precipitation = 0.500(In.)  
100 year, 1 hour precipitation = 1.200(In.)

Storm event year = 100.0  
Calculated rainfall intensity data:  
1 hour intensity = 1.200(In/Hr)  
Slope of intensity duration curve = 0.5000

-----  
\*\*\*\*\*  
Process from Point/Station 101.000 to Point/Station 102.000  
\*\*\*\* INITIAL AREA EVALUATION \*\*\*\*  
-----

Initial area flow distance = 761.000(Ft.)  
Top (of initial area) elevation = 1470.000(Ft.)  
Bottom (of initial area) elevation = 1467.000(Ft.)  
Difference in elevation = 3.000(Ft.)  
Slope = 0.00394 s(percent)= 0.39  
TC = k(0.420)\*[(length^3)/(elevation change)]^0.2  
Initial area time of concentration = 18.057 min.  
Rainfall intensity = 2.187(In/Hr) for a 100.0 year storm  
SINGLE FAMILY (1/2 Acre Lot)  
Runoff Coefficient = 0.784  
Decimal fraction soil group A = 0.000  
Decimal fraction soil group B = 0.000  
Decimal fraction soil group C = 1.000  
Decimal fraction soil group D = 0.000  
RI index for soil(AMC 2) = 69.00  
Pervious area fraction = 0.600; Impervious fraction = 0.400  
Initial subarea runoff = 6.773(CFS)  
Total initial stream area = 3.950(Ac.)  
Pervious area fraction = 0.600

-----  
\*\*\*\*\*  
Process from Point/Station 102.000 to Point/Station 103.000  
\*\*\*\* IMPROVED CHANNEL TRAVEL TIME \*\*\*\*  
-----

Upstream point elevation = 1467.000(Ft.)  
Downstream point elevation = 1466.330(Ft.)  
Channel length thru subarea = 260.000(Ft.)

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Channel base width = 2.000(Ft.)  
 Slope or 'Z' of left channel bank = 3.000  
 Slope or 'Z' of right channel bank = 3.000  
 Estimated mean flow rate at midpoint of channel = 7.082(CFS)  
 Manning's 'N' = 0.035  
 Maximum depth of channel = 2.000(Ft.)  
 Flow(q) thru subarea = 7.082(CFS)  
 Depth of flow = 0.964(Ft.), Average velocity = 1.503(Ft/s)  
 Channel flow top width = 7.781(Ft.)  
 Flow Velocity = 1.50(Ft/s)  
 Travel time = 2.88 min.  
 Time of concentration = 20.94 min.

Sub-Channel No. 1 Critical depth = 0.555(Ft.)  
 ' ' ' Critical flow top width = 5.328(Ft.)  
 ' ' ' Critical flow velocity= 3.484(Ft/s)  
 ' ' ' Critical flow area = 2.032(Sq.Ft)

Adding area flow to channel

COMMERCIAL subarea type

Runoff Coefficient = 0.880

Decimal fraction soil group A = 0.000

Decimal fraction soil group B = 0.000

Decimal fraction soil group C = 1.000

Decimal fraction soil group D = 0.000

RI index for soil(AMC 2) = 69.00

Pervious area fraction = 0.100; Impervious fraction = 0.900

Rainfall intensity = 2.031(In/Hr) for a 100.0 year storm

Subarea runoff = 0.643(CFS) for 0.360(Ac.)

Total runoff = 7.416(CFS) Total area = 4.310(Ac.)

Depth of flow = 0.984(Ft.), Average velocity = 1.521(Ft/s)

Sub-Channel No. 1 Critical depth = 0.566(Ft.)  
 ' ' ' Critical flow top width = 5.398(Ft.)  
 ' ' ' Critical flow velocity= 3.540(Ft/s)  
 ' ' ' Critical flow area = 2.095(Sq.Ft)

End of computations, total study area = 4.31 (Ac.)

The following figures may

be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.558

Area averaged RI index number = 69.0

**APPENDIX A.2: RATIONAL METHOD ANALYSIS, AREA “B1” – 100-YEAR STORM EVENT**

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Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0  
Rational Hydrology Study Date: 02/01/16 File:ARB1P100.out

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KITCHING SUBSTATION POST-PROJECT CONDITION HYDROLOGY  
NORTHERLY ONSITE AREA TRIBUTARY TO NORTH BASIN  
RATIONAL METHOD ANALYSIS, 100-YEAR STORM EVENT  
FILENAME: ARB1P100  
-----

\*\*\*\*\* Hydrology Study Control Information \*\*\*\*\*

English (in-lb) Units used in input data file  
-----

Program License Serial Number 6279  
-----

Rational Method Hydrology Program based on  
Riverside County Flood Control & Water Conservation District  
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 2

2 year, 1 hour precipitation = 0.500(In.)  
100 year, 1 hour precipitation = 1.200(In.)

Storm event year = 100.0  
Calculated rainfall intensity data:  
1 hour intensity = 1.200(In/Hr)  
Slope of intensity duration curve = 0.5000

\*\*\*\*\*  
Process from Point/Station 201.100 to Point/Station 202.100  
\*\*\*\* INITIAL AREA EVALUATION \*\*\*\*

-----  
Initial area flow distance = 252.000(Ft.)  
Top (of initial area) elevation = 1468.250(Ft.)  
Bottom (of initial area) elevation = 1466.000(Ft.)  
Difference in elevation = 2.250(Ft.)  
Slope = 0.00893 s(percent)= 0.89  
TC = k(0.480)\*[(length^3)/(elevation change)]^0.2  
Initial area time of concentration = 11.263 min.  
Rainfall intensity = 2.770(In/Hr) for a 100.0 year storm  
SINGLE FAMILY (1 Acre Lot)  
Runoff Coefficient = 0.772  
Decimal fraction soil group A = 0.000  
Decimal fraction soil group B = 0.000  
Decimal fraction soil group C = 1.000  
Decimal fraction soil group D = 0.000  
RI index for soil(AMC 2) = 69.00  
Pervious area fraction = 0.800; Impervious fraction = 0.200  
Initial subarea runoff = 2.416(CFS)  
Total initial stream area = 1.130(Ac.)  
Pervious area fraction = 0.800  
End of computations, total study area = 1.13 (Ac.)  
The following figures may  
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.800  
Area averaged RI index number = 69.0

**APPENDIX A.3: RATIONAL METHOD ANALYSIS, AREA “B2” – 100-YEAR STORM EVENT**

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Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0  
Rational Hydrology Study Date: 01/27/16 File:ARB2P100.out

-----  
KITCHING SUBSTATION POST-PROJECT CONDITION HYDROLOGY  
SOUTHERLY ONSITE AREA TRIBUTARY TO SOUTH BASIN  
RATIONAL METHOD ANALYSIS, 100-YEAR STORM EVENT  
FILENAME: ARB2P100  
-----

\*\*\*\*\* Hydrology Study Control Information \*\*\*\*\*

English (in-lb) Units used in input data file  
-----

Program License Serial Number 6279  
-----

Rational Method Hydrology Program based on  
Riverside County Flood Control & Water Conservation District  
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 2

2 year, 1 hour precipitation = 0.500(In.)  
100 year, 1 hour precipitation = 1.200(In.)

Storm event year = 100.0  
Calculated rainfall intensity data:  
1 hour intensity = 1.200(In/Hr)  
Slope of intensity duration curve = 0.5000

\*\*\*\*\*  
Process from Point/Station 201.200 to Point/Station 202.200  
\*\*\*\* INITIAL AREA EVALUATION \*\*\*\*

-----  
Initial area flow distance = 268.000(Ft.)  
Top (of initial area) elevation = 1467.800(Ft.)  
Bottom (of initial area) elevation = 1466.500(Ft.)  
Difference in elevation = 1.300(Ft.)  
Slope = 0.00485 s(percent)= 0.49  
TC = k(0.480)\*[(length^3)/(elevation change)]^0.2  
Initial area time of concentration = 13.042 min.  
Rainfall intensity = 2.574(In/Hr) for a 100.0 year storm  
SINGLE FAMILY (1 Acre Lot)  
Runoff Coefficient = 0.764  
Decimal fraction soil group A = 0.000  
Decimal fraction soil group B = 0.000  
Decimal fraction soil group C = 1.000  
Decimal fraction soil group D = 0.000  
RI index for soil(AMC 2) = 69.00  
Pervious area fraction = 0.800; Impervious fraction = 0.200  
Initial subarea runoff = 0.924(CFS)  
Total initial stream area = 0.470(Ac.)  
Pervious area fraction = 0.800  
End of computations, total study area = 0.47 (Ac.)  
The following figures may  
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.800  
Area averaged RI index number = 69.0

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**APPENDIX A.4: RATIONAL METHOD ANALYSIS, AREA “C” – 100-YEAR STORM EVENT**

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Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0  
Rational Hydrology Study Date: 02/01/16 File:ARCP100.out

-----  
KITCHING SUBSTATION POST-PROJECT CONDITION HYDROLOGY  
NORTHERLY OFFSITE AREA  
RATIONAL METHOD ANALYSIS, 100-YEAR STORM EVENT  
FILENAME: ARCP100  
-----

\*\*\*\*\* Hydrology Study Control Information \*\*\*\*\*

English (in-lb) Units used in input data file  
-----

Program License Serial Number 6279  
-----

Rational Method Hydrology Program based on  
Riverside County Flood Control & Water Conservation District  
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 2

2 year, 1 hour precipitation = 0.500(In.)  
100 year, 1 hour precipitation = 1.200(In.)

Storm event year = 100.0  
Calculated rainfall intensity data:  
1 hour intensity = 1.200(In/Hr)  
Slope of intensity duration curve = 0.5000

\*\*\*\*\*  
Process from Point/Station 301.000 to Point/Station 302.000  
\*\*\*\* INITIAL AREA EVALUATION \*\*\*\*  
-----

Initial area flow distance = 393.000(Ft.)  
Top (of initial area) elevation = 1474.000(Ft.)  
Bottom (of initial area) elevation = 1466.300(Ft.)  
Difference in elevation = 7.700(Ft.)  
Slope = 0.01959 s(percent)= 1.96  
TC = k(0.300)\*[(length^3)/(elevation change)]^0.2  
Initial area time of concentration = 7.186 min.  
Rainfall intensity = 3.468(In/Hr) for a 100.0 year storm  
COMMERCIAL subarea type  
Runoff Coefficient = 0.887  
Decimal fraction soil group A = 0.000  
Decimal fraction soil group B = 0.000  
Decimal fraction soil group C = 1.000  
Decimal fraction soil group D = 0.000  
RI index for soil(AMC 2) = 69.00  
Pervious area fraction = 0.100; Impervious fraction = 0.900  
Initial subarea runoff = 3.690(CFS)  
Total initial stream area = 1.200(Ac.)  
Pervious area fraction = 0.100  
End of computations, total study area = 1.20 (Ac.)  
The following figures may  
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.100  
Area averaged RI index number = 69.0

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

**APPENDIX B: POST-PROJECT CONDITION UNIT HYDROGRAPH HYDROLOGY  
CALCULATIONS**

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**APPENDIX B.1: AREA B1 – 100-YEAR, 24-HOUR STORM DURATION**

---

Unit Hydrograph Analysis

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0
Study date 02/01/16 File: ARB1P24100.out

-----

Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6279

-----
English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used
English Units used in output format

-----
KITCHING SUBSTATION POST-PROJECT CONDITION HYDROLOGY
AREA TRIBUTARY TO NORTH BASIN
UNIT HYDROGRAPH ANALYSIS, 100-YEAR, 24-HOUR STORM EVENT
FILENAME: ARB1P

-----
Drainage Area = 1.13(Ac.) = 0.002 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 1.13(Ac.) = 0.002 Sq. Mi.
USER Entry of lag time in hours
Lag time = 0.150 Hr.
Lag time = 9.01 Min.
25% of lag time = 2.25 Min.
40% of lag time = 3.60 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1] Rainfall(In)[2] Weighting[1\*2]
1.13 1.60 1.81

100 YEAR Area rainfall data:

Area(Ac.)[1] Rainfall(In)[2] Weighting[1\*2]
1.13 4.00 4.52

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.600(In)
Area Averaged 100-Year Rainfall = 4.000(In)

Point rain (area averaged) = 4.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 4.000(In)

Sub-Area Data:
Area(Ac.) Runoff Index Impervious %
1.130 89.00 0.060
Total Area Entered = 1.13(Ac.)

RI RI Infil. Rate Impervious Adj. Infil. Rate Area% F
AMC2 AMC-2 (In/Hr) (Dec.%) (In/Hr) (Dec.) (In/Hr)
89.0 89.0 0.141 0.060 0.134 1.000 0.134
Sum (F) = 0.134

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Area averaged mean soil loss (F) (In/Hr) = 0.134  
 Minimum soil loss rate ((In/Hr)) = 0.067  
 (for 24 hour storm duration)  
 Soil low loss rate (decimal) = 0.852

Unit Hydrograph  
 VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	55.482	7.223
2	0.167	110.963	30.611
3	0.250	166.445	27.904
4	0.333	221.926	11.265
5	0.417	277.408	6.379
6	0.500	332.889	4.371
7	0.583	388.371	3.172
8	0.667	443.853	2.275
9	0.750	499.334	1.746
10	0.833	554.816	1.448
11	0.917	610.297	1.087
12	1.000	665.779	0.841
13	1.083	721.261	0.612
14	1.167	776.742	0.555
15	1.250	832.224	0.510
Sum = 100.000			Sum= 1.139

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr)		Effective (In/Hr)
				Max	Low	
1	0.08	0.07	0.032	( 0.237)	0.027	0.005
2	0.17	0.07	0.032	( 0.236)	0.027	0.005
3	0.25	0.07	0.032	( 0.235)	0.027	0.005
4	0.33	0.10	0.048	( 0.234)	0.041	0.007
5	0.42	0.10	0.048	( 0.233)	0.041	0.007
6	0.50	0.10	0.048	( 0.233)	0.041	0.007
7	0.58	0.10	0.048	( 0.232)	0.041	0.007
8	0.67	0.10	0.048	( 0.231)	0.041	0.007
9	0.75	0.10	0.048	( 0.230)	0.041	0.007
10	0.83	0.13	0.064	( 0.229)	0.055	0.009
11	0.92	0.13	0.064	( 0.228)	0.055	0.009
12	1.00	0.13	0.064	( 0.227)	0.055	0.009
13	1.08	0.10	0.048	( 0.226)	0.041	0.007
14	1.17	0.10	0.048	( 0.225)	0.041	0.007
15	1.25	0.10	0.048	( 0.224)	0.041	0.007
16	1.33	0.10	0.048	( 0.224)	0.041	0.007
17	1.42	0.10	0.048	( 0.223)	0.041	0.007
18	1.50	0.10	0.048	( 0.222)	0.041	0.007
19	1.58	0.10	0.048	( 0.221)	0.041	0.007
20	1.67	0.10	0.048	( 0.220)	0.041	0.007
21	1.75	0.10	0.048	( 0.219)	0.041	0.007
22	1.83	0.13	0.064	( 0.218)	0.055	0.009
23	1.92	0.13	0.064	( 0.217)	0.055	0.009
24	2.00	0.13	0.064	( 0.216)	0.055	0.009
25	2.08	0.13	0.064	( 0.216)	0.055	0.009
26	2.17	0.13	0.064	( 0.215)	0.055	0.009
27	2.25	0.13	0.064	( 0.214)	0.055	0.009
28	2.33	0.13	0.064	( 0.213)	0.055	0.009
29	2.42	0.13	0.064	( 0.212)	0.055	0.009
30	2.50	0.13	0.064	( 0.211)	0.055	0.009
31	2.58	0.17	0.080	( 0.210)	0.068	0.012
32	2.67	0.17	0.080	( 0.210)	0.068	0.012
33	2.75	0.17	0.080	( 0.209)	0.068	0.012

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34	2.83	0.17	0.080	( 0.208)	0.068	0.012
35	2.92	0.17	0.080	( 0.207)	0.068	0.012
36	3.00	0.17	0.080	( 0.206)	0.068	0.012
37	3.08	0.17	0.080	( 0.205)	0.068	0.012
38	3.17	0.17	0.080	( 0.204)	0.068	0.012
39	3.25	0.17	0.080	( 0.204)	0.068	0.012
40	3.33	0.17	0.080	( 0.203)	0.068	0.012
41	3.42	0.17	0.080	( 0.202)	0.068	0.012
42	3.50	0.17	0.080	( 0.201)	0.068	0.012
43	3.58	0.17	0.080	( 0.200)	0.068	0.012
44	3.67	0.17	0.080	( 0.199)	0.068	0.012
45	3.75	0.17	0.080	( 0.198)	0.068	0.012
46	3.83	0.20	0.096	( 0.198)	0.082	0.014
47	3.92	0.20	0.096	( 0.197)	0.082	0.014
48	4.00	0.20	0.096	( 0.196)	0.082	0.014
49	4.08	0.20	0.096	( 0.195)	0.082	0.014
50	4.17	0.20	0.096	( 0.194)	0.082	0.014
51	4.25	0.20	0.096	( 0.193)	0.082	0.014
52	4.33	0.23	0.112	( 0.193)	0.095	0.017
53	4.42	0.23	0.112	( 0.192)	0.095	0.017
54	4.50	0.23	0.112	( 0.191)	0.095	0.017
55	4.58	0.23	0.112	( 0.190)	0.095	0.017
56	4.67	0.23	0.112	( 0.189)	0.095	0.017
57	4.75	0.23	0.112	( 0.189)	0.095	0.017
58	4.83	0.27	0.128	( 0.188)	0.109	0.019
59	4.92	0.27	0.128	( 0.187)	0.109	0.019
60	5.00	0.27	0.128	( 0.186)	0.109	0.019
61	5.08	0.20	0.096	( 0.185)	0.082	0.014
62	5.17	0.20	0.096	( 0.185)	0.082	0.014
63	5.25	0.20	0.096	( 0.184)	0.082	0.014
64	5.33	0.23	0.112	( 0.183)	0.095	0.017
65	5.42	0.23	0.112	( 0.182)	0.095	0.017
66	5.50	0.23	0.112	( 0.181)	0.095	0.017
67	5.58	0.27	0.128	( 0.181)	0.109	0.019
68	5.67	0.27	0.128	( 0.180)	0.109	0.019
69	5.75	0.27	0.128	( 0.179)	0.109	0.019
70	5.83	0.27	0.128	( 0.178)	0.109	0.019
71	5.92	0.27	0.128	( 0.177)	0.109	0.019
72	6.00	0.27	0.128	( 0.177)	0.109	0.019
73	6.08	0.30	0.144	( 0.176)	0.123	0.021
74	6.17	0.30	0.144	( 0.175)	0.123	0.021
75	6.25	0.30	0.144	( 0.174)	0.123	0.021
76	6.33	0.30	0.144	( 0.173)	0.123	0.021
77	6.42	0.30	0.144	( 0.173)	0.123	0.021
78	6.50	0.30	0.144	( 0.172)	0.123	0.021
79	6.58	0.33	0.160	( 0.171)	0.136	0.024
80	6.67	0.33	0.160	( 0.170)	0.136	0.024
81	6.75	0.33	0.160	( 0.170)	0.136	0.024
82	6.83	0.33	0.160	( 0.169)	0.136	0.024
83	6.92	0.33	0.160	( 0.168)	0.136	0.024
84	7.00	0.33	0.160	( 0.167)	0.136	0.024
85	7.08	0.33	0.160	( 0.167)	0.136	0.024
86	7.17	0.33	0.160	( 0.166)	0.136	0.024
87	7.25	0.33	0.160	( 0.165)	0.136	0.024
88	7.33	0.37	0.176	( 0.164)	0.150	0.026
89	7.42	0.37	0.176	( 0.164)	0.150	0.026
90	7.50	0.37	0.176	( 0.163)	0.150	0.026
91	7.58	0.40	0.192	0.162 ( 0.164)		0.030
92	7.67	0.40	0.192	0.161 ( 0.164)		0.031
93	7.75	0.40	0.192	0.161 ( 0.164)		0.031
94	7.83	0.43	0.208	0.160 ( 0.177)		0.048
95	7.92	0.43	0.208	0.159 ( 0.177)		0.049
96	8.00	0.43	0.208	0.158 ( 0.177)		0.050
97	8.08	0.50	0.240	0.158 ( 0.204)		0.082
98	8.17	0.50	0.240	0.157 ( 0.204)		0.083
99	8.25	0.50	0.240	0.156 ( 0.204)		0.084
100	8.33	0.50	0.240	0.155 ( 0.204)		0.085
101	8.42	0.50	0.240	0.155 ( 0.204)		0.085
102	8.50	0.50	0.240	0.154 ( 0.204)		0.086
103	8.58	0.53	0.256	0.153 ( 0.218)		0.103
104	8.67	0.53	0.256	0.152 ( 0.218)		0.104

105	8.75	0.53	0.256	0.152	( 0.218)	0.104
106	8.83	0.57	0.272	0.151	( 0.232)	0.121
107	8.92	0.57	0.272	0.150	( 0.232)	0.122
108	9.00	0.57	0.272	0.150	( 0.232)	0.122
109	9.08	0.63	0.304	0.149	( 0.259)	0.155
110	9.17	0.63	0.304	0.148	( 0.259)	0.156
111	9.25	0.63	0.304	0.148	( 0.259)	0.156
112	9.33	0.67	0.320	0.147	( 0.273)	0.173
113	9.42	0.67	0.320	0.146	( 0.273)	0.174
114	9.50	0.67	0.320	0.145	( 0.273)	0.175
115	9.58	0.70	0.336	0.145	( 0.286)	0.191
116	9.67	0.70	0.336	0.144	( 0.286)	0.192
117	9.75	0.70	0.336	0.143	( 0.286)	0.193
118	9.83	0.73	0.352	0.143	( 0.300)	0.209
119	9.92	0.73	0.352	0.142	( 0.300)	0.210
120	10.00	0.73	0.352	0.141	( 0.300)	0.211
121	10.08	0.50	0.240	0.141	( 0.204)	0.099
122	10.17	0.50	0.240	0.140	( 0.204)	0.100
123	10.25	0.50	0.240	0.139	( 0.204)	0.101
124	10.33	0.50	0.240	0.139	( 0.204)	0.101
125	10.42	0.50	0.240	0.138	( 0.204)	0.102
126	10.50	0.50	0.240	0.137	( 0.204)	0.103
127	10.58	0.67	0.320	0.137	( 0.273)	0.183
128	10.67	0.67	0.320	0.136	( 0.273)	0.184
129	10.75	0.67	0.320	0.135	( 0.273)	0.185
130	10.83	0.67	0.320	0.135	( 0.273)	0.185
131	10.92	0.67	0.320	0.134	( 0.273)	0.186
132	11.00	0.67	0.320	0.133	( 0.273)	0.187
133	11.08	0.63	0.304	0.133	( 0.259)	0.171
134	11.17	0.63	0.304	0.132	( 0.259)	0.172
135	11.25	0.63	0.304	0.131	( 0.259)	0.173
136	11.33	0.63	0.304	0.131	( 0.259)	0.173
137	11.42	0.63	0.304	0.130	( 0.259)	0.174
138	11.50	0.63	0.304	0.129	( 0.259)	0.175
139	11.58	0.57	0.272	0.129	( 0.232)	0.143
140	11.67	0.57	0.272	0.128	( 0.232)	0.144
141	11.75	0.57	0.272	0.127	( 0.232)	0.145
142	11.83	0.60	0.288	0.127	( 0.245)	0.161
143	11.92	0.60	0.288	0.126	( 0.245)	0.162
144	12.00	0.60	0.288	0.125	( 0.245)	0.163
145	12.08	0.83	0.400	0.125	( 0.341)	0.275
146	12.17	0.83	0.400	0.124	( 0.341)	0.276
147	12.25	0.83	0.400	0.124	( 0.341)	0.276
148	12.33	0.87	0.416	0.123	( 0.354)	0.293
149	12.42	0.87	0.416	0.122	( 0.354)	0.294
150	12.50	0.87	0.416	0.122	( 0.354)	0.294
151	12.58	0.93	0.448	0.121	( 0.382)	0.327
152	12.67	0.93	0.448	0.121	( 0.382)	0.327
153	12.75	0.93	0.448	0.120	( 0.382)	0.328
154	12.83	0.97	0.464	0.119	( 0.395)	0.345
155	12.92	0.97	0.464	0.119	( 0.395)	0.345
156	13.00	0.97	0.464	0.118	( 0.395)	0.346
157	13.08	1.13	0.544	0.118	( 0.463)	0.426
158	13.17	1.13	0.544	0.117	( 0.463)	0.427
159	13.25	1.13	0.544	0.116	( 0.463)	0.428
160	13.33	1.13	0.544	0.116	( 0.463)	0.428
161	13.42	1.13	0.544	0.115	( 0.463)	0.429
162	13.50	1.13	0.544	0.115	( 0.463)	0.429
163	13.58	0.77	0.368	0.114	( 0.314)	0.254
164	13.67	0.77	0.368	0.113	( 0.314)	0.255
165	13.75	0.77	0.368	0.113	( 0.314)	0.255
166	13.83	0.77	0.368	0.112	( 0.314)	0.256
167	13.92	0.77	0.368	0.112	( 0.314)	0.256
168	14.00	0.77	0.368	0.111	( 0.314)	0.257
169	14.08	0.90	0.432	0.111	( 0.368)	0.321
170	14.17	0.90	0.432	0.110	( 0.368)	0.322
171	14.25	0.90	0.432	0.109	( 0.368)	0.323
172	14.33	0.87	0.416	0.109	( 0.354)	0.307
173	14.42	0.87	0.416	0.108	( 0.354)	0.308
174	14.50	0.87	0.416	0.108	( 0.354)	0.308
175	14.58	0.87	0.416	0.107	( 0.354)	0.309

176	14.67	0.87	0.416	0.107	( 0.354)	0.309
177	14.75	0.87	0.416	0.106	( 0.354)	0.310
178	14.83	0.83	0.400	0.106	( 0.341)	0.294
179	14.92	0.83	0.400	0.105	( 0.341)	0.295
180	15.00	0.83	0.400	0.104	( 0.341)	0.296
181	15.08	0.80	0.384	0.104	( 0.327)	0.280
182	15.17	0.80	0.384	0.103	( 0.327)	0.281
183	15.25	0.80	0.384	0.103	( 0.327)	0.281
184	15.33	0.77	0.368	0.102	( 0.314)	0.266
185	15.42	0.77	0.368	0.102	( 0.314)	0.266
186	15.50	0.77	0.368	0.101	( 0.314)	0.267
187	15.58	0.63	0.304	0.101	( 0.259)	0.203
188	15.67	0.63	0.304	0.100	( 0.259)	0.204
189	15.75	0.63	0.304	0.100	( 0.259)	0.204
190	15.83	0.63	0.304	0.099	( 0.259)	0.205
191	15.92	0.63	0.304	0.099	( 0.259)	0.205
192	16.00	0.63	0.304	0.098	( 0.259)	0.206
193	16.08	0.13	0.064	( 0.098)	0.055	0.009
194	16.17	0.13	0.064	( 0.097)	0.055	0.009
195	16.25	0.13	0.064	( 0.097)	0.055	0.009
196	16.33	0.13	0.064	( 0.096)	0.055	0.009
197	16.42	0.13	0.064	( 0.096)	0.055	0.009
198	16.50	0.13	0.064	( 0.095)	0.055	0.009
199	16.58	0.10	0.048	( 0.095)	0.041	0.007
200	16.67	0.10	0.048	( 0.094)	0.041	0.007
201	16.75	0.10	0.048	( 0.094)	0.041	0.007
202	16.83	0.10	0.048	( 0.093)	0.041	0.007
203	16.92	0.10	0.048	( 0.093)	0.041	0.007
204	17.00	0.10	0.048	( 0.092)	0.041	0.007
205	17.08	0.17	0.080	( 0.092)	0.068	0.012
206	17.17	0.17	0.080	( 0.091)	0.068	0.012
207	17.25	0.17	0.080	( 0.091)	0.068	0.012
208	17.33	0.17	0.080	( 0.091)	0.068	0.012
209	17.42	0.17	0.080	( 0.090)	0.068	0.012
210	17.50	0.17	0.080	( 0.090)	0.068	0.012
211	17.58	0.17	0.080	( 0.089)	0.068	0.012
212	17.67	0.17	0.080	( 0.089)	0.068	0.012
213	17.75	0.17	0.080	( 0.088)	0.068	0.012
214	17.83	0.13	0.064	( 0.088)	0.055	0.009
215	17.92	0.13	0.064	( 0.087)	0.055	0.009
216	18.00	0.13	0.064	( 0.087)	0.055	0.009
217	18.08	0.13	0.064	( 0.087)	0.055	0.009
218	18.17	0.13	0.064	( 0.086)	0.055	0.009
219	18.25	0.13	0.064	( 0.086)	0.055	0.009
220	18.33	0.13	0.064	( 0.085)	0.055	0.009
221	18.42	0.13	0.064	( 0.085)	0.055	0.009
222	18.50	0.13	0.064	( 0.084)	0.055	0.009
223	18.58	0.10	0.048	( 0.084)	0.041	0.007
224	18.67	0.10	0.048	( 0.084)	0.041	0.007
225	18.75	0.10	0.048	( 0.083)	0.041	0.007
226	18.83	0.07	0.032	( 0.083)	0.027	0.005
227	18.92	0.07	0.032	( 0.082)	0.027	0.005
228	19.00	0.07	0.032	( 0.082)	0.027	0.005
229	19.08	0.10	0.048	( 0.082)	0.041	0.007
230	19.17	0.10	0.048	( 0.081)	0.041	0.007
231	19.25	0.10	0.048	( 0.081)	0.041	0.007
232	19.33	0.13	0.064	( 0.081)	0.055	0.009
233	19.42	0.13	0.064	( 0.080)	0.055	0.009
234	19.50	0.13	0.064	( 0.080)	0.055	0.009
235	19.58	0.10	0.048	( 0.079)	0.041	0.007
236	19.67	0.10	0.048	( 0.079)	0.041	0.007
237	19.75	0.10	0.048	( 0.079)	0.041	0.007
238	19.83	0.07	0.032	( 0.078)	0.027	0.005
239	19.92	0.07	0.032	( 0.078)	0.027	0.005
240	20.00	0.07	0.032	( 0.078)	0.027	0.005
241	20.08	0.10	0.048	( 0.077)	0.041	0.007
242	20.17	0.10	0.048	( 0.077)	0.041	0.007
243	20.25	0.10	0.048	( 0.077)	0.041	0.007
244	20.33	0.10	0.048	( 0.076)	0.041	0.007
245	20.42	0.10	0.048	( 0.076)	0.041	0.007
246	20.50	0.10	0.048	( 0.076)	0.041	0.007

247	20.58	0.10	0.048	( 0.075)	0.041	0.007
248	20.67	0.10	0.048	( 0.075)	0.041	0.007
249	20.75	0.10	0.048	( 0.075)	0.041	0.007
250	20.83	0.07	0.032	( 0.074)	0.027	0.005
251	20.92	0.07	0.032	( 0.074)	0.027	0.005
252	21.00	0.07	0.032	( 0.074)	0.027	0.005
253	21.08	0.10	0.048	( 0.074)	0.041	0.007
254	21.17	0.10	0.048	( 0.073)	0.041	0.007
255	21.25	0.10	0.048	( 0.073)	0.041	0.007
256	21.33	0.07	0.032	( 0.073)	0.027	0.005
257	21.42	0.07	0.032	( 0.072)	0.027	0.005
258	21.50	0.07	0.032	( 0.072)	0.027	0.005
259	21.58	0.10	0.048	( 0.072)	0.041	0.007
260	21.67	0.10	0.048	( 0.072)	0.041	0.007
261	21.75	0.10	0.048	( 0.071)	0.041	0.007
262	21.83	0.07	0.032	( 0.071)	0.027	0.005
263	21.92	0.07	0.032	( 0.071)	0.027	0.005
264	22.00	0.07	0.032	( 0.071)	0.027	0.005
265	22.08	0.10	0.048	( 0.070)	0.041	0.007
266	22.17	0.10	0.048	( 0.070)	0.041	0.007
267	22.25	0.10	0.048	( 0.070)	0.041	0.007
268	22.33	0.07	0.032	( 0.070)	0.027	0.005
269	22.42	0.07	0.032	( 0.070)	0.027	0.005
270	22.50	0.07	0.032	( 0.069)	0.027	0.005
271	22.58	0.07	0.032	( 0.069)	0.027	0.005
272	22.67	0.07	0.032	( 0.069)	0.027	0.005
273	22.75	0.07	0.032	( 0.069)	0.027	0.005
274	22.83	0.07	0.032	( 0.069)	0.027	0.005
275	22.92	0.07	0.032	( 0.068)	0.027	0.005
276	23.00	0.07	0.032	( 0.068)	0.027	0.005
277	23.08	0.07	0.032	( 0.068)	0.027	0.005
278	23.17	0.07	0.032	( 0.068)	0.027	0.005
279	23.25	0.07	0.032	( 0.068)	0.027	0.005
280	23.33	0.07	0.032	( 0.068)	0.027	0.005
281	23.42	0.07	0.032	( 0.067)	0.027	0.005
282	23.50	0.07	0.032	( 0.067)	0.027	0.005
283	23.58	0.07	0.032	( 0.067)	0.027	0.005
284	23.67	0.07	0.032	( 0.067)	0.027	0.005
285	23.75	0.07	0.032	( 0.067)	0.027	0.005
286	23.83	0.07	0.032	( 0.067)	0.027	0.005
287	23.92	0.07	0.032	( 0.067)	0.027	0.005
288	24.00	0.07	0.032	( 0.067)	0.027	0.005

(Loss Rate Not Used)

Sum = 100.0 Sum = 23.6

Flood volume = Effective rainfall 1.97(In)  
times area 1.1(Ac.)/[(In)/(Ft.)] = 0.2(Ac.Ft)  
Total soil loss = 2.03(In)  
Total soil loss = 0.191(Ac.Ft)  
Total rainfall = 4.00(In)  
Flood volume = 8082.7 Cubic Feet  
Total soil loss = 8324.8 Cubic Feet

Peak flow rate of this hydrograph = 0.475(CFS)

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24 - H O U R S T O R M  
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0000	0.00	Q				
0+10	0.0000	0.00	Q				
0+15	0.0000	0.00	Q				
0+20	0.0001	0.00	Q				
0+25	0.0001	0.01	Q				
0+30	0.0002	0.01	Q				
0+35	0.0002	0.01	Q				
0+40	0.0003	0.01	Q				

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0+45	0.0003	0.01	Q				
0+50	0.0004	0.01	Q				
0+55	0.0004	0.01	Q				
1+ 0	0.0005	0.01	Q				
1+ 5	0.0006	0.01	Q				
1+10	0.0006	0.01	Q				
1+15	0.0007	0.01	Q				
1+20	0.0007	0.01	Q				
1+25	0.0008	0.01	Q				
1+30	0.0008	0.01	Q				
1+35	0.0009	0.01	Q				
1+40	0.0010	0.01	Q				
1+45	0.0010	0.01	Q				
1+50	0.0011	0.01	Q				
1+55	0.0011	0.01	Q				
2+ 0	0.0012	0.01	Q				
2+ 5	0.0013	0.01	Q				
2+10	0.0013	0.01	Q				
2+15	0.0014	0.01	Q				
2+20	0.0015	0.01	Q				
2+25	0.0016	0.01	Q				
2+30	0.0016	0.01	Q				
2+35	0.0017	0.01	Q				
2+40	0.0018	0.01	Q				
2+45	0.0019	0.01	Q				
2+50	0.0020	0.01	Q				
2+55	0.0021	0.01	Q				
3+ 0	0.0022	0.01	Q				
3+ 5	0.0022	0.01	Q				
3+10	0.0023	0.01	Q				
3+15	0.0024	0.01	Q				
3+20	0.0025	0.01	Q				
3+25	0.0026	0.01	Q				
3+30	0.0027	0.01	Q				
3+35	0.0028	0.01	Q				
3+40	0.0029	0.01	Q				
3+45	0.0030	0.01	Q				
3+50	0.0031	0.01	Q				
3+55	0.0032	0.01	Q				
4+ 0	0.0033	0.02	Q				
4+ 5	0.0034	0.02	Q				
4+10	0.0035	0.02	Q				
4+15	0.0036	0.02	Q				
4+20	0.0037	0.02	Q				
4+25	0.0038	0.02	Q				
4+30	0.0040	0.02	Q				
4+35	0.0041	0.02	Q				
4+40	0.0042	0.02	Q				
4+45	0.0043	0.02	Q				
4+50	0.0045	0.02	Q				
4+55	0.0046	0.02	Q				
5+ 0	0.0047	0.02	QV				
5+ 5	0.0049	0.02	QV				
5+10	0.0050	0.02	QV				
5+15	0.0051	0.02	QV				
5+20	0.0053	0.02	QV				
5+25	0.0054	0.02	QV				
5+30	0.0055	0.02	QV				
5+35	0.0056	0.02	QV				
5+40	0.0058	0.02	QV				
5+45	0.0059	0.02	QV				
5+50	0.0061	0.02	QV				
5+55	0.0062	0.02	QV				
6+ 0	0.0063	0.02	QV				
6+ 5	0.0065	0.02	QV				
6+10	0.0067	0.02	QV				
6+15	0.0068	0.02	QV				
6+20	0.0070	0.02	QV				
6+25	0.0071	0.02	QV				
6+30	0.0073	0.02	QV				
6+35	0.0075	0.02	QV				

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6+40	0.0076	0.03	QV				
6+45	0.0078	0.03	QV				
6+50	0.0080	0.03	QV				
6+55	0.0082	0.03	QV				
7+ 0	0.0084	0.03	QV				
7+ 5	0.0085	0.03	QV				
7+10	0.0087	0.03	QV				
7+15	0.0089	0.03	QV				
7+20	0.0091	0.03	QV				
7+25	0.0093	0.03	Q V				
7+30	0.0095	0.03	Q V				
7+35	0.0097	0.03	Q V				
7+40	0.0099	0.03	Q V				
7+45	0.0101	0.03	Q V				
7+50	0.0104	0.04	Q V				
7+55	0.0107	0.04	Q V				
8+ 0	0.0110	0.05	Q V				
8+ 5	0.0114	0.05	Q V				
8+10	0.0118	0.07	Q V				
8+15	0.0124	0.08	Q V				
8+20	0.0129	0.08	Q V				
8+25	0.0135	0.09	Q V				
8+30	0.0142	0.09	Q V				
8+35	0.0148	0.09	Q V				
8+40	0.0155	0.10	Q V				
8+45	0.0163	0.11	Q V				
8+50	0.0170	0.11	Q V				
8+55	0.0179	0.12	Q V				
9+ 0	0.0187	0.13	Q V				
9+ 5	0.0197	0.13	Q V				
9+10	0.0207	0.15	Q V				
9+15	0.0218	0.16	Q V				
9+20	0.0230	0.17	Q V				
9+25	0.0242	0.18	Q V				
9+30	0.0254	0.18	Q V				
9+35	0.0268	0.19	Q V				
9+40	0.0281	0.20	Q V				
9+45	0.0296	0.21	Q V				
9+50	0.0310	0.21	Q V				
9+55	0.0325	0.22	Q V				
10+ 0	0.0341	0.23	Q V				
10+ 5	0.0356	0.22	Q V				
10+10	0.0369	0.19	Q V				
10+15	0.0380	0.15	Q V				
10+20	0.0389	0.14	Q V				
10+25	0.0399	0.13	Q V				
10+30	0.0408	0.13	Q V				
10+35	0.0417	0.13	Q V				
10+40	0.0428	0.16	Q V				
10+45	0.0440	0.18	Q V				
10+50	0.0454	0.19	Q V				
10+55	0.0467	0.20	Q V				
11+ 0	0.0481	0.20	Q V				
11+ 5	0.0495	0.20	Q V				
11+10	0.0509	0.20	Q V				
11+15	0.0522	0.20	Q V				
11+20	0.0536	0.20	Q V				
11+25	0.0550	0.20	Q V				
11+30	0.0563	0.20	Q V				
11+35	0.0577	0.20	Q V				
11+40	0.0589	0.19	Q V				
11+45	0.0602	0.18	Q V				
11+50	0.0613	0.17	Q V				
11+55	0.0626	0.18	Q V				
12+ 0	0.0638	0.18	Q V				
12+ 5	0.0652	0.19	Q V				
12+10	0.0668	0.23	Q V				
12+15	0.0686	0.27	Q V				
12+20	0.0706	0.29	Q V				
12+25	0.0726	0.30	Q V				
12+30	0.0748	0.31	Q V				

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12+35	0.0770	0.32	Q				
12+40	0.0793	0.34	Q		V		
12+45	0.0817	0.35	Q		V		
12+50	0.0842	0.36	Q		V		
12+55	0.0867	0.37	Q		V		
13+ 0	0.0893	0.38	Q		V		
13+ 5	0.0920	0.39	Q		V		
13+10	0.0949	0.42	Q		V		
13+15	0.0980	0.45	Q		V		
13+20	0.1012	0.46	Q		V		
13+25	0.1044	0.47	Q		V		
13+30	0.1077	0.47	Q		V		
13+35	0.1109	0.46	Q		V		
13+40	0.1137	0.41	Q		V		
13+45	0.1161	0.35	Q		V		
13+50	0.1184	0.33	Q		V		
13+55	0.1206	0.32	Q		V		
14+ 0	0.1228	0.31	Q		V		
14+ 5	0.1250	0.31	Q		V		
14+10	0.1273	0.33	Q		V		
14+15	0.1297	0.35	Q		V		
14+20	0.1321	0.36	Q		V		
14+25	0.1346	0.35	Q		V		
14+30	0.1370	0.35	Q		V		
14+35	0.1394	0.35	Q		V		
14+40	0.1418	0.35	Q		V		
14+45	0.1442	0.35	Q		V		
14+50	0.1466	0.35	Q		V		
14+55	0.1490	0.35	Q		V		
15+ 0	0.1513	0.34	Q		V		
15+ 5	0.1537	0.34	Q		V		
15+10	0.1559	0.33	Q		V		
15+15	0.1582	0.33	Q		V		
15+20	0.1604	0.32	Q		V		
15+25	0.1626	0.32	Q		V		
15+30	0.1648	0.31	Q		V		
15+35	0.1669	0.30	Q		V		
15+40	0.1688	0.28	Q		V		
15+45	0.1706	0.26	Q		V		
15+50	0.1723	0.25	Q		V		
15+55	0.1740	0.25	Q		V		
16+ 0	0.1757	0.24	Q		V		
16+ 5	0.1772	0.22	Q		V		
16+10	0.1783	0.15	Q		V		
16+15	0.1789	0.09	Q		V		
16+20	0.1794	0.06	Q		V		
16+25	0.1797	0.05	Q		V		
16+30	0.1800	0.04	Q		V		
16+35	0.1802	0.03	Q		V		
16+40	0.1804	0.03	Q		V		
16+45	0.1805	0.02	Q		V		
16+50	0.1806	0.02	Q		V		
16+55	0.1807	0.01	Q		V		
17+ 0	0.1808	0.01	Q		V		
17+ 5	0.1809	0.01	Q		V		
17+10	0.1810	0.01	Q		V		
17+15	0.1810	0.01	Q		V		
17+20	0.1811	0.01	Q		V		
17+25	0.1812	0.01	Q		V		
17+30	0.1813	0.01	Q		V		
17+35	0.1814	0.01	Q		V		
17+40	0.1815	0.01	Q		V		
17+45	0.1816	0.01	Q		V		
17+50	0.1817	0.01	Q		V		
17+55	0.1817	0.01	Q		V		
18+ 0	0.1818	0.01	Q		V		
18+ 5	0.1819	0.01	Q		V		
18+10	0.1820	0.01	Q		V		
18+15	0.1821	0.01	Q		V		
18+20	0.1821	0.01	Q		V		
18+25	0.1822	0.01	Q		V		

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18+30	0.1823	0.01	Q				V
18+35	0.1824	0.01	Q				V
18+40	0.1824	0.01	Q				V
18+45	0.1825	0.01	Q				V
18+50	0.1825	0.01	Q				V
18+55	0.1826	0.01	Q				V
19+ 0	0.1826	0.01	Q				V
19+ 5	0.1827	0.01	Q				V
19+10	0.1827	0.01	Q				V
19+15	0.1828	0.01	Q				V
19+20	0.1828	0.01	Q				V
19+25	0.1829	0.01	Q				V
19+30	0.1830	0.01	Q				V
19+35	0.1830	0.01	Q				V
19+40	0.1831	0.01	Q				V
19+45	0.1832	0.01	Q				V
19+50	0.1832	0.01	Q				V
19+55	0.1833	0.01	Q				V
20+ 0	0.1833	0.01	Q				V
20+ 5	0.1834	0.01	Q				V
20+10	0.1834	0.01	Q				V
20+15	0.1835	0.01	Q				V
20+20	0.1835	0.01	Q				V
20+25	0.1836	0.01	Q				V
20+30	0.1836	0.01	Q				V
20+35	0.1837	0.01	Q				V
20+40	0.1837	0.01	Q				V
20+45	0.1838	0.01	Q				V
20+50	0.1838	0.01	Q				V
20+55	0.1839	0.01	Q				V
21+ 0	0.1839	0.01	Q				V
21+ 5	0.1840	0.01	Q				V
21+10	0.1840	0.01	Q				V
21+15	0.1841	0.01	Q				V
21+20	0.1841	0.01	Q				V
21+25	0.1842	0.01	Q				V
21+30	0.1842	0.01	Q				V
21+35	0.1843	0.01	Q				V
21+40	0.1843	0.01	Q				V
21+45	0.1844	0.01	Q				V
21+50	0.1844	0.01	Q				V
21+55	0.1845	0.01	Q				V
22+ 0	0.1845	0.01	Q				V
22+ 5	0.1845	0.01	Q				V
22+10	0.1846	0.01	Q				V
22+15	0.1846	0.01	Q				V
22+20	0.1847	0.01	Q				V
22+25	0.1847	0.01	Q				V
22+30	0.1848	0.01	Q				V
22+35	0.1848	0.01	Q				V
22+40	0.1849	0.01	Q				V
22+45	0.1849	0.01	Q				V
22+50	0.1849	0.01	Q				V
22+55	0.1850	0.01	Q				V
23+ 0	0.1850	0.01	Q				V
23+ 5	0.1850	0.01	Q				V
23+10	0.1851	0.01	Q				V
23+15	0.1851	0.01	Q				V
23+20	0.1852	0.01	Q				V
23+25	0.1852	0.01	Q				V
23+30	0.1852	0.01	Q				V
23+35	0.1853	0.01	Q				V
23+40	0.1853	0.01	Q				V
23+45	0.1853	0.01	Q				V
23+50	0.1854	0.01	Q				V
23+55	0.1854	0.01	Q				V
24+ 0	0.1855	0.01	Q				V
24+ 5	0.1855	0.01	Q				V
24+10	0.1855	0.00	Q				V
24+15	0.1855	0.00	Q				V
24+20	0.1855	0.00	Q				V

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24+25	0.1855	0.00	Q				V
24+30	0.1855	0.00	Q				V
24+35	0.1855	0.00	Q				V
24+40	0.1855	0.00	Q				V
24+45	0.1856	0.00	Q				V
24+50	0.1856	0.00	Q				V
24+55	0.1856	0.00	Q				V
25+ 0	0.1856	0.00	Q				V
25+ 5	0.1856	0.00	Q				V
25+10	0.1856	0.00	Q				V

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**APPENDIX B.2: AREA B2 – 100-YEAR, 24-HOUR STORM DURATION**

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Unit Hydrograph Analysis

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0
Study date 01/27/16 File: ARB2P24100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6279

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English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used
English Units used in output format

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KITCHING SUBSTATION POST-PROJECT CONDITION HYDROLOGY
AREA TRIBUTARY TO SOUTH BASIN
UNIT HYDROGRAPH ANALYSIS, 100-YEAR, 24-HOUR STORM EVENT
FILENAME: ARB2P
-----

Drainage Area = 0.47(Ac.) = 0.001 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 0.47(Ac.) = 0.001 Sq. Mi.
USER Entry of lag time in hours
Lag time = 0.174 Hr.
Lag time = 10.43 Min.
25% of lag time = 2.61 Min.
40% of lag time = 4.17 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1] Rainfall(In)[2] Weighting[1\*2]
0.47 1.60 0.75

100 YEAR Area rainfall data:

Area(Ac.)[1] Rainfall(In)[2] Weighting[1\*2]
0.47 4.00 1.88

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.600(In)
Area Averaged 100-Year Rainfall = 4.000(In)

Point rain (area averaged) = 4.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 4.000(In)

Sub-Area Data:
Area(Ac.) Runoff Index Impervious %
0.470 89.00 0.148
Total Area Entered = 0.47(Ac.)

RI RI Infil. Rate Impervious Adj. Infil. Rate Area% F
AMC2 AMC-2 (In/Hr) (Dec.%) (In/Hr) (Dec.) (In/Hr)
89.0 89.0 0.141 0.148 0.123 1.000 0.123
Sum (F) = 0.123

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Area averaged mean soil loss (F) (In/Hr) = 0.123  
 Minimum soil loss rate ((In/Hr)) = 0.061  
 (for 24 hour storm duration)  
 Soil low loss rate (decimal) = 0.782

Unit Hydrograph  
 VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	47.920	5.739
2	0.167	95.841	24.379
3	0.250	143.761	28.931
4	0.333	191.681	13.752
5	0.417	239.601	7.012
6	0.500	287.522	4.841
7	0.583	335.442	3.516
8	0.667	383.362	2.709
9	0.750	431.282	2.021
10	0.833	479.203	1.550
11	0.917	527.123	1.384
12	1.000	575.043	1.064
13	1.083	622.963	0.862
14	1.167	670.884	0.679
15	1.250	718.804	0.510
16	1.333	766.724	0.479
17	1.417	814.644	0.572
		Sum = 100.000	Sum= 0.474

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)	
1	0.08	0.07	0.032	( 0.217)	0.025	0.007
2	0.17	0.07	0.032	( 0.216)	0.025	0.007
3	0.25	0.07	0.032	( 0.216)	0.025	0.007
4	0.33	0.10	0.048	( 0.215)	0.038	0.010
5	0.42	0.10	0.048	( 0.214)	0.038	0.010
6	0.50	0.10	0.048	( 0.213)	0.038	0.010
7	0.58	0.10	0.048	( 0.212)	0.038	0.010
8	0.67	0.10	0.048	( 0.211)	0.038	0.010
9	0.75	0.10	0.048	( 0.211)	0.038	0.010
10	0.83	0.13	0.064	( 0.210)	0.050	0.014
11	0.92	0.13	0.064	( 0.209)	0.050	0.014
12	1.00	0.13	0.064	( 0.208)	0.050	0.014
13	1.08	0.10	0.048	( 0.207)	0.038	0.010
14	1.17	0.10	0.048	( 0.206)	0.038	0.010
15	1.25	0.10	0.048	( 0.206)	0.038	0.010
16	1.33	0.10	0.048	( 0.205)	0.038	0.010
17	1.42	0.10	0.048	( 0.204)	0.038	0.010
18	1.50	0.10	0.048	( 0.203)	0.038	0.010
19	1.58	0.10	0.048	( 0.202)	0.038	0.010
20	1.67	0.10	0.048	( 0.202)	0.038	0.010
21	1.75	0.10	0.048	( 0.201)	0.038	0.010
22	1.83	0.13	0.064	( 0.200)	0.050	0.014
23	1.92	0.13	0.064	( 0.199)	0.050	0.014
24	2.00	0.13	0.064	( 0.198)	0.050	0.014
25	2.08	0.13	0.064	( 0.198)	0.050	0.014
26	2.17	0.13	0.064	( 0.197)	0.050	0.014
27	2.25	0.13	0.064	( 0.196)	0.050	0.014
28	2.33	0.13	0.064	( 0.195)	0.050	0.014
29	2.42	0.13	0.064	( 0.194)	0.050	0.014
30	2.50	0.13	0.064	( 0.194)	0.050	0.014
31	2.58	0.17	0.080	( 0.193)	0.063	0.017

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32	2.67	0.17	0.080	( 0.192)	0.063	0.017
33	2.75	0.17	0.080	( 0.191)	0.063	0.017
34	2.83	0.17	0.080	( 0.190)	0.063	0.017
35	2.92	0.17	0.080	( 0.190)	0.063	0.017
36	3.00	0.17	0.080	( 0.189)	0.063	0.017
37	3.08	0.17	0.080	( 0.188)	0.063	0.017
38	3.17	0.17	0.080	( 0.187)	0.063	0.017
39	3.25	0.17	0.080	( 0.187)	0.063	0.017
40	3.33	0.17	0.080	( 0.186)	0.063	0.017
41	3.42	0.17	0.080	( 0.185)	0.063	0.017
42	3.50	0.17	0.080	( 0.184)	0.063	0.017
43	3.58	0.17	0.080	( 0.183)	0.063	0.017
44	3.67	0.17	0.080	( 0.183)	0.063	0.017
45	3.75	0.17	0.080	( 0.182)	0.063	0.017
46	3.83	0.20	0.096	( 0.181)	0.075	0.021
47	3.92	0.20	0.096	( 0.180)	0.075	0.021
48	4.00	0.20	0.096	( 0.180)	0.075	0.021
49	4.08	0.20	0.096	( 0.179)	0.075	0.021
50	4.17	0.20	0.096	( 0.178)	0.075	0.021
51	4.25	0.20	0.096	( 0.177)	0.075	0.021
52	4.33	0.23	0.112	( 0.177)	0.088	0.024
53	4.42	0.23	0.112	( 0.176)	0.088	0.024
54	4.50	0.23	0.112	( 0.175)	0.088	0.024
55	4.58	0.23	0.112	( 0.174)	0.088	0.024
56	4.67	0.23	0.112	( 0.174)	0.088	0.024
57	4.75	0.23	0.112	( 0.173)	0.088	0.024
58	4.83	0.27	0.128	( 0.172)	0.100	0.028
59	4.92	0.27	0.128	( 0.171)	0.100	0.028
60	5.00	0.27	0.128	( 0.171)	0.100	0.028
61	5.08	0.20	0.096	( 0.170)	0.075	0.021
62	5.17	0.20	0.096	( 0.169)	0.075	0.021
63	5.25	0.20	0.096	( 0.168)	0.075	0.021
64	5.33	0.23	0.112	( 0.168)	0.088	0.024
65	5.42	0.23	0.112	( 0.167)	0.088	0.024
66	5.50	0.23	0.112	( 0.166)	0.088	0.024
67	5.58	0.27	0.128	( 0.165)	0.100	0.028
68	5.67	0.27	0.128	( 0.165)	0.100	0.028
69	5.75	0.27	0.128	( 0.164)	0.100	0.028
70	5.83	0.27	0.128	( 0.163)	0.100	0.028
71	5.92	0.27	0.128	( 0.163)	0.100	0.028
72	6.00	0.27	0.128	( 0.162)	0.100	0.028
73	6.08	0.30	0.144	( 0.161)	0.113	0.031
74	6.17	0.30	0.144	( 0.160)	0.113	0.031
75	6.25	0.30	0.144	( 0.160)	0.113	0.031
76	6.33	0.30	0.144	( 0.159)	0.113	0.031
77	6.42	0.30	0.144	( 0.158)	0.113	0.031
78	6.50	0.30	0.144	( 0.158)	0.113	0.031
79	6.58	0.33	0.160	( 0.157)	0.125	0.035
80	6.67	0.33	0.160	( 0.156)	0.125	0.035
81	6.75	0.33	0.160	( 0.155)	0.125	0.035
82	6.83	0.33	0.160	( 0.155)	0.125	0.035
83	6.92	0.33	0.160	( 0.154)	0.125	0.035
84	7.00	0.33	0.160	( 0.153)	0.125	0.035
85	7.08	0.33	0.160	( 0.153)	0.125	0.035
86	7.17	0.33	0.160	( 0.152)	0.125	0.035
87	7.25	0.33	0.160	( 0.151)	0.125	0.035
88	7.33	0.37	0.176	( 0.151)	0.138	0.038
89	7.42	0.37	0.176	( 0.150)	0.138	0.038
90	7.50	0.37	0.176	( 0.149)	0.138	0.038
91	7.58	0.40	0.192	0.148	( 0.150)	0.044
92	7.67	0.40	0.192	0.148	( 0.150)	0.044
93	7.75	0.40	0.192	0.147	( 0.150)	0.045
94	7.83	0.43	0.208	0.146	( 0.163)	0.062
95	7.92	0.43	0.208	0.146	( 0.163)	0.062
96	8.00	0.43	0.208	0.145	( 0.163)	0.063
97	8.08	0.50	0.240	0.144	( 0.188)	0.096
98	8.17	0.50	0.240	0.144	( 0.188)	0.096
99	8.25	0.50	0.240	0.143	( 0.188)	0.097
100	8.33	0.50	0.240	0.142	( 0.188)	0.098
101	8.42	0.50	0.240	0.142	( 0.188)	0.098
102	8.50	0.50	0.240	0.141	( 0.188)	0.099

103	8.58	0.53	0.256	0.140	( 0.200)	0.116
104	8.67	0.53	0.256	0.140	( 0.200)	0.116
105	8.75	0.53	0.256	0.139	( 0.200)	0.117
106	8.83	0.57	0.272	0.138	( 0.213)	0.134
107	8.92	0.57	0.272	0.138	( 0.213)	0.134
108	9.00	0.57	0.272	0.137	( 0.213)	0.135
109	9.08	0.63	0.304	0.136	( 0.238)	0.168
110	9.17	0.63	0.304	0.136	( 0.238)	0.168
111	9.25	0.63	0.304	0.135	( 0.238)	0.169
112	9.33	0.67	0.320	0.135	( 0.250)	0.185
113	9.42	0.67	0.320	0.134	( 0.250)	0.186
114	9.50	0.67	0.320	0.133	( 0.250)	0.187
115	9.58	0.70	0.336	0.133	( 0.263)	0.203
116	9.67	0.70	0.336	0.132	( 0.263)	0.204
117	9.75	0.70	0.336	0.131	( 0.263)	0.205
118	9.83	0.73	0.352	0.131	( 0.275)	0.221
119	9.92	0.73	0.352	0.130	( 0.275)	0.222
120	10.00	0.73	0.352	0.129	( 0.275)	0.223
121	10.08	0.50	0.240	0.129	( 0.188)	0.111
122	10.17	0.50	0.240	0.128	( 0.188)	0.112
123	10.25	0.50	0.240	0.128	( 0.188)	0.112
124	10.33	0.50	0.240	0.127	( 0.188)	0.113
125	10.42	0.50	0.240	0.126	( 0.188)	0.114
126	10.50	0.50	0.240	0.126	( 0.188)	0.114
127	10.58	0.67	0.320	0.125	( 0.250)	0.195
128	10.67	0.67	0.320	0.124	( 0.250)	0.196
129	10.75	0.67	0.320	0.124	( 0.250)	0.196
130	10.83	0.67	0.320	0.123	( 0.250)	0.197
131	10.92	0.67	0.320	0.123	( 0.250)	0.197
132	11.00	0.67	0.320	0.122	( 0.250)	0.198
133	11.08	0.63	0.304	0.121	( 0.238)	0.183
134	11.17	0.63	0.304	0.121	( 0.238)	0.183
135	11.25	0.63	0.304	0.120	( 0.238)	0.184
136	11.33	0.63	0.304	0.120	( 0.238)	0.184
137	11.42	0.63	0.304	0.119	( 0.238)	0.185
138	11.50	0.63	0.304	0.118	( 0.238)	0.186
139	11.58	0.57	0.272	0.118	( 0.213)	0.154
140	11.67	0.57	0.272	0.117	( 0.213)	0.155
141	11.75	0.57	0.272	0.117	( 0.213)	0.155
142	11.83	0.60	0.288	0.116	( 0.225)	0.172
143	11.92	0.60	0.288	0.116	( 0.225)	0.172
144	12.00	0.60	0.288	0.115	( 0.225)	0.173
145	12.08	0.83	0.400	0.114	( 0.313)	0.286
146	12.17	0.83	0.400	0.114	( 0.313)	0.286
147	12.25	0.83	0.400	0.113	( 0.313)	0.287
148	12.33	0.87	0.416	0.113	( 0.325)	0.303
149	12.42	0.87	0.416	0.112	( 0.325)	0.304
150	12.50	0.87	0.416	0.112	( 0.325)	0.304
151	12.58	0.93	0.448	0.111	( 0.350)	0.337
152	12.67	0.93	0.448	0.110	( 0.350)	0.338
153	12.75	0.93	0.448	0.110	( 0.350)	0.338
154	12.83	0.97	0.464	0.109	( 0.363)	0.355
155	12.92	0.97	0.464	0.109	( 0.363)	0.355
156	13.00	0.97	0.464	0.108	( 0.363)	0.356
157	13.08	1.13	0.544	0.108	( 0.425)	0.436
158	13.17	1.13	0.544	0.107	( 0.425)	0.437
159	13.25	1.13	0.544	0.107	( 0.425)	0.437
160	13.33	1.13	0.544	0.106	( 0.425)	0.438
161	13.42	1.13	0.544	0.106	( 0.425)	0.438
162	13.50	1.13	0.544	0.105	( 0.425)	0.439
163	13.58	0.77	0.368	0.104	( 0.288)	0.264
164	13.67	0.77	0.368	0.104	( 0.288)	0.264
165	13.75	0.77	0.368	0.103	( 0.288)	0.265
166	13.83	0.77	0.368	0.103	( 0.288)	0.265
167	13.92	0.77	0.368	0.102	( 0.288)	0.266
168	14.00	0.77	0.368	0.102	( 0.288)	0.266
169	14.08	0.90	0.432	0.101	( 0.338)	0.331
170	14.17	0.90	0.432	0.101	( 0.338)	0.331
171	14.25	0.90	0.432	0.100	( 0.338)	0.332
172	14.33	0.87	0.416	0.100	( 0.325)	0.316
173	14.42	0.87	0.416	0.099	( 0.325)	0.317

174	14.50	0.87	0.416	0.099	( 0.325)	0.317
175	14.58	0.87	0.416	0.098	( 0.325)	0.318
176	14.67	0.87	0.416	0.098	( 0.325)	0.318
177	14.75	0.87	0.416	0.097	( 0.325)	0.319
178	14.83	0.83	0.400	0.097	( 0.313)	0.303
179	14.92	0.83	0.400	0.096	( 0.313)	0.304
180	15.00	0.83	0.400	0.096	( 0.313)	0.304
181	15.08	0.80	0.384	0.095	( 0.300)	0.289
182	15.17	0.80	0.384	0.095	( 0.300)	0.289
183	15.25	0.80	0.384	0.094	( 0.300)	0.290
184	15.33	0.77	0.368	0.094	( 0.288)	0.274
185	15.42	0.77	0.368	0.093	( 0.288)	0.275
186	15.50	0.77	0.368	0.093	( 0.288)	0.275
187	15.58	0.63	0.304	0.092	( 0.238)	0.212
188	15.67	0.63	0.304	0.092	( 0.238)	0.212
189	15.75	0.63	0.304	0.091	( 0.238)	0.213
190	15.83	0.63	0.304	0.091	( 0.238)	0.213
191	15.92	0.63	0.304	0.090	( 0.238)	0.214
192	16.00	0.63	0.304	0.090	( 0.238)	0.214
193	16.08	0.13	0.064	( 0.090)	0.050	0.014
194	16.17	0.13	0.064	( 0.089)	0.050	0.014
195	16.25	0.13	0.064	( 0.089)	0.050	0.014
196	16.33	0.13	0.064	( 0.088)	0.050	0.014
197	16.42	0.13	0.064	( 0.088)	0.050	0.014
198	16.50	0.13	0.064	( 0.087)	0.050	0.014
199	16.58	0.10	0.048	( 0.087)	0.038	0.010
200	16.67	0.10	0.048	( 0.086)	0.038	0.010
201	16.75	0.10	0.048	( 0.086)	0.038	0.010
202	16.83	0.10	0.048	( 0.086)	0.038	0.010
203	16.92	0.10	0.048	( 0.085)	0.038	0.010
204	17.00	0.10	0.048	( 0.085)	0.038	0.010
205	17.08	0.17	0.080	( 0.084)	0.063	0.017
206	17.17	0.17	0.080	( 0.084)	0.063	0.017
207	17.25	0.17	0.080	( 0.083)	0.063	0.017
208	17.33	0.17	0.080	( 0.083)	0.063	0.017
209	17.42	0.17	0.080	( 0.083)	0.063	0.017
210	17.50	0.17	0.080	( 0.082)	0.063	0.017
211	17.58	0.17	0.080	( 0.082)	0.063	0.017
212	17.67	0.17	0.080	( 0.081)	0.063	0.017
213	17.75	0.17	0.080	( 0.081)	0.063	0.017
214	17.83	0.13	0.064	( 0.081)	0.050	0.014
215	17.92	0.13	0.064	( 0.080)	0.050	0.014
216	18.00	0.13	0.064	( 0.080)	0.050	0.014
217	18.08	0.13	0.064	( 0.079)	0.050	0.014
218	18.17	0.13	0.064	( 0.079)	0.050	0.014
219	18.25	0.13	0.064	( 0.079)	0.050	0.014
220	18.33	0.13	0.064	( 0.078)	0.050	0.014
221	18.42	0.13	0.064	( 0.078)	0.050	0.014
222	18.50	0.13	0.064	( 0.077)	0.050	0.014
223	18.58	0.10	0.048	( 0.077)	0.038	0.010
224	18.67	0.10	0.048	( 0.077)	0.038	0.010
225	18.75	0.10	0.048	( 0.076)	0.038	0.010
226	18.83	0.07	0.032	( 0.076)	0.025	0.007
227	18.92	0.07	0.032	( 0.076)	0.025	0.007
228	19.00	0.07	0.032	( 0.075)	0.025	0.007
229	19.08	0.10	0.048	( 0.075)	0.038	0.010
230	19.17	0.10	0.048	( 0.075)	0.038	0.010
231	19.25	0.10	0.048	( 0.074)	0.038	0.010
232	19.33	0.13	0.064	( 0.074)	0.050	0.014
233	19.42	0.13	0.064	( 0.073)	0.050	0.014
234	19.50	0.13	0.064	( 0.073)	0.050	0.014
235	19.58	0.10	0.048	( 0.073)	0.038	0.010
236	19.67	0.10	0.048	( 0.072)	0.038	0.010
237	19.75	0.10	0.048	( 0.072)	0.038	0.010
238	19.83	0.07	0.032	( 0.072)	0.025	0.007
239	19.92	0.07	0.032	( 0.071)	0.025	0.007
240	20.00	0.07	0.032	( 0.071)	0.025	0.007
241	20.08	0.10	0.048	( 0.071)	0.038	0.010
242	20.17	0.10	0.048	( 0.071)	0.038	0.010
243	20.25	0.10	0.048	( 0.070)	0.038	0.010
244	20.33	0.10	0.048	( 0.070)	0.038	0.010



245	20.42	0.10	0.048	( 0.070)	0.038	0.010
246	20.50	0.10	0.048	( 0.069)	0.038	0.010
247	20.58	0.10	0.048	( 0.069)	0.038	0.010
248	20.67	0.10	0.048	( 0.069)	0.038	0.010
249	20.75	0.10	0.048	( 0.068)	0.038	0.010
250	20.83	0.07	0.032	( 0.068)	0.025	0.007
251	20.92	0.07	0.032	( 0.068)	0.025	0.007
252	21.00	0.07	0.032	( 0.068)	0.025	0.007
253	21.08	0.10	0.048	( 0.067)	0.038	0.010
254	21.17	0.10	0.048	( 0.067)	0.038	0.010
255	21.25	0.10	0.048	( 0.067)	0.038	0.010
256	21.33	0.07	0.032	( 0.067)	0.025	0.007
257	21.42	0.07	0.032	( 0.066)	0.025	0.007
258	21.50	0.07	0.032	( 0.066)	0.025	0.007
259	21.58	0.10	0.048	( 0.066)	0.038	0.010
260	21.67	0.10	0.048	( 0.066)	0.038	0.010
261	21.75	0.10	0.048	( 0.065)	0.038	0.010
262	21.83	0.07	0.032	( 0.065)	0.025	0.007
263	21.92	0.07	0.032	( 0.065)	0.025	0.007
264	22.00	0.07	0.032	( 0.065)	0.025	0.007
265	22.08	0.10	0.048	( 0.064)	0.038	0.010
266	22.17	0.10	0.048	( 0.064)	0.038	0.010
267	22.25	0.10	0.048	( 0.064)	0.038	0.010
268	22.33	0.07	0.032	( 0.064)	0.025	0.007
269	22.42	0.07	0.032	( 0.064)	0.025	0.007
270	22.50	0.07	0.032	( 0.064)	0.025	0.007
271	22.58	0.07	0.032	( 0.063)	0.025	0.007
272	22.67	0.07	0.032	( 0.063)	0.025	0.007
273	22.75	0.07	0.032	( 0.063)	0.025	0.007
274	22.83	0.07	0.032	( 0.063)	0.025	0.007
275	22.92	0.07	0.032	( 0.063)	0.025	0.007
276	23.00	0.07	0.032	( 0.062)	0.025	0.007
277	23.08	0.07	0.032	( 0.062)	0.025	0.007
278	23.17	0.07	0.032	( 0.062)	0.025	0.007
279	23.25	0.07	0.032	( 0.062)	0.025	0.007
280	23.33	0.07	0.032	( 0.062)	0.025	0.007
281	23.42	0.07	0.032	( 0.062)	0.025	0.007
282	23.50	0.07	0.032	( 0.062)	0.025	0.007
283	23.58	0.07	0.032	( 0.062)	0.025	0.007
284	23.67	0.07	0.032	( 0.062)	0.025	0.007
285	23.75	0.07	0.032	( 0.061)	0.025	0.007
286	23.83	0.07	0.032	( 0.061)	0.025	0.007
287	23.92	0.07	0.032	( 0.061)	0.025	0.007
288	24.00	0.07	0.032	( 0.061)	0.025	0.007

(Loss Rate Not Used)

Sum = 100.0 Sum = 25.7

Flood volume = Effective rainfall 2.14(In)  
 times area 0.5(Ac.)/[ (In)/(Ft.) ] = 0.1(Ac.Ft)  
 Total soil loss = 1.86(In)  
 Total soil loss = 0.073(Ac.Ft)  
 Total rainfall = 4.00(In)  
 Flood volume = 3650.0 Cubic Feet  
 Total soil loss = 3174.4 Cubic Feet

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 Peak flow rate of this hydrograph = 0.200(CFS)  
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24 - H O U R S T O R M  
 R u n o f f H y d r o g r a p h

-----  
 Hydrograph in 5 Minute intervals ((CFS))  
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Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0000	0.00	Q				
0+10	0.0000	0.00	Q				
0+15	0.0000	0.00	Q				
0+20	0.0000	0.00	Q				
0+25	0.0001	0.00	Q				
0+30	0.0001	0.00	Q				

0+35	0.0001	0.00	Q
0+40	0.0001	0.00	Q
0+45	0.0002	0.00	Q
0+50	0.0002	0.00	Q
0+55	0.0002	0.01	Q
1+ 0	0.0003	0.01	Q
1+ 5	0.0003	0.01	Q
1+10	0.0004	0.01	Q
1+15	0.0004	0.01	Q
1+20	0.0004	0.01	Q
1+25	0.0005	0.01	Q
1+30	0.0005	0.01	Q
1+35	0.0005	0.01	Q
1+40	0.0006	0.01	Q
1+45	0.0006	0.01	Q
1+50	0.0006	0.01	Q
1+55	0.0007	0.01	Q
2+ 0	0.0007	0.01	Q
2+ 5	0.0008	0.01	Q
2+10	0.0008	0.01	Q
2+15	0.0009	0.01	Q
2+20	0.0009	0.01	Q
2+25	0.0009	0.01	Q
2+30	0.0010	0.01	Q
2+35	0.0010	0.01	Q
2+40	0.0011	0.01	Q
2+45	0.0011	0.01	Q
2+50	0.0012	0.01	Q
2+55	0.0012	0.01	Q
3+ 0	0.0013	0.01	Q
3+ 5	0.0014	0.01	Q
3+10	0.0014	0.01	Q
3+15	0.0015	0.01	Q
3+20	0.0015	0.01	Q
3+25	0.0016	0.01	Q
3+30	0.0016	0.01	Q
3+35	0.0017	0.01	Q
3+40	0.0017	0.01	Q
3+45	0.0018	0.01	Q
3+50	0.0019	0.01	Q
3+55	0.0019	0.01	Q
4+ 0	0.0020	0.01	Q
4+ 5	0.0021	0.01	Q
4+10	0.0021	0.01	QV
4+15	0.0022	0.01	QV
4+20	0.0023	0.01	QV
4+25	0.0023	0.01	QV
4+30	0.0024	0.01	QV
4+35	0.0025	0.01	QV
4+40	0.0026	0.01	QV
4+45	0.0026	0.01	QV
4+50	0.0027	0.01	QV
4+55	0.0028	0.01	QV
5+ 0	0.0029	0.01	QV
5+ 5	0.0030	0.01	QV
5+10	0.0030	0.01	QV
5+15	0.0031	0.01	QV
5+20	0.0032	0.01	QV
5+25	0.0033	0.01	QV
5+30	0.0033	0.01	QV
5+35	0.0034	0.01	QV
5+40	0.0035	0.01	QV
5+45	0.0036	0.01	QV
5+50	0.0037	0.01	QV
5+55	0.0038	0.01	QV
6+ 0	0.0039	0.01	QV
6+ 5	0.0040	0.01	QV
6+10	0.0040	0.01	QV
6+15	0.0041	0.01	QV
6+20	0.0042	0.01	Q V
6+25	0.0043	0.01	Q V

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6+30	0.0044	0.01	Q	V				
6+35	0.0045	0.01	Q	V				
6+40	0.0046	0.02	Q	V				
6+45	0.0048	0.02	Q	V				
6+50	0.0049	0.02	Q	V				
6+55	0.0050	0.02	Q	V				
7+ 0	0.0051	0.02	Q	V				
7+ 5	0.0052	0.02	Q	V				
7+10	0.0053	0.02	Q	V				
7+15	0.0054	0.02	Q	V				
7+20	0.0055	0.02	Q	V				
7+25	0.0057	0.02	Q	V				
7+30	0.0058	0.02	Q	V				
7+35	0.0059	0.02	Q	V				
7+40	0.0060	0.02	Q	V				
7+45	0.0062	0.02	Q	V				
7+50	0.0063	0.02	Q	V				
7+55	0.0065	0.02	Q	V				
8+ 0	0.0066	0.03	Q	V				
8+ 5	0.0068	0.03	Q	V				
8+10	0.0071	0.03	Q	V				
8+15	0.0073	0.04	Q	V				
8+20	0.0076	0.04	Q	V				
8+25	0.0079	0.04	Q	V				
8+30	0.0082	0.04	Q	V				
8+35	0.0085	0.04	Q	V				
8+40	0.0088	0.05	Q	V				
8+45	0.0091	0.05	Q	V				
8+50	0.0095	0.05	Q	V				
8+55	0.0099	0.06	Q	V				
9+ 0	0.0103	0.06	Q	V				
9+ 5	0.0107	0.06	Q	V				
9+10	0.0112	0.07	Q	V				
9+15	0.0116	0.07	Q	V				
9+20	0.0122	0.07	Q	V				
9+25	0.0127	0.08	Q	V				
9+30	0.0132	0.08	Q	V				
9+35	0.0138	0.08	Q	V				
9+40	0.0144	0.09	Q	V				
9+45	0.0150	0.09	Q	V				
9+50	0.0157	0.09	Q	V				
9+55	0.0163	0.10	Q	V				
10+ 0	0.0170	0.10	Q	V				
10+ 5	0.0177	0.10	Q	V				
10+10	0.0183	0.09	Q	V				
10+15	0.0188	0.07	Q	V				
10+20	0.0192	0.07	Q	V				
10+25	0.0197	0.06	Q	V				
10+30	0.0201	0.06	Q	V				
10+35	0.0205	0.06	Q	V				
10+40	0.0210	0.07	Q	V				
10+45	0.0215	0.08	Q	V				
10+50	0.0221	0.08	Q	V				
10+55	0.0227	0.09	Q	V				
11+ 0	0.0233	0.09	Q	V				
11+ 5	0.0240	0.09	Q	V				
11+10	0.0246	0.09	Q	V				
11+15	0.0252	0.09	Q	V				
11+20	0.0258	0.09	Q	V				
11+25	0.0264	0.09	Q	V				
11+30	0.0270	0.09	Q	V				
11+35	0.0276	0.09	Q	V				
11+40	0.0281	0.08	Q	V				
11+45	0.0287	0.08	Q	V				
11+50	0.0292	0.08	Q	V				
11+55	0.0298	0.08	Q	V				
12+ 0	0.0303	0.08	Q	V				
12+ 5	0.0309	0.08	Q	V				
12+10	0.0316	0.10	Q	V				
12+15	0.0323	0.11	Q	V				
12+20	0.0332	0.12	Q	V				

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12+25	0.0341	0.13	Q	V			
12+30	0.0350	0.13	Q	V			
12+35	0.0359	0.14	Q	V			
12+40	0.0369	0.14	Q	V			
12+45	0.0379	0.15	Q	V			
12+50	0.0389	0.15	Q	V			
12+55	0.0400	0.16	Q	V			
13+ 0	0.0411	0.16	Q	V			
13+ 5	0.0423	0.16	Q	V			
13+10	0.0435	0.18	Q	V			
13+15	0.0448	0.19	Q	V			
13+20	0.0461	0.19	Q	V			
13+25	0.0475	0.20	Q	V			
13+30	0.0488	0.20	Q	V			
13+35	0.0502	0.20	Q	V			
13+40	0.0514	0.18	Q	V			
13+45	0.0525	0.16	Q	V			
13+50	0.0535	0.15	Q	V			
13+55	0.0545	0.14	Q	V			
14+ 0	0.0554	0.14	Q	V			
14+ 5	0.0564	0.14	Q	V			
14+10	0.0573	0.14	Q	V			
14+15	0.0584	0.15	Q	V			
14+20	0.0594	0.15	Q	V			
14+25	0.0605	0.15	Q	V			
14+30	0.0615	0.15	Q	V			
14+35	0.0625	0.15	Q	V			
14+40	0.0636	0.15	Q	V			
14+45	0.0646	0.15	Q	V			
14+50	0.0656	0.15	Q	V			
14+55	0.0666	0.15	Q	V			
15+ 0	0.0677	0.15	Q	V			
15+ 5	0.0687	0.15	Q	V			
15+10	0.0696	0.14	Q	V			
15+15	0.0706	0.14	Q	V			
15+20	0.0716	0.14	Q	V			
15+25	0.0725	0.14	Q	V			
15+30	0.0734	0.13	Q	V			
15+35	0.0743	0.13	Q	V			
15+40	0.0752	0.12	Q	V			
15+45	0.0760	0.11	Q	V			
15+50	0.0767	0.11	Q	V			
15+55	0.0775	0.11	Q	V			
16+ 0	0.0782	0.11	Q	V			
16+ 5	0.0789	0.10	Q	V			
16+10	0.0794	0.08	Q	V			
16+15	0.0798	0.05	Q	V			
16+20	0.0800	0.03	Q	V			
16+25	0.0802	0.03	Q	V			
16+30	0.0803	0.02	Q	V			
16+35	0.0805	0.02	Q	V			
16+40	0.0806	0.02	Q	V			
16+45	0.0806	0.01	Q	V			
16+50	0.0807	0.01	Q	V			
16+55	0.0808	0.01	Q	V			
17+ 0	0.0808	0.01	Q	V			
17+ 5	0.0809	0.01	Q	V			
17+10	0.0809	0.01	Q	V			
17+15	0.0810	0.01	Q	V			
17+20	0.0811	0.01	Q	V			
17+25	0.0811	0.01	Q	V			
17+30	0.0812	0.01	Q	V			
17+35	0.0812	0.01	Q	V			
17+40	0.0813	0.01	Q	V			
17+45	0.0813	0.01	Q	V			
17+50	0.0814	0.01	Q	V			
17+55	0.0814	0.01	Q	V			
18+ 0	0.0815	0.01	Q	V			
18+ 5	0.0815	0.01	Q	V			
18+10	0.0816	0.01	Q	V			
18+15	0.0816	0.01	Q	V			

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18+20	0.0817	0.01	Q				V
18+25	0.0817	0.01	Q				V
18+30	0.0818	0.01	Q				V
18+35	0.0818	0.01	Q				V
18+40	0.0819	0.01	Q				V
18+45	0.0819	0.01	Q				V
18+50	0.0819	0.01	Q				V
18+55	0.0820	0.00	Q				V
19+ 0	0.0820	0.00	Q				V
19+ 5	0.0820	0.00	Q				V
19+10	0.0820	0.00	Q				V
19+15	0.0821	0.00	Q				V
19+20	0.0821	0.00	Q				V
19+25	0.0822	0.01	Q				V
19+30	0.0822	0.01	Q				V
19+35	0.0822	0.01	Q				V
19+40	0.0823	0.01	Q				V
19+45	0.0823	0.01	Q				V
19+50	0.0823	0.01	Q				V
19+55	0.0824	0.00	Q				V
20+ 0	0.0824	0.00	Q				V
20+ 5	0.0824	0.00	Q				V
20+10	0.0825	0.00	Q				V
20+15	0.0825	0.00	Q				V
20+20	0.0825	0.00	Q				V
20+25	0.0826	0.00	Q				V
20+30	0.0826	0.00	Q				V
20+35	0.0826	0.00	Q				V
20+40	0.0827	0.00	Q				V
20+45	0.0827	0.00	Q				V
20+50	0.0827	0.00	Q				V
20+55	0.0828	0.00	Q				V
21+ 0	0.0828	0.00	Q				V
21+ 5	0.0828	0.00	Q				V
21+10	0.0828	0.00	Q				V
21+15	0.0829	0.00	Q				V
21+20	0.0829	0.00	Q				V
21+25	0.0829	0.00	Q				V
21+30	0.0830	0.00	Q				V
21+35	0.0830	0.00	Q				V
21+40	0.0830	0.00	Q				V
21+45	0.0830	0.00	Q				V
21+50	0.0831	0.00	Q				V
21+55	0.0831	0.00	Q				V
22+ 0	0.0831	0.00	Q				V
22+ 5	0.0832	0.00	Q				V
22+10	0.0832	0.00	Q				V
22+15	0.0832	0.00	Q				V
22+20	0.0832	0.00	Q				V
22+25	0.0833	0.00	Q				V
22+30	0.0833	0.00	Q				V
22+35	0.0833	0.00	Q				V
22+40	0.0834	0.00	Q				V
22+45	0.0834	0.00	Q				V
22+50	0.0834	0.00	Q				V
22+55	0.0834	0.00	Q				V
23+ 0	0.0834	0.00	Q				V
23+ 5	0.0835	0.00	Q				V
23+10	0.0835	0.00	Q				V
23+15	0.0835	0.00	Q				V
23+20	0.0835	0.00	Q				V
23+25	0.0836	0.00	Q				V
23+30	0.0836	0.00	Q				V
23+35	0.0836	0.00	Q				V
23+40	0.0836	0.00	Q				V
23+45	0.0837	0.00	Q				V
23+50	0.0837	0.00	Q				V
23+55	0.0837	0.00	Q				V
24+ 0	0.0837	0.00	Q				V
24+ 5	0.0837	0.00	Q				V
24+10	0.0838	0.00	Q				V

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24+15	0.0838	0.00	Q				V	
24+20	0.0838	0.00	Q				V	
24+25	0.0838	0.00	Q				V	
24+30	0.0838	0.00	Q				V	
24+35	0.0838	0.00	Q				V	
24+40	0.0838	0.00	Q				V	
24+45	0.0838	0.00	Q				V	
24+50	0.0838	0.00	Q				V	
24+55	0.0838	0.00	Q				V	
25+ 0	0.0838	0.00	Q				V	
25+ 5	0.0838	0.00	Q				V	
25+10	0.0838	0.00	Q				V	
25+15	0.0838	0.00	Q				V	
25+20	0.0838	0.00	Q				V	

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Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

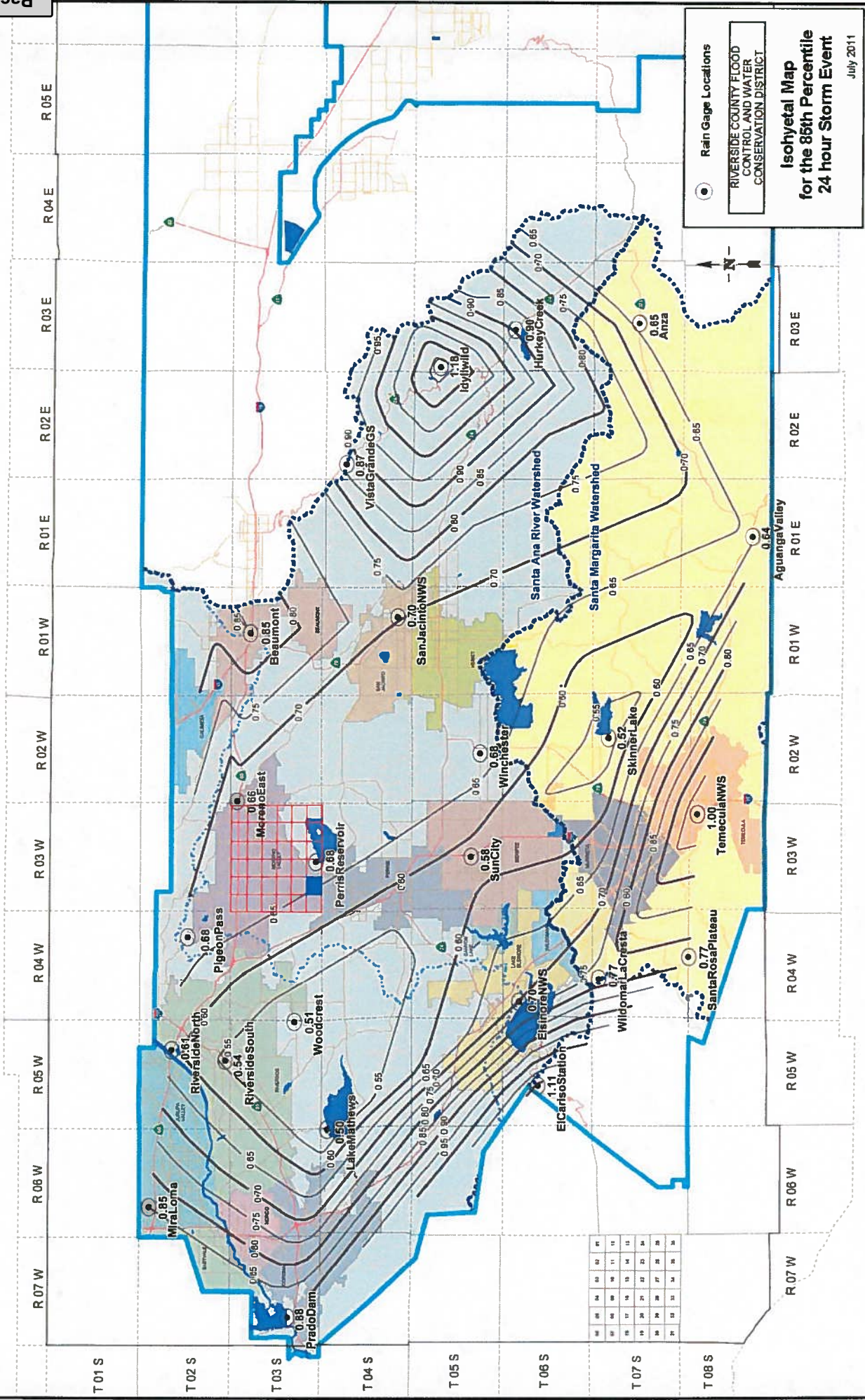
**APPENDIX C: WATER QUALITY**

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**APPENDIX C.1: 85<sup>TH</sup> PERCENTILE RAINFALL MAP**

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R 07 W R 06 W R 05 W R 04 W R 03 W R 02 W R 01 W R 01 E R 02 E R 03 E R 04 E R 05 E

T 01 S T 02 S T 03 S T 04 S T 05 S T 06 S T 07 S T 08 S

Miraloma 0.85  
 RiversideNorth 0.81  
 RiversideSouth 0.54  
 PigeonPass 0.66  
 Woodcrest 0.51  
 PradobDam 0.88  
 Lakerainews 0.60  
 PerrisReservoir 0.88  
 MerenoEast 0.66  
 SanJacintoNWS 0.70  
 SunCity 0.58  
 Winchester 0.68  
 EismoreNWS 0.70  
 EICarisoStation 1.11  
 WilomarLaCrista 0.77  
 SkimmerLake 0.52  
 SantaAnaRiverWatershed 0.70  
 SantaMargaritaWatershed 0.65  
 VistaGrandeGS 0.87  
 HurkeyCreek 0.90  
 Anza 0.65  
 TemeculaNWS 1.00  
 SantaRosaPlateau 0.77  
 AguangaValley 0.64

**APPENDIX C.2: SANTA ANA WATERSHED BMP DESIGN VOLUME SPREADSHEETS**

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**Santa Ana Watershed - BMP Design Volume,  $V_{BMP}$**   
 (Rev. 10-2011)

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: JLC Engineering and Consulting, Inc. Date: 12/21/2015  
 Designed by: Jilleen Ferris Case No: SCE  
 Company Project Number/Name: \_\_\_\_\_

**BMP Identification**

BMP NAME / ID: AREA B1 - NORTH BASIN  
*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)
DMA B1-A	46284.07	Class 2 Base	0.3	0.23	10421.6			
DMA B1-B	2812.32	Concrete or Asphalt	1	0.89	2508.6			
<b>Total</b>					<b>12930.2</b>	<b>0.68</b>	<b>732.7</b>	<b>15266</b>

Notes:

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

**Santa Ana Watershed - BMP Design Volume,  $V_{BMP}$**   
 (Rev. 10-2011)

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 **JLC Engineering and Consulting, Inc.** Date **12/21/2015**  
 Designed by **Jilleen Ferris** Case No **SCE**  
 Company Project Number/Name

**BMP Identification**

BMP NAME / ID **AREA B2 - SOUTH BASIN**  
*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)
DMA B2-A	17601.83	Class 2 Base	0.3	0.23	3963.3			
DMA B2-B	3060.8	Concrete or Asphalt	1	0.89	2730.2			
<b>20662.63</b>		<b>Total</b>			<b>6693.5</b>	<b>0.68</b>	<b>379.3</b>	<b>7975</b>

Notes:

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

**APPENDIX C.3: INFILTRATION TRENCH – DESIGN PROCEDURE SPREADSHEETS**

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Infiltration Trench - Design Procedure	BMP ID	Legend:	Required Entries
	B1		Calculated Cells

Company Name:	JLC Engineering and Consulting	Date:	1/28/2015
Designed By:	Jilleen Ferris	County/City Case No.:	Kitching Substation

**Design Volume**

Enter the area tributary to this feature, Max = 10 acres  $A_T = 1.13$  acres

Enter  $V_{BMP}$  determined from Section 2.1 of this Handbook  $V_{BMP} = 732.7$  ft<sup>3</sup>

**Calculate Maximum Depth of Reservoir Layer**

Enter the Infiltration rate  $I = 1.41$  in/hr

Enter Factor of Safety, FS (unitless)  $FS = 3$   
*Obtain from Table 1, Appendix A: "Infiltration Testing" of this BMP Handbook*

Calculate  $D_1$   $D_1 = 7.05$  ft

$$D_1 = \frac{I \text{ (in/hr)} \times 72 \text{ hrs}}{12 \text{ (in/ft)} \times (n/100) \times FS}$$

$n = 40$  %

Enter depth to historic high groundwater mark (measured from finished grade)  $50$  ft

Enter depth to top of bedrock or impermeable layer (measured from finished grade)  $50$  ft

$D_2$  is the smaller of:  
 Depth to groundwater - 11ft; & Depth to impermeable layer - 6 ft  $D_2 = 39.0$  ft

$D_{MAX}$  is the smaller value of  $D_1$  and  $D_2$ , must be less than or equal to 8 ft  $D_{MAX} = 7.1$  ft

**Trench Sizing**

Enter proposed reservoir layer depth  $D_R$ , must be  $\leq D_{MAX}$   $D_R = 1$  ft

Calculate the design depth of water,  $d_w$   $0.4$  ft

$$\text{Design } d_w = (D_R) \times (n/100)$$

Minimum Surface Area,  $A_S$   $1831.75$  ft<sup>2</sup>

$$A_S = \frac{V_{BMP}}{d_w}$$

Proposed Design Surface Area  $A_D = 2231.5$  ft<sup>2</sup>

Minimum Width =  $D_R + 1$  foot pea gravel  $2.00$  ft

Sediment Control Provided? (Use Pulldown)

Geotechnical Report Attached? (Use Pulldown)  YES

Notes:

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

Infiltration Trench - Design Procedure	BMP ID	Legend:	Required Entries
	B2		Calculated Cells

Company Name:	JLC Engineering and Consulting	Date:	1/28/2015
Designed By:	Jilleen Ferris	County/City Case No.:	Kitching Substation

**Design Volume**

Enter the area tributary to this feature, Max = 10 acres  $A_T = 0.47$  acres

Enter  $V_{BMP}$  determined from Section 2.1 of this Handbook  $V_{BMP} = 379.3$  ft<sup>3</sup>

**Calculate Maximum Depth of Reservoir Layer**

Enter the Infiltration rate  $I = 1.41$  in/hr

Enter Factor of Safety, FS (unitless)  $FS = 3$   
*Obtain from Table 1, Appendix A: "Infiltration Testing" of this BMP Handbook*

Calculate  $D_1$   $D_1 = 7.05$  ft

$$D_1 = \frac{I \text{ (in/hr)} \times 72 \text{ hrs}}{12 \text{ (in/ft)} \times (n/100) \times FS}$$

$n = 40$  %

Enter depth to historic high groundwater mark (measured from finished grade) 50 ft

Enter depth to top of bedrock or impermeable layer (measured from finished grade) 50 ft

$D_2$  is the smaller of:  
 Depth to groundwater - 11ft; & Depth to impermeable layer - 6 ft  $D_2 = 39.0$  ft

$D_{MAX}$  is the smaller value of  $D_1$  and  $D_2$ , must be less than or equal to 8 ft  $D_{MAX} = 7.1$  ft

**Trench Sizing**

Enter proposed reservoir layer depth  $D_R$ , must be  $\leq D_{MAX}$   $D_R = 2$  ft

Calculate the design depth of water,  $d_w$

$$\text{Design } d_w = (D_R) \times (n/100)$$

Design  $d_w = 0.8$  ft

Minimum Surface Area,  $A_S$   $A_S = 474.125$  ft<sup>2</sup>

$$A_S = \frac{V_{BMP}}{d_w}$$

Proposed Design Surface Area  $A_D = 716$  ft<sup>2</sup>

Minimum Width =  $D_R + 1$  foot pea gravel 3.00 ft

Sediment Control Provided? (Use Pulldown)

Geotechnical Report Attached? (Use Pulldown)

Notes:

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

**APPENDIX D: INCREASED RUNOFF MITIGATION**

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**APPENDIX D.1: INFILTRATION TRENCH STORAGE VOLUME SPREADSHEETS**

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**INFILTRATION TRENCH B1 - SURFACE STORAGE VOLUME**

Contour Elevation	Contour Area (sf)	Contour Area (ac)	Contour Interval Volume (ac-ft)	Total Basin Volume (ac-ft)	Total Basin Volume (cu.ft.)
1463.5	2231.5	0.051		0	0
			0.026		
1464	2242.2	0.051		0.026	1118.419
			0.061		
1465	3064.02	0.070		0.086	3760.868
			0.081		
1466	4013.82	0.092		0.167	7289.119
			0.104		
1467	5091.63	0.117		0.272	11831.174
			0.058		
1467.5	5075.25	0.117		0.330	14372.893

**INFILTRATION TRENCH B1 - GRAVEL TRENCH STORAGE VOLUME**

Bottom Surface Area = 2231.5 sq. ft.  
 Gravel Trench Depth = 1 ft.  
 Void Ratio = 0.4

Gravel Trench Storage Volume = 893 cu. ft.

Total Infiltration Trench Storage Volume = 15,266 cu. ft.

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

**INFILTRATION TRENCH B2 - SURFACE STORAGE VOLUME**

Contour Elevation	Contour Area (sf)	Contour Area (ac)	Contour Interval Volume (ac-ft)	Total Basin Volume (ac-ft)	Total Basin Volume (cu.ft.)
1464.5	716.0	0.016		0	0
			0.011		
1465	1295.4	0.030		0.011	495.756
			0.037		
1466	1968.75	0.045		0.049	2116.130
			0.054		
1467	2770.11	0.064		0.103	4474.186
			0.032		
1467.5	2770.11	0.064		0.135	5859.241

**INFILTRATION TRENCH B2 - GRAVEL TRENCH STORAGE VOLUME**

Bottom Surface Area = 716.0 sq. ft.  
 Gravel Trench Depth = 1 ft.  
 Void Ratio = 0.4

Gravel Trench Storage Volume = 286 cu. ft.

Total Infiltration Trench Storage Volume = 7,975 cu. ft.

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

**APPENDIX E:       HYDRAULIC CALCULATIONS**

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**APPENDIX E.1: PERVIOUS SWALE NORMAL DEPTH CALCULATIONS**

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 Worksheet for Pervious Swale
 

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 Project Description
 

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Friction Method	Manning Formula
Solve For	Discharge

 Input Data
 

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Roughness Coefficient	0.035	
Channel Slope	0.00100	ft/ft
Normal Depth	1.30	ft
Left Side Slope	3.00	ft/ft (H:V)
Right Side Slope	4.00	ft/ft (H:V)
Bottom Width	2.00	ft

 Results
 

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Discharge	9.37	ft <sup>3</sup> /s
Flow Area	8.52	ft <sup>2</sup>
Wetted Perimeter	11.47	ft
Hydraulic Radius	0.74	ft
Top Width	11.10	ft
Critical Depth	0.62	ft
Critical Slope	0.02497	ft/ft
Velocity	1.10	ft/s
Velocity Head	0.02	ft
Specific Energy	1.32	ft
Froude Number	0.22	
Flow Type	Subcritical	

 GVF Input Data
 

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Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

 GVF Output Data
 

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Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	1.30	ft
Critical Depth	0.62	ft
Channel Slope	0.00100	ft/ft

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Worksheet for Pervious Swale

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GVF Output Data

Critical Slope 0.02497 ft/ft

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

**APPENDIX E.2: 18" STORM DRAIN MAXIMUM FLOW RATE CALCULATIONS**

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 Worksheet for 18in Storm Drain
 

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 Project Description
 

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Friction Method	Manning Formula
Solve For	Full Flow Capacity

 Input Data
 

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Roughness Coefficient	0.013	
Channel Slope	0.00400	ft/ft
Normal Depth	1.50	ft
Diameter	1.50	ft
Discharge	6.64	ft <sup>3</sup> /s

 Results
 

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Discharge	6.64	ft <sup>3</sup> /s
Normal Depth	1.50	ft
Flow Area	1.77	ft <sup>2</sup>
Wetted Perimeter	4.71	ft
Hydraulic Radius	0.38	ft
Top Width	0.00	ft
Critical Depth	1.00	ft
Percent Full	100.0	%
Critical Slope	0.00656	ft/ft
Velocity	3.76	ft/s
Velocity Head	0.22	ft
Specific Energy	1.72	ft
Froude Number	0.00	
Maximum Discharge	7.15	ft <sup>3</sup> /s
Discharge Full	6.64	ft <sup>3</sup> /s
Slope Full	0.00400	ft/ft
Flow Type	SubCritical	

 GVF Input Data
 

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Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

 GVF Output Data
 

---

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

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Worksheet for 18in Storm Drain

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**GVF Output Data**

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	1.50	ft
Critical Depth	1.00	ft
Channel Slope	0.00400	ft/ft
Critical Slope	0.00656	ft/ft

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

**EXCERPTS**

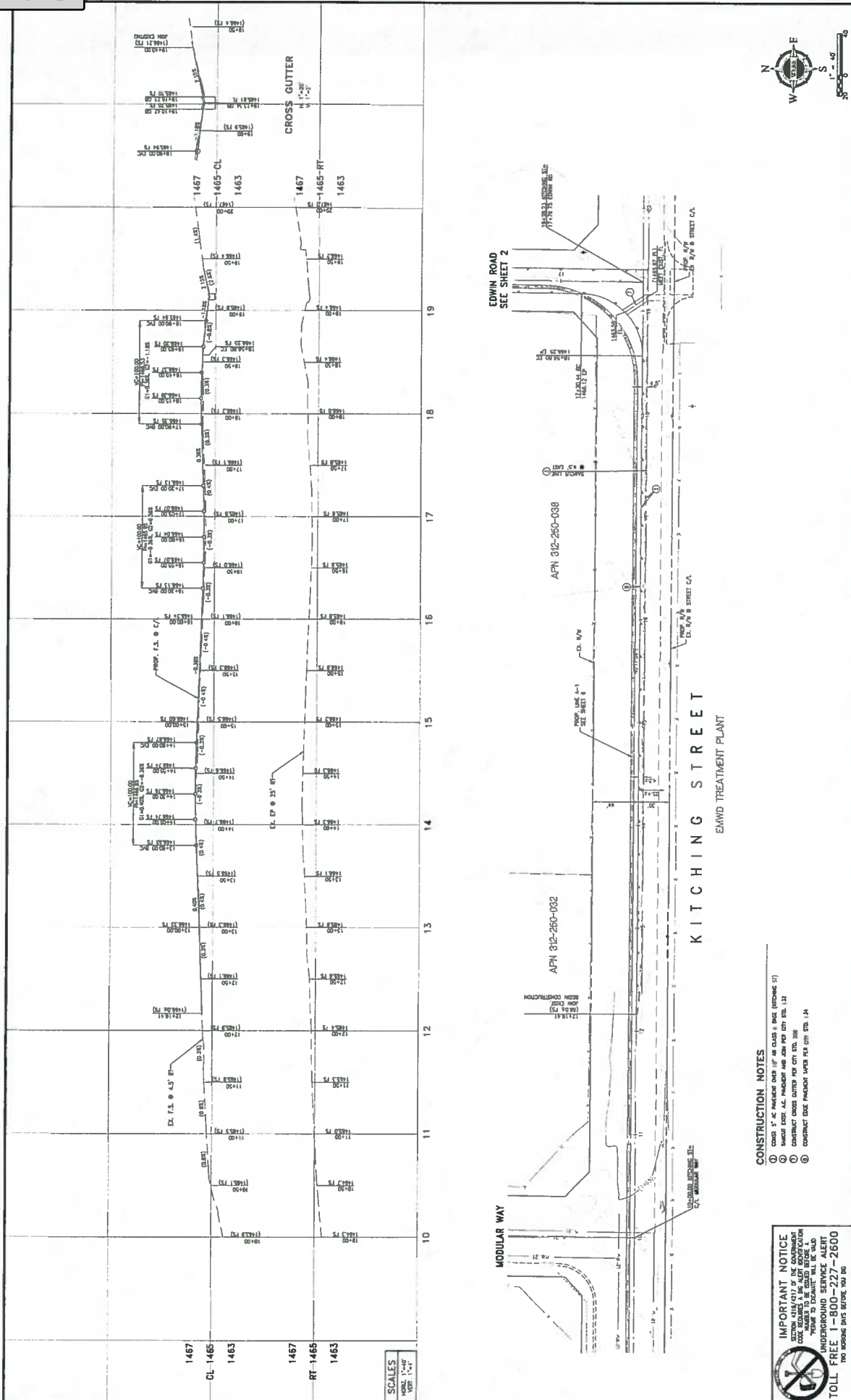
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**EXCERPT A: STREET IMPROVEMENT PLANS AND STORM DRAIN IMPROVEMENT  
PLANS FOR PLOT PLAN P12-146 (PA06-0017) – FIRST THIRTY SIX  
LOGISTICS CENTER**

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**IMPORTANT NOTICE**  
 SECTION 14.4.0(1) OF THE GOVERNMENT CODE STATES THAT THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO CONSTRUCTION.

**UNDERGROUND SERVICE ALERT**  
 TOLL FREE 1-800-227-2600  
 THE BOMBERS ARE HERE TO HELP

**CONSTRUCTION NOTES**

- CONSTRUCT 12" DIAMETER WATER MAIN WITH 12" WALL THICKNESS AND 12" COVER.
- CONSTRUCT 12" DIAMETER SEWER MAIN WITH 12" WALL THICKNESS AND 12" COVER.
- CONSTRUCT 12" DIAMETER GAS MAIN WITH 12" WALL THICKNESS AND 12" COVER.
- CONSTRUCT 12" DIAMETER WATER MAIN WITH 12" WALL THICKNESS AND 12" COVER.

**REVIEW BY CITY STAFF**

DATE	REVISION	DESCRIPTION
10/15/13	1	ISSUED FOR PERMITTING
10/15/13	2	ISSUED FOR PERMITTING
10/15/13	3	ISSUED FOR PERMITTING

**BASIS OF BEARING**

THE BASIS OF BEARING IS THE NORTH SPOKE OF THE CITY OF MORENO VALLEY. THE BASIS OF BEARING IS THE NORTH SPOKE OF THE CITY OF MORENO VALLEY. THE BASIS OF BEARING IS THE NORTH SPOKE OF THE CITY OF MORENO VALLEY.

**CITY OF MORENO VALLEY APPROVALS**

DATE	REVISION	DESCRIPTION
10/15/13	1	ISSUED FOR PERMITTING
10/15/13	2	ISSUED FOR PERMITTING
10/15/13	3	ISSUED FOR PERMITTING

**CIVIL ENGINEERS**

**WEBB**  
 3700 AVENUE STREET  
 MORENO VALLEY, CA 91731  
 TEL: (951) 796-1254

**CITY OF MORENO VALLEY**

**STREET IMPROVEMENT PLANS**  
 PLOT PLAN P12-148 (PA08-0017)  
 KITCHING ST.  
 FIRST THIRTY SIX LOGISTICS CENTER

**CITY OF MORENO VALLEY**

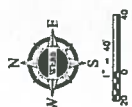
**SEAL**

**BENCHMARK**

BENCHMARK NO. N 20 1943  
 ELEVATION 144.23

**SHEET 3 OF 11**

CITY I.D. NO. 4987



**SCALES**  
 HORIZ. 1"=40'  
 VERT. 1"=4'

1467  
 CL-1465  
 1463  
 1467  
 RT-1465  
 1463

EDWIN ROAD  
 SEE SHEET 2

MODULAR WAY

APN 812-250-082

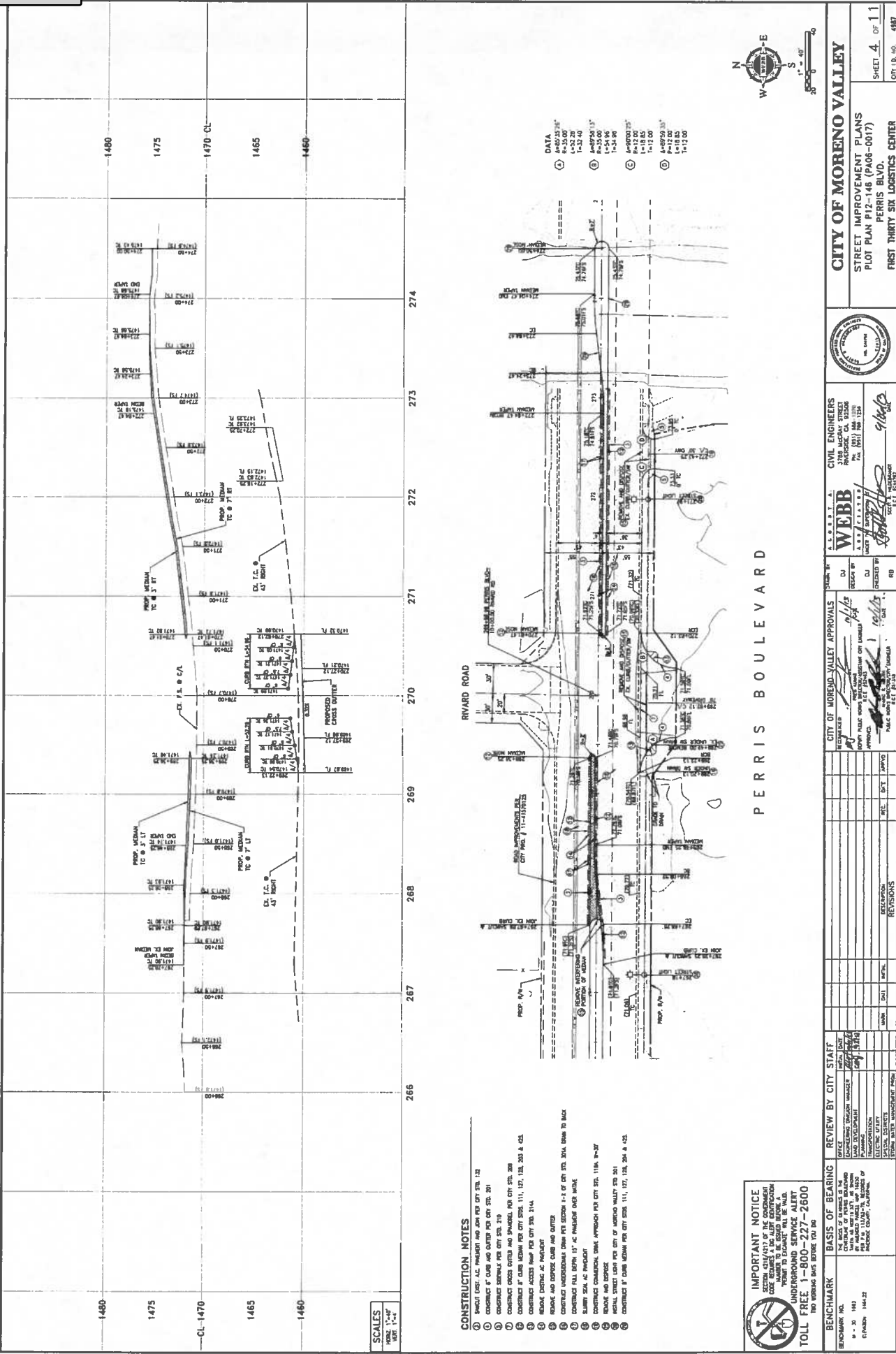
APN 812-250-088

KITCHING STREET

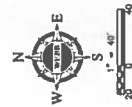
EMDW TREATMENT PLANT

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

E.1.c



DATA	
A	R=25.00'
	L=32.20'
B	R=25.00'
	L=31.96'
C	R=25.00'
	L=31.96'
D	R=25.00'
	L=31.96'
E	R=25.00'
	L=31.96'



**SCALES**  
 HORIZ. 1"=40'  
 VERT. 1"=4'

**CONSTRUCTION NOTES**

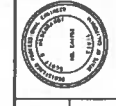
1. VERIFY EXIST. UTILITY LOCATIONS AND DEPT. PER CITY STS. 132
2. CONTRACTOR TO VERIFY AND OBTAIN PER CITY STS. 201
3. CONTRACTOR TO VERIFY AND OBTAIN PER CITY STS. 210
4. CONTRACTOR TO VERIFY AND OBTAIN PER CITY STS. 209
5. CONTRACTOR TO VERIFY AND OBTAIN PER CITY STS. 111, 117, 123, 203 & 205
6. CONTRACTOR TO VERIFY AND OBTAIN PER CITY STS. 214
7. REMOVE EXISTING AC PAVEMENT
8. REMOVE AND REPAIR CURB AND GUTTER
9. CONTRACTOR UNDERSTANDS CHANGING PER SECTION 1-4 OF CITY STS. 201A, 201B, 201C & 201D
10. CONTRACTOR TO VERIFY AND OBTAIN PER CITY STS. 116A, 116B, 116C & 116D
11. CONTRACTOR TO VERIFY AND OBTAIN PER CITY STS. 111, 117, 123, 203 & 205
12. CONTRACTOR TO VERIFY AND OBTAIN PER CITY STS. 111, 117, 123, 203 & 205

**IMPORTANT NOTICE**  
 SECTION 411(A)(7) OF THE CONSTITUTION OF THE STATE OF CALIFORNIA PROVIDES THAT ANY AND ALL CONTRACTS FOR THE CONSTRUCTION OF PUBLIC UTILITIES SHALL BE SUBJECT TO THE REGULATION AND CONTROL OF THE PUBLIC UTILITIES COMMISSION.  
 UNDERGROUND SERVICE ALERT  
 TOLL FREE 1-800-277-2800  
 THE FURNISHING OF SERVICE IS YOUR RESPONSIBILITY.

REVIEW BY CITY STAFF	
NAME	DATE
OFFICE ENGINEER	10/21/13
PLANNING	10/21/13
ELECTRIC SAFETY	10/21/13
STREETS	10/21/13
UTILITY	10/21/13

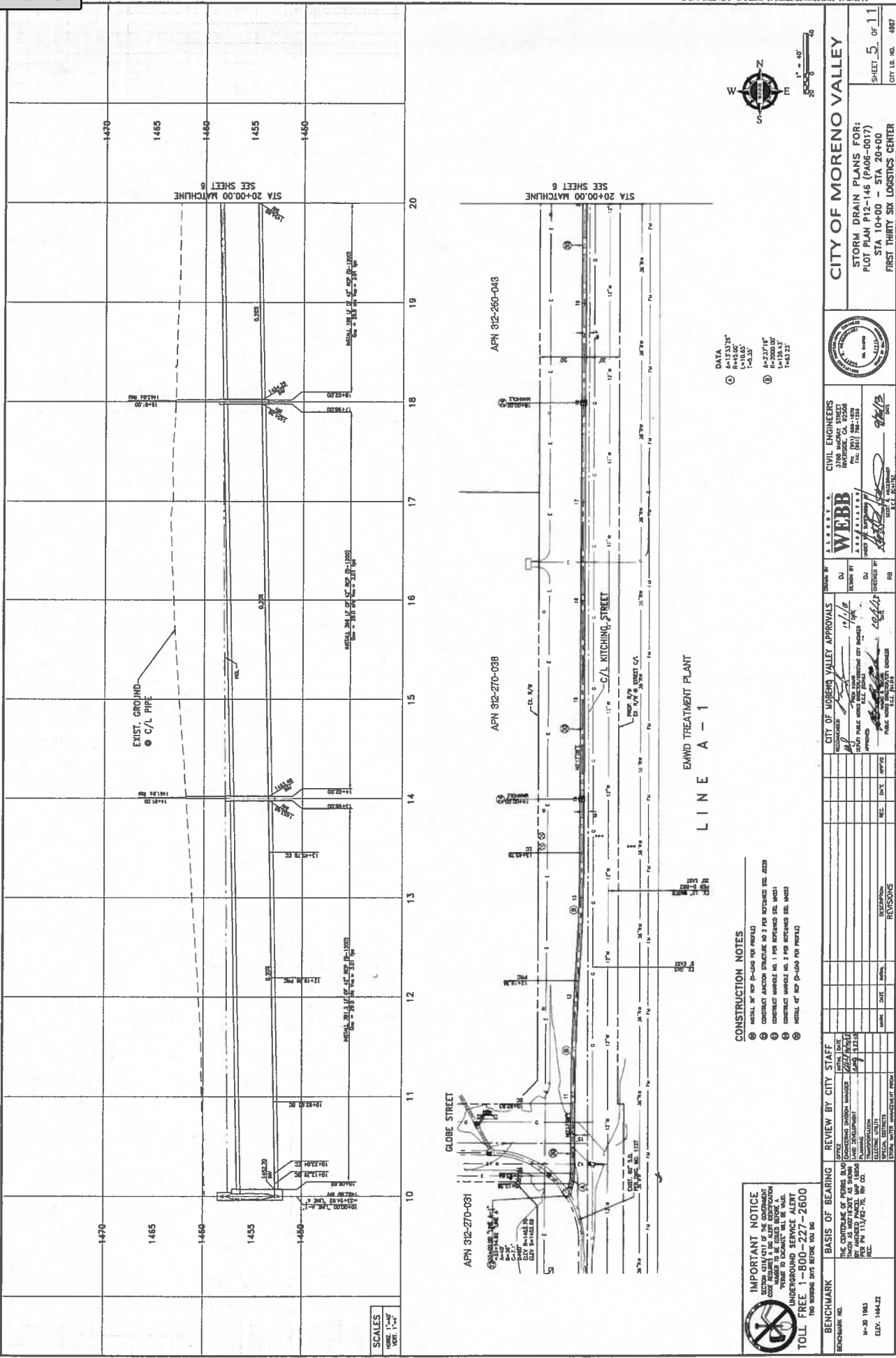
CITY OF MORENO VALLEY APPROVALS	
REVISOR	DATE
APPROVED	10/21/13
APPROVED	10/21/13

**WEBB CIVIL ENGINEERS**  
 2810 JACOB STREET  
 MORENO VALLEY, CA 91731  
 TEL: (951) 871-1111  
 FAX: (951) 871-1125



**CITY OF MORENO VALLEY**  
 STREET IMPROVEMENT PLANS  
 PLOT PLAN P12-146 (PA08-0017)  
 PERRIS BLVD.  
 FIRST THIRTY SIX LOGISTICS CENTER  
 SHEET 4 OF 11  
 CITY I.D. NO. 4887



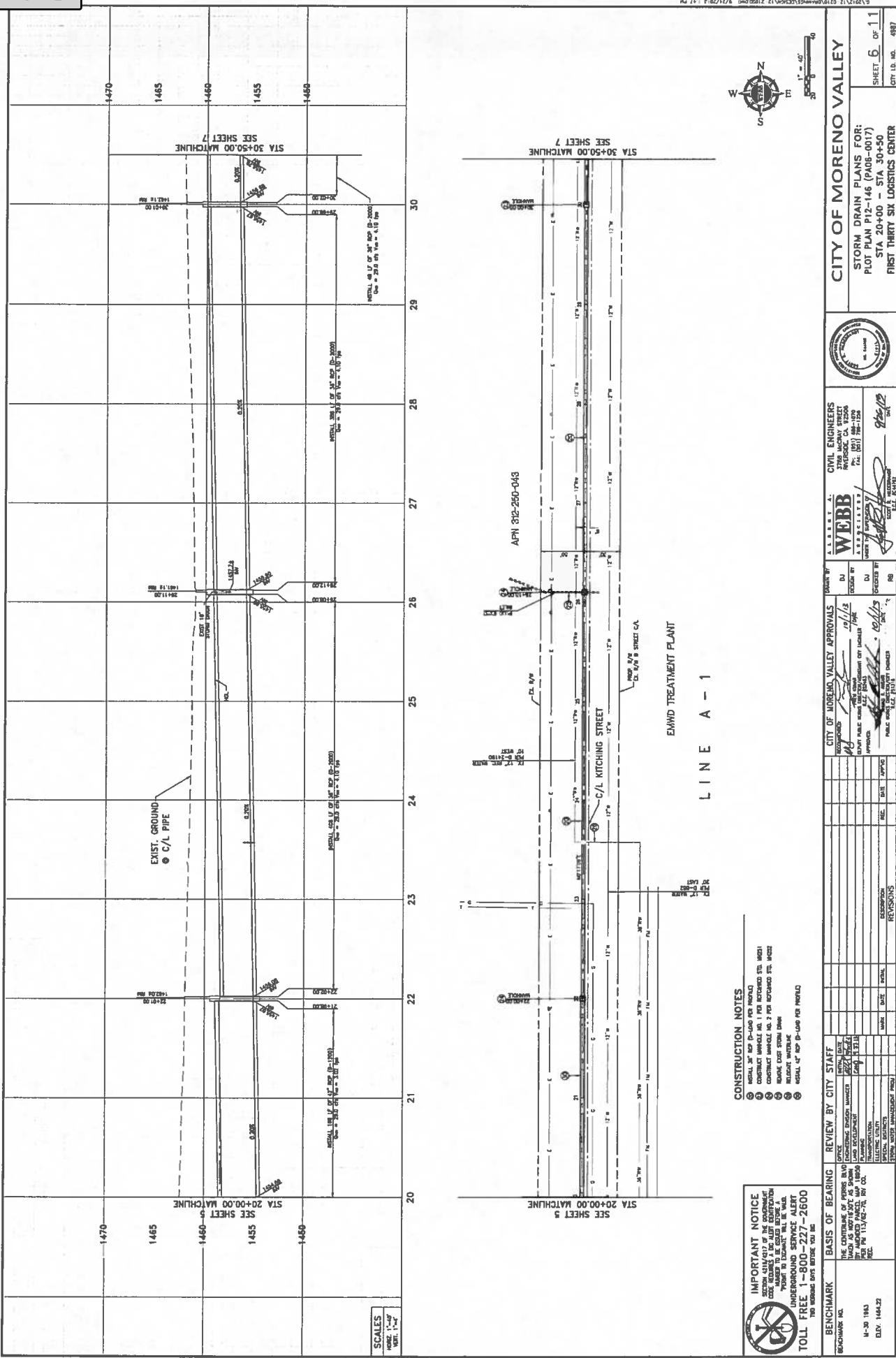


DATA  
 ① A=13.37' ② A=23.71'  
 L=16.65' L=20.00'  
 ③ L=5.33' ④ L=43.33'

- CONSTRUCTION NOTES**
- ① METAL 36" RCP (30' PER FOOT)
  - ② CONCRETE JUNCTION STRUCTURE NO. 2 PER DETACHED SET. 2229
  - ③ CONCRETE MANHOLE NO. 1 PER DETACHED SET. 1621
  - ④ CONCRETE MANHOLE NO. 3 PER DETACHED SET. 1621
  - ⑤ METAL 48" RCP (30' PER FOOT)

**IMPORTANT NOTICE**  
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE CITY OF MORENO VALLEY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE CITY OF MORENO VALLEY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE CITY OF MORENO VALLEY.  
 TOLL FREE 1-800-227-2600  
 NO WORKING DAYS BEFORE 7:00 AM

<b>BENCHMARK</b> BENCHMARK NO. 14-30 (1983) ELEV. 1444.22		<b>REVIEW BY CITY STAFF</b> PUBLIC WORKS ENGINEER: [Signature] PUBLIC WORKS SUPERVISOR: [Signature] PUBLIC WORKS ASST. SUPERVISOR: [Signature]	
<b>REVISIONS</b> NO. DATE DESCRIPTION		<b>REVISIONS</b> NO. DATE DESCRIPTION	
<b>APPROVALS</b> PREPARED BY: [Signature] CHECKED BY: [Signature] DATE: 10/11/18		<b>APPROVALS</b> PUBLIC WORKS ENGINEER: [Signature] PUBLIC WORKS SUPERVISOR: [Signature] PUBLIC WORKS ASST. SUPERVISOR: [Signature]	
<b>CITY OF MORENO VALLEY APPROVALS</b> CITY ENGINEER: [Signature] DATE: 10/11/18		<b>CIVIL ENGINEERS</b> WEBB ENGINEERS 1400 S. GARDEN ST. ANAHEIM, CA 92805 TEL: (714) 933-2222	
<b>CITY OF MORENO VALLEY</b> STORM DRAIN PLANS FOR: PLOT PLAN P12-146 (PA06-0017) STA 10+00 - STA 20+00 FIRST THIRTY SIX LOGISTICS CENTER		SHEET 5 OF 11 CITY I.D. NO. 4887	



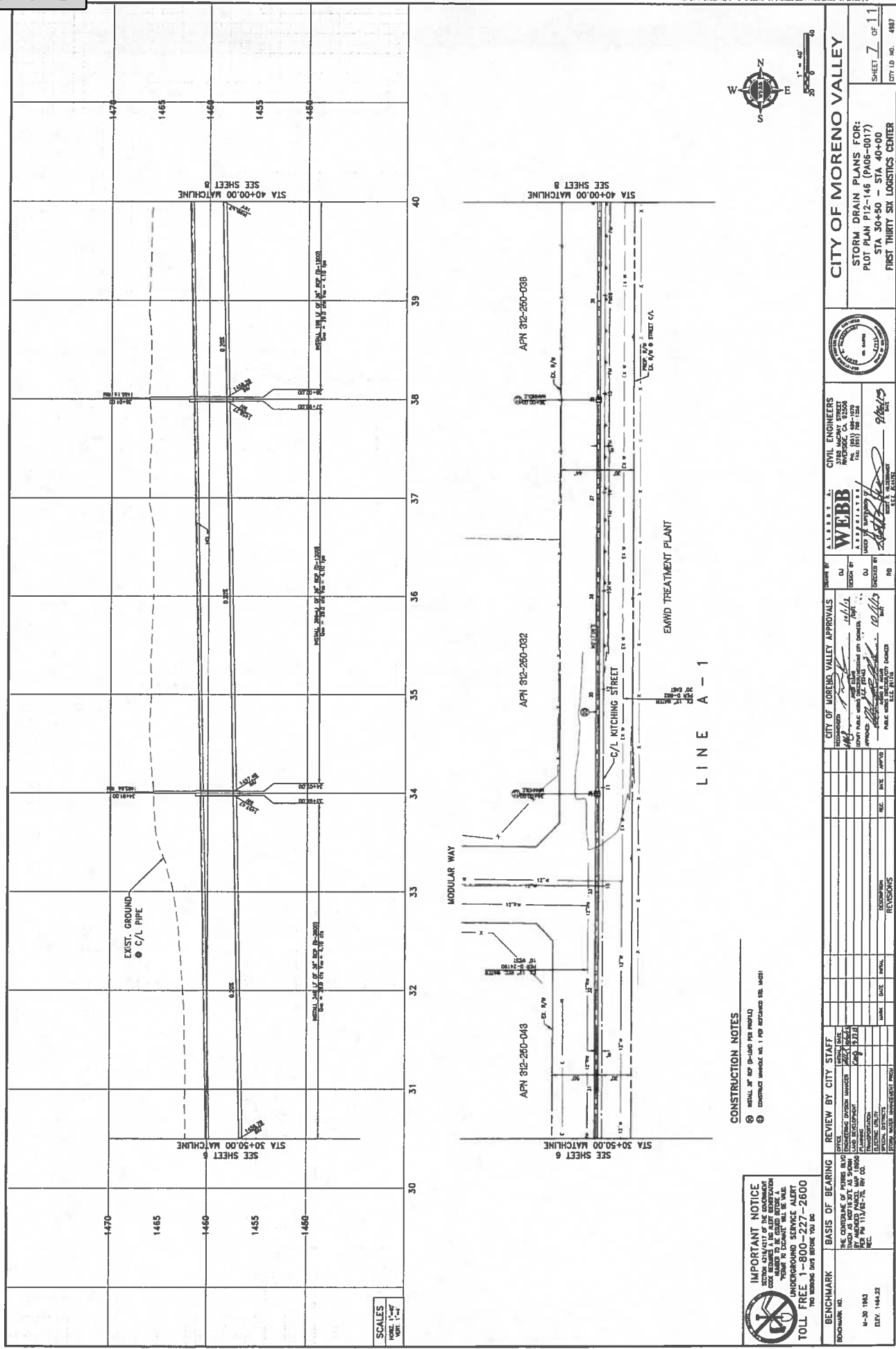
**CONSTRUCTION NOTES**

- 1. INSTALL 12" M.P. PIPE PER MANUAL
- 2. CONCRETE MANHOLE NO. 1 FOR RECORDS SEE MND
- 3. CONCRETE MANHOLE NO. 2 FOR RECORDS SEE MND
- 4. BRICK LINED STORM DRAIN
- 5. RELOCATE WATERLINE
- 6. INSTALL 12" M.P. PIPE PER MANUAL

**IMPORTANT NOTICE**  
 SECTION 15140.01 OF THE SUBDIVISION MAP ACT AND SECTION 15140.02 OF THE SUBDIVISION MAP ACT SHALL BE APPLIED TO THIS PROJECT IN ACCORDANCE WITH THE PROVISIONS OF THE ACT.  
 PER PER 115/42-76, BY O.C. DEL.  
**TOLL FREE 800-451-2800**  
 NO BEARING AND MONUMENTS



<b>BENCHMARK</b> BENCHMARK NO. 14-30 1843 D.D.V. 1444.22 NO BEARING AND MONUMENTS		<b>REVIEW BY CITY STAFF</b> OFFICE: ENGINEERING DIVISION DIVISION: ENGINEERING DIVISION PROJECT: LAND DEVELOPMENT DRAWING: 15140.01 DATE: 10/18/18 BY: [Signature] CHECKED BY: [Signature] APPROVED BY: [Signature]		<b>CITY OF MORENO VALLEY APPROVALS</b> APPROVED: [Signature] 10/18/18 PUBLIC WORKS DEPARTMENT APPROVED: [Signature] 10/18/18 PUBLIC ENGINEERING DEPARTMENT APPROVED: [Signature] 10/18/18 PUBLIC UTILITIES DEPARTMENT APPROVED: [Signature] 10/18/18		<b>CIVIL ENGINEERS</b> WEBB ENGINEERS 15140.01 15140.02 15140.03 15140.04 15140.05 15140.06 15140.07 15140.08 15140.09 15140.10 15140.11 15140.12 15140.13 15140.14 15140.15 15140.16 15140.17 15140.18 15140.19 15140.20 15140.21 15140.22 15140.23 15140.24 15140.25 15140.26 15140.27 15140.28 15140.29 15140.30 15140.31 15140.32 15140.33 15140.34 15140.35 15140.36 15140.37 15140.38 15140.39 15140.40 15140.41 15140.42 15140.43 15140.44 15140.45 15140.46 15140.47 15140.48 15140.49 15140.50		<b>CITY OF MORENO VALLEY</b> STORM DRAIN PLANS FOR: PLOT PLAN P12-146 (PA08-0017) STA 20+00 - STA 30+50 FIRST THIRTY SIX LOGISTICS CENTER SHEET 6 OF 11 CITY I.D. NO. 4887	
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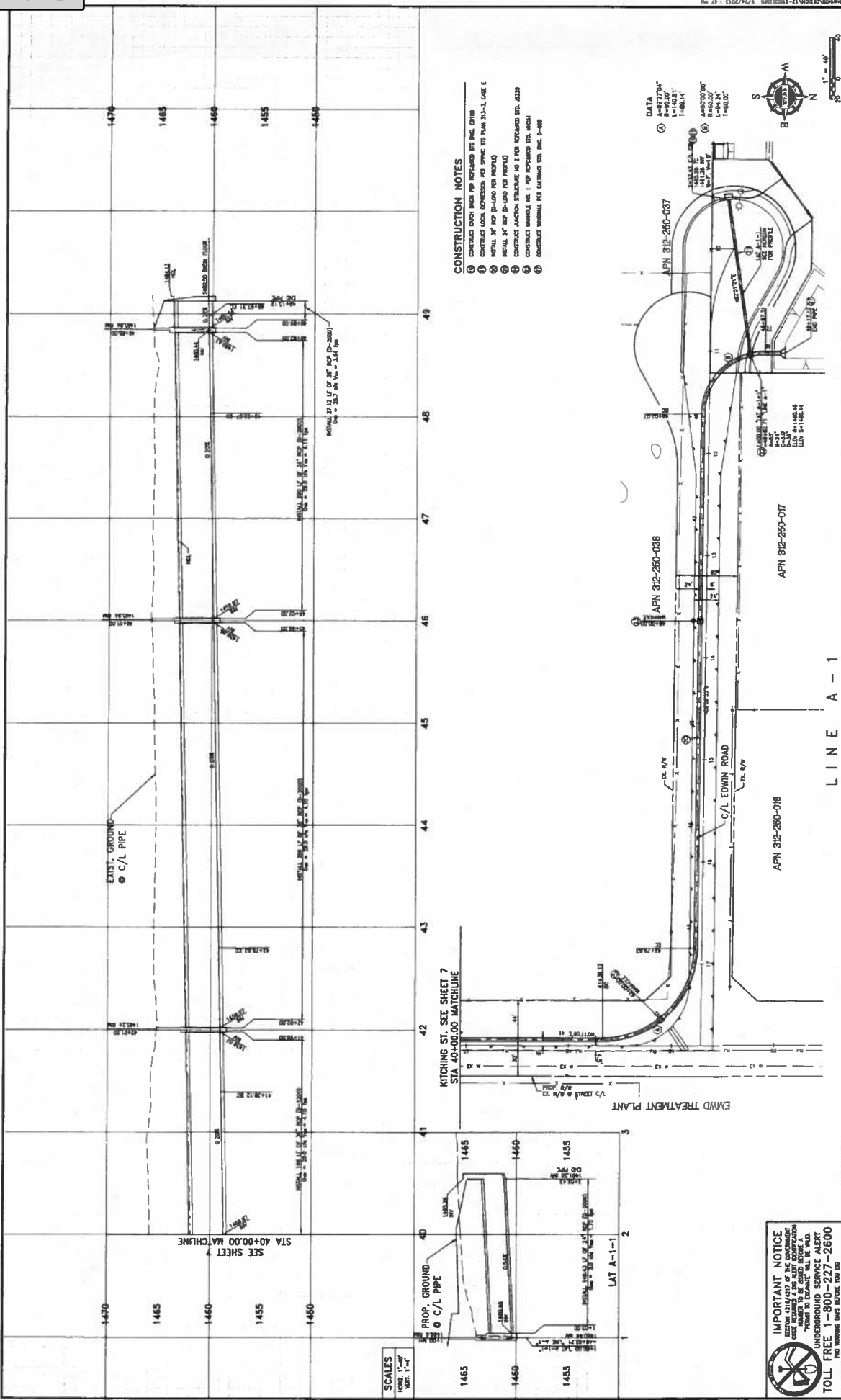
**CONSTRUCTION NOTES**  
 ① MIN. 18" DEEP FOR MANHOLE  
 ② CONTACT UTILITY AS 1 MPH APPROX. SEE WEST

**IMPORTANT NOTICE**  
 THE CREDENCE OF THESE PLANS AND THE ACCURACY OF THE INFORMATION CONTAINED HEREIN IS THE RESPONSIBILITY OF THE DESIGNER. THE USER OF THESE PLANS SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED BY ANY SOURCE. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED BY ANY SOURCE. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR VERIFYING THE ACCURACY OF ALL INFORMATION PROVIDED BY ANY SOURCE.

TOLL FREE 1-800-227-2600  
 NO WORKING DATE BEFORE YOU GO



<b>BENCHMARK</b> BENCHMARK NO. 4-30 1983 ELEV. 1444.22	<b>REVIEW BY CITY STAFF</b> ENGINEERING DIVISION MANAGER PLANNING DIVISION MANAGER PUBLIC WORKS DIVISION MANAGER ELECTRIC DIVISION ENGINEER (REGISTERED PROFESSIONAL)	<b>CITY OF MORENO VALLEY APPROVALS</b> APPROVED BY: [Signature] APPROVED BY: [Signature] APPROVED BY: [Signature] APPROVED BY: [Signature]	<b>CIVIL ENGINEERS</b> WEBB ENGINEERS 1400 S. GARDEN ST. ANAHEIM, CA 92805 TEL: (714) 944-1029 FAX: (714) 944-1028	SHEET 7 OF 11 CITY I.D. NO. 4887



- CONSTRUCTION NOTES**
1. CONTRACTOR SHALL VERIFY PROPOSED PIPE SIZE AND GRADE.
  2. CONTRACTOR SHALL VERIFY PROPOSED PIPE SIZE AND GRADE.
  3. CONTRACTOR SHALL VERIFY PROPOSED PIPE SIZE AND GRADE.
  4. CONTRACTOR SHALL VERIFY PROPOSED PIPE SIZE AND GRADE.
  5. CONTRACTOR SHALL VERIFY PROPOSED PIPE SIZE AND GRADE.
  6. CONTRACTOR SHALL VERIFY PROPOSED PIPE SIZE AND GRADE.

**DATA**

- 1. 1445.00'
- 2. 1445.00'
- 3. 1445.00'
- 4. 1445.00'
- 5. 1445.00'
- 6. 1445.00'



<p><b>IMPORTANT NOTICE</b></p> <p>THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES.</p> <p><b>TOLL FREE - 800-277-2600</b></p> <p>NO WORKING DATE BEFORE YOU GO</p>		<p><b>REVIEW BY CITY STAFF</b></p> <p>DATE: 11/15/17</p> <p>BY: [Signature]</p>	<p><b>CITY OF MORENO VALLEY APPROVALS</b></p> <p>DATE: 11/15/17</p> <p>BY: [Signature]</p>	<p><b>CIVIL ENGINEERS</b></p> <p><b>WEBB</b></p> <p>DATE: 11/15/17</p>	<p><b>CITY OF MORENO VALLEY</b></p> <p><b>STORM DRAIN PLANS FOR:</b></p> <p><b>PILOT PLAN P12-146 (PA08-0017)</b></p> <p><b>STA. 40+00.00--STA. 49+17.12</b></p> <p><b>FIRST THIRTY SIX LOGISTICS CENTER</b></p>
<p><b>BENCHMARK</b></p> <p>14-30 1983</p> <p>DLV, 1444.22</p>	<p><b>DATE</b></p> <p>11/15/17</p>	<p><b>DATE</b></p> <p>11/15/17</p>	<p><b>DATE</b></p> <p>11/15/17</p>	<p><b>DATE</b></p> <p>11/15/17</p>	<p><b>SHEET 8 OF 11</b></p> <p><b>CITY I.D. NO. 4487</b></p>

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

THE CITY OF MORENO VALLEY IS A CITY UNDER THE GOVERNANCE OF THE STATE OF CALIFORNIA...

THE CITY ENGINEERS AND CIVIL ENGINEERS REVIEW AND APPROVE THE PROJECT AND THE CITY ENGINEERS...

THE CITY ENGINEERS REVIEW AND APPROVE THE PROJECT AND THE CITY ENGINEERS REVIEW AND APPROVE...

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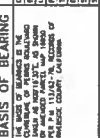
THE CITY ENGINEERS REVIEW AND APPROVE THE PROJECT AND THE CITY ENGINEERS REVIEW AND APPROVE...

THE CITY ENGINEERS REVIEW AND APPROVE THE PROJECT AND THE CITY ENGINEERS REVIEW AND APPROVE...

IMPORTANT NOTICE THE CITY ENGINEERS REVIEW AND APPROVE THE PROJECT AND THE CITY ENGINEERS REVIEW AND APPROVE...

Table with columns: BENCHMARK NO., REVIEW BY CITY STAFF, BASIS OF BEARING, TOLL FREE 1-800-227-2600

CITY OF MORENO VALLEY STREET IMPROVEMENT PLANS PLAT PLAN P12-146 (PL06-0017) CONDITIONS OF APPROVAL FIRST THIRTY SIX LOTS CENTER



CIVIL ENGINEERS WEBB CIVIL ENGINEERS 3789 MONROE STREET MORENO VALLEY, CA 91731

1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

SHEET 9 of 11



WEBB CIVIL ENGINEERS, STREET  
1700 N. CALIFORNIA STREET  
SUITE 100  
MORNING GLORY, CA 91769  
TEL: (951) 261-1258  
FAX: (951) 261-1259

APPROVED: [Signature]  
DATE: 1/11/11  
CITY OF MORENO VALLEY APPROVALS

Table with columns: REVIEW BY CITY STAFF, REVIEW BY CITY STAFF, REVIEW BY CITY STAFF, REVIEW BY CITY STAFF

REMARKS  
DATE  
INITIALS  
REVISIONS

IMPORTANT NOTICE  
SECTION 15020 OF THE GOVERNMENT  
CODE ACTS AS A NOTICE TO THE  
PUBLIC THAT THE PROJECT HAS BEEN  
APPROVED BY THE CITY OF MORENO  
VALLEY AND IS SUBJECT TO THE  
CITY OF MORENO VALLEY  
TOLL FREE: 800-927-2600  
TWO WEEKS DATE BOXES YOU AS

BASES OF BEARING  
CITY ENGINEER  
CITY PLANNER  
CITY MANAGER  
CITY CLERK  
CITY ATTORNEY  
CITY COMMISSIONER

1. THE CITY ENGINEER SHALL REVIEW THE PROJECT FOR COMPLIANCE WITH THE CITY ENGINEERING DEPARTMENT'S STANDARDS AND SPECIFICATIONS FOR STREET IMPROVEMENTS. THE CITY ENGINEER SHALL REVIEW THE PROJECT FOR COMPLIANCE WITH THE CITY ENGINEERING DEPARTMENT'S STANDARDS AND SPECIFICATIONS FOR STREET IMPROVEMENTS.

2. THE CITY ENGINEER SHALL REVIEW THE PROJECT FOR COMPLIANCE WITH THE CITY ENGINEERING DEPARTMENT'S STANDARDS AND SPECIFICATIONS FOR STREET IMPROVEMENTS. THE CITY ENGINEER SHALL REVIEW THE PROJECT FOR COMPLIANCE WITH THE CITY ENGINEERING DEPARTMENT'S STANDARDS AND SPECIFICATIONS FOR STREET IMPROVEMENTS.

3. THE CITY ENGINEER SHALL REVIEW THE PROJECT FOR COMPLIANCE WITH THE CITY ENGINEERING DEPARTMENT'S STANDARDS AND SPECIFICATIONS FOR STREET IMPROVEMENTS. THE CITY ENGINEER SHALL REVIEW THE PROJECT FOR COMPLIANCE WITH THE CITY ENGINEERING DEPARTMENT'S STANDARDS AND SPECIFICATIONS FOR STREET IMPROVEMENTS.

4. THE CITY ENGINEER SHALL REVIEW THE PROJECT FOR COMPLIANCE WITH THE CITY ENGINEERING DEPARTMENT'S STANDARDS AND SPECIFICATIONS FOR STREET IMPROVEMENTS. THE CITY ENGINEER SHALL REVIEW THE PROJECT FOR COMPLIANCE WITH THE CITY ENGINEERING DEPARTMENT'S STANDARDS AND SPECIFICATIONS FOR STREET IMPROVEMENTS.

5. THE CITY ENGINEER SHALL REVIEW THE PROJECT FOR COMPLIANCE WITH THE CITY ENGINEERING DEPARTMENT'S STANDARDS AND SPECIFICATIONS FOR STREET IMPROVEMENTS. THE CITY ENGINEER SHALL REVIEW THE PROJECT FOR COMPLIANCE WITH THE CITY ENGINEERING DEPARTMENT'S STANDARDS AND SPECIFICATIONS FOR STREET IMPROVEMENTS.

6. THE CITY ENGINEER SHALL REVIEW THE PROJECT FOR COMPLIANCE WITH THE CITY ENGINEERING DEPARTMENT'S STANDARDS AND SPECIFICATIONS FOR STREET IMPROVEMENTS. THE CITY ENGINEER SHALL REVIEW THE PROJECT FOR COMPLIANCE WITH THE CITY ENGINEERING DEPARTMENT'S STANDARDS AND SPECIFICATIONS FOR STREET IMPROVEMENTS.

7. THE CITY ENGINEER SHALL REVIEW THE PROJECT FOR COMPLIANCE WITH THE CITY ENGINEERING DEPARTMENT'S STANDARDS AND SPECIFICATIONS FOR STREET IMPROVEMENTS. THE CITY ENGINEER SHALL REVIEW THE PROJECT FOR COMPLIANCE WITH THE CITY ENGINEERING DEPARTMENT'S STANDARDS AND SPECIFICATIONS FOR STREET IMPROVEMENTS.

8. THE CITY ENGINEER SHALL REVIEW THE PROJECT FOR COMPLIANCE WITH THE CITY ENGINEERING DEPARTMENT'S STANDARDS AND SPECIFICATIONS FOR STREET IMPROVEMENTS. THE CITY ENGINEER SHALL REVIEW THE PROJECT FOR COMPLIANCE WITH THE CITY ENGINEERING DEPARTMENT'S STANDARDS AND SPECIFICATIONS FOR STREET IMPROVEMENTS.

9. THE CITY ENGINEER SHALL REVIEW THE PROJECT FOR COMPLIANCE WITH THE CITY ENGINEERING DEPARTMENT'S STANDARDS AND SPECIFICATIONS FOR STREET IMPROVEMENTS. THE CITY ENGINEER SHALL REVIEW THE PROJECT FOR COMPLIANCE WITH THE CITY ENGINEERING DEPARTMENT'S STANDARDS AND SPECIFICATIONS FOR STREET IMPROVEMENTS.

10. THE CITY ENGINEER SHALL REVIEW THE PROJECT FOR COMPLIANCE WITH THE CITY ENGINEERING DEPARTMENT'S STANDARDS AND SPECIFICATIONS FOR STREET IMPROVEMENTS. THE CITY ENGINEER SHALL REVIEW THE PROJECT FOR COMPLIANCE WITH THE CITY ENGINEERING DEPARTMENT'S STANDARDS AND SPECIFICATIONS FOR STREET IMPROVEMENTS.

11. THE CITY ENGINEER SHALL REVIEW THE PROJECT FOR COMPLIANCE WITH THE CITY ENGINEERING DEPARTMENT'S STANDARDS AND SPECIFICATIONS FOR STREET IMPROVEMENTS. THE CITY ENGINEER SHALL REVIEW THE PROJECT FOR COMPLIANCE WITH THE CITY ENGINEERING DEPARTMENT'S STANDARDS AND SPECIFICATIONS FOR STREET IMPROVEMENTS.

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CIVIL ENGINEERS  
WEBB  
2780 MACDONALD STREET  
MIRAMonte, CA 91761  
TEL: (951) 946-1070  
FAX: (951) 946-1258

APPROVED FOR THE CITY ENGINEER  
APPROVED FOR THE CITY ENGINEER  
APPROVED FOR THE CITY ENGINEER

NO.	DATE	BY	FOR
1	10/13/14	10/13/14	10/13/14

RECEIVED BY CITY STAFF  
DATE RECEIVED  
BY  
FOR

BENCHMARK  
BENCH MARK NO.  
11 2 1843  
DATE  
10/14/23

IMPORTANT NOTICE  
SEWER ALIQUOTS BY THE CONTRACTOR  
MUST BE SUBMITTED TO THE CITY ENGINEER  
FOR REVIEW AND APPROVAL  
BEFORE ANY CONSTRUCTION BEGINS  
TOLL FREE 800-397-2600  
NO BIDDING DATE BEFORE 10/16



THE CITY ENGINEER HAS REVIEWED THE INFORMATION SUBMITTED AND HAS CONCLUDED THAT THE PROPOSED PROJECT IS IN ACCORDANCE WITH THE CITY ENGINEERING STANDARDS AND SPECIFICATIONS AND HAS GRANTED THE NECESSARY PERMITS FOR THE PROJECT TO PROCEED. THE CITY ENGINEER HAS REVIEWED THE INFORMATION SUBMITTED AND HAS CONCLUDED THAT THE PROPOSED PROJECT IS IN ACCORDANCE WITH THE CITY ENGINEERING STANDARDS AND SPECIFICATIONS AND HAS GRANTED THE NECESSARY PERMITS FOR THE PROJECT TO PROCEED. THE CITY ENGINEER HAS REVIEWED THE INFORMATION SUBMITTED AND HAS CONCLUDED THAT THE PROPOSED PROJECT IS IN ACCORDANCE WITH THE CITY ENGINEERING STANDARDS AND SPECIFICATIONS AND HAS GRANTED THE NECESSARY PERMITS FOR THE PROJECT TO PROCEED.

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**EXCERPT B:**        **EXCERPTS FROM UNITED STATES DEPARTMENT OF AGRICULTURE,  
NATURAL RESOURCES CONSERVATION SERVICE NATIONAL  
ENGINEERING HANDBOOK, PART 630 – HYDROLOGY, CHAPTER 9 –  
HYDROLOGIC SOIL-COVER COMPLEXES**

---

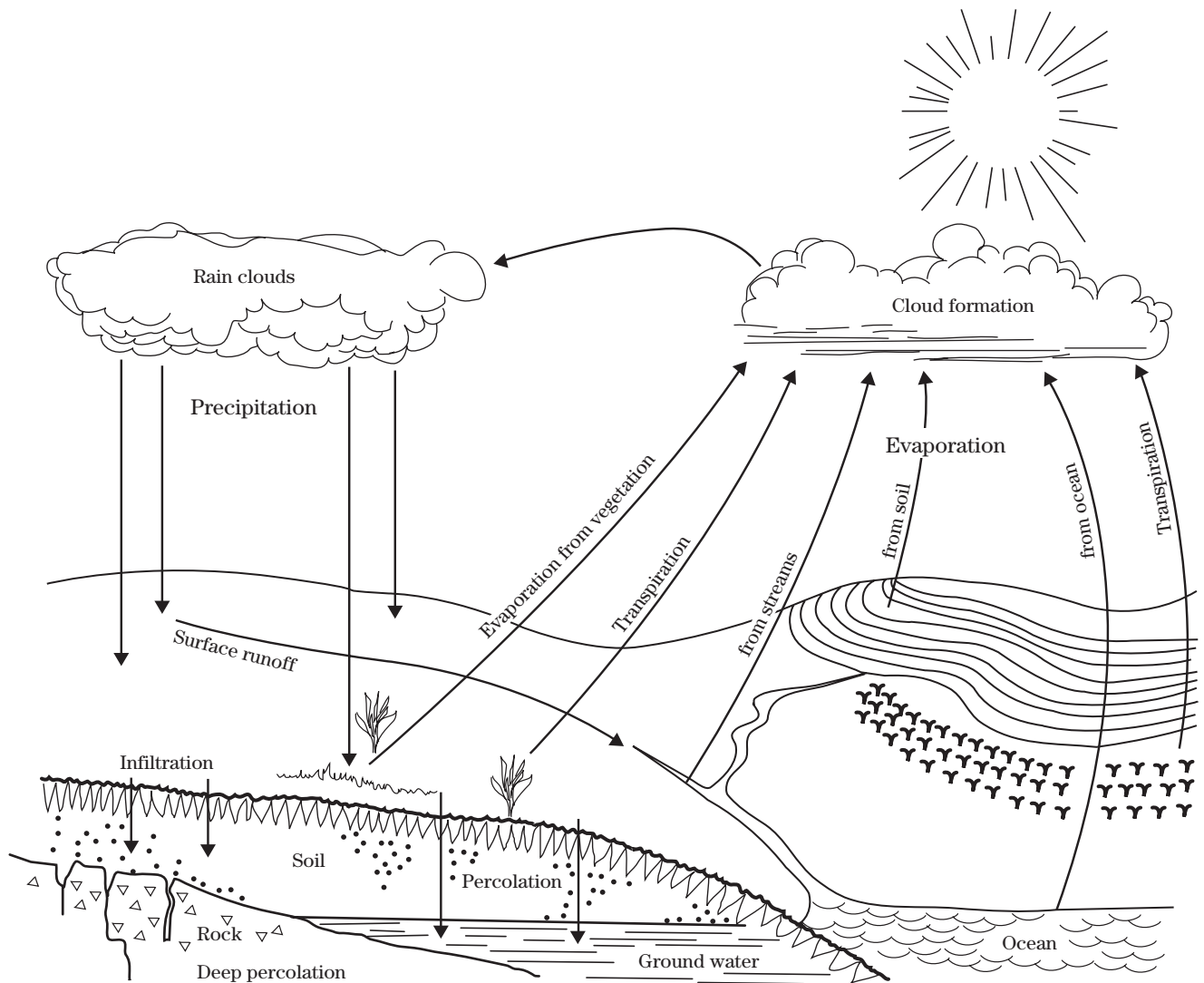


United States  
Department of  
Agriculture

Natural  
Resources  
Conservation  
Service

# Part 630 Hydrology National Engineering Handbook

## Chapter 9 Hydrologic Soil-Cover Complexes



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**Table 9-5** Runoff curve numbers for urban areas <sup>1/</sup>

Cover description cover type and hydrologic condition	Average percent impervious area <sup>2/</sup>	-- CN for hydrologic soil group --			
		A	B	C	D
Fully developed urban areas (vegetation established)					
Open space (lawns, parks, golf courses, cemeteries, etc.) <sup>3/</sup>					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) <sup>4/</sup>		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82
Developing urban areas					
Newly graded areas (pervious areas only, no vegetation)		77	86	91	94

1/ Average runoff condition, and  $I_a = 0.2S$ .

2/ The average percent impervious area shown was used to develop the composite CNs. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition.

3/ CNs shown are equivalent to those of pasture. Composite CNs may be computed for other combinations of open space type.

4/ Composite CNs for natural desert landscaping should be computed using figures 9-3 or 9-4 based on the impervious area percentage (CN=98) and the pervious area CN. The pervious area CNs are assumed equivalent to desert shrub in poor hydrologic condition.

**EXHIBITS**

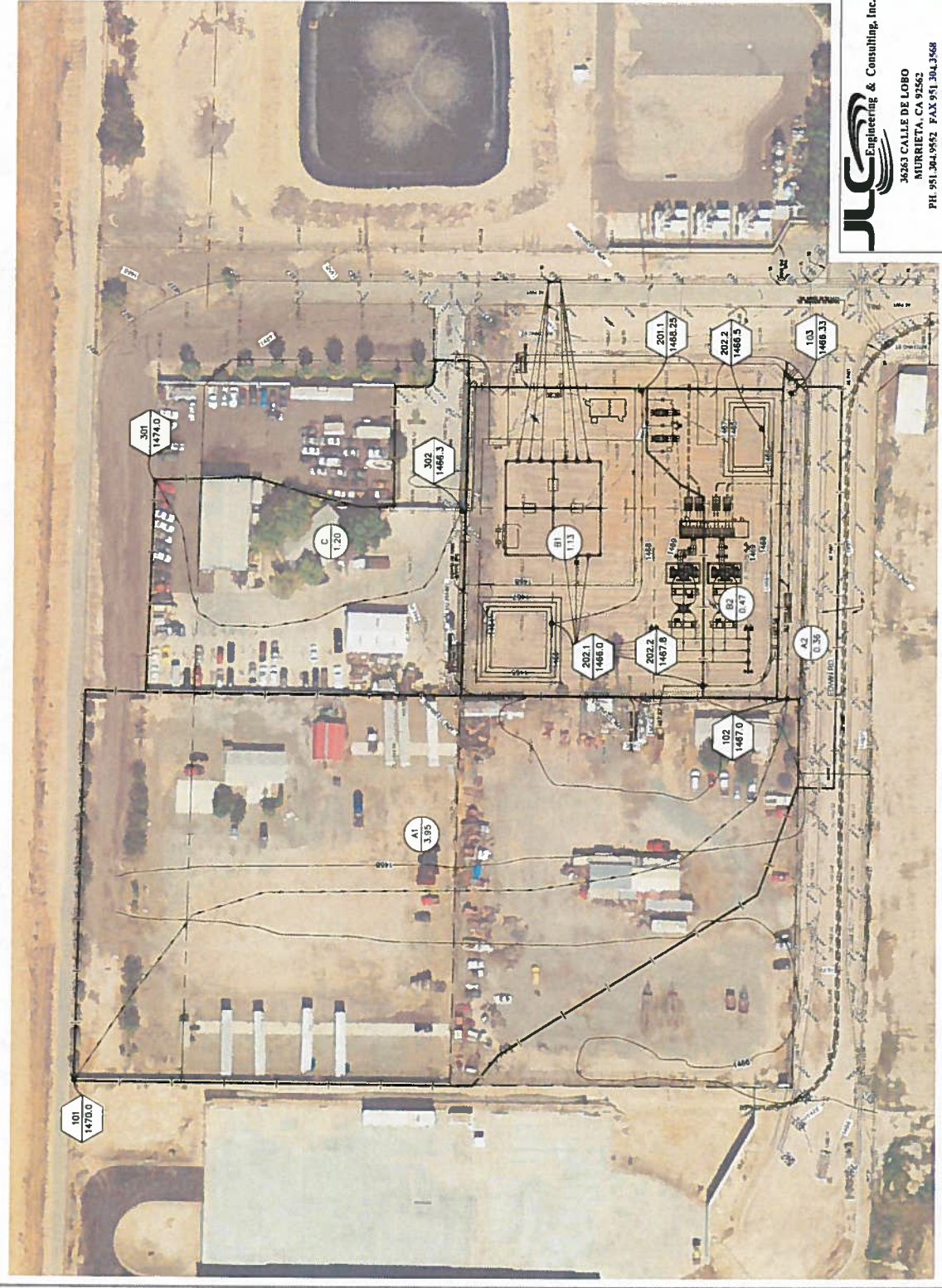
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**EXHIBIT A: RATIONAL METHOD HYDROLOGY MAP**

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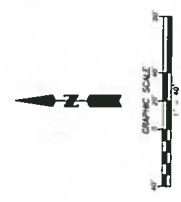
# KITCHING SUBSTATION IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA POST-PROJECT CONDITION SITE HYDROLOGY MAP

SHEET 1 OF 1



**LEGEND:**

- Node/Concentration Point Flowing Elevation
- Approximate Invert Elevation
- Sub Area Invert
- Flow Path
- Watershed Sub-Boundary



**EXHIBIT "A"**  
**KITCHING SUBSTATION**  
**POST-PROJECT CONDITION**  
**SITE HYDROLOGY MAP**

**JUCS** Engineering & Consulting, Inc.  
 36263 CALLE DE LOBO  
 MURRIETA, CA 92562  
 PH. 951.384.9552 FAX 951.384.3668

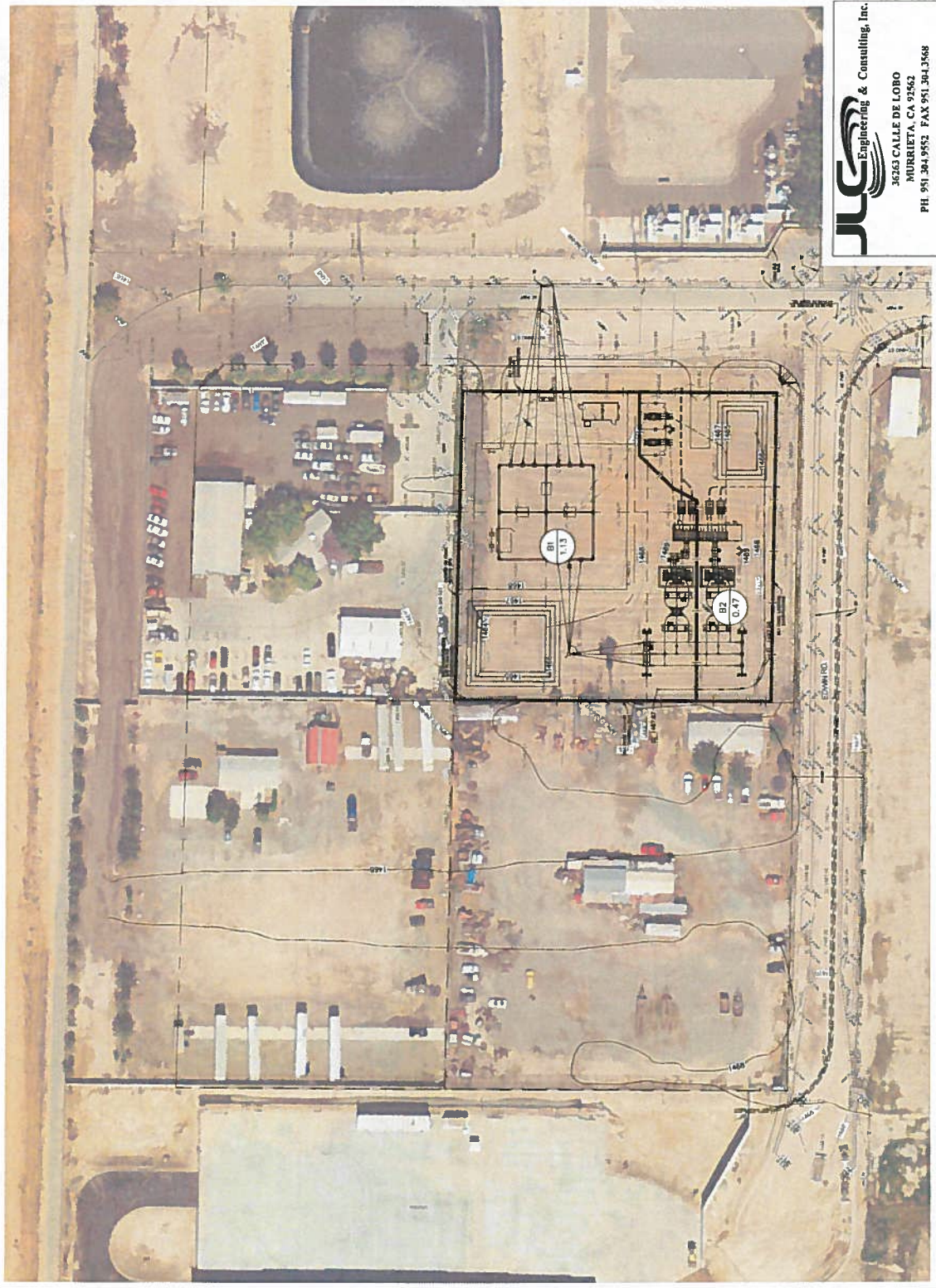
Source: Map 0-232 02 19/Agri/Env/Prj/Env/Map/Map - Revised Sheet Hydrology Map.dwg  
 Last Update: 04/01/2018 - 11:43am by jrc/asm

**EXHIBIT B: UNIT HYDROGRAPH HYDROLOGY MAP**

---

SHEET 1 OF 1

# KITCHING SUBSTATION IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA POST-PROJECT CONDITION UNIT HYDROGRAPH MAP



**JUC**  
Engineering & Consulting, Inc.  
36263 CALLE DE LOBO  
MURRIETA, CA 95662  
PH: 951-384-9552 FAX: 951-384-3568

**EXHIBIT "B"**  
**KITCHING SUBSTATION**  
**POST-PROJECT CONDITION**  
**UNIT HYDROGRAPH MAP**

Drawing Name: D:\2013\17\Engineering\Hydrology\Hydro\Substation B - Unit Hydrograph Map.dwg  
 User: jquinn Date: Feb 05, 2016 10:45am by jquinn

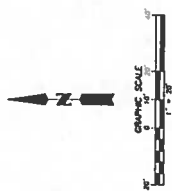
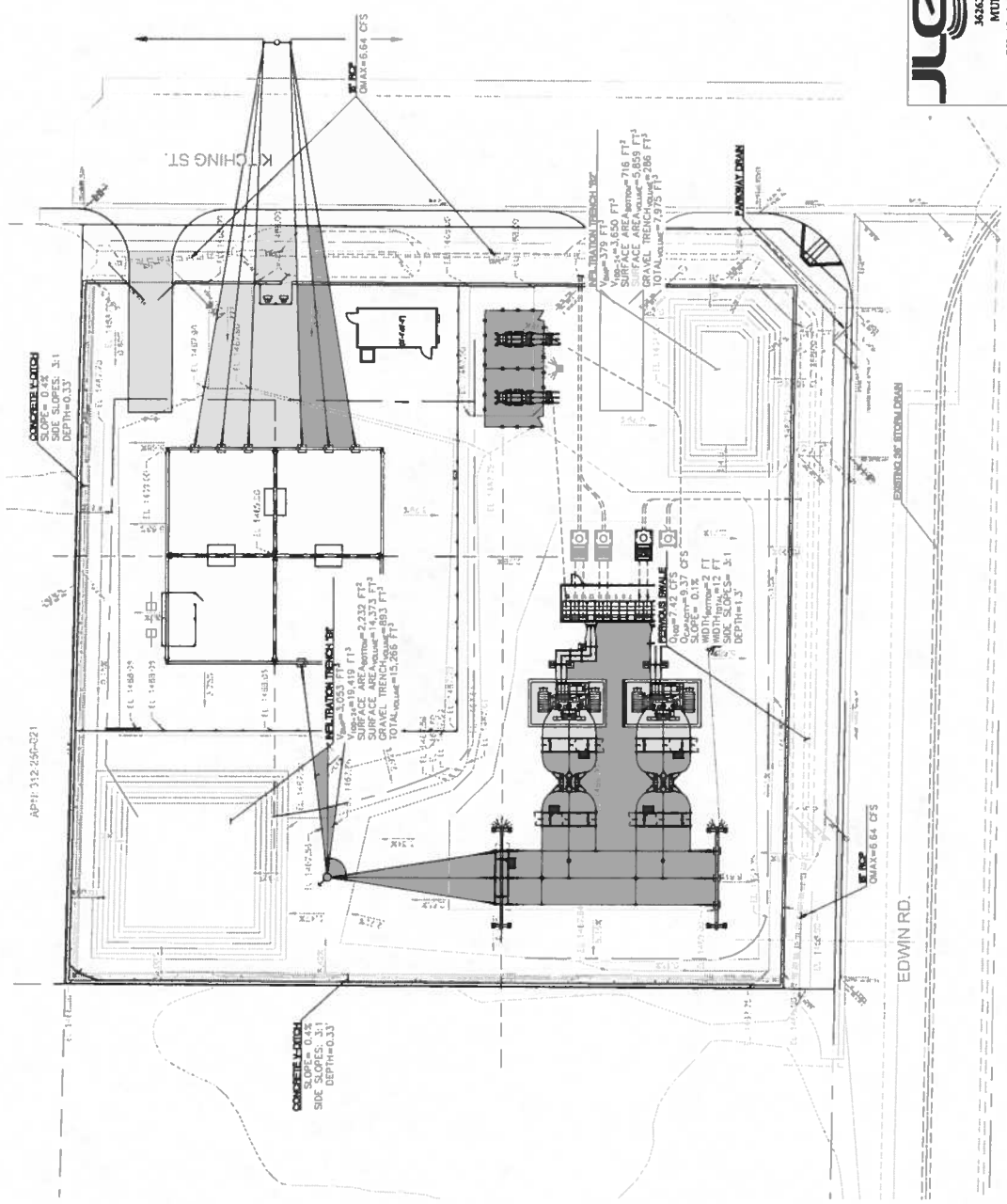
**EXHIBIT C: DRAINAGE FACILITIES MAP**

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# KITCHING SUBSTATION DRAINAGE FACILITIES MAP

IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

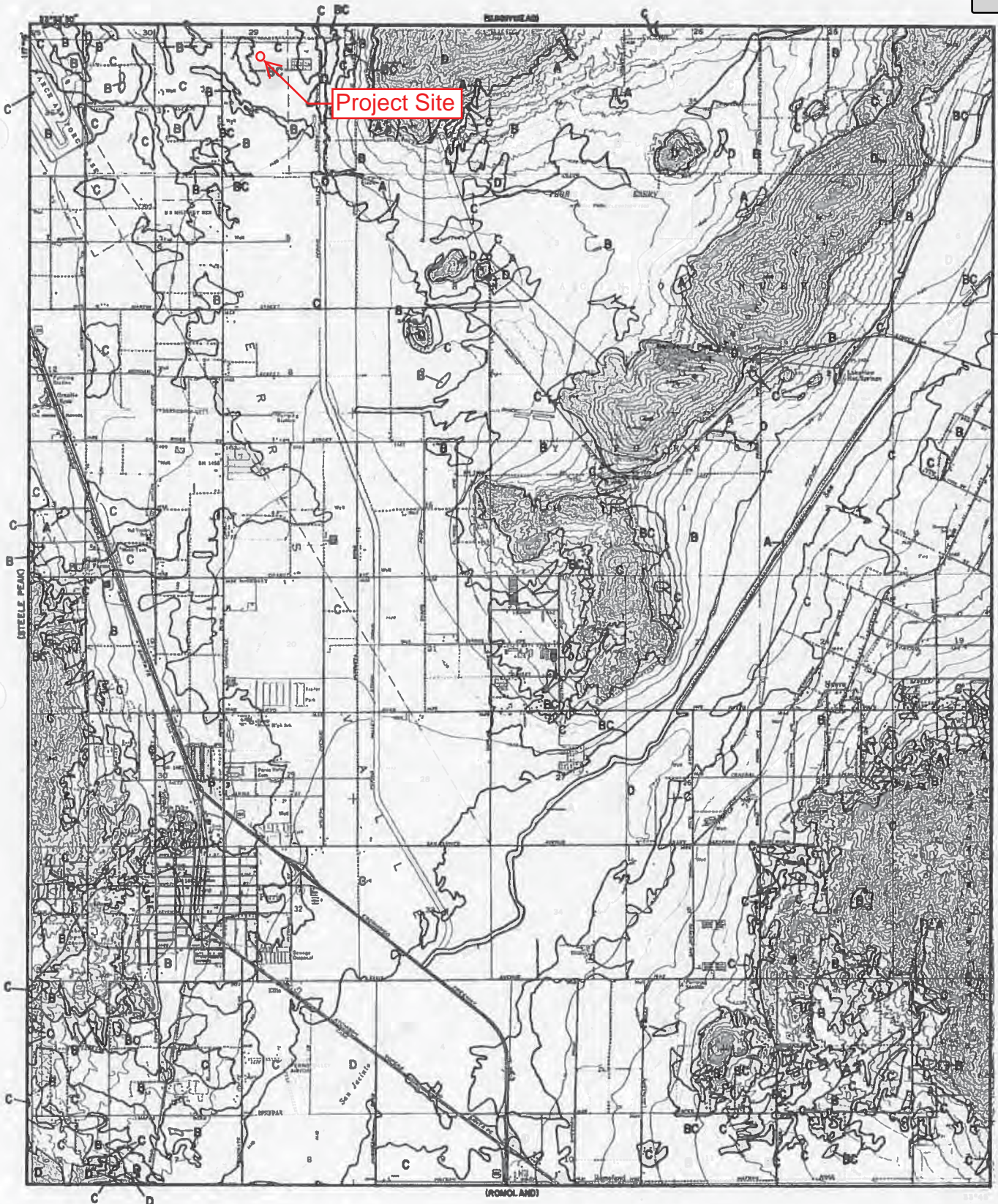


**EXHIBIT 'C'**  
**KITCHING SUBSTATION  
 DRAINAGE FACILITIES  
 MAP**

**JCS**  
 Engineering & Consulting, Inc.  
 34263 CALLE DE LOBO  
 MURRIETA, CA 92562  
 P/L 951.384.9552 \* FAX 951.384.1668

**EXHIBIT D:           HYDROLOGIC SOILS MAP**

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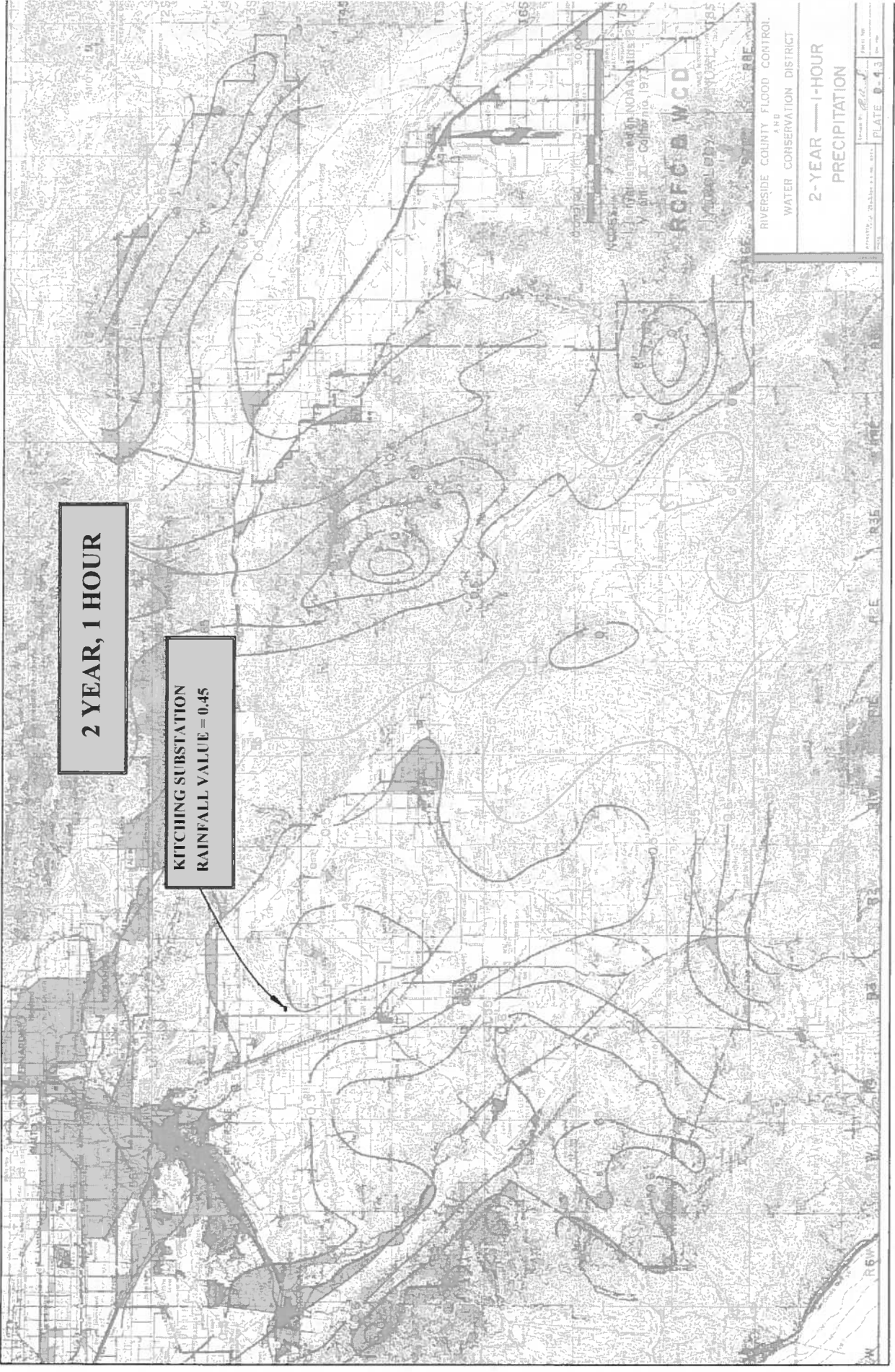


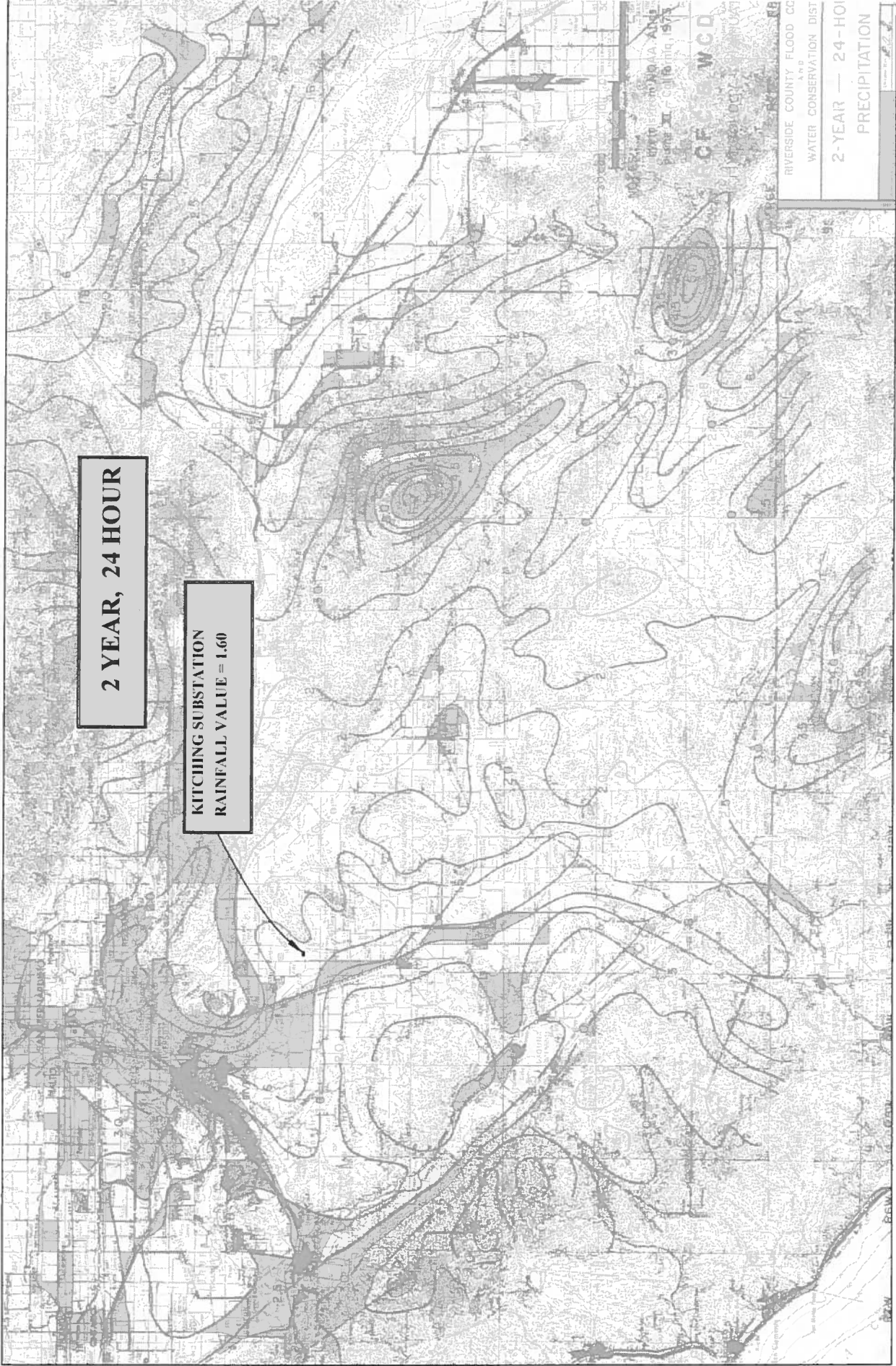
<p><b>LEGEND</b></p> <p>— SOILS GROUP BOUNDARY</p> <p>A SOILS GROUP DESIGNATION</p> <p><b>RCFC &amp; WCD</b></p> <p>HYDROLOGY MANUAL</p>		<p><b>HYDROLOGIC SOILS GROUP MAP</b></p> <p><b>FOR</b></p> <p><b>PERRIS</b></p>
--	--	---

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

**EXHIBIT E:            RAINFALL MAPS**

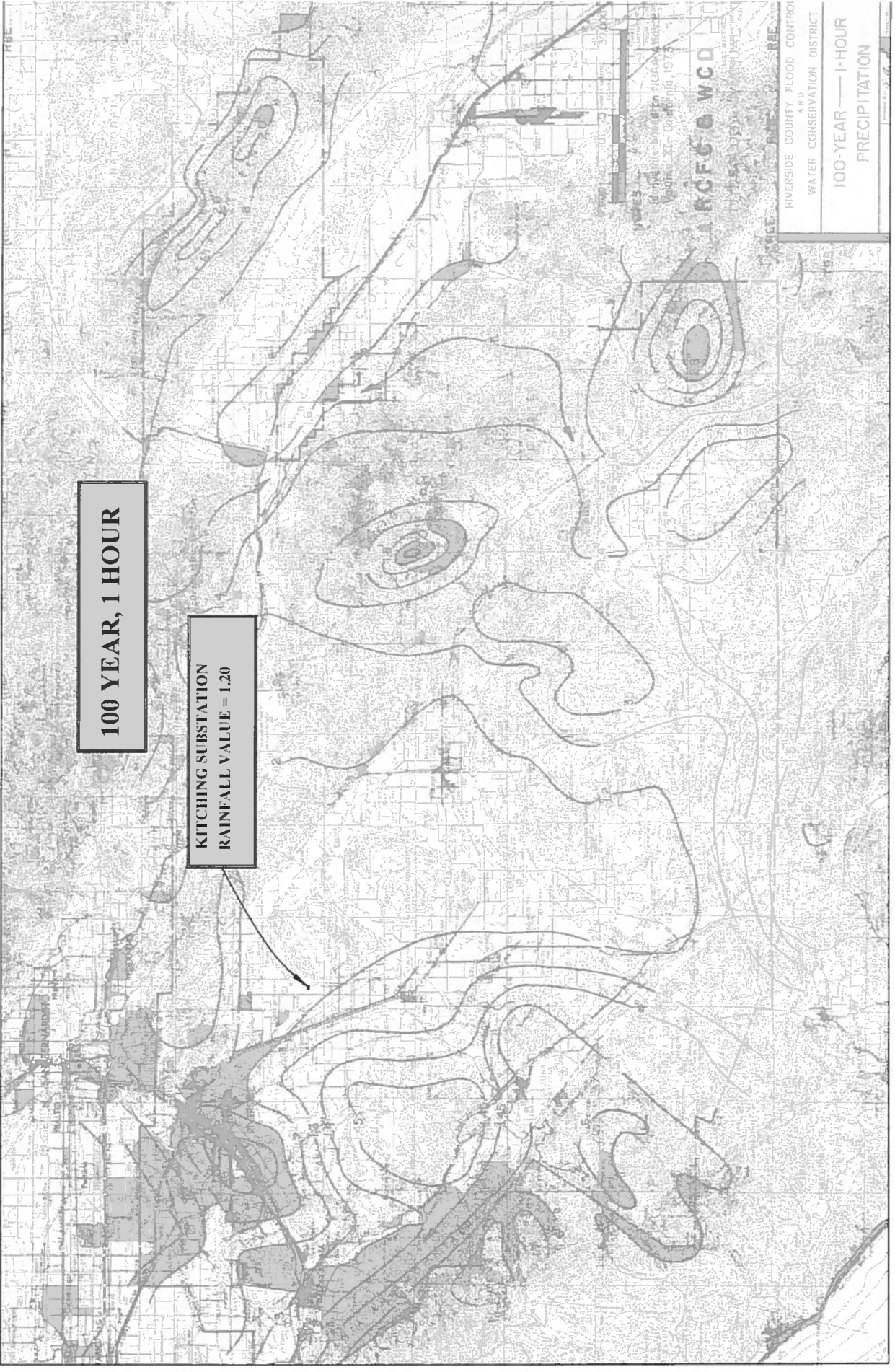
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**2 YEAR, 24 HOUR**

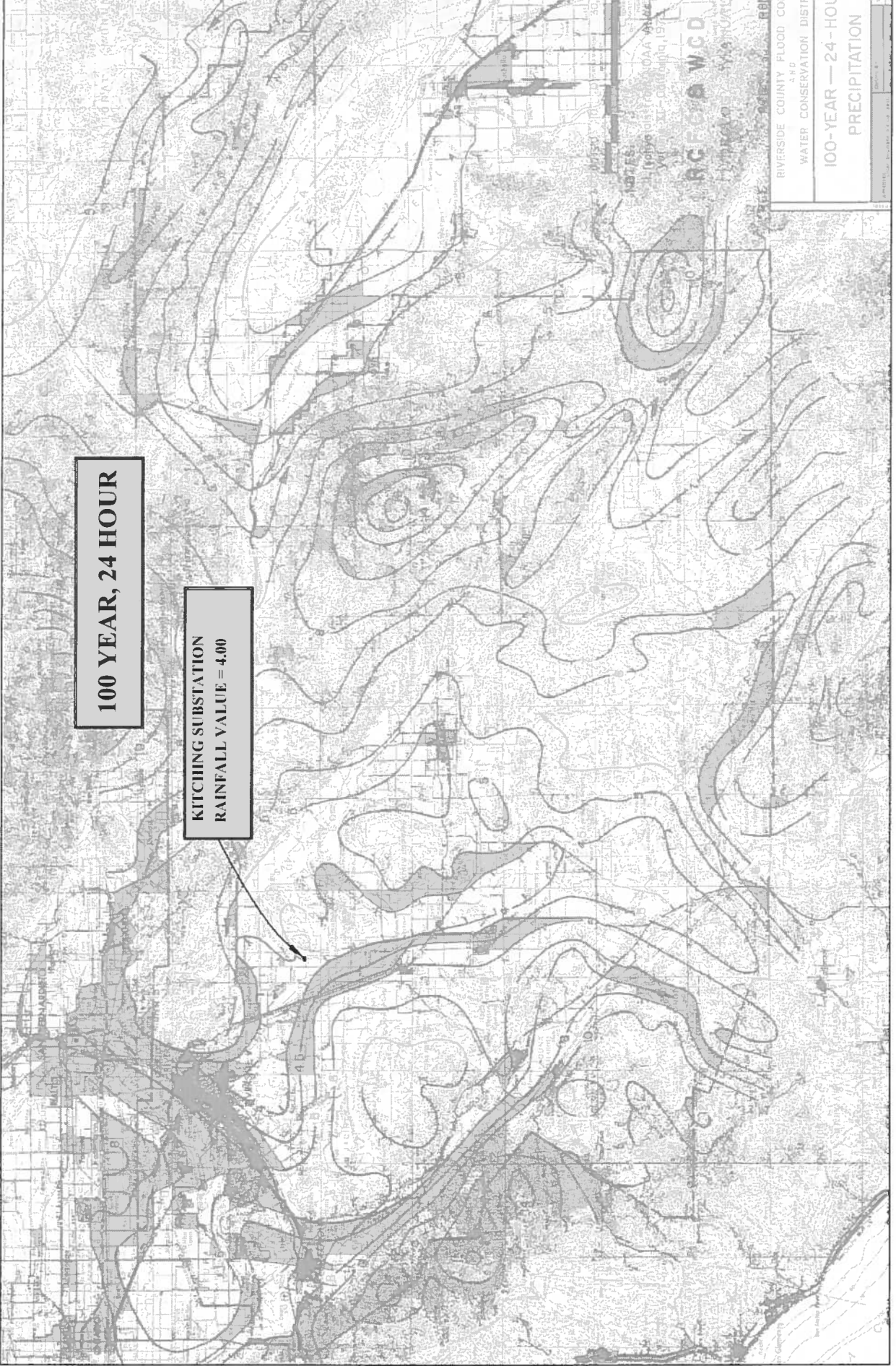
**KITCHING SUBSTATION  
RAINFALL VALUE = 1.60**



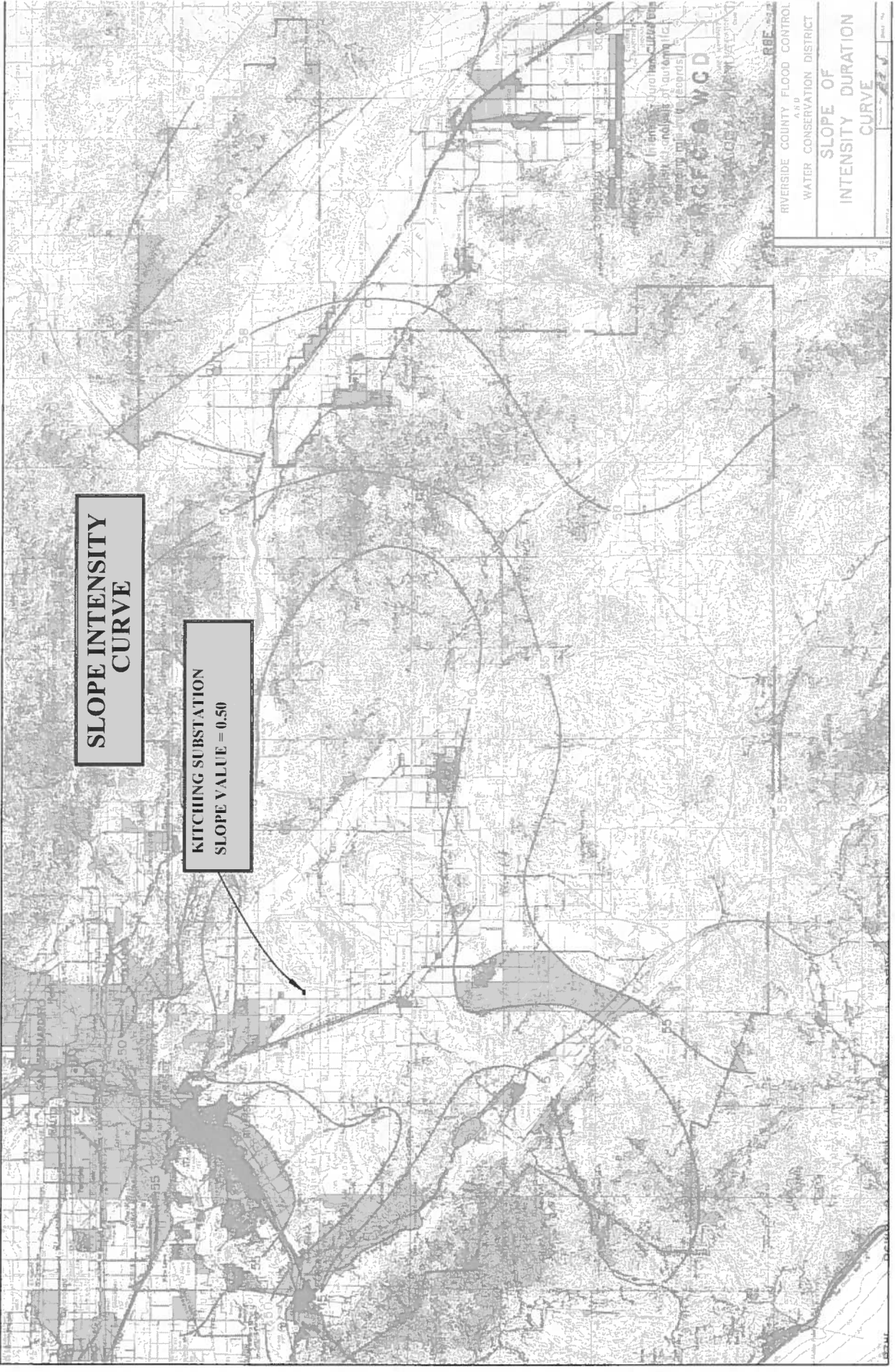
100 YEAR, 1 HOUR

KITCHING SUBSTATION  
RAINFALL VALUE = 1.20

RIVERSIDE COUNTY FLOOD CONTROL  
AND  
WATER CONSERVATION DISTRICT  
100-YEAR - 1-HOUR  
PRECIPITATION











# APPENDIX F

## Water Quality Management Plan

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



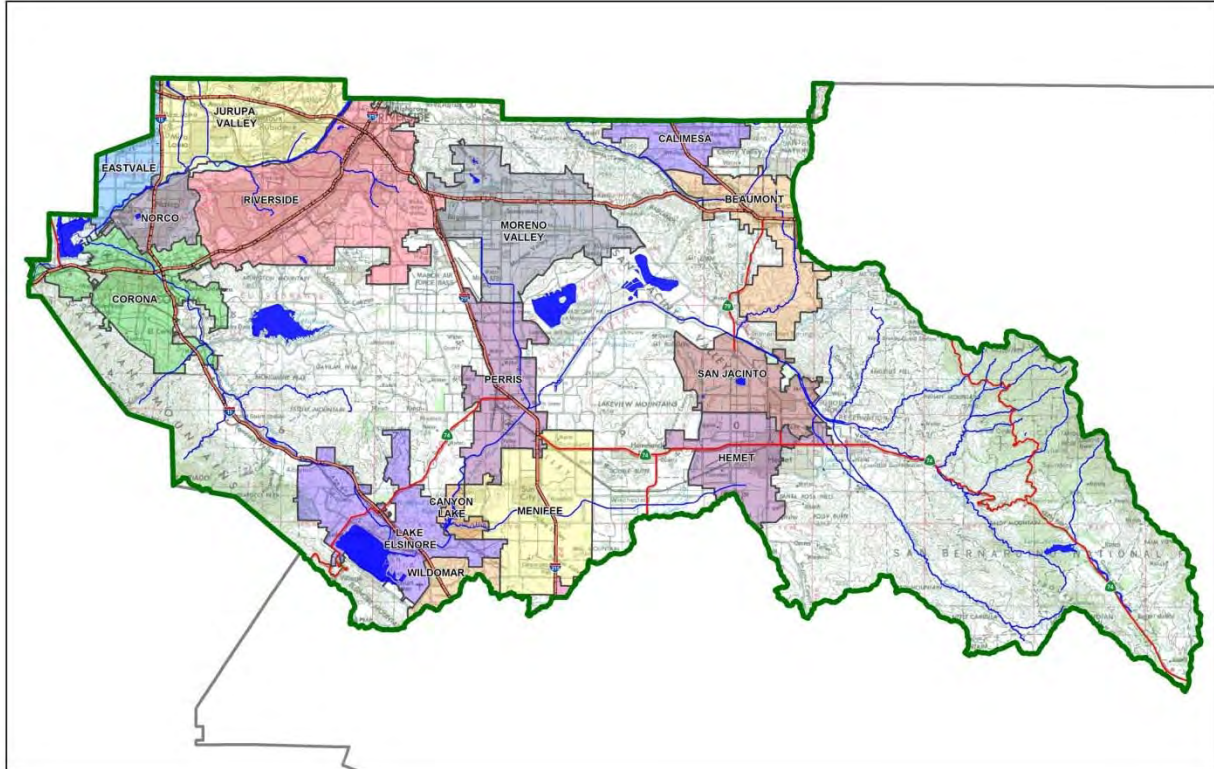
# Project Specific Water Quality Management Plan

A Template for Projects located within the **Santa Ana Watershed** Region of Riverside County

**Project Title:** Kitching Substation

**Development No:** TBD

**Design Review/Case No:** Preliminary



- Preliminary
- Final

**Original Date Prepared:** January 29, 2016

**Revision Date(s):** February 8, 2016

*Prepared for Compliance with  
Regional Board Order No. **R8-2010-0033***

**Contact Information:**

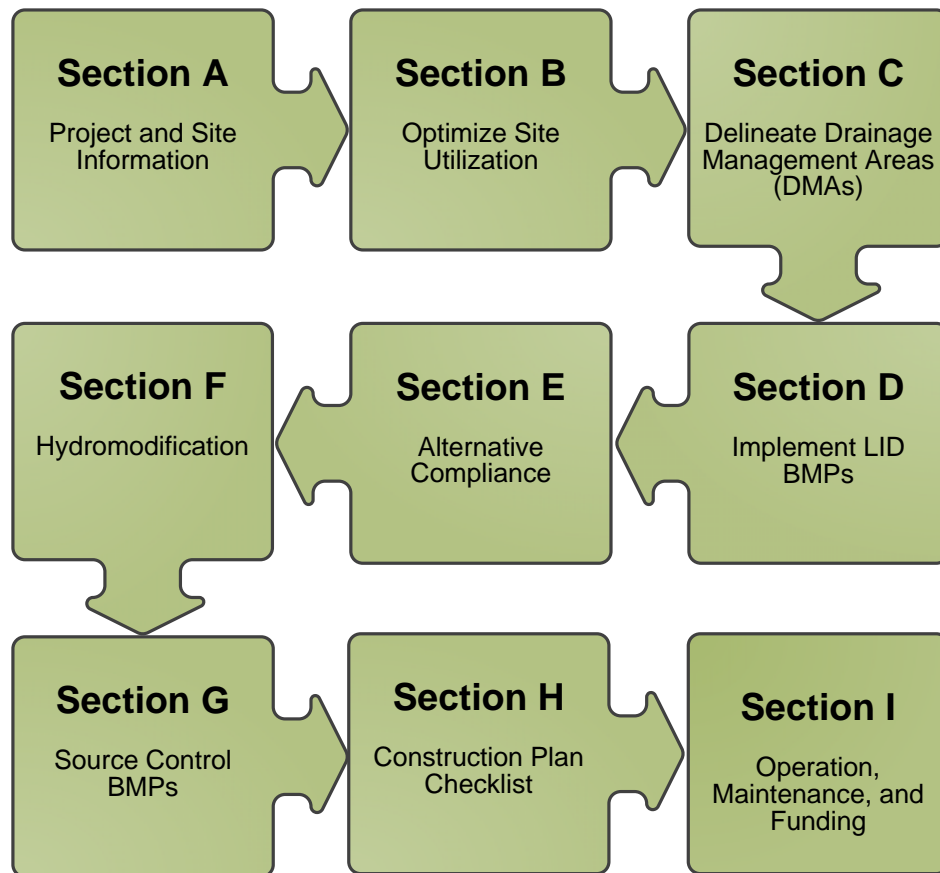
**Prepared for:** City of Moreno Valley  
14177 Frederick Street  
Moreno Valley, CA 92552  
(951) 413-3000

**Prepared by:** Joseph L. Castaneda, P.E.  
JLC Engineering and Consulting, Inc.  
36263 Calle de Lobo  
Murrieta, CA 92562  
(951) 304-9552

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

## 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 The City of Moreno Valley by JLC Engineering and Consulting, Inc. for the Kitching Substation.

This WQMP is intended to comply with the requirements of the City of Moreno Valley for Ordinance No. 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 the City of Moreno Valley Stormwater/Urban Runoff Management and Discharges Controls, Municipal Code 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."



\_\_\_\_\_  
January 29, 2016

\_\_\_\_\_  
Preparer's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Joseph L. Castaneda  
Preparer's

Printed

\_\_\_\_\_  
P.E. / Project Manager  
Name

Preparer's Title/Position

Preparer's Licensure:



Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

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## Section A: Project and Site Information

PROJECT INFORMATION	
Type of Project:	Substation
Planning Area:	SP208I
Community Name:	City Of Moreno Valley
Development Name:	Kitching Substation
PROJECT LOCATION	
Latitude & Longitude (DMS): 33°52'20"N 117°13'05"W	
Project Watershed and Sub-Watershed: Santa Ana River Watershed, San Jacinto River Sub-Watershed	
APN(s): 312-250-016	
Map Book and Page No.: Book 312, page 250	
PROJECT CHARACTERISTICS	
Proposed or Potential Land Use(s)	Substation
Proposed or Potential SIC Code(s)	4911
Area of Impervious Project Footprint (SF)	5,873
Total Area of <u>proposed</u> Impervious Surfaces within the Project Limits (SF)/or Replacement	5,873
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)	Hydrologic Soil "C"
What is the Water Quality Design Storm Depth for the project?	0.68

### 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.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
Kitching Street	N/A	N/A	N/A
Existing 60" Storm Drain @ Globe Street	N/A	N/A	N/A
Perris Valley Channel Lateral B – Stage 2	N/A	N/A	Not a RARE-designated water body
Perris Valley Channel	N/A	N/A	Not a RARE-designated water body
San Jacinto River	N/A	MUN, AGR, GWR, REC1, REC2, WARM, WILD	Not a RARE-designated water body
Canyon Lake	Nutrients, Pathogens (Bacteria & Viruses)	MUN, AGR, GWR, REC1, REC2, WAR, WILD	Not a RARE-designated water body
San Jacinto River	N/A	MUN, AGR, GWR, REC1, REC2, WARM, WILD	Not a RARE-designated water body
Lake Elsinore	Metals (Mercury), Nutrients, Organic Enrichment/Low Dissolved Oxygen, Polychlorinated biphenyls, sediment Toxicity, Sedimentation, Unknown Toxicity	REC1, REC2, WARM, WILD	Not a RARE-designated water body

### 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)	<input 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.

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## 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 project site currently drains to Edwin Road and Kitching Street. The project site will retain all onsite flows up to the 100-year, 24-hour storm duration. The offsite flows from the north and west will continue to the intersection of Edwin Road and Kitching Street.*

Did you identify and protect existing vegetation? If so, how? If not, why?

*The project site has been previously disced and therefore does not incorporate existing vegetation.*

Did you identify and preserve natural infiltration capacity? If so, how? If not, why?

*The project site will utilize 1.41 in/hr, which is the average of the two recommended design rates indicated by the Geotechnical Engineer for water quality treatment.*

Did you identify and minimize impervious area? If so, how? If not, why?

*The project site is approximately 9% impervious in the post-project condition. The majority of the project site is covered with pervious Class II base or equivalent gravel, therefore all flows within the project limits are dispersed into the gravel prior to discharging into one of the onsite infiltration trenches.*

Did you identify and disperse runoff to adjacent pervious areas? If so, how? If not, why?

*There are landscaped setback areas along Edwin Road and Kitching Street where bioswales are proposed. The project site does not incorporate landscaping. However, impervious areas will be dispersed within the gravel areas of the project site prior to discharging into one of the two onsite infiltration trenches.*

# 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
DMA B1	Roof, Concrete, Class II Base	49,096	Type "D"
DMA B2	Roof, Concrete, Class II Base	20,663	Type "D"

<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)

**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]	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)	Post-project surface type	Runoff factor	Product	DMA name /ID	Area (square feet)	Ratio
	[A]		[B]	[C] = [A] x [B]		[D]	[C]/[D]

Table C.5 Type 'D', Areas Draining to BMPs

DMA Name or ID	BMP Name or ID
DMA B1	Infiltration Trench B1
DMA B2	Infiltration Trench B2

*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:		X
...have significant cut and/or fill conditions that would preclude in-situ testing of infiltration rates at the final infiltration surface? If Yes, list affected DMAs:		X
...geotechnical report identify other site-specific factors that would preclude effective and safe infiltration? Describe here:		X

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.

The infiltration rate for the project site is the average of the two infiltration tests. Test P-1 is 0.63 in/hr and Test P-2 is 2.18 in/hr, resulting in an average infiltration rate of 1.41 in/hr. The average measured



infiltration rate is 2.81 in/hr, which is greater than the 1.6 in/hr measured minimum. Therefore infiltration BMPs shall be utilized for the project site. The infiltration testing has been included in Appendix 3.

## 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: N/A*

*Type of Landscaping (Conservation Design or Active Turf):*

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: N/A*

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: N/A*

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: N/A*

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)
N/A	N/A

### 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: N/A*

*Project Type: N/A*

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: N/A*

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: N/A*

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: N/A*

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).

<u>Minimum required Toilet Users (Step 4)</u>	<u>Projected number of toilet users (Step 1)</u>
N/A	N/A

### 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: N/A*

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: N/A*

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: N/A*

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: N/A*

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).

<b>Minimum required non-potable use (Step 4)</b>	<b>Projected average daily use (Step 1)</b>
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.

Based upon the Harvest and Use analysis, the project site does not have sufficient irrigated landscaped area or toilet users to utilize Harvest and Use BMPs.

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.3 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 B1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DMA B2	<input checked="" 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"/>	<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"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input 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.

The project site will utilize two infiltration trenches that will treat the required water quality volume. Additionally, the infiltration trenches will retain the volume associated with the 100-year, 24-hour storm event for the project site flows. This will ensure that the project site does not adversely impact the existing downstream storm drain facilities or property owners. More detailed discussion on this mitigation has been included in the Preliminary Hydrology and Hydraulics Report for the Kitching Substation.

The required water quality volume was determined by using the Santa Ana Watershed BMP Design Volume Spreadsheets. DMA B1 included the tributary offsite area from the north. Based upon the Design Volume Spreadsheets, DMA B1 has a  $V_{BMP}$  of 733 cu. ft., and DMA B2 has a  $V_{BMP}$  of 380 cu. ft.

The water quality volume will be treated within one of the two infiltration trenches. Infiltration Trench B1 is located at the north westerly project boundary and consists of 4 feet of surface storage and 1 foot of trench storage. The surface storage has a capacity of 14,373 cu. ft., and the gravel trench area has a storage capacity of 893 cu. ft. This gravel trench area was determined by taking the surface area (2,232 sq. ft.) multiplied by the 1 foot depth, and 40% void ratio. The resulting total storage volume within Infiltration Trench B1 is 15,266 cu.ft., which is more than sufficient for the  $V_{BMP}$ . HCOG mitigation is discussed in Section F.

Infiltration Trench B2 is located at the south easterly project boundary and consists of 3 feet of surface storage and 2 feet of trench storage. The surface storage has a capacity of 5,859 cu. ft., and the gravel trench area has a storage capacity of 286 cu. ft. This gravel trench area was determined by taking the surface area (716 sq. ft.) multiplied by the 1 foot depth, and 40% void ratio. The resulting total storage volume within Infiltration Trench B1 is 7,975 cu.ft., which is more than sufficient for the  $V_{BMP}$ . HCOG mitigation is discussed in Section F.

The water quality volume calculations have been included in Appendix 6.

## D.4 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  $V_{BMP}$  worksheet in Appendix F of the LID BMP Design Handbook. Second, design the LID BMP to meet the required  $V_{BMP}$  using a method approved by the Copermittee. Utilize the worksheets found in the LID BMP Design Handbook or consult with your Copermittee 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)	Post-Project Surface Type	Effective Impervious Fraction, $I_f$	DMA Runoff Factor	DMA Areas Runoff Factor $\times$	Bioretention Basin A/DMA A		
						Design Storm Depth (in)	Design Capture Volume, $V_{BMP}$ (cubic feet)	Proposed Volume on Plans (cubic feet)
	[A]		[B]	[C]	[A] x [C]			
<b>DMA B1-A</b>	46284.07	Class II Base	0.30	0.23	10417.4			
<b>DMA B1-B</b>	2812.32	Concrete or Asphalt	1.0	0.89	2508.6			
	49096.39				12930.2	0.68	732.7	15,266

[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

Table D.4 DCV Calculations for LID BMPs

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Impervious Fraction, $I_f$	DMA Runoff Factor	DMA Areas Runoff Factor $\times$	Bioretention Basin A/DMA A		
						Design Storm Depth (in)	Design Capture Volume, $V_{BMP}$ (cubic feet)	Proposed Volume on Plans (cubic feet)
	[A]		[B]	[C]	[A] x [C]			
<b>DMA B2-A</b>	17601.83	Class II Base	0.30	0.23	3963.3			
<b>DMA B2-B</b>	3060.8	Concrete or Asphalt	1.0	0.89	2730.2			
	20662.63				6693.5	0.68	379.3	7,975

[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.

N/A



## 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"/>

*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>
<i>Total Credit Percentage<sup>1</sup></i>	

<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)	Post-Project Surface Type	Effective Impervious Fraction, I <sub>f</sub>	DMA Runoff Factor	DMA Area x Runoff Factor	Enter BMP Name / Identifier Here			
	[A]		[B]	[C]	[A] x [C]				
						Design Storm Depth (in)	Minimum Design Capture Volume or Design Flow Rate (cubic feet or cfs)	Total Storm Water Credit % Reduction	Proposed Volume or Flow on Plans (cubic feet or cfs)
	$A_T = \sum[A]$				$\Sigma = [D]$	[E]	$[F] = \frac{[D] \times [E]}{[G]}$	$[F] \times (1-[H])$	[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

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

### 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>	N/A	N/A	N/A
<b>Volume (Cubic Feet)</b>	N/A	N/A	N/A

<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:

N/A

**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.

The project site will retain the entire volume associated with the 100-year, 24-hour post-project unit hydrograph calculations, which is greater than the 2-year, 24-hour volume. Therefore, by retaining the volume up to the 100-year, 24-hour volume, the project will ensure that flows, volumes and time of concentrations for the 2-year, 24-hour are also mitigated. The unit hydrograph calculations for DMA B1 and DMA B2 for the 100-year, 24-hour storm duration have been included in Appendix 7. The following table summarizes the required volumes to be retained:

DMA	100-Year, 24-Hour Volume	100-Year, 24-Hour Volume
DMA B1	0.1856 ac-ft	8,085 cu. ft.
DMA B2	0.0838 ac-ft	3,651 cu. ft.

Infiltration Trench B1 provides a total of 15,266 cu. ft. of volume and Infiltration Trench B2 provides a total of 7,975 cu. ft. of volume (see Section D for discussion of volume calculations), which is sufficient volume to retain the entire 100-year, 24-hour volume.

## 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
Roofing, gutters and trim	Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff.	
Vehicular Restrictions		<ul style="list-style-type: none"> <li>• Restrict vehicular onsite power washes</li> <li>• Restrict vehicular onsite maintenance and repairs</li> </ul>

## 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)
B1	Infiltration Trench B1	Figure 3 – Site Plan
B2	Infiltration Trench B2	Figure 3 – Site Plan

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:** City of Moreno Valley

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: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

Figure 1 – Vicinity Map

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



**KITCHING SUBSTATION  
VICINITY MAP**

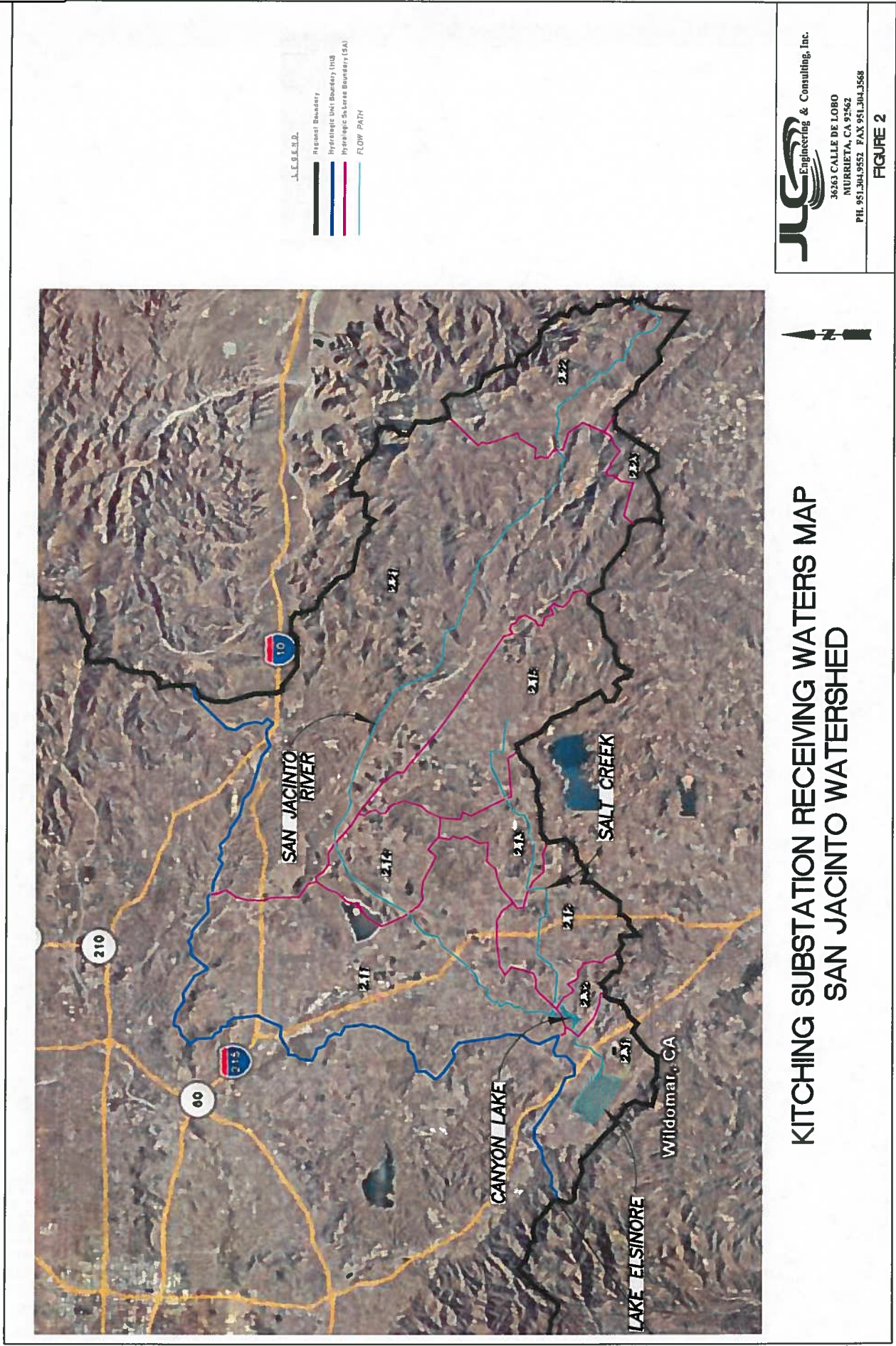


36263 CALLE LOBO  
MURRIETA, CA 92562  
TEL. 951.304.9552 FAX 951.304.3568

**FIGURE 1**

## Figure 2 – Receiving Waters Map

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**JCS**  
 Engineering & Consulting, Inc.  
 36243 CALLE DE LOBO  
 MURRIETA, CA 92562  
 PH. 951.941.9552 FAX 951.941.9568

**FIGURE 2**

Drawing Name: O:\203.03.15\Engineering\WMP\Appendix 1 - Maps & Site Plan\Receiving waters-San Jacinto and Vicinity.dwg  
 Last Opened: Jun 28, 2018 - 10:05am by jcaiver

Figure 3 – WQMP Site Plan

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

SHEET 1 OF 1

# KITCHING SUBSTATION WQMP SITE PLAN

IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

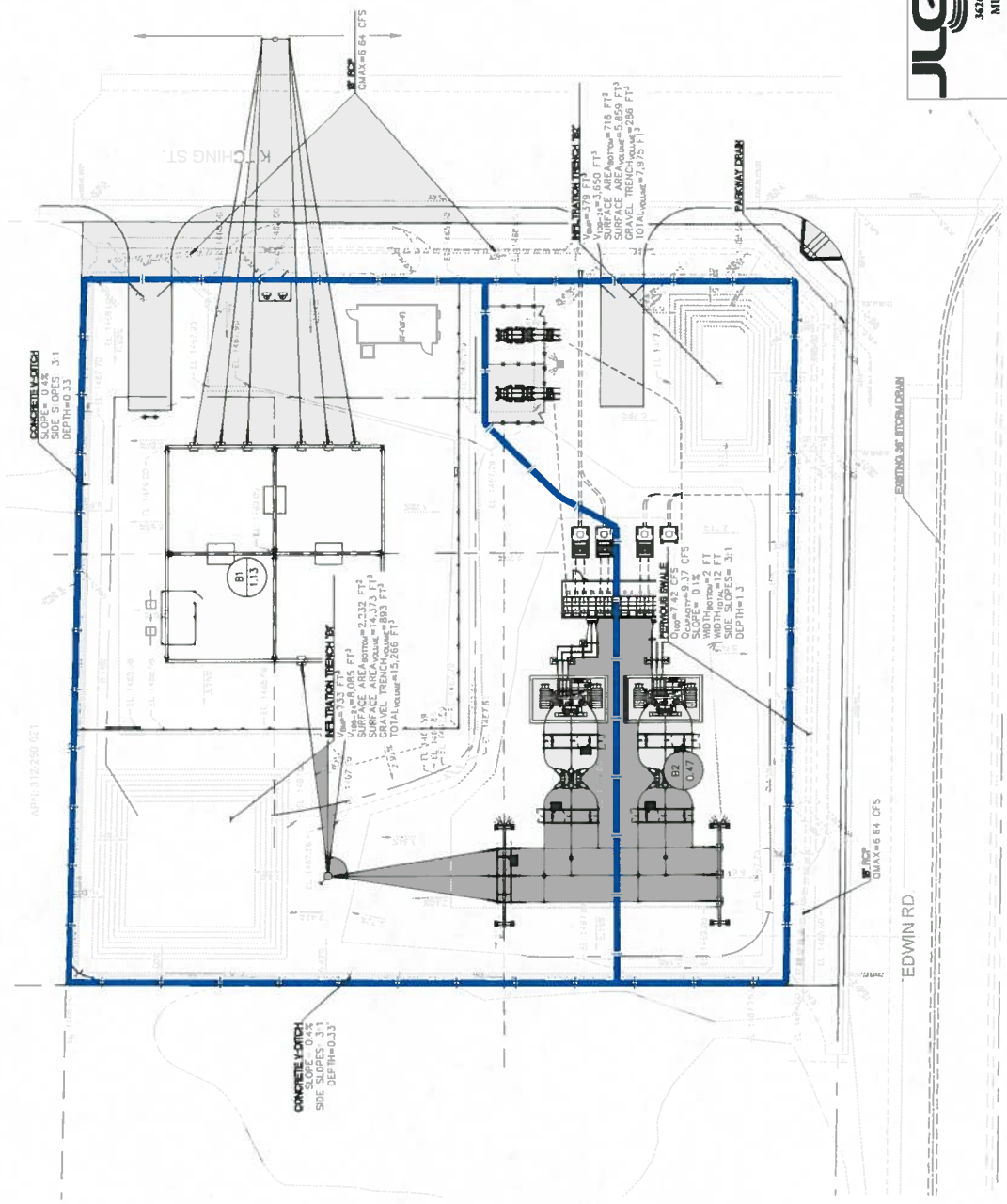


FIGURE 3

### KITCHING SUBSTATION WQMP SITE PLAN

**JUCS**  
Engineering & Consulting, Inc.  
34343 CALLE DE LOBO  
MURRIETA, CA 92562  
PH. 951.384.9551 FAX 951.384.3689

Drawing Name: D:\2025\10\17\MorenoValley\WQMP\030317\030317.dwg  
Last Update: Feb 11, 2016 9:13am by jmc

# Appendix 2: Construction Plans

*Grading and Drainage Plans*

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



# Appendix 3: Soils Information

*Geotechnical Study and Other Infiltration Testing Data*

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

Project No. 150817.3  
February 8, 2016

Mr. Clement Jimenez  
Senior Engineer, PE  
Financial & Management Services  
City of Moreno Valley  
14177 Frederick Street  
Moreno Valley, CA 92553

Subject: Percolation Testing Report  
Kitching Street Electrical Substation  
NW Corner of Kitching Street and Edwin Road  
Moreno Valley, California

Reference: Riverside County Low Impact Development BMP Design Handbook, Appendix A –  
Infiltration Testing Guidelines, dated September 2011.

Twining, Inc., 2015, "Draft Geotechnical Investigation Report, Kitching Street  
Electrical Substation, NW Corner of Kitching Street and Edwin Road, Moreno Valley,  
California," Twining Project No. 150817.3, dated December 21.

Dear Mr. Jimenez:

Twining, Inc., is pleased to present the results of our percolation testing for the subject project. Percolation testing was performed at two locations within the proposed Kitching Street Electrical Substation site along Edwin Road in Moreno Valley, California. The percolation testing locations were provided to us by the project hydrological engineer and are presented on the attached Figure 2, Exploration Location Map. The purpose of our testing was to evaluate design infiltration rates of site subgrade soils and determine the feasibility of implementing water quality best management practices (bmps).

### Field Exploration

As indicated above, two percolation test borings were hand-excavated using a 5.5-inch diameter auger on January 8, 2015 at the project site. The first boring was excavated approximately 14 feet north of the existing Edwin Road right-of-way line at a proposed water quality bmp and extended to 30 inches below existing ground surface (bgs). The second boring was excavated approximately 27 feet north of the existing Edwin Road right-of-way line at another proposed water quality bmp location and extended to 56 inches bgs. The borings exposed damp to moist, light brown, sandy silt at both locations in conformance with previous geotechnical borings performed at the site.

Groundwater was not encountered during percolation testing. According to the referenced geotechnical report, during our subsurface investigation in November 2015 we observed the groundwater table at depths ranging between 25 to 27 feet bgs in the vicinity of the test locations. It is important to note that according to the referenced Riverside County guidelines (2011), the invert elevation of the infiltration system should be a minimum of 10 feet above the groundwater table elevation. Based on our review, the proposed water quality bmps will be located more than 10 feet above the groundwater table.



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**Percolation Testing**

Percolation testing was performed in general conformance with the referenced Riverside County guidelines (2011). As indicated above, borings P-1 and P-2 had an approximate diameter of 5.5-inches and were excavated to depths of 30 inches and 56 inches bgs, respectively. At the completion of excavation, approximately 2 inches of coarse gravel was placed at the bottom of the boreholes to prevent scouring during testing. Perforated PVC pipe sections were inserted in the boreholes and coarse gravel was used as backfill around the pipes. The boreholes were presoaked prior to testing during two 25-minute intervals in accordance with Riverside County guidelines for sandy soil materials.

After the completion of presoaking, the borings were filled with water to a level at least 5 times greater than the radius of the boring. Measurements were taken at 10-minute intervals for a total of 6 readings. After a stable reading was observed, the drop that occurred during the final 10 minutes was used to determine the percolation rate at each test location.

The following conversion equation was used for the final 10-minute interval to calculate the infiltration rate:

Infiltration Rate =  $I_t = \Delta H(60r) / [\Delta t(r + 2H_{avg})]$ , where:

- $\Delta t$  = time interval (in minutes) = 10 minutes
- $r$  = test hole radius =  $d/2 = 2.75$  inches
- $D_0$  = initial depth to water
- $D_f$  = final depth to water
- $D_T$  = total depth of test hole
- $H_0$  = initial height of water at the selected time interval =  $D_T - D_0$
- $H_f$  = final height of water at the selected time interval =  $D_T - D_f$
- $\Delta H = \Delta D$  = change in height over the time interval =  $H_0 - H_f$
- $H_{avg} = (H_0 + H_f) / 2$

The design infiltration rate was calculated from the measured infiltration by applying a factor of safety of 2.0, as required by the referenced specifications. A summary of the test results is presented in Table 1. Additional test details are presented in the Appendix.

**Table 1 - Summary of Percolation Test Results**

Test Location	Depth of Test Hole (in.)	$\Delta H$ (in.)	$H_{avg}$ (in.)	Time Interval, $\Delta t$ (min.)	Measured Infiltration Rate (in/hr)	Design Infiltration Rate (in/hr)
P-1	30	3.75	23.4	10	1.25	0.63
P-2	56	15.00	27.1	10	4.36	2.18

**Recommendations**

Based on the results of our testing and analyses, the installation of the proposed water quality bmps is feasible. We recommend a design infiltration rate of 0.63 inches per hour. It is also recommended that the proposed water quality bmps comply with the setback requirements presented in Table 2.

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Table 2: Recommended Infiltration Facility Setback Requirements

Setback from	Distance
Property lines and public right of way	5 feet
Any foundation	15 feet or within 1:1 plane drawn up from the bottom of foundation, whichever is greater
Face of any slope	H/2, 5 feet minimum (H is height of slope)
Water wells used for drinking water	100 feet

**Limitations**

Due to the limited nature of our field exploration, conditions not observed and described in this report may be present on the site. Uncertainties relative to subsurface conditions can be reduced through additional subsurface exploration. Additional subsurface evaluation can be performed upon request. It should be understood that conditions different from those anticipated in this report may be encountered during construction.

Site conditions, including groundwater elevation, can change with time as a result of natural processes or that activities of man at the subject site or at nearby sites. Changes to applicable laws, regulations, codes, and standards of practice may occur as a result of government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Twining, Inc. has no control.

We have endeavored to perform our evaluation using the degree of care and skill ordinarily exercised under similar circumstances by engineering professionals with experience in this area. No other warranty, either expressed or implied, is made as to the conclusions contained in this report.

**Closure**

We appreciated the opportunity to be of service on this project. If you have any questions regarding this report, or if we can be of further service, please do not hesitate to contact the undersigned at (562) 426-3355.

Respectfully submitted,  
**TWINING, INC.**

*Adrian Moreno*  
 Adrian Moreno, EIT  
 Staff Engineer

*Andres Bernal*  
 Andres Bernal, RCE 62366, GE 2715  
 Senior Geotechnical Engineer



Attachments: Figure 2 – Test Location Map  
 Appendix – Percolation Test Data

Attachment: MND\_IS\_MM RP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

# Appendix 4: Historical Site Conditions

*Phase I Environmental Site Assessment or Other Information on Past Site Use*

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

# Appendix 5: LID Infeasibility

*LID Technical Infeasibility Analysis*

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

# Appendix 6: BMP Design Details

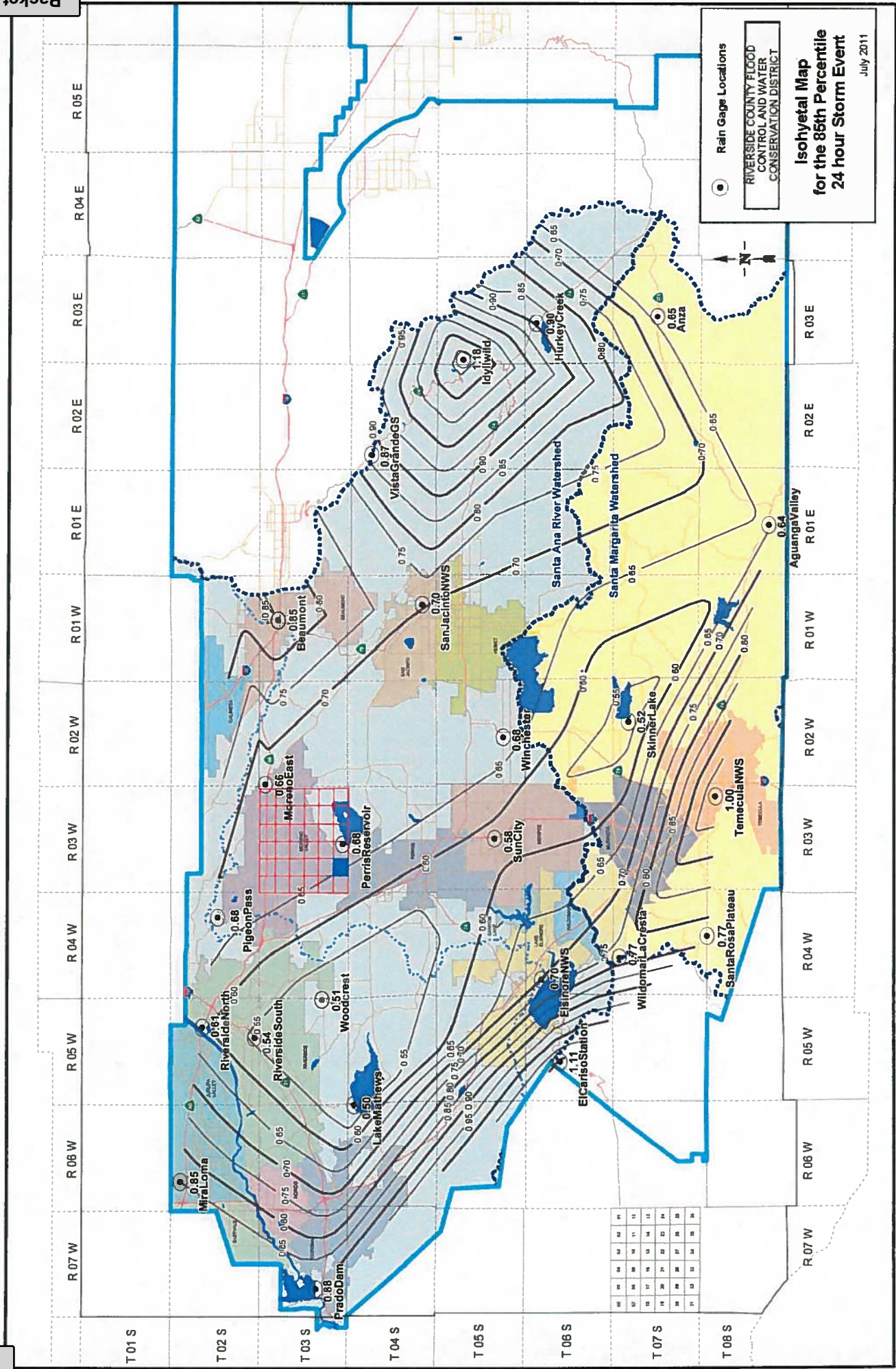
*BMP Sizing, Design Details and other Supporting Documentation*

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

# Isohyetal Map for the 85<sup>th</sup> Percentile 24-hour Storm Event

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# Santa Ana Watershed – BMP Design Volume Spreadsheets

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

**Santa Ana Watershed - BMP Design Volume,  $V_{BMP}$**   
 (Rev. 10-2011)

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: JLC Engineering and Consulting, Inc. Date: 12/21/2015  
 Designed by: Jilleen Ferris Case No: SCE  
 Company Project Number/Name: \_\_\_\_\_

**BMP Identification**

BMP NAME / ID: AREA B1 - NORTH BASIN  
*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)
DMA B1-A	46284.07	Class 2 Base	0.3	0.23	10421.6			
DMA B1-B	2812.32	Concrete or Asphalt	1	0.89	2508.6			
<b>Total</b>					<b>12930.2</b>	<b>0.68</b>	<b>732.7</b>	<b>15266</b>

Notes:

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

**Santa Ana Watershed - BMP Design Volume,  $V_{BMP}$**   
 (Rev. 10-2011)

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: JLC Engineering and Consulting, Inc. Date: 12/21/2015  
 Designed by: Jilleen Ferris Case No: SCE  
 Company Project Number/Name: \_\_\_\_\_

**BMP Identification**

BMP NAME / ID: AREA B2 - SOUTH BASIN  
*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)
DMA B2-A	17601.83	Class 2 Base	0.3	0.23	3963.3			
DMA B2-B	3060.8	Concrete or Asphalt	1	0.89	2730.2			
<b>Total</b>					<b>6693.5</b>	<b>0.68</b>	<b>379.3</b>	<b>7975</b>

Notes:

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

# Infiltration Trench – Design Procedure Spreadsheets

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

Infiltration Trench - Design Procedure	BMP ID	Legend:	Required Entries
	B1		Calculated Cells

Company Name:	JLC Engineering and Consulting	Date:	1/28/2015
Designed By:	Jilleen Ferris	County/City Case No.:	Kitching Substation

**Design Volume**

Enter the area tributary to this feature, Max = 10 acres  $A_T = 1.13$  acres

Enter  $V_{BMP}$  determined from Section 2.1 of this Handbook  $V_{BMP} = 732.7$  ft<sup>3</sup>

**Calculate Maximum Depth of Reservoir Layer**

Enter the Infiltration rate  $I = 1.41$  in/hr

Enter Factor of Safety, FS (unitless)  $FS = 3$

*Obtain from Table 1, Appendix A: "Infiltration Testing" of this BMP Handbook*

$n = 40$  %

Calculate  $D_1$

$$D_1 = \frac{I \text{ (in/hr)} \times 72 \text{ hrs}}{12 \text{ (in/ft)} \times (n/100) \times FS}$$

$D_1 = 7.05$  ft

Enter depth to historic high groundwater mark (measured from finished grade)  $50$  ft

Enter depth to top of bedrock or impermeable layer (measured from finished grade)  $50$  ft

$D_2$  is the smaller of:

Depth to groundwater - 11ft; & Depth to impermeable layer - 6 ft  $D_2 = 39.0$  ft

$D_{MAX}$  is the smaller value of  $D_1$  and  $D_2$ , must be less than or equal to 8 ft  $D_{MAX} = 7.1$  ft

**Trench Sizing**

Enter proposed reservoir layer depth  $D_R$ , must be  $\leq D_{MAX}$   $D_R = 1$  ft

Calculate the design depth of water,  $d_w$

$$\text{Design } d_w = (D_R) \times (n/100)$$

Design  $d_w = 0.4$  ft

Minimum Surface Area,  $A_S$

$$A_S = \frac{V_{BMP}}{d_w}$$

$A_S = 1831.75$  ft<sup>2</sup>

Proposed Design Surface Area

$A_D = 2231.5$  ft<sup>2</sup>

Minimum Width =  $D_R + 1$  foot pea gravel  $2.00$  ft

Sediment Control Provided? (Use Pulldown)

Geotechnical Report Attached? (Use Pulldown)  YES

Notes:

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

Infiltration Trench - Design Procedure	BMP ID	Legend:	Required Entries
	B2		Calculated Cells

Company Name:	JLC Engineering and Consulting	Date:	1/28/2015
Designed By:	Jilleen Ferris	County/City Case No.:	Kitching Substation

**Design Volume**

Enter the area tributary to this feature, Max = 10 acres  $A_T = 0.47$  acres

Enter  $V_{BMP}$  determined from Section 2.1 of this Handbook  $V_{BMP} = 379.3$  ft<sup>3</sup>

**Calculate Maximum Depth of Reservoir Layer**

Enter the Infiltration rate  $I = 1.41$  in/hr

Enter Factor of Safety, FS (unitless)  $FS = 3$

*Obtain from Table 1, Appendix A: "Infiltration Testing" of this BMP Handbook*

$n = 40$  %

Calculate  $D_1$

$$D_1 = \frac{I \text{ (in/hr)} \times 72 \text{ hrs}}{12 \text{ (in/ft)} \times (n/100) \times FS}$$

$D_1 = 7.05$  ft

Enter depth to historic high groundwater mark (measured from finished grade)  $50$  ft

Enter depth to top of bedrock or impermeable layer (measured from finished grade)  $50$  ft

$D_2$  is the smaller of:

Depth to groundwater - 11ft; & Depth to impermeable layer - 6 ft  $D_2 = 39.0$  ft

$D_{MAX}$  is the smaller value of  $D_1$  and  $D_2$ , must be less than or equal to 8 ft  $D_{MAX} = 7.1$  ft

**Trench Sizing**

Enter proposed reservoir layer depth  $D_R$ , must be  $\leq D_{MAX}$   $D_R = 2$  ft

Calculate the design depth of water,  $d_w$

$$\text{Design } d_w = (D_R) \times (n/100)$$

Design  $d_w = 0.8$  ft

Minimum Surface Area,  $A_S$

$$A_S = \frac{V_{BMP}}{d_w}$$

$A_S = 474.125$  ft<sup>2</sup>

Proposed Design Surface Area

$A_D = 716$  ft<sup>2</sup>

Minimum Width =  $D_R + 1$  foot pea gravel  $3.00$  ft

Sediment Control Provided? (Use Pulldown)

Geotechnical Report Attached? (Use Pulldown)  YES

Notes:

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

# Appendix 7: Hydromodification

*Supporting Detail Relating to Hydrologic Conditions of Concern*

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



**DMA B1**

**Post-Project Condition Unit Hydrograph Calculations – 100-Year, 24-Hour Storm Duration**

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

Unit Hydrograph Analysis

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0
Study date 02/01/16 File: ARB1P24100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6279

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English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used
English Units used in output format

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KITCHING SUBSTATION POST-PROJECT CONDITION HYDROLOGY
AREA TRIBUTARY TO NORTH BASIN
UNIT HYDROGRAPH ANALYSIS, 100-YEAR, 24-HOUR STORM EVENT
FILENAME: ARB1P
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Drainage Area = 1.13(Ac.) = 0.002 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 1.13(Ac.) = 0.002 Sq. Mi.
USER Entry of lag time in hours
Lag time = 0.150 Hr.
Lag time = 9.01 Min.
25% of lag time = 2.25 Min.
40% of lag time = 3.60 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1] Rainfall(In)[2] Weighting[1\*2]
1.13 1.60 1.81

100 YEAR Area rainfall data:

Area(Ac.)[1] Rainfall(In)[2] Weighting[1\*2]
1.13 4.00 4.52

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.600(In)
Area Averaged 100-Year Rainfall = 4.000(In)

Point rain (area averaged) = 4.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 4.000(In)

Sub-Area Data:
Area(Ac.) Runoff Index Impervious %
1.130 89.00 0.060
Total Area Entered = 1.13(Ac.)

RI RI Infil. Rate Impervious Adj. Infil. Rate Area% F
AMC2 AMC-2 (In/Hr) (Dec.%) (In/Hr) (Dec.) (In/Hr)
89.0 89.0 0.141 0.060 0.134 1.000 0.134
Sum (F) = 0.134

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Area averaged mean soil loss (F) (In/Hr) = 0.134  
 Minimum soil loss rate ((In/Hr)) = 0.067  
 (for 24 hour storm duration)  
 Soil low loss rate (decimal) = 0.852

Unit Hydrograph  
 VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	55.482	7.223
2	0.167	110.963	30.611
3	0.250	166.445	27.904
4	0.333	221.926	11.265
5	0.417	277.408	6.379
6	0.500	332.889	4.371
7	0.583	388.371	3.172
8	0.667	443.853	2.275
9	0.750	499.334	1.746
10	0.833	554.816	1.448
11	0.917	610.297	1.087
12	1.000	665.779	0.841
13	1.083	721.261	0.612
14	1.167	776.742	0.555
15	1.250	832.224	0.510
Sum = 100.000			Sum= 1.139

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr)		Effective (In/Hr)
				Max	Low	
1	0.08	0.07	0.032	( 0.237)	0.027	0.005
2	0.17	0.07	0.032	( 0.236)	0.027	0.005
3	0.25	0.07	0.032	( 0.235)	0.027	0.005
4	0.33	0.10	0.048	( 0.234)	0.041	0.007
5	0.42	0.10	0.048	( 0.233)	0.041	0.007
6	0.50	0.10	0.048	( 0.233)	0.041	0.007
7	0.58	0.10	0.048	( 0.232)	0.041	0.007
8	0.67	0.10	0.048	( 0.231)	0.041	0.007
9	0.75	0.10	0.048	( 0.230)	0.041	0.007
10	0.83	0.13	0.064	( 0.229)	0.055	0.009
11	0.92	0.13	0.064	( 0.228)	0.055	0.009
12	1.00	0.13	0.064	( 0.227)	0.055	0.009
13	1.08	0.10	0.048	( 0.226)	0.041	0.007
14	1.17	0.10	0.048	( 0.225)	0.041	0.007
15	1.25	0.10	0.048	( 0.224)	0.041	0.007
16	1.33	0.10	0.048	( 0.224)	0.041	0.007
17	1.42	0.10	0.048	( 0.223)	0.041	0.007
18	1.50	0.10	0.048	( 0.222)	0.041	0.007
19	1.58	0.10	0.048	( 0.221)	0.041	0.007
20	1.67	0.10	0.048	( 0.220)	0.041	0.007
21	1.75	0.10	0.048	( 0.219)	0.041	0.007
22	1.83	0.13	0.064	( 0.218)	0.055	0.009
23	1.92	0.13	0.064	( 0.217)	0.055	0.009
24	2.00	0.13	0.064	( 0.216)	0.055	0.009
25	2.08	0.13	0.064	( 0.216)	0.055	0.009
26	2.17	0.13	0.064	( 0.215)	0.055	0.009
27	2.25	0.13	0.064	( 0.214)	0.055	0.009
28	2.33	0.13	0.064	( 0.213)	0.055	0.009
29	2.42	0.13	0.064	( 0.212)	0.055	0.009
30	2.50	0.13	0.064	( 0.211)	0.055	0.009
31	2.58	0.17	0.080	( 0.210)	0.068	0.012
32	2.67	0.17	0.080	( 0.210)	0.068	0.012
33	2.75	0.17	0.080	( 0.209)	0.068	0.012

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34	2.83	0.17	0.080	( 0.208)	0.068	0.012
35	2.92	0.17	0.080	( 0.207)	0.068	0.012
36	3.00	0.17	0.080	( 0.206)	0.068	0.012
37	3.08	0.17	0.080	( 0.205)	0.068	0.012
38	3.17	0.17	0.080	( 0.204)	0.068	0.012
39	3.25	0.17	0.080	( 0.204)	0.068	0.012
40	3.33	0.17	0.080	( 0.203)	0.068	0.012
41	3.42	0.17	0.080	( 0.202)	0.068	0.012
42	3.50	0.17	0.080	( 0.201)	0.068	0.012
43	3.58	0.17	0.080	( 0.200)	0.068	0.012
44	3.67	0.17	0.080	( 0.199)	0.068	0.012
45	3.75	0.17	0.080	( 0.198)	0.068	0.012
46	3.83	0.20	0.096	( 0.198)	0.082	0.014
47	3.92	0.20	0.096	( 0.197)	0.082	0.014
48	4.00	0.20	0.096	( 0.196)	0.082	0.014
49	4.08	0.20	0.096	( 0.195)	0.082	0.014
50	4.17	0.20	0.096	( 0.194)	0.082	0.014
51	4.25	0.20	0.096	( 0.193)	0.082	0.014
52	4.33	0.23	0.112	( 0.193)	0.095	0.017
53	4.42	0.23	0.112	( 0.192)	0.095	0.017
54	4.50	0.23	0.112	( 0.191)	0.095	0.017
55	4.58	0.23	0.112	( 0.190)	0.095	0.017
56	4.67	0.23	0.112	( 0.189)	0.095	0.017
57	4.75	0.23	0.112	( 0.189)	0.095	0.017
58	4.83	0.27	0.128	( 0.188)	0.109	0.019
59	4.92	0.27	0.128	( 0.187)	0.109	0.019
60	5.00	0.27	0.128	( 0.186)	0.109	0.019
61	5.08	0.20	0.096	( 0.185)	0.082	0.014
62	5.17	0.20	0.096	( 0.185)	0.082	0.014
63	5.25	0.20	0.096	( 0.184)	0.082	0.014
64	5.33	0.23	0.112	( 0.183)	0.095	0.017
65	5.42	0.23	0.112	( 0.182)	0.095	0.017
66	5.50	0.23	0.112	( 0.181)	0.095	0.017
67	5.58	0.27	0.128	( 0.181)	0.109	0.019
68	5.67	0.27	0.128	( 0.180)	0.109	0.019
69	5.75	0.27	0.128	( 0.179)	0.109	0.019
70	5.83	0.27	0.128	( 0.178)	0.109	0.019
71	5.92	0.27	0.128	( 0.177)	0.109	0.019
72	6.00	0.27	0.128	( 0.177)	0.109	0.019
73	6.08	0.30	0.144	( 0.176)	0.123	0.021
74	6.17	0.30	0.144	( 0.175)	0.123	0.021
75	6.25	0.30	0.144	( 0.174)	0.123	0.021
76	6.33	0.30	0.144	( 0.173)	0.123	0.021
77	6.42	0.30	0.144	( 0.173)	0.123	0.021
78	6.50	0.30	0.144	( 0.172)	0.123	0.021
79	6.58	0.33	0.160	( 0.171)	0.136	0.024
80	6.67	0.33	0.160	( 0.170)	0.136	0.024
81	6.75	0.33	0.160	( 0.170)	0.136	0.024
82	6.83	0.33	0.160	( 0.169)	0.136	0.024
83	6.92	0.33	0.160	( 0.168)	0.136	0.024
84	7.00	0.33	0.160	( 0.167)	0.136	0.024
85	7.08	0.33	0.160	( 0.167)	0.136	0.024
86	7.17	0.33	0.160	( 0.166)	0.136	0.024
87	7.25	0.33	0.160	( 0.165)	0.136	0.024
88	7.33	0.37	0.176	( 0.164)	0.150	0.026
89	7.42	0.37	0.176	( 0.164)	0.150	0.026
90	7.50	0.37	0.176	( 0.163)	0.150	0.026
91	7.58	0.40	0.192	0.162 ( 0.164)		0.030
92	7.67	0.40	0.192	0.161 ( 0.164)		0.031
93	7.75	0.40	0.192	0.161 ( 0.164)		0.031
94	7.83	0.43	0.208	0.160 ( 0.177)		0.048
95	7.92	0.43	0.208	0.159 ( 0.177)		0.049
96	8.00	0.43	0.208	0.158 ( 0.177)		0.050
97	8.08	0.50	0.240	0.158 ( 0.204)		0.082
98	8.17	0.50	0.240	0.157 ( 0.204)		0.083
99	8.25	0.50	0.240	0.156 ( 0.204)		0.084
100	8.33	0.50	0.240	0.155 ( 0.204)		0.085
101	8.42	0.50	0.240	0.155 ( 0.204)		0.085
102	8.50	0.50	0.240	0.154 ( 0.204)		0.086
103	8.58	0.53	0.256	0.153 ( 0.218)		0.103
104	8.67	0.53	0.256	0.152 ( 0.218)		0.104

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105	8.75	0.53	0.256	0.152	( 0.218)	0.104
106	8.83	0.57	0.272	0.151	( 0.232)	0.121
107	8.92	0.57	0.272	0.150	( 0.232)	0.122
108	9.00	0.57	0.272	0.150	( 0.232)	0.122
109	9.08	0.63	0.304	0.149	( 0.259)	0.155
110	9.17	0.63	0.304	0.148	( 0.259)	0.156
111	9.25	0.63	0.304	0.148	( 0.259)	0.156
112	9.33	0.67	0.320	0.147	( 0.273)	0.173
113	9.42	0.67	0.320	0.146	( 0.273)	0.174
114	9.50	0.67	0.320	0.145	( 0.273)	0.175
115	9.58	0.70	0.336	0.145	( 0.286)	0.191
116	9.67	0.70	0.336	0.144	( 0.286)	0.192
117	9.75	0.70	0.336	0.143	( 0.286)	0.193
118	9.83	0.73	0.352	0.143	( 0.300)	0.209
119	9.92	0.73	0.352	0.142	( 0.300)	0.210
120	10.00	0.73	0.352	0.141	( 0.300)	0.211
121	10.08	0.50	0.240	0.141	( 0.204)	0.099
122	10.17	0.50	0.240	0.140	( 0.204)	0.100
123	10.25	0.50	0.240	0.139	( 0.204)	0.101
124	10.33	0.50	0.240	0.139	( 0.204)	0.101
125	10.42	0.50	0.240	0.138	( 0.204)	0.102
126	10.50	0.50	0.240	0.137	( 0.204)	0.103
127	10.58	0.67	0.320	0.137	( 0.273)	0.183
128	10.67	0.67	0.320	0.136	( 0.273)	0.184
129	10.75	0.67	0.320	0.135	( 0.273)	0.185
130	10.83	0.67	0.320	0.135	( 0.273)	0.185
131	10.92	0.67	0.320	0.134	( 0.273)	0.186
132	11.00	0.67	0.320	0.133	( 0.273)	0.187
133	11.08	0.63	0.304	0.133	( 0.259)	0.171
134	11.17	0.63	0.304	0.132	( 0.259)	0.172
135	11.25	0.63	0.304	0.131	( 0.259)	0.173
136	11.33	0.63	0.304	0.131	( 0.259)	0.173
137	11.42	0.63	0.304	0.130	( 0.259)	0.174
138	11.50	0.63	0.304	0.129	( 0.259)	0.175
139	11.58	0.57	0.272	0.129	( 0.232)	0.143
140	11.67	0.57	0.272	0.128	( 0.232)	0.144
141	11.75	0.57	0.272	0.127	( 0.232)	0.145
142	11.83	0.60	0.288	0.127	( 0.245)	0.161
143	11.92	0.60	0.288	0.126	( 0.245)	0.162
144	12.00	0.60	0.288	0.125	( 0.245)	0.163
145	12.08	0.83	0.400	0.125	( 0.341)	0.275
146	12.17	0.83	0.400	0.124	( 0.341)	0.276
147	12.25	0.83	0.400	0.124	( 0.341)	0.276
148	12.33	0.87	0.416	0.123	( 0.354)	0.293
149	12.42	0.87	0.416	0.122	( 0.354)	0.294
150	12.50	0.87	0.416	0.122	( 0.354)	0.294
151	12.58	0.93	0.448	0.121	( 0.382)	0.327
152	12.67	0.93	0.448	0.121	( 0.382)	0.327
153	12.75	0.93	0.448	0.120	( 0.382)	0.328
154	12.83	0.97	0.464	0.119	( 0.395)	0.345
155	12.92	0.97	0.464	0.119	( 0.395)	0.345
156	13.00	0.97	0.464	0.118	( 0.395)	0.346
157	13.08	1.13	0.544	0.118	( 0.463)	0.426
158	13.17	1.13	0.544	0.117	( 0.463)	0.427
159	13.25	1.13	0.544	0.116	( 0.463)	0.428
160	13.33	1.13	0.544	0.116	( 0.463)	0.428
161	13.42	1.13	0.544	0.115	( 0.463)	0.429
162	13.50	1.13	0.544	0.115	( 0.463)	0.429
163	13.58	0.77	0.368	0.114	( 0.314)	0.254
164	13.67	0.77	0.368	0.113	( 0.314)	0.255
165	13.75	0.77	0.368	0.113	( 0.314)	0.255
166	13.83	0.77	0.368	0.112	( 0.314)	0.256
167	13.92	0.77	0.368	0.112	( 0.314)	0.256
168	14.00	0.77	0.368	0.111	( 0.314)	0.257
169	14.08	0.90	0.432	0.111	( 0.368)	0.321
170	14.17	0.90	0.432	0.110	( 0.368)	0.322
171	14.25	0.90	0.432	0.109	( 0.368)	0.323
172	14.33	0.87	0.416	0.109	( 0.354)	0.307
173	14.42	0.87	0.416	0.108	( 0.354)	0.308
174	14.50	0.87	0.416	0.108	( 0.354)	0.308
175	14.58	0.87	0.416	0.107	( 0.354)	0.309

176	14.67	0.87	0.416	0.107	( 0.354)	0.309
177	14.75	0.87	0.416	0.106	( 0.354)	0.310
178	14.83	0.83	0.400	0.106	( 0.341)	0.294
179	14.92	0.83	0.400	0.105	( 0.341)	0.295
180	15.00	0.83	0.400	0.104	( 0.341)	0.296
181	15.08	0.80	0.384	0.104	( 0.327)	0.280
182	15.17	0.80	0.384	0.103	( 0.327)	0.281
183	15.25	0.80	0.384	0.103	( 0.327)	0.281
184	15.33	0.77	0.368	0.102	( 0.314)	0.266
185	15.42	0.77	0.368	0.102	( 0.314)	0.266
186	15.50	0.77	0.368	0.101	( 0.314)	0.267
187	15.58	0.63	0.304	0.101	( 0.259)	0.203
188	15.67	0.63	0.304	0.100	( 0.259)	0.204
189	15.75	0.63	0.304	0.100	( 0.259)	0.204
190	15.83	0.63	0.304	0.099	( 0.259)	0.205
191	15.92	0.63	0.304	0.099	( 0.259)	0.205
192	16.00	0.63	0.304	0.098	( 0.259)	0.206
193	16.08	0.13	0.064	( 0.098)	0.055	0.009
194	16.17	0.13	0.064	( 0.097)	0.055	0.009
195	16.25	0.13	0.064	( 0.097)	0.055	0.009
196	16.33	0.13	0.064	( 0.096)	0.055	0.009
197	16.42	0.13	0.064	( 0.096)	0.055	0.009
198	16.50	0.13	0.064	( 0.095)	0.055	0.009
199	16.58	0.10	0.048	( 0.095)	0.041	0.007
200	16.67	0.10	0.048	( 0.094)	0.041	0.007
201	16.75	0.10	0.048	( 0.094)	0.041	0.007
202	16.83	0.10	0.048	( 0.093)	0.041	0.007
203	16.92	0.10	0.048	( 0.093)	0.041	0.007
204	17.00	0.10	0.048	( 0.092)	0.041	0.007
205	17.08	0.17	0.080	( 0.092)	0.068	0.012
206	17.17	0.17	0.080	( 0.091)	0.068	0.012
207	17.25	0.17	0.080	( 0.091)	0.068	0.012
208	17.33	0.17	0.080	( 0.091)	0.068	0.012
209	17.42	0.17	0.080	( 0.090)	0.068	0.012
210	17.50	0.17	0.080	( 0.090)	0.068	0.012
211	17.58	0.17	0.080	( 0.089)	0.068	0.012
212	17.67	0.17	0.080	( 0.089)	0.068	0.012
213	17.75	0.17	0.080	( 0.088)	0.068	0.012
214	17.83	0.13	0.064	( 0.088)	0.055	0.009
215	17.92	0.13	0.064	( 0.087)	0.055	0.009
216	18.00	0.13	0.064	( 0.087)	0.055	0.009
217	18.08	0.13	0.064	( 0.087)	0.055	0.009
218	18.17	0.13	0.064	( 0.086)	0.055	0.009
219	18.25	0.13	0.064	( 0.086)	0.055	0.009
220	18.33	0.13	0.064	( 0.085)	0.055	0.009
221	18.42	0.13	0.064	( 0.085)	0.055	0.009
222	18.50	0.13	0.064	( 0.084)	0.055	0.009
223	18.58	0.10	0.048	( 0.084)	0.041	0.007
224	18.67	0.10	0.048	( 0.084)	0.041	0.007
225	18.75	0.10	0.048	( 0.083)	0.041	0.007
226	18.83	0.07	0.032	( 0.083)	0.027	0.005
227	18.92	0.07	0.032	( 0.082)	0.027	0.005
228	19.00	0.07	0.032	( 0.082)	0.027	0.005
229	19.08	0.10	0.048	( 0.082)	0.041	0.007
230	19.17	0.10	0.048	( 0.081)	0.041	0.007
231	19.25	0.10	0.048	( 0.081)	0.041	0.007
232	19.33	0.13	0.064	( 0.081)	0.055	0.009
233	19.42	0.13	0.064	( 0.080)	0.055	0.009
234	19.50	0.13	0.064	( 0.080)	0.055	0.009
235	19.58	0.10	0.048	( 0.079)	0.041	0.007
236	19.67	0.10	0.048	( 0.079)	0.041	0.007
237	19.75	0.10	0.048	( 0.079)	0.041	0.007
238	19.83	0.07	0.032	( 0.078)	0.027	0.005
239	19.92	0.07	0.032	( 0.078)	0.027	0.005
240	20.00	0.07	0.032	( 0.078)	0.027	0.005
241	20.08	0.10	0.048	( 0.077)	0.041	0.007
242	20.17	0.10	0.048	( 0.077)	0.041	0.007
243	20.25	0.10	0.048	( 0.077)	0.041	0.007
244	20.33	0.10	0.048	( 0.076)	0.041	0.007
245	20.42	0.10	0.048	( 0.076)	0.041	0.007
246	20.50	0.10	0.048	( 0.076)	0.041	0.007

247	20.58	0.10	0.048	( 0.075)	0.041	0.007
248	20.67	0.10	0.048	( 0.075)	0.041	0.007
249	20.75	0.10	0.048	( 0.075)	0.041	0.007
250	20.83	0.07	0.032	( 0.074)	0.027	0.005
251	20.92	0.07	0.032	( 0.074)	0.027	0.005
252	21.00	0.07	0.032	( 0.074)	0.027	0.005
253	21.08	0.10	0.048	( 0.074)	0.041	0.007
254	21.17	0.10	0.048	( 0.073)	0.041	0.007
255	21.25	0.10	0.048	( 0.073)	0.041	0.007
256	21.33	0.07	0.032	( 0.073)	0.027	0.005
257	21.42	0.07	0.032	( 0.072)	0.027	0.005
258	21.50	0.07	0.032	( 0.072)	0.027	0.005
259	21.58	0.10	0.048	( 0.072)	0.041	0.007
260	21.67	0.10	0.048	( 0.072)	0.041	0.007
261	21.75	0.10	0.048	( 0.071)	0.041	0.007
262	21.83	0.07	0.032	( 0.071)	0.027	0.005
263	21.92	0.07	0.032	( 0.071)	0.027	0.005
264	22.00	0.07	0.032	( 0.071)	0.027	0.005
265	22.08	0.10	0.048	( 0.070)	0.041	0.007
266	22.17	0.10	0.048	( 0.070)	0.041	0.007
267	22.25	0.10	0.048	( 0.070)	0.041	0.007
268	22.33	0.07	0.032	( 0.070)	0.027	0.005
269	22.42	0.07	0.032	( 0.070)	0.027	0.005
270	22.50	0.07	0.032	( 0.069)	0.027	0.005
271	22.58	0.07	0.032	( 0.069)	0.027	0.005
272	22.67	0.07	0.032	( 0.069)	0.027	0.005
273	22.75	0.07	0.032	( 0.069)	0.027	0.005
274	22.83	0.07	0.032	( 0.069)	0.027	0.005
275	22.92	0.07	0.032	( 0.068)	0.027	0.005
276	23.00	0.07	0.032	( 0.068)	0.027	0.005
277	23.08	0.07	0.032	( 0.068)	0.027	0.005
278	23.17	0.07	0.032	( 0.068)	0.027	0.005
279	23.25	0.07	0.032	( 0.068)	0.027	0.005
280	23.33	0.07	0.032	( 0.068)	0.027	0.005
281	23.42	0.07	0.032	( 0.067)	0.027	0.005
282	23.50	0.07	0.032	( 0.067)	0.027	0.005
283	23.58	0.07	0.032	( 0.067)	0.027	0.005
284	23.67	0.07	0.032	( 0.067)	0.027	0.005
285	23.75	0.07	0.032	( 0.067)	0.027	0.005
286	23.83	0.07	0.032	( 0.067)	0.027	0.005
287	23.92	0.07	0.032	( 0.067)	0.027	0.005
288	24.00	0.07	0.032	( 0.067)	0.027	0.005

(Loss Rate Not Used)

Sum = 100.0 Sum = 23.6

Flood volume = Effective rainfall 1.97(In)  
times area 1.1(Ac.)/[(In)/(Ft.)] = 0.2(Ac.Ft)  
Total soil loss = 2.03(In)  
Total soil loss = 0.191(Ac.Ft)  
Total rainfall = 4.00(In)  
Flood volume = 8082.7 Cubic Feet  
Total soil loss = 8324.8 Cubic Feet

Peak flow rate of this hydrograph = 0.475(CFS)

24 - H O U R S T O R M

R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0000	0.00	Q				
0+10	0.0000	0.00	Q				
0+15	0.0000	0.00	Q				
0+20	0.0001	0.00	Q				
0+25	0.0001	0.01	Q				
0+30	0.0002	0.01	Q				
0+35	0.0002	0.01	Q				
0+40	0.0003	0.01	Q				

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0+45	0.0003	0.01	Q				
0+50	0.0004	0.01	Q				
0+55	0.0004	0.01	Q				
1+ 0	0.0005	0.01	Q				
1+ 5	0.0006	0.01	Q				
1+10	0.0006	0.01	Q				
1+15	0.0007	0.01	Q				
1+20	0.0007	0.01	Q				
1+25	0.0008	0.01	Q				
1+30	0.0008	0.01	Q				
1+35	0.0009	0.01	Q				
1+40	0.0010	0.01	Q				
1+45	0.0010	0.01	Q				
1+50	0.0011	0.01	Q				
1+55	0.0011	0.01	Q				
2+ 0	0.0012	0.01	Q				
2+ 5	0.0013	0.01	Q				
2+10	0.0013	0.01	Q				
2+15	0.0014	0.01	Q				
2+20	0.0015	0.01	Q				
2+25	0.0016	0.01	Q				
2+30	0.0016	0.01	Q				
2+35	0.0017	0.01	Q				
2+40	0.0018	0.01	Q				
2+45	0.0019	0.01	Q				
2+50	0.0020	0.01	Q				
2+55	0.0021	0.01	Q				
3+ 0	0.0022	0.01	Q				
3+ 5	0.0022	0.01	Q				
3+10	0.0023	0.01	Q				
3+15	0.0024	0.01	Q				
3+20	0.0025	0.01	Q				
3+25	0.0026	0.01	Q				
3+30	0.0027	0.01	Q				
3+35	0.0028	0.01	Q				
3+40	0.0029	0.01	Q				
3+45	0.0030	0.01	Q				
3+50	0.0031	0.01	Q				
3+55	0.0032	0.01	Q				
4+ 0	0.0033	0.02	Q				
4+ 5	0.0034	0.02	Q				
4+10	0.0035	0.02	Q				
4+15	0.0036	0.02	Q				
4+20	0.0037	0.02	Q				
4+25	0.0038	0.02	Q				
4+30	0.0040	0.02	Q				
4+35	0.0041	0.02	Q				
4+40	0.0042	0.02	Q				
4+45	0.0043	0.02	Q				
4+50	0.0045	0.02	Q				
4+55	0.0046	0.02	Q				
5+ 0	0.0047	0.02	QV				
5+ 5	0.0049	0.02	QV				
5+10	0.0050	0.02	QV				
5+15	0.0051	0.02	QV				
5+20	0.0053	0.02	QV				
5+25	0.0054	0.02	QV				
5+30	0.0055	0.02	QV				
5+35	0.0056	0.02	QV				
5+40	0.0058	0.02	QV				
5+45	0.0059	0.02	QV				
5+50	0.0061	0.02	QV				
5+55	0.0062	0.02	QV				
6+ 0	0.0063	0.02	QV				
6+ 5	0.0065	0.02	QV				
6+10	0.0067	0.02	QV				
6+15	0.0068	0.02	QV				
6+20	0.0070	0.02	QV				
6+25	0.0071	0.02	QV				
6+30	0.0073	0.02	QV				
6+35	0.0075	0.02	QV				

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6+40	0.0076	0.03	QV				
6+45	0.0078	0.03	QV				
6+50	0.0080	0.03	QV				
6+55	0.0082	0.03	QV				
7+ 0	0.0084	0.03	QV				
7+ 5	0.0085	0.03	QV				
7+10	0.0087	0.03	QV				
7+15	0.0089	0.03	QV				
7+20	0.0091	0.03	QV				
7+25	0.0093	0.03	Q V				
7+30	0.0095	0.03	Q V				
7+35	0.0097	0.03	Q V				
7+40	0.0099	0.03	Q V				
7+45	0.0101	0.03	Q V				
7+50	0.0104	0.04	Q V				
7+55	0.0107	0.04	Q V				
8+ 0	0.0110	0.05	Q V				
8+ 5	0.0114	0.05	Q V				
8+10	0.0118	0.07	Q V				
8+15	0.0124	0.08	Q V				
8+20	0.0129	0.08	Q V				
8+25	0.0135	0.09	Q V				
8+30	0.0142	0.09	Q V				
8+35	0.0148	0.09	Q V				
8+40	0.0155	0.10	Q V				
8+45	0.0163	0.11	Q V				
8+50	0.0170	0.11	Q V				
8+55	0.0179	0.12	Q V				
9+ 0	0.0187	0.13	Q V				
9+ 5	0.0197	0.13	Q V				
9+10	0.0207	0.15	Q V				
9+15	0.0218	0.16	Q V				
9+20	0.0230	0.17	Q V				
9+25	0.0242	0.18	Q V				
9+30	0.0254	0.18	Q V				
9+35	0.0268	0.19	Q V				
9+40	0.0281	0.20	Q V				
9+45	0.0296	0.21	Q V				
9+50	0.0310	0.21	Q V				
9+55	0.0325	0.22	Q V				
10+ 0	0.0341	0.23	Q V				
10+ 5	0.0356	0.22	Q V				
10+10	0.0369	0.19	Q V				
10+15	0.0380	0.15	Q V				
10+20	0.0389	0.14	Q V				
10+25	0.0399	0.13	Q V				
10+30	0.0408	0.13	Q V				
10+35	0.0417	0.13	Q V				
10+40	0.0428	0.16	Q V				
10+45	0.0440	0.18	Q V				
10+50	0.0454	0.19	Q V				
10+55	0.0467	0.20	Q V				
11+ 0	0.0481	0.20	Q V				
11+ 5	0.0495	0.20	Q V				
11+10	0.0509	0.20	Q V				
11+15	0.0522	0.20	Q V				
11+20	0.0536	0.20	Q V				
11+25	0.0550	0.20	Q V				
11+30	0.0563	0.20	Q V				
11+35	0.0577	0.20	Q V				
11+40	0.0589	0.19	Q V				
11+45	0.0602	0.18	Q V				
11+50	0.0613	0.17	Q V				
11+55	0.0626	0.18	Q V				
12+ 0	0.0638	0.18	Q V				
12+ 5	0.0652	0.19	Q V				
12+10	0.0668	0.23	Q V				
12+15	0.0686	0.27	Q V				
12+20	0.0706	0.29	Q V				
12+25	0.0726	0.30	Q V				
12+30	0.0748	0.31	Q V				

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12+35	0.0770	0.32	Q							
12+40	0.0793	0.34	Q							
12+45	0.0817	0.35	Q							
12+50	0.0842	0.36	Q							
12+55	0.0867	0.37	Q							
13+ 0	0.0893	0.38	Q							
13+ 5	0.0920	0.39	Q							
13+10	0.0949	0.42	Q							
13+15	0.0980	0.45	Q							
13+20	0.1012	0.46	Q							
13+25	0.1044	0.47	Q							
13+30	0.1077	0.47	Q							
13+35	0.1109	0.46	Q							
13+40	0.1137	0.41	Q							
13+45	0.1161	0.35	Q							
13+50	0.1184	0.33	Q							
13+55	0.1206	0.32	Q							
14+ 0	0.1228	0.31	Q							
14+ 5	0.1250	0.31	Q							
14+10	0.1273	0.33	Q							
14+15	0.1297	0.35	Q							
14+20	0.1321	0.36	Q							
14+25	0.1346	0.35	Q							
14+30	0.1370	0.35	Q							
14+35	0.1394	0.35	Q							
14+40	0.1418	0.35	Q							
14+45	0.1442	0.35	Q							
14+50	0.1466	0.35	Q							
14+55	0.1490	0.35	Q							
15+ 0	0.1513	0.34	Q							
15+ 5	0.1537	0.34	Q							
15+10	0.1559	0.33	Q							
15+15	0.1582	0.33	Q							
15+20	0.1604	0.32	Q							
15+25	0.1626	0.32	Q							
15+30	0.1648	0.31	Q							
15+35	0.1669	0.30	Q							
15+40	0.1688	0.28	Q							
15+45	0.1706	0.26	Q							
15+50	0.1723	0.25	Q							
15+55	0.1740	0.25	Q							
16+ 0	0.1757	0.24	Q							
16+ 5	0.1772	0.22	Q							
16+10	0.1783	0.15	Q							
16+15	0.1789	0.09	Q							
16+20	0.1794	0.06	Q							
16+25	0.1797	0.05	Q							
16+30	0.1800	0.04	Q							
16+35	0.1802	0.03	Q							
16+40	0.1804	0.03	Q							
16+45	0.1805	0.02	Q							
16+50	0.1806	0.02	Q							
16+55	0.1807	0.01	Q							
17+ 0	0.1808	0.01	Q							
17+ 5	0.1809	0.01	Q							
17+10	0.1810	0.01	Q							
17+15	0.1810	0.01	Q							
17+20	0.1811	0.01	Q							
17+25	0.1812	0.01	Q							
17+30	0.1813	0.01	Q							
17+35	0.1814	0.01	Q							
17+40	0.1815	0.01	Q							
17+45	0.1816	0.01	Q							
17+50	0.1817	0.01	Q							
17+55	0.1817	0.01	Q							
18+ 0	0.1818	0.01	Q							
18+ 5	0.1819	0.01	Q							
18+10	0.1820	0.01	Q							
18+15	0.1821	0.01	Q							
18+20	0.1821	0.01	Q							
18+25	0.1822	0.01	Q							

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18+30	0.1823	0.01	Q				V
18+35	0.1824	0.01	Q				V
18+40	0.1824	0.01	Q				V
18+45	0.1825	0.01	Q				V
18+50	0.1825	0.01	Q				V
18+55	0.1826	0.01	Q				V
19+ 0	0.1826	0.01	Q				V
19+ 5	0.1827	0.01	Q				V
19+10	0.1827	0.01	Q				V
19+15	0.1828	0.01	Q				V
19+20	0.1828	0.01	Q				V
19+25	0.1829	0.01	Q				V
19+30	0.1830	0.01	Q				V
19+35	0.1830	0.01	Q				V
19+40	0.1831	0.01	Q				V
19+45	0.1832	0.01	Q				V
19+50	0.1832	0.01	Q				V
19+55	0.1833	0.01	Q				V
20+ 0	0.1833	0.01	Q				V
20+ 5	0.1834	0.01	Q				V
20+10	0.1834	0.01	Q				V
20+15	0.1835	0.01	Q				V
20+20	0.1835	0.01	Q				V
20+25	0.1836	0.01	Q				V
20+30	0.1836	0.01	Q				V
20+35	0.1837	0.01	Q				V
20+40	0.1837	0.01	Q				V
20+45	0.1838	0.01	Q				V
20+50	0.1838	0.01	Q				V
20+55	0.1839	0.01	Q				V
21+ 0	0.1839	0.01	Q				V
21+ 5	0.1840	0.01	Q				V
21+10	0.1840	0.01	Q				V
21+15	0.1841	0.01	Q				V
21+20	0.1841	0.01	Q				V
21+25	0.1842	0.01	Q				V
21+30	0.1842	0.01	Q				V
21+35	0.1843	0.01	Q				V
21+40	0.1843	0.01	Q				V
21+45	0.1844	0.01	Q				V
21+50	0.1844	0.01	Q				V
21+55	0.1845	0.01	Q				V
22+ 0	0.1845	0.01	Q				V
22+ 5	0.1845	0.01	Q				V
22+10	0.1846	0.01	Q				V
22+15	0.1846	0.01	Q				V
22+20	0.1847	0.01	Q				V
22+25	0.1847	0.01	Q				V
22+30	0.1848	0.01	Q				V
22+35	0.1848	0.01	Q				V
22+40	0.1849	0.01	Q				V
22+45	0.1849	0.01	Q				V
22+50	0.1849	0.01	Q				V
22+55	0.1850	0.01	Q				V
23+ 0	0.1850	0.01	Q				V
23+ 5	0.1850	0.01	Q				V
23+10	0.1851	0.01	Q				V
23+15	0.1851	0.01	Q				V
23+20	0.1852	0.01	Q				V
23+25	0.1852	0.01	Q				V
23+30	0.1852	0.01	Q				V
23+35	0.1853	0.01	Q				V
23+40	0.1853	0.01	Q				V
23+45	0.1853	0.01	Q				V
23+50	0.1854	0.01	Q				V
23+55	0.1854	0.01	Q				V
24+ 0	0.1855	0.01	Q				V
24+ 5	0.1855	0.01	Q				V
24+10	0.1855	0.00	Q				V
24+15	0.1855	0.00	Q				V
24+20	0.1855	0.00	Q				V

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24+25	0.1855	0.00	Q				V	
24+30	0.1855	0.00	Q				V	
24+35	0.1855	0.00	Q				V	
24+40	0.1855	0.00	Q				V	
24+45	0.1856	0.00	Q				V	
24+50	0.1856	0.00	Q				V	
24+55	0.1856	0.00	Q				V	
25+ 0	0.1856	0.00	Q				V	
25+ 5	0.1856	0.00	Q				V	
25+10	0.1856	0.00	Q				V	

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**DMA B2**

**Post-Project Condition Unit Hydrograph Calculations – 100-Year, 24-Hour Storm Duration**

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Unit Hydrograph Analysis

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014, Version 9.0
Study date 01/27/16 File: ARB2P24100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6279

-----
English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used
English Units used in output format

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KITCHING SUBSTATION POST-PROJECT CONDITION HYDROLOGY
AREA TRIBUTARY TO SOUTH BASIN
UNIT HYDROGRAPH ANALYSIS, 100-YEAR, 24-HOUR STORM EVENT
FILENAME: ARB2P
-----

Drainage Area = 0.47(Ac.) = 0.001 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 0.47(Ac.) = 0.001 Sq. Mi.
USER Entry of lag time in hours
Lag time = 0.174 Hr.
Lag time = 10.43 Min.
25% of lag time = 2.61 Min.
40% of lag time = 4.17 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1] Rainfall(In)[2] Weighting[1\*2]
0.47 1.60 0.75

100 YEAR Area rainfall data:

Area(Ac.)[1] Rainfall(In)[2] Weighting[1\*2]
0.47 4.00 1.88

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.600(In)
Area Averaged 100-Year Rainfall = 4.000(In)

Point rain (area averaged) = 4.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 4.000(In)

Sub-Area Data:
Area(Ac.) Runoff Index Impervious %
0.470 89.00 0.148
Total Area Entered = 0.47(Ac.)

RI RI Infil. Rate Impervious Adj. Infil. Rate Area% F
AMC2 AMC-2 (In/Hr) (Dec.%) (In/Hr) (Dec.) (In/Hr)
89.0 89.0 0.141 0.148 0.123 1.000 0.123
Sum (F) = 0.123

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Area averaged mean soil loss (F) (In/Hr) = 0.123  
 Minimum soil loss rate ((In/Hr)) = 0.061  
 (for 24 hour storm duration)  
 Soil low loss rate (decimal) = 0.782

Unit Hydrograph  
 VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	47.920	5.739
2	0.167	95.841	24.379
3	0.250	143.761	28.931
4	0.333	191.681	13.752
5	0.417	239.601	7.012
6	0.500	287.522	4.841
7	0.583	335.442	3.516
8	0.667	383.362	2.709
9	0.750	431.282	2.021
10	0.833	479.203	1.550
11	0.917	527.123	1.384
12	1.000	575.043	1.064
13	1.083	622.963	0.862
14	1.167	670.884	0.679
15	1.250	718.804	0.510
16	1.333	766.724	0.479
17	1.417	814.644	0.572
		Sum = 100.000	Sum= 0.474

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max   Low	Effective (In/Hr)
1	0.08	0.07	( 0.217)   0.025	0.007
2	0.17	0.07	( 0.216)   0.025	0.007
3	0.25	0.07	( 0.216)   0.025	0.007
4	0.33	0.10	( 0.215)   0.038	0.010
5	0.42	0.10	( 0.214)   0.038	0.010
6	0.50	0.10	( 0.213)   0.038	0.010
7	0.58	0.10	( 0.212)   0.038	0.010
8	0.67	0.10	( 0.211)   0.038	0.010
9	0.75	0.10	( 0.211)   0.038	0.010
10	0.83	0.13	( 0.210)   0.050	0.014
11	0.92	0.13	( 0.209)   0.050	0.014
12	1.00	0.13	( 0.208)   0.050	0.014
13	1.08	0.10	( 0.207)   0.038	0.010
14	1.17	0.10	( 0.206)   0.038	0.010
15	1.25	0.10	( 0.206)   0.038	0.010
16	1.33	0.10	( 0.205)   0.038	0.010
17	1.42	0.10	( 0.204)   0.038	0.010
18	1.50	0.10	( 0.203)   0.038	0.010
19	1.58	0.10	( 0.202)   0.038	0.010
20	1.67	0.10	( 0.202)   0.038	0.010
21	1.75	0.10	( 0.201)   0.038	0.010
22	1.83	0.13	( 0.200)   0.050	0.014
23	1.92	0.13	( 0.199)   0.050	0.014
24	2.00	0.13	( 0.198)   0.050	0.014
25	2.08	0.13	( 0.198)   0.050	0.014
26	2.17	0.13	( 0.197)   0.050	0.014
27	2.25	0.13	( 0.196)   0.050	0.014
28	2.33	0.13	( 0.195)   0.050	0.014
29	2.42	0.13	( 0.194)   0.050	0.014
30	2.50	0.13	( 0.194)   0.050	0.014
31	2.58	0.17	( 0.193)   0.063	0.017

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32	2.67	0.17	0.080	( 0.192)	0.063	0.017
33	2.75	0.17	0.080	( 0.191)	0.063	0.017
34	2.83	0.17	0.080	( 0.190)	0.063	0.017
35	2.92	0.17	0.080	( 0.190)	0.063	0.017
36	3.00	0.17	0.080	( 0.189)	0.063	0.017
37	3.08	0.17	0.080	( 0.188)	0.063	0.017
38	3.17	0.17	0.080	( 0.187)	0.063	0.017
39	3.25	0.17	0.080	( 0.187)	0.063	0.017
40	3.33	0.17	0.080	( 0.186)	0.063	0.017
41	3.42	0.17	0.080	( 0.185)	0.063	0.017
42	3.50	0.17	0.080	( 0.184)	0.063	0.017
43	3.58	0.17	0.080	( 0.183)	0.063	0.017
44	3.67	0.17	0.080	( 0.183)	0.063	0.017
45	3.75	0.17	0.080	( 0.182)	0.063	0.017
46	3.83	0.20	0.096	( 0.181)	0.075	0.021
47	3.92	0.20	0.096	( 0.180)	0.075	0.021
48	4.00	0.20	0.096	( 0.180)	0.075	0.021
49	4.08	0.20	0.096	( 0.179)	0.075	0.021
50	4.17	0.20	0.096	( 0.178)	0.075	0.021
51	4.25	0.20	0.096	( 0.177)	0.075	0.021
52	4.33	0.23	0.112	( 0.177)	0.088	0.024
53	4.42	0.23	0.112	( 0.176)	0.088	0.024
54	4.50	0.23	0.112	( 0.175)	0.088	0.024
55	4.58	0.23	0.112	( 0.174)	0.088	0.024
56	4.67	0.23	0.112	( 0.174)	0.088	0.024
57	4.75	0.23	0.112	( 0.173)	0.088	0.024
58	4.83	0.27	0.128	( 0.172)	0.100	0.028
59	4.92	0.27	0.128	( 0.171)	0.100	0.028
60	5.00	0.27	0.128	( 0.171)	0.100	0.028
61	5.08	0.20	0.096	( 0.170)	0.075	0.021
62	5.17	0.20	0.096	( 0.169)	0.075	0.021
63	5.25	0.20	0.096	( 0.168)	0.075	0.021
64	5.33	0.23	0.112	( 0.168)	0.088	0.024
65	5.42	0.23	0.112	( 0.167)	0.088	0.024
66	5.50	0.23	0.112	( 0.166)	0.088	0.024
67	5.58	0.27	0.128	( 0.165)	0.100	0.028
68	5.67	0.27	0.128	( 0.165)	0.100	0.028
69	5.75	0.27	0.128	( 0.164)	0.100	0.028
70	5.83	0.27	0.128	( 0.163)	0.100	0.028
71	5.92	0.27	0.128	( 0.163)	0.100	0.028
72	6.00	0.27	0.128	( 0.162)	0.100	0.028
73	6.08	0.30	0.144	( 0.161)	0.113	0.031
74	6.17	0.30	0.144	( 0.160)	0.113	0.031
75	6.25	0.30	0.144	( 0.160)	0.113	0.031
76	6.33	0.30	0.144	( 0.159)	0.113	0.031
77	6.42	0.30	0.144	( 0.158)	0.113	0.031
78	6.50	0.30	0.144	( 0.158)	0.113	0.031
79	6.58	0.33	0.160	( 0.157)	0.125	0.035
80	6.67	0.33	0.160	( 0.156)	0.125	0.035
81	6.75	0.33	0.160	( 0.155)	0.125	0.035
82	6.83	0.33	0.160	( 0.155)	0.125	0.035
83	6.92	0.33	0.160	( 0.154)	0.125	0.035
84	7.00	0.33	0.160	( 0.153)	0.125	0.035
85	7.08	0.33	0.160	( 0.153)	0.125	0.035
86	7.17	0.33	0.160	( 0.152)	0.125	0.035
87	7.25	0.33	0.160	( 0.151)	0.125	0.035
88	7.33	0.37	0.176	( 0.151)	0.138	0.038
89	7.42	0.37	0.176	( 0.150)	0.138	0.038
90	7.50	0.37	0.176	( 0.149)	0.138	0.038
91	7.58	0.40	0.192	0.148	( 0.150)	0.044
92	7.67	0.40	0.192	0.148	( 0.150)	0.044
93	7.75	0.40	0.192	0.147	( 0.150)	0.045
94	7.83	0.43	0.208	0.146	( 0.163)	0.062
95	7.92	0.43	0.208	0.146	( 0.163)	0.062
96	8.00	0.43	0.208	0.145	( 0.163)	0.063
97	8.08	0.50	0.240	0.144	( 0.188)	0.096
98	8.17	0.50	0.240	0.144	( 0.188)	0.096
99	8.25	0.50	0.240	0.143	( 0.188)	0.097
100	8.33	0.50	0.240	0.142	( 0.188)	0.098
101	8.42	0.50	0.240	0.142	( 0.188)	0.098
102	8.50	0.50	0.240	0.141	( 0.188)	0.099

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103	8.58	0.53	0.256	0.140	( 0.200)	0.116
104	8.67	0.53	0.256	0.140	( 0.200)	0.116
105	8.75	0.53	0.256	0.139	( 0.200)	0.117
106	8.83	0.57	0.272	0.138	( 0.213)	0.134
107	8.92	0.57	0.272	0.138	( 0.213)	0.134
108	9.00	0.57	0.272	0.137	( 0.213)	0.135
109	9.08	0.63	0.304	0.136	( 0.238)	0.168
110	9.17	0.63	0.304	0.136	( 0.238)	0.168
111	9.25	0.63	0.304	0.135	( 0.238)	0.169
112	9.33	0.67	0.320	0.135	( 0.250)	0.185
113	9.42	0.67	0.320	0.134	( 0.250)	0.186
114	9.50	0.67	0.320	0.133	( 0.250)	0.187
115	9.58	0.70	0.336	0.133	( 0.263)	0.203
116	9.67	0.70	0.336	0.132	( 0.263)	0.204
117	9.75	0.70	0.336	0.131	( 0.263)	0.205
118	9.83	0.73	0.352	0.131	( 0.275)	0.221
119	9.92	0.73	0.352	0.130	( 0.275)	0.222
120	10.00	0.73	0.352	0.129	( 0.275)	0.223
121	10.08	0.50	0.240	0.129	( 0.188)	0.111
122	10.17	0.50	0.240	0.128	( 0.188)	0.112
123	10.25	0.50	0.240	0.128	( 0.188)	0.112
124	10.33	0.50	0.240	0.127	( 0.188)	0.113
125	10.42	0.50	0.240	0.126	( 0.188)	0.114
126	10.50	0.50	0.240	0.126	( 0.188)	0.114
127	10.58	0.67	0.320	0.125	( 0.250)	0.195
128	10.67	0.67	0.320	0.124	( 0.250)	0.196
129	10.75	0.67	0.320	0.124	( 0.250)	0.196
130	10.83	0.67	0.320	0.123	( 0.250)	0.197
131	10.92	0.67	0.320	0.123	( 0.250)	0.197
132	11.00	0.67	0.320	0.122	( 0.250)	0.198
133	11.08	0.63	0.304	0.121	( 0.238)	0.183
134	11.17	0.63	0.304	0.121	( 0.238)	0.183
135	11.25	0.63	0.304	0.120	( 0.238)	0.184
136	11.33	0.63	0.304	0.120	( 0.238)	0.184
137	11.42	0.63	0.304	0.119	( 0.238)	0.185
138	11.50	0.63	0.304	0.118	( 0.238)	0.186
139	11.58	0.57	0.272	0.118	( 0.213)	0.154
140	11.67	0.57	0.272	0.117	( 0.213)	0.155
141	11.75	0.57	0.272	0.117	( 0.213)	0.155
142	11.83	0.60	0.288	0.116	( 0.225)	0.172
143	11.92	0.60	0.288	0.116	( 0.225)	0.172
144	12.00	0.60	0.288	0.115	( 0.225)	0.173
145	12.08	0.83	0.400	0.114	( 0.313)	0.286
146	12.17	0.83	0.400	0.114	( 0.313)	0.286
147	12.25	0.83	0.400	0.113	( 0.313)	0.287
148	12.33	0.87	0.416	0.113	( 0.325)	0.303
149	12.42	0.87	0.416	0.112	( 0.325)	0.304
150	12.50	0.87	0.416	0.112	( 0.325)	0.304
151	12.58	0.93	0.448	0.111	( 0.350)	0.337
152	12.67	0.93	0.448	0.110	( 0.350)	0.338
153	12.75	0.93	0.448	0.110	( 0.350)	0.338
154	12.83	0.97	0.464	0.109	( 0.363)	0.355
155	12.92	0.97	0.464	0.109	( 0.363)	0.355
156	13.00	0.97	0.464	0.108	( 0.363)	0.356
157	13.08	1.13	0.544	0.108	( 0.425)	0.436
158	13.17	1.13	0.544	0.107	( 0.425)	0.437
159	13.25	1.13	0.544	0.107	( 0.425)	0.437
160	13.33	1.13	0.544	0.106	( 0.425)	0.438
161	13.42	1.13	0.544	0.106	( 0.425)	0.438
162	13.50	1.13	0.544	0.105	( 0.425)	0.439
163	13.58	0.77	0.368	0.104	( 0.288)	0.264
164	13.67	0.77	0.368	0.104	( 0.288)	0.264
165	13.75	0.77	0.368	0.103	( 0.288)	0.265
166	13.83	0.77	0.368	0.103	( 0.288)	0.265
167	13.92	0.77	0.368	0.102	( 0.288)	0.266
168	14.00	0.77	0.368	0.102	( 0.288)	0.266
169	14.08	0.90	0.432	0.101	( 0.338)	0.331
170	14.17	0.90	0.432	0.101	( 0.338)	0.331
171	14.25	0.90	0.432	0.100	( 0.338)	0.332
172	14.33	0.87	0.416	0.100	( 0.325)	0.316
173	14.42	0.87	0.416	0.099	( 0.325)	0.317

174	14.50	0.87	0.416	0.099	( 0.325)	0.317
175	14.58	0.87	0.416	0.098	( 0.325)	0.318
176	14.67	0.87	0.416	0.098	( 0.325)	0.318
177	14.75	0.87	0.416	0.097	( 0.325)	0.319
178	14.83	0.83	0.400	0.097	( 0.313)	0.303
179	14.92	0.83	0.400	0.096	( 0.313)	0.304
180	15.00	0.83	0.400	0.096	( 0.313)	0.304
181	15.08	0.80	0.384	0.095	( 0.300)	0.289
182	15.17	0.80	0.384	0.095	( 0.300)	0.289
183	15.25	0.80	0.384	0.094	( 0.300)	0.290
184	15.33	0.77	0.368	0.094	( 0.288)	0.274
185	15.42	0.77	0.368	0.093	( 0.288)	0.275
186	15.50	0.77	0.368	0.093	( 0.288)	0.275
187	15.58	0.63	0.304	0.092	( 0.238)	0.212
188	15.67	0.63	0.304	0.092	( 0.238)	0.212
189	15.75	0.63	0.304	0.091	( 0.238)	0.213
190	15.83	0.63	0.304	0.091	( 0.238)	0.213
191	15.92	0.63	0.304	0.090	( 0.238)	0.214
192	16.00	0.63	0.304	0.090	( 0.238)	0.214
193	16.08	0.13	0.064	( 0.090)	0.050	0.014
194	16.17	0.13	0.064	( 0.089)	0.050	0.014
195	16.25	0.13	0.064	( 0.089)	0.050	0.014
196	16.33	0.13	0.064	( 0.088)	0.050	0.014
197	16.42	0.13	0.064	( 0.088)	0.050	0.014
198	16.50	0.13	0.064	( 0.087)	0.050	0.014
199	16.58	0.10	0.048	( 0.087)	0.038	0.010
200	16.67	0.10	0.048	( 0.086)	0.038	0.010
201	16.75	0.10	0.048	( 0.086)	0.038	0.010
202	16.83	0.10	0.048	( 0.086)	0.038	0.010
203	16.92	0.10	0.048	( 0.085)	0.038	0.010
204	17.00	0.10	0.048	( 0.085)	0.038	0.010
205	17.08	0.17	0.080	( 0.084)	0.063	0.017
206	17.17	0.17	0.080	( 0.084)	0.063	0.017
207	17.25	0.17	0.080	( 0.083)	0.063	0.017
208	17.33	0.17	0.080	( 0.083)	0.063	0.017
209	17.42	0.17	0.080	( 0.083)	0.063	0.017
210	17.50	0.17	0.080	( 0.082)	0.063	0.017
211	17.58	0.17	0.080	( 0.082)	0.063	0.017
212	17.67	0.17	0.080	( 0.081)	0.063	0.017
213	17.75	0.17	0.080	( 0.081)	0.063	0.017
214	17.83	0.13	0.064	( 0.081)	0.050	0.014
215	17.92	0.13	0.064	( 0.080)	0.050	0.014
216	18.00	0.13	0.064	( 0.080)	0.050	0.014
217	18.08	0.13	0.064	( 0.079)	0.050	0.014
218	18.17	0.13	0.064	( 0.079)	0.050	0.014
219	18.25	0.13	0.064	( 0.079)	0.050	0.014
220	18.33	0.13	0.064	( 0.078)	0.050	0.014
221	18.42	0.13	0.064	( 0.078)	0.050	0.014
222	18.50	0.13	0.064	( 0.077)	0.050	0.014
223	18.58	0.10	0.048	( 0.077)	0.038	0.010
224	18.67	0.10	0.048	( 0.077)	0.038	0.010
225	18.75	0.10	0.048	( 0.076)	0.038	0.010
226	18.83	0.07	0.032	( 0.076)	0.025	0.007
227	18.92	0.07	0.032	( 0.076)	0.025	0.007
228	19.00	0.07	0.032	( 0.075)	0.025	0.007
229	19.08	0.10	0.048	( 0.075)	0.038	0.010
230	19.17	0.10	0.048	( 0.075)	0.038	0.010
231	19.25	0.10	0.048	( 0.074)	0.038	0.010
232	19.33	0.13	0.064	( 0.074)	0.050	0.014
233	19.42	0.13	0.064	( 0.073)	0.050	0.014
234	19.50	0.13	0.064	( 0.073)	0.050	0.014
235	19.58	0.10	0.048	( 0.073)	0.038	0.010
236	19.67	0.10	0.048	( 0.072)	0.038	0.010
237	19.75	0.10	0.048	( 0.072)	0.038	0.010
238	19.83	0.07	0.032	( 0.072)	0.025	0.007
239	19.92	0.07	0.032	( 0.071)	0.025	0.007
240	20.00	0.07	0.032	( 0.071)	0.025	0.007
241	20.08	0.10	0.048	( 0.071)	0.038	0.010
242	20.17	0.10	0.048	( 0.071)	0.038	0.010
243	20.25	0.10	0.048	( 0.070)	0.038	0.010
244	20.33	0.10	0.048	( 0.070)	0.038	0.010

245	20.42	0.10	0.048	( 0.070)	0.038	0.010
246	20.50	0.10	0.048	( 0.069)	0.038	0.010
247	20.58	0.10	0.048	( 0.069)	0.038	0.010
248	20.67	0.10	0.048	( 0.069)	0.038	0.010
249	20.75	0.10	0.048	( 0.068)	0.038	0.010
250	20.83	0.07	0.032	( 0.068)	0.025	0.007
251	20.92	0.07	0.032	( 0.068)	0.025	0.007
252	21.00	0.07	0.032	( 0.068)	0.025	0.007
253	21.08	0.10	0.048	( 0.067)	0.038	0.010
254	21.17	0.10	0.048	( 0.067)	0.038	0.010
255	21.25	0.10	0.048	( 0.067)	0.038	0.010
256	21.33	0.07	0.032	( 0.067)	0.025	0.007
257	21.42	0.07	0.032	( 0.066)	0.025	0.007
258	21.50	0.07	0.032	( 0.066)	0.025	0.007
259	21.58	0.10	0.048	( 0.066)	0.038	0.010
260	21.67	0.10	0.048	( 0.066)	0.038	0.010
261	21.75	0.10	0.048	( 0.065)	0.038	0.010
262	21.83	0.07	0.032	( 0.065)	0.025	0.007
263	21.92	0.07	0.032	( 0.065)	0.025	0.007
264	22.00	0.07	0.032	( 0.065)	0.025	0.007
265	22.08	0.10	0.048	( 0.064)	0.038	0.010
266	22.17	0.10	0.048	( 0.064)	0.038	0.010
267	22.25	0.10	0.048	( 0.064)	0.038	0.010
268	22.33	0.07	0.032	( 0.064)	0.025	0.007
269	22.42	0.07	0.032	( 0.064)	0.025	0.007
270	22.50	0.07	0.032	( 0.064)	0.025	0.007
271	22.58	0.07	0.032	( 0.063)	0.025	0.007
272	22.67	0.07	0.032	( 0.063)	0.025	0.007
273	22.75	0.07	0.032	( 0.063)	0.025	0.007
274	22.83	0.07	0.032	( 0.063)	0.025	0.007
275	22.92	0.07	0.032	( 0.063)	0.025	0.007
276	23.00	0.07	0.032	( 0.062)	0.025	0.007
277	23.08	0.07	0.032	( 0.062)	0.025	0.007
278	23.17	0.07	0.032	( 0.062)	0.025	0.007
279	23.25	0.07	0.032	( 0.062)	0.025	0.007
280	23.33	0.07	0.032	( 0.062)	0.025	0.007
281	23.42	0.07	0.032	( 0.062)	0.025	0.007
282	23.50	0.07	0.032	( 0.062)	0.025	0.007
283	23.58	0.07	0.032	( 0.062)	0.025	0.007
284	23.67	0.07	0.032	( 0.062)	0.025	0.007
285	23.75	0.07	0.032	( 0.061)	0.025	0.007
286	23.83	0.07	0.032	( 0.061)	0.025	0.007
287	23.92	0.07	0.032	( 0.061)	0.025	0.007
288	24.00	0.07	0.032	( 0.061)	0.025	0.007

(Loss Rate Not Used)

Sum = 100.0 Sum = 25.7

Flood volume = Effective rainfall 2.14(In)  
times area 0.5(Ac.)/[ (In)/(Ft.) ] = 0.1(Ac.Ft)  
Total soil loss = 1.86(In)  
Total soil loss = 0.073(Ac.Ft)  
Total rainfall = 4.00(In)  
Flood volume = 3650.0 Cubic Feet  
Total soil loss = 3174.4 Cubic Feet

-----  
Peak flow rate of this hydrograph = 0.200(CFS)  
-----

+++++

24 - H O U R S T O R M  
R u n o f f H y d r o g r a p h

-----  
Hydrograph in 5 Minute intervals ((CFS))  
-----

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0000	0.00	Q				
0+10	0.0000	0.00	Q				
0+15	0.0000	0.00	Q				
0+20	0.0000	0.00	Q				
0+25	0.0001	0.00	Q				
0+30	0.0001	0.00	Q				

0+35	0.0001	0.00	Q
0+40	0.0001	0.00	Q
0+45	0.0002	0.00	Q
0+50	0.0002	0.00	Q
0+55	0.0002	0.01	Q
1+ 0	0.0003	0.01	Q
1+ 5	0.0003	0.01	Q
1+10	0.0004	0.01	Q
1+15	0.0004	0.01	Q
1+20	0.0004	0.01	Q
1+25	0.0005	0.01	Q
1+30	0.0005	0.01	Q
1+35	0.0005	0.01	Q
1+40	0.0006	0.01	Q
1+45	0.0006	0.01	Q
1+50	0.0006	0.01	Q
1+55	0.0007	0.01	Q
2+ 0	0.0007	0.01	Q
2+ 5	0.0008	0.01	Q
2+10	0.0008	0.01	Q
2+15	0.0009	0.01	Q
2+20	0.0009	0.01	Q
2+25	0.0009	0.01	Q
2+30	0.0010	0.01	Q
2+35	0.0010	0.01	Q
2+40	0.0011	0.01	Q
2+45	0.0011	0.01	Q
2+50	0.0012	0.01	Q
2+55	0.0012	0.01	Q
3+ 0	0.0013	0.01	Q
3+ 5	0.0014	0.01	Q
3+10	0.0014	0.01	Q
3+15	0.0015	0.01	Q
3+20	0.0015	0.01	Q
3+25	0.0016	0.01	Q
3+30	0.0016	0.01	Q
3+35	0.0017	0.01	Q
3+40	0.0017	0.01	Q
3+45	0.0018	0.01	Q
3+50	0.0019	0.01	Q
3+55	0.0019	0.01	Q
4+ 0	0.0020	0.01	Q
4+ 5	0.0021	0.01	Q
4+10	0.0021	0.01	QV
4+15	0.0022	0.01	QV
4+20	0.0023	0.01	QV
4+25	0.0023	0.01	QV
4+30	0.0024	0.01	QV
4+35	0.0025	0.01	QV
4+40	0.0026	0.01	QV
4+45	0.0026	0.01	QV
4+50	0.0027	0.01	QV
4+55	0.0028	0.01	QV
5+ 0	0.0029	0.01	QV
5+ 5	0.0030	0.01	QV
5+10	0.0030	0.01	QV
5+15	0.0031	0.01	QV
5+20	0.0032	0.01	QV
5+25	0.0033	0.01	QV
5+30	0.0033	0.01	QV
5+35	0.0034	0.01	QV
5+40	0.0035	0.01	QV
5+45	0.0036	0.01	QV
5+50	0.0037	0.01	QV
5+55	0.0038	0.01	QV
6+ 0	0.0039	0.01	QV
6+ 5	0.0040	0.01	QV
6+10	0.0040	0.01	QV
6+15	0.0041	0.01	QV
6+20	0.0042	0.01	Q V
6+25	0.0043	0.01	Q V

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6+30	0.0044	0.01	Q	V				
6+35	0.0045	0.01	Q	V				
6+40	0.0046	0.02	Q	V				
6+45	0.0048	0.02	Q	V				
6+50	0.0049	0.02	Q	V				
6+55	0.0050	0.02	Q	V				
7+ 0	0.0051	0.02	Q	V				
7+ 5	0.0052	0.02	Q	V				
7+10	0.0053	0.02	Q	V				
7+15	0.0054	0.02	Q	V				
7+20	0.0055	0.02	Q	V				
7+25	0.0057	0.02	Q	V				
7+30	0.0058	0.02	Q	V				
7+35	0.0059	0.02	Q	V				
7+40	0.0060	0.02	Q	V				
7+45	0.0062	0.02	Q	V				
7+50	0.0063	0.02	Q	V				
7+55	0.0065	0.02	Q	V				
8+ 0	0.0066	0.03	Q	V				
8+ 5	0.0068	0.03	Q	V				
8+10	0.0071	0.03	Q	V				
8+15	0.0073	0.04	Q	V				
8+20	0.0076	0.04	Q	V				
8+25	0.0079	0.04	Q	V				
8+30	0.0082	0.04	Q	V				
8+35	0.0085	0.04	Q	V				
8+40	0.0088	0.05	Q	V				
8+45	0.0091	0.05	Q	V				
8+50	0.0095	0.05	Q	V				
8+55	0.0099	0.06	Q	V				
9+ 0	0.0103	0.06	Q	V				
9+ 5	0.0107	0.06	Q	V				
9+10	0.0112	0.07	Q	V				
9+15	0.0116	0.07	Q	V				
9+20	0.0122	0.07	Q	V				
9+25	0.0127	0.08	Q	V				
9+30	0.0132	0.08	Q	V				
9+35	0.0138	0.08	Q	V				
9+40	0.0144	0.09	Q	V				
9+45	0.0150	0.09	Q	V				
9+50	0.0157	0.09	Q	V				
9+55	0.0163	0.10	Q	V				
10+ 0	0.0170	0.10	Q	V				
10+ 5	0.0177	0.10	Q	V				
10+10	0.0183	0.09	Q	V				
10+15	0.0188	0.07	Q	V				
10+20	0.0192	0.07	Q	V				
10+25	0.0197	0.06	Q	V				
10+30	0.0201	0.06	Q	V				
10+35	0.0205	0.06	Q	V				
10+40	0.0210	0.07	Q	V				
10+45	0.0215	0.08	Q	V				
10+50	0.0221	0.08	Q	V				
10+55	0.0227	0.09	Q	V				
11+ 0	0.0233	0.09	Q	V				
11+ 5	0.0240	0.09	Q	V				
11+10	0.0246	0.09	Q	V				
11+15	0.0252	0.09	Q	V				
11+20	0.0258	0.09	Q	V				
11+25	0.0264	0.09	Q	V				
11+30	0.0270	0.09	Q	V				
11+35	0.0276	0.09	Q	V				
11+40	0.0281	0.08	Q	V				
11+45	0.0287	0.08	Q	V				
11+50	0.0292	0.08	Q	V				
11+55	0.0298	0.08	Q	V				
12+ 0	0.0303	0.08	Q	V				
12+ 5	0.0309	0.08	Q	V				
12+10	0.0316	0.10	Q	V				
12+15	0.0323	0.11	Q	V				
12+20	0.0332	0.12	Q	V				

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12+25	0.0341	0.13	Q	V			
12+30	0.0350	0.13	Q	V			
12+35	0.0359	0.14	Q	V			
12+40	0.0369	0.14	Q	V			
12+45	0.0379	0.15	Q	V			
12+50	0.0389	0.15	Q	V			
12+55	0.0400	0.16	Q	V			
13+ 0	0.0411	0.16	Q	V			
13+ 5	0.0423	0.16	Q	V			
13+10	0.0435	0.18	Q	V			
13+15	0.0448	0.19	Q	V			
13+20	0.0461	0.19	Q	V			
13+25	0.0475	0.20	Q	V			
13+30	0.0488	0.20	Q	V			
13+35	0.0502	0.20	Q	V			
13+40	0.0514	0.18	Q	V			
13+45	0.0525	0.16	Q	V			
13+50	0.0535	0.15	Q	V			
13+55	0.0545	0.14	Q	V			
14+ 0	0.0554	0.14	Q	V			
14+ 5	0.0564	0.14	Q	V			
14+10	0.0573	0.14	Q	V			
14+15	0.0584	0.15	Q	V			
14+20	0.0594	0.15	Q	V			
14+25	0.0605	0.15	Q	V			
14+30	0.0615	0.15	Q	V			
14+35	0.0625	0.15	Q	V			
14+40	0.0636	0.15	Q	V			
14+45	0.0646	0.15	Q	V			
14+50	0.0656	0.15	Q	V			
14+55	0.0666	0.15	Q	V			
15+ 0	0.0677	0.15	Q	V			
15+ 5	0.0687	0.15	Q	V			
15+10	0.0696	0.14	Q	V			
15+15	0.0706	0.14	Q	V			
15+20	0.0716	0.14	Q	V			
15+25	0.0725	0.14	Q	V			
15+30	0.0734	0.13	Q	V			
15+35	0.0743	0.13	Q	V			
15+40	0.0752	0.12	Q	V			
15+45	0.0760	0.11	Q	V			
15+50	0.0767	0.11	Q	V			
15+55	0.0775	0.11	Q	V			
16+ 0	0.0782	0.11	Q	V			
16+ 5	0.0789	0.10	Q	V			
16+10	0.0794	0.08	Q	V			
16+15	0.0798	0.05	Q	V			
16+20	0.0800	0.03	Q	V			
16+25	0.0802	0.03	Q	V			
16+30	0.0803	0.02	Q	V			
16+35	0.0805	0.02	Q	V			
16+40	0.0806	0.02	Q	V			
16+45	0.0806	0.01	Q	V			
16+50	0.0807	0.01	Q	V			
16+55	0.0808	0.01	Q	V			
17+ 0	0.0808	0.01	Q	V			
17+ 5	0.0809	0.01	Q	V			
17+10	0.0809	0.01	Q	V			
17+15	0.0810	0.01	Q	V			
17+20	0.0811	0.01	Q	V			
17+25	0.0811	0.01	Q	V			
17+30	0.0812	0.01	Q	V			
17+35	0.0812	0.01	Q	V			
17+40	0.0813	0.01	Q	V			
17+45	0.0813	0.01	Q	V			
17+50	0.0814	0.01	Q	V			
17+55	0.0814	0.01	Q	V			
18+ 0	0.0815	0.01	Q	V			
18+ 5	0.0815	0.01	Q	V			
18+10	0.0816	0.01	Q	V			
18+15	0.0816	0.01	Q	V			

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18+20	0.0817	0.01	Q				V
18+25	0.0817	0.01	Q				V
18+30	0.0818	0.01	Q				V
18+35	0.0818	0.01	Q				V
18+40	0.0819	0.01	Q				V
18+45	0.0819	0.01	Q				V
18+50	0.0819	0.01	Q				V
18+55	0.0820	0.00	Q				V
19+ 0	0.0820	0.00	Q				V
19+ 5	0.0820	0.00	Q				V
19+10	0.0820	0.00	Q				V
19+15	0.0821	0.00	Q				V
19+20	0.0821	0.00	Q				V
19+25	0.0822	0.01	Q				V
19+30	0.0822	0.01	Q				V
19+35	0.0822	0.01	Q				V
19+40	0.0823	0.01	Q				V
19+45	0.0823	0.01	Q				V
19+50	0.0823	0.01	Q				V
19+55	0.0824	0.00	Q				V
20+ 0	0.0824	0.00	Q				V
20+ 5	0.0824	0.00	Q				V
20+10	0.0825	0.00	Q				V
20+15	0.0825	0.00	Q				V
20+20	0.0825	0.00	Q				V
20+25	0.0826	0.00	Q				V
20+30	0.0826	0.00	Q				V
20+35	0.0826	0.00	Q				V
20+40	0.0827	0.00	Q				V
20+45	0.0827	0.00	Q				V
20+50	0.0827	0.00	Q				V
20+55	0.0828	0.00	Q				V
21+ 0	0.0828	0.00	Q				V
21+ 5	0.0828	0.00	Q				V
21+10	0.0828	0.00	Q				V
21+15	0.0829	0.00	Q				V
21+20	0.0829	0.00	Q				V
21+25	0.0829	0.00	Q				V
21+30	0.0830	0.00	Q				V
21+35	0.0830	0.00	Q				V
21+40	0.0830	0.00	Q				V
21+45	0.0830	0.00	Q				V
21+50	0.0831	0.00	Q				V
21+55	0.0831	0.00	Q				V
22+ 0	0.0831	0.00	Q				V
22+ 5	0.0832	0.00	Q				V
22+10	0.0832	0.00	Q				V
22+15	0.0832	0.00	Q				V
22+20	0.0832	0.00	Q				V
22+25	0.0833	0.00	Q				V
22+30	0.0833	0.00	Q				V
22+35	0.0833	0.00	Q				V
22+40	0.0834	0.00	Q				V
22+45	0.0834	0.00	Q				V
22+50	0.0834	0.00	Q				V
22+55	0.0834	0.00	Q				V
23+ 0	0.0834	0.00	Q				V
23+ 5	0.0835	0.00	Q				V
23+10	0.0835	0.00	Q				V
23+15	0.0835	0.00	Q				V
23+20	0.0835	0.00	Q				V
23+25	0.0836	0.00	Q				V
23+30	0.0836	0.00	Q				V
23+35	0.0836	0.00	Q				V
23+40	0.0836	0.00	Q				V
23+45	0.0837	0.00	Q				V
23+50	0.0837	0.00	Q				V
23+55	0.0837	0.00	Q				V
24+ 0	0.0837	0.00	Q				V
24+ 5	0.0837	0.00	Q				V
24+10	0.0838	0.00	Q				V

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24+15	0.0838	0.00	Q				V	
24+20	0.0838	0.00	Q				V	
24+25	0.0838	0.00	Q				V	
24+30	0.0838	0.00	Q				V	
24+35	0.0838	0.00	Q				V	
24+40	0.0838	0.00	Q				V	
24+45	0.0838	0.00	Q				V	
24+50	0.0838	0.00	Q				V	
24+55	0.0838	0.00	Q				V	
25+ 0	0.0838	0.00	Q				V	
25+ 5	0.0838	0.00	Q				V	
25+10	0.0838	0.00	Q				V	
25+15	0.0838	0.00	Q				V	
25+20	0.0838	0.00	Q				V	

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# Infiltration Trench Storage Volume Spreadsheets

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

**INFILTRATION TRENCH B1 - SURFACE STORAGE VOLUME**

Contour Elevation	Contour Area (sf)	Contour Area (ac)	Contour Interval Volume (ac-ft)	Total Basin Volume (ac-ft)	Total Basin Volume (cu.ft.)
1463.5	2231.5	0.051		0	0
			0.026		
1464	2242.2	0.051		0.026	1118.419
			0.061		
1465	3064.02	0.070		0.086	3760.868
			0.081		
1466	4013.82	0.092		0.167	7289.119
			0.104		
1467	5091.63	0.117		0.272	11831.174
			0.058		
1467.5	5075.25	0.117		0.330	14372.893

**INFILTRATION TRENCH B1 - GRAVEL TRENCH STORAGE VOLUME**

Bottom Surface Area = 2231.5 sq. ft.  
 Gravel Trench Depth = 1 ft.  
 Void Ratio = 0.4

Gravel Trench Storage Volume = 893 cu. ft.

Total Infiltration Trench Storage Volume = 15,266 cu. ft.

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**INFILTRATION TRENCH B2 - SURFACE STORAGE VOLUME**

Contour Elevation	Contour Area (sf)	Contour Area (ac)	Contour Interval Volume (ac-ft)	Total Basin Volume (ac-ft)	Total Basin Volume (cu.ft.)
1464.5	716.0	0.016		0	0
			0.011		
1465	1295.4	0.030		0.011	495.756
			0.037		
1466	1968.75	0.045		0.049	2116.130
			0.054		
1467	2770.11	0.064		0.103	4474.186
			0.032		
1467.5	2770.11	0.064		0.135	5859.241

**INFILTRATION TRENCH B2 - GRAVEL TRENCH STORAGE VOLUME**

Bottom Surface Area = 716.0 sq. ft.  
 Gravel Trench Depth = 1 ft.  
 Void Ratio = 0.4

Gravel Trench Storage Volume = 286 cu. ft.

Total Infiltration Trench Storage Volume = 7,975 cu. ft.

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# Appendix 8: Source Control

*Pollutant Sources/Source Control Checklist*

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL

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 type="checkbox"/> A. On-site storm drain inlets	<input type="checkbox"/> Locations of inlets.	<input 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 type="checkbox"/> Maintain and periodically repaint or replace inlet markings. <input type="checkbox"/> Provide stormwater pollution prevention information to new site owners, lessees, or operators. <input 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 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 type="checkbox"/> B. Interior floor drains and elevator shaft sump pumps		<input type="checkbox"/> State that interior floor drains and elevator shaft sump pumps will be plumbed to sanitary sewer.	<input 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.

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									
<p>1</p> <p>Potential Sources of Runoff Pollutants</p> <p><input type="checkbox"/> D1. Need for future indoor &amp; structural pest control</p> <p><input type="checkbox"/> D2. Landscape/ Outdoor Pesticide Use</p>	<table border="1"> <thead> <tr> <th>2</th> <th>3</th> <th>4</th> </tr> <tr> <th>Permanent Controls—Show on WQMP Drawings</th> <th>Permanent Controls—List in WQMP Table and Narrative</th> <th>Operational BMPs—Include in WQMP Table and Narrative</th> </tr> </thead> <tbody> <tr> <td> <p><input type="checkbox"/> Show locations of native trees or areas of shrubs and ground cover to be undisturbed and retained.</p> <p><input type="checkbox"/> Show self-retaining landscape areas, if any.</p> <p><input type="checkbox"/> Show stormwater treatment and hydrograph modification management BMPs. (See instructions in Chapter 3, Step 5 and guidance in Chapter 5.)</p> </td> <td> <p><input type="checkbox"/> Note building design features that discourage entry of pests.</p> <p>State that final landscape plans will accomplish all of the following.</p> <p><input type="checkbox"/> Preserve existing native trees, shrubs, and ground cover to the maximum extent possible.</p> <p><input 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 type="checkbox"/> Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions.</p> <p><input 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> </td> <td> <p><input type="checkbox"/> Provide Integrated Pest Management information to owners, lessees, and operators.</p> <p><input type="checkbox"/> Maintain landscaping using minimum or no pesticides.</p> <p><input type="checkbox"/> See applicable operational BMPs in “What you should know for...Landscape and Gardening” at <a href="http://reflood.org/stormwater/Error!">http://reflood.org/stormwater/Error!</a> <small>Hyperlink reference not valid.</small></p> <p><input type="checkbox"/> Provide IPM information to new owners, lessees and operators.</p> </td> </tr> </tbody> </table>	2	3	4	Permanent Controls—Show on WQMP Drawings	Permanent Controls—List in WQMP Table and Narrative	Operational BMPs—Include in WQMP Table and Narrative	<p><input type="checkbox"/> Show locations of native trees or areas of shrubs and ground cover to be undisturbed and retained.</p> <p><input type="checkbox"/> Show self-retaining landscape areas, if any.</p> <p><input type="checkbox"/> Show stormwater treatment and hydrograph modification management BMPs. (See instructions in Chapter 3, Step 5 and guidance in Chapter 5.)</p>	<p><input type="checkbox"/> Note building design features that discourage entry of pests.</p> <p>State that final landscape plans will accomplish all of the following.</p> <p><input type="checkbox"/> Preserve existing native trees, shrubs, and ground cover to the maximum extent possible.</p> <p><input 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 type="checkbox"/> Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions.</p> <p><input 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 type="checkbox"/> Provide Integrated Pest Management information to owners, lessees, and operators.</p> <p><input type="checkbox"/> Maintain landscaping using minimum or no pesticides.</p> <p><input type="checkbox"/> See applicable operational BMPs in “What you should know for...Landscape and Gardening” at <a href="http://reflood.org/stormwater/Error!">http://reflood.org/stormwater/Error!</a> <small>Hyperlink reference not valid.</small></p> <p><input type="checkbox"/> Provide IPM information to new owners, lessees and operators.</p>
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STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

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Potential Sources of Runoff Pollutants	Permanent Controls—Show on WQMP Drawings	Permanent Controls—List in WQMP Table and Narrative	Operational BMPs—Include in WQMP Table and Narrative
<p><input type="checkbox"/> E. Pools, spas, ponds, decorative fountains, and other water features.</p>	<p><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>	<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>	<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></p>
<p><input type="checkbox"/> F. Food service</p>	<p><input 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.</p> <p><input type="checkbox"/> On the drawing, show a note that this drain will be connected to a grease interceptor before discharging to the sanitary sewer.</p>	<p><input type="checkbox"/> Describe the location and features of the designated cleaning area.</p> <p><input 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.</p>	<p><input 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></p> <p>Provide this brochure to new site owners, lessees, and operators.</p>
<p><input type="checkbox"/> G. Refuse areas</p>	<p><input 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.</p> <p><input type="checkbox"/> If dumpsters or other receptacles are outdoors, show how the designated area will be covered, graded, and paved to prevent runoff and show locations of berms to prevent runoff from the area.</p> <p><input type="checkbox"/> Any drains from dumpsters, compactors, and tallow bin areas shall be connected to a grease removal device before discharge to sanitary sewer.</p>	<p><input type="checkbox"/> State how site refuse will be handled and provide supporting detail to what is shown on plans.</p> <p><input type="checkbox"/> State that signs will be posted on or near dumpsters with the words "Do not dump hazardous materials here" or similar.</p>	<p><input type="checkbox"/> State how the following will be implemented:</p> <p>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></p>

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

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<p>1 Potential Sources of Runoff Pollutants</p> <p><input type="checkbox"/> H. Industrial processes.</p>	<p>2 Permanent Controls—Show on WQMP Drawings</p> <p><input type="checkbox"/> Show process area.</p>	<p>3 Permanent Controls—List in WQMP Table and Narrative</p> <p><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.”</p>	<p>4 Operational BMPs—Include in WQMP Table and Narrative</p> <p><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 &amp; Commercial Facilities Best Management Practices for: Industrial, Commercial Facilities” at <a href="http://rcflood.org/stormwater/">http://rcflood.org/stormwater/</a></p>



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<p>1 Potential Sources of Runoff Pollutants</p> <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>2 Permanent Controls—Show on WQMP Drawings</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 runoff 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>3 Permanent Controls—List in WQMP Table and Narrative</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>4 Operational BMPs—Include in WQMP Table and Narrative</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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<p>1 Potential Sources of Runoff Pollutants</p> <p><input checked="" type="checkbox"/> J. Vehicle and Equipment Cleaning</p>	<table border="1"> <thead> <tr> <th>2 Permanent Controls—Show on WQMP Drawings</th> <th>3 Permanent Controls—List in WQMP Table and Narrative</th> <th>4 Operational BMPs—Include in WQMP Table and Narrative</th> </tr> </thead> <tbody> <tr> <td> <p><input 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> </td> <td> <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> </td> <td> <p>Describe operational measures to implement the following (if applicable):</p> <p><input 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> </td> </tr> </tbody> </table>	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"/> 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 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

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<p>1</p> <p>Potential Sources of Runoff Pollutants</p> <p><input type="checkbox"/> K. Vehicle/Equipment Repair and Maintenance</p>	<p>2</p> <p>Permanent Controls—Show on WQMP Drawings</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>3</p> <p>Permanent Controls—List in WQMP Table and Narrative</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>4</p> <p>Operational BMPs—Include in WQMP Table and Narrative</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; Car 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>

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<input type="checkbox"/> L. Fuel Dispensing Areas	<input 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.  <input 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.		<input type="checkbox"/> The property owner shall dry sweep the fueling area routinely. <input 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>

<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.

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<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>

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	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>	
O. Miscellaneous Drain or Wash Water or Other Sources <input type="checkbox"/> Boiler drain lines <input 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 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. <input type="checkbox"/> 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.		

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<input type="checkbox"/> P. Plazas, sidewalks, and parking lots.			<input 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.

## Appendix 9: O&M

*Operation and Maintenance Plan and Documentation of Finance, Maintenance and Recording Mechanisms*

*Detailed Operations and Maintenance Plans will be provided during final engineering.*



# Appendix 10: Educational Materials

*BMP Fact Sheets, Maintenance Guidelines and Other End-User BMP Information*

*Education Materials will be provided during final engineering*

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



# APPENDIX G

## Noise and Vibration Analysis During Construction

Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL



## Kitching Substation

### Short -Term Noise and Vibration Analysis

Table 5: Default Noise Emission Reference Levels and Usage Factors

Equipment Description	Impact Device?	Acoustical Usage Factor (%)	Spec. 721.560 L <sub>max</sub> @ 50 feet (dBA, slow)	Actual Measured L <sub>max</sub> @ 50 feet (dBA, slow) (Samples Averaged)	Number of Actual Data Samples (Count)
All other Equipment > 5 HP	No	50	85	N/A	0
Auger Drill Rig	No	20	85	84	36
Backhoe	No	40	80	78	372
Bar Bender	No	20	80	N/A	0
Blasting	Yes	N/A	94	N/A	0
Boring Jack Power Unit	No	50	80	83	1
Chain Saw	No	20	85	84	46
Clam Shovel (dropping)	Yes	20	93	87	4
Compactor (ground)	No	20	80	83	57
Compressor (air)	No	40	80	78	18
Concrete Batch Plant	No	15	83	N/A	0
Concrete Mixer Truck	No	40	85	79	40
Concrete Pump Truck	No	20	82	81	30
Concrete Saw	No	20	90	90	55
Crane	No	16	85	81	405
Dozer	No	40	85	82	55
Drill Rig Truck	No	20	84	79	22
Drum Mixer	No	50	80	80	1
Dump Truck	No	40	84	76	31
Excavator	No	40	85	81	170
Flat Bed Truck	No	40	84	74	4
Front End Loader	No	40	80	79	96
Generator	No	50	82	81	19
Generator (<25KVA, VMS Signs)	No	50	70	73	74
Gradall	No	40	85	83	70
Grader	No	40	85	N/A	0
Grapple (on backhoe)	No	40	85	87	1
Horizontal Boring Hydraulic Jack	No	25	80	82	6
Hydra Break Ram	Yes	10	90	N/A	0
Impact Pile Driver	Yes	20	95	101	11
Jackhammer	Yes	20	85	89	133
Man Lift	No	20	85	75	23
Mounted Impact Hammer	Yes	20	90	90	212

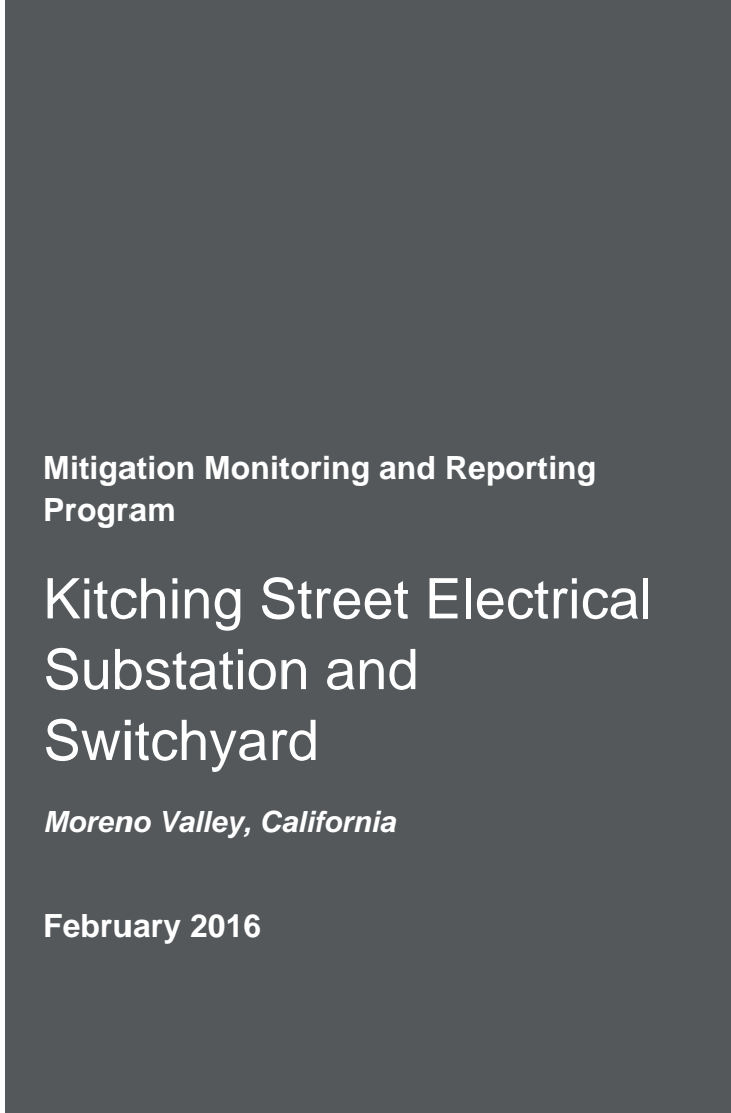
Equipment Description	Impact Device?	Acoustical Usage Factor (%)	Spec. 721.560 L <sub>max</sub> @ 50 feet (dBA, slow)	Actual Measured L <sub>max</sub> @ 50 feet (dBA, slow) (Samples Averaged)	Number of Actual Data Samples (Count)
Pavement Scarifier	No	20	85	90	2
Paver	No	50	85	77	9
Pickup Truck	No	40	55	75	1
Pneumatic Tools	No	50	85	85	90
Pumps	No	50	77	81	17
Refrigerator Unit	No	100	82	73	3
Rivit Buster/Chipping Gun	Yes	20	85	79	19
Rock Drill	No	20	85	81	3
Roller	No	20	85	80	16
Sand Blasting (single nozzle)	No	20	85	96	9
Scraper	No	40	85	84	12
Sheers (on backhoe)	No	40	85	96	5
Slurry Plant	No	100	78	78	1
Slurry Trenching Machine	No	50	82	80	75
Soil Mix Drill Rig	No	50	80	N/A	0
Tractor	No	40	84	N/A	0
Vacuum Excavator (Vac-Truck)	No	40	85	85	149
Vacuum Street Sweeper	No	10	80	82	19
Ventilation Fan	No	100	85	79	13
Vibrating Hopper	No	50	85	87	1
Vibratory Concrete Mixer	No	20	80	80	1
Vibratory Pile Driver	No	20	95	101	44
Warning Horn	No	5	85	83	12
Welder/Torch	No	40	73	74	5

Source: FHWA, Construction Noise Handbook, August 2006.

**Table 6: Vibration Source Amplitudes for Construction Equipment**

Equipment	Reference PPV at 25 feet (in/sec)
Vibration Roller	0.210
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Bulldozer	0.003
Crack-and-seat Operations	2.4

Source: California Department of Transportation, Transportation and Construction Vibration Guidance Manual, September 2013



Mitigation Monitoring and Reporting Program

# Kitching Street Electrical Substation and Switchyard

*Moreno Valley, California*

February 2016

**Lead Agency:**  
City of Moreno Valley Electric Utility Division,  
14177 Frederick Street,  
Moreno Valley, CA 92553

**Prepared by:**  
HDR  
3230 El Camino Real, Suite 200  
Irvine, CA 92602



Attachment: MND\_IS\_MMRP\_03.03.17 [Revision 3] (1905 : ADOPT A MITIGATED NEGATIVE DECLARATION FOR KITCHING ELECTRICAL





## **MITIGATION MONITORING AND REPORTING PROGRAM**

### **Moreno Valley Electric Utility Division**

### **Kitching Street Electrical Substation and Switchyard Project**

The Moreno Valley Electric Utility Division (MVU) will adopt this Mitigation Monitoring and Reporting Program (MMRP) in accordance with Public Resources Code (PRC) Section 21081.6 and Section 15097 of the California Environmental Quality Act (CEQA) Guidelines. The purpose of the MMRP is to ensure that the Kitching Street Electrical Substation and Switchyard Project, which is the subject of the Mitigated Negative Declaration (MND), complies with all applicable environmental mitigation requirements. The mitigation measure for the project will be adopted by MVU, in conjunction with the adoption of the MND. The mitigation measure has been integrated into this MMRP. Within this document, the approved mitigation measure is organized and referenced by subject category and includes: Biological Resources in Table 1. The specific mitigation measure is identified, as well as the method and timing of verification and the responsible party that will ensure that each action is implemented.

Public Resources Code Section 21081.6 requires the Lead Agency, for each project that is subject to CEQA, to monitor performance of the mitigation measures included in any environmental document to ensure that implementation does, in fact, take place. MVU is the designated lead agency for the MMRP. MVU is responsible for review of all monitoring reports, enforcement actions, and document disposition. MVU will rely on information provided by the monitor as accurate and up to date and will field check mitigation measure status as required.

A record of the MMRP will be monitored at City of Moreno Valley Electric Utility Division, 14177 Frederick Street, Moreno Valley, CA 92553. The mitigation measure contained in the MND shall be made a condition of the project as may be further described below.



**Table 1. Mitigation Monitoring and Reporting Program**

Mitigation Measure	Implementation Time Frame	Implementation Responsibility	Verification Responsibility	Mitigation Measure Implemented? (Y/N) & Date	Documentation Location (Monitoring Record)
<b>Biological Resources</b>					
<b>Mitigation Measure BIO – 1:</b> A focused survey for smooth tarplant and Coulter's goldfields shall be conducted by a qualified biologist during the appropriate blooming season for these species (April – June). The loss of any individuals observed within the project area would be mitigated through location and preservation of populations that are not already proposed for conservation in the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), and/or restoration or enhancement of existing populations within the proposed conservation area. The proposed mitigation would be evaluated in a Determination of Biologically Equivalent or Superior Preservation (DBESP) and subject to approval by the city and RCA.	Prior to construction	Moreno Valley Electric Utility (MVU)	MVU		MVU Office

<sup>1</sup> City of Moreno Valley's Electric Utility Division, 14177 Frederick Street, Moreno Valley, CA 92553. Office Hours: 7:30am – 5:30pm (M-Th) and 7:30am – 4:30pm (F). (951) 413-3513.



## Report to City Council

---

**TO:** Mayor and City Council

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

**AGENDA DATE:** March 15, 2016

**TITLE:** SIGNATURE AUTHORITY OF CITY MANAGER

---

### **RECOMMENDED ACTION**

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

1. Review the signature authority previously delegated to the City Manager by the City Council.
2. Take whatever action the City Council deems appropriate.

### **SUMMARY**

On June 9, 2015, the City Council approved the Fiscal Years 2015/16-2016/17 Budget, which restricts all financial activities by these approved budget limits. Following the adoption of the budget, the actions to carry out the expenditures are delegated through the levels of procurement signatures that are determined by City Council Resolution No. 2008-115 which currently authorizes the City Manager (or designee) authority to enter into contracts and to procure materials up to \$100,000. Fiscal Policy 3.18 Procurement Policy complies with this resolution and further directs staff in the procurement process and directs compliance with all signature authority levels.

On June 9, 2015, the City Council reviewed and discussed ideas of modifying the City Manager's signature authority. The City Manager's signature authority was further discussed on January 2016 and continued until this evening for further discussion.

### **DISCUSSION**

The City's budget must be approved by City Council. The subsequent selection of a vendor or consultant must adhere to the approved procurement policy and contracting process, which may involve an informal or formal Request for Proposal or Bidding process. Following the system of checks and balances the City Manager may then, and

only within the restrictions of the budget and procurement policy, sign for items within the delegated approval level. When payments are issued for completed services or material received, notice of the payments are reported to City Council and to the public through the publication of the Payment Register to the City's website and included in City Council communication. An additional level of transparency will soon be available via the Socrata system, which will provide the public with detailed financial information accessed through an online portal.

Per the City's Municipal Code section 3.12, delegation by the City Council for authority to award contracts and procurements shall be as set forth in a resolution of the City Council. The current delegated signature authority, as established in Resolution No. 2008-115, delegates to the City Manager (or designee) authority up to \$100,000. In no case may this authority exceed specific appropriations in the City's annual budget, as approved by the City Council.

A survey conducted through the California Association of Public Procurement Officials of cities with a population similar to Moreno Valley or in close proximity reflected that the City's \$100,000 threshold for City Manager delegated signature authority is comparable to the average of the following list. Additionally, based on a survey conducted by the City of Riverside and presented to its Finance Committee on September 10, 2014, the comparable average threshold for City Managers is approximately \$100,000. These survey details are included in the attachments to this staff report.

On January 19, 2016, the City Council reviewed and discussed the idea of decreasing the City Manager's signature authority. At that time the City Council directed staff to further examine the option of having split levels to consider (e.g. the Huntington Beach and Chula Vista models noted below). The table below provides examples in response to the Council's request:

City Name	Population as of 1/1/15	Non Public Works	Public Works
Chula Vista	227,725	\$100,000	\$50,000
Huntington Beach	202,250	\$50,000	\$100,000
Murrieta	107,279	\$100,000	\$50,000
Perris	72,908	\$30,000	\$175,000
Pomona	152,419	\$30,000	\$175,000
San Jacinto	45,895	\$25,000	\$100,000
Temecula	108,920	\$10,000	\$30,000

Based on the multiple survey results and the direction of the City Council, the option of splitting signature authority levels may provide the City Council an additional opportunity to review non-public works professional service contracts.

Based on the direction of the City Council, Resolution No. 2008-115 may be modified to reflect the new signature authority. The Procurement Policy would be updated to reflect this adjustment and modified to reflect the categories of "Public Works" related projects

to include all public works contracts for professional services, construction, materials, and equipment and the “Non Public Works” category to include other professional service contracts, materials, and supplies.

### ALTERNATIVES

1. Review and discuss.
2. Direct staff to modify the Resolution and policies to reflect the split levels of signature authority of \$100,000 for “Public Works” and \$50,000 for “Non Public Works” contracts. The Resolution would be brought back to City Council for adoption.
3. Take whatever action the City Council deems appropriate.

### FISCAL IMPACT

There is no fiscal impact if the current signature level is maintained.

Decreasing the signature level will have an impact in work productivity and production. Reducing the signature threshold would also delay implementation in lower value contracts. If the City Manager’s signature authority were to be decreased from \$100,000 to \$50,000, any future purchase orders and contracts exceeding \$50,000 would need to be presented to the City Council to award the contract. Although funding for all contracts requires City Council approval, reducing the City Manager approval level would result in additional vendor and contract awards which would need to be brought forward for City Council approval. Staff work for the preparation of a staff report for each of these additional Council awarded contracts would increase and could delay related services until such time as they could be calendared on the City Council agenda. Based on current agenda posting requirements, the submittal of staff reports could potentially delay projects, materials, and services approximately 30 days on average depending on available Council meeting dates.

### NOTIFICATION

None.

### PREPARATION OF STAFF REPORT

Prepared By:  
Marshall Eyeran  
Chief Financial Officer/City Treasurer

Concurred By:  
Terrie Stevens  
Administrative Services Director

Concurred By:  
Rix Skonberg  
Purchasing & Facilities Division Manager

### CITY COUNCIL GOALS

None

**ATTACHMENTS**

- 1. City Manager Signature Authority Staff Report 6-9-15

**APPROVALS**

Budget Officer Approval	<u>✓ Approved</u>	2/16/16 10:11 AM
City Attorney Approval	<u>✓ Approved</u>	2/16/16 1:31 PM
City Manager Approval	<u>✓ Approved</u>	3/03/16 3:49 PM



## Report to City Council

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**TO:** Mayor and City Council

**FROM:** Richard Teichert, Chief Financial Officer

**AGENDA DATE:** June 9, 2015

**TITLE:** SIGNATURE AUTHORITY OF CITY MANAGER

---

### **RECOMMENDED ACTION**

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

1. Review the signature authority previously delegated to the City Manager by the City Council.

### **SUMMARY**

On June 9, the City Council will be presented with the Proposed Budget for Fiscal Years 2015/16-2016/17. Once the final budget is approved by City Council, all financial activities will be restricted by these approved budget limits. Following the adoption of the budget, the actions to carry out the expenditures are delegated through the levels of procurement signature that are determined by City Council Resolution No. 2008-115 which currently authorizes the City Manager (or designee) authority to enter into contracts and to procure materials up to \$100,000. Fiscal Policy 3.18 Procurement Policy complies with this resolution and further directs staff in the procurement process and directs compliance with all signature authority levels.

### **DISCUSSION**

Per the City's Municipal Code section 3.12, delegation by the City Council for authority to award contracts and procurements shall be as set forth in a resolution of the City Council. The current delegated signature authority, as established in Resolution No. 2008-115, delegates to the City Manager (or designee) authority up to \$100,000. In no case may this authority exceed specific appropriations in the City's annual budget, as approved by the City Council.

A survey conducted through the California Association of Public Procurement Officials of cities with a population similar to Moreno Valley or in close proximity to Moreno Valley is displayed in the following chart. The City’s \$100,000 threshold for City Manager delegated signature authority is comparable to the average of the following list.

City / Agency	Population	City Council/Board Approval Amount Threshold	Comments
Anaheim	345,556	\$ 100,000	All instances
Chula Vista	227,723	\$ 100,000	Materials/Equipment
Chula Vista	227,723	\$ 50,000	Public Works and Professional Services
Corona	146,164	\$ 125,000	All instances
Elk Grove	160,688	\$ 50,000	All instances
Escondido	141,788	\$ 100,000	All instances
Huntington Beach	202,250	\$ 100,000	Materials/Equipment
Huntington Beach	202,250	\$ 50,000	Professional Services
Irvine	202,079	\$ 1,000,000	All instances
Lancaster	143,818	\$ 125,000	All instances
Ontario	172,701	\$ 100,000	All instances
Oxnard	192,996	Unlimited	Good and Services
Oxnard	192,996	\$ 250,000	Public Works
Riverside	350,000	\$ 50,000	All instances
Santa Clarita	210,000	\$ 50,000	All instances
Santa Rosa	158,000	\$ 100,000	All instances
Thousand Oaks	129,000	\$ 175,000	Construction
Thousand Oaks	129,000	\$ 50,000	Equipment and Services
Torrance	147,000	\$ 40,000	Full service Charter City

Additionally, based on a survey conducted by the City of Riverside and presented to their Finance Committee on September 10, 2014, the comparable average threshold for City Managers is approximately \$100,000.

Attachment: City Manager Signature Authority Staff Report 6-9-15 (1921 : SIGNATURE AUTHORITY OF CITY MANAGER)



City	Formal Procurement Threshold
Los Angeles	\$ 100,000
San Diego	\$ 50,000
San Jose	\$ 100,000
San Francisco	\$ 50,000
Fresno	\$ 129,000
Sacramento	\$ 100,000
Long Beach	\$ 200,000
Oakland	\$ 150,000
Bakersfiled	\$ 40,000
Anaheim	\$ 100,000
Santa Ana	\$ 10,000
Riverside	\$ 50,000
Stockton	\$ 32,000
Chula Vista	\$ 100,000

If the City Manager’s signature authority were to be decreased from \$100,000 to \$50,000, any future contracts exceeding \$50,000 would need to be presented to the City Council to award the contract. Although funding for all contracts requires City Council approval, reducing the City Manager approval level would result in nearly double the amount of vendor and contract awards which would need to be brought forward for City Council approval. In fiscal year 2014/15, an additional 57 staff reports would have been researched, written, reviewed, and approved through the agenda process. Staff work for the preparation of a staff report for each of these additional Council awarded contracts would increase and could delay related services until such time as they could be calendared on the City Council agenda.

The City’s budget must be approved by City Council. The subsequent selection of a vendor or consultant must adhere to the City Council approved procurement policy and contracting process, which may involve an informal or formal Request for Proposal or Bidding process. Following the system of checks and balances the City Manager may then, and only within the restrictions of the budget and procurement policy, sign for items within the delegated approval level. When payments are issued for completed services or material received, notice of the payments are reported to City Council and to the public through the publication of the Payment Register to the City’s website and included in City Council communication.

**ALTERNATIVES**

1. Review and discuss. Staff recommends no change to the current signature levels, acknowledging the current authority adheres strictly to council-approved expenditures, is efficient, preserves checks and balances and is transparent.
2. Direct staff to provide a monthly report to City Council identifying the contracts authorized by the City Manager that fall within the current signature authority

Attachment: City Manager Signature Authority Staff Report 6-9-15 (1921 : SIGNATURE AUTHORITY OF CITY MANAGER)

level while maintaining the City Manager’s level of authority at an amount not to exceed \$100,000.

- 3. Change to Resolution No. 2008-115 to decrease the signature authority for the City Manager for contracts and other procurement transactions from \$100,000 to \$50,000 or other designated amount.

**FISCAL IMPACT**

There is no fiscal impact if the current signature level is maintained. Decreasing the signature level will have an impact in work productivity and production. Reducing the signature threshold would also delay implementation in lower value contracts.

**ATTACHMENTS**

No attachments.

**PREPARATION OF STAFF REPORT**

Prepared By:  
Dena Heald  
Financial Operations Division Manager

Department Head Approval:  
Richard Teichert  
Chief Financial Officer

Concurred By:  
Rix Skonberg  
Purchasing & Facilities Division Manager

**CITY COUNCIL GOALS**

None

**ATTACHMENTS**

None

**APPROVALS**

Budget Officer Approval	<u>✓ Approved</u>	6/03/15 8:23 AM
City Attorney Approval	<u>✓ Approved</u>	
City Manager Approval	<u>✓ Approved</u>	

<b>RESULT:</b>	<b>APPROVED [3 TO 2]</b>
<b>MOVER:</b>	George E. Price, Council Member
<b>SECONDER:</b>	Jeffrey J. Giba, Council Member
<b>AYES:</b>	Jeffrey J. Giba, D. LaDonna Jempson, George E. Price
<b>NAYS:</b>	Jesse L. Molina, Dr. Yxstian A. Gutierrez

Attachment: City Manager Signature Authority Staff Report 6-9-15 (1921 : SIGNATURE AUTHORITY OF CITY MANAGER)



## Report to City Council

---

**TO:** Mayor and City Council

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

**AGENDA DATE:** March 15, 2016

**TITLE:** DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING AGREEMENT BY AND BETWEEN CITY OF MORENO VALLEY AND RB BOULDER RIDGE, LP

---

### **RECOMMENDED ACTION**

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

1. Approve the Disposition and Development/Affordable Housing Agreement by and between the City of Moreno Valley and RB Boulder Ridge, LP.
2. Authorize the City Manager to execute the Disposition and Development/Affordable Housing Agreement which includes executing documents necessary for the acquisition and disposition of the site, subject to the approval of the City Attorney.
3. Adopt Resolution 2016-13. A resolution of the City Council of the City of Moreno Valley, California, supporting the Boulder Ridge Affordable Housing Development and affirming its intention to provide financial assistance to Rancho Belago Developers, Inc. for the first phase.
4. Approve budget adjustments to the adopted budget as set forth in the Fiscal Impact section of this report.

### **SUMMARY**

This report recommends approval of the Disposition and Development/Affordable Housing Agreement (DDA/AHA) by and between the City of Moreno Valley and RB Boulder Ridge Limited Partnership. The project is publicly-privately funded with a combination of Neighborhood Stabilization Program (NSP), HOME Partnership Investment (HOME) funds, state tax credits and private funds.

The structure of the DDA/AHA was presented for discussion to the Finance Subcommittee at the February 24, 2016 meeting.

## **DISCUSSION**

The Boulder Ridge is a 141-unit multi-family affordable housing project that will be located on the southeast corner of Alessandro Boulevard and Lasselle Street, proposed by Rancho Belago Developers (“Developer”). The site consists of an 8.61 acre vacant parcel with a current zoning of 30 units per usable acre. It is anticipated that 6 acres of the site will be usable for the development; the unusable acreage will be preserved as open space. The site, which is fully entitled, is centrally-located and is in close proximity to various community services and other neighborhood conveniences such as: a regional hospital, supermarket/local shopping, bus stop/bus route, high school, elementary school, library and public park.

The project is proposed to be developed in two phases for which the Developer will apply for tax credit equity through the Low Income Housing Tax Credit (LIHTC) program for both phases. The construction of the first phase is contingent upon the successful award of tax credits. The first phase will be comprised of four (4) three-story garden-style buildings and consist of 72-units. There will be a total of eight (8) one-bedroom units, forty (40) two-bedroom units and twenty-four (24) three bedroom units, one of which is the on-site manager's unit. All of the units, with the exception of the manager's unit, will be rent-restricted and reserved for income-eligible households earning up to 60% Area Median Income (AMI). The project will incorporate a senior housing component, which will serve as a “project within a project”. To ensure compliance with fair housing and anti-discrimination laws governing housing, one of the four buildings will be specifically dedicated to senior use. The building - commonly referred to as “Building 2” - will be comprised of 10 units. The senior component is proposed that 8 one-bedroom units and 2 two-bedroom units will be age-restricted serving households 62 years and older and the units will target senior households earning between 30% and 60% AMI.

The project will consist of an onsite leasing office, a community/recreation room, laundry facilities, and garages; all of which will be constructed during the first phase. In addition to the onsite conveniences, the outdoor amenities shall include individual patios/balconies for each unit, and common open space with recreational amenities, namely, a swimming pool, a tot lot, and BBQ areas. The landscaping will be comprised of materials that promote water conservation, low maintenance and durability. Additionally, each individual unit will contain energy-efficient appliances (i.e. oven/stove, microwave, dishwasher, and refrigerator). All materials including flooring, window coverings, plumbing and light fixtures, countertops and cabinets will exceed recommended standards and will be sustainable, where applicable.

In December 2015, the Developer executed a Purchase Agreement with a third-party property owner to acquire the property for \$2.82M. The Developer has proposed receiving financial assistance from the City to assist with the acquisition of the property. Because of federal regulations imposed upon the proposed funding sources, the City is

proposing to have the Purchase Agreement assigned from the Developer to the City. The City will then acquire and take title to the property using program income generated by the Neighborhood Stabilization Program (NSP).

The property will be conveyed in the future to the Developer in accordance with a phasing plan. The parcel will be divided into two parts (A and B). Upon notification of a preliminary reservation of tax credits for the first phase of the project (Part A), the City will convey title to the Developer for the development of that portion only. As a provision of the DDA/AHA, the Developer will be granted access to Part B, via a licensing agreement so the land may be used - as a staging site - to assist with the construction of Part A.

The Developer is proposing to utilize several types of financing for the first phase project costs including NSP and HOME loans from the City of Moreno Valley, Low-Income Housing Tax Credit Equity, general partner equity, and conventional financing. Below is a breakdown of the proposed financing:

<b>Proposed Project Financing (figures rounded)</b>	
9% Tax Credit Equity	\$ 16,710,000
Conventional Financing	2,130,000
City of Moreno Valley- NSP1 Loan	3,200,000
City of Moreno Valley- NSP3 Loan	300,000
City of Moreno Valley- HOME Loan	1,000,000
City of Moreno Valley- Affordable Housing Fee Reductions	730,000
Deferred Developer Fees (General Partner Equity)	350,000
<b>Total</b>	<b>\$ 24,420,000</b>

Due to the complexity of the project and the stringent benchmarks and timing of the commitment and release of funds for the various funding sources, the project will require various Council-required actions. In accordance with federal regulations governing HOME funds, the Developer will need to secure all necessary financing for the project, namely, tax credits and private funding prior to a formal commitment of funds; the DDA/AHA will be amended and presented before Council for approval. The amendment will address the commitment of the HOME funds and timing of the release of funds.

While all of the financing for the project has not been secured as yet, an application for funding of tax credits for the first phase of the project will be submitted by the Developer to the California Tax Credit Allocation Committee (CTCAC) for approval in July 2016. As a CTCAC requirement, the submission of a resolution outlining the City's conditional support is required by CTCAC to accompany the application. Since evidence of proposed financing is required as part of the TCAC application process, the City will adopt a resolution conditionally committing the HOME allocation until all federal requirements have been satisfied and project financing has been secured.

NSP1 and NSP3 funds totaling \$3.5 million will be used to cover acquisition costs, allowable closing costs, allowable pre-development costs and some of the construction costs. The loan terms will be 55-years, accrue 1% simple interest annually, and paid on a residual receipts basis. The loan will be secured by a deed of trust and affordability covenants that will run with the land.

In January 2016, prior to initiating negotiations and committing funds, the City procured the consultancy services of financial advisor, Keyser Marston Associates (KMA) to complete the underwriting and fiscal analysis of the project. Based upon the review of the financial advisor, the project was determined to be feasible and the requested assistance to be reasonable.

**ALTERNATIVES**

1. Approve the Disposition and Development/Affordable Housing Agreement; authorize the City Manager and Executive Director of the Housing Authority to execute project-related documents; authorize the City Manager to approve future amendments to the AHA that do not substantially increase the City’s obligations or materially change uses; approve proposed resolution; approve necessary revenue and expenditure appropriations and authorize the Chief Financial Officer to process adjustments. **Staff recommends this alternative as it will allow the City to acquisition the property and the Developer to receive the necessary financial commitments to apply TCAC tax credits.**
  
2. Do not approve the Disposition and Development/Affordable Housing Agreement; do not authorize the City Manager and Executive Director of the Housing Authority to execute project-related documents; do not authorize the City Manager to approve future amendments to the AHA that do not substantially increase City’s obligations or materially change uses; do not approve proposed resolution; do not approve necessary revenue and expenditure appropriations and authorize the Chief Financial Officer to process adjustments. **Staff does not recommend this alternative as it will not allow the City to acquire the property or the Developer to receive the necessary financial commitments to apply TCAC tax credits.**

**FISCAL IMPACT**

This project is being funded using funds designated for the specific purpose of creating affordable housing opportunities for income-eligible households, as set forth in the terms and conditions of NSP and HOME federal grant funds; HOME funding will be committed at a later date. **There will be no fiscal impact to the City’s General Fund.**

Fund	GL Account No.	Type (Rev/Exp)	FY 2015/16 Proposed Budget Amendment
NSP1- Programs	2507-30-33-72701-733201	Exp	\$3,200,000
NSP3- Redevelopment	2507-30-33-72703-733207	Exp	\$ 300,000

		<b>Exp Subtotal</b>	<b>\$3,500,000</b>
NSP3- Receipt of Grant/HUD Fund Balance	2507-30-33-72703-485000	Rev	\$ 300,000
NSP1- Receipt of Grant/HUD Fund Balance	2507-30-33-72701-485000	Rev	\$3,000,000
		<b>Rev Subtotal</b>	<b>\$3,300,000</b>

**NOTIFICATION**

The public has been notified through the publication of the agenda.

**PREPARATION OF STAFF REPORT**

Prepared By:  
Shanikqua Freeman  
Housing Program Coordinator

Department Head Approval:  
Marshall Eyerman  
Chief Financial Officer

Concurred By:  
Dena Heald  
Interim Financial Resources Division Manager

**CITY COUNCIL GOALS**

**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.

**ATTACHMENTS**

1. DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA
2. Project Site Aerial
3. Resolution 2016-13

**APPROVALS**

Budget Officer Approval	<u>✓ Approved</u>	3/02/16 10:17 AM
City Attorney Approval	<u>✓ Approved</u>	3/03/16 3:24 PM
City Manager Approval	<u>✓ Approved</u>	3/03/16 3:51 PM

**DISPOSITION AND DEVELOPMENT/AFFORDABLE  
HOUSING AGREEMENT**

**by and between the**

**CITY OF MORENO VALLEY**

**and**

**RB BOULDER RIDGE LIMITED PARTNERSHIP,  
a California limited partnership**



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**ATTACHMENTS**

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- ATTACHMENT NO. 2 LEGAL DESCRIPTION OF THE SITE
- ATTACHMENT NO. 3 SCHEDULE OF PERFORMANCE
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- ATTACHMENT NO. 19 HOME DOCUMENTATION, RECORDKEEPING, REPORTING AND MONITORING REQUIREMENTS

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## DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING AGREEMENT

**THIS DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING AGREEMENT** (the “Agreement”), dated, for identification purposes only, as of March 15, 2016 (the “Date of Agreement”), is entered into by and between the **CITY OF MORENO VALLEY**, a municipal corporation (“City”) and **RB BOULDER RIDGE LIMITED PARTNERSHIP**, a California limited partnership (the “Developer”).

### R E C I T A L S

**A.** City, as part of its functions as a municipal corporation under the Constitution and laws of the State of California and in connection with its municipal code (the “City Code”), is authorized to promote the provision of affordable housing for all income segments of the community. Pursuant to the City Code and resolutions adopted pursuant thereto, City is authorized to defer receipt of all or a portion of its development impact fees chargeable in relation to various projects. City is authorized to enter into agreements in connection therewith.

**B.** City is the recipient of moneys from the federal government pursuant to the Neighborhood Stabilization Program (“NSP”) enacted by the United States Congress as part of the Housing and Economic Recovery Act of 2008 (Pub. L. 110-289, approved July 30, 2008, sometimes referred to as “HERA”) and the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Pub.L. 111-203, approved July 21, 2010, including regulations cited at 75 FR 64322) sometimes referred to as “NSP3”).

**C.** Pursuant to the NSP, the City Council of City adopted, approved, and established Guidelines (“ARR Guidelines”) for City’s Acquisition, Rehabilitation and Resale Program (“ARR Program”) on November 25, 2008, which provide in part for the acquisition of foreclosed or vacant multi-family units within the area designated in City’s NSP Action Plan (“NSP Area”) by City and/or a developer partner, rehabilitation of such unit and the rental of such dwelling units to households having incomes at or below fifty percent (50%) of area median income. The ARR Guidelines are incorporated herein by this reference.

**D.** Participant has submitted a detailed proposal and evidence of Participant as a developer partner under the ARR program and City has selected Participant to participate in City’s ARR Program in connection with certain real property described below as “Area A”.

**E.** City is authorized and empowered to enter into agreements for the production, improvement, or preservation of affordable housing to households of limited income, with such housing to be available at “Affordable Rent” (as defined herein).

**F.** The Redevelopment Plan for the Moreno Valley Redevelopment Project, sometimes referred to as the Project (herein, the “Redevelopment Project”) was adopted by Ordinance No. 87-25 by the City Council of the City of Moreno Valley on July 13, 1987 and was subsequently amended (as amended, the “Redevelopment Plan”). The redevelopment project area for the Redevelopment Plan as so amended constitutes the “Project Area.” The Site is located within the Project Area.

**G.** Developer initiated and concluded discussions with Lakeridge Marketplace, LLC, a California limited liability company (“Original Site Owner”) for the acquisition of certain territory

referred to herein as “the Site.” The Site is depicted on the “Site Map” (Attachment No. 1 hereto). The legal description of the Site is attached hereto as Attachment 2. The Site consists of approximately 8.61 acres. The price for which Original Site Owner has agreed to sell the Site is Two Million Eight Hundred Twenty Thousand Dollars (\$2,820,000.00) (the “Acquisition Price”). The Site consists of two portions, (i) “Area A” (as described below) which consists of approximately 2.8 acres and is so delineated on the Site Map, and (ii) “Area B” (as defined below) which consists of approximately 5.81 acres and is so delineated on the Site Map. The Site is vacant and undeveloped. There are not currently nor have there previously been persons occupying the Site.

**H.** Developer has arranged with Original Site Owner that Original Site Owner will convey the Site to City, subject to satisfaction of the conditions precedent thereto is set forth in this Agreement.

**I.** Developer is experienced in the development and operation of affordable multi-family housing, particularly in Riverside County.

**J.** City has entered into this Agreement with Developer to develop seventy-two (72) dwelling units, of which seventy-one (71) shall be restricted to affordable rents for households of limited income, as well as satisfying conditions of approval. As evidenced by this Agreement, and as more particularly set forth herein, City is committed to acquiring the Site and, subject to satisfaction of conditions precedent set forth in this Agreement, conveying to Developer Area A for the development and operation of an affordable rental housing project, as more particularly set forth in this Agreement.

**K.** Developer has proposed to enter into this Agreement with City under which City will convey title to Area A, whereupon Developer shall develop on Area A seventy-two (72) dwelling units and a designated number of those dwelling units to be rented at “Affordable Rent” and in conformity with the “Prescribed Income Levels” throughout the “Required Covenant Period” (as defined below). Those undertakings of Developer are material to this Agreement and but for those undertakings by Developer, City would not have entered into this Agreement.

**L.** It is contemplated that Developer shall apply for and obtain an allocation for the obtaining of 9% federal low income housing tax credits as generally provided for under Section 42 of the Internal Revenue Code and credits applicable toward state income taxes imposed by the State of California in connection with the production of affordable housing on Area A.

**M.** This Agreement is in the vital and best interest of the City of Moreno Valley, California, and the health, safety and welfare of its residents and furthers the public policies of City.

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

## **1. DEFINITIONS AND INTERPRETATION**

**1.1 Defined Terms.** As used in this Agreement (and in all other Project Documents, unless otherwise defined), the following capitalized terms shall have the following meanings:

“**Acquisition Agreement**” means that certain agreement dated as of October 26, 2015 between Developer and Original Site Owner providing for the sale of the Site to Developer or assignee for the Acquisition Price. A copy of the Acquisition Agreement is on file with City.

“**Acquisition Conditions Precedent**” has the meaning set forth therefor in Section 3.3.

“**Acquisition Conveyance**” means the conveyance of the Site by Original Site Owner or Developer to City.

“**Acquisition Escrow**” is described in Section 2.2.

“**Acquisition Escrow Holder**” means First American Title Insurance, escrow division, or such other escrow holder as may be approved by City.

“**Acquisition Grant Deed**” means a grant deed, in the form of Attachment No. 16, or in such modified form as may be mutually agreed between City and Developer with each acting at its sole discretion, by which Developer or the Original Site Owner will convey the Site to City.

“**Acquisition Price**” means Two Million Eight Hundred Twenty Thousand Dollars (\$2,820,000.00).

“**Affiliated Person**” means, when used in reference to a specific person, any person that directly or indirectly controls or is controlled by or under common control with the specified person, any person that is an officer or director of, a trustee of, or a general partner, managing member or operator in, the specified person or of which the specified person is an officer, director, trustee, general partner or managing member, or any person that directly or indirectly is the beneficial owner of ten percent (10%) or more of any class of the outstanding voting securities of the specified person.

“**Affordable Rent**” has the following meaning: For an Extremely Low Income Household, Affordable Rent means a monthly rent which does not exceed one twelfth (1/12<sup>th</sup>) of thirty percent (30%) of thirty percent (30%) of the Median Income for the Area for a household size appropriate to the Unit or, if greater, 30% Tax Credit Rent. For a 40% Very Low Income Household, Affordable Rent means a monthly rent which does not exceed one twelfth (1/12<sup>th</sup>) of thirty percent (30%) of fifty percent (50%) of the Median Income for the Area for a household size appropriate to the Unit, or, if greater 40% Tax Credit Rent. For a 50% Very Low Income Household, Affordable Rent means a monthly rent which does not exceed one-twelfth (1/12<sup>th</sup>) of thirty percent (30%) of fifty percent (50%) of Median Income for a household size of appropriate to the Unit or, if greater, 50% Tax Credit Rent. For a Lower Income Household, Affordable Rent means a monthly rent which does not exceed one twelfth (1/12<sup>th</sup>) of thirty percent (30%) of sixty percent (60%) of the Median Income for the Area for a household size appropriate to the Unit or if, greater, 60% Tax Credit Rent. For a Moderate Income Household, if any, Affordable Rent means a monthly rent which does not exceed one twelfth (1/12<sup>th</sup>) of thirty percent (30%) of one hundred ten percent (110%) of the Median Income for the Area for a household size appropriate to the Unit. “Household size appropriate to the Unit,” as used herein, means two persons for each one-bedroom Unit (if any), and three persons for each two bedroom Unit, excepting that in connection with determining household size when applying tax credit rents, the household size shall be deemed to be 1.5 persons per bedroom (or one person per studio). The maximum monthly rental amount of the Units shall be adjusted annually by the formula set forth above upon the promulgation of revised Riverside Primary Metropolitan Statistical Area median income figures by regulation of the California Department of Housing and Community



Development. Actual rent charged may be less than such maximum rent at a cost not in excess of the lesser of (i) that rent which may be charged the applicable Eligible Person or Family pursuant to Section 50053 of the California Health and Safety Code and (ii) the limits as set forth in this Agreement. Notwithstanding the foregoing portion of this paragraph, in the event any Units are assisted, financed or receive the benefit of HOME Moneys, the maximum allowable rent for each of the HOME Units during the HOME Compliance Period shall not exceed the applicable HOME rent amount determined pursuant to the HOME Regulations. It is contemplated that if HOME Moneys are applied, all of the Units in the Development will be HOME Units. Of the total number of Units in the Development, 50 will be Low HOME Units and the remaining 21 restricted units will be High HOME Units.

“**Allowable Closing Costs**” means recording fees, escrow fees, documentary transfer taxes, premiums for insurance and other maintenance costs and transfer incurred in connection with the acquisition of the Site by City and in connection with the Acquisition Conveyance and the City Disposition Conveyance (but not payments for land, property taxes or assessments).

“**Allowable Predevelopment Expense Conditions Precedent**” means all matters set forth in Section 3.1 as City Disposition Conditions Precedent excepting (b), (g) and (h) thereof.

“**Allowable Predevelopment Expenses**” means amounts paid by the Developer in connection with the preparation of plans and revisions, City and/or County planning and plan check fees, predevelopment architecture and engineering fees, legal fees, TCAC application and reservation fees (provided that to the extent any such amounts are refundable if the Project does not proceed, such amounts would be returned to City), and architecture/engineering construction documents retainer (provided that to the extent such amounts are refundable, such amounts would be returned to City), arranging for the acquisition of the Site and preparation of agreements in connection therewith, including legal fees of Developer, as hereafter approved by the City Manager up to the sum of Five Hundred Thousand Dollars (\$500,000.00). The Allowable Predevelopment Expenses are part of and not in addition to the City Initial Loan Amount.

“**Applicable Federal Rate**” means the interest rate set by the United States Treasury from time to time for the purpose of determining applicable Low Income Housing Tax Credit interest rates. The Applicable Federal Rate is published by the Internal Revenue Service in monthly revenue rulings.

“**Applicable Interest Rate**” means the following rates: (a) as to amounts paid when due with respect to which the Applicable Interest Rate is made applicable by this Agreement, three percent (3%) per annum, and (b) as to amounts not paid when due, the lesser of (i) seven percent (7%) per annum, compounded annually, and (ii) the maximum rate permitted by applicable law.

“**Applicable Percentage**” means fifty percent (50%) of Residual Receipts.

“**Application for Disbursement**” is defined in Section 4.16 hereof.

“**Approved Construction and/or Permanent Lender**” means one or more of Bank of America, California Community Reinvestment Corporation (“CCRC”), Wells Fargo Bank, East West Bank, U.S. Bank, JP Morgan Chase Bank, Citibank, or another mutually acceptable institutional lender, but not Fannie Mae.

“**Area**” means the Riverside Primary Metropolitan Statistical Area, as periodically defined by HUD.

“**Area A**” means that certain portion of the Site so delineated on the Site Map. Area A consists of approximately 2.8 acres.

“**Area A Value**” means One Million Four Hundred Forty Thousand Dollars (\$1,440,000.00).

“**Area B**” means that certain portion of the Site so delineated on the Site Map and depicted at Exhibit A to the Area B License Agreement. Area B consists of approximately 5.81 acres.

“**Area B License Agreement**” means a license agreement under which City, as fee owner of the Site, grants to Developer the right to temporarily use Area B as a staging area for the Improvements, for the storage of construction materials and equipment to be used in constructing the Improvements, and for ingress and egress to Area A during the construction of the Improvements. The Area B License Agreement shall not convey any interest in land. The Area B License Agreement shall be substantially in the form of Attachment No. 15.

“**ARR Guidelines**” has the meaning established therefor in Recital C to this Agreement.

“**ARR Program**” has the meaning established therefor in Recital C to this Agreement.

“**Audit**” as defined in Section 4.18.1.

“**Audited Financial Statement**” means an audited financial statement, including without limitation a profit and loss statement, generated by Cohn Reznick or another third party certified public accountant acceptable to City in its reasonable discretion, showing, for the previous Year, on a monthly basis and in an easily readable format, Gross Revenues, Operating Expenses, Debt Service, Operating Reserve, Capital Replacement Reserve, Deferred Developer Fee, Asset Management Fee and Residual Receipts.

“**Bank Deed of Trust**” means a deed of trust, among an Approved Construction and/or Permanent Lender, as beneficiary and Developer as trustor and Title Company or another mutually acceptable title insurer as trustee, in connection with the construction loan provided by an Approved Construction and/or Permanent Lender to Developer.

“**Base Pro Forma**” means an analysis by Keyser Marston Associates, Inc. concerning the Development as prepared in connection with a staff report as prepared by City staff, a copy of which is on file with City.

“**Basic Concept Drawings**” is defined in Section 4.2.1 hereof.

“**Building Permit**” means the building permit(s) issued by City and required for the Improvements.

“**Calculation of Affordable Rents**” means Attachment No. 7 to this Agreement.

“**Capital Replacement Reserve**” means a reserve fund to be established by Developer as a capital reserve as described in Section 5.7 hereof. To the extent Developer is required to maintain a Capital Replacement Reserve by any Approved Construction and/or Permanent Lender, Developer

shall receive a credit hereunder for such amounts maintained by it in compliance with such Approved Construction and/or Permanent Lender capital replacement reserve requirement.

“**Certificate of Completion**” means Attachment No. 10 to this Agreement.

“**Certificate of Continuing Program Compliance**” means the Certificate to be filed by Developer or its property manager on behalf of Developer with City, which Certificate shall be substantially in the form attached hereto as Attachment No. 4.

“**Chargeable Reserves**” means each of the following, within the respective parameters therefor set forth in this Agreement: (i) Capital Replacement Reserve; and (ii) Operating Reserve.

“**City**”, as defined in the first paragraph hereof, means the City of Moreno Valley, a municipal corporation.

“**City Aggregate Disbursement Amount**” means an amount equal to the sum of the City Initial Amount and the City Subsequent Loan Amount.

“**City Code**,” as defined in the Recitals hereto, is the Municipal Code of the City of Moreno Valley as it may be amended from time to time.

“**City Construction Disbursement Amount**” means (i) the amount of the City Subsequent Loan, if such loan is originated, and (ii) the amount of the City Initial Loan remaining after disbursements for the Acquisition Price, the Allowable Closing Costs and the Allowable Predevelopment Expenses.

“**City Developer CC&Rs**” or “**City Regulatory Agreement**” means Attachment No. 11 to this Agreement.

“**City Disposition Conditions Precedent**” is set forth in Section 3.1.

“**City Disposition Conveyance**” means the conveyance of Area A by City to Developer under the City Disposition Deed.

“**City Disposition Deed**” means a deed substantially in the form of Attachment No. 6 to this Agreement.

“**City Disposition Escrow Holder**” means First American Title Insurance Company, Riverside office, escrow division, or another mutually acceptable escrow holder.

“**City Fees**” means all fees chargeable by City in connection with the development of the Improvements.

“**City Impact Fees**” means those facility fees, road improvement fees, and other fees identified by City as development impact fees, including street improvements and/or street improvement fees, required by City and retained by City in connection with the development of the Rental Project. The City Impact Fees are estimated at One Million Dollars (\$1,000,000.00); provided that the amount designated for fees as of the time of payment to City shall control.

“**City Initial Amount**” means the form of (i) the Acquisition Price, (ii) the Allowable Closing Costs and (iii) the Allowable Predevelopment Expenses.

“**City Initial Deed of Trust**” means Attachment No. 14 to this Agreement.

“**City Initial Loan**” means a loan in the amount of the City Initial Loan Amount.

“**City Initial Loan Amount**” means the sum of Three Million Five Hundred Thousand Dollars (\$3,500,000.00).

“**City Initial Note**” means Attachment No. 13 to this Agreement.

“**City Manager**” means the City Manager of City or his or her designee.

“**City/Private Funds Ratio**” means the ratio between the City Construction Disbursement Amount and the total funds available for the construction of the Improvements by virtue of investors’ equity contributions and the construction loan commitment.

“**City Subsequent Deed of Trust**” means a deed of trust to be recorded as to Area A securing repayment of the City Subsequent Note. The Additional City Subsequent Deed of Trust shall be substantially in the form of Attachment No. 18; however, unless otherwise designated by City, the City Subsequent Deed of Trust shall be subordinate to the City Initial Deed of Trust.

“**City Subsequent Loan Amount**” means a sum hereafter determined by City not in excess of One Million Dollars (\$1,000,000.00). It is mutually contemplated that if the City Subsequent Loan Amount is made available, the sole source of such amount will consist of moneys available City under the HOME Program.

“**City Subsequent Note**” means a promissory note to be given by Developer to City in the event Developer obtains final financing commitments as described in the final financing plan that Developer demonstrates to the reasonable satisfaction of the City Manager are sufficient to fund the Improvements and to fund reserves at the levels required under this Agreement to be accomplished as of the City Disposition Conveyance. The City Subsequent Note shall be substantially in the form of Attachment No. 17; however, the order of payments as between such promissory notes shall be determined by City.

“**City Waiver Amount**” means the amount of Seven Hundred Thirty Three Thousand Dollars (\$733,000.00) approximating waiver of certain City Fees, as provided in Municipal Code Section 9.03.050.D.1.a.

“**Contractor**” shall mean a construction contractor, duly licensed in the State of California and bonded and insured as required herein, performing the Construction work for the Rental Project or any other Improvements that comprise the Rental Project.

“**Cost Overrun Amounts**” means amounts incurred and expended by Developer in connection with demolition and construction under this Agreement to the extent that: (i) total construction and demolition costs exceed the amounts set forth therefor in the Base Pro Forma; (ii) such amounts have not been defrayed by moneys provided by City; and (iii) the City Manager, acting in good faith and upon consultation with Developer, confirms that such amounts were reasonably incurred and were not unreasonable as to amount.

“**Cost Savings**” is defined in Section 4.18 hereof.

“**County**” means the County of Riverside, California.

“**Date of Agreement**” means March 15, 2016.

“**Debt Service**” means required debt service payments for the Primary Construction Loan and/or the Primary Permanent Loan including the funding obligations in respect of all reserves or escrows required thereunder and scheduled payments as approved as part of the Final Financing Package.

“**Default**” is defined in Section 7.1 hereof.

“**Deferred Developer Fee**” means the approximate sum of Three Hundred Thousand Fifty One Dollars (\$351,000.00). No interest shall accrue with respect to the Deferred Developer Fee.

“**Developer**”, as defined in the first paragraph of this Agreement, means RB Boulder Ridge Limited Partnership, a California limited partnership.

“**Developer Fee**” means the lesser of: (i) Two Million Dollars (\$2,000,000.00) or (ii) that amount of a fee to the Developer as a developer fee included within basis in connection with the preliminary reservation of Tax Credits, all inclusive of the Deferred Developer Fee; Developer Fee as received by Developer shall be limited to such amount.

“**Developer Title Policy**” is defined in Section 2.8.

“**Development**” or “**Project**” means the Housing Component.

“**Disposition Escrow Holder**” means First American Title Company or another escrow holder approved by City.

“**Environmental Laws**” means all laws, ordinances and regulations relating to Hazardous Materials, including, without limitation: the Clean Air Act, as amended, 42 U.S.C. Section 7401, *et seq.*; the Federal Water Pollution Control Act, as amended, 33 U.S.C. Section 1251 *et seq.*; the Resource Conservation and Recovery Act of 1976, as amended, 42 U.S.C. Section 6901, *et seq.*; the Comprehensive Environment Response, Compensation and Liability Act of 1980, as amended (including the Superfund Amendments and Reauthorization Act of 1986, “CERCLA”), 42 U.S.C. Section 9601, *et seq.*; the Toxic Substances Control Act, as amended, 15 U.S.C. Section 2601 *et seq.*; the Occupational Safety and Health Act, as amended, 29 U.S.C. Section 651, the Emergency Planning and Community Right to Know Act of 1986, 42 U.S.C. Section 11001 *et seq.*; the Mine Safety and Health Act of 1977, as amended, 30 U.S.C. Section 801 *et seq.*; the Safe Drinking Water Act, as amended, 42 U.S.C. Section 300f *et seq.*; all comparable state and local laws, laws of other jurisdictions or orders and regulations; and all laws, ordinances, statutes, codes, rules, regulations, orders and decrees of the United States, the State, City, or any other political subdivision in which the Site is located, and of any other political subdivision, agency or instrumentality exercising jurisdiction over City, Developer, or the Site.

“**Escrow Holder**” means First American Title Insurance Company, Riverside office, escrow division, or another mutually acceptable escrow holder.

“**Excess Amount**” is defined in Section 4.15.1.

“**Extremely Low Income Households**” means households earning not greater than thirty percent (30%) of Median Income for the Area pursuant to the Health and Safety Code Section 50106.

“**Extremely Low Income Unit**” means a Unit occupied at Affordable Rent by an Extremely Low Income Household.

“**Federal Program Limitations**” means the requirements of Section 3 and those requirements enumerated in Section 8.2 hereof and, in the event HOME Moneys are utilized for any of the Improvements, the HOME Requirements.

“**Final Development Budget**” means a detailed enumeration of all projected costs of construction of the Development, including all costs and off-site improvements required to be constructed under this Agreement.

“**Final Financing Commitments**” means the final and unconditional commitment of financing by the Primary Construction Lender, a Tax Credit Institutional Investor, moneys escrowed by Developer for such purpose (from Developer’s funds) and such money which as of the presentment of the Final Financing Plan shall have disbursed or committed by City.

“**Final Financing Package**” is defined in Section 4.15 hereof.

“**General Partner Fee**” means a fee if charged by the general partner not to exceed Thirty Thousand Dollars (\$30,000.00) per year, increasing by two and one half percent (2.5%) annually.

“**Gross Revenues**” means the sum of: (i) the total rental income and all other revenues or income received by Developer or its successors or assigns in connection with the Housing Component, including without limitation Housing Rent, laundry charges (as received by Developer) or consideration received from an entity that contracts to provide laundry services, payments in connection with Section 8 certificates, if any (including payments under such certificates that are in excess of the restricted rents provided for herein), cable income or consideration received from an entity that contracts to provide cable services, each of (ii) amounts paid to Developer or any Affiliated Person of Developer on account of Operating Expenses for further disbursement by Developer or such affiliate to a third party or parties, including, without limitation, grants received to fund social services or other housing supportive services at the Development; (iii) late charges and interest paid on rentals; (iv) rents and receipts from licenses, concessions, vending machines, coin laundry, and similar sources; (v) other fees, charges, or payments not denominated as rental but payable to Developer in connection with the rental of office, retail, storage, or other space in the Development; (vi) consideration received in whole or in part for the cancellation, modification, extension or renewal of leases; and (vii) interest and other investment earnings on security deposits, reserve accounts and other Development accounts to the extent disbursed, but does not include: (x) the proceeds of the sale of Tax Credits to finance the Development; (y) Refinancing Net Proceeds (provided the refinancing is permitted by and is accomplished in accordance with the City Disposition Deed and this Agreement); or (z) insurance proceeds applied to reconstruct or repair the Improvements.

“**Hazardous Material**” or “**Hazardous Materials**” means and include any substance, material, or waste which is or becomes regulated by any local governmental authority, including the

County, the Regional Water Quality Control Board, the State of California, or the United States Government, including, but not limited to, any material or substance which is: (i) defined as a “hazardous waste,” “acutely hazardous waste,” “restricted hazardous waste,” or “extremely hazardous waste” under Sections 25115, 25117 or 25122.7, or listed pursuant to Section 25140, of the California Health and Safety Code, Division 20, Chapter 6.5 (Hazardous Waste Control Law); (ii) defined as a “hazardous substance” under Section 25316 of the California Health and Safety Code, Division 20, Chapter 6.8 (Carpenter Presley Tanner Hazardous Substance Account Act); (iii) defined as a “hazardous material,” “hazardous substance,” or “hazardous waste” under Section 25501 of the California Health and Safety Code, Division 20, Chapter 6.95 (Hazardous Materials Release Response Plans and Inventory); (iv) defined as a “hazardous substance” under Section 25281 of the California Health and Safety Code, Division 20, Chapter 6.7 (Underground Storage of Hazardous Substances); (v) petroleum; (vi) asbestos and/or asbestos containing materials; (vii) lead based paint or any lead based or lead products; (viii) polychlorinated biphenyls, (ix) designated as a “hazardous substance” pursuant to Section 311 of the Clean Water Act (33 U.S.C. Section 1317); (x) defined as a “hazardous waste” pursuant to Section 1004 of the Resource Conservation and Recovery Act, 42 U.S.C. Section 6901, *et seq.* (42 U.S.C. Section 6903); (xi) Methyl tert Butyl Ether; (xii) defined as “hazardous substances” pursuant to Section 101 of the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. Section 9601, *et seq.* (42 U.S.C. Section 9601); (xiii) any other substance, whether in the form of a solid, liquid, gas or any other form whatsoever, which by any “Governmental Requirements” (as defined in Paragraph (c) of this Section 308) either requires special handling in its use, transportation, generation, collection, storage, handling, treatment or disposal, or is defined as “hazardous” or harmful to the environment; and/or (xiv) lead based paint pursuant to and defined in the Lead Based Paint Poisoning Prevention Act, Title X of the 1992 Housing and Community Development Act, 42 U.S.C. § 4800, *et seq.*, specifically §§ 4821–4846, and the implementing regulations thereto. Notwithstanding the foregoing, “Hazardous Materials” shall not include such products in quantities below attainment levels identified in one or more of the enactments identified above as Governmental Requirements, including those products and amounts as are customarily used in the construction, maintenance, rehabilitation, management, operation and residence of residential developments or associated buildings and grounds, or typically used in residential activities in a manner typical of other comparable residential developments, or substances commonly ingested by a significant population living within the Development, including without limitation alcohol, aspirin, tobacco and saccharine.

“**Hazardous Materials Contamination**” means the contamination (whether presently existing or hereafter occurring) of the improvements, facilities, soil, groundwater, air or other elements on, in, or under the Site by Hazardous Materials, or the contamination of the buildings, facilities, soil, groundwater, air or other elements on, in or of any other property as a result of Hazardous Materials at any time (whether before or after the Date of Agreement) emanating from the Site.

“**HCD**” means the Housing and Community Development Department of the State of California.

“**HOME Compliance Period**” means that period of time commencing as of the date the first HOME Unit is rented to a tenant household and ending on the twentieth (20<sup>th</sup>) anniversary of the issuance of the final certificate of occupancy for the Improvements by City.

“**HOME Documentation, Recordkeeping, Reporting and Monitoring Requirements**” means Attachment No. 19.

“**HOME Moneys**” means moneys that become available to City under the HOME Program that are applied in connection with development of certain Units at the Rental Project.

“**HOME Program**” means that program established by the HOME Regulations.

“**HOME Regulations**” means those regulations set forth at 24 CPR, Part 92, as such regulations may be revised from time to time. In the event City hereafter commits moneys available to City under the HOME Program to the Rental Project, then a copy of the HOME Regulations will be kept on file with City as a public record; provided that any failure of City to maintain a copy of such HOME Regulations on file shall not excuse the obligation for performance by Developer.

“**HOME Rent**” means “Low HOME Rent” for Riverside County as determined in conformance with §92.252(b) and the remainder of the HOME Regulations, and applying utility allowances as determined by the County Housing Authority or California Utility Allowance Calculation (“CUAC”).

“**HOME Units**” are those Units, if any, that are financed with, constructed with, or receive the benefit of HOME Moneys.

“**Housing Component**” means the new apartment complex and associated improvements as required by this Agreement to be: (i) constructed by Developer upon Area A, including associated infrastructure on the remainder of the Site, with related offsite improvements, as more particularly described in the Scope of Development, and (ii) operated as an affordable housing complex in conformity with the City Disposition Deed on Area A.

“**Housing Rent**” means the total of monthly payments by the tenants of a Unit for (a) use and occupancy for the Unit and facilities associated therewith, (b) any separately charged fees or service charges assessed by Developer which are required of all tenants of the Units, other than security deposits, (c) a reasonable allowance for utilities not included in (a) or (b) above, including garbage collection, sewer, water, electricity and gas, as determined by regulation of Housing Authority of the County pursuant to 24 C.F.R. Section 5.600 *et seq.* or CUAC, and (d) possessory interest, taxes or other fees or charges assessed for the use of the Units and facilities associated therewith by a public or private entity other than Developer.

“**Improvements**” means all of the improvements described in the Scope of Development.

“**Income Verification**” means Attachment No. 12 to this Agreement.

“**Legal Description of the Site**” means Attachment No. 2 to this Agreement.

“**Limited Partner Fee**” means a fee if charged by the limited partner under the Partnership Agreement, not to exceed Five Thousand Dollars (\$5,000.00) per year, increasing by two and one half percent (2.5%) annually so long as the Partnership Agreement is in effect.

“**Low Income Households**” or “**Lower Income Households**” means households earning not greater than eighty percent (80%) of Median Income pursuant to Health and Safety Code Section 50079.5.

“**Low Income Unit**” or “**Lower Income Unit**” means a Unit occupied at Affordable Rent by a Low Income Household.



“**Materially Adverse Conditions**” are surface or subsurface conditions of the Site which: (i) are not apparent from a visual inspection of the surface of the Site; and (ii) (a) include the presence of Hazardous Materials at the Site in excess of currently applicable levels permitted under federal or state law, or (b) include the presence of conditions not typically found in properties within City and which a mutually acceptable independent third party geotechnical firm retained by Developer estimates will increase development costs by over Three Hundred Thousand Dollars (\$300,000.00).

“**Maturity Date (Acquisition)**” has the meaning established therefor in the City Initial Note.

“**Maturity Date (Construction)**” has the meaning established therefor in the City Subsequent Note.

“**Median Income for the Area**” means Median Income for the Area (namely, Riverside County), as set forth by regulation of the California Department of Housing and Community Development pursuant to Health and Safety Code Sections 50079.5 and 50105.

“**Moderate Income Households**” means households earning greater than eighty percent (80%) of Median Income but not greater than one hundred twenty percent (120%) of Median Income pursuant to Health and Safety Code Section 50093.

“**Moderate Income Unit**” means a Unit occupied at Affordable Rent by a Moderate Income Household.

“**Net Operating Income**” means Gross Revenues, less: (i) Operating Expenses; (ii) Debt Service; (iii) Chargeable Reserves; (iv) the deferred portion of the Developer Fee (as determined by audit, as provided under the definition of “Developer Fee”, above); (v) the General Partner Fee; and (vi) the Limited Partner Fee (as determined under the Final Financing Package).

“**Notice of Affordability Restrictions**” means a recordable instrument substantially in the form of Attachment No. 5.

“**Notice**” means a notice in the form prescribed by Section 10.2 hereof.

“**NSP**” is defined in Recital A, above.

“**NSP3**” is defined in Recital B, above.

“**Operating Expenses**” means actual, reasonable and customary costs, fees and expenses directly incurred and for which payment has been made and which are attributable to the operation, maintenance, and management of the Rental Project, excluding the Capital Replacement Reserve and consisting of only the following (and such additional items, if any, as to which the prior written approval of the City Manager is first obtained. Such approval shall be granted, granted subject to conditions, or refused at reasonable discretion of the City Manager): painting, cleaning, repairs and alterations; landscaping; utilities; rubbish removal; sewer charges; costs incurred to third parties in connection with generating laundry charges (but in no event to exceed the laundry charges); real and personal property taxes and assessments; insurance premiums; security; advertising, promotion and publicity; office, janitorial, cleaning and building supplies; actual and customary salary payable to an on-site manager which directly and exclusively benefits residents of the Rental Project; the actual and customary salary paid for one assistant manager, one on-site maintenance manager and such

other on-site management personnel, if any, which directly and exclusively benefit residents of the Rental Project, subject to the prior written approval of the City Manager at his or her reasonable discretion; a management fee (“Management Fee”) (excluding any on-site management personnel) of not to exceed six percent (6%) of Gross Revenues; purchase, repairs, servicing and installation of appliances, equipment, fixtures and furnishings; reasonable and customary fees and expenses of accountants, attorneys, consultants and other professionals as incurred commencing after the completion of the Improvements (as evidenced by the issuance by City of a certificate of occupancy for the corresponding building developed as part of the Improvements) in connection with the operation of the Rental Project; the Limited Partner Fee; the General Partner Fee; tenant improvements that are not included in the costs of the Housing Component, and payments made by Developer to satisfy indemnity obligations and other payments by Developer pursuant to this Agreement other than to Developer, partners or other related persons; provided, however, that payments to parties related to Developer for Operating Expenses must not exceed market rates. The Operating Expenses shall not include non-cash expenses, including without limitation, depreciation. The Operating Expenses shall be reported in the Audited Financial Statement and shall be broken out in line item detail.

“**Operating Reserve**” means a reserve fund to be established by Developer as of the City Disposition Conveyance as a reserve for operating expenses in the amount of One Hundred Twenty-Six Thousand Dollars (\$126,000.00), and may be increased annually by two and one-half percent (2.5%) per year, or such other amount as the City Manager and Developer shall mutually approve. Interest earned on moneys held in the Operating Reserve shall be retained in the Operating Reserve unless otherwise directed by the Permanent Lender. To the extent Developer is required to maintain an Operating Reserve by any Approved Construction and/or Permanent Lender, Developer shall receive a credit hereunder for such amounts maintained by it in compliance such Approved Construction and/or Permanent Lender operating reserve requirement. It is contemplated that the Operating Reserve will be held by the Permanent Lender.

“**Original Site Owner**” means Lakeridge Marketplace, LLC, a California limited liability company, the fee owner of the Site as of the Date of Agreement.

“**Partnership Agreement**” means the agreement(s) which set(s) forth the terms of Developer’s (or its approved Affiliated Persons’) limited partnership, as such agreement(s) may be amended from time to time, so long as consistent with the requirements of this Agreement. The Partnership Agreement shall include provisions which incorporate or otherwise conform to the cash flow priorities included in the definition of “Residual Receipts” set forth in this Agreement.

“**Permitted Senior Lien**” means collectively, the deeds of trust securing the Primary Construction Loan and the Primary Permanent Loan.

“**Prescribed Income Levels**” means the following: during the Required Covenant Period households at the following income levels: (i) for one (1) one-bedroom Unit, thirty percent (30%) of Median Income; (ii) for one (1) one-bedroom Unit, forty percent (40%) of Median Income; (iii) for four (4) one-bedroom Units, fifty percent (50%) of Median Income; (iv) for two (2) one-bedroom Units, sixty percent (60%) of Median Income; (v) for four (4) two-bedroom Units, thirty percent (30%) of Median Income; (vi) for four (4) two-bedroom Units, forty percent (40%) of Median income; (vii) for twenty (20) two-bedroom Units, fifty percent (50%) of Median Income; (viii) for eleven (11) two-bedroom Units, sixty percent (60%) of Median Income; (ix) for three (3) three-bedroom Units, thirty percent (30%) of Median Income; (x) for two (2) three-bedroom Units, forty

percent (40%) of Median Income; (xi) for eleven (11) three-bedroom Units, fifty percent (50%) of Median Income; and (xii) for eight (8) three-bedroom Units, sixty percent (60%) of Median Income; provided, however, that Developer may adjust the configuration of the bedroom sizes of the Units in the Senior Citizen Component, slightly, to better accommodate Senior Citizen Households with the consent of the City, which consent shall not be unreasonably withheld.

**“Primary Construction Loan”** means the mortgage loans and letters of credit obtained by Developer from a state agency or instrumentality or a reputable and established bank, savings and loan association, or other similar financial institution (but not Fannie Mae) for financing the development (but not the operation) of the Rental Project pursuant to this Agreement.

**“Primary Permanent Loan”** means the mortgage loan obtained by Developer from a state agency or instrumentality or a reputable and established bank, savings and loan association, or other similar financial institution (but not Fannie Mae) in an amount limited to satisfaction of the outstanding balance of the Primary Construction Loan or in an amount in excess of such outstanding balance so long as such excess proceeds are used to pay (or prepay) the Developer Fee (including the Deferred Developer Fee), amounts outstanding under the City Initial Note, the City Subsequent Note, Cost Overrun Amounts and outstanding development costs.

**“Principals”** means James M. Jernigan and RBI.

**“Project Documents”** means, collectively, this Agreement, the City Developer CC&Rs, the City Disposition Deed, all other Attachments to this Agreement, and any other agreement, document, or instrument that City requires in connection with the execution of this Agreement or from time to time to effectuate the purposes of this Agreement.

**“RBI”** means Rancho Belago Developers, Inc., a California corporation.

**“Redevelopment Plan”** means the Redevelopment Plan for the Moreno Valley Redevelopment Project (the “Redevelopment Project”) first approved by Ordinance No. 87-25 adopted by the City Council of the City on July 13, 1987, as subsequently amended. The Redevelopment Plan is on file with City as a public record.

**“Refinancing Net Proceeds”** means the proceeds of any approved refinancing of any of the Primary Construction Loan or the Primary Permanent Loan or other approved financing secured by the interest of Developer in the Site (or portion thereof), net of: (i) the amount of the financing which is satisfied out of such proceeds; (ii) reasonable and customary costs and expenses incurred in connection with the refinancing; (iii) the balance, if any, of the Deferred Developer Fee (provided that Developer’s share shall be reduced to the extent payment of additional amounts is required to be made to City [including without limitation Section 5.3.2 of this Agreement]) for the Development; (iv) the balance of loans to the Development made by the limited partners of Developer for development or operating deficits, amounts expended to maintain compliance with the Tax Credit Rules, or contributions for capital expenditures in excess of available Project revenues, if any, including interest at the Applicable Federal Rate; (v) the balance, if any, of operating loans or development loans made by the general partners of Developer to the Development, including interest at the Applicable Federal Rate; (vi) the return of capital contributions, if any, to the Development made by the general partners of Developer that were used to pay the Deferred Developer Fee; (vii) payment of unpaid Tax Credit adjustment amounts or reimbursement of Tax Credit adjustment amounts paid by the administrative and/or managing general partners and/or the guarantors to the

Development pursuant to the approved Partnership Agreement, if any; and (viii) the payment to the administrative general partner of Developer of a refinancing fee, which fee is and shall be subject to the approval of the City Manager at the time of each refinancing and which shall not exceed five percent (5%) of the amount of the approved refinancing.

“**Related Entity**” means RBI, a Principal or an entity in which any interest is held by Developer or one or more of the Principals.

“**Relocation**” or “**Relocation Laws**” means all applicable federal and state relocation laws and regulations, including without limitation, (i) the relocation obligations of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (“URA”), 42 U.S.C. 4201–4655, and the implementing regulations thereto set forth in 49 C.F.R. Part 24, (ii) the California Relocation Assistance Act, Government Code Section 7260, *et seq.* and the implementing regulations thereto set forth in Title 25, Section 6000, *et seq.* of the California Code of Regulations, and (iii) any other applicable federal, state or local enactment, regulation or practice providing for relocation assistance, benefits, or compensation for moving and for property interests (including without limitation goodwill and furnishings, fixtures and equipment, and moving expenses), and (iv) any federal law or regulation prohibiting payment of relocation benefits or assistance to persons ineligible for relocation benefits or assistance. Developer shall be solely responsible for payment of any and all costs, expenses, and payments required to be made and/or incurred pursuant to any and all applicable Relocation Laws; City shall not incur any costs or expenses as a result of the application of the Relocation Laws to the Development, this Agreement and the acquisition of the Site.

“**Reporting Amounts**” means the sum of Two Hundred Fifty Dollars (\$250.00) per unit per year for each dwelling unit as to which Developer fails to deliver to City, during any Year, a full and adequate report that conforms such reporting as is described at Section 33418 of the California Health and Safety Code and which conforms to the Rules and Regulations.

“**Request for Notice of Default**” means Attachment No. 8.

“**Required Affordable Units**” means seventy-one (71) of the Units required to be developed on Area A under this Agreement; provided that, in the event a greater number of Units are required to be maintained as affordable units in connection with CDLAC or TCAC approvals, then such greater number shall control and this Agreement, including the attachments hereto, shall be conformed to such greater numbers; provided that, as to any Units above seventy-one (71) Units that are restricted, rent may be charged at levels allowable by TCAC under the Tax Credit Rules.

“**Required Covenant Period**” means a period of approximately fifty-five (55) years, as more particularly set forth in the City Developer CC&Rs.

“**Residual Receipts**” for a particular Year means Gross Revenues for the corresponding Year less (i) Debt Service payments made during such Year on the Primary Construction Loan or the Primary Permanent Loan in amounts not in excess of the amounts due and payable during such Year (and not including prepayments); and (ii) the sum of (a) Operating Expenses and, to the extent funded, (b) payments made for Chargeable Reserves as made during the corresponding Year; and (iii) payments made for the Deferred Developer Fee as made during the corresponding Year. All calculations of Residual Receipts shall be made annually, on or before May 15 for the preceding Year, on a cash (and not accrual) basis and the components thereof shall be subject to verification

and approval, on an annual basis, based upon conformity with the terms of this Agreement and the City Disposition Deed, by City.

**“Rules and Regulations”** means each of: (i) Health and Safety Code Sections 33413, 33334.2, 33334.3, 50052.5, 50053 and 50105; (ii) the Davis-Bacon Act (40 U.S.C. 3141 *et seq.*); (iii) Community Development Block Grant (CDBG) program as authorized under the Housing and Community Development Act of 1974, 42 U.S.C. 5301 *et seq.* (“HCD Act”) and the regulations promulgated thereunder at 24 CFR 570; (iv) The Housing and Economic Recovery Act of 2008 (Public Law 110-289) (“HERA”); (v) The American Reinvestment and Recovery Act of 2009 (Public Law 111-005) (the “Recovery Act”); (vi) Notice of Fund Availability (NOFA) for the Neighborhood Stabilization Program 2 under the American Recovery and Reinvestment Act, 2009 [Docket No. FR 5321-N-01] (the “NSP2 NOFA”); (vii) the Community Development Block Grant (CDBG) program as authorized under the Public Housing and Community Development Act of 1974, 42 U.S.C. 5301 *et seq.* (“HCD Act”) as amplified by regulations set forth at 24 CFR 570; (viii) the Housing and Economic Recovery Act of 2008 (Public Law 110-289) (“HERA”); (ix) the American Reinvestment and Recovery Act of 2009 (Public Law 111-005) (the “Recovery Act”); (x) the Notice of Fund Availability (NOFA) for the Neighborhood Stabilization Program 2 under the American Recovery and Reinvestment Act, 2009 [Docket No. FR 5321-N-01] (the “NSP2 NOFA”); (xi) the National Environmental Policy Act of 1969 and related federal environmental authorities and regulations at 24 CFR Part 58; (xii) City’s Final Neighborhood Stabilization Program as amended by Substantial Amendment to City’s 2008-2009 Annual Action Plan, as adopted November 25, 2008; and (xiii) the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Pub. 2 111-203, approved July 21, 2010, including regulations cited at 75 FR 64322) sometimes referred to as “NSP3.”

**“Schedule of Performance”** means Attachment No. 3 to this Agreement. The Schedule of Performance sets forth the dates by which Developer is to perform certain obligations under this Agreement.

**“Scope of Development”** means Attachment No. 9 to this Agreement.

**“Section 3 Clause”** and **“Section 3”** shall mean and refer to Section 3 of the Housing and Urban Development Act of 1968, 12 U.S.C. 1701u, as amended. Prior to the infusion of any moneys under this Agreement, City shall have prepared a Section 3 “checklist” and other forms related to Section 3 compliance; these shall be provided by City to Developer, Contractor, subcontractor(s), or other contractor(s), as applicable, such forms shall be utilized in all contracts and subcontracts to which Section 3 applies and to the extent required by 24 CFR part 135. For purposes of this Section 3 Clause and compliance thereto, whenever the word “contractor” is used it shall mean and include, as applicable, Developer, Contractor, other contractor(s), and subcontractor(s).

Developer hereby acknowledges and agrees the responsibility for compliance with all Section 3 Clause federal requirements as to Developer, its Contractor, or other contractor(s), subcontractor(s), and other agents is the primary obligation of Developer. Developer shall provide or cause to be provided to its Contractor, and each of its other contractor(s), subcontractor(s) and agents a checklist for compliance with Section 3 federal requirements, to obtain from such Contractor, and other contractor(s), subcontractor(s), and agents all applicable items, documents, and other evidence of compliance with the items, actions, and other provisions within the checklist, and to submit all such completed Section 3 documentation and proof of compliance to the City Manager.

The particular text to be utilized in any and all contracts of any contractor doing work covered by Section 3, and to the extent required by 24 CFR part 135, shall be in substantially the form of the following, as reasonably determined by City Manager, or as directed by HUD or its representative, and shall be executed by the applicable contractor under penalty of perjury:

“(i) The work to be performed under this contract is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (“Section 3”). The purpose of Section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by Section 3, shall, to the greatest extent feasible, be directed to income eligible persons inclusive of Extremely Low Income Households, 40% Very Low Income Households, 50% Very Low Income Households, and Low Income Households served by the Rental Project (as defined in the Disposition and Development/Affordable Housing Agreement and Regulatory Agreement), particularly persons who are recipients of HUD assistance for housing.

“(ii) The parties to this contract agree to comply with HUD’s regulations in 24 CFR part 135, which implement Section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.

“(iii) The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers’ representative of the contractor’s commitments under this Section 3 clause, and will post copies of notices in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the Section 3 preference, shall set forth minimum number of job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; the name and location of person(s) taking applications for each of the positions; and the anticipated date the work shall begin.

“(iv) The contractor agrees to include this Section 3 clause in every subcontract subject to compliance with regulations in 24 CFR part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this Section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR part 135.

“(v) The contractor will certify that any vacant employment positions, including training positions, that are filled (a) after the contractor is selected but before the contract is executed, and (b) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor’s obligations under 24 CFR part 135.

“(vi) Noncompliance with HUD’s regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

“(vii) With respect to work performed in connection with Section 3 covered Indian Housing assistance, Section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible, (a) preference and opportunities for training and employment shall be given to Indians, and (b) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of Section 3 and Section 7(b) agree to comply with Section 3 to the maximum extent feasible, but not in derogation of compliance with Section 7(b).”

After the foregoing Section 3 Clause, Developer and/or Contractor, as applicable, shall add the signature block of Contractor (or other contractor(s) and subcontractor(s), as applicable) and add the following text immediately above the signature block: “The contractor/provider by this his signature affixed hereto declares under penalty of perjury that contractor has read the requirements of this Section 3 Clause and accepts all its requirements contained therein for all of his operations related to this contract.”

“**Senior Citizen Component**” means those certain Units which are designated in the City Regulatory Agreement as Senior Citizen Units. All of the Senior Citizen Units shall be contained only in one building, which building shall consist solely of Senior Citizen Units.

“**Senior Citizen Household**” means a household in which all persons are 62 years of age or older.

“**Senior Citizen Unit**” means a Unit restricted to occupancy by a Senior Citizen Household as provided under the City Regulatory Agreement.

“**Site**” means that real property depicted on the Site Map and described with greater particularity by the Legal Description of the Site. The Site consists of approximately 8.61 acres.

“**Site Contract Price**” means the sum of Two Million Eight Hundred Twenty Thousand Dollars (\$2,820,000.00), as more particularly set forth in the Acquisition Agreement.

“**Site Map**” means Attachment No. 1 to this Agreement. The Site Map depicts the Site and separately delineates Area A and Area B.

“**Site Value**” means the value of the Site as of the Date of Agreement, namely Two Million Eight Hundred Twenty Thousand Dollars (\$2,820,000.00).

“**Stabilized Occupancy**” means occupancy of ninety percent 90% or more of the Units for three (3) consecutive months.

“**Tax Credit Amount**” means the sum of Sixteen Million Seven Hundred Ten Thousand Dollars (\$16,710,000.00) which represents the projected yield from the marketing of the Tax Credits under the Base Pro Forma.

“**Tax Credit Application**” means, individually and collectively, Developer’s Tax Credit application to be submitted to TCAC to obtain an allocation of 9% Tax Credits for the Development or such other financing as may be applied for pursuant to Section 4.15. The Tax Credit Application submitted by Developer shall be consistent with the terms of this Agreement.

“**Tax Credit Institutional Investor**” means a financial institution with a national reputation and practice of purchasing and holding Tax Credits or securitizing Tax Credits.

“**Tax Credit Regulatory Agreement**” means the regulatory agreement which it is contemplated may be required to be recorded against Area A with respect to the issuance of Tax Credits in the event a preliminary reservation is obtained from TCAC for the Rental Project.

“**Tax Credit Rules**” means Section 42 of the Internal Revenue Code and/or California Revenue and Taxation Code Sections 17057.5, 17058, 23610.4 and 23610.5 and California Health and Safety Code Section 50199, *et seq.*, and the rules and regulations implementing the foregoing, including without limitation the program regulations promulgated by TCAC.

“**Tax Credits**” means 9% Housing Tax Credits granted pursuant to Section 42 of the Internal Revenue Code and/or California Revenue and Taxation Code Sections 17057.5, 17058, 23610.4 and 23610.5 and California Health and Safety Code Section 50199, *et seq.*

“**TCAC**” means the Tax Credit Allocation Committee of the State of California.

“**Title Company**” shall be First American Title Insurance Company or another title insurer mutually acceptable to City and Developer.

“**Unit**” means each of the seventy-two (72) dwelling units required to be developed by Developer on Area A under this Agreement.

“**Very Low Income Unit**” means a Unit occupied at Affordable Rent by a Very Low Income Household.

“**Year**” means the period commencing as of the City Disposition Conveyance and ending as of December 31 of that calendar year, then each succeeding calendar year thereafter during the Required Covenant Period.

“**30% Tax Credit Rent**” means the maximum allowable rent for rental units restricted to occupancy by this Agreement to Extremely Low Income Households as established from time to time by TCAC as part of the Tax Credit Rules.

“**40% Tax Credit Rent**” means the maximum allowable rent for rental units restricted to occupancy by this Agreement to 40% Very Low Income Households as established from time to time by TCAC as part of the Tax Credit Rules.

“**40% Very Low Income Households**” means households earning not greater than forty percent (40%) of Median Income for the Area.

“**50% Very Low Income Households**” means households earning not greater than fifty percent (50%) of Median Income for the Area.

“**50% Tax Credit Rent**” means the maximum allowable rent for rental units restricted to occupancy by this Agreement to 50% Very Low Income Households as established from time to time by TCAC as part of the Tax Credit Rules.



“**60% Tax Credit Rent**” means the maximum allowable rent for rental units restricted to occupancy by this Agreement to Low Income Households as established from time to time by TCAC as part of the Tax Credit Rules.

**1.2 Singular and Plural Terms.** Any defined term used in the plural in this Agreement or any Project Document shall refer to all members of the relevant class and any defined term used in the singular shall refer to any number of the members of the relevant class.

**1.3 References and Other Terms.** Any reference to this Agreement or any Project Document shall include such document both as originally executed and as it may from time to time be modified. References herein to Articles, Sections and Exhibits shall be construed as references to this Agreement unless a different document is named. References to subparagraphs shall be construed as references to the same Section in which the reference appears. The term “document” is used in its broadest sense and encompasses agreements, certificates, opinions, consents, instruments and other written material of every kind. The terms “including” and “include” mean “including (include) without limitation.”

**1.4 Exhibits Incorporated.** All attachments and exhibits to this Agreement, as now existing and as the same may from time to time be modified, are incorporated herein by this reference.

**1.5 Representations and Warranties.**

**1.5.1 City Representations.** City represents and warrants to Developer as follows:

(a) Authority. City is a municipal corporation which has been authorized to transact business pursuant to action of City. City has full right, power and lawful authority to acquire the Site and thereafter convey Area A as provided herein and the execution, performance, and delivery of this Agreement by City has been fully authorized by all requisite actions on the part of City. The parties who have executed this Agreement on behalf of City are authorized to bind City by their signatures hereto.

(b) Litigation. To the best of City’s knowledge, there are no actions, suits, material claims, legal proceedings, or any other proceedings affecting the Site or any portion thereof, at law or in equity before any court or governmental agency, domestic or foreign.

(c) No Conflict. To the best of City’s knowledge, City’s execution, delivery, and performance of its obligations under this Agreement will not constitute a default or a breach under any contract, agreement or order to which City is a party or by which it is bound.

(d) No City Bankruptcy. City is not the subject of a bankruptcy proceeding.

Until the City Disposition Conveyance, City shall, upon learning of any fact or condition which would cause any of the warranties and representations in this Section 1.5.1 not to be true as of the City Disposition Conveyance, immediately give written notice of such fact or condition to Developer. Such exception(s) to a representation shall not be deemed a breach by City hereunder, but shall constitute an exception which Developer shall have a right to approve or disapprove if such exception would have an effect on the value and/or operation of Area A. If Developer elects to

accept the City Disposition Conveyance and possession of Area A following disclosure of such information, City's representations and warranties contained herein shall be deemed to have been made as of the City Disposition Conveyance, subject to such exception(s). If, following the disclosure of such information, Developer elects to not accept the City Disposition Conveyance of and possession of Area A, then this Agreement shall automatically terminate, and neither party shall have any further rights, obligations or liabilities hereunder. The representations and warranties set forth in this Section 1.5.1 shall survive the City Disposition Conveyance.

**1.5.2 Developer Representations.** Developer represents and warrants to City as follows:

(a) Authority. Developer is a duly organized limited partnership organized within and in good standing under the laws of the State of California. Developer has full right, power and lawful authority to acquire and accept title to and possession of Area A and undertake all obligations as provided herein and the execution, performance and delivery of this Agreement by Developer has been fully authorized by all requisite actions on the part of Developer. The parties who have executed this Agreement on behalf of Developer are authorized to bind Developer by their signatures hereto.

(b) Litigation. To the best of Developer's knowledge, there are no actions, suits, material claims, legal proceedings, or any other proceedings affecting the Site or Developer, at law or in equity before any court or governmental agency, domestic or foreign.

(c) No Conflict. To the best of Developer's knowledge, Developer's execution, delivery, and performance of its obligations under this Agreement will not constitute a default or a breach under any contract, agreement or order to which Developer is a party or by which it is bound.

(d) No Developer Bankruptcy. Developer is not the subject of a bankruptcy proceeding.

(e) Developer Experience; Sophisticated Party. The Principals of Developer are sophisticated parties, with substantial experience in the acquisition, rehabilitation, development, financing, obtaining financing for, marketing, and operation of affordable housing projects, including rental projects, and with the negotiation, review, and preparation of agreements and other documents in connection with such activities. Developer is familiar with and has reviewed all laws and regulations pertaining to the development and operation of the Development, including without limitation the Tax Credit Rules, the ARR Guidelines, the NSP, NSP3, and the Rules and Regulations, and has obtained advice from any advisers of its own choosing in connection with this Agreement.

(f) Due Authorization and Execution; Studies Completed. Developer has duly authorized the execution of this Agreement, including without limitation the attachments hereto. Developer is ready, willing and able to execute the City Developer CC&Rs, the City Initial Note, the City Initial Deed of Trust, the City Subsequent Deed of Trust, the City Subsequent Note, the City Subsequent Deed of Trust, and all documents necessary to effectuate the acquisition of the Site by City and the City Disposition Conveyance and has conducted all studies necessary to proceed with the Development. Concurrently with the execution of this Agreement by City or within three (3) calendar days thereafter, Developer shall execute and deposit with City (to be held pending

satisfaction of the City Disposition Conditions Precedent as set forth in Section 3.1 hereunder) the City Developer CC&Rs, the City Initial Note, the City Initial Deed of Trust, the City Subsequent Deed of Trust, and all documents necessary to effectuate the City Disposition Conveyance hereunder.

Until the City Disposition Conveyance, Developer shall, upon learning of any fact or condition which would cause any of the warranties and representations in this Section 1.5.2 not to be true as of one or more of the Acquisition Conveyance or the City Disposition Conveyance, immediately give written notice of such fact or condition to City. Such exception(s) to a representation shall not be deemed a breach by Developer hereunder, but shall constitute an exception which City shall have a right to approve or disapprove if such exception would have an effect on the development and/or operation of the Site. If City elects to proceed with the City Disposition Conveyance following disclosure of such information, Developer's representations and warranties contained herein shall be deemed to have been made as of the City Disposition Conveyance, subject to such exception(s). If, following the disclosure of such information, City elects to not close Escrow, then this Agreement and the City Disposition Escrow shall automatically terminate, and neither party shall have any further rights, obligations or liabilities hereunder. The representations and warranties set forth in this Section 1.5.2 shall survive the City Disposition Conveyance.

## **1.6 Environmental Condition of the Site.**

**1.6.1 Studies and Reports.** Prior to the Closing, Developer may obtain data and make any other or additional surveys, tests, studies, and reports necessary to evaluate the suitability of the Site for the Development, including the investigation of the environmental condition of the Site (collectively, the "Studies"). Any studies undertaken on the Site by Developer prior to the Closing shall be done at the sole expense of Developer, and Developer shall make arrangements with City prior to undertaking such work and entering the Site. Any studies shall be undertaken only after Developer has secured the consent of City and any necessary permits therefor from the appropriate governmental agencies, including without limitation City. Developer hereby agrees to promptly provide each of City with any and all Studies relating to the environmental condition of the Site upon Developer's acquisition thereof.

**1.6.2 Indemnification.** Developer shall save, protect, pay for, defend (with counsel acceptable to City), indemnify and hold harmless each of City and its elected and appointed officials, officers, employees, attorneys, representatives, volunteers, contractors and agents (collectively, "Indemnitees") from and against any and all liabilities, suits, actions, claims, demands, penalties, damages (including, without limitation, penalties, fines and monetary sanctions), losses, costs or expenses (including, without limitation, consultants' fees, investigation and laboratory fees, attorneys' fees and remedial and response costs and third-party claims or costs) (the foregoing are hereinafter collectively referred to as "Liabilities") that may now or in the future be incurred or suffered by Indemnitees by reason of, resulting from, in connection with or arising in any manner whatsoever as a direct or indirect result of: (i) the acquisition by City of the Site; (ii) the presence, use, release, escape, seepage, leakage, spillage, emission, generation, discharge, storage, or disposal of any Hazardous Materials in, on, under, or about, or the transportation of any such Hazardous Materials to or from, the Site; (iii) the violation, or alleged violation, of any statute, ordinance, order, rule, regulation, permit, judgment, or license relating to the use, generation, release, leakage, spillage, emission, escape, discharge, storage, disposal, or transportation of Hazardous Materials in, on, under, or about, or to or from, the Site; (iv) the physical and environmental condition of the Site, and (v) any Liabilities caused or contributed to by acts or omissions of Developer relating to any Environmental

Laws and other Governmental Requirements relating to Hazardous Materials and/or the environmental and/or physical condition of the Site. The foregoing indemnification shall not apply to the presence, use, release, escape, seepage, leakage, spillage, emission, or discharge of any Hazardous Materials in, on, under, or about the Site where such Hazardous Material existed on the property prior to the Closing. The foregoing indemnification shall continue in full force and effect regardless of whether such condition, liability, loss, damage, cost, penalty, fine, and/or expense shall accrue or be discovered before or after the termination of the Required Covenant Period. This indemnification supplements and in no way limits the indemnification set forth in Section 4.7.

**1.6.3 Duty to Prevent Hazardous Material Contamination.** During the construction, development, operation and management of the Development, Developer shall take all necessary precautions to prevent the release of any Hazardous Materials into the environment on or under the Site. Such precautions shall include, but not be limited to, compliance with all Environmental Laws and other Governmental Requirements. Developer shall notify City, and provide to City a copy or copies of any notices of violation, notices to comply, citations, inquiries, clean up or abatement orders, cease and desist orders, reports filed pursuant to self-reporting requirements and reports filed or applications made pursuant to all Environmental Laws and other Governmental Requirements, and Developer shall report to City, as soon as possible after each incident, any unusual or potentially important incidents in the event of a release of any Hazardous Materials into the environment.

**1.6.4 Release of Indemnitees by Developer.** Developer hereby waives, releases and discharges forever the Indemnitees from all present and future claims, demands, suits, legal and administrative proceedings and from all liability for damages, losses, costs, liabilities, fees and expenses, including attorneys' fees, court and litigation costs and fees of expert witnesses, present and future, arising out of or in any way connected with Developer's possession or use of the Site, improvement of the Site in accordance with this Agreement, the Scope of Development, and the land use entitlements obtained by Developer for the Development, and for the operation of the Development at the Site, of any Hazardous Materials on the Site, or the existence of Hazardous Materials contamination in any state on, under, or about the Site, however they came to be located there.

In connection with the foregoing, Developer acknowledges that it is aware of and familiar with the provisions of Section 1542 of the California Civil Code that provides 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.”**

As such relates to this Section 1.6.5, Developer hereby waives and relinquishes all rights and benefits that it may have under Section 1542 of the California Civil Code.

Notwithstanding the foregoing, this waiver, discharge, and release shall not be effective for claims, demands, suits, legal and administrative proceedings and from all liability for damages, losses, costs, liabilities, fees and expenses arising from the presence or release of Hazardous Materials on the Site that were actually (and not constructively known to City and were

not known to Developer and occurred or existed prior to the Closing, or that occur as a result of the gross negligence or willful misconduct of City or their respective officers, employees, representatives and agents.

**1.6.5 Environmental Inquiries.** Developer shall notify City upon receipt, and provide to City a copy or copies, of the following environmental permits, disclosures, applications, entitlements or inquiries relating to the Site and the Development: notices of violation, notices to comply, citations, inquiries, clean up or abatement orders, cease and desist orders, reports filed pursuant to self-reporting requirements and reports filed or applications made pursuant to any Environmental Laws and other applicable Governmental Requirements relating to Hazardous Materials and underground tanks, and Developer shall report to City, as soon as possible after each incident, all material information relating to or arising from such incident, including, but not limited to, the following:

- (a) All required reports of releases of Hazardous Materials, including notices of any release of Hazardous Materials as required by any Governmental Requirements;
- (b) All notices of suspension of any permits relating to Hazardous Materials;
- (c) All notices of violation from federal, state or local environmental authorities relating to Hazardous Materials;
- (d) All orders under the State Hazardous Waste Control Act and the State Hazardous Substance Account Act and corresponding federal statutes, concerning investigation, compliance schedules, clean up, or other remedial actions;
- (e) All orders under the Porter Cologne Act, including corrective action orders, cease and desist orders, and clean up and abatement orders;
- (f) Any notices of violation from OSHA or Cal OSHA concerning employees' exposure to Hazardous Materials;
- (g) All complaints and other pleadings filed against Developer relating to Developer's storage, use, transportation, handling or disposal of Hazardous Materials on or about the Site; and
- (h) Any and all other notices, citations, inquiries, orders, filings or any other reports containing information which would have a materially adverse effect on the Site or City's liabilities or obligations relating to Hazardous Materials.

In the event of a release of any Hazardous Materials into the environment, Developer shall, as soon as possible after the release, furnish to City a copy of any and all reports relating thereto and copies of all correspondence with governmental agencies relating to the release. Upon request of City, but subject to any limitations imposed by law or by court order, Developer shall furnish to City a copy or copies of any and all other environmental entitlements or inquiries relating to or affecting the Site in Developer's possession and/or shall notify City of any environmental entitlements or inquiries relating to or affecting the Site within Developer's actual or constructive knowledge if Developer is not in possession of same, including, but not limited to, all permit applications, permits

and reports including, without limitation, those reports and other matters which may be characterized as confidential.

## 2. ACQUISITION AND DISPOSITION OF THE SITE

**2.1 Acquisition of the Site.** The Original Site Owner is the fee owner of the Site as of the Date of Agreement. Developer has arranged for the acquisition of the Site pursuant to the Acquisition Agreement. Developer has caused the assignment or has made arrangements for the assignment of its rights to purchase the Site under the Acquisition Agreement to City, as further set forth in this Agreement.

Based upon its review, Developer has determined that the Site is suitable for the development and use provided under this Agreement. Developer has determined that there are not Materially Adverse Conditions on the Site and has so informed City.

**2.2 Acquisition Escrow.** The parties shall open an escrow (the “Acquisition Escrow”) with the Acquisition Escrow Holder, by the time established therefor in the Schedule of Performance, and the recordation and delivery of the Acquisition Grant Deed to City. City and Developer agree to execute such escrow instructions as may be reasonably required to implement this Section 2.2; Developer shall be responsible to obtain the conveyance of Original Site Owner to such escrow instructions. The obligation of City to execute a deed acceptance as to the Acquisition Grant Deed, to escrow or to proceed with the acquisition of the Site is contingent upon the satisfaction of the “Acquisition Conditions Precedent,” as set forth in Section 3.3 of this Agreement.

**2.2.1 Costs of Acquisition Escrow.** City and Original Site Owner shall pay their respective portions of the premium for the Acquisition Title Policy as set forth in Section 2.4 hereof and all other fees, charges, and costs which arise from Acquisition Escrow. City shall have no responsibility to pay any of such charges and shall deduct such fees, charges and costs from the City Initial Loan Amount and deem such amount to be disbursed to Developer.

**2.2.2 Acquisition Escrow Instructions.** This Agreement constitutes the joint escrow instructions of Developer (and, upon approval by Original Site Owner, the Original Site Owner) and City, and the Acquisition Escrow Holder to whom these instructions are delivered is hereby empowered to act under this Agreement with respect to the conveyance of the Site to City. The parties hereto agree to do all acts reasonably necessary to close this Acquisition Escrow on a timely basis. Insurance policies for fire or casualty are not to be transferred, and Original Site Owner will cancel its own policies after the Acquisition Conveyance. All funds received in the Acquisition Escrow shall be deposited with other escrow funds in a general escrow account(s) and may be transferred to any other such escrow trust account in any State or National Bank doing business in the State of California. All disbursements shall be made by check from such account.

If in the opinion of any of Developer (or Original Site Owner) or City it is necessary or convenient in order to accomplish the Acquisition Conveyance, such party may require that the parties sign supplemental escrow instructions; provided that if there is any inconsistency between this Agreement and the supplemental escrow instructions, then the provisions of this Agreement shall control. The parties agree to execute such other and further documents as may be reasonably necessary, helpful or appropriate to effectuate the provisions of this Agreement. The Acquisition Conveyance shall take place when the Acquisition Conditions Precedent have been satisfied.

Acquisition Escrow Holder is instructed to release Authority's escrow closing and Original Site Owner's escrow closing statements to the respective parties.

**2.2.3 Authority of Acquisition Escrow Holder.** Acquisition Escrow Holder is authorized to, and shall:

(a) Pay and charge Developer or Original Site Owner for their respective shares of the premium of the Acquisition Title Policy as set forth in Section 2.4 and any amount necessary to place title in the condition necessary to satisfy Section 2.3 of this Agreement.

(b) Pay and charge Developer or Original Site Owner for their respective shares of any escrow fees, charges, and costs payable under Section 2.2.1 of this Agreement.

(c) Pay and charge Developer for any endorsements to the Acquisition Title Policy which are reasonably requested by City.

(d) Disburse funds, record and deliver the Acquisition Grant Deed to City.

(e) Do such other actions as necessary to fulfill its obligations under this Agreement concerning the Acquisition Escrow.

(f) Prepare and file with all appropriate governmental or taxing authorities a uniform settlement statement, closing statement, tax withholding forms including an IRS 1099-S form, and be responsible for withholding taxes, if any such forms are provided for or required by law.

All fees, charges and costs allocated to Developer under Sections 2.2.3(a), (b) and (c) above shall be deemed a disbursement to Developer of the City Initial Loan Amount.

**2.2.4 Acquisition Escrow Closing.** The Acquisition Conveyance, including recording of the Acquisition Grant Deed, and delivery of Acquisition Grant Deed to City shall close ("Acquisition Closing") within fifteen (15) days of the parties' satisfaction of all of Acquisition Conditions Precedent. The "Acquisition Closing" means the time and day that the Acquisition Grant Deed to City has been recorded by the Riverside County Recorder. The "Acquisition Closing Date" means the day on which the Acquisition Closing occurs.

**2.2.5 Acquisition Escrow Termination.** If Acquisition Escrow is not in condition to close by the time established therefor in the Schedule of Performance, then either party which has fully performed under this Agreement may, in writing, demand the return of money or property from the Acquisition Escrow. If a party to this Agreement makes a written demand for return of documents or properties, the Acquisition Escrow shall not terminate until five (5) days after Acquisition Escrow Holder shall have delivered copies of such demand to all other parties at the respective addresses shown in this Agreement. If any objections are raised within said five (5) day period, Acquisition Escrow Holder is authorized to hold all papers and documents until instructed by a court of competent jurisdiction or by mutual written instructions of the parties. City, however, shall have the sole option to withdraw any money deposited by it with respect to the Acquisition Escrow Closing. If no demands are made, the Acquisition Escrow Holder shall proceed with the Acquisition Closing.

**2.2.6 Acquisition Escrow Closing Procedure.** Acquisition Escrow Holder shall close Acquisition Escrow as follows:

- (a) Record the following documents in this order: (i) the Acquisition Grant Deed; (ii) such other instruments, if any, as shall be approved by City Manager, with instructions for the Recorder of Riverside County, California to deliver to City the Acquisition Grant Deed;
- (b) Instruct the Title Company to deliver the Acquisition Title Policy to City;
- (c) Disburse the Acquisition Price less those amounts used to pay property taxes and assessments and to otherwise clear matters of record to Original Site Owner or such other entity as shall be mutually designated by Developer and City;
- (d) File any informational reports required by Internal Revenue Code Section 6045(e), as amended, and any other applicable requirements;
- (e) Deliver the FIRPTA Certificate, if any, to City;
- (f) Deliver documents as set forth in Section 2.2.3 hereof; and
- (g) Forward to both Developer (and Original Site Owner) and City a separate accounting of all funds received and disbursed for each party and copies of all executed and recorded or filed documents deposited into Escrow, with such recording and filing date and information endorsed thereon.

**2.3 Review of Title for Acquisition.** Developer has caused the Title Company to deliver to each of City and Developer a standard preliminary title report (the “Acquisition PTR”) with respect to the Site, and Developer shall cause the Title Company to provide to City legible copies of the documents underlying the exceptions (“Acquisition Exceptions”) set forth in the Acquisition PTR, within ten (10) days from the date of this Agreement. City shall have the right to approve or disapprove the Acquisition Exceptions at its discretion; provided, however, that City hereby approves the following Acquisition Exceptions:

- (a) The Redevelopment Plan.
- (b) The lien of any non-delinquent property taxes and assessments (to be prorated at close of the Acquisition Escrow).
- (c) Roadways and utility easements.

Developer shall inform City in writing within ten (10) days after its receipt of the Acquisition PTR if any matters set forth in the Acquisition PTR are viewed as obstacles by Developer with respect to the ownership of the Site (or any portion thereof) or the development of the Improvements.

City shall have ten (10) days from the later to occur of (i) the approval of this Agreement, or (ii) City’s receipt of the Acquisition PTR Report to give written notice to Acquisition Escrow Holder of City’s approval or disapproval of any of such Acquisition Exceptions. City’s failure to give written disapproval of the Acquisition PTR within such time limit shall be deemed disapproval of the



Acquisition PTR. If City notifies Developer or Original Site Owner of its disapproval of any Acquisition Exceptions in the Acquisition PTR, Developer or Original Site Owner shall have ten (10) days from the receipt of written notice of disapproval by City to determine whether or not it will undertake the removal of any disapproved Acquisition Exceptions. If Developer or Original Site Owner elects to remove such Acquisition Exceptions, it shall diligently proceed to effect the removal of such Acquisition Exceptions. If Developer or Original Site Owner cannot or does not elect to remove any of the disapproved Acquisition Exceptions within that period, City shall have ten (10) business days after the expiration of such ten (10) business day period to either give Developer or Original Site Owner written notice that City elects to proceed with the acquisition of the Site subject to the disapproved Acquisition Exceptions or to give Developer or Original Site Owner written notice that City elects to terminate this Acquisition Escrow. The Acquisition Exceptions to title expressly approved by City as provided herein shall hereinafter be referred to as the "Acquisition Escrow Condition of Title." The Acquisition Grant Deed shall have the right to approve or disapprove any additional and previously unreported Acquisition Exceptions reported by the Title Company after City has approved the Acquisition Condition of Title.

**2.4 Acquisition Escrow Title Insurance.** Concurrently with recordation of the Acquisition Grant Deed, there shall be issued to City a CLTA owner's policy of title insurance or, if so designated by Developer, an ALTA owner's extended coverage policy of title insurance (the "Acquisition Title Policy"), based upon the amount of the Area A Value, together with such endorsements as are reasonably requested by City, issued by the Title Company insuring that the title to the Site is vested in City in the condition required by Section 2.3 of this Agreement. The Acquisition Title Policy shall be based upon the Acquisition Price. Developer (or Original Site Owner) shall pay that portion of the premium for the Acquisition Title Policy equal to the cost of a CLTA standard coverage title policy (or, if an ALTA policy is designated by Developer, the cost of an ALTA policy) insuring fee title in the amount based upon the Acquisition Price. Any additional costs, including the cost of any endorsements reasonably requested by City, shall be borne by Developer. Original Site Owner or Developer shall pay any documentary transfer taxes in connection with the Acquisition Conveyance.

**2.5 Disposition of Area A.** Subject to the proper satisfaction of the City Disposition Conditions Precedent, City agrees to convey Area A to Developer. All references in this Agreement to acreage are approximate; the level of City financial participation, payments by Developer (including without limitation those payments required under the City Initial Note and the City Subsequent Note) will not change regardless of whether the actual acreage of Area A differs from the acreage figures set forth therefor in this Agreement. Subject to the conditions and limitations set forth in the foregoing part of this Section 2.5 and further subject to the prior satisfaction of the City Disposition Conditions Precedent, the conveyance of Area A is to be accomplished as set forth in Sections 2.5 to 2.8 hereof.

Developer shall timely make all payments due under the City Initial Note and the City Subsequent Note, and shall comply with and cause the use of Area A to conform to the City Disposition Deed, and the City Developer CC&Rs throughout the Required Covenant Period.

**2.5.1 City Subsequent Loan Amount.** The City Subsequent Loan Amount, and that portion of the City Initial Loan Amount in excess of the City Initial Amount, shall be disbursed at the times and in the manner set forth in Section 4.17 of this Agreement. The sole source of moneys used to pay the City Subsequent Loan Amount shall be proceeds of such HOME Moneys as may hereafter be committed by City for such purpose and investment earnings, if any, thereon. City

shall, upon receipt of written request therefor by Developer, provide written evidence that the funding source used consists only of such HOME Moneys (if and when committed) plus investment earnings, if any, thereon. The City Subsequent Loan Amount, shall be deemed to have been disbursed as a loan, and shall be repaid from Residual Receipts as set forth in the City Initial Note and the City Subsequent Note.

**2.6 Disposition Escrow.** The parties shall open an escrow (the “City Disposition Escrow”) with the City Disposition Escrow Holder, by the time established therefor in the Schedule of Performance, and the recordation and delivery of documents described in Section 2.6.6. City and Developer agree to execute such escrow instructions as may be reasonably required to implement this Section 2.6. The obligation of City to deliver the City Disposition Deed to escrow or to proceed with the City Disposition Conveyance is contingent upon the satisfaction of the City Disposition Conditions Precedent as set forth in Section 3.1 of this Agreement.

**2.6.1 Costs of Disposition Escrow.** Developer shall pay the premium for the Developer Title Policy, the Senior City Loan Policy and the Junior City Loan Policy, as set forth in Section 2.8 hereof. Developer shall pay for the documentary transfer taxes, if any, due with respect to the City Disposition Conveyance, and Developer shall pay Developer all other fees, charges, and costs which arise from the City Disposition Escrow.

**2.6.2 Disposition Escrow Instructions.** This Agreement constitutes the joint escrow instructions of Developer, City, and the City Disposition Escrow Holder to whom these instructions are delivered is hereby empowered to act under this Agreement with respect to the conveyance of Area A by City to Developer. Insurance policies for fire or casualty are not to be transferred, and City will cancel its own policies after the City Disposition Conveyance. All funds received in the City Disposition Escrow shall be deposited with other escrow funds in a general escrow account(s) and may be transferred to any other such escrow trust account in any State or National Bank doing business in the State of California. All disbursements shall be made by check from such account.

If in the opinion of Developer or City it is necessary or convenient in order to accomplish the City Disposition Conveyance, such party may require that the parties sign supplemental escrow instructions; provided that if there is any inconsistency between this Agreement and the supplemental escrow instructions, then the provisions of this Agreement shall control. The parties agree to execute such other and further documents as may be reasonably necessary, helpful or appropriate to effectuate the provisions of this Agreement with respect to conveyance of Area A by City to Developer. The City Disposition Conveyance shall take place when the City Disposition Conditions Precedent have been satisfied. Disposition Escrow Holder is instructed to release City’s escrow closing and Developer’s escrow closing statements to the respective parties.

**2.6.3 Authority of Disposition Escrow Holder.** Disposition Escrow Holder is authorized to, and shall:

(a) Pay and charge Developer for the premium of the Developer Title Policy, the Senior City Loan Policy and the Junior City Loan Policy as set forth in Section 2.8 and any amount necessary to place title in the condition necessary to satisfy Section 2.7 of this Agreement.

(b) Pay and charge Developer for all shares of any escrow fees, charges, and costs payable under Section 2.6.1 of this Agreement.

(c) Pay and charge Developer for any endorsements to the Developer Title Policy which are requested by Developer and for any endorsements reasonably requested by City as to the Senior City Loan Policy and the Junior City Loan Policy.

(d) Disburse funds, record and deliver the City Disposition Deed, the City Developer CC&Rs, the Bank Deed of Trust (if applicable), a UCC-1 Financing Statement by Developer (if applicable) in favor of an Approved Construction and/or Permanent Lender (as construction lender) for filing as a fixture filing in Riverside County, the City Initial Deed of Trust, the City Subsequent Deed of Trust, the Notice of Affordability Restrictions, and such other instruments, if any, as shall be approved by City Manager upon consultation with City's legal counsel, as necessary or convenient to effectuate and implement the initial financing of the Improvements, in the order set forth above.

(e) Do such other actions as necessary to fulfill its obligations under this Agreement with respect to conveyance of Area A by City to Developer.

(f) Prepare and file with all appropriate governmental or taxing authorities a uniform settlement statement, closing statement, tax withholding forms including an IRS 1099-S form, and be responsible for withholding taxes, if any such forms are provided for or required by law.

**2.6.4 Disposition Closing.** The City Disposition Conveyance and delivery of documents related shall close ("Disposition Closing") within thirty (30) days of the parties' satisfaction of all of the City Disposition Conditions Precedent, but in no event later than the last day established therefor in the Schedule of Performance. The Schedule of Performance is subject to modification from time to time at the mutual concurrence of City and Developer, each acting at its sole discretion. The "Disposition Closing" means the time and day that each of the City Initial Note and the City Subsequent Note is executed and held by Escrow Holder for delivery to City and all of the City Developer CC&Rs, the Notice of Affordability Restrictions, the City Disposition Deed, the City Initial Deed of Trust and the City Subsequent Deed of Trust have been recorded by the Riverside County Recorder. The "Disposition Closing Date" means the day on which the Disposition Closing occurs.

**2.6.5 Termination of Disposition Escrow.** If the Disposition Escrow is not in condition to close by the time established therefor in the Schedule of Performance, as such Schedule of Performance has been modified by the parties, then either party which has fully performed under this Agreement may, in writing, demand the return of money or property. If either party makes a written demand for return of documents or properties, this the Disposition Escrow shall not terminate until five (5) days after Disposition Escrow Holder shall have delivered copies of such demand to all other parties at the respective addresses shown in this Agreement. If any objections are raised within said five (5) day period, Disposition Escrow Holder is authorized to hold all papers and documents until instructed by a court of competent jurisdiction or by mutual written instructions of the parties. Termination of this Agreement shall be without prejudice as to whatever legal rights either party may have against the other arising from this Agreement. If no demands are made, the City Disposition Escrow Holder shall proceed with the Disposition Closing as soon as possible. At the election of City, default by Developer under this Agreement shall constitute a default under this Agreement.

**2.6.6 Closing Procedure for Disposition Escrow.** Disposition Escrow Holder shall close the Disposition Escrow for the City Disposition Conveyance as follows:

Record the following documents in this order: (i) the City Disposition Deed; (ii) the City Developer CC&Rs; (iii) the construction/permanent lender's deed of trust; (iv) UCC-1 Financing Statement by Developer (if applicable) in favor of an Approved Construction and/or Permanent Lender (as construction lender) for filing as a fixture filing in Riverside County; (v) the City Initial Deed of Trust; (vi) the City Subsequent Deed of Trust; (vii) the Notice of Affordability Restrictions; and (viii) such other instruments, if any, as shall be approved by City Manager (upon consultation with City's legal counsel) as necessary or convenient to effectuate and implement the initial financing of the Improvements (and the permanent financing thereof), with instructions for the Recorder of Riverside County, California to deliver to Developer the City Disposition Deed (and to deliver a certified copy thereof) and to deliver to City the City Developer CC&Rs, the City Initial Deed of Trust, the City Subsequent Deed of Trust, and the Notice of Affordability Restrictions, and to deliver a certified copy of each to Developer.

(a) Instruct the Title Company to deliver the Developer Title Policy to Developer, with a copy to City;

(b) File any informational reports required by Internal Revenue Code Section 6045(e), as amended, and any other applicable requirements;

(c) Deliver the FIRPTA Certificate, if any, to Developer;

(d) Deliver documents as set forth in Section 2.2.3 hereof;

(e) Instruct the Title Company to deliver to City the Senior City Lender Policy and the Junior City Lender Policy; and

(f) Forward to both Developer and City a separate accounting of all funds received and disbursed for each party and copies of all executed and recorded or filed documents deposited into Escrow, with such recording and filing date and information endorsed thereon.

**2.7 Review of Title.** City shall cause the Title Company to deliver to Developer a standard preliminary title report (the "Disposition PTR") with respect to Area A at least thirty (30) days prior to the scheduled Disposition Closing, and City will endeavor to cause the Title Company to provide to Developer legible copies of the documents underlying the exceptions ("Area A Exceptions") set forth in the Area A Disposition PTR at such time. Developer shall have the right to reasonably approve or disapprove the Exceptions; provided, however, that Developer shall be deemed to have approved the following Exceptions:

(a) The Redevelopment Plan.

(b) The lien of any non-delinquent property taxes and assessments (to be prorated at close of Escrow).

(c) Any matters of record disclosed to Developer prior to the acquisition of the Site by City (which disclosure shall be deemed to have been sufficiently made if disclosure of

such items was included in the Acquisition PTR or otherwise made in writing to Developer or otherwise known by Developer);

(d) The provisions of the City Developer CC&Rs, the City Disposition Deed, the Notice of Affordability Restrictions, and the City Initial Deed of Trust, the City Subsequent Deed of Trust and the City Subsequent Deed of Trust.

(e) Any incidental easements or other matters affecting title which do not materially impact Developer's use of Area A as described in the Scope of Development.

Developer shall have thirty (30) days from the date of its receipt of the Disposition PTR to give written notice to City and Escrow Holder of Developer's approval or disapproval of any of such Area A Exceptions. Developer's failure to give written disapproval of the Disposition PTR within such time limit shall be deemed approval of the Disposition PTR. If Developer notifies City of its disapproval of any Area A Exceptions in the Disposition PTR, City shall have ten (10) days from the receipt of written notice of disapproval by Developer to determine whether or not it will undertake the removal of any disapproved Area A Exceptions. If City elects to remove such Area A Exceptions, it shall diligently proceed to effect the removal of such Area A Exceptions. If City cannot or does not elect to remove any of the disapproved Area A Exceptions within that period, Developer shall have ten (10) business days after the expiration of such ten (10) business day period to either give City written notice that Developer elects to proceed with acquisition from City of Area A subject to the disapproved Area A Exceptions or to give City written notice that Developer elects to terminate this Agreement. The Area A Exceptions to title approved by Developer as provided herein shall hereinafter be referred to as the "Area A Condition of Title." Developer shall have the right to approve or disapprove any additional and previously unreported Area A Exceptions reported by the Title Company after Developer has approved the Area A Condition of Title (which are not created by Developer).

## **2.8 Disposition Title Insurance Policies.**

(a) Owner's Policy of Title Insurance. Concurrently with recordation of the City Disposition Deed, there shall be issued to Developer a CLTA owner's policy of title insurance (the "Developer Title Policy"), based upon the amount of the Area A Value, together with such endorsements as are reasonably requested by Developer, issued by the Title Company insuring that the title to Area A is vested in Developer in the condition required by Section 2.7 of this Agreement. The Title Company shall provide City with a copy of the Developer Title Policy. The Developer Title Policy shall be based upon the Area A Value. Developer shall pay the premium for the Developer Title Policy, as well as costs or additional premium associated with procurement of an ALTA policy (if requested by Developer) or any endorsements requested by Developer.

(b) City Lender Policies of Title Insurance. Concurrently with recordation of the City Disposition Deed, there shall be issued to City a lender's policy of title insurance as to City's beneficial interest under the Senior City Deed of Trust (the "Senior City Loan Policy") and as to City's beneficial interest under the Junior City Deed of Trust (the "Junior City Loan Policy"). The Senior City Loan Policy will be to cover the original principal amount of the City Initial Loan; the Junior City Loan Policy will be to cover the original principal amount of the City Subsequent Loan. Each policy will include those endorsements as are reasonably requested by City. Each such title policy shall insure that the beneficial interests of City under such Deeds of

Trust are insured in the condition required by Section 2.7 of this Agreement. Developer shall pay the premiums for each of the Senior City Loan Policy and the Junior City Loan Policy and endorsements.

### 3. CONDITIONS TO DEVELOPER POSSESSION OF THE SITE AND TO ACQUISITION OF THE SITE

**3.1 City Disposition Conditions Precedent.** City shall not effect the City Disposition Conveyance, as provided pursuant to this Agreement, and Developer shall not take possession of Area A (notwithstanding any provision of this Agreement to contrary effect) and City shall not disburse any portion of the City Construction Disbursement Amount unless all of the following conditions precedent (the “City Disposition Conditions Precedent”) have been fully satisfied, as determined in good faith by the City Manager (which condition, if it requires action by Developer, shall also be a covenant of Developer):

(a) Site Acquisition. City shall have acquired title to and control of the Site.

(b) Mapping. Developer, at its expense, shall have processed and caused to be recorded among Official Records a parcel map or subdivision map to effect the division of the Site into Area A and Area B as separate legal lots.

(c) Recording of Certain Documents. Each of the City Developer CC&Rs, the City Disposition Deed, the Notice of Affordability Restrictions and the City Initial Deed of Trust and the City Subsequent Deed of Trust has been duly executed, is on deposit with the Disposition Escrow Holder and is in form ready to be recorded among the Official Records; any documents determined in connection with the Final Financing Package to be executed and delivered have been so executed and delivered and, where required to be recorded, have been recorded; and Developer has obtained a policy of title and the Title Company has committed to issue and deliver to Developer the Developer Title Policy and to City the Senior City Loan Policy and the Junior City Loan Policy.

(d) License Agreement. Developer shall have entered into the Area B License Agreement with City and Developer shall not have been in default thereunder nor shall any event shall have occurred which with the passage of time would constitute a default thereunder;

(e) Evidence of Financing. Developer shall have provided written proof acceptable to City that Developer has sufficient internal funds and/or has obtained a loan or financing for construction of the Development, and City has approved such evidence of financing as further described in Section 4.15 hereof. In the event Developer obtains a loan or financing for the construction of the Development, such construction loan or financing for the Development shall be ready to close, and shall close, and a portion of proceeds from the sale of Tax Credits, as provided for in this Agreement and under the Final Financing Package, shall be immediately available for use in constructing the Housing Component.

(f) Guaranties. Developer or one or more of the Principals shall provide guaranties to the extent, if any, required under Section 4.15.1.

(g) Construction Contract. Developer shall have provided to City a signed copy of a fixed-price contract or not to exceed price contract between Developer and the

general contractor for the construction of the Development and the remainder of the Improvements, certified by Developer to be a true and correct copy thereof, and City Manager shall have approved such contractor or contractors, and the construction contract or contracts, pursuant to Section 4.15 hereof. The parties acknowledge that the Principals are or may be Related Parties to Developer. However, nothing contained in this subsection (c) shall be deemed to create any responsibility or liability for selection of the contractor(s) of for construction of the Improvements, Developer being solely responsible for such activities.

(h) Payment, Performance and Completion Bonds. Developer shall have obtained payment bonds and performance and completion bonds for off-site improvements as may be customarily required by City in connection with its subdivision process, in an amount and from a surety company reasonably acceptable to the City Manager. All bonds shall be issued by good and solvent sureties qualified to do business in California and shall have a rating of A or better in the most recent edition of Best's Key Rating Guide.

(i) TCAC Approval. All TCAC approvals required in connection with the preliminary reservation of Tax Credits have been obtained in an amount not less than that set forth therefor in the Base Pro Forma and remain in full force and effect.

(j) Insurance. City shall have received evidence, satisfactory to City Manager, that all of the insurance policies required by Section 4.5, below, are in full force and effect.

(k) Acquisition Conditions Precedent. Developer shall have satisfied the Acquisition Conditions Precedent and Developer shall have remained in compliance therewith.

(l) Remediation. Unless such condition is waived by the City Manager, Developer shall have concluded remediation as to the Site in compliance with the requirements of the Riverside County Department of Environmental Health and applicable law and to such greater extent, if applicable, as reasonably necessary to satisfy Developer.

(m) No Objection by HUD. HUD shall not have objected to the approval of this Agreement or the disbursement in the manner, time and amounts set forth in this Agreement of moneys made available to City under the NSP (or, if the availability of HOME Moneys for the construction of certain Units shall hereafter occur, HOME Moneys), and HUD shall have consented to such disbursements to the extent such consent is required under the NSP and, if applicable, under the HOME Regulations.

(n) Representations and Warranties. The representations and warranties of Developer contained in this Agreement shall be correct as of the City Disposition Conveyance as though made on and as of that date, and City Manager shall have received a certificate to that effect signed by an officer of Developer.

(o) No Default. No Event of Default by Developer shall have occurred under this Agreement or any other agreement between City and Developer and/or its officers or employees, no event shall have occurred which, with the giving of notice or the passage of time or both, would constitute an Event of Default by Developer under this Agreement, and City Manager shall have received a certificate to that effect signed by an officer of Developer.

All conditions set forth in Section 3.1, or to City's obligations hereunder, are for City's benefit only and City Manager may waive all or any part of such rights by written notice to Developer. If City Manager shall, within the applicable periods set forth herein, disapprove of any of the items which are subject to City's approval, or if any of the conditions set forth in this Agreement are not met within the times called for, City may thereafter terminate this Agreement without any further liability on the part of City by giving written notice of termination to Developer.

**3.2 Developer Conditions Precedent.** Disposition Closing shall not occur unless all of the following conditions precedent (the "Developer Conditions Precedent") have been fully satisfied, as determined in good faith by Developer (which condition, if it requires action by City, shall also be a covenant of City):

- (a) City has title to the Site.
- (b) HUD shall not have objected to the approval of this Agreement or the disbursement in the manner, time and amounts set forth in this Agreement of moneys made available to City under the NSP, and HUD shall have consented to such disbursements to the extent such consent is required under the NSP.
- (c) City has unencumbered funds in the amount of the City Construction Disbursement Amount which are available to be used to fund City's financial contributions under this Agreement by not later than thirty (30) days after Developer has obtained a preliminary reservation of Tax Credits for the Rental Project from TCAC.

All conditions set forth in Section 3.2, or to Developer's obligations hereunder, are for Developer's benefit only and it may waive all or any part of such rights by written notice to City. If Developer shall, within the applicable periods set forth herein, disapprove of any of the items which are subject to Developer's approval, or if any of the conditions set forth in this Agreement are not met within the times called for, Developer may thereafter terminate this Agreement without any further liability on the part of Developer by giving written notice of termination to City.

**3.3 Acquisition Conditions Precedent.** City shall not disburse the City Initial Loan Amount, or any portion thereof (notwithstanding any provision of this Agreement to contrary effect) unless all of the following conditions precedent (the "Acquisition Conditions Precedent") have been fully satisfied, as determined in good faith by the City Manager (which condition, if it requires action by Developer, shall also be a covenant of Developer):

- (a) Site Authorization. Developer shall have entered into an agreement with the Original Site Owner to acquire the Site, and shall have obtained written confirmation from the Original Site Owner and Developer that Developer is assigning to City its rights under the Acquisition Agreement to acquire the Site without necessity of payment of any additional consideration by City (without regard to the Acquisition Price and closing costs as set forth in the Acquisition Agreement).
- (b) Site Estimates. Developer shall have obtained preliminary cost estimates for demolition of and remediation to the Site, which estimates, when combined with the consideration to acquire the Site and closing costs in connection therewith, do not exceed the City Subsequent Loan Amount.



(c) No Objection by HUD. HUD shall not have objected to the approval of this Agreement or the disbursement in the manner, time and amounts set forth in this Agreement of moneys made available to City under the NSP, and HUD shall have consented to such disbursements to the extent such consent is required under the NSP.

(d) Disposition of the Site to City. Original Site Owner shall have opened escrow for the disposition of the Site to City, with the condition of fee title to be acceptable to City and with title insurance based upon City's fee ownership interest subject only to encumbrances reasonably acceptable to City.

(e) Preliminary Financing Plan. Developer shall have provided written evidence reasonably acceptable to the City Manager of a preliminary financing plan indicating that Developer reasonably expects to obtain a loan or financing, subject to customary conditions, for acquisition of Area A and development of the Improvements pursuant to this Agreement and the operation of affordable housing units as provided in this Agreement, including without limitation the attachments hereto.

(f) Representations and Warranties. The representations and warranties of Developer contained in this Agreement shall be correct as of the City Disposition Conveyance as though made on and as of that date, and City Manager shall have received a certificate to that effect signed by an officer of Developer.

(g) No Default. No Event of Default by Developer shall have occurred under this Agreement or any other agreement between City and Developer and/or its officers or employees, no event shall have occurred which, with the giving of notice or the passage of time or both, would constitute an Event of Default by Developer under this Agreement, and City Manager shall have received a certificate to that effect signed by an officer of Developer.

All conditions set forth in Section 3.3, or to City's obligations hereunder, are for City's benefit only and City Manager may waive all or any part of such rights by written notice to Developer. If City Manager shall, within the applicable periods set forth herein, disapprove of any of the items which are subject to City's approval, or if any of the conditions set forth in this Agreement are not met within the times called for, City may thereafter terminate this Agreement without any further liability on the part of City by giving written notice of termination to Developer.

#### **4. SCOPE OF DEVELOPMENT; INSURANCE AND INDEMNITY, FINANCING**

**4.1 Scope of Development.** Developer shall develop the Improvements in accordance with the Scope of Development, and the approved plans, drawings and documents for the Improvements. In the event of any inconsistency between the Scope of Development and the plans for the Improvements which have been approved by City, the approved Development plans shall control.

#### **4.2 Design Review.**

**4.2.1 Developer Submissions.** Prior to the Date of Agreement, Developer or the Original Site Owner has obtained land use approvals, including environmental clearance, for the development of seventy-two (72) rental Units on Area A; such land use approvals are more fully described in the Scope of Development. Developer has submitted "Basic Concept Drawings" for the

Improvements. The Improvements include site improvements and seventy-two (72) rental Units, as well as various amenities, as more particularly described in the Scope of Development. Before commencement of construction of the Improvements or other works of improvement upon Area A, Developer shall submit to City any plans and drawings (collectively, the “Design Development Drawings”) which may be required by City with respect to any permits and entitlements which are required to be obtained to develop the Improvements, which City shall comment on and return to Developer within fifteen (15) days from the date of receipt thereof. Developer, on or prior to the date set forth in the Schedule of Performance, shall submit to City such plans for the Improvements as required by City in order for Developer to obtain building permits for the Improvements. Within thirty (30) days after City’s disapproval or conditional approval of such plans, Developer shall revise the portions of such plans identified by City as requiring revisions and resubmit the revised plans to City.

**4.2.2 City Review and Approval.** City shall have all rights to review and approve or disapprove all Design Development Drawings and other required submittals in accordance with the City Code, and nothing set forth in this Agreement shall be construed to constitute City’s approval of any or all of the Design Development Drawings or to limit or affect City’s review and right to approve, approve subject to conditions, or disapprove Design Development Drawings, plans, drawings, applications, or submittals.

**4.2.3 Revisions.** Any and all change orders or revisions required by City and its inspectors under the City Code, including without limitation, all applicable Uniform Codes (e.g. Building, Plumbing, Fire, Electrical, etc.) and under other applicable laws and regulations shall be included by Developer in its Design Development Drawings and other required submittals and shall be completed during the construction of the Improvements.

**4.2.4 Defects in Plans.** City shall not be responsible either to Developer or to third parties in any way for any defects in the Design Development Drawings, nor for any structural or other defects in any work done according to the approved Design Development Drawings, nor for any delays reasonably caused by the review and approval processes established by this Section 4.2.4.

**4.2.5 Land Use Approvals.** Before commencement of construction of the Improvements or other works of improvement upon the Site, Developer shall, at its own expense, secure or cause to be secured any and all land use and other entitlements, permits, and approvals which may be required for the Improvements by City or any other governmental agency affected by or having jurisdiction over such construction or work, except for those which are the responsibility of City as set forth herein, including without limitation a license agreement between Developer and City allowing entry onto the Site which indemnifies City from any claims made in connection with the activities of Developer. Developer shall, without limitation, apply for and secure, and pay all costs, charges and fees associated therewith, all permits and fees required by City, County, and other governmental agencies with jurisdiction over the Improvements. Because of the land use approvals previously obtained, it is anticipated that additional discretionary approvals will not be necessary with respect to the Improvements. If changes in plans do necessitate such additional or other approvals, in the judgment of the City Manager, Developer will conform to the relevant provisions of this Agreement regarding such applications and approvals in accordance with the customary entitlement process of City.

**4.3 Time of Performance; Progress Reports.** Developer shall submit all Design Development Drawings, commence and complete all construction of the Improvements, and satisfy

all other obligations and conditions of this Agreement within the times established therefor in this Agreement. Construction of the Improvements shall be commenced on or before the time established therefor in the Schedule of Performance. Once construction is commenced, it shall continuously and diligently be pursued to completion and shall not be abandoned for more than thirty (30) days except when due to causes beyond the control and without the fault of Developer. During the course of construction and prior to issuance of the Certificate of Completion, Developer shall provide timely reports of the progress of construction when requested by the City Manager. Developer shall complete construction of all of the Improvements on the Site within eighteen (18) months after the commencement of construction.

**4.4 Cost of Development.** Except as otherwise agreed by the parties, the cost of planning, designing, developing, and constructing the Improvements and the cost of any mapping of the Site shall be borne solely by Developer. All fees imposed by any governmental entity in connection with the acquisition of the Site or the development of the Improvements shall be borne by Developer and shall be paid when due by Developer. Developer shall be responsible for and bear the costs, if any, associated with the application of Relocation Laws to the Development. Developer shall pay to City, or cause to be disbursed by the lender making the Primary Construction Loan to City, all of the City Impact Fees not later than concurrently with the closing of the Primary Construction Loan.

**4.4.1 City Senior Loan.** The City Senior Loan shall be deemed to be a loan for the benefit of (and payable by) Developer, and shall be repaid from Residual Receipts as set forth in the City Senior Note. Interest shall accrue on the amounts disbursed as set forth in the City Senior Note. The City Senior Note shall be secured by the City Senior Deed of Trust. The obligation of Developer to repay the City Senior Loan is set forth in the City Senior Note. The City Senior Deed of Trust is to be recorded against Developer's interest in Area A (which deed of trust shall be subordinate to liens securing repayment of the Primary Construction Loan and the Primary Permanent Loan).

**4.4.2 City Subsequent Loan.** The City Subsequent Loan shall be deemed to be a loan for the benefit of (and payable by) Developer, and shall be repaid from Residual Receipts as set forth in the City Subsequent Note. Interest shall accrue on the amounts disbursed as set forth in the City Subsequent Note. The City Subsequent Note shall be secured by the City Junior Deed of Trust. The obligation of Developer to repay the City Subsequent Loan is set forth in the City Subsequent Note. The City Junior Deed of Trust is to be recorded against Developer's interest in Area A (which deed of trust shall be subordinate to liens securing repayment of the Primary Construction Loan and the Primary Permanent Loan) and the City Senior Loan.

**4.5 Insurance Requirements.** Commencing as of City Disposition Conveyance and continuing throughout the Required Covenant Period, and, in addition at all times during which Developer is conducting work on the Site or any portion thereof, including times prior to the City Disposition Conveyance, Developer shall maintain at Developer's sole expense, with insurers reasonably approved by City, the following policies of insurance in form and substance reasonably satisfactory to City:

(a) workers' compensation insurance (if Developer has any employees) and (in addition to such insurance as is described in subsections (b), (c), (d) and (e) of this Section 4.5), additional other insurance to the extent and with limits as required by law in connection with the Improvements or other work performed on the Site (to be in effect only while work is being performed on the Site);

(b) prior to commencement of construction of the Improvements and at all times prior to completion of the Improvements, builder's risk-all risk insurance covering 100% of the replacement cost of all Improvements (including offsite and the materials) during the course of construction in the event of fire, lightning, windstorm, vandalism, earthquake, malicious mischief and all other risks normally covered by "all risk" coverage policies in the area where the Site is located (including loss by flood if the Site is in an area designated as subject to the danger of flood);

(c) public liability insurance in amounts reasonably required by the City Manager from time to time, and in no event less than \$2,000,000 for "single occurrence;" and

(d) property damage insurance in amounts reasonably required by the City Manager from time to time, and in no event less than \$2,000,000.

All such insurance shall provide that it may not be canceled or materially modified without 30 days prior written notice to City. The policies required under subparagraphs (b) and (c) shall include a "lender's loss payable endorsement" (Form 438BFU) in form and substance satisfactory to City, showing City as an additional insured and loss payee. City shall be an additional insured in the policies required under subparagraph (d). No such insurance shall include deductible amounts to which City has not previously consented in writing. Certificates of insurance for the above policies (and/or original policies, if required by City) shall be delivered to City from time to time within 10 days after demand therefor. All policies insuring against damage to the Improvements shall contain an agreed value clause sufficient to eliminate any risk of co-insurance. No less than thirty (30) days prior to the expiration of each policy, Developer shall deliver to City evidence of renewal or replacement of such policy reasonably satisfactory to the City Manager.

Coverage provided hereunder by Developer shall be primary insurance and not be contributing with any insurance maintained by City, and the policy shall contain such an endorsement. The insurance policy or the endorsement shall contain a waiver of subrogation for the benefit of City. None of the above-described policies shall require Developer to meet a deductible or self-insured retention amount of more than Ten Thousand Dollars (\$10,000.00) unless approved in writing by the City Manager. All policies shall be written by good and solvent insurers qualified to do business in California and shall have a policyholder's rating of A- or better in the most recent edition of "Best's Key Rating Guide -- Property and Casualty." The required certificate shall be furnished by Developer at the time set forth herein.

**4.5.2 Waiver of Subrogation.** Developer hereby waives all rights to recover against City (or any officer, employee, agent or representative of City) for any loss incurred by Developer from any cause insured against or required by any Project Document to be insured against; provided, however, that this waiver of subrogation shall not be effective with respect to any insurance policy if the coverage thereunder would be materially reduced or impaired as a result. Developer shall use its best efforts to obtain only policies which permit the foregoing waiver of subrogation.

**4.6 Obligation to Repair and Restore Damage Due to Casualty.** If during the period of construction the Improvements shall be totally or partially destroyed or rendered wholly or partly uninhabitable by fire or other casualty required to be insured against by Developer, Developer shall promptly proceed to obtain insurance proceeds and take all steps necessary to begin reconstruction and, immediately upon receipt of insurance proceeds, to promptly and diligently commence the repair or replacement of the Improvements to substantially the same condition as the Improvements

are required to be constructed pursuant to this Agreement, whether or not the insurance proceeds are sufficient to cover the actual cost of repair, replacement, or restoration, and Developer shall complete the same as soon as possible thereafter so that the Improvements can be occupied as an affordable housing project in accordance with this Agreement. In no event shall the repair, replacement, or restoration period exceed eighteen (18) months from the date Developer obtains insurance proceeds unless the City Manager, in his or her sole and absolute discretion, approves a longer period of time. City shall cooperate with Developer, at no expense to City, in obtaining any governmental permits required for the repair, replacement, or restoration. If, however, the then-existing laws of any other governmental agencies with jurisdiction over the Site do not permit the repair, replacement, or restoration, Developer may elect not to repair, replace, or restore the Improvements by giving notice to City (in which event Developer will be entitled to all insurance proceeds after paying to City from such proceeds an amount equal to any assistance expended by City but Developer shall be required to remove all debris from the Site) or Developer may reconstruct such other improvements on the Site as are consistent with applicable land use regulations and approved by City and the other governmental agency or agencies with jurisdiction, and City may pursue remedies of its choosing under this Agreement, including without limitation termination.

**4.7 Indemnity.** Developer shall defend (by counsel satisfactory to City), indemnify and save and hold harmless City and its officers, contractors, agents and employees (collectively, the “Indemnitees”) from and against all claims, damages, demands, actions, losses, liabilities, costs and expenses (including, without limitation, attorneys’ fees and court costs) arising from or relating to: (i) this Agreement (including without limitation Section 4.9 hereof); (ii) the disbursement of City Initial Loan; (iii) the disbursement of the City Subsequent Loan; (iv) the Senior Housing Component; (v) the use of federal funds for the Project and compliance, *vel non*, with respect thereto; (vi) compliance with applicable laws; (vii) a claim, demand or cause of action that any person has or asserts against Developer; (viii) any act or omission of Developer, any contractor, subcontractor or material supplier, engineer, architect or other person with respect to the Site; (ix) any claim, loss or liability arising from or related to the acquisition of the Site, dealings with the Original Site Owner and any occupants of the Site; or (x) the ownership, occupancy or use of the Site and any portions thereof. Notwithstanding the foregoing, Developer shall not be obligated to indemnify City with respect to the consequences of any act of gross negligence not contributed to by Developer or willful misconduct of City. Developer’s obligations under this Section 4.7 shall survive the issuance of the Certificate of Completion and termination of this Agreement; the requirements under this Section 4.7 are in addition to and do not limit the obligations of Developer under the City Disposition Deed.

Developer shall reimburse City immediately upon written demand for all costs reasonably incurred by City (including the reasonable fees and expenses of attorneys, accountants, appraisers and other consultants, whether the same are independent contractors or employees of City) in connection with the enforcement of the Project Documents and all related matters including the following: (a) City’s commencement of, appearance in, or defense of any action or proceeding purporting to affect the rights or obligations of the parties to any Project Document, and (b) all claims, demands, causes of action, liabilities, losses, commissions and other costs against which City is indemnified under the Project Documents. Such reimbursement obligations shall bear interest based upon the amounts and times of disbursement by City, provided that City gives written demand to Developer at the Applicable Interest Rate. Such reimbursement obligations shall survive the issuance of the Certificate of Completion and termination of this Agreement and are in addition to and do not limit the obligations of Developer under the City Disposition Deed.

Developer shall indemnify City from any real estate commissions or brokerage fees which may arise from this Agreement or the Site, including without limitation the acquisition of the Site by Developer, or the leasing of dwelling units on the Site. Developer represents that it has engaged no broker, agent, or finder in connection with this transaction, and Developer agrees to hold City harmless from any claim by any broker, agent or finder in connection with this Agreement, the activities by Developer, or the Site.

This Section 4.7 is not intended to expand, negate, nullify or modify the limited recourse of City against Developer provided in Section 7.17 of this Agreement.

Upon the Closing, Developer shall take all necessary precautions to prevent the release into the environment of any Hazardous Materials which are located in, on or under the Site. Such precautions shall include compliance with all Governmental Requirements with respect to Hazardous Materials. In addition, Developer shall install and utilize such equipment and implement and adhere to such procedures as are consistent with commercially reasonable standards as respects the disclosure, storage, use, removal and disposal of Hazardous Materials. Notwithstanding anything contained herein to the contrary, Developer shall not indemnify City for any claims arising from City's gross and active negligence or City's willful misconduct so long as the loss alleged is not caused or contributed to by Developer and the foregoing indemnification shall not apply to the presence, use, release, escape, seepage, leakage, spillage, emission, or discharge of any Hazardous Materials in, on, under, or about the Site where such Hazardous Material existed on the property prior to the Closing.

**4.8 Rights of Access.** Prior to the issuance of the Certificate of Completion, for purposes of assuring compliance with this Agreement, representatives of City shall have the right of access to the Site, without charges or fees, at normal construction hours during the period of construction for the purposes of this Agreement, including but not limited to, the inspection of the work being performed in constructing the Improvements so long as City representatives comply with all safety rules. City representatives shall, except in emergency situations, notify Developer prior to exercising its rights pursuant to this Section 4.8 at least 24 hours prior to entering the Site. In addition, representatives of City shall have access to the Site in connection with the enforcement of laws, including without limitation the City Code to the extent used in connection with the police powers of City without regard to any limitations otherwise set forth in this Section 4.8.

**4.9 Compliance With Laws.** Developer shall carry out the design, construction and operation of the Improvements in conformity with all applicable laws, including all applicable state labor standards and federal prevailing wage laws (including without limitation provisions for payment of prevailing wages in connection with all construction of the Improvements to the extent applicable), the Rules and Regulations, NSP, NSP3, HOME Regulations (to the extent applicable, and including without limitation requirements for affirmative marketing and those other matters as referenced in Section 8 hereof), City zoning and development standards, building, plumbing, mechanical and electrical codes, and all other provisions of the City Code, and the Fair Housing Act, 42 U.S.C. Section 3601 *et seq.* (and 24 C.F.R. Part 100), the Americans With Disabilities Act, 42 U.S.C. Section 12101, *et seq.*, Government Code Section 4450, *et seq.*, Government Code Section 11135, *et seq.*, the Unruh Civil Rights Act, Civil Code Section 51, *et seq.*, and the California Building Standards Code, Health and Safety Code Section 18900, *et seq.* Developer, including but not limited to its contractors and subcontractors, shall comply with Labor Code Section 1720, *et seq.*, and its implementing regulations, regarding the payment of prevailing wages (the "State Prevailing Wage Law") and, if applicable, federal prevailing wage law ("Federal Prevailing Wage Law" and,

together with State Prevailing Wage Law, “Prevailing Wage Laws”) with regard to the construction of the Improvements, but only if and to the extent such sections are applicable to the development of the Improvements. Because NSP funding will be utilized for the Rental Project, Developer will comply with Federal Prevailing Wage Laws. Developer hereby releases from liability, and agrees to indemnify, defend, assume all responsibility for and hold each of City, and their respective officers, employees, agents and representatives, harmless from any and all claims, demands, actions, suits, proceedings, fines, penalties, damages, expenses resulting from, arising out of, or based upon Developer’s acts or omissions pertaining to the compliance with the Prevailing Wage Laws for the Improvements. Participant agrees and acknowledges that federal prevailing wages under the Davis-Bacon Act are applicable to the Improvements under the NSP, and Participant agrees to comply with the NSP (including without limitation or respect to the payment of federal prevailing wages).

Without limitation as to Section 4.7 of this Agreement, Developer shall indemnify, protect, defend and hold harmless City and its officers, employees, contractors and agents, with counsel reasonably acceptable to City, from and against any and all loss, liability, damage, claim, cost, expense and/or “increased costs” (including reasonable attorneys’ fees, court and litigation costs, and fees of expert witnesses) which, in connection with the development, construction, and/or operation of the Improvements, including, without limitation, any and all public works (as defined by applicable law), results or arises in any way from any of the following: (1) the noncompliance by Developer of any applicable local, state and/or federal law (including without limitation the Rules and Regulations), including, without limitation, any applicable federal and/or state labor laws (including, without limitation, if applicable, the requirement to pay state prevailing wages and/or federal prevailing wages and, if greater, prevailing wages under the Davis-Bacon Act); (2) the implementation of Section 1781 of the Labor Code, as the same may be amended from time to time, or any other similar law; and/or (3) failure by Developer to provide any required disclosure or identification as required by Labor Code Section 1781, as the same may be amended from time to time, or any other similar law; and/or (4) failure to comply with the NSP, NSP3 and all regulations and laws applicable in connection thereafter, and, if HOME Moneys are used, HOME Regulations. It is agreed by the parties that, in connection with the development of the Improvements, including, without limitation, any and all public works (as defined by applicable law), Developer shall bear all risks of payment or non-payment of prevailing wages under California law and/or the implementation of Labor Code Section 1781, as the same may be amended from time to time, and/or any other similar law. “Increased costs,” as used in this Section 4.9, shall have the meaning ascribed to it in Labor Code Section 1781, as the same may be amended from time to time. The foregoing indemnity shall survive termination of this Agreement and shall continue after completion of the construction and development of the Improvements by Developer.

**4.10 Nondiscrimination in Employment.** Developer certifies and agrees that all persons employed or applying for employment by it, its affiliates, subsidiaries, or holding companies are and will be treated equally by it without regard to, or because of race, color, religion, ancestry, national origin, sex, sexual orientation, age, pregnancy, childbirth or related medical condition, medical condition (cancer related) or physical or mental disability.

**4.11 Taxes and Assessments.** Subject to Developer’s right to contest taxes and assessments as provided in Section 7.2(c) of the City Disposition Deed, Developer shall pay prior to delinquency all ad valorem real estate taxes and assessments on Area A. Developer shall remove or have removed any levy or attachment made on any of the Site or any part thereof which is owned by Developer, or assure the satisfaction thereof within a reasonable time, but in no event to exceed sixty (60) days. Developer shall additionally defend, indemnify, and hold harmless City from and against

any taxes, assessments, mechanic's liens, claims of materialmen and suppliers, or other claims by private parties in connection with activities undertaken by Developer. Developer shall pay City's utility user taxes, if any. City acknowledges and does not object that Developer may seek exemptions from property taxes to the extent provided by state law.

**4.12 Liens and Stop Notices.** Developer shall not allow to be placed on the Site or any part thereof any lien or stop notice. If a claim of a lien or stop notice is given or recorded affecting the Improvements Developer shall within thirty (30) days of such recording or service or within five (5) days of City's demand whichever last occurs:

- (a) pay and discharge the same; or
- (b) affect the release thereof by recording and delivering to City a surety bond in sufficient form and amount, or otherwise; or
- (c) provide City with indemnification from the Title Company against such lien or other assurance which City deems, in its sole discretion, to be satisfactory for the payment of such lien or bonded stop notice and for the full and continuous protection of City from the effect of such lien or bonded stop notice.

**4.13 Certificate of Completion.** Promptly after completion of the Improvements in conformity with this Agreement, if requested to do so in writing by Developer, City shall furnish Developer with a "Certificate of Completion," substantially in the form of attached hereto. City shall not unreasonably withhold such Certificate of Completion. The Certificate of Completion shall be a conclusive determination of satisfactory completion of the Improvements and the Certificate of Completion shall so state. If City refuses or fails to furnish a Certificate of Completion after written request from Developer, City shall, within fifteen (15) days of receipt of written request therefor, provide Developer with a written statement of the reasons City refused or failed to furnish the Certificate of Completion. The statement shall also contain City's opinion of the actions Developer must take to obtain the Certificate of Completion. The Certificate of Completion is not a notice of completion as referred to in Section 3093 of the California Civil Code.

**4.14 Further Assurances.** Developer shall execute and acknowledge (or cause to be executed and acknowledged) and deliver to City all documents, and take all actions, reasonably required by City from time to time to confirm the rights created or now or hereafter intended to be created under the Project Documents or otherwise to carry out the purposes of the Project Documents.

**4.15 Financing of the Improvements.** Financing shall be provided consistent with the Final Financing Package. As required herein and as one of the City Disposition Conditions Precedent, Developer shall submit to City evidence that Developer has obtained sufficient equity capital or has arranged for and obtained a binding Final Financing Commitments sufficient for the development of the Improvements in accordance with this Agreement; such submittal shall fully comply with this Section 4.15. This requirement shall be implemented as follows: on or before the time set forth in the Schedule of Performance for the satisfaction of the City Disposition Conditions Precedent, Developer shall submit to the City Manager a proposed final financing package (the "Proposed Financing Package") which identifies all funding, including sources, amounts, timing and mechanics for disbursement, sufficient to finance the development of the Improvements in conformity with this Agreement. In the event Developer requests funding by City, such request shall



be limited to a request for (i) waiver by City of certain City Fees in an amount of not to exceed the City Waiver Amount, and (ii) disbursement of the City Initial Loan Amount and an amount, consisting solely of HOME Moneys, of up to the City Subsequent Loan Amount. It is contemplated that the sole source for the City Subsequent Loan Amount would be moneys available to City under the HOME Program. Developer agrees and acknowledges that as of the Date of Agreement, City has not made any commitment to Developer of HOME Moneys, that as of the Date of Agreement the amount of HOME Moneys available to City or expected to be received by City may be less than the City Subsequent Loan Amount, that if any such funding is provided, a separate agreement or amendment will become necessary in order to infuse any such moneys, and that, in such event, Developer would comply with all laws, rules and regulation with respect to the HOME Program. Prior to any infusion of HOME Moneys, a subsidy layering analysis shall have been performed by City. Upon receipt of such submittal from Developer of the Proposed Financing Package, the City Manager (and nominees of his choosing for this purpose) will review the Proposed Financing Package and will confer with Developer regarding the Proposed Financing Package. The City Manager may make suggestions and propose modifications or substitutions to the Proposed Financing Package. The parties contemplate that more than one submittal may be necessary to achieve a submitted financing package that is approved by the City Manager, and that a consultative process shall occur in connection with each such submittal. At such point as the City Manager may determine, in his or her reasonable discretion, to approve a proposed financing package, upon approval by the City Manager, such financing package shall be referred to as the "Final Financing Package." Attachments hereto shall be subject to change by the terms of the Final Financing Package.

Each of the Proposed Financing Package and the Final Financing Package shall provide for the payment by Developer to City of Residual Receipts at not less than the Applicable Percentage (excepting to the extent a greater amount is to be payable to City under the terms of this Agreement) and for a Developer fee not in excess of the limitation established with respect thereto under the definition of Developer Fee in this Agreement.

The Proof of Financing Commitment shall include a copy of a firm loan commitment(s) obtained by Developer from one or more financial institutions for the mortgage loan or loans for financing to fund the construction and completion of the Improvements.

**4.15.1 Approval of Financing.** As required herein and as a City Condition Precedent to the disbursement of the City Subsequent Loan, Developer shall submit to City evidence that Developer has obtained sufficient equity capital or has arranged for and obtained a binding commitment for construction financing necessary to undertake the development of the Site and the construction of the Improvements in accordance with this Agreement ("Proof of Financing Commitments").

(a) Required Financing Submittals; Submittal of Construction Contract. Such evidence of financing for the Development and readiness to commence construction of the Development shall include all of the following:

(i) An updated pro forma and final development budget for the Development showing the projected costs of construction of the Development, including all onsite and offsite improvements to be constructed in connection therewith.

(ii) A copy of the lender's firm commitment obtained by Developer for the Primary Construction Loan for the Development and, when available, copies of all loan documents evidencing the Primary Construction Loan therefor. The Primary Construction Loan commitments for financing shall be in such form and content acceptable to City and its financial advisor(s) and its legal advisor(s) and as such reasonably evidences a legally binding, firm and enforceable commitment, subject only to the Lender's customary and normal conditions and terms and subject to the requirements of this Section 4.15. Developer shall provide written certification to the City that the loan documents submitted are correct copies of the actual loan documents to be executed by Developer concurrently with the Closing. If the Lender requires a subordination agreement between or among Lender, City and/or Developer, City shall review the form of subordination subject to the reasonable review and approval of the City Manager and legal counsel(s), subject to one or more of the conditions set forth in Section 4.15.6 necessary for the Primary Construction Loan to be a title insured first monetary lien on the Development.

(iii) A current certified financial statement of Developer (and all partners and members thereof, except the Investor Limited Partner) and/or other documentation satisfactory to City as evidence of other sources of capital sufficient to demonstrate that Developer has adequate funds to cover the difference, if any, between construction and completion costs, and the financing authorized by the Tax Credits, Primary Construction Loan, and any additional subsidies, sources of funding, or financing obtained by Developer for the development of the Development.

(iv) Copies of the construction contract(s), which contracts shall reflect the inclusion of Section 3 information.

(v) Such information pertaining to Section 3 compliance as called for in forms concerning Section 3 to be obtained by Developer from City.

City shall have the right to approve or disapprove such evidence of financing within thirty (30) days of submission by Developer to City of all complete items required by this Section 4.15 or as otherwise reasonably imposed by Developer's financing and such approval or disapproval shall be not less than ten (10) days prior to the date scheduled for the Closing (so long as City has had no fewer than thirty (30) days for review of a complete submittal). In this regard, Developer agrees it shall use best efforts to cause its Primary Construction Lender and Primary Permanent Lender to timely provide complete drafts of documents for review by City and its legal counsel(s) to perform within such time frames. Approval shall not be unreasonably withheld or conditioned. If City disapproves any such evidence of financing, City shall do so by written notice to Developer stating the reasons for such disapproval and Developer shall promptly obtain and submit to City new evidence of financing within reset but equal time periods. If Developer's submission of new evidence of financing is timely and complete and provides City with adequate time to review such evidence within the times established in this Section 4.15, City shall approve or disapprove such new evidence of financing in the same manner and within the same times established in this Section 4.15 for the approval or disapproval of the evidence of financing as submitted to City initially.

The evidence of financing shall be deemed to be an ongoing representation by Developer that the sum total of all sources of financing are equal to and not greater than the amount of the approved Project costs as set forth in the Final Development Budget for the Development and that such Final Development Budget conforms to the Tax Credit Application and the preliminary reservation of Tax Credits, and any and all updates thereto submitted by Developer to TCAC. Once

the complete evidence of financing is approved by City, Developer shall promptly notify City in writing of any change in, additional conditions to, or additional sources of financing, including without limitation, the award of state or federal Tax Credits, and any updates or additional information material or relevant to such financing and/or the Tax Credits. The representations made by Developer with respect to the budgets and costs for the Development and the sources of funding and method of financing for the Development, inclusive of all submittals and information related to the Tax Credits, were and remain the basis used by City to negotiate the financial terms of this Agreement.

The evidence of financing shall show, and the Proof of Financing Commitment shall implement, that payment of the Deferred Developer Fee shall be from Residual Receipts.

(b) Alternate Financing Sources. It is the intent of the parties to conserve City funds and to maximize the leverage of City funds by making every effort to secure sources of non-local subsidies for the Development, including grants, and federal credits and rebates for the energy efficient appliances to be included in the Development in accordance with the Scope of Development. Developer shall apply for an allocation of federal 9% Tax Credits for the Development, in accordance with Section 4.15.1(a), and shall attempt to increase the chance of obtaining an award of Tax Credits by maximizing the points maintained by the Development, including readiness points. Other than as described herein, City shall not be a source of financing for the Development, in whole or in part, and City shall not be responsible for any payments under this Agreement.

(c) Tax Credit Equity. Developer has represented that Developer is to obtain equity financing for the construction and operation of the Development including the use of Tax Credits and obtaining capital contributions from limited partners in Developer in consideration primarily for the receipt of the Tax Credits received by Developer with respect to the Development. In the event a preliminary reservation of Tax Credits is not obtained by Developer, this Agreement shall be subject to termination by City. The following requirements must be satisfied in order for the equity financing for Tax Credit funding for the Development to be approved by City pursuant to this Section 4.15:

(i) Developer understands and agrees that Developer and/or one or more of the Principals of Developer may be required to provide an operating deficit guaranty, tax credit recapture guaranty, and/or other guaranties which may be required with respect to the limited partners' investment in the Development. If required for such financing, the execution of such guaranties shall be an additional City Disposition Condition Precedent for the purposes of Section 3.1.

(ii) Developer shall submit the following documents as evidence of financing prior to the time set forth in the Schedule of Performance for the recording of documents, but not later than the Disposition Closing: Final Financing Commitments consisting of one or more of: (a) a copy of a firm loan commitment(s) or approval(s) obtained by Developer from unrelated financial institutions for the mortgage loan or loans for financing to fund the construction of the Development, subject to such lenders' reasonable, customary and normal conditions and terms, (b) a limited partnership agreement or funding agreement from the equity investors in the Development which demonstrates that Developer has sufficient funds for such construction, and that such funds have been committed to such construction, and a current financial statement of Developer, (c) a copy of a Preliminary Reservation of Tax Credits from the California Tax Credit

Allocation Committee for Tax Credits for the construction of the Development, (d) a binding agreement for the purchase of the Tax Credits, and/or (e) other documentation satisfactory to City as evidence of other sources of capital, all of which together are sufficient to demonstrate that Developer has adequate funds to construct and complete the Development.

(iii) The equity investment of the limited partners of the limited partnership shall not be less than the approximate prevailing price for 9% Tax Credits at such time, taking into consideration all relevant factors such as timing of required payments and amount of the Tax Credits.

(iv) The identity of the limited partners of the limited partnership shall be reasonably acceptable to the City Manager, City financial advisor(s), and legal counsel(s).

(d) Required Submissions. Developer shall submit the following documents as evidence of Tax Credit financing:

(i) The Partnership Agreement or equivalent funding commitment letter from the equity investors in the Development which demonstrates that Developer has sufficient funds and committed capital/equity for commencement through completion of construction, and that such funds have been committed to construction of the Development, and a current financial statement of Developer.

(ii) A complete copy of each application for Tax Credits and supporting documentation submitted to TCAC by Developer, within five (5) days following Developer's submission thereof to TCAC.

(iii) A copy of a preliminary reservation letter from TCAC notifying Developer that an allocation of 9% Tax Credits for not less than the Tax Credit Amount, has been reserved for construction of the Development, and further documentation demonstrating that Developer remains eligible and qualified to receive such allocation, along with certification that there have not been any material changes to the information provided by Developer in the applications for Tax Credits, as defined and referenced in such reservation letters, and that if there are material changes then such information will be provided to TCAC (and City) forthwith.

(e) Approval of Financing. As required herein and pursuant to the terms of the City Initial Note, Developer shall submit to City evidence that Developer has obtained sufficient equity capital or has arranged for and obtained a binding commitment for construction financing necessary to undertake the development of the Site and the construction of the Improvements in accordance with this Agreement ("Proof of Financing Commitments").

City shall reasonably approve or disapprove such evidence of financing within twenty (20) days of receipt of each of the respective submittals, provided that such submittal is complete. Approval shall not be unreasonably withheld so long as the terms and conditions of the financing are consistent with this Agreement, including without limitation the availability of the Tax Credit Amount and the acknowledgment and consent by such lender to the City Developer CC&Rs, with the further proviso that if the Tax Credit Amount exceeds the amount set forth therefor on the Base Pro Forma, Developer shall agree that the excess remaining after applying amounts necessary to defray Cost Overrun Amounts theretofore experienced or the Developer Fee (the "Excess Amount") shall be applied to reduce the City Construction Disbursement Amount, and provided further that such

financing terms are otherwise reasonable and customary. Such consent may be included in an “Intercreditor Agreement” in connection with which City will agree to subordinate, for the benefit of such lender, the obligation to pay Residual Receipts Note Payments in the event such lender should acquire Developer’s interest in the Site upon foreclosure by such lender. If City shall disapprove any such evidence of financing, City shall do so by Notice to Developer stating the reasons for such disapproval and Developer shall endeavor to promptly obtain and submit to City new evidence of financing. City shall approve or disapprove such new evidence of financing in the same manner and within the same times established in this Section 4.15.1(e) for the approval or disapproval of the evidence of financing as initially submitted to City. Developer shall close the approved financing prior to or concurrently with the Closing.

The Proof of Financing Commitment shall include a copy of a legally binding, firm and enforceable loan commitment(s) obtained by Developer from one or more financial institutions for the mortgage loan or loans for financing to fund the construction and completion of the Improvements.

The parties intend that Developer is to obtain equity financing for the construction and operation of the Development including the use of Tax Credits (in an amount of not less than the Tax Credit Amount) and obtaining capital contributions from limited partners in the Development in consideration primarily for the receipt of the Tax Credits received by Developer with respect to the Development.

In no event shall City be obligated to provide any financial assistance or subsidy to the Development other than as expressly set forth in this Agreement. City shall have no obligation to make any additional expenditures by this Agreement.

Developer understands and agrees that Developer and/or one or more of the Principals of Developer may be required by third party lenders to provide an operating deficit guaranty, tax credit recapture guaranty, and/or other guaranties which may be required with respect to the limited partners’ investment in the Development. If required for such financing, the execution of such guaranties shall be an additional condition precedent for the purposes of Section 3.1.

Developer shall submit the following documents as evidence of financing: (a) a copy of a firm loan commitment(s) or approval(s) obtained by Developer from unrelated financial institutions for the mortgage loan or loans for financing to fund the construction of the Development, subject to such lenders’ reasonable, customary and normal conditions and terms, (b) a limited partnership agreement or funding agreement from the equity investors in the Development which demonstrates that Developer has sufficient funds for such construction, and that such funds have been committed to such construction, and a current financial statement of Developer and Developer’s other sources of equity capital, (c) a copy of a preliminary reservation of Tax Credits (and when available, the final reservation of Tax Credits) from the California Tax Credit Allocation Committee for Tax Credits for the construction of the Development (or other evidence satisfactory to the City Manager that Tax Credits will be available), (d) a binding agreement for the purchase of the Tax Credits, and (e) such other documentation as may be reasonably necessary to satisfy City as to the availability, commitment and adequacy of other sources of capital, all of which together are sufficient to demonstrate that Developer has adequate funds committed for the construction and completion of the Development.

**4.15.2 No Encumbrances Except Mortgages, Deeds of Trust, or Sale and Lease-Back for Development.** Mortgages, deeds of trust and subleases and subleases-back on Developer's interest shall be permitted before the completion of the Improvements only with City's prior written approval, but only for the purpose of securing loans of funds to be used for financing the construction of the Improvements (including architecture, engineering, legal, construction period carrying costs such as property taxes, insurance and interest, and related direct costs as well as indirect costs) on or in connection with Area A, and the obtaining of a permanent loan in the amount at or below the outstanding balance of the construction loan. In no event, however, shall the amount or amounts of indebtedness secured by mortgages or deeds of trust on Developer's interest as to the Site exceed the projected Developer's cost, as evidenced by a pro forma and a construction contract which have been delivered to the City Manager prior to the Date of this Agreement and which set forth such costs, unless the written approval of the City Manager is first obtained. Developer shall notify City in advance of any mortgage, deed of trust or sublease and sublease-back financing, if Developer proposes to enter into the same before completion of the construction of the Improvements. The words "mortgage" and "trust deed" as used hereinafter shall include sublease and sublease-back. No liens shall be permitted on Area A, excepting only as to Developer's interest. Upon receipt of Developer's request therefor, City agrees to subordinate the City Initial Deed of Trust, the City Subsequent Deed of Trust and its rights to receive Residual Receipts (under the City Initial Note and, as Residual Receipts Rent, under the City Disposition Deed) to Permitted Senior Liens, so long as such lender(s) agree to provide reasonable notice and the right but not the obligation for City to cure. City authorizes the City Manager to execute such instruments on behalf of City without necessity of further action by the governing board of City.

**4.15.3 Holder Not Obligated to Construct Improvements.** The holder of any mortgage or deed of trust on Developer's interest authorized by this Agreement shall not be obligated by the provisions of this Agreement to construct, complete, or operate the Improvements or any portion thereof, or to guarantee such construction, completion or operation; nor shall any covenant or any other provision in this Agreement be construed so to obligate such holder. Nothing in this Agreement shall be deemed to permit or authorize any such holder to devote the Site to any uses or to construct any improvements thereon, other than those uses or improvements provided for or authorized by this Agreement.

**4.15.4 Notice of Default to Mortgagee or Deed of Trust Holders; Right to Cure.** With respect to any mortgage or deed of trust granted by Developer as to its interest as provided herein, whenever City may deliver any notice or demand to Developer with respect to any breach or default by Developer under this Agreement, City shall at the same time deliver to each holder of record of any mortgage or deed of trust authorized by this Agreement a copy of such notice or demand; provided that the failure to notify any holder of record shall not vitiate or affect the effectiveness of notice to Developer. Each such holder shall (insofar as the rights granted by City are concerned) have the right, at its option, within sixty (60) days after the receipt of the notice, to cure or remedy or commence to cure or remedy and thereafter to pursue with due diligence the cure or remedy of any such default and to add the cost thereof to the mortgage debt and the lien of its mortgage or deed of trust. Nothing contained in this Agreement shall be deemed to permit or authorize such holder to undertake or continue the construction or completion of the Improvements, or any portion thereof (beyond the extent necessary to conserve or protect the improvements or construction already made) without first having expressly assumed Developer's obligations to City by written agreement reasonably satisfactory to City. The holder, in that event, must agree to complete, in the manner provided in this Agreement, the improvements to which the lien or title of such holder relates, but on a schedule which takes into account the time reasonably required for the

holder to obtain title to and possession of Developer's interest in the Site, analyze and negotiate amendments to plans, specifications, construction contracts and operating contracts or to negotiate new construction contracts and operating contracts. Any such holder properly completing such improvement shall be entitled, upon compliance with the requirements of Section 4.13 of this Agreement, to a Certificate of Completion. It is understood that a holder shall be deemed to have satisfied the sixty (60) day time limit set forth above for commencing to cure or remedy a Developer default which requires title and/or possession of Developer's interest in the Site (or portion thereof) if and to the extent any such holder has within such sixty (60) day period commenced proceedings to obtain title and/or possession and thereafter the holder diligently pursues such proceedings to completion and cures or remedies the default. The City Manager is authorized to consent, on behalf of City, to the provision of similar cure rights to the limited partner as reasonably requested by the tax credit investor.

**4.15.5 Failure of Holder to Complete Improvements.** In any case where, sixty (60) days after the holder of any mortgage or deed of trust creating a lien or encumbrance upon the Site or any part thereof receives a notice from City of a default by Developer in completion of construction of any of the Improvements under this Agreement, and such holder is not vested with ownership of Developer's interest in the Site and has not exercised the option to construct as set forth in Section 4.15, or if it has exercised the option but has defaulted hereunder and failed to timely cure such default, in addition to such other rights and remedies as City shall have, City may purchase the mortgage or deed of trust by payment to the holder of the amount of the unpaid mortgage or deed of trust debt, including principal and interest and all other sums secured by the mortgage or deed of trust. If the ownership of the Site or any part thereof has vested in the holder, City, if it so desires, shall be entitled to a conveyance from the holder to City upon payment to the holder of an amount equal to the sum of the following:

- (a) The unpaid mortgage or deed of trust debt at the time title became vested in the holder (less all appropriate credits, including those resulting from collection and application of rentals and other income received during foreclosure proceedings);
- (b) All expenses with respect to foreclosure including reasonable attorneys' fees;
- (c) The net expense, if any, incurred by the holder as a direct result of the subsequent management of the Site or part thereof;
- (d) The costs of any improvements made by such holder;
- (e) An amount equivalent to the interest that would have accrued at the rate(s) specified in the holder's loan documents on the aggregate of such amounts had all such amounts become part of the mortgage or deed of trust debt and such debt had continued in existence to the date of payment by City; and
- (f) Any customary prepayment charges imposed by the lender pursuant to its loan documents and agreed to by Developer.

The foregoing rights shall be in addition to those measures set forth in an Inter-Creditor Agreement, and in addition shall supplement and not limit City's rights under the City Disposition Deed or the City Developer CC&Rs.

**4.15.6 Right of City to Cure Mortgage or Deed of Trust Default.** In the event of a mortgage or deed of trust default or breach by Developer whether prior to or after the completion of the construction of any of the Improvements or any part thereof (continuing until the expiration of the Required Covenant Period), Developer shall immediately deliver to City a copy of any mortgage holder's notice of default. If the holder of any mortgage or deed of trust has not exercised its option to construct, City shall have the right but no obligation to cure the default. In such event, City shall be entitled to reimbursement from Developer of all proper costs and expenses incurred by City in curing such default.

Developer agrees to provide documentation evidencing the relinquishment of any and all rights to the Development and under the City Disposition Deed in such event; provided that the failure to provide such documentation shall not be construed to mean that Developer retains any rights under the Agreement or the City Disposition Deed.

**4.15.7 No Subordination of Covenants.** The City Developer CC&Rs and the affordability covenants as contained therein and in the City Disposition Deed will not be subordinated.

**4.15.8 Failure to Obtain Financing.** In the event this Agreement is terminated, Developer shall immediately deliver to City an executed assignment in a form reasonably acceptable to City of Developer's right to use all plans, blueprints, drawings, sketches, specifications, tentative or final subdivision maps, landscape plans, utilities plans, soils reports, noise studies, environmental assessment reports, grading plans and any other materials relating to the construction of the Improvements on the Site (the "Plans"), together with copies of all of the Plans. Such assignment shall not affect Developer's obligations or duties concerning any of the Plans, including without limitation any obligation to pay for any work done on the Plans, and shall, in addition, relinquish the Site to City in a lien-free condition. The Plans shall be free of liens and encumbrances, and Developer shall use good faith, commercially reasonable efforts to deliver to City an estoppel certificate in a form reasonably acceptable to City from each person or entity which prepared such Plans, authorizing City to use such Plans for the Site, and releasing City from any responsibility or liability for paying any costs or fees for such Plans. Upon such assignment and payment therefor, the parties agree that neither shall have any further obligations or liability to the other pursuant to this Agreement.

**4.16 Mechanics of Disbursement of City Disbursement Amount Excepting for the City Subsequent Loan Amount.** The City Construction Disbursement Amount and the Allowable Predevelopment Expenses shall be disbursed at the times and in the manner set forth in Section 4.16 of this Agreement. The sole source of moneys used to pay the City Construction Disbursement Amount and the Allowable Predevelopment Expenses shall be (i) those NSP and NSP3 moneys used to fund the City Initial Loan and (ii) HOME Moneys hereafter available to City and hereafter designated by City for such purpose (excepting that HOME Moneys shall not be used for Allowable Predevelopment Expenses). No such commitment of HOME Moneys is being made by City by this Agreement. The City Construction Disbursement Amount, as well as the Acquisition Loan Amount, shall be deemed to have been disbursed as a loan, and shall be repaid from Residual Receipts as set forth in the City Initial Note and the City Subsequent Note. The City Initial Note shall be secured by the City Initial Deed of Trust. The City Subsequent Note shall be secured by the City Subsequent Deed of Trust. The obligation of Developer to repay the City Disbursement Amount from Residual Receipts is also called the "City Initial Loan." The City Initial Deed of Trust, the City Subsequent Deed of Trust is to be recorded against Developer's interest in Area A under the City Disposition



Deed (which deeds of trust shall be subordinate to liens securing repayment of the Primary Construction Loan and the Primary Permanent Loan). In the event HOME Moneys become available for the Rental Project, City will prepare an amendment to this Agreement which will include various HOME Requirements, including without limitation those provisions known as “Section 3” requirements.

(a) Provided that the Allowable Predevelopment Expense Conditions Precedent have been satisfied, City shall make available to Developer funds from the City Initial Loan to pay for Allowable Predevelopment Expenses as theretofore incurred. Provided that the City Disposition Conditions Precedent as more particularly described in Section 3.1 hereof have first been satisfied, City shall make available to Developer funds from the City Initial Loan to pay for Allowable Predevelopment Expenses as theretofore incurred (for which disbursements have not previously been made), and shall further make available to Developer the City Construction Disbursement Amount excepting for the City Subsequent Loan Amount as follows: (i) as to that portion of the City Construction Disbursement Amount other than the Deferred Developer Fee, the City Construction Disbursement Amount (other than the Deferred Developer Fee) will be disbursed to Developer as progress payments based upon the percentage of completion of construction of the Improvements as determined by the City Manager; and (ii) as to the Deferred Developer Fee, such amount is to be disbursed within sixty (60) days following achievement of Stabilized Occupancy and the receipt by City of written notice of such circumstance. The City Manager may, at his or her discretion, waive the applicability of the Conditions Precedent to Disbursement with respect to disbursement of the Allowable Predevelopment Expenses.

(b) City shall have no obligation to disburse any portion of the City Construction Disbursement Amount unless and until all of the Conditions Precedent to Disbursement are first satisfied.

(c) City shall not provide any assistance pursuant to this Agreement other than the disbursement by City of the City Construction Disbursement Amount on the terms and conditions set forth in this Agreement. Excepting only for the City Construction Disbursement Amount, Developer assumes all responsibility for any and all costs to develop the Development. All amounts disbursed by City to or for the benefit of Developer pursuant to this Agreement shall be applied to defray the cost of the Development.

(d) Developer has obtained advice from advisers of its choosing regarding this Agreement and all matters which may pertain thereto, including without limitation any consequences as to income tax or property tax, and City has not made any representations or provided any advice in connection therewith.

Notwithstanding the foregoing portion of this Section 4.16, if construction draws from a construction loan for the Development are being administered by an Approved Construction and/or Permanent Lender or a major institutional lender having a rating by Moody’s Investors Service, Standard & Poor’s or Fitch Ratings of AA (or equivalent) or better as reasonably approved by City will consent to such lender acting as a disbursing agent for City in respect to the City Construction Disbursement Amount. Interest earned on City moneys as so placed with the construction lender shall be maintained in an insured or rated (at investment grade of AA or better), interest-bearing account, with interest to be applied to defray project costs payable to unrelated third parties. The City Manager is authorized to enter into such agreement(s) as may be necessary or convenient to implement this Section 4.16.

In the event HOME Moneys are not available to City in an amount of not less than the City Subsequent Loan Amount, City shall have no obligation to utilize any other source of funds to address the shortfall, if any.

**4.17 Mechanics of Disbursement of the City Subsequent Loan Amount.** Provided that the Acquisition Conditions Precedent have first been satisfied, City shall make available to Developer moneys from the City Subsequent Loan Amount and that portion of the City Initial Loan Amount in excess of the City Initial Amount as follows: as to the City Subsequent Loan Amount, moneys will be disbursed to Developer as progress payments based upon the percentage of completion of grubbing and remediation of the Site and construction of the Improvements as determined by the City Manager or his or her designee upon consultation with Developer. The further conditions and protocol for payment of the City Subsequent Loan Amount shall be as follows:

(a) City shall have no obligation to disburse any portion of the City Subsequent Loan Amount unless and until all of the Acquisition Conditions Precedent are first satisfied.

(b) City shall not provide any assistance or other payment pursuant to this Agreement with respect to the acquisition of the Site and conduct of grubbing and remediation thereon (the "Preliminary Site Work") other than on the terms and conditions set forth in this Agreement. Excepting only for amounts due and payable from the City Subsequent Loan Amount for the Preliminary Site Work, Developer assumes all responsibility for any and all costs for the Preliminary Site Work. All amounts disbursed by City as the City Subsequent Loan Amount shall be applied to defray the cost of the Preliminary Site Work.

(c) Protocol for Disbursement of the City Subsequent Loan Amount: City shall make available the City Subsequent Loan Amount in installments based upon the progress toward completion of the Preliminary Site Work with such moneys to be infused notably (and not, following the Disposition Conveyance, in excess of amounts loaned by the City) with those of the Primary Construction Loan, treating both the City Initial Loan and the City Subsequent Loan as amounts infused by the City, as determined in good faith by the City Manager. Prior to each disbursement of any portion of the City Subsequent Loan Amount, Developer shall submit to City an "Application for Disbursement" which shall include:

A written, itemized statement, signed by a representative of Developer which sets forth: (i) a description of the work performed, material supplied and/or costs incurred or due for which disbursement is requested; and (ii) the total amount incurred, expended and/or due for the requested disbursement. All moneys applied for and disbursed pursuant to this Section 4.17 shall be applied only for the Preliminary Site Work or Allowable Closing Costs and the statement(s) by the representative of Developer shall so affirm. Disbursements may be used only to defray the cost of the Preliminary Site Work, and only where such work is performed by (and disbursements are made to) third parties not related or connected to Developer. The City Manager shall have the right to review, approve or disapprove the necessity or reasonableness of work undertaken and the costs incurred therefor.

Copies of billing invoices, statements, receipts and other documents evidencing the total amount expended, incurred or due for any requested disbursement.

Mechanics lien waivers including: (i) a Conditional Waiver and Release Upon Progress Payment (California Civil Code Section 3262(d)(1)) for itself and each contractor covered by such Request Payment, (ii) an Unconditional Waiver and Release Upon Progress Payment (California Civil Code Section 3262(d)(2)) for itself and each of its contractors covering the full amount of all previous payments made to Developer, and (iii) an Unconditional Waiver and Release Upon Final Payment (California Civil Code Section 3262(d)(4)) for its contractors who have completed their work and for whom Developer has received full payment.

A statement that the percentage and/or stage of construction corresponding to the Application for Disbursement has been substantially completed and substantially conforms to the Plans.

Subject to satisfaction of the requirements of this Section 4.17, City will endeavor to make payments within ten (10) days after the submittals required pursuant to this Section 4.17 are accomplished, review by the City Manager is completed, and the City Manager has had a reasonable opportunity to review the stage of completion. After the approval of this Agreement by City, further approval by the governing board of City shall not be required to authorize the disbursement of moneys pursuant to this Section 4.17.

**4.18 Cost Savings Obligation; Excess Tax Credits Obligation.** Developer hereby agrees to provide and pay to City a payment described under Section 4.18.1 below in connection with Cost Savings from the Development in an amount to be determined based on the Audit to be conducted upon completion of construction for the Development. Payment of the Cost Savings is to be made at the time set forth therefor in Section 4.18.1, below. Provided that the payment is timely and fully made in accordance with Section 4.18.1, the amount paid as the Cost Savings shall be credited against the amount then outstanding under the City Initial Note (excepting to the extent necessary to defray Cost Overrun Amounts therefor experienced or Developer Fee as further described in Section 4.18.1). Developer also agrees to make a payment to City, or approve a reduction to the City Construction Disbursement Amount, to the extent there is an Excess Amount. The payment or credit as to the Applicable Percentage of the Excess Amount shall be administered in the manner described in this Section 4.18 for Cost Savings, or as otherwise mutually agreed in writing by City and Developer.

**4.18.1 Audit to Determine Cost Savings and City Share of Cost Savings.** The actual amount of "Cost Savings" (as defined below) to be paid to City shall be determined after the Audit, as hereafter defined and described, and the amount of such Cost Savings shall be equal to the amount by which the total sources of permanent financing for the Development exceed the costs of development incurred for that Project (with the resulting amount constituting the "Cost Savings"); Developer shall pay to City an amount equal to the Cost Savings remaining after satisfaction of the Developer Fee (including any Deferred Developer Fee) and the Cost Overrun Amounts (which resulting amount shall constitute the "City Share of Cost Savings"). Within one hundred eighty (180) days following the completion of construction of the Development, as evidenced by issuance of the final certificate of occupancy by City's building official, Developer shall cause its certified public accountant(s) to perform a final audit of the costs of development of the Development in accordance with the requirements of the Tax Credits, and generally accepted accounting procedures (GAAP) and generally accepted auditing standards (herein, referred to as "Audit"). If the Audit determines that the total sources of permanent financing for the Development (including long-term permanent debt and equity) exceed the total development cost for the Development (including, without limitation, all hard and soft costs and all onsite and offsite improvements required in connection with the

development of the Development, including the Developer Fee), such excess shall be considered the “Cost Savings” for the Development.

**4.18.2 Payment of City Share of Cost Savings as Payment of Principal on City Initial Note.** The City Share of Cost Savings, once determined by the Audit pursuant to Section 4.18.1, shall be due and paid by Developer and allocated and credited as a principal payment on the City Initial Note or, at City’s election, the City Subsequent Note or allocated between both such Notes, as and when paid.

**4.18.3 Timing of Payment of City Share of Cost Savings.** The City Share of Cost Savings shall become due and payable by Developer to City upon conversion to permanent loan and completion of construction, concurrent with the closing of the Primary Permanent Loan or, if earlier, at such time as Developer receives its final Tax Credit equity payment for the Development, and such City Share of Cost Savings shall be paid in a lump sum as a principal payment toward the amount outstanding under the City Initial Note.

**4.19 No Burden on General Fund.** It is mutually agreed that no funding will be provided for the Project using the general fund of the City; the parties mutually understand and agree that the only sources of moneys for the Project emanating from the City will be moneys available under NSP or NSP3 and, to the extent, if any, as may be hereafter approved by City, the HOME Program. Developer agrees to refrain from requesting the provision of any other moneys from the City or the Moreno Valley Housing Authority.

## 5. COVENANTS AND RESTRICTIONS

**5.1 Use Covenants.** Developer covenants and agrees for itself, its successors, assigns, and every successor in interest to the Site or any part thereof, that Developer shall devote the Site to the uses specified in and shall operate in conformity with this Agreement, the City Developer CC&Rs, the City Disposition Deed and, if applicable, whichever is the more restrictive in each case unless expressly provided to contrary effect herein. All uses conducted on the Site, including, without limitation, all activities undertaken by Developer pursuant to this Agreement, shall conform to the Redevelopment Plan and all applicable provisions of the City Code.

### 5.2 Affordable Housing Requirements.

**5.2.1 Number of Required Affordable Units and Other Units.** Developer agrees to make available, restrict occupancy to, and rent all of the Required Affordable Units at Affordable Rent. Subject to modification if mutually approved by the parties and further subject to the possible approval of greater affordability requirements by CDLAC or TCAC, there shall be seventy-two (72) Units on the Site, with affordability for seventy-one (71) of such Units to be provided in conformity with the Prescribed Income Levels and Affordable Rents. One (1) of the Units shall be developed and maintained on the Site as an on-site manager’s unit. The restriction of Units in addition to the Required Affordable Units at limited rent levels, in connection with requirements for tax credits, shall not be deemed to constitute a violation of this Agreement. An example of the calculation of Affordable Rent for the Units is attached hereto as Attachment No. 7 and incorporated herein. In the event TCAC imposes greater affordability requirements, this Agreement and the attachments hereto will be conformed to meet such requirements.

**5.2.2 Duration of Affordability Requirements.** The Required Affordable Units shall be maintained as rental units available at and rented to Extremely Low Income Households, 40% Very Low Income Households, 50% Very Low Income Households and Lower Income Households throughout the Required Covenant Period, as more particularly set forth in the City Developer CC&Rs.

**5.2.3 Selection of Tenants; Special Limitations as to Senior Citizen Component.** Developer shall be responsible for the selection of tenants for the Required Affordable Units in compliance with the criteria set forth in Sections 5.2 and 5.3 of this Agreement. Developer shall restrict occupancy of all of the Units in the Senior Housing Component as Senior Citizen Units occupied by “Senior Citizens” and “Qualified Permanent Residents” (as those terms are or may be defined in California Civil Code Section 51.3). California Civil Code Section 51.3 presently provides as follows: At least one person in residence in each dwelling unit must be a Senior Citizen, and other residents in the same dwelling unit who are not Senior Citizens must be Qualified Permanent Residents. Temporary guests of a Senior Citizen or Qualified Permanent Resident shall be allowed for a period of not more than sixty (60) days in any twelve (12) month period. Upon the death, dissolution of marriage, hospitalization or other prolonged absence of the Senior Citizen in a dwelling unit, any Qualified Permanent Resident who has continuously resided in the dwelling unit with such Senior Citizen shall be permitted to continue as a resident of that dwelling unit. “Permitted Health Care Residents” (as that term is or may be defined in California Civil Code Section 51.3) shall be permitted to occupy any dwelling unit during any period that such person is actually providing live in, long term or hospice health care to a Senior Citizen tenant or Qualified Permanent Resident tenant for compensation.

**5.2.4 Income of Tenants.** Each tenant shall be a 40% Very Low Income Household, a 50% Very Low Income Household, or, to the extent provided herein a Lower Income Household, in accordance with the Prescribed Income Levels, meets the eligibility requirements established for the corresponding Required Affordable Unit, and Developer shall obtain a certification from each tenant renting or leasing each housing unit which substantiates such fact. Developer shall verify the income certification of each tenant as set forth in Section 5.3 hereof. Prior to the rental or lease of any housing unit on the Site to a tenant, and annually thereafter, Developer shall submit to City or its designee, at Developer’s expense, a completed income computation and certification form, in a form to be provided by City.

**5.2.5 Determination of Affordable Rent for the Units.** Each Required Affordable Unit shall be rented at an Affordable Rent as defined in this Agreement.

“Household size appropriate to the unit,” for the purpose of the calculation of rent herein (and without regard to actual occupancy), means an amount equal to the number of bedrooms in the unit plus one (i.e., for a two-bedroom unit, 3 people; for a three-bedroom unit, four people); provided that the maximum monthly rental amount of the Required Affordable Units shall be adjusted annually by the formula set forth above upon the promulgation of revised figures concerning Median Income for the Area by regulation of the California Department of Housing and Community Development (“HCD”). Actual rent charged may be less than such maximum rent.

Notwithstanding the foregoing portion of this Section 5.2.5, Developer agrees that rents for the Required Affordable Units shall be limited as provided in this Agreement.

**5.2.6 Relationship to Other Governmental Requirements.** In the event Developer is required, as a condition of funding imposed by entities other than City, to cause a greater number of Units to be restricted by rent and/or income qualifications, the attachments to this Agreement will be modified to reflect such greater number of Units limited to rental at Affordable Rent to households of the corresponding income lived as determined in accordance with the Calculation of Affordable Rents.

### **5.3 Verifications.**

**5.3.1 Income Verification.** Developer shall verify the income of each proposed and existing tenant of the Required Affordable Units and all other Units developed on the Site.

**5.3.2 Annual Reports.** Following the issuance of the Certificate of Completion, and on or before June 15 of each Year, Developer, at its expense, shall submit to City or its designee the reports in the manner described by Health and Safety Code Section 33418, as the same may be amended from time to time, with each such report to be in the form prescribed by City. Each annual report shall cover the immediately preceding fiscal year. If HOME Moneys are used, Developer shall also provide for reporting to City and for verification of household incomes as provided under the HOME Regulations.

Developer shall maintain on file each tenant's executed lease and Income Verification and rental records for all Units developed on the Site. Developer shall maintain complete and accurate records pertaining to the Required Affordable Units and will permit any duly authorized representative of City to inspect the books and records of Developer pertaining to this Agreement and the Required Affordable Units. Developer shall prepare and submit to City (or its designee) annually commencing June 15 of the year construction of the Development commences and continuing throughout the Required Covenant Period, a Certificate of Continuing Program Compliance. Such documentation shall state for each Required Affordable Unit the unit size, the rental amount, the number of occupants, and the income of the occupants and any other information which may be used to determine compliance with the terms of this Agreement, including without limitation concerning compliance with regulations pertaining to NSP, NSP3, the ARR Regulations and, if HOME Moneys are used, HOME Regulations (including without limitation section 92.251 thereof).

As part of its annual report, Developer shall include a statement of amounts payable by Developer under this Agreement (including the City Disposition Deed) supported by an Audited Financial Statement (prepared by an independent accounting firm reasonable acceptable to City) which sets forth information in detail sufficient for adequate review by City for the purposes of confirming those amounts payable by Developer to City as well as showing the general financial performance of the Affordable Housing Project ("Annual Financial Report"). Each Annual Financial Report shall include a profit and loss statement showing Gross Revenues, Operating Expenses, Debt Service, Operating Reserve, Capital Replacement Reserve and Rental Receipts, payments of fees and any other remuneration to Developer (including without limitation any Deferred Developer Fee) all certified by the Audited Financial Statement. In the event the amounts reported or paid deviate by five percent (5%) or more from that amount determined to be owing upon review of Developer's submittal, Developer shall reimburse City for its cost to review (which may require engagement of auditors) and collect the amounts owing; such amounts shall, until paid, be added to the principal amount payable under the City Initial Note and the City Subsequent Note. Developer agrees to maintain records in businesslike manner, and to maintain such records for the Required Covenant

Period. The income and rent restrictions provided for hereunder are intended and shall be maintained in a manner sufficient to satisfy the requirements of Health and Safety Code Section 33413(b) without regard to whether such statute is applicable as a matter of law.

In addition, as part of its annual report and at City's request, but not less frequently than prior to each initial and subsequent rental of each Unit to a new tenant household (but not lease renewals) and annually thereafter, Developer shall also provide to City completed income computation, asset evaluation, and certification forms, for any such tenant or tenants, in substantially the form provided by City from time to time. Developer shall obtain, or shall cause to be obtained by the Property Manager, an annual certification from each household of each Unit demonstrating that such household is an Extremely Low Income Household, a 40% Very Low Income Household, a 50% Very Low Income Household or a Low Income Household, as applicable, and meets the eligibility requirements established for each such Unit. Developer shall verify, or shall cause to be verified by the Property Manager, the income certification of each tenant household. In order to comply with this Section 5.3, Developer shall submit to City any and all tenant income and occupancy certifications and supporting documentation required to be submitted to TCAC pursuant to the Tax Credit Rules and the Tax Credit Regulatory Agreement for the Rental Project; provided, City may request (and Developer shall provide) additional documentation to assist City's evaluation of Developer's compliance with this Agreement, if determined to be necessary in the reasonable discretion of the City Manager, specifically including (without limitation) any documentation or additional certifications that may be necessary to verify compliance with the HOME Regulations and Federal Program Limitations, as applicable during the HOME Compliance Period, and each tenant's status as to each Senior Citizen Unit as a Senior Citizen Household. This requirement is in addition to and does not replace or supersede Developer's obligation to annually submit the Certificate of Continuing Program Compliance to City. Further, City has the right, but not the obligation to monitor compliance with respect to each tenant household at the Rental Project, and City's election to monitor some, but not all, of the Units shall not constitute a waiver of City's right to monitor and enforce compliance with respect to all Units in the future.

**5.3.3 Verification of Income of New and Continuing Tenants.** Gross income calculations for prospective (and continuing) tenants shall be determined in accordance with 25 Cal. Code Regs. Section 6914 or as required by the Tax Credit Rules. Developer shall verify the income and information provided in the income certification of the proposed tenant as set forth below.

(a) Developer shall verify the income of each proposed tenant of the Rental Project and by at least one of the following methods as appropriate to the proposed tenant:

(i) obtain two (2) paycheck stubs from the person's two (2) most recent pay periods;

(ii) obtain a true copy of an income tax return from the person for the most recent tax year in which a return was filed;

(iii) obtain an income verification certification from the employer of the person;

(iv) obtain an income verification certification from the Social Security Administration and/or the California Department of Social Services if the person receives assistance from such agencies;

(v) obtain an alternate form of income verification reasonably requested by Authority, if none of the above forms of verification is available to Developer; or

(vi) as to the Senior Citizen Housing Units obtain verification and supporting documentation of the household as a Senior Citizen Household.

**5.3.4 Verification Regarding Eligibility of New Tenants.** Developer shall retain documentation regarding the eligibility of each new tenant household.

**5.4 Maintenance of Area A.** Developer agrees for itself and its successors in interest to Area A, to maintain the improvements on Area A in conformity with the City Code and the conditions set forth in the City Developer CC&Rs, and shall keep Area A free from any accumulation of debris or waste materials. During such period, Developer shall also maintain the landscaping planted on Area A in a healthy condition. This section shall also apply to Area B during any times Developer uses Area B or portion thereof.

Developer and its maintenance staff, contractors or subcontractors shall comply with the following standards as to the Development (collectively, "Maintenance Standards"):

(a) Area A shall be maintained in conformance and in compliance with the approved final as-built plans, and reasonable maintenance standards which comply with the industry standard for comparable first quality affordable housing projects in the County, including but not limited to painting and cleaning of all exterior surfaces and other exterior facades comprising all private improvements and public improvements to the curblin. Area A shall be maintained in good condition and in accordance with the industry custom and practice generally applicable to comparable first quality affordable housing projects in the County.

(b) Landscape maintenance shall include, but not be limited to: watering/irrigation; fertilization; mowing; edging; trimming of grass; tree and shrub pruning; trimming and shaping of trees and shrubs to maintain a healthy, natural appearance and safe road conditions and visibility, and irrigation coverage; replacement, as needed, of all plant materials; control of weeds in all planters, shrubs, lawns, ground covers, or other planted areas; and staking for support of trees.

(c) Clean-up maintenance shall include, but not be limited to: maintenance of all sidewalks, paths and other paved areas in clean and weed-free condition; maintenance of all such areas clear of dirt, mud, trash, debris or other matter which is unsafe or unsightly; removal of all trash, litter and other debris from improvements and landscaping prior to mowing; clearance and cleaning of all areas maintained prior to the end of the day on which the maintenance operations are performed to ensure that all cuttings, weeds, leaves and other debris are properly disposed of by maintenance workers.

City agrees to notify Developer in writing if the condition of Area A does not meet with the Maintenance Standards and to specify the deficiencies and the actions required to be taken by Developer to cure the deficiencies. Upon notification of any maintenance deficiency, Developer shall have thirty (30) days within which to correct, remedy or cure the deficiency. If the written notification states the problem is urgent relating to the public health and safety, then Developer shall have forty-eight (48) hours to rectify the problem. In the event Developer does not maintain Area A in the manner set forth herein and in accordance with the Maintenance Standards, City shall have, in



addition to any other rights and remedies hereunder, the right to maintain Area A, or to contract for the correction of such deficiencies, after written notice to Developer, and Developer shall be responsible for the payment of all such costs incurred by City.

**5.4.1 Program Maintenance.** In addition to the routine maintenance and repair required pursuant to Section 5.4 Developer shall perform the following minimum programmed maintenance of the Improvements to Area A:

- (a) Interior painting and window covering replacement at least every seven (7) years, unless such improvements would be substantially disruptive to a vulnerable resident occupant, in which case, Developer shall perform as work at the earliest feasible opportunity;
- (b) Exterior painting at least every ten (10) years;
- (c) Repair and resurfacing of parking areas and walkways at least every ten (10) years;
- (d) Replacement of all deteriorated or worn landscaping at least every five (5) years; and
- (e) Replacement of all deteriorated or worn recreational equipment at least every ten (10) years.

Notwithstanding the foregoing, if the City Manager reasonably determines that the Development suffers from excess unexpected wear and tear requiring any of the above items of maintenance to be performed sooner than as set forth above, the Agency may require that such maintenance actions be performed within a reasonable time, even if sooner than the time periods set forth above. Upon the request of Developer, the City Manager, at his or her sole and absolute discretion, may grant a waiver or deferral of any program maintenance requirement. Developer shall keep such records of maintenance and repair as are necessary to prove performance of the program maintenance requirements.

**5.4.2 Occupancy Limits.** To the greatest extent allowed by law, the maximum occupancy of the Units in the Development shall not exceed more than such number of persons as is equal to two persons per bedroom, plus one. Thus, for the two (2) bedroom Housing Units, the maximum occupancy shall not exceed five (5) persons. For the three (3) bedroom Housing Units, the maximum occupancy shall not exceed seven (7) persons.

**5.5 Nondiscrimination Covenants.** Developer covenants by and for itself and any successors in interest that there shall be no discrimination against or segregation of, any person or group of persons on account of any basis listed in subdivision (a) or (d) of Section 12955 of the Government Code, as those bases are defined in Sections 12926, 12926.1, subdivision (m) and paragraph (1) of subdivision (p) of Section 12955, and Section 12955.2 of the Government Code, in the sale, lease, sublease, transfer, use, occupancy, tenure, or enjoyment of the premises herein conveyed, nor shall the grantee or any person claiming under or through him or her, establish or permit any practice or practices of discrimination or segregation with reference to the selection, location, number, use or occupancy of tenants, lessees, subtenants, sublessees, or vendees in the premises herein conveyed. The foregoing covenants shall run with the land.

Developer shall refrain from restricting the rental, sale or lease of the Site on the basis of race, color, religion, sex, marital status, ancestry or national origin of any person. All such deeds, leases or contracts shall contain or be subject to substantially the following nondiscrimination or nonsegregation clauses:

**In deeds:** “The grantee herein covenants by and for himself or herself, his or her heirs, executors, administrators, and assigns, and all persons claiming under or through them, that there shall be no discrimination against or segregation of, any person or group of persons on account of any basis listed in subdivision (a) or (d) of Section 12955 of the Government Code, as those bases are defined in Sections 12926, 12926.1, subdivision (m) and paragraph (1) of subdivision (p) of Section 12955, and Section 12955.2 of the Government Code, in the sale, lease, sublease, transfer, use, occupancy, tenure, or enjoyment of the premises herein conveyed, nor shall the grantee or any person claiming under or through him or her, establish or permit any practice or practices of discrimination or segregation with reference to the selection, location, number, use or occupancy of tenants, lessees, subtenants, sublessees, or vendees in the premises herein conveyed. The foregoing covenants shall run with the land.”

**In leases:** “The lessee herein covenants by and for himself or herself, his or her heirs, executors, administrators, and assigns, and all persons claiming under or through him or her, and this lease is made and accepted upon and subject to the following conditions:

“That there shall be no discrimination against or segregation of any person or group of persons, on account of any basis listed in subdivision (a) or (d) of Section 12955 of the Government Code, as those bases are defined in Sections 12926, 12926.1, subdivision (m) and paragraph (1) of subdivision (p) of Section 12955, and Section 12955.2 of the Government Code, in the leasing, subleasing, transferring, use, occupancy, tenure, or enjoyment of the premises herein leased nor shall the lessee himself or herself, or any person claiming under or through him or her, establish or permit any such practice or practices of discrimination or segregation with reference to the selection, location, number, use, or occupancy, of tenants, lessees, sublessees, subtenants, or vendees in the premises herein leased.”

**In contracts:** “There shall be no discrimination against or segregation of, any person or group of persons on account of any basis listed in subdivision (a) or (d) of Section 12955 of the Government Code, as those bases are defined in Sections 12926, 12926.1, subdivision (m) and paragraph (1) of subdivision (p) of Section 12955, and Section 12955.2 of the Government Code, in the sale, lease, sublease, transfer, use, occupancy, tenure, or enjoyment of the premises which are the subject of this Agreement, nor shall the grantee or any person claiming under or through him or her, establish or permit any practice or practices of discrimination or segregation with reference to the selection, location, number, use or occupancy of tenants, lessees, subtenants, sublessees, or vendees in the premises herein conveyed. The foregoing covenants shall run with the land.”

In addition, Developer hereby covenants, by and for itself, its successors and assigns, and all persons claiming under or through them, to comply with the following laws relating to nondiscrimination and equal opportunity to the extent applicable to the Site or the Housing Project: (1) the Fair Housing Act (42 U.S.C. 3601-19) and implementing regulations at 24 CFR part 100 *et seq.*; Executive Order 11063, as amended by Executive Order 12259 (3 CFR, 1959-1963 Comp., p. 652 and 3 CFR, 1980 Comp., p. 307) (Equal Opportunity in Housing Programs) and implementing regulations at 24 CFR part 107; title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d-2000d-4) (Nondiscrimination in Federally Assisted Programs) and implementing regulations at 24 CFR part 1;

the Age Discrimination Act of 1975 (42 U.S.C. 6101-6107) and implementing regulations at 24 CFR part 146; section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and implementing regulations at part 8 of this title; title II of the Americans with Disabilities Act, 42 U.S.C. 12101 *et seq.*; 24 CFR part 8; section 3 of the Housing and Urban Development Act of 1968 (12 U.S.C. 1701u) and implementing regulations at 24 CFR part 135; Executive Order 11246, as amended by Executive Orders 11375, 11478, 12086, and 12107 (3 CFR, 1964-1965 Comp., p. 339; 3 CFR, 1966-1970 Comp., p. 684; 3 CFR, 1966-1970 Comp., p. 803; 3 CFR, 1978 Comp., p. 230; and 3 CFR, 1978 Comp., p. 264, respectively) (Equal Employment Opportunity Programs) and implementing regulations at 41 CFR chapter 60; Executive Order 11625, as amended by Executive Order 12007 (3 CFR, 1971-1975 Comp., p. 616 and 3 CFR, 1977 Comp., p. 139) (Minority Business Enterprises); Executive Order 12432 (3 CFR, 1983 Comp., p. 198) (Minority Business Enterprise Development); and Executive Order 12138, as amended by Executive Order 12608 (3 CFR, 1977 Comp., p. 393 and 3 CFR, 1987 Comp., p. 245) (Women’s Business Enterprise), and the Unruh Act, Civil Code Section 51, *et seq.*

Developer further covenants, by and for itself, its successors and assigns, and all persons claiming under or through them, not to inquire about the sexual orientation or gender identity of an applicant for, or occupant of, the Housing Project or any Housing Unit at the Site, for the purpose of determining eligibility for occupancy of such Housing Units or otherwise making such Housing Units available. This prohibition on inquiries regarding sexual orientation or gender identity does not prohibit any individual from voluntarily self-identifying sexual orientation or gender identity. Further, determinations of eligibility for occupancy of Housing Units at the Housing Project shall be made in accordance with the eligibility requirements provided for such program by HUD, and such Housing Units shall be made available without regard to actual or perceived sexual orientation, gender identity, or marital status.

The covenants established in this Section shall, without regard to technical classification and designation, be binding for the benefit and in favor of City and its successors and assigns, and shall remain in effect in perpetuity.

## **5.6 Management of the Rental Project.**

**5.6.1 Property Manager.** Developer shall manage or cause the Development, and all appurtenances thereto that are a part of the Development, to be managed in a prudent and business-like manner, consistent with good property management standards for other comparable first quality, well-managed affordable rental housing projects in the County. Developer may contract with a property management company or property manager, to operate and maintain the Development in accordance with the terms of this Section 5.6 (“Property Manager”); provided, however, the selection and hiring of the Property Manager (and each successor or assignee), including any Affiliated Person, is and shall be subject to prior written approval of the City Manager (or designee) in his or her discretion. The Property Manager shall manage the Development in accordance with the definitions of Affordable Rent contained in this Agreement (including without limitation as to age and income) hereof, the tenant selection requirements contained in this Agreement, and the definitions relating to income contained in this Agreement. Any fee paid to the Property Manager for social services provided to the tenants shall be exclusive of the fee paid to the Property Manager relating to the management of the Development. Developer shall conduct due diligence and background evaluation of any potential third party property manager or property management company to evaluate experience, references, credit worthiness, and related qualifications as a property manager. Any proposed property manager shall have significant and

relevant prior experience with affordable housing projects and properties comparable to the Development and the references and credit record of such property manager/company shall be investigated (or caused to be investigated) by Developer prior to submitting the name and qualifications of such proposed property manager to the City Manager for review and approval. A complete and true copy of the results of such background evaluation shall be provided to the City Manager. Approval of a Property Manager by City Manager shall not be unreasonably delayed but shall be in his or her sole reasonable discretion, and the City Manager shall use good faith efforts to respond as promptly as practicable in order to facilitate effective and ongoing property management of the Development. The replacement of a Property Manager by Developer and/or the selection by Developer of any new or different Property Manager during the Required Covenant Period shall also be subject to the foregoing requirements.

**5.6.2 Property Management Plan.** Prior to and as a condition precedent to Disposition Conveyance and as one of the City Disposition Conditions Precedent, Developer shall prepare and submit to the City Manager for review and approval, a management plan for the Development which includes a detailed plan and strategy for long term marketing, operation, maintenance, repair and security of the Development, inclusive of social services for the residents of the Required Affordable Units, and the method of selection of tenants, rules and regulations for tenants, and other rental policies for the Development (“Property Management Plan”). City Manager shall review and shall act reasonably to approve or disapprove the Property Management Plan within a reasonable time. Subsequent to approval of the Property Management Plan by the City Manager the ongoing management and operation of the Development shall be in compliance with the approved Property Management Plan. During the Required Covenant Period, Developer and its Property Manager may from time to time submit to the City Manager proposed amendments to the Property Management Plan, the implementation of which shall also be subject to the prior written approval of the City Manager.

**5.6.3 Gross Mismanagement.** During the Required Covenant Period, and in the event of “Gross Mismanagement” (as defined below) of the Development, City Manager shall have and retain the authority to direct and require any condition(s), acts, or inactions of Gross Mismanagement to cease and/or be corrected immediately, and further to direct and require the immediate removal of the Property Manager and replacement with a new qualified and approved Property Manager, if such condition(s) is/are not ceased and/or corrected after expiration of thirty (30) days from the date of written notice from City Manager. If Developer or Property Manager has commenced to cure such Gross Mismanagement condition(s) on or before the 20th day from the date of written notice (with evidence of such submitted to the City Manager), but has failed to complete such cure by the 30th day (or such longer period if the cure cannot reasonably be accomplished in thirty (30) days as reasonably determined by the non-defaulting party), then Developer and its Property Manager shall have an additional 10 days to complete the cure of Gross Mismanagement condition(s). In no event shall any condition of Gross Mismanagement continue uncured for a period exceeding forty-five (45) days from the date of the initial written notice of such condition(s), except that the conditions described in subdivisions (d) and (e) below may exist for up to, but no longer than, seventy-five (75) days without triggering City’s right to remove the Property Manager as described in the immediately following sentence as long as Developer is diligently working to cure such conditions of Gross Mismanagement. If such condition(s) do persist beyond such period, City Manager shall have the sole and absolute right to immediately and without further notice to Developer (or to Property Manager or any other person/entity) to remove the Property Manager and replace the Property Manager with a new property manager of the City Manager’s selection at the

sole cost and expense of Developer. If Developer takes steps to select a new Property Manager that selection is subject to the requirements set forth above for selection of a Property Manager.

For purposes of this Agreement, the term “Gross Mismanagement” means management of the Development in a manner which violates the terms and/or intention of this Agreement to operate a first quality affordable housing complex, and shall include, but is not limited to, any one or more of the following:

- (a) Leasing to tenants who exceed the prescribed income levels;
- (b) Leasing of a Unit in the Senior Citizen Component (other than one Manager’s Unit) to a household that is not a Senior Citizen Household;
- (c) Subject to fair housing laws, allowing tenants to exceed the prescribed occupancy levels without taking immediate action to stop such overcrowding;
- (d) Under-funding required reserve accounts;
- (e) Failing to timely maintain the Development in accordance with the Property Management Plan and Maintenance Standards;
- (f) Failing to submit timely and/or adequate annual reports to the Agency as required herein;
- (g) Failing to comply with the HOME Requirements in the event HOME Moneys are used for the Development;
- (h) Failing to comply with the City Developer CC&Rs;
- (i) Failing to comply with the Tax Credit Regulatory Agreement;
- (j) Fraud or embezzlement of Development funds, including without limitation funds in the reserve accounts;
- (k) Failing to fully cooperate with the Moreno Valley Police Department or other local law enforcement agency(ies) with jurisdiction over the Development, in maintaining a crime-free environment within the Development;
- (l) Failing to fully cooperate with the Moreno Valley Fire Department or other local public safety agency(ies) with jurisdiction over the Development, in maintaining a safe and accessible environment within the Development;
- (m) Failing to fully cooperate with the Moreno Valley Planning and Building and Safety Department, or other local health and safety enforcement agency(ies) with jurisdiction over the Development, in maintaining a decent, safe and sanitary environment within the Development; and
- (n) Spending funds from the Capital Replacement Reserve account for items that are not defined as eligible costs, including eligible capital and/or replacement costs, under the standards imposed by GAAP (and/or, as applicable, generally accepted auditing principles).

Notwithstanding the requirements of the Property Manager to correct any condition of Gross Mismanagement as described above, Developer is obligated and shall use its best efforts to correct any defects in property management or operations at the earliest feasible time and, if necessary, to replace the Property Manager as provided above. Developer shall include advisement and provisions of the foregoing requirements and requirements of this Agreement within any contract between Developer and its Property Manager for the Development.

**5.6.4 Code Enforcement.** Developer acknowledges and agrees that City and its employees and authorized agents, shall have the right to conduct code compliance and/or code enforcement inspections of the Development and the individual dwelling units at the Development (and not limited to the Required Affordable Units), both exterior and interior, at reasonable times and upon reasonable notice (not less than 48 hours prior notice, except in an emergency) to Developer and/or an individual tenant. If such notice is provided by City representative(s) to Developer, then Developer (or its Property Manager) shall immediately and directly advise any affected tenant of such upcoming inspection and cause access to the area(s) and/or Units at the Development to be made available and open for inspection. Developer shall include express advisement of such inspection rights within the lease/rental agreements for each Unit in the Development in order for each and every tenant and tenant household to be aware of this inspection right. The foregoing portion of this Section 5.6.4 is without limitation as to the exercise of police powers by City.

**5.7 Capital Reserve Requirements.** Commencing upon the closing for the Primary Permanent Loan for the Development, Developer shall annually set aside an amount of not less than Two Hundred Fifty Dollars (\$250.00) per dwelling unit (72 dwelling units times \$250.00 equals \$18,000) or such increased amount required by TCAC or the Partnership Agreement or the Lender under the Primary Permanent Loan for the Development) from the gross rents received from the Development, into a separate interest bearing trust account defined as the Capital Replacement Reserve. Funds in the Capital Replacement Reserve shall be used only for capital repairs, improvements and replacements to the Development, including fixtures and equipment, which are normally capitalized under generally accepted accounting principles. The non-availability of funds in the Capital Replacement Reserve does not in any manner relieve or lessen Developer's obligation to undertake any and all necessary capital repairs, improvements, or replacements and to continue to maintain the Development in the manner prescribed herein for the Development. Not less than once per year, Developer, at its expense, shall submit to the City Manager an accounting for the Capital Replacement Reserve for the Development. Capital improvements and repairs to, and replacements at the Development shall include only those items with a long useful life, including without limitation the following: carpet and drapery replacement; appliance replacement; exterior painting, including exterior trim; hot water heater replacement; plumbing fixtures replacement, including tubs and showers, toilets, lavatories, sinks, faucets; air conditioning and heating replacement; asphalt repair and replacement, and seal coating; roofing repair and replacement; landscape tree replacement; irrigation pipe and controls replacement; sewer line replacement; water line replacement; gas line replacement; lighting fixture replacement; elevator replacement and upgrade work; miscellaneous motors and blowers; common area furniture replacement; and common area repainting. Pursuant to the procedure for submittal of each Annual Budget for the Development to City Manager by Developer, City Manager will evaluate the cumulative amount on deposit in the Capital Replacement Reserve account and exercise his/her sole, reasonable discretion to determine if existing balance(s) in, proposed deposits to, shortfalls, if any, and/or a cumulative unexpended/unencumbered account balance in such Capital Replacement Reserve account are adequate to provide for necessary capital repairs and improvement for the Development.

Notwithstanding the foregoing portion of this Section 5.7, in the event TCAC prescribes particular amounts to be set aside as a capital replacement reserve, compliance therewith shall be deemed to comply with this Section 5.7.

**5.8 Operating Budget and Operating Reserve.** Within twelve (12) months after commencement of construction of the Development, but in no event later than ninety (90) days prior to the completion of construction of the Development, and not less than annually thereafter on or before November 1 of each year following the issuance of the first certificate of occupancy issued by the City's building official for the Development and continuing each year throughout the Required Covenant Period, Developer shall submit to City on not less than an annual basis an operating budget for the Development ("Operating Budget" or "Annual Budget"), which budget shall be subject to the written approval of City Manager or his or her designee, which approval shall not be unreasonably withheld. The City Manager's discretion in review and approval of each proposed annual Operating Budget shall include, without limitation, authority to review individual categories, line items, and accounts, such as the following: extent, type, and amount for social services at or associated with the Development; existing balance(s) in and proposed deposits to the Capital Replacement Reserve for the Development to evaluate shortfalls and/or cumulative unexpended/unencumbered deposits (provided that required annual deposits thereto are not required to exceed \$250.00/per unit); conformity of any annual increases in the Partnership Related Fees for the Development with only those increases expressly permitted in the definition of "Partnership Related Fees"; reasonableness and conformity to prevailing market rates in Riverside County and rates and fees for goods and services to be provided Developer or any of its parent, affiliated, or subsidiary entities, etc. for the Development.

Developer shall, or shall cause the Property Manager to, set aside an Operating Reserve for the Development in a separate interest bearing trust account a target amount equal to three (3) months of (i) Debt Service on the Primary Construction Loan or the Primary Permanent Loan and (ii) Operating Expenses pursuant to an approved Annual Budget for the Development ("Target Amount"), which shall be funded by Tax Credit equity (or, if a different amount is identified for such purpose the Primary Construction Lender, the Primary Permanent Lender or TCAC, the amount identified by TCAC (which amount shall take precedence in this context) or, if no such amount is identified by TCAC, the amount identified by the Primary Construction Lender or the Primary Permanent Lender). The Operating Reserve shall thereafter be replenished from Annual Project Revenue to maintain the Operating Reserve balance at the Target Amount. The Target Amount shall be retained in the Operating Reserve to cover shortfalls between Annual Project Revenue and actual Operating Expenses, but shall in no event be used to pay for capital items or capital costs properly payable from the Capital Replacement Reserve. Developer shall, not less than once per every twelve (12) months, submit to the City Manager evidence reasonably satisfactory to City of compliance herewith. Interest earned on moneys held in the Operating Reserve shall be retained in the Operating Reserve. The Operating Reserve shall be maintained throughout the Required Covenant Period.

Notwithstanding the foregoing portion of this Section 5.8, in the event TCAC prescribes particular amounts to be set aside as an operating reserve, compliance therewith shall be deemed to comply with that portion of this Section 5.8 which sets forth in the amount of operating reserves (but not the remainder of this Section 5.8).

**5.9 Allocation of Residual Receipts.** Residual Receipts shall be allocable as follows: fifty percent (50%) to City and fifty percent (50%) to Developer. Upon receipt of payments of Residual Receipts by City, such amounts shall be allocated as between the City Initial Note and the

City Subsequent Note based upon the proportion of the amount of the City Initial Loan to the sum of the City Initial Loan and the City Subsequent Loan and the proportion of the amount of the City Subsequent Loan to the sum of the City Initial Loan and the City Subsequent Loan; the allocation by City of such payments of Residual Receipts as received by City is a matter with which Developer need not be concerned. In addition, with respect to those moneys received by City in repayment of moneys loaned using NSP and NSP3 moneys, respectively, the City will allocate payments proportionately as between NSP (\$3,200,000.00) and NSP3 (\$300,000.00); this is also a matter with respect to which Developer need not be concerned.

**5.10 Effect of Violation of the Terms and Provisions of this Agreement After Completion of Construction.** City is deemed the beneficiary of the terms and provisions of this Agreement and of the covenants running with the land, for and in its own right and for the purposes of protecting the interests of the community and other parties, public or private, in whose favor and for whose benefit this Agreement and the covenants running with the land have been provided, without regard to whether City has been, remains or is an owner of any land or interest therein in the Site or in the Project Area of the Redevelopment Plan. City shall have the right, if the Agreement or any covenants in any agreement pursuant to this Agreement, including without limitation the City Developer CC&Rs and the City Disposition Deed, are breached, to exercise all rights and remedies, and to maintain any actions or suits at law or in equity or other proper proceedings to enforce the curing of such breaches to which it or any other beneficiaries of this Agreement and such covenants may be entitled.

## 6. DEVELOPER'S GENERAL REPRESENTATIONS AND WARRANTIES

As a material inducement to City to enter into this Agreement, Developer represents and warrants to City that:

**6.1 Formation, Qualification and Compliance.** Developer (a) is a California limited partnership validly existing and in good standing under the laws of the State of California; (b) has all requisite and the authority to conduct its business and own, purchase, improve and sell its properties. Developer is in compliance in all material respects with all laws applicable to its business and has obtained all approvals, licenses, exemptions and other authorizations from, and has accomplished all filings, registrations and qualifications with any governmental agency that are necessary for the transaction of its business; (c) Developer has and will in the future duly authorize, execute and deliver this Agreement and any and all other agreements and documents required to be executed and delivered by Developer in order to carry out, give effect to, and consummate the transactions contemplated by this Agreement; (d) Developer does not have any material contingent obligations or any material contractual agreements which could materially adversely affect the ability of Developer to carry out its obligations hereunder; (e) There are no material pending or, so far as is known to Developer, threatened, legal proceedings to which Developer is or may be made a party or to which any of its property is or may become subject, which have not been fully disclosed by Developer to City in this Agreement which could materially adversely affect the ability of Developer to carry out its obligations hereunder; (f) Developer has reviewed the Rules and Regulations, the NSP, NSP3, the ARR Guidelines, the ARR program and is familiar with and prepared to comply with all terms thereof; and (g) There is no action or proceeding pending or, to Developer's best knowledge, threatened, looking toward the dissolution or liquidation of Developer and there is no action or proceeding pending or, to Developer's best knowledge, threatened by or against Developer which could affect the validity and enforceability of the terms of this Agreement, or materially and adversely affect the ability of Developer to carry out its obligations hereunder.



Each of the foregoing items (a) to (g), inclusive, shall be deemed to be an ongoing representation and warranty. Developer shall advise each of City in writing if there is any change pertaining to any matters set forth or referenced in the foregoing items (a) to (g), inclusive.

**6.2 Execution and Performance of Project Documents.** Developer has all requisite authority to execute and perform its obligations under the Project Documents. The execution and delivery by Developer of, and the performance by Developer of its obligations under, each Project Document has been authorized by all necessary action and do not and will not violate any provision of, or require any consent or approval not heretofore obtained under, any articles of incorporation, by-laws or other governing document applicable to Developer.

**6.3 Covenant Not to Transfer Except in Conformity.** Excepting for the rental of individual dwelling units to occupants in the regular course of business (which rental activity shall not be limited by this Section 6.3), or the sale of a partnership interest to generate proceeds in consideration of the Tax Credits, Developer shall not sell, lease, or otherwise transfer or convey all or any part of the Site, or any interest therein, unless Developer has first obtained the prior written consent of the City Manager, which consent may be granted or refused in the City Manager's sole and absolute discretion; except City shall upon receipt of written request therefor consent to a sale by Developer of its interest in the Development to RBI or the Developer's nonprofit general partner, after the expiration of the tax credit period. In addition, Developer's limited partner and any successor thereto, may, without the prior consent of City and except as set forth in the senior permitted liens, sell, transfer, assign, pledge, hypothecate, and encumber some or all of its partnership interests in Developer and the same shall not be a violation of this Agreement. Moreover, Developer's limited partner and any successor thereto, shall have the right, without the prior consent of City and except as set for in the senior permitted liens, to remove any or all of Developer's general partners for cause as permitted under Developer's limited partnership agreement and replace any or all removed general partners with a person or entity determined in the limited partner's sole discretion. Any sale, lease, transfer or conveyance without such consent shall, at City's option, be void. A change in ownership of Developer resulting in the individuals executing this Agreement on behalf of Developer retaining less than fifty-one percent (51%) ownership of all general partner interests in Developer shall be deemed to violate this Section 6.3. In connection with the foregoing consent requirement, Developer acknowledges that City relied upon Developer's particular expertise in entering into this Agreement and continues to rely on such expertise to ensure the satisfactory completion of all of the Improvements, and the marketing and rental of the Required Affordable Units to 40% Very Low Income Households, 50% Very Low Income Households and Low Income Households to afford the community a long-term, quality affordable housing resource.

## 7. DEFAULTS, REMEDIES, AND TERMINATION

**7.1 Default Remedies.** Subject to the extensions of time set forth in Section 7.12 of this Agreement, failure by any party to perform any action or covenant required by this Agreement within the time periods provided herein following notice and failure to cure as described hereafter, constitutes a "Default under this Agreement. A party claiming a Default shall give written notice of Default to the other parties specifying the Default. Except as otherwise expressly provided in this Agreement, and without limiting or affecting rights of parties hereto to terminate this Agreement, the claimant shall not institute any proceedings against any other party, and the other parties shall not be in Default if such party within thirty (30) days from receipt of such notice immediately, with due diligence, commences to cure, correct or remedy the specified Default and shall complete such cure, correction or remedy with diligence.

**7.2 Institution of Legal Actions.** In addition to any other rights or remedies and subject to the restrictions otherwise set forth in this Agreement, any party may institute an action at law or equity to seek specific performance of the terms of this Agreement, or to cure, correct or remedy any Default, to recover damages for any Default, or to obtain any other remedy consistent with the purpose of this Agreement; provided, that City shall have no right, in any event, to impose a lien for monetary damages against the Site or portion thereof or on any improvements erected from time-to-time on the Site. Such legal actions must be instituted in the Superior Court of the County, State of California.

**7.3 Termination by Developer.** In the event that as of the time described below (and if no time is described below, the time established therefor in the Schedule of Performance):

(a) by the time set forth therefor in the Schedule of Performance for the City Disposition Conveyance, Developer is not in default under this Agreement and City does not execute the City Disposition Deed and attempt to effect the City Disposition Conveyance to Developer in the manner and condition and by the date provided in this Agreement; or

(b) by the time set forth in the Schedule of Performance for the City Disposition Conveyance, Developer has not achieved the conveyance of the Site to City or City's designee for such purpose; or

(c) on or before the time established therefor in the Schedule of Performance, Developer fails to obtain a preliminary reservation for Tax Credits by TCAC; or

(d) by the time of the City Disposition Conveyance, City does not have unencumbered funds sufficient to defray the City Subsequent Loan Amount; or

(e) in the event of any default of City prior to the City Disposition Conveyance which is not cured within the time set forth in Section 7.1 hereof; and

any such failure is not cured within the applicable time period after written demand by Developer, then this Agreement may, at the option of Developer, be terminated by Notice thereof to City; provided that Developer shall have delivered to City the documents required to be delivered to City pursuant to Section 4.15.8 of this Agreement and further provided that Developer shall have conveyed or caused to be conveyed to City (or a nominee designated by City for such purpose) the Site, unless Developer is otherwise instructed by the City Manager in a writing that mentions this Section 7.3, if moneys were expended hereunder to acquire the Site. From the date of the Notice of termination of this Agreement by Developer to City and thereafter, this Agreement shall be deemed terminated and there shall be no further rights or obligations among the parties. Provided, however, termination of this Agreement shall not preclude Developer from seeking recovery of its actual costs and expenses incurred in connection with the intended development of the Site and the remediation of Hazardous Materials on the Site to relevant attainment levels. Such actual costs and expenses may include, but not be limited to, costs of third party consultants, engineers, vendors, attorney's fees and costs, permit, site development, map processing and other governmental fees and costs that have not been paid through funds supplied by City.

**7.4 Termination by City.** In the event that Developer fails to provide by the Tax Credit Deadline evidence satisfactory to the City Manager that tax credit proceeds will be available for the

Development or if prior to the time established in the Schedule of Performance for the satisfaction of City's Conditions Precedent:

(a) Developer (or any successor in interest) assigns this Agreement or any rights therein or in the Site in violation of this Agreement; or

(b) City receives notification from Developer that there are Materially Adverse Conditions at the Site or that the condition of Area A will delay completion of the Improvements; or

(c) One of more of the City Disposition Conditions Precedent is not satisfied; or

(d) Developer does not notify City in writing of its approval of the environmental condition of the Site as provided under Section 1.6.2 hereof; or

(e) Developer fails to execute one or more of the City Developer CC&Rs, the City Initial Note, the City Initial Deed of Trust, the City Subsequent Note, the City Subsequent Deed of Trust, or the City Disposition Deed; or

(f) Developer is otherwise in default of this Agreement and fails to cure such default within the time set forth in Section 7.1 hereof;

then this Agreement and any rights of Developer or any assignee or transferee with respect to or arising out of the Agreement or the Site (including without limitation all attachments to this Agreement), shall, at the option of City, be terminated by City by Notice thereof to Developer. From the date of the Notice of termination of this Agreement by City to Developer and thereafter this Agreement (including without limitations all attachments hereto) shall be deemed terminated excepting that Developer shall have conveyed or caused to be conveyed to City (or a nominee designated by City for such purpose) the Site, unless Developer is otherwise instructed by the City Manager in writing that mentions this Section 7.4 and there shall be no further rights or obligations among the parties, except that City may pursue any remedies it has hereunder.

**7.5 Acceptance of Service of Process.** In the event that any legal action is commenced against City, service of process on City shall be made by personal service upon the City Manager or in such other manner as may be provided by law. In the event that any legal action is commenced against Developer, service of process on Developer shall be made in such manner as may be provided by law and shall be effective whether served inside or outside of California.

**7.6 Rights and Remedies Are Cumulative.** Except as otherwise expressly stated in this Agreement, the rights and remedies of the parties are cumulative, and the exercise by a 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 or any other default by another party.

**7.7 Inaction Not a Waiver of Default.** Any failures or delays by either party in asserting any of its rights and remedies as to any Default shall not operate as a waiver of any Default or of any such rights or remedies, or deprive either such party of its right to institute and maintain any actions or proceedings which it may deem necessary to protect, assert or enforce any such rights or remedies.

**7.8 Applicable Law.** The laws of the State of California shall govern the interpretation and enforcement of this Agreement.

**7.9 Enforced Delay; Extension of Times of Performance.** In addition to specific provisions of this Agreement, performance by any party hereunder shall not be deemed to be in Default, and all performance and other dates specified in this Agreement shall be extended, where delays or Defaults are due to: war; insurrection; riots; floods; earthquakes; fires; casualties; acts of God; acts of the public enemy; acts or omissions of another party, or acts or failures to act of City or any other public or governmental agency or entity (excepting that acts or failures to act of City shall not excuse performance by City). Notwithstanding anything to the contrary in this Agreement, an extension of time for any such cause shall be for the period of the enforced delay and shall commence to run from the time of the commencement of the cause, if notice by the party claiming such extension is sent to the other party within thirty (30) days of the commencement of the cause. Times of performance under this Agreement may also be extended in writing by the mutual agreement of City and Developer. Notwithstanding any provision of this Agreement to the contrary, the inability to obtain an allocation for tax credits, for any reason, or the lack of funding to complete the Development shall not constitute grounds of enforced delay pursuant to this Section 7.9. This Section 7.9 shall not be deemed applicable to the City Disposition Deed unless expressly incorporated by reference therein.

In addition to the foregoing (and without regard to the preceding portion of this Section 7.9), the City Manager shall have the authority, at his or her discretion, to approve extensions on behalf of City to approve extensions of time not to exceed a cumulative total of one hundred eighty (180) days.

**7.10 [Reserved].**

**7.11 Transfers of Interest in Agreement or of Site.** Except as otherwise set forth in Section 6.3 hereof, Section 7.11, and all subsections of this Section 7.11, shall apply to transfers prior to the City Disposition Conveyance. Any transfers occurring or proposed after the City Disposition Conveyance are subject to the provisions therefor of the City Developer CC&Rs. In the event of conflict between the provisions of this Section 7.11 and the City Disposition Deed (concerning transfers of interest), the City Disposition Conveyance shall control.

**7.11.1 Prohibition.** The qualifications and identity of Developer are of particular concern to City. It is because of those qualifications and identity that City has entered into this Agreement with Developer. For the period commencing upon the date of this Agreement and until the end of the Required Covenant Period, except as otherwise set forth in Section 6.3 hereof, no voluntary or involuntary successor in interest of Developer shall acquire any rights or powers under this Agreement, nor shall Developer make any total or partial sale, transfer, conveyance, assignment, subdivision, refinancing or lease of the whole or any part of the Site or the Development thereon (excepting the rental of Units to Occupants) without prior written approval of City, except as expressly set forth herein.

**7.11.2 Permitted Transfers.** In the event of a proposed assignment by Developer under subparagraphs 7.11.2 through 7.11.3, inclusive, Developer agrees that at least thirty (30) days prior to such assignment it shall give written notice to City including a request for approval of such assignment and satisfactory evidence that the assignee has assumed jointly with Developer the Obligations of this Agreement. In addition, no consent of City shall be required in connection with the transfer of Developer's interest in the Site that occurs by foreclosure or deed in lieu of foreclosure

of any Permitted Senior Lien to respective holder thereof or to their nominees or assignees exclusive of Developer, RBI and Developer's nonprofit general partner. The provisions of this Section 7.11.2 shall be limited by those transfers permitted in Section 6.3.

(a) Any transfers to an entity or entities in which Developer retains a minimum of fifty-one percent (51%) of the ownership or beneficial interest and retains management and control of the transferee entity or entities or relating to the syndication of Tax Credits or after the Tax Credit period, the removal of the Tax Credit investor.

(b) The conveyance or dedication of any portion of the Site to City or other appropriate governmental agency, or the granting of easements or permits to facilitate construction of the Development.

In the event of a proposed assignment by Developer under subparagraphs 7.11.2 through 7.11.3, inclusive, Developer agrees that at least thirty (30) days prior to such assignment it shall give written notice to City including a request for approval of such assignment and satisfactory evidence that the assignee has assumed jointly with Developer the Obligations of this Agreement. In addition, no consent of City shall be required in connection with the transfer of Developer's interest in the Site that occurs by foreclosure or deed in lieu of foreclosure of any Permitted Senior Lien to respective holder thereof or to their nominees or assignees exclusive of Developer and RBI.

**7.11.3 City Consideration of Requested Transfer.** City agrees that it will consider in good faith a request made pursuant to this Section 7.11 after the achievement of occupancy of ninety percent (90%) or more of the Units in conformity with this Agreement following the issuance by City of a Certificate of Completion for the last building to be constructed as part of the Improvements, provided Developer delivers written notice to City requesting such approval and further provided that the City Developer CC&Rs remain in full force and effect. Such notice shall be accompanied by sufficient evidence regarding the proposed assignee's or purchaser's development and/or operational qualifications and experience, its financial commitments and resources, and the financial terms of such assignment (including the consideration proposed to flow to Developer or Related Entity and/or any of the Principals) in sufficient detail to enable City to evaluate the proposed assignee or purchaser pursuant to the criteria set forth in this Section 7.11, and as reasonably determined by City. Notwithstanding the foregoing, the transfer of limited partnership interests to tax credit investors shall not entitle City to receive compensation (in connection with such transfer to tax credit investors). City shall evaluate each proposed transferee or assignee on the basis of its development and/or qualifications and experience in the operation of facilities similar to the Development, and its financial commitments and resources, and may reasonably disapprove any proposed transferee or assignee, during the period for which this Section 7.11 applies, which City reasonably determines does not possess sufficient qualifications. An assignment and assumption agreement in form satisfactory to City's legal counsel shall also be required for all proposed assignments. Developer agrees and acknowledges that in connection with any such assignment approved by City pursuant to this Agreement, Developer shall remain liable for performance pursuant to this Agreement for a period of five (5) years following such assignment; provided that the five-year limitation shall not apply (and the ongoing liability of Developer shall not be thereby limited) in connection with the transfer of limited partnership interests to tax credit investors. Within thirty (30) days after the receipt of Developer's written notice requesting approval of an assignment or transfer pursuant to this Section 7.11, including assignments that do not require City Manager approval, City shall either approve or disapprove such proposed assignment or shall respond in writing by stating what further information, if any, City reasonably requires in order to determine the

request complete and determine whether or not to grant the requested approval. Upon receipt of such a response, Developer shall promptly furnish to City such further information as may be reasonably requested. In addition, City will not unreasonably withhold its approval of a transfer made at the conclusion of the tax credit period to Developer and affiliates upon the removal of the tax credit investor, so long as there are no defaults under this Agreement and the transferee agrees to be bound by all executory provisions of this Agreement.

**7.11.4 Successors and Assigns.** All of the terms, covenants and conditions of this Agreement shall be binding upon Developer and its permitted successors and assigns. Whenever the term “Developer” is used in this Agreement, such term shall include any other permitted successors and assigns as herein provided.

**7.11.5 Assignment by City.** City may assign or transfer any of its rights or obligations under this Agreement with the approval of Developer, which approval shall not be unreasonably withheld; provided, however, that City may assign or transfer any of its interests hereunder to City at any time without the consent of Developer.

**7.12 Non-Liability of Officials and Employees of City.** No member, official, officer or employee of City shall be personally liable to Developer, or any successor in interest, in the event of any Default or breach by City or for any amount which may become due to Developer or its successors, or on any obligations under the terms of this Agreement.

**7.13 Relationship Between City and Developer.** It is hereby acknowledged that the relationship between City and Developer is not that of a partnership or joint venture and that City and Developer shall not be deemed or construed for any purpose to be the agent of the other. Accordingly, except as expressly provided in this Agreement, including the Attachments hereto, City shall have not have rights, powers, duties or obligations with respect to the development, operation, maintenance or management of the Development.

**7.14 City Approvals and Actions.** Whenever a reference is made herein to an action or approval to be undertaken by City, the City Manager is authorized to act on behalf of City unless specifically provided otherwise or the law otherwise requires. When a reference is made herein to an action or approval to be undertaken by City the City Manager is authorized to act on behalf of City unless specifically provided otherwise or the law otherwise requires.

**7.15 Real Estate Brokers.** City has not engaged any finder or broker in connection with this transaction. Developer has engaged that finder set forth in the Acquisition Agreement on the terms set forth thereon, and no other broker or finder. Any amounts to such broker will be paid solely by the Original Site Owner. Except for the foregoing, Developer represents and warrants to City that no broker or finder is entitled to any commission or finder’s fee in connection with this transaction, and each agrees to defend and hold harmless the other from any claim to any such commission or fee resulting from any action on its part.

**7.16 [Reserved].**

**7.17 Non-recourse Liability of Developer.** Notwithstanding anything to the contrary in this Agreement or any other Project Document, neither Developer nor any of its partners shall be personally liable for any default, loss, claim, damage, expense or liability to any person and the sole remedy against Developer hereunder shall be limited to its interest in the Development.

## 8. FEDERAL PROGRAM LIMITATIONS; COMPLIANCE WITH LAWS

**8.1 Federal Funds.** Developer shall carry out the Construction of the Housing Units and the operation of the Rental Project during the HOME Compliance Period in conformity with all requirements of the HOME Program (including the 2013 Final Rule) to the extent applicable to the Rental Project and Developer desires to change the affordable housing or maintenance requirements for Area A from the specific requirements set forth in this Agreement in order to comply with a subsequently enacted amendment to the HOME Program, Developer shall notify City in writing of such proposed change and the amendment related thereto at least thirty (30) days prior to implementing such change. In the event City disapproves of such change and Developer's interpretation of the amendment related thereto, City shall notify Developer of its disapproval in writing and the parties shall seek clarification from the appropriate HUD Field Office; only if HUD concurs with Developer's interpretation of the HOME Program shall Developer be permitted to implement the proposed change. In addition, as project funding will include NSP and NSP3 moneys, Developer shall comply with the provisions of this Section 8, including all sections thereunder, during the Required Covenant Period.

**8.2 Funding with Federal Moneys.** Developer shall comply with all applicable Federal Program Limitations, including without limitation, the following federal provisions.

**8.2.1 Property Standards.** Developer agrees to ensure that construction of the Rental Project and operation of the Housing Units during the Required Covenant Period, both the Senior Citizen Housing Units and all other Units and all ancillary and appurtenant improvements, will comply with all provisions set forth in the HOME Regulations (notwithstanding that the Required Covenant Period extends beyond the HOME Compliance Period), including 24 CFR §92.251, including the following requirements:

(a) State and Local Requirements. The Rental Project and all Housing Units and common areas at Area A shall meet all applicable State and local codes, ordinances, and zoning requirements, including all applicable requirements set forth in the City Code and all applicable State and local residential and building codes. The Rental Project and all Housing Units and common areas at Area A must meet all such applicable requirements upon Rental Project completion.

(b) HUD Requirements. The Rental Project and all Units and common areas at Area A shall also meet the requirements described in paragraphs (i) through (iv) of this Section 8.2.1:

(i) Accessibility. The Rental Project and all Units and common areas at Area A shall meet the accessibility requirements of 24 CFR part 8, which implements Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794), and Titles II and III of the Americans with Disabilities Act (42 U.S.C. 12131-12189) implemented at 28 CFR parts 35 and 36, as applicable. Covered multifamily dwellings, as defined at 24 CFR 100.201, must also meet the design and construction requirements at 24 CFR 100.205, which implements the Fair Housing Act (42 U.S.C. 3601-3619).

(ii) Disaster Mitigation. Where relevant, the Rental Project must be constructed to mitigate the impact of potential disasters (e.g., earthquakes, hurricanes, flooding,

and wildfires), in accordance with State and local codes, ordinances, or other State and local requirements, or such other requirements as HUD may establish.

(iii) Written Cost Estimates, Construction Contracts and Construction Documents. The construction contract(s) and Development Plans must describe the construction work to be undertaken in adequate detail so that City can conduct inspections in the manner described in the HOME Regulations. The Developer shall also provide written cost estimates for construction for City's review; City shall determine whether such cost estimates are reasonable.

(iv) Construction Progress Inspections. Developer shall permit and facilitate progress and final inspections of construction by City to ensure that work is done in accordance with the applicable codes, the construction contract(s), and Development Plans.

(c) Ongoing Property Condition Standards: Rental Housing. City has established property standards for rental housing ("City's Property Standards"), which standards include all inspectable items and inspectable areas specified by HUD based on the HUD physical inspection procedures (Uniform Physical Condition Standards (UPCS)) prescribed by HUD pursuant to 24 CFR 5.705. Developer shall ensure that the Rental Project, including without limitation all Units, and all common areas and appurtenant improvements at Area A, shall comply with the City's Property Standards throughout the Required Covenant. In accordance with the City's Property Standards, Developer shall maintain the Rental Project, including all Units and common areas at Area A: (i) as decent, safe, and sanitary housing in good repair, (ii) free of all health and safety defects and life-threatening deficiencies, and (iii) in compliance with the lead-based paint requirements in 24 CFR Part 35.

(d) Inspections; Corrective and Remedial Actions. In the manner described in the HOME Regulations, City shall undertake ongoing inspections of the Rental Project in accordance with §92.504(d). City has developed written inspection procedures and procedures for ensuring that timely corrective and remedial actions are taken by the Developer to address identified deficiencies.

**8.2.2 Labor Standards.** In addition to compliance with Section 8.2.1, to the extent required by applicable federal and/or state laws, the construction contract for the Rental Project, as well as any other contract for the construction work, shall contain a provision requiring that not less than the wages prevailing in the locality, as predetermined by the Secretary of the United States Department of Labor pursuant to the Davis-Bacon Act (40 U.S.C. §276a–276a-5), will be paid to all laborers and mechanics employed in the construction work, and such contract(s) shall also be subject to the overtime provisions, as applicable, of the Contract Work Hours and Safety Standards Act (40 U.S.C. §3701, *et seq.*). Participating contractors, subcontractors, and other participants must comply with regulations issued under these Acts and with other federal laws and regulations pertaining to labor standards and HUD Handbook 1344.1 (Federal Labor Standards Compliance in Housing and Community Development Programs), as applicable. Developer shall supply to City certification, in form and substance satisfactory to HUD and the City Manager, as to compliance with the applicable provisions of this Section before receiving any disbursement of federal funds for the construction work. If required by applicable federal and/or state law, Developer shall require the general contractor to implement and enforce all applicable prevailing wage and labor laws, including California Labor Code Section 1720, Davis-Bacon, and other applicable labor laws and regulations



including, e.g., the requirement that all workers sign in and sign out of the job site (to the extent such requirement is applicable by law).

**8.2.3 Handicapped Accessibility.** Developer shall comply with (a) Section 504 of the Rehabilitation Act of 1973, and implementing regulations at 24 CFR 8C governing accessibility of projects assisted with federal funds; and (b) the Americans with Disabilities Act of 1990, and implementing regulations at 28 CFR 35–36 in order to provide handicapped accessibility to the extent readily achievable; and (c) the Uniform Federal Accessibility Standards (UFAS) pursuant to the Architectural Barriers Act of 1968, 42 U.S.C. 4151-4157, as amended.

**8.2.4 Use of Debarred, Suspended, or Ineligible Participants.** Developer shall comply (and cause the general contractor to comply) with the provisions of 24 CFR 24 relating to the employment, engagement of services, awarding of contracts, or funding of any contractor or subcontractor during any period of debarment, suspension, or placement in ineligibility status. The contractor, each subcontractor, and any other contractors or subcontractors or agents of Developer (subject to compliance with 24 CFR part 135) shall have provided to City the certification in appendix B of 24 CFR Part 24 that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation from this Project, and City shall be responsible for determining whether each contractor has been debarred.

**8.2.5 Maintenance of Drug-Free Workplace.** Developer shall certify that Developer will provide a drug-free workplace in the manner described by 2 CFR 2429.

**8.2.6 Lead-Based Paint.** City, as a recipient of federal funds, has modified and conformed all of its federally funded housing programs to the Lead-Based Paint Poisoning Prevention Act, Title X of the 1992 Housing and Community Development Act, 42 U.S.C. §4800, *et seq.*, specifically §§4821-4846, and the implementing regulations thereto. In this regard, Developer shall comply with all applicable federal requirements relating to lead-based paint.

**8.2.7 Affirmative Marketing.** Developer shall adopt and implement affirmative marketing procedures and requirements at Area A to the extent and in the manner provided under Section 92.351 of the HOME Regulations.

**8.2.8 Nondiscrimination, Equal Opportunity and Fair Housing.** Developer shall carry out the Rental Project and perform its obligations under this Agreement in compliance with all of the federal laws and regulations regarding nondiscrimination equal opportunity and fair housing described in 24 CFR 92.350 and 24 CFR 5.105.

**8.2.9 Energy Conservation Standards.** As applicable to the Rental Project, Developer shall cause Area A and the Rental Project to meet the cost-effective energy conservation and effectiveness standards in 24 CFR 965 and 24 CFR 990.185.

**8.2.10 Displacement and Relocation.** Developer acknowledges and agrees that, pursuant to Federal Program Limitations and consistent with the other goals and objectives of that part, City must ensure that it has taken all reasonable steps to minimize the displacement of persons as a result of the construction work. In the event displacement were to occur, Developer shall cause all relocation of tenants and occupants at the Rental Project to be conducted in accordance with the relocation laws and all Federal Program Limitations. Developer further agrees to cooperate with City in meeting the requirements of the Federal Program Limitations and shall take all actions and

measures reasonably required by the City Manager (or his or her duly authorized representative) in connection therewith.

**8.2.11 Requests for Disbursements of Funds.** Developer may not request disbursements of funds hereunder until the funds are needed for payment of eligible costs of the Rental Project. The amount of each request shall be limited to the amount needed for the acquisition of Area A and the construction as set forth in the Final Budget.

**8.2.12 Eligible Costs.** If HOME Moneys are made available, Developer shall only use HOME Program funds to pay costs defined as “eligible costs” under Federal Program Limitations.

**8.2.13 Records and Reports.** Developer shall maintain and from time to time submit to City such records, reports and information as the City Manager may reasonably require in order to permit City to meet the recordkeeping and reporting requirements required of them pursuant to 24 CFR 92.508. Without limiting the following, Developer shall maintain records and submit annual reports as required by this Agreement.

**8.2.14 Conflict of Interest.** Developer shall comply with and be bound by the conflict of interest provisions set forth at 24 CFR 570.611.

**8.3 Compliance with Laws.** Developer shall comply with all applicable federal, state and local statutes, ordinances, regulations and laws, (including the Governmental Requirements) with respect to Developer’s Area A and the development of the Improvements and the operation and management of the Rental Project at Area A by Developer. Developer shall carry out the design, construction and completion of the Improvements, and operation and management of the Rental Project, in conformity with all applicable laws, including all applicable federal, state, and local labor standards, City zoning and development standards, building, plumbing, mechanical and electrical codes, and all other provisions of the Municipal Code, Government Code Section 4450, *et seq.*, Government Code Section 11135, *et seq.*, and the Unruh Act, Civil Code Section 51, *et seq.*

**8.3.1 Section 3 Compliance.** Developer agrees to comply with and to cause the contractor, each subcontractor, and any other contractors and/or subcontractors or agents of Developer to comply with the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. §1701u, and the implementing regulations, in connection with the construction of the Rental Project to the extent applicable. In such event, Developer shall submit to City each construction contract with appropriate provisions providing for the construction of the Rental Project in conformance with the terms of this Agreement, including a Section 3 Clause.

9. [RESERVED]

10. MISCELLANEOUS

**10.1 Obligations Unconditional and Independent.** Notwithstanding the existence at any time of any obligation or liability of City to Developer, or any other claim by Developer against City, in connection with the Site or otherwise, Developer hereby waives any right it might otherwise have (a) to offset any such obligation, liability or claim against Developer’s obligations under this Agreement (including without limitation the attachments hereto), or (b) to claim that the existence of

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any such outstanding obligation, liability or claim excuses the nonperformance by Developer of any of its obligations under the Project Documents.

**10.2 Notices.** All notices, demands, approvals and other communications provided for in the Project Documents shall be in writing and be delivered to the appropriate party at its address as follows:

If to Developer: RB Boulder Ridge Limited Partnership  
27700 Kalmia Avenue  
Rancho Belago, CA 92128  
Telephone: (951) 686-6600  
Attn: James M. Jernigan

With a copy to: Goldfarb & Lipman LLP  
1300 Clay Street, 11th Floor  
Oakland, CA 94612  
Telephone: (510) 836-6336  
Telecopier: (510) 836-1035  
Attn: Robert C. Mills, Esq.

If to City: City of Moreno Valley  
14177 Frederick Street  
Moreno Valley, CA 92552-0805  
Attn: City Manager

with copy to: City Clerk  
City of Moreno Valley  
14177 Frederick Street  
Moreno Valley, California 92552-0805

Addresses for notice may be changed from time to time by written notice to all other parties. All communications shall be effective when actually received; provided, however, that nonreceipt of any communication as the result of a change of address of which the sending party was not notified or as the result of a refusal to accept delivery shall be deemed receipt of such communication.

**10.3 Survival of Representations and Warranties.** All representations and warranties in the Project Documents shall survive the City Disposition Conveyance and the rental of the Required Affordable Units and have been or will be relied on by City notwithstanding any investigation made by City.

**10.4 No Third Parties Benefited.** This Agreement is made for the purpose of setting forth rights and obligations of Developer and City, and no other person (except for City) shall have any rights hereunder or by reason hereof.

**10.5 Binding Effect; Assignment of Obligations.** This Agreement shall bind, and shall inure to the benefit of, City, Developer and City and their respective successors and assigns. Developer shall not assign any of its rights or obligations under any Project Document without the prior written consent of the City Manager, which consent may be withheld in the City Manager’s sole and absolute discretion; provided that the City Manager shall reasonably consider an assignment to

an entity or entities owned or under majority control by Developer or the Principals where Developer pays City's and City's costs to review, estimate, process and document such assignment and no other provisions of this Agreement are amended thereby. Any such assignment without such consent shall, at City's option, be void. In connection with the foregoing consent requirement, Developer acknowledges that City relied upon Developer's particular expertise in entering this Agreement and continues to rely on such expertise to ensure the satisfactory completion of the Improvements and the use of the Required Affordable Units in conformity with this Agreement.

**10.6 [Reserved].**

**10.7 Counterparts.** Any Project Document may be executed in three (3) counterparts, all of which, taken together, shall be deemed to be one and the same document.

**10.8 Prior Agreements; Amendments; Consents.** This Agreement (together with the other Project Documents) contains the entire agreement between City and Developer with respect to the Site, and all prior negotiations, understandings and agreements with respect to such matters are superseded by this Agreement and such other Project Documents. No modification of any Project Document (including waivers of rights and conditions) shall be effective unless in writing and signed by the party or parties against whom enforcement of such modification is sought, and then only in the specific instance and for the specific purpose given. This Agreement is executed in three (3) duplicate originals, each of which is deemed to be an original. This Agreement includes pages 1 through 81 and Attachments 1 through 19, which constitutes the entire understanding and agreement of the parties.

This Agreement integrates all of the terms and conditions mentioned herein or incidental hereto, and supersedes all negotiations or previous agreements among the parties or their predecessors in interest with respect to all or any part of the subject matter hereof.

All waivers of the provisions of this Agreement must be in writing by the appropriate authorities of City and Developer, and all amendments hereto must be in writing by the appropriate authorities of City and Developer. Whenever this Agreement provides for action by City, the City Manager may act on behalf of City unless the context or applicable law requires otherwise.

**10.9 Governing Law.** All of the Project Documents shall be governed by, and construed and enforced in accordance with, the laws of the State of California. Developer irrevocably and unconditionally submits to the jurisdiction of the Superior Court of the State of California for the County in connection with any legal action or proceeding arising out of or relating to this Agreement or the other Project Documents. Assuming proper service of process, Developer also waives any objection regarding personal or in rem jurisdiction or venue.

**10.10 Severability of Provisions.** No provision of any Project Document that is held to be unenforceable or invalid shall affect the remaining provisions, and to this end all provisions of the Project Documents are hereby declared to be severable.

**10.11 Headings.** Article and section headings are included in the Project Documents for convenience of reference only and shall not be used in construing the Project Documents.

**10.12 Conflicts.** In the event of any conflict between the provisions of this Agreement and those of any other Project Document, this Agreement shall prevail; provided however that, with

respect to any matter addressed in both such documents, the fact that one document provides for greater, lesser or different rights or obligations than the other shall not be deemed a conflict unless the applicable provisions are inconsistent and could not be simultaneously enforced or performed.

**10.13 Time of the Essence.** Time is of the essence of all of the Project Documents.

**10.14 Conflict of Interest.** No member, official or employee of City shall have any direct or indirect interest in this Agreement, nor participate in any decision relating to the Agreement which is prohibited by law.

**10.15 Warranty Against Payment of Consideration.** Developer warrants that it has not paid or given, and will not pay or give, any third person any money or other consideration for obtaining this Agreement.

**IN WITNESS WHEREOF**, the parties hereto have caused this Agreement to be executed on the dates hereinafter respectively set forth.

**DEVELOPER:**

**RB BOULDER RIDGE LIMITED PARTNERSHIP,**  
a California limited partnership

By: Rancho Belago Developers, Inc.,  
a California corporation  
its General Partner

By: \_\_\_\_\_  
James M. Jernigan, President

**CITY:**

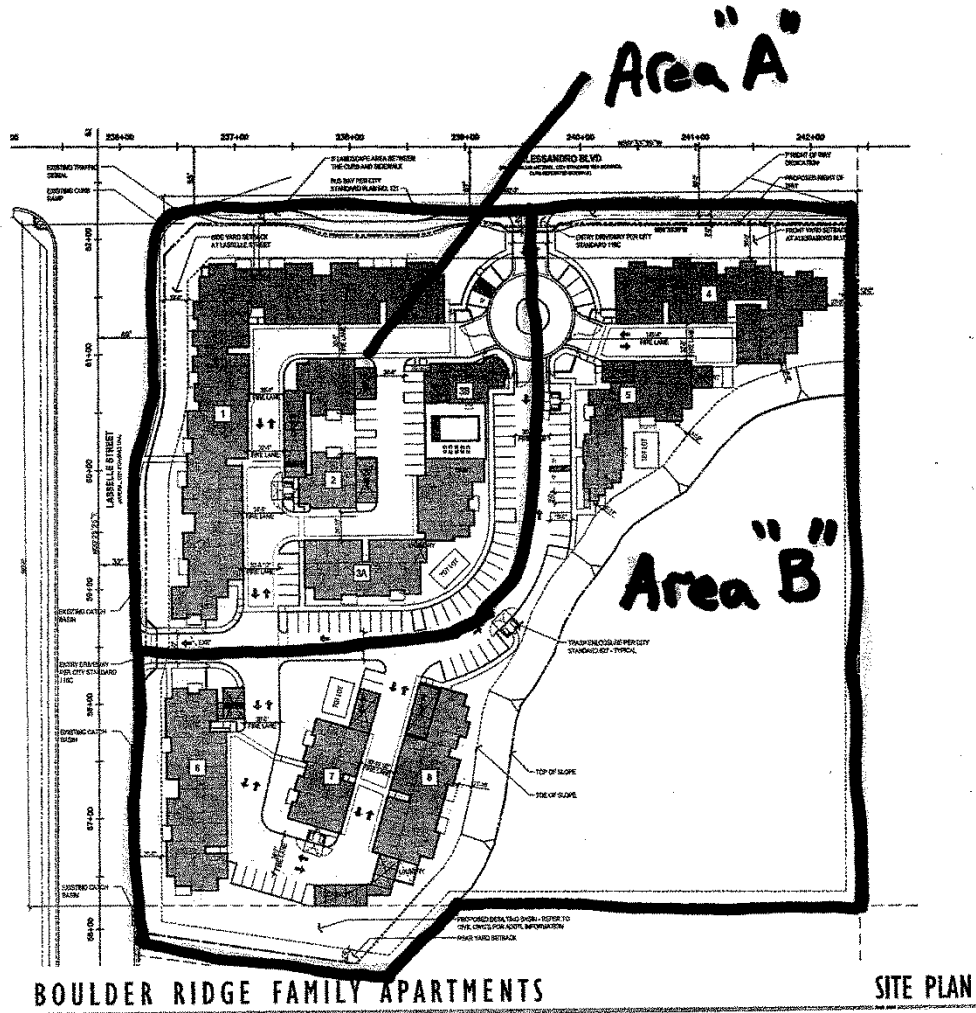
**CITY OF MORENO VALLEY**, a municipal corporation

By: \_\_\_\_\_  
Thomas DeSantis,  
Assistant City Manager

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ATTACHMENT NO. 1

SITE MAP



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Attachment No. 1  
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**ATTACHMENT NO. 2**  
**LEGAL DESCRIPTION OF THE SITE**

The land is situated in the City of Moreno Valley, County of Riverside, State of California, and is described as follows:

LOT 4 IN BLOCK 120, MAP NO. 1 BEAR VALLEY AND ALESSANDRO DEVELOPMENT CO., IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 11, PAGE 10, OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID SAN BERNARDINO COUNTY, CALIFORNIA, TOGETHER THE SOUTH HALF OF ALESSANDRO BOULEVARD AND THE EAST HALF OF LASSELLE STREET, WITHIN SAID BLOCK, LYING WESTERLY OF THE EASTERLY LINE OF SAID LOT, PROLONGED NORTHERLY AND NORTHERLY OF THE SOUTHERLY LINE OF SAID LOT, PROLONGED WESTERLY.

APN: 486-280-044-6



**ATTACHMENT NO. 3**  
**SCHEDULE OF PERFORMANCE**

For the purposes of this Schedule of Performance, the “Date of Agreement” is March 15, 2016. The City Manager may extend by not more than one hundred eighty (180) days, as all such extensions are aggregated, the time under this Schedule of Performance by which any obligation of Developer shall be performed.

- |  |   |
|--|---|
| 1. <u>Escrow Opens for City Acquisition Conveyance.</u>  | On or before March 17, 2016.  |
| 2. <u>City Acquires Site.</u>  | On or before March 31, 2016.  |
| 3. <u>TCAC Approval.</u> Developer shall have obtained allocation by TCAC of a preliminary reservation for tax credits for the Development.  | Not later than March 31, 2019.  |
| 4. <u>Satisfaction of City Disposition Conditions Precedent.</u> Developer shall satisfy the City Disposition Conditions Precedent.  | Within 180 days of obtaining an allocation from TCAC of a preliminary reservation of tax credits for the Development. |
| 5. <u>Recording of Documents.</u> The City Disposition Deed is recorded; in addition, each and every document required to be executed and delivered in connection with the City Disposition Conveyance and the City Initial Loan shall have been delivered and each and every document required to be recorded shall have been recorded, including without limitation the City Developer CC&Rs). | Within 180 days of obtaining an allocation from TCAC of a preliminary reservation of tax credits for the Development. |
| 6. <u>Commencement of Construction.</u> Developer shall have commenced construction of the Improvements.   | Within 180 days of obtaining an allocation from TCAC of a preliminary reservation of tax credits for the Development. |
| 7. <u>Completion of Construction.</u> Developer shall complete construction of the Improvements.   | Within eighteen (18) months after the commencement of construction of the Improvements.                               |
| 8. <u>Rental Units Occupied.</u> Developer causes the Required Affordable Units to be occupied using rents prescribed by and in conformity with the Agreement.   | Within one hundred eighty (180) days after completion of construction.  |

ATTACHMENT NO. 4

CERTIFICATE OF CONTINUING PROGRAM COMPLIANCE

TO: City of Moreno Valley
14177 Frederick Street
Moreno Valley, California 92552-0805
Attention: City Manager

The undersigned, \_\_\_\_\_, being duly authorized to execute this Certificate of Continuing Program Compliance (this "Certificate") on behalf of RB Boulder Ridge Limited Partnership, a California limited partnership (the "Developer"), hereby represents and warrants that:

1. He has read and is thoroughly familiar with the provisions of the Disposition and Development/Affordable Housing Agreement (the "DDA") by and between the City of Moreno Valley (the "City") and the Developer dated as of March 15, 2016, including without limitation the City Developer CC&Rs, the City Disposition Deed, and other attachments thereto. Capitalized terms used herein shall have the same meaning as that set forth in the DDA; and

2. As of the date of this Certificate, the following number of completed residential units at the Site: (i) are currently occupied by Extremely Low Income Households at Affordable Rent; (ii) are currently occupied by 40% Very Low Income Households or 50% Very Low Income Households at Affordable Rent; (iii) are currently occupied by Lower Income Households at Affordable Rent; (iv) are currently occupied by a Moderate Income Household at Affordable Rent; (v) are currently vacant and being held available for occupancy by an Extremely Low Income Household at Affordable Rent; (vi) are currently vacant and being held available for occupancy by a Very Low Income Household and have been so held continuously since the date a Very Low Income Household vacated such unit; or (vii) are currently vacant and being held available for occupancy by a Lower Income Household and have been so held continuously since the date a Lower Income Household vacated such unit. Developer shall indicate with the initials "SC" each Unit that is a Senior Citizen Unit.

Occupied at an Affordable Rent by:

- i. Extremely Low Income Households (30%) \_\_\_ # of Units, Nos.: \_\_\_\_\_
ii. 40% Very Low Income Households (40%) \_\_\_ # of Units, Nos.: \_\_\_\_\_
iii. 50% Very Low Income Households (50%) \_\_\_ # of Units, Nos.: \_\_\_\_\_
iv. Low Income Households (60%) \_\_\_ # of Units, Nos.: \_\_\_\_\_

Vacant:

a. Held for occupancy by:

- i. Extremely Low Income Households (30%) \_\_\_ # of Units, Nos.: \_\_\_\_\_
ii. 40% Very Low Income Households (40%) \_\_\_ # of Units, Nos.: \_\_\_\_\_
iii. 50% Very Low Income Households (50%) \_\_\_ # of Units, Nos.: \_\_\_\_\_
iv. Low Income Households (60%) \_\_\_ # of Units, Nos.: \_\_\_\_\_

b. Last occupied by:

- i. Extremely Low Income Households (30%) \_\_\_ # of Units, Nos.: \_\_\_\_\_
- ii. 40% Very Low Income Households (40%) \_\_\_ # of Units, Nos.: \_\_\_\_\_
- iii. 50% Very Low Income Households (50%) \_\_\_ # of Units, Nos.: \_\_\_\_\_
- iv. Low Income Households (60%) \_\_\_ # of Units, Nos.: \_\_\_\_\_
- iv. Low Income Households (60%) \_\_\_\_\_ # of Units, Nos.: \_\_\_\_\_

3. At no time since the date of filing of the last Certification of Continuing Program Compliance have less than one hundred percent (100%) of the Required Affordable Units as completed units in the Rental Project been occupied by, or been last occupied, or have been available for occupancy by Extremely Low Income Households, 40% Very Low Income Households, 50% Very Low Income Households, and/or Lower Income Households at an Affordable Rent. At no time since filing of the last certification of Continuing Program Compliance has any Unit heretofore designated as a Senior Citizen Unit been occupied by a household that is not a senior citizen household.

4. Developer is not in default under the terms of the Agreement, including without limitation the attachments thereto (such as the City Disposition Deed, and the City Developer CC&Rs).

**RB BOULDER RIDGE LIMITED PARTNERSHIP,**  
a California limited partnership

By: Rancho Belago Developers, Inc.,  
a California corporation  
its Managing General Partner

By: \_\_\_\_\_  
Name: James M. Jernigan  
Title: President

**(DEVELOPER)**

**ATTACHMENT NO. 5  
NOTICE OF AFFORDABILITY RESTRICTIONS**

Recording Requested By:  
  
When Recorded Return To and  
Mail Tax Statements To:  
  
City of Moreno Valley  
14177 Frederick Street  
Moreno Valley, California 92552-  
0805  
Attention: City Manager

[Empty space for recording details]

[Space above for recorder.]  
This document is exempt from the payment of a recording  
fee pursuant to Government Code Section 27383.

**NOTICE OF AFFORDABILITY RESTRICTIONS ON  
TRANSFER OF PROPERTY**

This NOTICE OF AFFORDABILITY RESTRICTIONS ON TRANSFER OF PROPERTY (or “Notice of Affordability Restrictions”) is executed as of \_\_\_\_\_, 201\_ and affects that certain property described in Exhibit “A” hereto (“Area A”). The City of Moreno Valley (“City”) and RB Boulder Ridge Limited Partnership (“Developer”) have previously entered into that certain Disposition and Development/Affordable Housing Agreement dated as of March 15, 2016 (the “DDA”).

1. The DDA provides for affordability restrictions and restrictions on the transfer of Area A, as more particularly set forth in the DDA. A copy of the DDA is on file with City as a public record and is deemed incorporated herein. Reference is made to the DDA with regard to the complete text of the provisions of

such agreement which provides for affordability restrictions and restrictions on the transfer of Area A.

2. The DDA provides for City to convey Area A to Developer and for Developer to (a) construct 72 rental dwelling units at Area A and (b) rent a specified number of such dwelling units to households of limited income, paying an affordable rent; such restrictions are set forth at greater length in a document entitled the “Regulatory Agreement,” substantially in the form prescribed by the DDA, which has been entered into by and between the City and Developer, and which is expected to be recorded substantially concurrently herewith among the official land records of the County of Riverside. The City Regulatory Agreement and the DDA are deemed to be incorporated herein by reference.

2.1 Article II, Section 1 of the City Regulatory Agreement provides as follows; where the terms “Declaration” and “CC&Rs” are used in the quoted language below, such terms refer to the City Regulatory Agreement:

“Uses. Developer shall develop the Approved Housing Project on Area A in conformity with the DDA. Thereafter, Area A shall be operated as an Affordable Housing Project and devoted only to the uses specified in the DDA and the City Disposition Deed for the periods of time specified herein. All uses conducted on Area A, including, without limitation, all activities undertaken by Developer pursuant to the DDA, shall conform to all applicable provisions of the City Code and the City Approvals.

Area A shall be used, maintained and operated in accordance with the DDA, the City Disposition Deed, and this Regulatory Agreement for the Required Covenant Period. None of the units in the Rental Project shall at any time be utilized on a transient basis nor shall the Rental Project or any portion thereof ever be used as a hotel, motel, dormitory, fraternity or sorority house, rooming house, hospital, nursing home, sanitarium, rest home or trailer court or park. No part of Area A, from the date Developer acquired Area A, has been or will at any time be owned or used as a cooperative housing corporation or a community apartment project or a stock cooperative.

2.2 Article II, Section 2 of the City Regulatory Agreement provides as follows:

“Affordable Housing.

Number of Units. Throughout the Required Covenant Period, the Required Affordable Units shall be rented to households at the following income levels: (i) for one (1) one-bedroom Unit, thirty percent (30%) of Median Income; (ii) for one (1) one-bedroom Unit, forty percent (40%) of Median Income; (iii) for four (4) one-bedroom Units, fifty percent (50%) of Median Income; (iv) for two (2) one-bedroom Units, sixty percent (60%) of Median Income; (v) for four (4) two-bedroom Units, thirty percent (30%) of Median Income; (vi) for four (4) two-bedroom Units, forty percent (40%) of Median income; (vii) for twenty (20) two-bedroom Units, fifty percent (50%) of Median Income; (viii) for eleven (11) two-bedroom Units, sixty percent (60%) of Median Income; (ix) for three (3) three-bedroom Units, thirty percent (30%) of Median Income; (x) for two (2) three-bedroom Units, forty percent (40%) of Median Income; (xi) for eleven (11) three-bedroom Units, fifty percent (50%) of Median Income; and (xii) for eight (8) three-bedroom Units, sixty percent (60%) of Median Income; provided, however, that Developer may adjust the configuration of the bedroom sizes of the Units in the Senior Citizen Component, slightly, to better accommodate Senior Citizen Households with the consent of the City, which consent shall not be unreasonably withheld. All Required Affordable Units shall be rented at Affordable Rent. For this purpose, a tenant who qualifies as an Extremely Low Income Household at the time he or she first occupies an Affordable Unit shall be deemed to continue to be so qualified until such time as a recertification of such individual’s or family’s income in accordance with Section 3 below demonstrates that such individual or family no longer qualifies as an Extremely Low Income Household. Moreover, a unit

previously occupied by an Extremely Low Income Household, and then vacated shall be considered occupied by such Extremely Low Income Household until reoccupied, other than for a temporary period, at which time the character of the unit shall be redetermined; a similar protocol shall apply with respect to 40% Very Low Income Units, 50% Very Low Income Units and Lower Income Units. In no event shall such temporary period exceed thirty-one (31) days.

At such time as a tenant ceases to qualify as an Extremely Low Income Household, the unit occupied by such tenant shall cease to be an Extremely Low Income Unit. Developer shall replace each such Extremely Low Income Unit by designating the next available unit and any necessary units thereafter as an Extremely Low Income Unit. For purposes of this Agreement, such designated unit will be considered an Extremely Low Income Unit if it is held vacant and available for occupancy by an Extremely Low Income Household, and, upon occupancy, the income eligibility of the tenant as an Extremely Low Income Household is verified and the unit is rented at Affordable Rent. A similar protocol shall apply with respect to 40% Very Low Income Units, 50% Very Low Income Units and Lower Income Units, respectively.

In the event a household's income initially complies with the corresponding income restriction for an Extremely Low Income Household but the income of such household increases, such increase shall not be deemed to result in a violation of the restrictions of this Regulatory Agreement concerning limitations upon income of occupants, provided that the occupancy by such household is for a reasonable time of not to exceed one year (measured from the time the income of the household ceases to qualify at the designated affordability level). Developer shall include in its rental agreements provisions which implement this

requirement and limitation, and Developer shall expressly inform prospective renters as to this limitation prior to the commencement of a tenancy.

**Duration of Affordability Requirements.** The Required Affordable Units shall be available to and occupied by Extremely Low Income Households and, to the extent provided under Prescribed Income Levels, 40% Very Low Income Households, 50% Very Low Income Households and Lower Income Households, at Affordable Rent throughout the Required Covenant Period. All tenants residing in any Unit for which rents are limited by virtue of this Regulatory Agreement or pursuant to other regulation during the last two (2) years of the Required Covenant Period shall be given notice by Developer at least once every six (6) months prior to the expiration date of this requirement, that the rent payable on such Unit may be raised to a market rate rent at the end of the Required Covenant Period.

*Selection of Tenants.* As specified hereinbelow, Developer shall demonstrate to City that the proposed tenants of each of the Required Affordable Units constitutes an Extremely Low Income Household or, to the extent provided herein, a 40% Very Low Income Household, 50% Very Low Income Household or Lower Income Household.

Developer shall restrict occupancy of all of the Units in the Senior Housing Component as Senior Citizen Units occupied by “Senior Citizens” and “Qualified Permanent Residents” (as those terms are or may be defined in California Civil Code Section 51.3). California Civil Code Section 51.3 presently provides as follows: At least one person in residence in each dwelling unit must be a Senior Citizen, and other residents in the same dwelling unit who are not Senior Citizens must be Qualified Permanent Residents. Temporary guests of a Senior Citizen or Qualified Permanent Resident shall be allowed for a period of not more than sixty (60) days in any twelve (12) month



period. Upon the death, dissolution of marriage, hospitalization or other prolonged absence of the Senior Citizen in a dwelling unit, any Qualified Permanent Resident who has continuously resided in the dwelling unit with such Senior Citizen shall be permitted to continue as a resident of that dwelling unit. “Permitted Health Care Residents” (as that term is or may be defined in California Civil Code Section 51.3) shall be permitted to occupy any dwelling unit during any period that such person is actually providing live in, long term or hospice health care to a Senior Citizen tenant or Qualified Permanent Resident tenant for compensation.

Prior to the rental or lease of an Required Affordable Unit to a tenant, and as set forth in this Section 2 of Article II of this Declaration, Developer shall require the tenant to execute a written lease and to complete an Income Verification certifying that the tenant(s) occupying the Required Affordable Unit is/are an Extremely Low Income Household or, to the extent provided herein, a 40% Very Low Income Unit, 50% Very Low Income Unit or a Lower Income Household and meet(s) the eligibility requirements established for the Required Affordable Unit. Developer shall verify the income of the tenant(s).

Developer shall accept as tenants on the same basis as all other prospective tenants, persons who are recipients of federal certificates for rent subsidies pursuant to the existing program under Section 8 of the United States Housing Act of 1937, or its successor. Developer shall not apply selection criteria to Section 8 certificate holders which are more burdensome than criteria applied to any other prospective tenants.

*Determination of Affordable Rent for the Affordable Units.* The Affordable Units shall be rented or leased at Affordable Rent. As of the approval of the DDA, Affordable Rent is calculated in accordance with the Affordable Rent Worksheet. The maximum

monthly rental for the Affordable Unit shall be adjusted annually as permitted by Section 50053 of the California Health and Safety Code based on the annual adjustment to the Median Income for the Area established pursuant to Section 50093 of the California Health and Safety Code, as more particularly set forth in the Affordable Rent Worksheet.

*Relationship to Tax Credit Requirements.* Notwithstanding any other provision of this Regulatory Agreement, if, following completion of construction of the Improvements, Developer restricts a greater number of Units as affordable units than is required under this Regulatory Agreement as of the date it is first executed, Developer agrees, upon request therefor by City, to execute and record such addendum or supplement to this Regulatory Agreement as would restrict such additional units to be affordable on a similar basis to that set forth herein.

DEVELOPER UNDERSTANDS AND KNOWINGLY AGREES THAT THE MAXIMUM RENTAL FOR THE AFFORDABLE UNITS ESTABLISHED BY THE DDA, THIS REGULATORY AGREEMENT AND THE CITY DISPOSITION DEED IS SUBSTANTIALLY BELOW THE FAIR MARKET RENT FOR THE AFFORDABLE UNITS.”

3. The restrictions contained in the City Regulatory Agreement expire fifty five (55) years following the date the City Regulatory Agreement is recorded. The City Regulatory Agreement is being submitted for recordation contemporaneously with this Notice of Affordability Restrictions.

4. The commonly known address for Area A is [TBD]\_\_\_\_\_ in the City of Moreno Valley.

Area A consists of all or a portion of parcels: APN: 486-280-044-6; such numbers are subject to change.

5. The legal description for Area A is attached hereto as Exhibit A and is incorporated herein by reference.

6. The City Regulatory Agreement, which includes the affordability restrictions referenced above, is expected to be submitted for recordation in the Office of the Riverside County Recorder contemporaneously with this Notice of Affordability Restrictions.

7. The DDA and the City Regulatory Agreement both remain in full force and effect and are not amended or altered in any manner whatsoever by this Notice of Affordability Restrictions.

8. Capitalized terms shall have the meaning established under the DDA (including all Attachments thereto) excepting only to the extent as otherwise expressly provided under this Notice of Affordability Restrictions.

[Notice of Affordability Restrictions continues on following page.]

9. Persons having questions regarding this Notice of Affordability Restrictions, the DDA or the Attachments thereto (including the City Regulatory Agreement) should contact City at its offices (14177 Frederick Street, Moreno Valley, or such other address as may be designated by City from time to time).

**DEVELOPER:**

**RB BOULDER RIDGE LIMITED PARTNERSHIP,**  
a California limited partnership

By: Rancho Belago Developers, Inc.,  
a California corporation  
its General Partner

By: \_\_\_\_\_  
James M. Jernigan, President

**CITY:**

**CITY OF MORENO VALLEY,**  
a municipal corporation

By: \_\_\_\_\_  
Thomas DeSantis,  
Assistant City Manager

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING

**EXHIBIT A**  
**LEGAL DESCRIPTION OF AREA A**

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING

**ATTACHMENT NO. 6  
CITY DISPOSITION DEED**

Recording Requested By:

When Recorded Return To and  
Mail Tax Statements To:

RB Boulder Ridge Limited Partnership  
27700 Kalmia Avenue  
Rancho Belago, CA 92128  
Attn: James M. Jernigan

APN: \_\_\_\_\_

**GRANT DEED CONTAINING RESALE RESTRICTIONS**

For a valuable consideration receipt of which is hereby acknowledged,

The **CITY OF MORENO VALLEY**, a municipal corporation, herein called "Grantor" (or "City") hereby grants to **RB BOULDER RIDGE LIMITED PARTNERSHIP**, a California limited partnership, herein called "Grantee" or "Developer," the real property hereinafter referred to as "Property", described in Exhibit A attached hereto and incorporated herein, subject to the existing easements, restrictions and covenants or record described there.

1. Said Property is conveyed in accordance with and subject to that certain unrecorded Disposition and Development /Affordable Housing Agreement entered into between Grantor and Grantee dated as of March 15, 2016 (the "DDA"), a copy of which is on file with the Grantor at its offices as a public record. Capitalized terms used herein and not otherwise defined shall have the same meaning as set forth in the DDA.

2. The Grantee hereby covenants and agrees, for itself and its successors and assigns, that the Grantee shall restrict the Property and the improvements thereon in accordance with this Grant Deed Containing Resale Restrictions to preserve its value for the benefit of Grantee, its successors and the surrounding neighborhood.

3. The Property is conveyed to Grantee at a purchase price, herein called "Purchase Price," determined in accordance with the Program and the restrictions imposed on the Property.

Therefore, Grantee hereby covenants and agrees that the Grantee shall maintain and use the Property in conformity with that certain Regulatory Agreement to be recorded of even date herewith between City and Grantee (the “Regulatory Agreement”).

For a period (“Required Covenant Period”) commencing upon the date on which Grantee acquires the Property and terminating on the fifty-fifth (55th) anniversary of that date (“Affordability Period Termination Date”), the Property may be used for affordable rental housing for households of limited income in accordance with the “Prescribed Income Limits” (as defined below), as more particularly set forth in the City Regulatory Agreement, and subject to the following:

“**Prescribed Income Levels**” means the following: during the Required Covenant Period households at the following income levels: (i) for one (1) one-bedroom Unit, thirty percent (30%) of Median Income; (ii) for one (1) one-bedroom Unit, forty percent (40%) of Median Income; (iii) for four (4) one-bedroom Units, fifty percent (50%) of Median Income; (iv) for two (2) one-bedroom Units, sixty percent (60%) of Median Income; (v) for four (4) two-bedroom Units, thirty percent (30%) of Median Income; (vi) for four (4) two-bedroom Units, forty percent (40%) of Median income; (vii) for twenty (20) two-bedroom Units, fifty percent (50%) of Median Income; (viii) for eleven (11) two-bedroom Units, sixty percent (60%) of Median Income; (ix) for three (3) three-bedroom Units, thirty percent (30%) of Median Income; (x) for two (2) three-bedroom Units, forty percent (40%) of Median Income; (xi) for eleven (11) three-bedroom Units, fifty percent (50%) of Median Income; and (xii) for eight (8) three-bedroom Units, sixty percent (60%) of Median Income; provided, however, that Developer may adjust the configuration of the bedroom sizes of the Units in the Senior Citizen Component, slightly, to better accommodate Senior Citizen Households with the consent of the City, which consent shall not be unreasonably withheld.

4. **Limitation or Transfer of the Property.** Excepting for the rental of individual dwelling units to occupants in the regular course of business (which rental activity shall not be limited by this Section 4), or the sale of a partnership interest to generate proceeds in consideration of the Tax Credits, Developer shall not sell, lease, or otherwise transfer or convey all or any part of the Site, or any interest therein, unless Developer has first obtained the prior written consent of the City Manager, which consent may be granted or refused in the City Manager’s sole and absolute discretion; except City shall upon receipt of written request therefor consent to a sale by Developer of its interest in the Development to RBI or Developer’s nonprofit general partner, after the expiration of the tax credit period. In addition, Developer’s limited partner and any successor thereto, may, without the prior consent of City and except as set forth in the senior permitted liens, sell, transfer, assign, pledge, hypothecate, and encumber some or all of its partnership interests in Developer and the same shall not be a violation of this Agreement. Moreover, Developer’s limited partner and any successor thereto, shall have the right, without the prior consent of City and except as set for in the senior permitted liens, to remove any or all of Developer’s general partners for cause as permitted under Developer’s limited partnership agreement and replace any or all removed general partners with a person or entity determined in the limited partner’s sole discretion. Any sale, lease, transfer or conveyance without such consent shall, at City’s option, be void. A change in ownership of Developer resulting in the individuals executing this Agreement on behalf of Developer retaining less than fifty-one percent (51%) ownership of all general partner interests in Developer shall be deemed to violate this Section 4. In connection with the foregoing consent requirement, Developer acknowledges that City relied upon Developer’s particular expertise in entering into this Agreement and continues to rely on such expertise to ensure the satisfactory completion of all of the Improvements, and the marketing and rental of the Required Affordable Units to 40% Very Low

Income Households, 50% Very Low Income Households and Low Income Households to afford the community a long-term, quality affordable housing resource.

5. **Encumbrances.**

a. **No Subordination.** The provisions of this Grant Deed Containing Resale Restrictions shall not be subordinated.

b. **Request for Notice of Default.** Grantor may cause a Request for Notice to be recorded on the Property subsequent to the recordation of a deed of trust or mortgage requesting a statutory notice of default as set forth in California Civil Code Section 2924b.

6. **Uses.** The Grantee covenants and agrees to devote, use and maintain the Property in accordance with this Grant Deed Containing Resale Restrictions. All uses conducted on the Property, including, without limitation, all activities undertaken by the Grantee pursuant to this Grant Deed Containing Resale Restrictions, shall conform to all applicable provisions of the City Code, and the recorded documents pertaining to and running with the Property. Grantee further agrees to not oppose the inclusion of the Property in a homeowners association should one be formed.

7. **Nondiscrimination Covenants.** Developer covenants by and for itself and any successors in interest that there shall be no discrimination against or segregation of, any person or group of persons on account of any basis listed in subdivision (a) or (d) of Section 12955 of the Government Code, as those bases are defined in Sections 12926, 12926.1, subdivision (m) and paragraph (1) of subdivision (p) of Section 12955, and Section 12955.2 of the Government Code, in the sale, lease, sublease, transfer, use, occupancy, tenure, or enjoyment of the premises herein conveyed, nor shall the grantee or any person claiming under or through him or her, establish or permit any practice or practices of discrimination or segregation with reference to the selection, location, number, use or occupancy of tenants, lessees, subtenants, sublessees, or vendees in the premises herein conveyed. The foregoing covenants shall run with the land.

Developer shall refrain from restricting the rental, sale or lease of the Site on the basis of race, color, religion, sex, marital status, ancestry or national origin of any person. All such deeds, leases or contracts shall contain or be subject to substantially the following nondiscrimination or nonsegregation clauses:

**In deeds:** “The grantee herein covenants by and for himself or herself, his or her heirs, executors, administrators, and assigns, and all persons claiming under or through them, that there shall be no discrimination against or segregation of, any person or group of persons on account of any basis listed in subdivision (a) or (d) of Section 12955 of the Government Code, as those bases are defined in Sections 12926, 12926.1, subdivision (m) and paragraph (1) of subdivision (p) of Section 12955, and Section 12955.2 of the Government Code, in the sale, lease, sublease, transfer, use, occupancy, tenure, or enjoyment of the premises herein conveyed, nor shall the grantee or any person claiming under or through him or her, establish or permit any practice or practices of discrimination or segregation with reference to the selection, location, number, use or occupancy of tenants, lessees, subtenants, sublessees, or vendees in the premises herein conveyed. The foregoing covenants shall run with the land.”



**In leases:** “The lessee herein covenants by and for himself or herself, his or her heirs, executors, administrators, and assigns, and all persons claiming under or through him or her, and this lease is made and accepted upon and subject to the following conditions:

“That there shall be no discrimination against or segregation of any person or group of persons, on account of any basis listed in subdivision (a) or (d) of Section 12955 of the Government Code, as those bases are defined in Sections 12926, 12926.1, subdivision (m) and paragraph (1) of subdivision (p) of Section 12955, and Section 12955.2 of the Government Code, in the leasing, subleasing, transferring, use, occupancy, tenure, or enjoyment of the premises herein leased nor shall the lessee himself or herself, or any person claiming under or through him or her, establish or permit any such practice or practices of discrimination or segregation with reference to the selection, location, number, use, or occupancy, of tenants, lessees, sublessees, subtenants, or vendees in the premises herein leased.”

**In contracts:** “There shall be no discrimination against or segregation of, any person or group of persons on account of any basis listed in subdivision (a) or (d) of Section 12955 of the Government Code, as those bases are defined in Sections 12926, 12926.1, subdivision (m) and paragraph (1) of subdivision (p) of Section 12955, and Section 12955.2 of the Government Code, in the sale, lease, sublease, transfer, use, occupancy, tenure, or enjoyment of the premises which are the subject of this Agreement, nor shall the grantee or any person claiming under or through him or her, establish or permit any practice or practices of discrimination or segregation with reference to the selection, location, number, use or occupancy of tenants, lessees, subtenants, sublessees, or vendees in the premises herein conveyed. The foregoing covenants shall run with the land.”

In addition, Developer hereby covenants, by and for itself, its successors and assigns, and all persons claiming under or through them, to comply with the following laws relating to nondiscrimination and equal opportunity to the extent applicable to the Site or the Housing Project: (1) The Fair Housing Act (42 U.S.C. 3601-19) and implementing regulations at 24 CFR part 100 *et seq.*; Executive Order 11063, as amended by Executive Order 12259 (3 CFR, 1959-1963 Comp., p. 652 and 3 CFR, 1980 Comp., p. 307) (Equal Opportunity in Housing Programs) and implementing regulations at 24 CFR part 107; title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d-2000d-4) (Nondiscrimination in Federally Assisted Programs) and implementing regulations at 24 CFR part 1; the Age Discrimination Act of 1975 (42 U.S.C. 6101-6107) and implementing regulations at 24 CFR part 146; section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and implementing regulations at part 8 of this title; title II of the Americans with Disabilities Act, 42 U.S.C. 12101 *et seq.*; 24 CFR part 8; section 3 of the Housing and Urban Development Act of 1968 (12 U.S.C. 1701u) and implementing regulations at 24 CFR part 135; Executive Order 11246, as amended by Executive Orders 11375, 11478, 12086, and 12107 (3 CFR, 1964-1965 Comp., p. 339; 3 CFR, 1966-1970 Comp., p. 684; 3 CFR, 1966-1970 Comp., p. 803; 3 CFR, 1978 Comp., p. 230; and 3 CFR, 1978 Comp., p. 264, respectively) (Equal Employment Opportunity Programs) and implementing regulations at 41 CFR chapter 60; Executive Order 11625, as amended by Executive Order 12007 (3 CFR, 1971-1975 Comp., p. 616 and 3 CFR, 1977 Comp., p. 139) (Minority Business Enterprises); Executive Order 12432 (3 CFR, 1983 Comp., p. 198) (Minority Business Enterprise Development); and Executive Order 12138, as amended by Executive Order 12608 (3 CFR, 1977 Comp., p. 393 and 3 CFR, 1987 Comp., p. 245) (Women’s Business Enterprise), and the Unruh Act, Civil Code Section 51, *et seq.*

Developer further covenants, by and for itself, its successors and assigns, and all persons claiming under or through them, not to inquire about the sexual orientation or gender identity of an

applicant for, or occupant of, the Housing Project or any Housing Unit at Area A, for the purpose of determining eligibility for occupancy of such Housing Units or otherwise making such Housing Units available. This prohibition on inquiries regarding sexual orientation or gender identity does not prohibit any individual from voluntarily self-identifying sexual orientation or gender identity. Further, determinations of eligibility for occupancy of Housing Units at the Housing Project shall be made in accordance with the eligibility requirements provided for such program by HUD, and such Housing Units shall be made available without regard to actual or perceived sexual orientation, gender identity, or marital status.

The covenants established in this Section shall, without regard to technical classification and designation, be binding for the benefit and in favor of City and its successors and assigns, and shall remain in effect in perpetuity.

8. **Maintenance of Property.** Grantee shall maintain the improvements and landscaping on the Property in a manner consistent with the City Regulatory Agreement, in accordance with the City Code. Grantee also agrees to comply with all applicable federal, state and local laws.

9. **Effect of Violation of the Terms and Provisions of this Grant Deed Containing Resale Restrictions.**

a. **In General.** The covenants established in this Grant Deed Containing Resale Restrictions shall, without regard to technical classification and designation, be binding for the benefit and in favor of Grantor, its successors and assigns, as to those covenants which are for its benefit. The covenants contained in this Grant Deed Containing Resale Restrictions shall remain in effect for the periods of time specified herein. The covenants against discrimination shall remain in effect in perpetuity. Grantor is deemed the beneficiary of the terms and provisions of this Grant Deed Containing Resale Restrictions and of the covenants running with the land, for and in its own rights and for the purposes of protecting the interests of the community and other parties, public or private, in whose favor and for whose benefit this Grant Deed Containing Resale Restrictions and the covenants running with the land have been provided. This Grant Deed Containing Resale Restrictions and the covenants therein shall run in favor of Grantor, without regard to whether Grantor has been, remains or is an owner of any land or interest therein in the Property or in the Project Area. Grantor shall have the right, if the Grant Deed Containing Resale Restrictions or covenants are breached, to exercise all rights and remedies, and to maintain any actions or suits at law or in equity or other proper proceedings to enforce the curing of such breaches to which it or any other beneficiaries of this Grant Deed Containing Resale Restrictions and covenants may be entitled.

10. **Indemnification.** Grantee shall pay for, defend, indemnify and hold harmless Grantor and its officers, officials, agents, employees, representatives, and volunteers from and against any loss, liability, claim, or judgment relating in any manner to the Grantee's use of the Property or Grantee's violation of this Grant Deed Containing Resale Restrictions. The Grantee shall remain fully obligated for the payment of taxes, liens and assessments related to the Property. There shall be no reduction in taxes for Grantee, nor any transfer of responsibility to Grantor to make such payments, by virtue of this Grant Deed Containing Resale Restrictions.

11. **Insurance.** Grantee shall maintain, during the Required Covenant Period, all insurance policies, conveyances and endorsements as set forth in Section 4.5 of the DDA.

12. **Defaults.** Failure or delay by either party to perform any term or provision of this Grant Deed Containing Resale Restrictions which is not cured within thirty (30) days after receipt of notice from the other party constitutes a default under this Grant Deed Containing Resale Restrictions; provided, however, if such default is of the nature requiring more than thirty (30) days to cure, the defaulting party shall avoid default hereunder by commencing to cure within such thirty (30) day period, and thereafter diligently pursuing such cure to completion. The party who so fails or delays must immediately commence to cure, correct or remedy such failure or delay, and shall complete such cure, correction or remedy with diligence. The injured party shall give written notice of default to the party in default, specifying the default complained of by the injured party. Except as required to protect against further damages, the injured party may not institute proceedings against the party in default until thirty (30) days after giving such notice. Failure or delay in giving such notice shall not constitute a waiver of any default, nor shall it change the time of default.

13. **Non Waiver.** Failure to exercise any right Grantor may have or be entitled to, in the event of default hereunder, shall not constitute a waiver of such right or any other right in the event of a subsequent default.

14. **Further Assurances.** The Grantee shall execute any further documents consistent with the terms of this Grant Deed Containing Resale Restrictions, including documents in recordable form, as Grantor shall from time to time find necessary or appropriate to effectuate its purposes in entering into this Grant Deed Containing Resale Restrictions.

15. **Governing Law; Interpretation.** The Grantee hereby agrees to comply with all ordinances, rules and regulations of Grantor and the City. Nothing in this Grant Deed Containing Resale Restrictions is intended to be, nor shall it be deemed to be, a waiver of any City ordinance, rule or regulation. This Grant Deed Containing Resale Restrictions shall be governed by the laws of the State of California. Any legal action brought under this Grant Deed Containing Resale Restrictions must be instituted in the Superior Court of the County of Riverside, State of California.

This Grant Deed Containing Resale Restrictions shall be interpreted in a manner to favor Grantor's interest in maintaining the long term affordability of the Property.

16. **Amendment of Grant Deed Containing Resale Restrictions.** No modification, rescission, waiver, release or amendment of any provision of this Grant Deed Containing Resale Restrictions shall be made except by a written agreement executed by the Grantee and Grantor.

17. **Covenants Running With the Land.** All covenants contained in this Grant Deed Containing Resale Restrictions shall be covenants running with the land. Grantee's obligation to maintain and use the improvements constructed as provided herein shall continue in effect until the expiration of the Affordability Period. Every covenant contained in this Grant Deed Containing Resale Restrictions against discrimination contained in paragraph 7 of this Grant Deed Containing Resale Restrictions shall remain in perpetuity.

18. **Covenants Binding.** All covenants without regard to technical classification or designation shall be binding for the benefit of the Grantor, and such covenants shall run in favor of the Grantor for the entire period during which such covenants shall be in force and effect, without regard to whether the Grantor is or remains an owner of any land or interest therein to which such covenants relate. The Grantor, in the event of any breach of any such covenants, shall have the right

to exercise all the rights and remedies and to maintain any actions at law or suits in equity or other proper proceedings to enforce the curing of such breach.

**IN WITNESS WHEREOF**, the Grantor and Grantee have caused this instrument to be executed on their behalf by their respective officers hereunto duly authorized, this \_\_ day of \_\_\_\_\_, 2016.

**CITY OF MORENO VALLEY,**  
a municipal corporation

By: \_\_\_\_\_  
Thomas DeSantis  
Its: Assistant City Manager

The Grantee agrees to be bound by the covenants set forth above.

**RB BOULDER RIDGE LIMITED  
PARTNERSHIP,**  
a California limited partnership

By: Rancho Belago Developers, Inc.,  
a California corporation  
its General Partner

By: \_\_\_\_\_  
James M. Jernigan, President

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING

**EXHIBIT "A"  
TO ATTACHMENT NO. 6**

**LEGAL DESCRIPTION OF THE PROPERTY**

[to come: legal description of Area A]

Real property in the City of Moreno Valley, County of Riverside, State of California, described as follows:

[to come]

APN: \_\_\_\_\_

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING

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 )  
 ) ss.  
COUNTY OF \_\_\_\_\_ )

On \_\_\_\_\_, before me, \_\_\_\_\_, Notary Public,  
(Print Name of Notary Public)

personally appeared \_\_\_\_\_

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 of Notary Public

**OPTIONAL**

Though the data below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent reattachment of this form.

**CAPACITY CLAIMED BY SIGNER**

**DESCRIPTION OF ATTACHED DOCUMENT**

- Individual
- Corporate Officer

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

- Partner(s)       Limited       General
- Attorney-In-Fact
- Trustee(s)
- Guardian/Conservator
- Other: \_\_\_\_\_

Signer is representing:  
Name Of Person(s) Or Entity(ies)

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Title Or Type Of Document

\_\_\_\_\_  
Number Of Pages

\_\_\_\_\_  
Date Of Documents

\_\_\_\_\_  
Signer(s) Other Than Named Above

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING

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 )  
 ) ss.  
COUNTY OF \_\_\_\_\_ )

On \_\_\_\_\_, before me, \_\_\_\_\_, Notary Public,  
(Print Name of Notary Public)

personally appeared \_\_\_\_\_

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 of Notary Public

**OPTIONAL**

Though the data below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent reattachment of this form.

**CAPACITY CLAIMED BY SIGNER**

**DESCRIPTION OF ATTACHED DOCUMENT**

- Individual
- Corporate Officer

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

- Partner(s)       Limited       General
- Attorney-In-Fact
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- Other: \_\_\_\_\_

\_\_\_\_\_  
Title Or Type Of Document

\_\_\_\_\_  
Number Of Pages

Signer is representing:  
Name Of Person(s) Or Entity(ies)

\_\_\_\_\_  
Date Of Documents

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Signer(s) Other Than Named Above

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING



**ATTACHMENT NO. 7**  
**CALCULATION OF AFFORDABLE RENTS**

**Riverside County**  
**Affordable Rent Worksheet**

(2015 Income Figures)

**Method of Determining Rents<sup>1</sup>**

**1. Income Eligibility<sup>2,3</sup>**

The first step in determining eligibility for an affordable housing program is determining whether the family which will be purchasing or renting the housing unit meets the following income standards applicable to **Riverside County**, based upon the size of the family:

<i>Income Level</i>	<i>1 person household</i>	<i>2 person household</i>	<i>3 person household</i>	<i>4 person household</i>	<i>5 person household</i>	<i>6 person household</i>	<i>7 person household</i>	<i>8 person household</i>
<i>Extremely Low</i>	\$14,100	\$16,100	\$20,090	\$24,250	\$28,410	\$32,570	\$36,730	\$40,890
<i>Very Low</i>	\$23,450	\$26,800	\$30,150	\$33,500	\$36,200	\$38,900	\$41,550	\$44,250
<i>Lower</i>	\$37,550	\$42,900	\$48,250	\$53,600	\$57,900	\$62,200	\$66,500	\$70,800
<i>Median</i>	\$45,500	\$52,000	\$58,500	\$65,000	\$70,200	\$75,400	\$80,600	\$85,800
<i>Moderate</i>	\$54,600	\$62,400	\$70,200	\$78,000	\$84,250	\$90,500	\$96,700	\$102,950

**2. Determining Affordable Rent**

For rental housing, the second step in determining compliance with affordable housing requirements is determining whether the total rent costs payable by the tenant are within allowable amounts.

<sup>1</sup> Based on currently effective median income of Riverside County, as released by the Department of Housing and Community Development (“HCD”) by memorandum dated as of April 15, 2015 as posted to the HCD website. These median income numbers are revised annually; accordingly, affordable rents are revised annually as well. The Developer is responsible for charging rents in the amounts allowable under this Agreement. The Developer is encouraged to annually confirm proposed rents with the Authority.

<sup>2</sup> Affordable Rent for Extremely Low Income Households is the product of 30 percent times 30 percent of the area median income adjusted for family size appropriate to the unit. Health and Safety Code Section 50053 (b)(1).

<sup>3</sup> Affordable Rent for Very Low Income Households is the product of 30 percent times 50 percent of the area median income adjusted for family size appropriate to the unit. Health and Safety Code Section 50053 (b)(2).

For **Extremely Low Income Households**:<sup>4</sup>

- renting a **0 bedroom** unit, monthly rent may not exceed **\$341.25**
- renting a **1 bedroom** unit, monthly rent may not exceed **\$390.00**
- renting a **2 bedroom** unit, monthly rent may not exceed **\$438.75**
- renting a **3 bedroom** unit, monthly rent may not exceed **\$487.50**
- renting a **4 bedroom** unit, monthly rent may not exceed **\$526.50**
- renting a **5 bedroom** unit, monthly rent may not exceed **\$565.50**

For **Very Low Income Households**:<sup>5</sup>

- renting a **0 bedroom** unit, monthly rent may not exceed **\$568.75**
- renting a **1 bedroom** unit, monthly rent may not exceed **\$650.00**
- renting a **2 bedroom** unit, monthly rent may not exceed **\$731.25**
- renting a **3 bedroom** unit, monthly rent may not exceed **\$812.50**
- renting a **4 bedroom** unit, monthly rent may not exceed **\$877.50**
- renting a **5 bedroom** unit, monthly rent may not exceed **\$942.50**

For **Lower Income Households**:<sup>6</sup>

- renting a **0 bedroom** unit, monthly rent may not exceed **\$682.50**
- renting a **1 bedroom** unit, monthly rent may not exceed **\$780.00**
- renting a **2 bedroom** unit, monthly rent may not exceed **\$877.50**
- renting a **3 bedroom** unit, monthly rent may not exceed **\$975.00**
- renting a **4 bedroom** unit, monthly rent may not exceed **\$1,053.00**
- renting a **5 bedroom** unit, monthly rent may not exceed **\$1,131.00**

<sup>4</sup> Affordable Rent for Extremely Low Income Households is the product of 30 percent times 30 percent of the area median income adjusted for family size appropriate to the unit. Health and Safety Code Section 50053(b)(1).

<sup>5</sup> Affordable Rent for Very Low Income Households is the product of 30 percent times 50 percent of the area median income adjusted for family size appropriate to the unit. Health and Safety Code Section 50053(b)(3).

<sup>6</sup> Affordable Rent for Lower Income Households is the product of 30 percent times 60 percent of the area median income adjusted for family size appropriate to the unit. Health and Safety Code Section 50053(b)(3).

In addition, for any Lower Income Household whose income falls within the following guidelines, it is **optional** for the City to require that **affordable rent not exceed 30 percent of the gross income of the household:**<sup>7</sup>

- *1 person households* whose income is between **\$27,300 and \$37,550**
- *2 person households* whose income is between **\$31,200 and \$42,900**
- *3 person households* whose income is between **\$35,100 and \$48,250**
- *4 person households* whose income is between **\$39,000 and \$53,600**
- *5 person households* whose income is between **\$42,120 and \$57,900**
- *6 person households* whose income is between **\$45,240 and \$62,200**
- *7 person households* whose income is between **\$48,360 and \$66,500**
- *8 person households* whose income is between **\$51,480 and \$70,800**

For **Moderate Income** Households:<sup>8</sup>

- renting a *0 bedroom* unit, monthly rent may not exceed **\$1,251.25**
- renting a *1 bedroom* unit, monthly rent may not exceed **\$1,430.00**
- renting a *2 bedroom* unit, monthly rent may not exceed **\$1,608.75**
- renting a *3 bedroom* unit, monthly rent may not exceed **\$1,787.50**
- renting a *4 bedroom* unit, monthly rent may not exceed **\$1,930.50**
- renting a *5 bedroom* unit, monthly rent may not exceed **\$2,073.50**

In addition, for any Moderate Income Household whose income falls within the following guidelines, it is **optional** for the City to require that **affordable rent not exceed 30 percent of the gross income of the household:**<sup>9</sup>

- *1 person households* whose income is between **\$50,050 and \$54,600**
- *2 person households* whose income is between **\$57,200 and \$62,400**
- *3 person households* whose income is between **\$64,350 and \$70,200**

<sup>7</sup> Health and Safety Code Section 50053 (b)(3).

<sup>8</sup> Affordable Rent for Moderate Income Households is the product of 30 percent times 110 percent of area median income adjusted for family size appropriate to the unit. Health and Safety Code Section 50053 (b)(4).

<sup>9</sup> Health and Safety Code Section 50053 (b)(4).

- **4 person households** whose income is between **\$71,500 and \$78,000**
- **5 person households** whose income is between **\$77,220 and \$84,250**
- **6 person households** whose income is between **\$82,940 and \$90,500**
- **7 person households** whose income is between **\$88,660 and \$96,700**
- **8 person households** whose income is between **\$94,380 and \$102,950**

**For purposes of determining Affordable Rent, “Rent”** is an average of estimated housing costs for the next twelve months. **“Rent”** includes the total of monthly payments for all of the following:<sup>10</sup>

- Use and occupancy of a housing unit and land and facilities associated therewith.
- Any separately charged fees or service charges assessed by the lessor which are required of all tenants, other than security deposits.
- A reasonable allowance for utilities not included in the above costs, including garbage collection, sewer, water, electricity, gas, and other heating, cooking, and refrigeration fuels. “Utilities” does not include telephone service. Such an allowance shall take into consideration the cost of an adequate level of service.
- Possessory interest taxes or other fees or charges assessed for use of the land and facilities associated therewith by a public or private entity other than the lessor.

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<sup>10</sup> 25 California Code of Regulations Section 6918.

**ATTACHMENT NO. 8  
REQUEST FOR NOTICE OF DEFAULT**

RECORDING REQUESTED BY  
AND WHEN RECORDED MAIL  
TO:

City of Moreno Valley  
14177 Frederick Street  
Moreno Valley, California 92552-  
0805  
Attention: City Manager

SPACE ABOVE THIS LINE FOR RECORDER'S USE ONLY

Exempt from recording fees pursuant to Government Code § 6103.

**Request for Notice Under Section 2924b Civil Code**

In accordance with Section 2924b, Civil Code, request is hereby made that a copy of any Notice of Default and a copy of any Notice of Sale under the Deed of Trust recorded as Instrument No. \_\_\_\_\_ on \_\_\_\_\_, 201\_\_, in Book \_\_\_\_\_, Page \_\_\_\_\_, Official Records of Riverside County, California, and describing land therein as

See Exhibit A attached hereto

executed by \_\_\_\_\_, as Trustor, in which \_\_\_\_\_ is named as Beneficiary, and \_\_\_\_\_ as Trustee, be mailed to City of Moreno Valley, at 14177 Frederick Street, Moreno Valley, California 92552-0805, Attention: City Manager.

**NOTICE: A COPY OF ANY NOTICE OF DEFAULT AND OF ANY NOTICE OF SALE WILL BE SENT ONLY TO THE ADDRESS CONTAINED IN THIS RECORDED REQUEST. IF YOUR ADDRESS CHANGES, A REQUEST MUST BE RECORDED.**

\_\_\_\_\_  
Assistant City Manager

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING

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 )  
 ) ss.  
COUNTY OF \_\_\_\_\_ )

On \_\_\_\_\_, before me, \_\_\_\_\_, Notary Public,  
(Print Name of Notary Public)

personally appeared \_\_\_\_\_

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 of Notary Public

**OPTIONAL**

Though the data below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent reattachment of this form.

**CAPACITY CLAIMED BY SIGNER**

**DESCRIPTION OF ATTACHED DOCUMENT**

- Individual
- Corporate Officer

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

\_\_\_\_\_  
Title Or Type Of Document

- Partner(s)       Limited       General
- Attorney-In-Fact
- Trustee(s)
- Guardian/Conservator
- Other: \_\_\_\_\_

\_\_\_\_\_  
Number Of Pages

Signer is representing:  
Name Of Person(s) Or Entity(ies)

\_\_\_\_\_  
Date Of Documents

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Signer(s) Other Than Named Above

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING

**ATTACHMENT NO. 9**  
**SCOPE OF DEVELOPMENT**

**I. GENERAL DESCRIPTION**

The Site is specifically delineated on the Site Map and the Legal Description of the Site. Area A is that portion of the Site so delineated at the Site Map.

**II. DEVELOPMENT**

Developer shall construct four (4) buildings housing seventy-two (72) housing units on Area A, together with all on-site and off-site features (including without limitation certain infrastructure features to Area B) described in this Scope of Development (as presented to the City Council of the City on March 15, 2016 as part of the Housing Component, including without limitation landscaping. All such improvements, including all conditions of deposit now or hereafter imposed by City (including without limitation and mitigation measures) collectively constitute the "Housing Component." The number of bedrooms for the Required Affordable Units (71 units) is set forth within the definition, Required Affordable Units. One-bedroom units shall be a minimum of 680 square feet, two-bedroom units shall be a minimum of 877 square feet and three-bedroom units shall be a minimum of 1,301 square feet.

The Housing Project's gross building area shall include: (i) residential gross building area of approximately 74,803 square feet and not less than 73,000 square feet, (ii) a community room consisting of approximately 1,945 square feet and not less than 1,800 square feet, and (iii) circulation/common area gross building area consisting of approximately 23,729 square feet, for a total of approximately 100,477 square feet and not less than 95,000 square feet. Included as part of the Improvements shall be at least 116 parking areas, consisting of 72 garage/carport spaces and 44 numbered stalls. Each Unit will include the following amenities: range, frost-free refrigerator, oven, dishwasher, garbage disposal, central heating and air conditioning, countertops, vertical blinds, low-pile carpeting, and will include CAT 5 wiring. All of the apartments are designed for energy efficiency and include energy efficient appliances. The Developer shall undertake all improvements required by the City as a condition of development of the Site as situated on Area A or necessary to serve Area A, and specifically BBQ area, picnic area, community center as described above with laundry, management offices and computer facilities with high-speed internet connection to be available to occupants of Area A and their guests, as more particularly provided in the City approvals given for the Site.

Building No. 2, as designated in the plans heretofore approved by the City, shall be limited to Senior Citizen Units; excepting for Building No. 2, no Units shall be restricted to occupancy by Senior Citizen Households. Building No. 2 shall include the following features tailored to the needs of Senior Citizen Households: an elevator and social services particularly designed to meet the specific needs of senior citizens.

The Housing Component together with all such other improvements as may be required by City under its entitlement process, constitute the "Improvements."

The quality of construction shall be of a high level. The Improvements shall conform to such plans as are hereafter approved by City and maintained on file with City as supplemented by the Design Development Drawings (the “Approved Plans”). All development on the Site, including without limitation Area A, shall be accomplished by Developer in conformity with the Final Conditions of Approval for Plot Plan PA 13-0006, General Plan Amendment PA 13-0008 and Zone Change PA 13-0007 (collectively, the “Existing Entitlement Actions”). All of the conditions set forth in the Existing Entitlement Actions shall be deemed to apply to the Development excepting to the extent, if any, that City in its discretion determines that any provisions do not apply to the Development as proposed under this Agreement.

Developer shall commence and complete the Improvements by the respective times established therefor in the Schedule of Performance.

### III. DEVELOPMENT STANDARDS

The Improvements shall conform to all applicable state laws and regulations and to local zoning, applicable provisions of the City Code, including without limitation the Existing Entitlement Actions, and the following development standards:

#### A. General Requirements:

**1. Vehicular Access.** The placement of vehicular driveways shall be coordinated with the needs of proper street traffic flow as approved by City. In the interest of minimizing traffic congestion, City will control the number and location of curb breaks for access to the Site for off-street parking and truck loading. All access driveways shall require written approval of City staff.

**2. Building Signs.** Signs shall be limited in size, subdued and otherwise designed to contribute positively to the environment. Signs identifying the building use will be permitted, but their height, size, location, color, lighting and design will be subject to City staff approval, and signs must conform to the Municipal Code.

**3. Screening.** All outdoor storage of materials or equipment shall be enclosed or screened to the extent and in the manner required by City staff.

**4. Landscaping.** Developer shall provide and maintain landscaping within the public rights-of-way and within setback area along all street frontages and conforming to the plans as hereafter approved by City.

Landscaping shall consist of trees, shrubs and installation of an automatic irrigation system adequate to maintain such plant material. The type and size of trees to be planted, together with a landscaping plan, shall be subject to City staff approval prior to planting.

**5. Utilities.** All utilities on the Site provided to service the units constructed by Developer shall be underground at Developer’s expense.

**6. Building Design.** Buildings shall be constructed such that the Improvements shall be of high architectural quality, and shall be effectively and aesthetically designed and in conformance with City approvals.



**7. Mitigation Measures.** Mitigation measures approved for the Development under the California Environmental Quality Act (CEQA).

**B. Design Features:**

The following design features are considered essential components to the Improvements:

Handicapped Units – Dwelling Units are to be fully handicapped accessible in compliance with State Housing Code - Title 24 requirements.

Security - The details of security will be reviewed upon submission of the detailed plans.

Overall Design Quality, Materials, Colors, Design Features - Quality of design is important, materials and colors are to be approved by City.

Housing Type - Rental housing for occupancy by seventy-two (72) Units, consisting of eight (8) one-bedroom Units, forty (40) two-bedroom Units, and twenty four (24) three-bedroom Units; provided, however, that Developer may adjust the configuration of the bedroom sizes of the Units in the Senior Citizen Component, slightly, to better accommodate Senior Citizen Households with the consent of the City, which consent shall not be unreasonably withheld.

Mobility/Agility - All facilities shall comply, to the extent feasible, with “New Horizon Accessible, Adaptable Apartments for the Physically Disabled” published by HCD dated July 1989, and shall comply with those portions of Title 24 of the California Code of Regulations that have been adopted by HCD relating to handicapped units, and the requirements of the federal Department of Housing and Urban Development, Part VI, 24 C.F.R. Ch. 1, Vol. 56, No. 44, as published in the Federal Register March 6, 1991.

Senior Citizen Component – The Senior Citizen Component shall include an elevator and social services particularly designed to meet the specific needs of senior citizens.

**IV. DEMOLITION AND SOILS**

Developer assumes all responsibility for surface and subsurface conditions at the Site, and the suitability of Area A for the Improvements. Developer has undertaken all investigation of the Site as it shall deem necessary and has not received or relied upon any representations of City, or its officers, agents and employees.

**V. SPECIAL AMENITIES**

Developer shall undertake all improvements required by City as a condition of development of the Site.

**ATTACHMENT NO. 10  
CERTIFICATE OF COMPLETION**

RECORDING REQUESTED BY  
AND WHEN RECORDED MAIL TO:

APN: \_\_\_\_\_

(Space Above for Recorder's Use Only)

This document is exempt from the payment of a recording fee pursuant to Government Code Section 27383.

**CERTIFICATE OF COMPLETION**

**THIS CERTIFICATE OF COMPLETION** (the "Certificate") is made by the **CITY OF MORENO VALLEY**, a municipal corporation (the "City"), in favor of **RB BOULDER RIDGE LIMITED PARTNERSHIP**, a California limited partnership (the "Developer"), as of the date set forth below.

***RECITALS***

A. City and Developer have entered into that certain Disposition and Development/Affordable Housing Agreement (the "DDA") dated as of March 15, 2016 concerning the development of certain real property situated in the City of Moreno Valley, California, as more fully described in Exhibit "A" attached hereto and made a part hereof (the "Area A").

B. As referenced in Section 4.13 of the DDA, City is required to furnish Developer or its successors with a Certificate of Completion upon completion of construction of the "Improvements" for "Area A" (each as defined in Section 1.1 of the DDA), which Certificate is required to be in such form as to permit it to be recorded in the Recorder's Office of Riverside County. This Certificate is

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING

conclusive determination of satisfactory completion of the construction and development required by the DDA.

C. City has conclusively determined that the construction and development of the Development has been satisfactorily completed.

**NOW, THEREFORE,** City hereby certifies as follows:

1. City does hereby certify that the Improvements to be constructed by Developer on Area A have been fully and satisfactorily completed in full conformance with the DDA.

2. This Certificate shall not constitute evidence of compliance with or satisfaction of any obligation of Developer to any holder of a mortgage, or any insurer of a mortgage, securing money loaned to finance construction work on Area A, or any part thereof.

3. This Certificate shall not constitute evidence of Developer’s compliance with those covenants in the DDA that survive the issuance of this Certificate.

4. This Certificate is not a Notice of Completion as referred to in California Civil Code Section 3093.

5. Nothing contained in this instrument shall modify in any other way any other provisions of the DDA (including without limitation the attachments thereto).

**IN WITNESS WHEREOF,** City has executed this Certificate of Completion this \_\_\_\_ day of \_\_\_\_\_, 201\_\_.

**CITY OF MORENO VALLEY,**  
a municipal corporation

By: \_\_\_\_\_  
Thomas DeSantis, Assistant City Manager

**EXHIBIT "A" TO ATTACHMENT NO. 10**  
**LEGAL DESCRIPTION**

[to come: description of Area A]

APN:

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING

**ATTACHMENT NO. 11  
CITY DEVELOPER CC&RS**

RECORDING REQUESTED  
BY:

WHEN RECORDED RETURN  
TO:

City of Moreno Valley  
14177 Frederick Street  
Moreno Valley, California  
92552-0805  
Attention: City Manager

(Space above for Recorder's Use.)

This document is exempt from the payment of a recording fee pursuant to Government Code Section 6103.

**REGULATORY AGREEMENT**

These Covenants, Conditions and Restrictions, herein sometimes referred to as these "CC&Rs" or "Declaration" or "Regulatory Agreement" are made by the signatories hereto.

**R E C I T A L S**

**WHEREAS**, each of the **CITY OF MORENO VALLEY**, a municipal corporation ("City"), and **RB BOULDER RIDGE LIMITED PARTNERSHIP**, a California limited partnership ("Developer") is a party to this Declaration. City and Developer are sometimes collectively referred to herein as the "Declarants."

**WHEREAS**, City and Developer have entered into that certain unrecorded Disposition and Development/Affordable Housing Agreement dated as of March 15, 2016 (the "DDA") for the improvement and development of certain real property described in Exhibit "A" (to which these CC&Rs are attached) as "Area A", which DDA provides for the recordation of this Regulatory Agreement. The DDA is incorporated herein by this reference and any capitalized term not defined herein shall have the meaning established therefor in the DDA.

**WHEREAS**, this Regulatory Agreement establishes a plan for the improvement, development and maintenance of Area A, for the benefit of City.

**WHEREAS**, it is contemplated under the DDA that, as of the recordation of this Regulatory Agreement, Developer has acquired or shall concurrent with recordation hereof acquire a fee interest in Area A and described in the legal description attached hereto as Exhibit "A" and incorporated herein by this reference. The form of deed under which Developer has acquired or shall acquire Area A, as prescribed by the DDA, is referenced to as the "City Disposition Deed."

**WHEREAS**, the DDA sets forth certain restrictive covenants applicable to Area A, particularly the use of Area A for the provision of rental housing units available to Extremely Low Income Households, 40% Very Low Income Households, 50% Very Low Income Households and Low Income Households at Affordable Rents as those terms are defined therein.

**WHEREAS**, City, and Developer wish to adopt this Regulatory Agreement to further govern the use of Area A in conjunction and along with the DDA and to ensure that City achieves credit for production of affordable housing units in the manner described by Section 33413 of the California Health and Safety Code.

**NOW, THEREFORE**, City each of Developer (as owner of real property interests described hereinabove), in City, declares that Area A shall be held, transferred, encumbered, used, sold, conveyed, leased and occupied subject to the Covenants, Conditions and Restrictions hereinafter set forth expressly and exclusively for the use and benefit of said property, and City. Each and all of the restrictions, limitations, conditions, covenants, liens, reservations and charges herein contained shall run with the land and be recorded on the property title and shall be binding on Declarants, their grantees, successors, heirs, executors, administrators, devisees or assigns, and all subsequent owners of all or any part of Area A.

## **ARTICLE I** **DEFINITIONS**

The definitions provided herein shall be applicable to this Declaration and also to any amendment or supplemental Declaration (unless the context implicitly or explicitly shall prohibit), recorded against Area A pursuant to the provision of this Declaration.

**Section 1.** "Affordable Housing Project" means an affordable housing project operated in conformity with this Regulatory Agreement throughout the Required Covenant Period.

**Section 2.** "Affiliated Person" means, when used in reference to a specific person, any person that directly or indirectly controls or is controlled by or under common control with the specified person, any person that is an officer or director of, a trustee of, or a general partner, managing member or operator in, the specified person or of which the specified person is an officer, director, trustee, general partner or managing member, or any person that directly or indirectly is the beneficial owner of ten percent (10%) or more of any class of the outstanding voting securities of the specified person.

**Section 3.** "Affordable Rent" has the following meaning: For an Extremely Low Income Household, Affordable Rent means a monthly rent which does not exceed one twelfth (1/12th) of thirty percent (30%) of thirty percent (30%) of the Median Income for the Area for a household size

appropriate to the Unit or, if greater, 30% Tax Credit Rent. For a 40% Very Low Income Household, Affordable Rent means a monthly rent which does not exceed one twelfth (1/12th) of thirty percent (30%) of fifty percent (50%) of the Median Income for the Area for a household size appropriate to the Unit, or, if greater 40% Tax Credit Rent. For a 50% Very Low Income Household, Affordable Rent means a monthly rent which does not exceed one-twelfth (1/12th) of thirty percent (30%) of fifty percent (50%) of Median Income for a household size of appropriate to the Unit or, if greater, 50% Tax Credit Rent. For a Lower Income Household, Affordable Rent means a monthly rent which does not exceed one twelfth (1/12th) of thirty percent (30%) of sixty percent (60%) of the Median Income for the Area for a household size appropriate to the Unit or if, greater, 60% Tax Credit Rent. For a Moderate Income Household, if any, Affordable Rent means a monthly rent which does not exceed one twelfth (1/12th) of thirty percent (30%) of one hundred ten percent (110%) of the Median Income for the Area for a household size appropriate to the Unit. "Household size appropriate to the Unit," as used herein, means two persons for each one-bedroom Unit (if any), and three persons for each two bedroom Unit, excepting that in connection with determining household size when applying tax credit rents, the household size shall be deemed to be 1.5 persons per bedroom (or one person per studio). The maximum monthly rental amount of the Units shall be adjusted annually by the formula set forth above upon the promulgation of revised Riverside Primary Metropolitan Statistical Area median income figures by regulation of the California Department of Housing and Community Development. Actual rent charged may be less than such maximum rent at a cost not in excess of the lesser of (i) that rent which may be charged the applicable Eligible Person or Family pursuant to Section 50053 of the California Health and Safety Code and (ii) the limits as set forth in this Agreement. Notwithstanding the foregoing portion of this paragraph, in the event any Units are assisted, financed or receive the benefit of HOME Moneys, the maximum allowable rent for each of the HOME Units during the HOME Compliance Period shall not exceed the applicable Low HOME rent amount determined pursuant to the HOME Regulations. Actual rent charged may be less than such maximum allowable rent. It is contemplated that if HOME Moneys are applied, all of the Units in the Development will be HOME Units

Section 4. "Applicable Federal Rate" means the interest rate set by the United States Treasury from time to time for the purpose of determining applicable Low Income Housing Tax Credit interest rates. The Applicable Federal Rate is published by the Internal Revenue Service in monthly revenue rulings.

Section 5. "Approved Housing Project" means all improvements as provided to be developed by Developer under the DDA. The Approved Housing Project must be completed in strict conformity with all specifications contained in or referred to in the DDA.

Section 6. "Area" means the Riverside Primary Metropolitan Statistical Area, as periodically defined by HUD.

Section 7. "ARR Guidelines" means pursuant to the NSP, the City Council of City adopted, approved, and established Guidelines ("ARR Guidelines") for City's Acquisition, Rehabilitation and Resale Program ("ARR Program") on November 25, 2008, which provide in part for the acquisition of foreclosed or vacant multi-family units within the area designated in City's NSP Action Plan ("NSP Area") by City and/or a developer partner, rehabilitation of such unit and the rental of such dwelling units to households having incomes at or below fifty percent (50%) of area median income. The ARR Guidelines are incorporated herein by this reference.

Section 8. “ARR Program” means City’s Acquisition, Rehabilitation and Resale Program (“ARR Program”) on November 25, 2008, which provide in part for the acquisition of foreclosed or vacant multi-family units within the area designated in City’s NSP Action Plan (“NSP Area”) by City and/or a developer partner, rehabilitation of such unit and the rental of such dwelling units to households having incomes at or below fifty percent (50%) of area median income.

Section 9. “Audited Financial Statement” means an audited financial statement, including without limitation a profit and loss statement, generated by Cohn Reznick or another third party certified public accountant acceptable to City in its reasonable discretion, showing, for the previous Year, on a monthly basis and in an easily readable format, Gross Revenues, Operating Expenses, Debt Service, Operating Reserve, Capital Replacement Reserve and Residual Receipts.

Section 10. [Reserved].

Section 11. [Reserved]

Section 12. “Calculation of Affordable Rents” means the worksheet substantially in the form of Attachment No. 7 to the DDA.

Section 13. “Capital Replacement Reserve” means a reserve fund to be established and maintained by Developer throughout the Required Covenant Period as a capital reserve in the amount established therefor by Article II, Section 5 hereof. To the extent Developer is required to maintain a Capital Replacement Reserve by any Approved Construction and/or Permanent Lender, Developer shall receive a credit hereunder for such amounts maintained by it in compliance with such Approved Construction and/or Permanent Lender capital replacement reserve requirement.

Section 14. “Certificate” or “Certification” is defined in Section 3(a).

Section 15. “Certificate of Continuing Program Compliance” means a certificate in the form of Attachment No. 4 to the DDA.

Section 16. “City” means and refers to the City of Moreno Valley, a municipal corporation.

Section 17. “City Code” means and refers to the City of Moreno Valley Municipal Code as revised from time to time.

Section 18. “Common Areas” means all areas on Area A that are open or accessible to all tenants of Area A (such as grounds, but excluding buildings).

Section 19. “Developer Fee” means the lesser of: (i) Two Million Dollars (\$2,000,000.00) or (ii) that amount of a fee to the Developer included within basics in connection with the Tax Credits, all inclusive of the Deferred Developer Fee; Developer Fee as received by Developer shall be limited to such amount.

Section 20. “Environmental Laws” means all laws, ordinances and regulations relating to Hazardous Materials, including, without limitation: the Clean Air Act, as amended, 42 U.S.C. Section 7401, *et seq.*; the Federal Water Pollution Control Act, as amended, 33 U.S.C. Section 1251 *et seq.*; the Resource Conservation and Recovery Act of 1976, as amended, 42 U.S.C. Section 6901, *et seq.*; the Comprehensive Environment Response, Compensation and Liability Act of 1980, as



amended (including the Superfund Amendments and Reauthorization Act of 1986, “CERCLA”), 42 U.S.C. Section 9601, *et seq.*; the Toxic Substances Control Act, as amended, 15 U.S.C. Section 2601 *et seq.*; the Occupational Safety and Health Act, as amended, 29 U.S.C. Section 651, the Emergency Planning and Community Right to Know Act of 1986, 42 U.S.C. Section 11001 *et seq.*; the Mine Safety and Health Act of 1977, as amended, 30 U.S.C. Section 801 *et seq.*; the Safe Drinking Water Act, as amended, 42 U.S.C. Section 300f *et seq.*; all comparable state and local laws, laws of other jurisdictions or orders and regulations; and all laws, ordinances, statutes, codes, rules, regulations, orders and decrees of the United States, the State, the County, the City, or any other political subdivision in which Area A is located, and of any other political subdivision, agency or instrumentality exercising jurisdiction over City, Developer, or Area A.

Section 21. “Extremely Low Income Households” means households earning not greater than thirty percent (30%) of Median Income for the Area pursuant to Health and Safety Code Section 50106.

Section 22. “Extremely Low Income Unit” or “Extremely Lower Income Unit” means Unit occupied at Affordable Rent by an Extremely Low Income Household.

Section 23. “General Partner Fee” means a fee if charged by the general partner not to exceed Thirty Thousand Dollars (\$30,000.00) per year, increasing by two and one half percent (2.5%) annually.

Section 24. “Governmental Requirements” means all laws, ordinances, statutes, codes, rules, regulations, orders, and decrees of the United States, the state, the County, the City, or any other political subdivision in which Area A is located, and of any other political subdivision, City, or instrumentality exercising jurisdiction over the Developer or Area A.

Section 25. “Gross Income” means all payments from all sources received by a person (together with the gross income of all persons of the age of 18 years or older who intend to reside with such person in one residential unit) whether in cash or in kind as calculated pursuant to the Department of Housing and Urban Development (“HUD”) Regulations (24 C.F.R. §5.600 *et seq.*) in effect as of the Date of Agreement.

Section 26. “Gross Revenues” means the sum of: (i) the total rental income and all other revenues or income received by the Developer or its successors or assigns in connection with the Rental Project, including without limitation Housing Rent, laundry charges (as received by Developer) or consideration received from an entity that contracts to provide laundry services, payments in connection with Section 8 certificates, if any (including payments under such certificates that are in excess of the restricted rents provided for herein), cable income or consideration received from an entity that contracts to provide cable services, each of (ii) amounts paid to Developer or any Affiliated Person of Developer on account of Operating Expenses for further disbursement by Developer or such affiliate to a third party or parties, including, without limitation, grants received to fund social services or other housing supportive services at the Rental Project; (iii) late charges and interest paid on rentals; (iv) rents and receipts from licenses, concessions, vending machines, coin laundry, and similar sources; (v) other fees, charges, or payments not denominated as rental but payable to Developer in connection with the rental of office, retail, storage, or other space in the Rental Project; (vi) consideration received in whole or in part for the cancellation, modification, extension or renewal of leases; and (vii) interest and other investment earnings on security deposits, reserve accounts and other Rental Project accounts to the extent disbursed, but does not include:

(x) the proceeds of the sale of Tax Credits to finance the Rental Project; (y) Refinancing Net Proceeds (provided the refinancing is permitted by and is accomplished in accordance with the City Regulatory Agreement and the DDA); or (z) insurance proceeds applied to reconstruct or repair the Improvements.

Section 27. “Hazardous Material” or “Hazardous Materials” means and include any substance, material, or waste which is or becomes regulated by any local governmental authority, including the County, the Regional Water Quality Control Board, the State of California, or the United States Government, including, but not limited to, any material or substance which is: (i) defined as a “hazardous waste,” “acutely hazardous waste,” “restricted hazardous waste,” or “extremely hazardous waste” under Sections 25115, 25117 or 25122.7, or listed pursuant to Section 25140, of the California Health and Safety Code, Division 20, Chapter 6.5 (Hazardous Waste Control Law); (ii) defined as a “hazardous substance” under Section 25316 of the California Health and Safety Code, Division 20, Chapter 6.8 (Carpenter Presley Tanner Hazardous Substance Account Act); (iii) defined as a “hazardous material,” “hazardous substance,” or “hazardous waste” under Section 25501 of the California Health and Safety Code, Division 20, Chapter 6.95 (Hazardous Materials Release Response Plans and Inventory); (iv) defined as a “hazardous substance” under Section 25281 of the California Health and Safety Code, Division 20, Chapter 6.7 (Underground Storage of Hazardous Substances); (v) petroleum; (vi) asbestos and/or asbestos containing materials; (vii) lead based paint or any lead based or lead products; (viii) polychlorinated biphenyls, (ix) designated as a “hazardous substance” pursuant to Section 311 of the Clean Water Act (33 U.S.C. Section 1317); (x) defined as a “hazardous waste” pursuant to Section 1004 of the Resource Conservation and Recovery Act, 42 U.S.C. Section 6901, *et seq.* (42 U.S.C. Section 6903); (xi) Methyl tert Butyl Ether; (xii) defined as “hazardous substances” pursuant to Section 101 of the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. Section 9601, *et seq.* (42 U.S.C. Section 9601); (xiii) any other substance, whether in the form of a solid, liquid, gas or any other form whatsoever, which by any “Governmental Requirements” (as defined in Paragraph (c) of this Section 308) either requires special handling in its use, transportation, generation, collection, storage, handling, treatment or disposal, or is defined as “hazardous” or harmful to the environment; and/or (xiv) lead based paint pursuant to and defined in the Lead Based Paint Poisoning Prevention Act, Title X of the 1992 Housing and Community Development Act, 42 U.S.C. § 4800, *et seq.*, specifically §§ 4821–4846, and the implementing regulations thereto. Notwithstanding the foregoing, “Hazardous Materials” shall not include such products in quantities below attainment levels identified in one or more of the enactments identified above as Governmental Requirements, including those product and amounts as are customarily used in the construction, maintenance, rehabilitation, management, operation and residence of residential developments or associated buildings and grounds, or typically used in residential activities in a manner typical of other comparable residential developments, or substances commonly ingested by a significant population living within the Development, including without limitation alcohol, aspirin, tobacco and saccharine.

Section 28. “HOME Compliance Period” means that period of time commencing as of the date the first HOME Unit is rented to a tenant household and ending on the twentieth (20th) anniversary of the issuance of the final certificate of occupancy for the Improvements by City.

Section 29. “HOME Moneys” means moneys that become available to City under the HOME Program that are applied in connection with development of certain Units at the Rental Project.

Section 30. “HOME Program” means that program established by the HOME Regulations.

Section 31. “HOME Regulations” means those regulations set forth at 24 CPR, Part 92, as such regulations may be revised from time to time. In the event City hereafter commits moneys available to City under the HOME Program to the Rental Project, then a copy of the HOME Regulations will be kept on file with City as a public record; provided that any failure of City to maintain a copy of such HOME Regulations on file shall not excuse the obligation for performance by Developer.

Section 31. “HOME Rent” means “Low HOME Rent” for Riverside County as determined in conformance with §92.252(b) and the remainder of the HOME Regulations, and applying utility allowances as determined by the County Housing Authority (and if the County Housing Authority makes no such determinations of utility allowances, then utility allowances established from time to time by City).

Section 32. “HOME Units” means [to come: designate those Units, if any, that are financed with, constructed with, or receive the benefit of HOME Moneys. It is contemplated that if any HOME Moneys are made available to the Project, all of the Units will be HOME Units].

Section 33. “Improvements” means all improvements required by the DDA to be accomplished by the Developer, as more fully described in the Scope of Development thereto.

Section 34. “Limited Partner Fee” means a fee if charged by the limited partner under the Partnership Agreement, not to exceed Five Thousand Dollars (\$5,000.00) per year, increasing by two and one half percent (2.5%) annually so long as the Partnership Agreement is in effect.

Section 35. “Low Income Household” or “Lower Income Household” means a household earning not greater than eighty percent (80%) of median income for the Area as set forth by regulation of the California Department of Housing and Community Development, pursuant to Health and Safety Code Section 50079.5.

Section 36. “Low Income Unit” or “Lower Income Unit” means Unit occupied at Affordable Rent by a Low Income Household.

Section 37. “Map of the Site” means Exhibit B hereto.

Section 38. “Median Income for the Area” means the median income for the Riverside Primary Metropolitan Statistical Area, as periodically defined by HUD Area as most recently determined by the Secretary of Housing and Urban Development under Section 8 of the United States Housing Act of 1937, as amended, or, if programs under Section 8 are terminated, Median Income for the Area determined under the method used by the Secretary prior to such termination.

Section 39. “Moderate Income Households” means households earning not greater than one hundred twenty percent (120%) of Median Income for the Area.

Section 40. “Moderate Income Unit” means a Unit occupied at Affordable Rent by a Moderate Income Household.

Section 41. “NSP” means the Neighborhood Stabilization Program (“NSP”) enacted by the United States Congress as part of the Housing and Economic Recovery Act of 2008 (Pub. L. 110-289, approved July 30, 2008, sometimes referred to as “HERA”).

Section 42. “NSP3” means the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Pub.L. 111-203, approved July 21, 2010, including regulations cited at 75 FR 64322).

Section 43. “Operating Expenses” means actual, reasonable and customary costs, fees and expenses directly incurred and for which payment has been made and which are attributable to the operation, maintenance, and management of the Rental Project, excluding the Capital Replacement Reserve and consisting of only the following (and such additional items, if any, as to which the prior written approval of the City Manager is first obtained. Such approval shall be granted, granted subject to conditions, or refused at the reasonable discretion of the City Manager): painting, cleaning, repairs and alterations; landscaping; utilities; rubbish removal; sewer charges; costs incurred to third parties in connection with generating laundry charges (but in no event to exceed the laundry charges); real and personal property taxes and assessments; insurance premiums; security; advertising, promotion and publicity; office, janitorial, cleaning and building supplies; the actual and customary salary payable to an on-site manager which directly and exclusively benefits residents of the Rental Project; the actual and customary salary of one assistant manager, one on-site maintenance manager and such other personnel, if any, as incurred for the hiring of unrelated third parties for on-site management, which directly and exclusively benefit residents of the Rental Project, subject to the prior written approval of the City Manager at his or her reasonable discretion; a management fee (“Management Fee”) (excluding salaries and benefits payable to any on-site personnel) of not to exceed six percent (6%) of Gross Revenues; purchase, repairs, servicing and installation of appliances, equipment, fixtures and furnishings; reasonable and customary fees and expenses of accountants, attorneys, consultants and other professionals as incurred commencing after the completion of the Improvements (as evidenced by the issuance by City of a certificate of occupancy for the corresponding building developed as part of the Improvements) in connection with the operation of the Rental Project; the General Partner Fee; the Limited Partner Fee; the deferred portion of the Developer Fee; tenant improvements that are not included in the costs of the Improvements, and payments made by the Developer to satisfy indemnity obligations and other payments by the Developer pursuant to the DDA other than to the Developer, the Developer’s partners or other related persons; provided, however, that payments to parties related to Developer for Operating Expenses must not exceed market rates. The Operating Expenses shall not include non-cash expenses, including without limitation, depreciation. The Operating Expenses shall be reported in the Audited Financial Statement and shall be broken out in line item detail.

Section 44. “Operating Reserve” means a reserve fund to be established by Developer as of the City Disposition Conveyance as a reserve for operating expenses in the amount of One Hundred Twenty-Six Thousand Dollars (\$126,000.00), and may be increased annually by two and one-half percent (2.5%) per year, or such other amount as the City Manager and Developer shall mutually approve. Interest earned on moneys held in the Operating Reserve shall be retained in the Operating Reserve unless otherwise directed by the Permanent Lender. To the extent Developer is required to maintain an Operating Reserve by any Approved Construction and/or Permanent Lender, Developer shall receive a credit hereunder for such amounts maintained by it in compliance such Approved Construction and/or Permanent Lender operating reserve requirement. It is contemplated that the Operating Reserve will be held by the Permanent Lender.

Section 45. “Partnership Agreement” means the agreement(s) which set(s) forth the terms of Developer’s (or its approved Affiliated Persons’) limited partnership, as such agreement(s) may be amended from time to time, so long as consistent with the requirements of the DDA and this Regulatory Agreement. The Partnership Agreement shall include provisions which incorporate or otherwise conform to the cash flow priorities included in the definition of “Residual Receipts” set forth in the DDA.

Section 46. “Prescribed Income Levels” means households at the following income levels: (i) for one (1) studio Unit, thirty percent (30%) of Median Income; (ii) for two (2) studio Units, fifty percent (50%) of Median Income; (iii) for two (2) one-bedroom Units, thirty percent (30%) of Median Income; (iv) for fifteen (15) one-bedroom Units, fifty percent (50%) of Median Income; (v) for four (4) one-bedroom Units, sixty percent (60%) of Median Income; (vi) for fourteen (14) two-bedroom Units, fifty percent (50%) of Median Income; (vii) for eight (8) two-bedroom Units, sixty percent (60%) of Median Income; (viii) for two (2) three-bedroom Units, thirty percent (30%) of Median Income; (ix) for seven (7) three-bedroom Units, fifty percent (50%) of Median Income; and (x) for eleven (11) three-bedroom Units, sixty percent (60%) of Median Income; provided, however, that Developer may adjust the configuration of the bedroom sizes of the Units in the Senior Citizen Component, slightly, to better accommodate Senior Citizen Households with the consent of the City, which consent shall not be unreasonably withheld.

Section 47. “Primary Construction Loan” means the mortgage loans obtained by the Developer from a state agency or instrumentality or a reputable and established bank, savings and loan association, or other similar financial institution for financing the development (but not the operation) of the Rental Project pursuant to the DDA, and reimbursement obligations to approved lenders securing credit enhancement facilities.

Section 48. “Primary Permanent Loan” means the mortgage loan obtained by the Developer from a state agency or instrumentality or a reputable and established bank, savings and loan association, or other similar financial institution in an amount limited to satisfaction of the outstanding balance of the Primary Construction Loan or in an amount in excess of such outstanding balance so long as such excess proceeds are used to pay (or prepay) the Developer Fee, amounts outstanding under the City Initial Note and the City Subsequent Note, Cost Overrun Amounts and outstanding development costs.

Section 49. “Property Manager” means the person or organization responsible for the management and operation of the Rental Project, the reasonable approval of which by City shall be required, and which shall initially be AWI Management Corporation, or another manager mutually acceptable to City and Developer.

Section 50. “Refinancing Net Proceeds” means the proceeds of any approved refinancing of any of the Primary Construction Loan or the Primary Permanent Loan or other approved financing secured by Area A, net of: (i) the amount of the financing which is satisfied out of such proceeds; (ii) reasonable and customary costs and expenses incurred in connection with the refinancing; (iii) the balance, if any, of the Deferred Developer Fee (provided that Developer’s share shall be reduced to the extent payment of additional amounts is required to be made to City (including without limitation Section 5.3.2 of the DDA) for the Development; (iv) the balance of loans to the Development made by the limited partners of Developer for development or operating deficits, amounts expended to maintain compliance with the Tax Credit Rules, or contributions for capital expenditures in excess of available Project revenues, if any, including interest at the Applicable

Federal Rate; (v) the balance, if any, of operating loans or development loans made by the general partners of Developer to the Development, including interest at the Applicable Federal Rate; (vi) the return of capital contributions, if any, to the Development made by the general partners of Developer that were used to pay the Deferred Developer Fee; (vii) payment of unpaid Tax Credit adjustment amounts or reimbursement of Tax Credit adjustment amounts paid by the administrative and/or managing general partners and/or the guarantors to the Development pursuant to the approved Partnership Agreement, if any; and (viii) the payment to the administrative general partner of Developer of a refinancing fee, which fee is and shall be subject to the approval of the Executive Director at the time of each refinancing and which shall not exceed five percent (5%) of the amount of the approved refinancing.

Section 51. “Regulatory Agreement” means this Regulatory Agreement and any amendments, modifications or supplements which may also be referred to herein as these “CC&Rs” or this “Declaration.”

Section 52. “Rental Project” means the seventy-two (72) Unit residential rental development on the Site.

Section 53. “Reporting Amount(s)” means the sum of Two Hundred Fifty Hundred Dollars (\$250.00) per Unit per Year for each dwelling unit as to which Developer fails to deliver to City, during any Year, a full and adequate report that conforms to Section 33418 of the California Health and Safety Code.

Section 54. “Required Affordable Unit” means any of seventy-one (71) of the seventy-two (72) dwelling units in the Rental Project, as constructed under the DDA, and available to, occupied by, or held vacant for occupancy only by tenants qualifying as Extremely Low Income Households, 40% Very Low Income Households, 50% Very Low Income Households, and Low Income Households, conforming to Prescribed Income Levels and rented at Affordable Rent.

Section 55. “Required Covenant Period” means the period commencing on the date this Regulatory Agreement is recorded and ending fifty-five (55) years thereafter.

Section 56. “Rules and Regulations” means each of: (i) Health and Safety Code Sections 33413, 33334.2, 33334.3, 50052.5, 50053 and 50105; (ii) the Davis-Bacon Act (40 U.S.C. 3141 *et seq.*); (iii) Community Development Block Grant (CDBG) program as authorized under the Housing and Community Development Act of 1974, 42 U.S.C. 5301 *et seq.* (“HCD Act”) and the regulations promulgated thereunder at 24 CFR 570; (iv) The Housing and Economic Recovery Act of 2008 (Public Law 110-289) (“HERA”); (v) The American Reinvestment and Recovery Act of 2009 (Public Law 111-005) (the “Recovery Act”); (vi) Notice of Fund Availability (NOFA) for the Neighborhood Stabilization Program 2 under the American Recovery and Reinvestment Act, 2009 (Docket No. FR 5321-N-01) (the “NSP2 NOFA”); (vii) the Community Development Block Grant (CDBG) program as authorized under the Public Housing and Community Development Act of 1974, 42 U.S.C. 5301 *et seq.* (“HCD Act”) as amplified by regulations set forth at 24 CFR 570; (viii) the Housing and Economic Recovery Act of 2008 (Public Law 110-289) (“HERA”); (ix) the American Reinvestment and Recovery Act of 2009 (Public Law 111-005) (the “Recovery Act”); (x) the Notice of Fund Availability (NOFA) for the Neighborhood Stabilization Program 2 under the American Recovery and Reinvestment Act, 2009 (Docket No. FR 5321-N-01) (the “NSP2 NOFA”); (xi) the National Environmental Policy Act of 1969 and related federal environmental authorities and regulations at 24 CFR Part 58; (xii) City’s Final Neighborhood Stabilization Program as amended by

Substantial Amendment to City's 2008-2009 Annual Action Plan, as adopted November 25, 2008; and (xiii) the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Pub. 2 111-203, approved July 21, 2010, including regulations cited at 75 FR 64322) sometimes referred to as "NSP3."

Section 57. "Senior Citizen Component" means the building in the Housing Component reserved for occupancy by Senior Citizen Households. All of the Senior Citizen Units shall be contained only in one building, which building shall consist solely of Senior Citizen Units.

Section 58. "Senior Citizen Household" means a household in which all persons are 62 years of age or older.

Section 59. "Senior Citizen Unit" means a Unit restricted to occupancy by a Senior Citizen Household.

Section 60. "Site" means all of the real property and appurtenances as described in the Recitals above, including all structures and other improvements thereon, and those hereafter constructed.

Section 61. "Tax Credit Rules" means Section 42 of the Internal Revenue Code and/or California Revenue and Taxation Code Sections 17057.5, 17058, 23610.4 and 23610.5 and California Health and Safety Code Section 50199, *et seq.*, and the rules and regulations implementing the foregoing.

Section 62. "Tax Credits" means 9% Low Income Tax Credits granted pursuant to Section 42 of the Internal Revenue Code and/or California Revenue and Taxation Code Sections 17057.5, 17058, 23610.4 and 23610.5 and California Health and Safety Code Section 50199, *et seq.*

Section 63. "Unit" means a dwelling unit on the Rental Project.

Section 64. "Very Low Income Households" means Very Low Income Households whose Adjusted Income does not exceed fifty percent (50%) of Median Income for the Area as determined by the United States Department of Housing and Urban Development from time to time and as set forth in Health and Safety Code Section 50105.

Section 65. "Very Low Income Unit" means a Unit occupied at Affordable Rent by a Very Low Income Household.

Section 66. "Year" means a calendar year.

Section 67. "30% Tax Credit Rent" means the maximum allowable rent for rental units restricted to occupancy by this Agreement to Extremely Low Income Households as established from time to time by TCAC as part of the Tax Credit Rules.

Section 68. "40% Tax Credit Rent" means the maximum allowable rent for rental units restricted to occupancy by this Agreement to 40% Very Low Income Households as established from time to time by TCAC as part of the Tax Credit Rules.

Section 69. “40% Very Low Income Households” means households earning not greater than forty percent (40%) of Median Income for the Area.

Section 70. “50% Very Low Income Households” means households earning not greater than fifty percent (50%) of Median Income for the area.

Section 71. “50% Tax Credit Rent” means the maximum allowable rent for rental units restricted to occupancy by this Agreement to 50% Very Low Income Households as established from time to time by TCAC as part of the Tax Credit Rules.

Section 72. “60% Tax Credit Rent” means the maximum allowable rent for rental units restricted to occupancy by this Agreement to Low Income Households as established from time to time by TCAC as part of the Tax Credit Rules.

**ARTICLE II**  
**LAND USE RESTRICTIONS; AFFORDABLE UNITS;**  
**INCOME LIMITS; MANAGEMENT**

Section 1. Uses. Developer shall develop the Approved Housing Project on the Site in conformity with the DDA. Thereafter, Area A shall be operated as an Affordable Housing Project and devoted only to the uses specified in the DDA and the City Disposition Deed for the periods of time specified herein. All uses conducted on Area A, including, without limitation, all activities undertaken by Developer pursuant to the DDA, shall conform to all applicable provisions of the City Code and the City Approvals.

Area A shall be used, maintained and operated in accordance with the DDA, the City Disposition Deed, and this Regulatory Agreement for the Required Covenant Period. None of the units in the Rental Project shall at any time be utilized on a transient basis nor shall the Rental Project or any portion thereof ever be used as a hotel, motel, dormitory, fraternity or sorority house, rooming house, hospital, nursing home, sanitarium, rest home or trailer court or park. No part of the Site, from the date Developer acquired Area A, has been or will at any time be owned or used as a cooperative housing corporation or a community apartment project or a stock cooperative.

Section 2. Affordable Housing.

*Number of Units.* Throughout the Required Covenant Period, the Required Affordable Units shall be rented to households at the following income levels: (i) for one (1) one-bedroom Unit, thirty percent (30%) of Median Income; (ii) for one (1) one-bedroom Unit, forty percent (40%) of Median Income; (iii) for four (4) one-bedroom Units, fifty percent (50%) of Median Income; (iv) for two (2) one-bedroom Units, sixty percent (60%) of Median Income; (v) for four (4) two-bedroom Units, thirty percent (30%) of Median Income; (vi) for four (4) two-bedroom Units, forty percent (40%) of Median income; (vii) for twenty (20) two-bedroom Units, fifty percent (50%) of Median Income; (viii) for eleven (11) two-bedroom Units, sixty percent (60%) of Median Income; (ix) for three (3) three-bedroom Units, thirty percent (30%) of Median Income; (x) for two (2) three-bedroom Units, forty percent (40%) of Median Income; (xi) for eleven (11) three-bedroom Units, fifty percent (50%) of Median Income; and (xii) for eight (8) three-bedroom Units, sixty percent (60%) of Median Income; provided, however, that Developer may adjust the configuration of the bedroom sizes of the Units in the Senior Citizen Component, slightly, to better accommodate Senior Citizen Households with the consent of the City, which consent shall not be unreasonably withheld.



All Required Affordable Units shall be rented at Affordable Rent. For this purpose, a tenant who qualifies as an Extremely Low Income Household at the time he or she first occupies an Affordable Unit shall be deemed to continue to be so qualified until such time as a recertification of such individual's or family's income in accordance with Section 3 below demonstrates that such individual or family no longer qualifies as an Extremely Low Income Household. Moreover, a unit previously occupied by an Extremely Low Income Household, and then vacated shall be considered occupied by such Extremely Low Income Household until reoccupied, other than for a temporary period, at which time the character of the unit shall be redetermined; a similar protocol shall apply with respect to 40% Very Low Income Units, 50% Very Low Income Units, Lower Income Units and Moderate Income Units. In no event shall such temporary period exceed thirty-one (31) days.

At such time as a tenant ceases to qualify as an Extremely Low Income Household, the unit occupied by such tenant shall cease to be an Extremely Low Income Unit. Developer shall replace each such Extremely Low Income Unit by designating the next available unit and any necessary units thereafter as an Extremely Low Income Unit. For purposes of this Agreement, such designated unit will be considered an Extremely Low Income Unit if it is held vacant and available for occupancy by an Extremely Low Income Household, and, upon occupancy, the income eligibility of the tenant as an Extremely Low Income Household is verified and the unit is rented at Affordable Rent. A similar protocol shall apply with respect to 40% Very Low Income Units, 50% Very Low Income Units and Lower Income Units, respectively.

In the event a household's income initially complies with the corresponding income restriction for an Extremely Low Income Household but the income of such household increases, such increase shall not be deemed to result in a violation of the restrictions of this Regulatory Agreement concerning limitations upon income of occupants, provided that the occupancy by such household is for a reasonable time of not to exceed one year (measured from the time the income of the household ceases to qualify at the designated affordability level). Developer shall include in its rental agreements provisions which implement this requirement and limitation, and Developer shall expressly inform prospective renters as to this limitation prior to the commencement of a tenancy.

*Duration of Affordability Requirements.* The Required Affordable Units shall be available to and occupied by Extremely Low Income Households and, to the extent provided under Prescribed Income Levels, 40% Very Low Income Households, 50% Very Low Income Households and Lower Income Households, at Affordable Rent throughout the Required Covenant Period. All tenants residing in any Unit for which rents are limited by virtue of this Regulatory Agreement or pursuant to other regulation during the last two (2) years of the Required Covenant Period shall be given notice by Developer at least once every six (6) months prior to the expiration date of this requirement, that the rent payable on such Unit may be raised to a market rate rent at the end of the Required Covenant Period.

*Selection of Tenants.* As specified hereinbelow, Developer shall demonstrate to City that the proposed tenants of each of the Required Affordable Units constitutes an Extremely Low Income Household or, to the extent provided herein, a 40% Very Low Income Household, 50% Very Low Income Household or Lower Income Household.

Developer shall restrict occupancy of all of the Units in the Senior Housing Component as Senior Citizen Units occupied by "Senior Citizens" and "Qualified Permanent Residents" (as those terms are or may be defined in California Civil Code Section 51.3). California Civil Code Section 51.3 presently provides as follows: At least one person in residence in each

dwelling unit must be a Senior Citizen, and other residents in the same dwelling unit who are not Senior Citizens must be Qualified Permanent Residents. Temporary guests of a Senior Citizen or Qualified Permanent Resident shall be allowed for a period of not more than sixty (60) days in any twelve (12) month period. Upon the death, dissolution of marriage, hospitalization or other prolonged absence of the Senior Citizen in a dwelling unit, any Qualified Permanent Resident who has continuously resided in the dwelling unit with such Senior Citizen shall be permitted to continue as a resident of that dwelling unit. "Permitted Health Care Residents" (as that term is or may be defined in California Civil Code Section 51.3) shall be permitted to occupy any dwelling unit during any period that such person is actually providing live in, long term or hospice health care to a Senior Citizen tenant or Qualified Permanent Resident tenant for compensation.

Prior to the rental or lease of an Required Affordable Unit to a tenant, and as set forth in this Section 2 of Article II of this Declaration, Developer shall require the tenant to execute a written lease and to complete an Income Verification certifying that the tenant(s) occupying the Required Affordable Unit is/are an Extremely Low Income Household or, to the extent provided herein, a 40% Very Low Income Household, 50% Very Low Income Household or a Lower Income Household and meet(s) the eligibility requirements established for the Required Affordable Unit. Developer shall verify the income of the tenant(s).

Developer shall accept as tenants on the same basis as all other prospective tenants, persons who are recipients of federal certificates for rent subsidies pursuant to the existing program under Section 8 of the United States Housing Act of 1937, or its successor. Developer shall not apply selection criteria to Section 8 certificate holders which are more burdensome than criteria applied to any other prospective tenants.

*Determination of Affordable Rent for the Affordable Units.* The Affordable Units shall be rented or leased at Affordable Rent. As of the approval of the DDA, Affordable Rent is calculated in accordance with the Affordable Rent Worksheet; provided that Tax Credit Rents are to be applied if Tax Credits are obtained for the Improvements and the Rental Project. The maximum monthly rental for the Affordable Unit shall be adjusted annually as permitted by Section 50053 of the California Health and Safety Code based on the annual adjustment to the Median Income for the Area established pursuant to Section 50093 of the California Health and Safety Code, as more particularly set forth in the Affordable Rent Worksheet.

*Relationship to Tax Credit Requirements.* Notwithstanding any other provision of this Regulatory Agreement, if, following completion of construction of the Improvements, Developer restricts a greater number of Units as affordable units than is required under this Regulatory Agreement as of the date it is first executed, Developer agrees, upon request therefor by City, to execute and record such addendum or supplement to this Regulatory Agreement as would restrict such additional units to be affordable on a similar basis to that set forth herein.

DEVELOPER UNDERSTANDS AND KNOWINGLY AGREES THAT THE MAXIMUM RENTAL FOR THE AFFORDABLE UNITS ESTABLISHED BY THE DDA, THIS REGULATORY AGREEMENT AND THE CITY DISPOSITION DEED IS SUBSTANTIALLY BELOW THE FAIR MARKET RENT FOR THE AFFORDABLE UNITS.

Section 3. Developer Verification and Program Compliance.

*Income Verification and Certification.* Developer will obtain and maintain on file an Income Verification from each tenant (for every Unit on Area A), dated immediately prior to the initial occupancy of such tenant in the Rental Project.

On June 15, 2017 and annually thereafter, Developer shall file with City or its designee a Certificate, containing all information required pursuant to Health and Safety Code Section 33418, in a form prescribed by City. Each Certificate shall cover the immediately preceding fiscal year. If HOME Moneys are used, Developer shall also provide reporting to City for verification of household incomes as provided under the HOME Regulations.

Developer shall maintain on file throughout the Required Covenant Period each tenant's executed lease and Income Verification and rental records for the Rental Project and the Housing Units. Developer shall maintain complete and accurate records pertaining to the Extremely Low Income Units, the 40% Very Low Income Units, the 50% Very Low Income Units, the Lower Income Units and any other Units, and will permit any duly authorized representative of City to inspect the books and records of Developer pertaining to the Rental Project, including those records pertaining to the occupancy of the Extremely Low Income Units, the 40% Very Low Income Units, the 50% Very Low Income Units, Lower Income Units and any other units. Developer shall prepare and submit to City annually commencing the June 15 first following the issuance of the Certificate of Completion and continuing throughout the Required Covenant Period, a Certificate of Continuing Program Compliance. Such documentation shall state for each unit in the Rental Project the unit size, the rental amount, the number of occupants, and the income of the occupants and any other information which may be used to determine compliance with the terms of this Regulatory Agreement and the DDA, including without limitation compliance with statutes and regulations pertaining to NSP, NSP3, the ARR Regulations and, if HOME Moneys are used, HOME Regulations (including without limitation Section 92.251 thereof).

As part of its annual report, Developer shall include a statement of amounts payable by Developer under this Regulatory Agreement supported by an Audited Financial Statement (prepared by an independent accounting firm reasonably acceptable to City) which sets forth information in detail sufficient for adequate review by City for the purposes of confirming those amounts payable by Developer to City, including without limitation amounts payable under one or more of the City Initial Note and the City Subsequent Note, as well as showing the general financial performance of the Rental Project ("Annual Financial Report"). Each Annual Financial Report shall include a profit and loss statement showing Gross Revenues, Operating Expenses, Debt Services, Operating Reserve, Capital Replacement Reserve, Chargeable Reserves (and all components thereof), and Residual Receipts, all certified by the Audited Financial Statement. In the event the amounts reported or paid deviate by five percent (5%) or more from that amount owing upon review of Developer's submittal, Developer shall reimburse City for its cost to review (which may require engagement of auditors) and collect the amounts owing; such amounts shall, until paid, be added to the amount payable under one or more of the City Initial Note and the City Subsequent Note.

In addition, as part of its annual report, at City's request, but not less frequently than prior to each initial and subsequent rental of each Unit to a new tenant household (but not lease renewals) and annually thereafter, Developer shall also provide to City completed income computation, asset evaluation, and certification forms, for any such tenant or tenants, in substantially the form provided by City from time to time. Developer shall obtain, or shall cause to be obtained by

the Property Manager, an annual certification from each household of each Unit demonstrating that such household is an Extremely Low Income Household, a 40% Very Low Income Household, a 50% Very Low Income Household or a Low Income Household, as applicable, and meets the eligibility requirements established for each such Unit. Developer shall verify, or shall cause to be verified by the Property Manager, the income certification of each tenant household. In order to comply with this Section 3, Developer shall submit to City any and all tenant income and occupancy certifications and supporting documentation required to be submitted to TCAC pursuant to the Tax Credit Rules and the Tax Credit Regulatory Agreement for the Rental Project; provided, City may request (and Developer shall provide) additional documentation to assist City's evaluation of Developer's compliance with this Agreement, if determined to be necessary in the reasonable discretion of the City Manager, specifically including (without limitation) any documentation or additional certifications that may be necessary to verify compliance with the HOME Regulations and Federal Program Limitations, as applicable during the HOME Compliance Period, and each tenant's status as to each Senior Citizen Unit as a Senior Citizen Household. This requirement is in addition to and does not replace or supersede Developer's obligation to annually submit the Certificate of Continuing Program Compliance to City. Further, City has the right, but not the obligation to monitor compliance with respect to each tenant household at the Rental Project, and City's election to monitor some, but not all, of the Units shall not constitute a waiver of City's right to monitor and enforce compliance with respect to all Units in the future.

*Verification of Income of New and Continuing Tenants.* Gross income calculations for prospective (and continuing) tenants shall be determined in accordance with 25 Cal. Code Regs. Section 6914. Developer shall verify the income and information provided in the income certification of the proposed tenant as set forth below.

(a) Developer shall verify the income of each proposed tenant of the Rental Project and by at least one of the following methods as appropriate to the proposed tenant:

(i) obtain two (2) paycheck stubs from the person's two (2) most recent pay periods;

(ii) obtain a true copy of an income tax return from the person for the most recent tax year in which a return was filed;

(iii) obtain an income verification certification from the employer of the person;

(iv) obtain an income verification certification from the Social Security Administration and/or the California Department of Social Services if the person receives assistance from such agencies;

(v) obtain an alternate form of income verification reasonably requested by Authority, if none of the above forms of verification is available to Developer; or

(vi) as to the Senior Citizen Housing Units obtain verification and supporting documentation of the household as a Senior Citizen Household.

*Verification Regarding Eligibility of New Tenants.* Developer shall retain documentation regarding the eligibility of each new tenant household.

*Reporting Amounts.* City is required by Section 33418 of the California Health and Safety Code to require Developer to monitor affordability of the Affordable Units and submit the annual reports required by Section 3 of Article II of this Declaration. City relies upon the information contained in such reports to satisfy its own reporting requirements and to provide certain information described at Sections 33080 and 33080.1 of the California Health and Safety Code. In the event Developer fails to submit to City or its designee the Certification as required by Section 3(a), Developer shall be in noncompliance with this Regulatory Agreement. In the event Developer remains in noncompliance for thirty (30) days following receipt of written notice from City of such noncompliance under Sections 3(a) and 3(b) of Article II hereinabove, then Developer shall, without further notice or opportunity to cure, pay to City Two Hundred Fifty Dollars (\$250.00) per Required Affordable Unit for each year Developer fails to submit a Certificate covering each and every housing unit on Area A.

Section 4. Nondiscrimination. Developer shall refrain from restricting the rental, sale or lease of Area A, or any portion thereof, on the basis of race, color, creed, religion, sex, marital status, national origin or ancestry of any person. All such deeds, leases or contracts shall contain or be subject to substantially the following nondiscrimination or nonsegregation clauses:

(1) In deeds: “The grantee herein covenants by and for himself or herself, his or her heirs, executors, administrators, and assigns, and all persons claiming under or through them, that there shall be no discrimination against or segregation of, any person or group of persons on account of any basis listed in subdivision (a) or (d) of Section 12955 of the Government Code, as those bases are defined in Sections 12926, 12926.1, subdivision (m) and paragraph (1) of subdivision (p) of Section 12955, and Section 12955.2 of the Government Code, in the sale, lease, sublease, transfer, use, occupancy, tenure, or enjoyment of the premises herein conveyed, nor shall the grantee or any person claiming under or through him or her, establish or permit any practice or practices of discrimination or segregation with reference to the selection, location, number, use or occupancy of tenants, lessees, subtenants, sublessees, or vendees in the premises herein conveyed. The foregoing covenants shall run with the land.”

(2) In leases: “The lessee herein covenants by and for himself or herself, his or her heirs, executors, administrators, and assigns, and all persons claiming under or through him or her, and this lease is made and accepted upon and subject to the following conditions:

“That there shall be no discrimination against or segregation of any person or group of persons, on account of any basis listed in subdivision (a) or (d) of Section 12955 of the Government Code, as those bases are defined in Sections 12926, 12926.1, subdivision (m) and paragraph (1) of subdivision (p) of Section 12955, and Section 12955.2 of the Government Code, in the leasing, subleasing, transferring, use, occupancy, tenure, or enjoyment of the premises herein leased nor shall the lessee himself or herself, or any person claiming under or through him or her, establish or permit any such practice or practices of discrimination or segregation with reference to the selection, location, number, use, or occupancy, of tenants, lessees, sublessees, subtenants, or vendees in the premises herein leased.”

(3) In contracts: “There shall be no discrimination against or segregation of, any person or group of persons on account of any basis listed in subdivision (a) or (d) of Section 12955 of the Government Code, as those bases are defined in Sections 12926, 12926.1, subdivision (m) and paragraph (1) of subdivision (p) of Section 12955, and Section 12955.2 of the Government Code, in the sale, lease, sublease, transfer, use, occupancy, tenure, or enjoyment of the premises which are the

subject of this Agreement, nor shall the grantee or any person claiming under or through him or her, establish or permit any practice or practices of discrimination or segregation with reference to the selection, location, number, use or occupancy of tenants, lessees, subtenants, sublessees, or vendees in the premises herein conveyed. The foregoing covenants shall run with the land.”

The covenants established in this Declaration and the deeds of conveyance for the Site shall, without regard to technical classification and designation, be binding for the benefit and in favor of City, its successors and assigns, City and any successor in interest to the Site, together with any property acquired by Developer pursuant to this Agreement, or any part thereof. The covenants against discrimination as set forth in this Section 1 of Article II shall remain in effect in perpetuity.

Section 5. Management of the Rental Project.

*Maintenance and Repair; Capital Replacement Reserve.* Developer agrees to assume full responsibility for the management, operation and maintenance of the Improvements and Area A throughout the Required Covenant Period without expense to City, and to perform all repairs and replacements necessary to maintain and preserve the Improvements and Area A in good repair, in a neat, clean, safe and orderly condition reasonably satisfactory to City and in compliance with all applicable laws. Developer agrees that City shall not be required to perform any maintenance, repairs or services or to assume any expense in connection with the Improvements and Area A. Developer hereby waives all rights to make repairs or to cause any work to be performed at the expense of City as provided for in Section 1941 and 1942 of the California Civil Code.

The following standards shall be complied with by Developer and its maintenance staff, contractors or subcontractors:

(1) Developer shall maintain the Improvements, including individual Required Affordable Units, all common areas, all interior and exterior facades, and all exterior project site areas, in a safe and sanitary fashion suitable for a high quality, rental housing project. Developer agrees to provide utility services, administrative services, supplies, contract services, maintenance, maintenance reserves, and management for the entire project including interior tenant spaces, common area spaces and exterior common areas. The services provided by Developer shall include, but not be limited to, providing all common area electricity, gas, water, television, cable television, property, fire and liability insurance in the amounts set forth in this Regulatory Agreement, all property taxes and personal property taxes, any and all assessments, maintenance and replacement of all exterior landscaping, and all administration and overhead required for the Property Manager.

(2) Landscape maintenance shall include, but not be limited to: watering/irrigation; fertilization; mowing, edging, and trimming of grass; tree and shrub pruning; trimming and shaping of trees and shrubs to maintain a healthy, natural appearance and safe road conditions and visibility, and optimum irrigation coverage; replacement, as needed, of all plant materials; control of weeds in all planters, shrubs, lawns, ground covers, or other planted areas; and staking for support of trees.

(3) Clean-up maintenance shall include, but not be limited to: maintenance of all private paths, parking areas, driveways and other paved areas in clean and weed-free condition; maintenance of all such areas clear of dirt, mud, trash, debris or other matter which is unsafe or unsightly; removal of all trash, litter and other debris from improvements and landscaping prior to mowing; clearance and cleaning of all areas maintained prior to the end of the day on which the

maintenance operations are performed to ensure that all cuttings, weeds, leaves and other debris are properly disposed of by maintenance workers.

(4) The Improvements shall be maintained in conformance and in compliance with the approved construction and architectural plans and design scheme, as the same may be amended from time to time with the approval of the City.

(5) All maintenance work shall conform to all applicable federal and state Occupation Safety and Health Act standards and regulations for the performance of maintenance.

(6) Any and all chemicals, unhealthful substances, and pesticides used in and during maintenance shall be applied only by persons in strict accordance with all governing regulations.

(7) Parking lots, lighting fixtures, trash enclosures, and all areas shall be kept free from any accumulation of debris or waste materials by regularly scheduled maintenance.

(8) Developer shall, or shall cause the Property Manager to, set aside in an Operating Reserve, which shall be maintained as a separate interest-bearing trust account, in an amount as prescribed under the Primary Permanent Loan. To the extent this Regulatory Agreement requires that an Operating Reserve be funded at a level in excess of that required under the Primary Permanent Loan, such excess amount shall be funded by Developer from Residual Receipts. Developer shall provide, on not less than an annual basis, evidence reasonably satisfactory to City Manager of compliance herewith, and shall thereafter cause such amount to be retained in the Operating Reserve, to cover shortfalls between Improvements income and actual project operating expenses. The Operating Reserve shall be replenished to the full amount prior to any further disbursement of Residual Receipts to Developer. Any moneys in such Operating Reserve which are not expended as of the termination of this Regulatory Agreement shall be treated as Residual Receipts.

(9) Developer shall also, or cause the Property Manager or permanent lender to, commencing as of the first month following the first anniversary of the completion of the first Housing Unit (as such completion is evidenced by the issuance of a certificate of occupancy by the City as to the corresponding building) set aside the Capital Replacement Reserve. The Capital Replacement Reserve shall be deposited into a separate interest-bearing trust account. Funds in the Capital Replacement Reserve shall be used for capital replacements to the Improvements' fixtures and equipment which are normally capitalized under generally accepted accounting principles. As capital repairs and improvements of the Rental Project become necessary, the Capital Replacement Reserve shall be the first source of payment therefor; provided, however, that Developer may first use other funds for payment with the prior consent of City Manager, which approval shall not be unreasonably withheld. The non-availability of funds in the Capital Replacement Reserve does not in any manner relieve Developer of the obligation to undertake necessary capital repairs and improvements and to continue to maintain Area A in the manner prescribed in this Section 2 and the DDA. Developer, at its expense, shall submit to City on not less than an annual basis an accounting for the Capital Replacement Reserve. Any amounts of the Capital Replacement Reserve in excess of the level of such reserve required by the Primary Permanent Lender shall be funded from Residual Receipts. Any moneys in the Capital Replacement Reserve which are not expended as of the termination of this Lease shall be treated as Residual Receipts.

Capital repairs to and replacement of the Improvements shall include only those items with a long useful life, including without limitation the following:

- (a) Appliance replacement;
- (b) Hot water heater replacement;
- (c) Plumbing fixtures replacement, including tubs and showers, toilets, lavatories, sinks, faucets;
- (d) Air conditioning and heating replacement;
- (e) Asphalt replacement;
- (f) Roofing replacement;
- (g) Landscape tree replacement and irrigation pipe and controls replacement;
- (h) Gas line pipe replacement;
- (i) Lighting fixture replacement; and
- (j) Miscellaneous motors and blowers.

*Exterior Building Maintenance.* All exterior, painted surfaces shall be maintained at all times in a clean and presentable manner, free from chipping, cracking and defacing marks. Any such defacing marks shall be cleaned or removed within a reasonable period of time as set forth herein.

*Front and Side Exteriors.* Developer shall at all times maintain the front exterior and yard in a clean, safe and presentable manner, free from defacing marks or any disrepair and any visible side exteriors. Developer shall hire maintenance personnel to maintain and/or repair any front exterior or yard or visible side yard and exterior of any lot or building.

*Graffiti Removal.* All graffiti, and defacement of any type, including marks, words and pictures must be removed and any necessary painting or repair completed by the later to occur of (i) seventy two (72) hours of their creation or (ii) seventy two (72) hours after notice to Developer.

*Driveways.* All driveways must be paved and maintained with impervious material in accordance with the City Code. In addition, all water must be made to drain freely to the public part of the waterway without any pooling.

*Exterior Illumination.* Developer shall at all times maintain adequate lighting in all entrance ways and parking areas. Adequate lighting means outdoor, night lighting designed and installed, which provides no less than one (1.0) foot candles in the parking areas and no less than one and one-half (1-1/2) foot candles in the walking areas or common areas and no less than 0.2 foot candles at the point of least illumination.

*Front Setbacks.* All front setback areas that are not buildings, driveways or walkways shall be adequately and appropriately landscaped in accordance with minimum standards



established by City and shall be maintained by Developer. The landscaping shall meet minimum standards set from time to time by City.

*Trash Bins.* All trash shall be collected and placed at all times in an enclosable bin to be placed in a designated refuse/trash bin area. The designated area shall be located so that the bin will, to the extent possible, be readily accessible from the street.

*Prohibited Signs.* No sign of any kind shall be displayed to the public view on or from any portion of Area A without the approval of City and appropriate City departments if any as required by the City Code.

*Property Manager.* Developer shall manage or cause the Development, and all appurtenances thereto that are a part of the Development, to be managed in a prudent and business-like manner, consistent with good property management standards for other comparable first quality, well-managed affordable rental housing projects in the County. Developer may contract with a property management company or property manager, to operate and maintain the Development in accordance with the terms of this Section 5 (“Property Manager”); provided, however, the selection and hiring of the Property Manager (and each successor or assignee), including any Affiliated Person, is and shall be subject to prior written approval of the City Manager (or designee) in his or her discretion. The Property Manager shall manage the Development in accordance with the definitions of Affordable Rent contained in this Agreement (including without limitation as to age and income) hereof, the tenant selection requirements contained in this Agreement, and the definitions relating to income contained in this Agreement. Any fee paid to the Property Manager for social services provided to the tenants shall be exclusive of the fee paid to the Property Manager relating to the management of the Development. Developer shall conduct due diligence and background evaluation of any potential third party property manager or property management company to evaluate experience, references, credit worthiness, and related qualifications as a property manager. Any proposed property manager shall have significant and relevant prior experience with affordable housing projects and properties comparable to the Development and the references and credit record of such property manager/company shall be investigated (or caused to be investigated) by Developer prior to submitting the name and qualifications of such proposed property manager to the City Manager for review and approval. A complete and true copy of the results of such background evaluation shall be provided to the City Manager. Approval of a Property Manager by City Manager shall not be unreasonably delayed but shall be in his or her sole reasonable discretion, and the City Manager shall use good faith efforts to respond as promptly as practicable in order to facilitate effective and ongoing property management of the Development. The replacement of a Property Manager by Developer and/or the selection by Developer of any new or different Property Manager during the Required Covenant Period shall also be subject to the foregoing requirements.

*Property Management Plan.* Prior to and as a condition precedent to Disposition Conveyance and as one of the City Disposition Conditions Precedent, Developer shall prepare and submit to the City Manager for review and approval, a management plan for the Development which includes a detailed plan and strategy for long term marketing, operation, maintenance, repair and security of the Development, inclusive of social services for the residents of the Required Affordable Units, and the method of selection of tenants, rules and regulations for tenants, and other rental policies for the Development (“Property Management Plan”). City Manager shall review and shall act reasonably to approve or disapprove the Property Management Plan within a reasonable time. Subsequent to approval of the Property Management Plan by the City Manager the ongoing

management and operation of the Development shall be in compliance with the approved Property Management Plan. During the Required Covenant Period, Developer and its Property Manager may from time to time submit to the City Manager proposed amendments to the Property Management Plan, the implementation of which shall also be subject to the prior written approval of the City Manager.

*Gross Mismanagement.* During the Required Covenant Period, and in the event of “Gross Mismanagement” (as defined below) of the Development, City Manager shall have and retain the authority to direct and require any condition(s), acts, or inactions of Gross Mismanagement to cease and/or be corrected immediately, and further to direct and require the immediate removal of the Property Manager and replacement with a new qualified and approved Property Manager, if such condition(s) is/are not ceased and/or corrected after expiration of thirty (30) days from the date of written notice from City Manager. If Developer or Property Manager has commenced to cure such Gross Mismanagement condition(s) on or before the 20th day from the date of written notice (with evidence of such submitted to the City Manager), but has failed to complete such cure by the 30th day (or such longer period if the cure cannot reasonably be accomplished in thirty (30) days as reasonably determined by the non-defaulting party), then Developer and its Property Manager shall have an additional 10 days to complete the cure of Gross Mismanagement condition(s). In no event shall any condition of Gross Mismanagement continue uncured for a period exceeding forty-five (45) days from the date of the initial written notice of such condition(s), except that the conditions described in subdivisions (d) and (e) below may exist for up to, but no longer than, seventy-five (75) days without triggering City’s right to remove the Property Manager as described in the immediately following sentence as long as Developer is diligently working to cure such conditions of Gross Mismanagement. If such condition(s) do persist beyond such period, City Manager shall have the sole and absolute right to immediately and without further notice to Developer (or to Property Manager or any other person/entity) to remove the Property Manager and replace the Property Manager with a new property manager of the City Manager’s selection at the sole cost and expense of Developer. If Developer takes steps to select a new Property Manager that selection is subject to the requirements set forth above for selection of a Property Manager.

For purposes of this Agreement, the term “Gross Mismanagement” means management of the Development in a manner which violates the terms and/or intention of this Agreement to operate a first quality affordable housing complex, and shall include, but is not limited to, any one or more of the following:

- (a) Leasing to tenants who exceed the prescribed income levels;
- (b) Leasing of a Unit in the Senior Citizen Component (other than one Manager’s Unit) to a household that is not a Senior Citizen Household;
- (c) Subject to fair housing laws, allowing tenants to exceed the prescribed occupancy levels without taking immediate action to stop such overcrowding;
- (d) Under-funding required reserve accounts;
- (e) Failing to timely maintain the Development in accordance with the Property Management Plan and Maintenance Standards;

(f) Failing to submit timely and/or adequate annual reports to the Agency as required herein;

(g) Failing to comply with the HOME Requirements in the event HOME Moneys are used for the Development;

(h) Failing to comply with the City Developer CC&Rs;

(i) Failing to comply with the Tax Credit Regulatory Agreement;

(j) Fraud or embezzlement of Development funds, including without limitation funds in the reserve accounts;

(k) Failing to fully cooperate with the Moreno Valley Police Department or other local law enforcement agency(ies) with jurisdiction over the Development, in maintaining a crime-free environment within the Development;

(l) Failing to fully cooperate with the Moreno Valley Fire Department or other local public safety agency(ies) with jurisdiction over the Development, in maintaining a safe and accessible environment within the Development;

(m) Failing to fully cooperate with the Moreno Valley Planning and Building and Safety Department, or other local health and safety enforcement agency(ies) with jurisdiction over the Development, in maintaining a decent, safe and sanitary environment within the Development; and

(n) Spending funds from the Capital Replacement Reserve account for items that are not defined as eligible costs, including eligible capital and/or replacement costs, under the standards imposed by GAAP (and/or, as applicable, generally accepted auditing principles).

Notwithstanding the requirements of the Property Manager to correct any condition of Gross Mismanagement as described above, Developer is obligated and shall use its best efforts to correct any defects in property management or operations at the earliest feasible time and, if necessary, to replace the Property Manager as provided above. Developer shall include advisement and provisions of the foregoing requirements and requirements of this Agreement within any contract between Developer and its Property Manager for the Development.

*Code Enforcement.* Developer acknowledges and agrees that City and its employees and authorized agents, shall have the right to conduct code compliance and/or code enforcement inspections of the Development and the individual dwelling units at the Development (and not limited to the Required Affordable Units), both exterior and interior, at reasonable times and upon reasonable notice (not less than 48 hours prior notice, except in an emergency) to Developer and/or an individual tenant. If such notice is provided by City representative(s) to Developer, then Developer (or its Property Manager) shall immediately and directly advise any affected tenant of such upcoming inspection and cause access to the area(s) and/or Units at the Development to be made available and open for inspection. Developer shall include express advisement of such inspection rights within the lease/rental agreements for each Unit in the Development in order for each and every tenant and tenant household to be aware of this inspection right. The foregoing portion of this Section 5.6.4 is without limitation as to the exercise of police powers by City.

Capital Reserve Requirements. Commencing upon the closing for the Primary Permanent Loan for the Development, Developer shall annually set aside an amount of not less than Two Hundred Fifty Dollars (\$250.00) per dwelling unit (72 dwelling units times \$250.00 equals \$18,000) or such increased amount required by TCAC or the Partnership Agreement or the Lender under the Primary Permanent Loan for the Development) from the gross rents received from the Development, into a separate interest bearing trust account defined as the Capital Replacement Reserve. Funds in the Capital Replacement Reserve shall be used only for capital repairs, improvements and replacements to the Development, including fixtures and equipment, which are normally capitalized under generally accepted accounting principles. The non-availability of funds in the Capital Replacement Reserve does not in any manner relieve or lessen Developer's obligation to undertake any and all necessary capital repairs, improvements, or replacements and to continue to maintain the Development in the manner prescribed herein for the Development. Not less than once per year, Developer, at its expense, shall submit to the City Manager an accounting for the Capital Replacement Reserve for the Development. Capital improvements and repairs to, and replacements at the Development shall include only those items with a long useful life, including without limitation the following: carpet and drapery replacement; appliance replacement; exterior painting, including exterior trim; hot water heater replacement; plumbing fixtures replacement, including tubs and showers, toilets, lavatories, sinks, faucets; air conditioning and heating replacement; asphalt repair and replacement, and seal coating; roofing repair and replacement; landscape tree replacement; irrigation pipe and controls replacement; sewer line replacement; water line replacement; gas line replacement; lighting fixture replacement; elevator replacement and upgrade work; miscellaneous motors and blowers; common area furniture replacement; and common area repainting. Pursuant to the procedure for submittal of each Annual Budget for the Development to City Manager by Developer, City Manager will evaluate the cumulative amount on deposit in the Capital Replacement Reserve account and exercise his/her sole, reasonable discretion to determine if existing balance(s) in, proposed deposits to, shortfalls, if any, and/or a cumulative unexpended/unencumbered account balance in such Capital Replacement Reserve account are adequate to provide for necessary capital repairs and improvement for the Development.

Notwithstanding the foregoing portion of this Section 5, in the event TCAC prescribes particular amounts to be set aside as a capital replacement reserve, compliance therewith shall be deemed to comply with this Section 5.

Operating Budget and Operating Reserve. Within twelve (12) months after commencement of construction of the Development, but in no event later than ninety (90) days prior to the completion of construction of the Development, and not less than annually thereafter on or before November 1 of each year following the issuance of the first certificate of occupancy issued by the City's building official for the Development and continuing each year throughout the Required Covenant Period, Developer shall submit to City on not less than an annual basis an operating budget for the Development ("Operating Budget" or "Annual Budget"), which budget shall be subject to the written approval of City Manager or his or her designee, which approval shall not be unreasonably withheld. The City Manager's discretion in review and approval of each proposed annual Operating Budget shall include, without limitation, authority to review individual categories, line items, and accounts, such as the following: extent, type, and amount for social services at or associated with the Development; existing balance(s) in and proposed deposits to the Capital Replacement Reserve for the Development to evaluate shortfalls and/or cumulative unexpended/unencumbered deposits (provided that required annual deposits thereto are not required to exceed \$250.00/per unit); conformity of any annual increases in the Partnership Related Fees for the Development with only those increases expressly permitted in the definition of "Partnership Related Fees"; reasonableness

and conformity to prevailing market rates in Riverside County and rates and fees for goods and services to be provided Developer or any of its parent, affiliated, or subsidiary entities, etc. for the Development.

Developer shall, or shall cause the Property Manager to, set aside an Operating Reserve for the Development in a separate interest bearing trust account a target amount equal to three (3) months of (i) Debt Service on the Primary Construction Loan or the Primary Permanent Loan and (ii) Operating Expenses pursuant to an approved Annual Budget for the Development (“Target Amount”), which shall be funded by Tax Credit equity (or, if a different amount is identified for such purpose the Primary Construction Lender, the Primary Permanent Lender or TCAC, the amount identified by TCAC (which amount shall take precedence in this context) or, if no such amount is identified by TCAC, the amount identified by the Primary Construction Lender or the Primary Permanent Lender). The Operating Reserve shall thereafter be replenished from Annual Project Revenue to maintain the Operating Reserve balance at the Target Amount. The Target Amount shall be retained in the Operating Reserve to cover shortfalls between Annual Project Revenue and actual Operating Expenses, but shall in no event be used to pay for capital items or capital costs properly payable from the Capital Replacement Reserve. Developer shall, not less than once per every twelve (12) months, submit to the City Manager evidence reasonably satisfactory to City of compliance herewith. Interest earned on moneys held in the Operating Reserve shall be retained in the Operating Reserve. The Operating Reserve shall be maintained throughout the Required Covenant Period.

Notwithstanding the foregoing portion of this Section 5.8, in the event TCAC prescribes particular amounts to be set aside as an operating reserve, compliance therewith shall be deemed to comply with that portion of this Section 5 which sets forth in the amount of operating reserves (but not the remainder of this Section 5).

Allocation of Residual Receipts. Residual Receipts shall be allocable as follows: fifty percent (50%) to City and fifty percent (50%) to Developer.

Section 6. Keeping of Animals. No animals of any kind shall be raised, bred or kept on Area A, except that domesticated dogs, cats or other household pets may be kept by the tenants in the Rental Project at the discretion of Developer and subject to compliance with all laws. However, no animal shall be kept, bred or maintained for any commercial purpose or for fighting purposes. Nothing permitted herein shall derogate in any way the right of Developer to further restrict keeping of pets.

Section 7. Parking of Vehicles. Developer shall not permit the parking, storing or keeping of any vehicle except wholly within the parking areas designated for the Required Affordable Units. Developer shall not permit the parking, storing or keeping of any large commercial type vehicle (dump truck, cement mixer truck, oil or gas truck, etc.), or any vehicle over twenty (20) feet in length (camper unit, motor home, trailer, mobile home or other similar vehicle), boats over twenty (20) feet in length, or any vehicle other than a private passenger vehicle, upon any portion of the Common Areas, including parking spaces. For purposes of this section, a pickup truck with a pickup bed mounted camper shall be considered a private passenger vehicle; provided however, that no such vehicle shall be used for residential purposes while parked on the premises.

Developer shall not permit major repairs or major restorations of any motor vehicle, boat, trailer, aircraft or other vehicle to be conducted upon any portion of the Common Area, including the parking areas, except for emergency repairs thereto and then only to the extent necessary to enable

movement of the vehicle to a proper repair facility. No inoperable vehicle shall be stored or kept in the Common Area. Developer shall give the vehicle owner not less than four (4) days, nor more than seven (7) days' notice and an opportunity to remove any vehicle parked, stored or kept in violation of the provisions of this Declaration. Notice shall consist minimally of a reasonably diligent attempt to personally notify the vehicle owner or alternatively leaving written notice on the subject vehicle. After due notice and opportunity have been given to the vehicle owner, Developer shall have the right to remove, at the vehicle owner's expense, any vehicle parked, stored or kept in violation of the provisions of this Declaration.

Section 8. Maximum Occupancies. No persons shall be permitted to occupy any Apartment within the Rental Project in excess of applicable limit of maximum occupancy set by the City Code and the laws of the State of California.

Section 9. Signs Required. "No loitering" signs will be posted at each building and enforced by the owner(s). "Illegally parked vehicles will be towed" signs in compliance with California Vehicle Code requirements will be posted and enforced by Developer.

Section 10. Fences and Electronic Installations. Developer shall not install or knowingly permit to be installed on the exterior of any improvement or building on any fences or any antenna or other television or radio receiving device, excepting satellite dishes having a diameter of eighteen inches (18") or less, without prior written consent of City. This prohibition shall not prohibit the installation of cable television or subscription wires or receiving devices.

Section 11. Structural Change. Nothing shall be done on Area A in, on or to any building which would materially structurally change the exterior or the interior bearing walls of any such building or structure, except as otherwise provided herein. Nothing herein shall affect the rights of Developer to repair, alter or construct improvements on the buildings on Area A unless such repair, alteration or improvement would impair the structural integrity and/or exterior appearance of said buildings. Nothing herein shall be deemed to prohibit work ordered to be performed by the City building official.

Section 12. Compliance with Laws. Developer shall comply with all applicable laws in connection with the development and use of Area A, including without limitation the California Community Redevelopment Law (Health and Safety Code Section 33000, *et seq.*), NSP, NSP3, the ARR Guidelines, to the extent applicable, and Fair Housing Act (42 U.S.C. § 3601, *et seq.*, and 24 C.F.R. § 100.300, *et seq.*) and, if any HOME Moneys have been used for the development of the Improvements, the HOME Regulations. Developer shall also comply with the Tax Regulatory Agreement. Developer is a sophisticated party, with substantial experience in the acquisition, development, financing, obtaining financing for, marketing, and operation of affordable housing projects, and with the negotiation, review, and preparation of agreements and other documents in connection with such activities. Developer is familiar with and has reviewed all laws and regulations pertaining to the acquisition, development and operation of the Rental Project and has obtained advice from any advisers of its own choosing in connection with this Agreement.

**ARTICLE III**  
**CERTAIN DUTIES OF DEVELOPER: RESERVES; INSURANCE; INDEMNIFICATION;**  
**INSURANCE**

Section 1. ARR Program Compliance. Pursuant to the NSP, the City Council of City adopted, approved, and established the ARR Guidelines. Developer will comply with the ARR Guidelines, which are unrecorded but on file with the City, and which are deemed incorporated herein by this reference.

Section 2. Indemnification; Developer's Indemnity. Developer shall save, protect, pay for, defend (with counsel acceptable to City), indemnify and hold harmless City, and its respective elected and appointed officials, officers, employees, attorneys, representatives, volunteers, contractors and agents (collectively, "Indemnitees") from and against any and all liabilities, suits, actions, claims, demands, penalties, damages (including, without limitation, penalties, fines and monetary sanctions), losses, costs or expenses (including, without limitation, consultants' fees, investigation and laboratory fees, attorneys' fees and remedial and response costs and third-party claims or costs) (the foregoing are hereinafter collectively referred to as "Liabilities") that may now or in the future be incurred or suffered by Indemnitees by reason of, resulting from, in connection with or arising in any manner whatsoever as a direct or indirect result of: (i) the presence, use, release, escape, seepage, leakage, spillage, emission, generation, discharge, storage, or disposal of any Hazardous Materials in, on, under, or about, or the transportation of any such Hazardous Materials to or from, Area A; (ii) the violation, or alleged violation, of any statute, ordinance, order, rule, regulation, permit, judgment, or license relating to the use, generation, release, leakage, spillage, emission, escape, discharge, storage, disposal, or transportation of Hazardous Materials in, on, under, or about, or to or from, Area A; (iii) the physical and environmental condition of Area A, and (iv) any Liabilities caused or contributed to by acts or omissions of Developer relating to any Environmental Laws and other Governmental Requirements relating to Hazardous Materials and/or the environmental and/or physical condition of Area A. The foregoing indemnification shall not apply to the presence, use, release, escape, seepage, leakage, spillage, emission, or discharge of any Hazardous Materials in, on, under, or about Area A where such Hazardous Material existed on the property prior to the Closing. The foregoing indemnification shall continue in full force and effect regardless of whether such condition, liability, loss, damage, cost, penalty, fine, and/or expense shall accrue or be discovered before or after the termination of the Required Covenant Period. This indemnification supplements and in no way limits the indemnification set forth in Section 4.7 of the DDA. Developer's obligations under this Section 2 shall survive the expiration of the Required Covenant Period and shall not merge with any grant deed. Notwithstanding the foregoing, Developer shall not be obligated to indemnify City with respect to the consequences of any act of gross negligence or willful misconduct of City.

Section 3. Duty to Prevent Hazardous Material Contamination. Developer shall take all necessary precautions to prevent the release of any Hazardous Materials into the environment. Such precautions shall include compliance with all Governmental Requirements with respect to Hazardous Materials. In addition, Developer shall install and utilize such equipment and implement and adhere to such procedures as are consistent with the standards generally applied by apartment complexes in Riverside County, California as respects the disclosure, storage, use, removal, and disposal of Hazardous Materials. Developer shall notify City and provide to City a copy or copies of any notices of violation, notices to comply, citations, inquiries, clean up or abatement orders, cease and desist orders, reports filed pursuant to self-reporting requirements and reports filed or applications made pursuant to all Environmental Laws and other Governmental Requirements, and Developer shall

report to City, as soon as possible after each incident, any unusual or potentially important incidents in the event of a release of any Hazardous Materials into the environment.

Section 4. Obligation of Developer to Remediate Premises. Notwithstanding the obligation of Developer to indemnify City pursuant to Article III, Section 2 of this Regulatory Agreement, Developer shall, at its sole cost and expense, promptly take (i) all actions required by any federal, state, regional, or local governmental authority or political subdivision or any Governmental Requirements and (ii) all actions necessary to make full economic use of Area A for the purposes contemplated by this Regulatory Agreement and the DDA, which requirements or necessity arise from the presence upon, about or beneath Area A of any Hazardous Materials or Hazardous Materials Contamination no matter when occurring. Such actions shall include, but not be limited to, the investigation of the environmental condition of Area A, the preparation of any feasibility studies or reports and the performance of any cleanup, remedial, removal or restoration work. Developer shall take all actions necessary to promptly restore Area A to an environmentally sound condition for the uses contemplated by this Regulatory Agreement and the DDA notwithstanding any lesser standard of remediation allowable under applicable Governmental Requirements.

Section 5. Storage or Handling of Hazardous Materials. Developer, at its sole cost and expense, shall comply with all Governmental Requirements for the storage, use, transportation, handling and disposal of Hazardous Materials on or about Area A. In the event Developer does store, use, transport, handle or dispose of any Hazardous Materials, Developer shall notify City in writing at least ten (10) days prior to their first appearance on Area A and Developer's failure to do so shall constitute a material default under this Regulatory Agreement. Developer shall conduct all monitoring activities required or prescribed by applicable Governmental Requirements, and shall, at its sole cost and expense, comply with all posting requirements of Proposition 65 or any other similarly enacted Governmental Requirements. In addition, in the event of any complaint or governmental inquiry, or if otherwise deemed necessary by City in its reasonable judgment, City may require Developer, at Developer's sole cost and expense, to conduct specific monitoring or testing activities with respect to Hazardous Materials on Area A. Developer's monitoring programs shall be in compliance with applicable Governmental Requirements, and any program related to the specific monitoring of or testing for Hazardous Materials on Area A, shall be satisfactory to City, in City's reasonable discretion. Developer shall further be solely responsible, and shall reimburse City, for all costs and expenses incurred by City arising out of or connected with the removal, clean-up and/or restoration work and materials necessary to return Area A and any property adjacent to Area A affected by Hazardous Materials emanating from Area A to their condition existing at the time of the Developer's Site Evaluation. Developer's obligations hereunder shall survive the termination of this Regulatory Agreement and shall not merge with any grant deed.

Section 6. Environmental. Developer shall notify City upon receipt, and provide to City a copy or copies, of the following environmental permits, disclosures, applications, entitlements or inquiries relating to Area A and the Development: notices of violation, notices to comply, citations, inquiries, clean up or abatement orders, cease and desist orders, reports filed pursuant to self-reporting requirements and reports filed or applications made pursuant to any Environmental Laws and other applicable Governmental Requirements relating to Hazardous Materials and underground tanks, and Developer shall report to City, as soon as possible after each incident, all material information relating to or arising from such incident, including, but not limited to, the following:

(a) All required reports of releases of Hazardous Materials, including notices of any release of Hazardous Materials as required by any Governmental Requirements;



- (b) All notices of suspension of any permits relating to Hazardous Materials;
- (c) All notices of violation from federal, state or local environmental authorities relating to Hazardous Materials;
- (d) All orders under the State Hazardous Waste Control Act and the State Hazardous Substance Account Act and corresponding federal statutes, concerning investigation, compliance schedules, clean up, or other remedial actions;
- (e) All orders under the Porter Cologne Act, including corrective action orders, cease and desist orders, and clean up and abatement orders;
- (f) Any notices of violation from OSHA or Cal OSHA concerning employees' exposure to Hazardous Materials;
- (g) All complaints and other pleadings filed against Developer relating to Developer's storage, use, transportation, handling or disposal of Hazardous Materials on or about Area A; and
- (h) Any and all other notices, citations, inquiries, orders, filings or any other reports containing information which would have a materially adverse effect on Area A or the City's liabilities or obligations relating to Hazardous Materials.

In the event of a release of any Hazardous Materials into the environment, Developer shall, as soon as possible after the release, furnish to City a copy of any and all reports relating thereto and copies of all correspondence with governmental agencies relating to the release. Upon request of City, but subject to any limitations imposed by law or by court order, Developer shall furnish to City a copy or copies of any and all other environmental entitlements or inquiries relating to or affecting Area A in Developer's possession and/or shall notify City of any environmental entitlements or inquiries relating to or affecting Area A within Developer's actual or constructive knowledge if Developer is not in possession of same, including, but not limited to, all permit applications, permits and reports including, without limitation, those reports and other matters which may be characterized as confidential.

Section 7. Indemnity. During the Required Covenant Period, Developer agrees that City, its agents, officers, representatives and employees, shall not be liable for any claims, liabilities, penalties, fines or for any damage to the goods, properties or effects of Developer, its sublessees or representatives, agents, employees, guests, licensees, invitees, patrons or clientele or of any other person whomsoever, nor for personal injuries to, or deaths of any persons, whether caused by or resulting from any act or omission of Developer or its sublessees or any other person on or about Area A and the Improvements, or in connection with the operation thereof, or from any defect in Area A or the Improvements, or from any displacement of tenants or liability for relocation assistance pursuant to Government Code Section 7260, *et seq.*, due to the acts of Developer hereunder. Developer agrees to indemnify and save free and harmless City and its authorized agents, officers, representatives and employees against any and all claims, actions, damages, liability (including reasonable expenses and attorneys' fees) concerning loss of life, personal injury and/or damage to property arising from or out of any occurrence in, upon or at Area A and/or the Improvements or the occupancy or use by Developer of Area A and/or the Improvements or any part thereof, or arising from or out of Developer's failure to comply with any provision of this Regulatory

Agreement or otherwise occasioned wholly or in part by any act or omission of Developer, its agents, representatives, contractors, employees, servants, customers or licensees. Developer shall not be responsible for (and such indemnity shall not apply to) any acts, errors or omissions of City, or its respective agents, officers, representatives or employees.

Section 8. Insurance to be Provided by Developer. During the Required Covenant Period, Developer, at its sole cost and expense, shall:

(a) Maintain or cause to be maintained a policy or policies of insurance against loss or damage to the Improvements of all property of an insurable nature located upon Area A, resulting from fire, lightning, vandalism, malicious mischief, and such other perils ordinarily included in extended coverage fire insurance and casualty loss policies.

(b) Maintain or cause to be maintained use and occupancy or business interruption or rental income insurance against the perils of fire, lighting, vandalism, malicious mischief, and such other perils ordinarily included in extended coverage fire insurance policies, in an amount equal to not less than twelve (12) months' gross rental income payable to Developer from tenants on Area A, assuming one hundred percent (100%) occupancy.

(c) Maintain or cause to be maintained, comprehensive general liability insurance with respect to Area A and the Improvements and the operations of the Developer in, on or about Area A and the Improvements, including, but not limited to, owned and hired motor vehicle liability, cross liability and severability of interests, personal injury, XC&U, blanket contractual, owners protective broad form property damage, and product/completed operations liability coverage in an amount not less than Two Million Dollars (\$2,000,000), combined single limit, public liability insurance to protect against loss from liability for damages on account of personal injury, including death therefrom, suffered or alleged to be suffered by any person or persons whomsoever on or about Area A and the Improvements, or in connection with the operation thereof, resulting directly or indirectly from any acts or activities of Developer or its sublessees, or any person acting for Developer, or under their respective control or direction, and also to protect against loss from liability imposed by law for damages to any property of any person occurring on or about Area A and the Improvements, or in connection with the operation thereof, caused directly or indirectly by or from acts or activities of Developer of its sublessees, or any person acting for Developer, or under their respective control or direction. Such property damage and personal injury insurance shall also provide for and protect against incurring any legal cost in defending claims for alleged loss. The required amount of insurance shall be subject to increases as City may reasonably require from time to time, but not more frequently than every twenty-four (24) months. In no event shall such increase or increases exceed the increase during such period in the United States Department of Labor, Bureau of Labor Statistics, Consumer Price Index for Urban Wage Earners and Clerical Workers, Subgroup "All Items," in the geographical area applicable to the Moreno Valley area. Developer agrees that provisions of this paragraph as to maintenance of insurance shall not be construed as limiting in any way the extent to which Developer may be held responsible for the payment of damages to persons or property resulting from Developer's activities, activities of its sublessees or the activities of any other person or persons for which Developer is otherwise responsible.

(d) Maintain or cause to be maintained worker's compensation insurance issued by a responsible carrier authorized under the laws of the State of California to insure employers, if any, against liability for compensation under the workers' compensation laws now in force in California, or any laws hereafter enacted as an amendment or supplement thereto or in lieu thereof.

Such workers' compensation insurance shall cover all persons employed by Developer in connection with Area A and the Improvements and shall cover full liability for compensation under any such act aforesaid, based upon death or bodily injury claims made by, for on behalf of any person incurring or suffering injury or death in connection with Area A or the Improvements or the operation thereof by Developer.

Section 9. Definition of "Full Insurable Value." The term "Full Insurable Value" as used in this Section 9 means the actual replacement cost (excluding the cost of excavation, foundation and footings below the lowest floor and without deduction for depreciation) of the Improvements, including the cost of construction of the Improvements, architectural and engineering fees, and inspection and supervision. To ascertain the amount of coverage required, Developer shall cause the Full Insurable Value to be determined from time to time by appraisal by the insurer or, if no such appraisal is available, by an appraiser mutually acceptable to City and Developer, not less often than once every five (5) years.

Section 19. General Insurance Provisions. All policies of insurance provided for in this Section 9, except for the workers' compensation insurance, shall name Developer as the insured and loss payee and City and its respective officers, employees, agents, and representatives, as additional insureds, as their respective interests may appear. All property casualty insurance policies shall include the interest of any Developer's Mortgagee, and may provide that any loss is payable to Developer's Mortgagee in which event such policies shall contain standard mortgage loss payable clauses. Developer agrees to timely pay all premiums for such insurance and, at its sole cost and expense, to comply and secure compliance with all insurance requirements necessary for the maintenance of such insurance. Developer agrees to submit policies of all insurance required by this Section 9 of this Regulatory Agreement, or certificates evidencing the existence thereof, to City on or before the effective date of this Regulatory Agreement, indicating full coverage of the contractual liability imposed by this Regulatory Agreement. At least thirty (30) days prior to expiration of any such policy, copies of renewal policies, or certificates evidencing the existence thereof, shall be submitted to City. All policies of insurance required of Developer herein shall be issued by insurance companies with a general policy holder's rating of not less than A and a financial rating of not less than Class X, as rated in the most current available "Best's Key Rating Guide", and which are qualified to do business in the State of California. All policies or certificates of insurance shall also: (i) provide that such policies shall not be canceled or limited in any manner without at least thirty (30) days prior written notice to City; and (ii) provide that such coverage is primary and not contributing with any insurance as may be obtained by City and shall contain a waiver of subrogation for the benefit of the City.

Coverage provided hereunder by Developer shall be primary insurance and not be contributing with any insurance maintained by City, and the policy shall contain such an endorsement. The insurance policy or the endorsement shall contain a waiver of subrogation for the benefit of the City. None of the above-described policies shall require Developer to meet a deductible or self-insured retention amount of more than Ten Thousand Dollars (\$10,000.00) unless first approved in writing by the City Manager. All policies shall be written by good and solvent insurers qualified to do business in California and shall have a policyholder's rating of A or better in the most recent edition of "Best's Key Rating Guide – Property and Casualty." The required certificate shall be furnished by Developer at the time set forth herein.

Section 10. Failure to Maintain Insurance. If Developer fails or refuses to procure or maintain insurance as required by this Regulatory Agreement, City shall have the right, at City's

election, and upon ten (10) days prior notice to Developer, to procure and maintain such insurance. The premiums paid by City shall be treated as added rent due from Developer, to be paid on the first day of the month following the date on which the premiums were paid. City shall give prompt notice of the payment of such premiums, stating the amounts paid and the name of the insured(s).

**Section 11. Insurance Proceeds Resulting from Loss or Damage to Improvements.** All proceeds of insurance with respect to loss or damage to the Improvements during the Required Covenant Period shall be payable, under the provisions of the policy of insurance, to Developer, and said proceeds shall constitute a trust fund to be used for the restoration, repair and rebuilding of the Improvements in accordance with plans and specifications approved in writing by City. To the extent that such proceeds exceed the cost of such restoration, repair or rebuilding, then such proceeds shall be retained by the party that purchased the insurance. Notwithstanding the foregoing, within the period during which there is an outstanding mortgage upon the Improvements, such proceeds shall be payable in accordance with Article III, Section 9 of this Regulatory Agreement.

In the event this Regulatory Agreement is terminated by mutual agreement of City and Developer and said Improvements are not restored, repaired or rebuilt, the insurance proceeds shall be jointly retained by City and Developer and shall be applied first to any payments due under this Regulatory Agreement from Developer to City, second to restore Area A and Improvements to their original condition and to a neat and clean condition, and finally any excess shall be apportioned between Developer and City as their interests may appear; provided, however, that within any period when there is an outstanding mortgage upon the Improvements, such proceeds shall be applied first to discharge the debt secured by the mortgage and then for the purposes and in the order set forth above in this paragraph. The value of each interest for the purpose of apportioning excess proceeds under this Section 11 shall be the fair market value of such interests immediately prior to the occurrence of the damage or destruction.

#### **ARTICLE IV**

#### **OBLIGATION TO MAINTAIN, REPAIR AND REBUILD**

**Section 1. Maintenance by Developer.** Developer shall, at its sole cost and expense, maintain and repair the Site and the improvements thereon keeping the same in a decent, safe and sanitary manner, in accordance with the United States Department of Housing and Urban Development (“HUD”) Housing Quality Standards (“HQS”), and in good condition and making all repairs as they may be required by these CC&Rs and by all applicable City Code provisions, including without limitation Uniform Code provisions. Developer shall also maintain the landscaping required to be planted in a healthy condition. If, at any time, Developer fails to maintain the Rental Project or any portion thereof, and said condition is not corrected after the expiration of forty-five (45) days from the date of written notice from City, City may perform the necessary maintenance and Developer shall pay such costs as are reasonably incurred for such maintenance. Payment shall be due within fifteen (15) days of receipt of an invoice from City.

**Section 2. Damage and Destruction Affecting Project - Developer’s Duty to Rebuild.** If all or any portion of Area A and the improvements thereon is damaged or destroyed by fire or other casualty, it shall be the duty of Developer to rebuild, repair or reconstruct said portion of the Site and/or the improvements in a timely manner which will restore it to Code compliance condition.

In furtherance of the requirements of this Section 2, Developer shall keep the construction on Area A insured by carriers at all times satisfactory to City against loss by fire and such other hazards,

casualties, liabilities and contingencies as included within an all risk extended coverage hazard insurance policy, in an amount of the full replacement cost of the constructions. In the event of loss, Developer shall give prompt notice to the insurance carrier and to City.

If Area A is abandoned by Developer, or if Developer fails to respond to City within thirty (30) days from the date notice is mailed by City to Developer that the insurance carrier offers to settle a claim for insurance benefits, City is authorized to collect and apply the insurance proceeds at City’s option either to restoration or repair of Area A.

Section 3. Variance in Exterior Appearance and Design. In the event the Rental Project sustains substantial physical damage due to a casualty event, Developer may apply to City for approval to reconstruct, rebuild or repair in a manner which will provide different exterior appearance and lot design from that which existed prior to the date of the casualty.

Section 4. Time Limitation. Upon damage to Area A or the Rental Project or other improvements, Developer shall be obligated to proceed with all due diligence hereunder and commence reconstruction within two (2) months after the damage occurs and complete reconstruction within six (6) months after damage occurs or demolition and vacate within two (2) months, unless prevented by causes beyond their reasonable control, in which event reconstruction shall be commenced at the earliest feasible time.

**ARTICLE V  
ENFORCEMENT**

Section 1. Remedies. Breach of the covenants contained in the Declaration may be enjoined, abated or remedied by appropriate legal proceeding by City.

This Declaration does not in any way infringe on the right or duties of City to enforce any of the provisions of the City Code including, but not limited to, the abatement of dangerous buildings.

Section 2. Nuisance. The result of every act or omission whereby any of the covenants contained in this Declaration are violated in whole or in part is hereby declared to be and constitutes a nuisance, and every remedy allowable at law or equity, against a nuisance, either public or private, shall be applicable against every such result and may be exercised by any owner or its successors in interest, without derogation of City’s rights under law.

Section 3. Right of Entry. In addition to the above general rights of enforcement, City shall have the right through its agents and employees, to enter upon any part of the project area for the purpose of enforcing the California Vehicle Code, and the ordinances and other regulations of City, and for maintenance and/or repair of any or all publicly owned utilities. In addition, City has the right of entry at reasonable hours and upon and after reasonable attempts to contact Developer, on any lot to effect emergency repairs or maintenance which Developer has failed to perform. Subsequent to sixty (60) days written notice to Developer specifically outlining Developer’s noncompliance, City shall have the right of entry on the Site at reasonable hours to enforce compliance with this Declaration which Developer has failed to perform. This Section 3 is without limitation as to the police powers of City.

Section 4. Costs of Repair. The costs borne by City of any such repairs or maintenance emergency and/or non-emergency, shall become a charge for which Developer shall be responsible.

Section 5. Cumulative Remedies. The remedies herein provided for breach of the covenants contained in this Declaration shall be deemed cumulative, and none of such remedies shall be deemed exclusive.

Section 6. Failure to Enforce. The failure to enforce any of the covenants contained in this Declaration shall not constitute a waiver of the right to enforce the same thereafter.

Section 7. Enforcement and Nonliability. City may from time to time make such efforts, if any, as it shall deem appropriate enforce and/or assist in enforcing this Declaration. However, City shall not be subject to any liability for failure to affirmatively enforce any provision of this Declaration.

## **ARTICLE VI** **GENERAL PROVISIONS**

Section 1. Covenant Against Partition. By acceptance of its interest in Area A, Developer shall be deemed to covenant for itself and for its heirs, representatives, successors and assigns, that it will not institute legal proceedings or otherwise seek to effect partition of its right and interest in the interest being conveyed to Developer, or the burdens running with the land as a result of this Regulatory Agreement.

Section 2. Severability. Invalidation of any one of these covenants or restrictions by judgment or court order shall in no way affect any other provisions which shall remain in all force and effect.

Section 3. Term. This Declaration shall run with and bind the interest of Developer in Area A, and shall inure to the owner(s) of any property subject to this Declaration, his legal representatives, heirs, successors and assigns, and as provided in Article VI, Sections 2 and 3, be enforceable by City, for a term equal to the Required Covenant Period as defined in the DDA, provided; however, that the covenants regarding nondiscrimination set forth in Section 4 of Article II of this Declaration shall remain in effect for perpetuity.

Section 4. Construction. The provisions of this Declaration shall be liberally construed to effectuate its purpose of creating a uniform plan for the development and operation of rental housing available at Affordable Rent for 40% Very Low Income Households, 50% Very Low Income Households and, to the extent provided herein, Lower Income Households in conformity with the Prescribed Income Levels. The article and section headings have been inserted for convenience only, and shall not be considered or referred to in resolving questions of interpretation or construction.

Section 5. Amendments. This Declaration may be amended only by the written agreement of Developer, City.

Section 6. Encroachments. None of the rights and obligations of Developer created herein shall be altered in any way by encroachments due to settlement or shifting of structures or any other cause. There shall be valid easements for the maintenance of said encroachments so long as they shall exist; provided, however, that in no event shall a valid easement for encroachment be created in favor of Developer if said encroachment occurs due to the willful conduct of said Developer.

Section 7. Notices. Any notice permitted or required to be delivered as provided herein to Developer shall be in writing and may be delivered either personally or by certified mail. Notice to City shall be made by certified mail to the City Manager or his or her designee at 14177 Frederick Street, Moreno Valley, California 92552-0805 (with a copy to Stradling Yocca Carlson & Rauth, Attention: Mark J. Huebsch, 660 Newport Center Drive, Suite 1600, Newport Beach, California 92660), and shall be effective upon receipt. Notice to Developer shall be made by certified mail to RB Boulder Ridge Limited Partnership, a California limited partnership, 27700 Kalmia Avenue, Rancho Belago, California 92555-5200, and shall be effective upon receipt. Such addresses may be changed from time to time by notice in writing.

**DEVELOPER:**

**RB BOULDER RIDGE LIMITED PARTNERSHIP,**

a California limited partnership

By: Rancho Belago Developers, Inc.,  
a California corporation  
its General Partner

By: \_\_\_\_\_  
James M. Jernigan, President

**CITY:**

**CITY OF MORENO VALLEY,**

a municipal corporation

By: \_\_\_\_\_  
Thomas DeSantis, Assistant City Manager



**EXHIBIT A**  
**LEGAL DESCRIPTION OF AREA A**

[to come]

APN:

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING

**EXHIBIT B**  
**MAP OF AREA A**

[to come]

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 )  
 ) ss.  
COUNTY OF \_\_\_\_\_ )

On \_\_\_\_\_, before me, \_\_\_\_\_, Notary Public,  
(Print Name of Notary Public)

personally appeared \_\_\_\_\_

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 of Notary Public

**OPTIONAL**

Though the data below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent reattachment of this form.

**CAPACITY CLAIMED BY SIGNER**

**DESCRIPTION OF ATTACHED DOCUMENT**

- Individual
- Corporate Officer

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

\_\_\_\_\_  
Title Or Type Of Document

- Partner(s)       Limited       General
- Attorney-In-Fact
- Trustee(s)
- Guardian/Conservator
- Other: \_\_\_\_\_

\_\_\_\_\_  
Number Of Pages

Signer is representing:  
Name Of Person(s) Or Entity(ies)

\_\_\_\_\_  
Date Of Documents

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Signer(s) Other Than Named Above

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING

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STATE OF CALIFORNIA )  
 ) ss.  
COUNTY OF \_\_\_\_\_ )

On \_\_\_\_\_, before me, \_\_\_\_\_, Notary Public,  
(Print Name of Notary Public)

personally appeared \_\_\_\_\_

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 of Notary Public

**OPTIONAL**

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**DESCRIPTION OF ATTACHED DOCUMENT**

- Individual
- Corporate Officer

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

- Partner(s)       Limited       General
- Attorney-In-Fact
- Trustee(s)
- Guardian/Conservator
- Other: \_\_\_\_\_

\_\_\_\_\_  
Title Or Type Of Document

\_\_\_\_\_  
Number Of Pages

Signer is representing:  
Name Of Person(s) Or Entity(ies)

\_\_\_\_\_  
Date Of Documents

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Signer(s) Other Than Named Above

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING

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STATE OF CALIFORNIA )  
 ) ss.  
COUNTY OF \_\_\_\_\_ )

On \_\_\_\_\_, before me, \_\_\_\_\_, Notary Public,  
(Print Name of Notary Public)

personally appeared \_\_\_\_\_

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 of Notary Public

**OPTIONAL**

Though the data below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent reattachment of this form.

**CAPACITY CLAIMED BY SIGNER**

**DESCRIPTION OF ATTACHED DOCUMENT**

- Individual
- Corporate Officer

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

- Partner(s)       Limited       General
- Attorney-In-Fact
- Trustee(s)
- Guardian/Conservator
- Other: \_\_\_\_\_

\_\_\_\_\_  
Title Or Type Of Document

\_\_\_\_\_  
Number Of Pages

Signer is representing:  
Name Of Person(s) Or Entity(ies)

\_\_\_\_\_  
Date Of Documents

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Signer(s) Other Than Named Above

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING

**ATTACHMENT NO. 12**  
**INCOME VERIFICATION**

Part I -- General Information

- 1. Project Location: \_\_\_\_\_
- 2. Landlord's Name: \_\_\_\_\_

Part II -- Unit Information

- |    |             |    |                    |    |              |    |                     |
|----|-------------|----|--------------------|----|--------------|----|---------------------|
| 3. | Unit Number | 4. | Number of Bedrooms | 5. | Monthly Rent | 6. | Number of Occupants |
|----|-------------|----|--------------------|----|--------------|----|---------------------|

Part III -- Affidavit of Tenant

I, \_\_\_\_\_, and I, \_\_\_\_\_, as applicants for rental of an Apartment Unit at the above-described location, do hereby represent and warrant as follows:

A. (My/Our) gross income (anticipated total annual income) **does not exceed thirty percent (30%)** of the median income for the Riverside Primary Metropolitan Statistical Area as such income levels are established and amended from time to time pursuant to Section 8 of the United States Housing Act of 1937 and published by the State Department of Housing and Community Development in the California Code of Regulations. (I/We) understand that the applicable median income is \$\_\_\_\_\_. The following computation includes all income (I/we) anticipate receiving for the 12-month period beginning on the date (I/we) execute a rental agreement for an Affordable Unit or the date on which (I/we) will initially occupy such unit, whichever is earlier.

\_\_\_\_\_  
Tenant(s)' Initials

B. (My/Our) gross income (anticipated total annual income) **does not exceed forty percent (40%)** of the median income for the Riverside Primary Metropolitan Statistical Area as such income levels are established and amended from time to time pursuant to Section 8 of the United States Housing Act of 1937 and published by the State Department of Housing and Community Development in the California Code of Regulations. (I/We) understand that the applicable median income is \$\_\_\_\_\_. The following computation includes all income (I/we) anticipate receiving for the 12 month period beginning on the date (I/we) execute a rental agreement for an Affordable Unit or the date on which (I/we) will initially occupy such unit, whichever is earlier.

\_\_\_\_\_  
Tenant(s)' Initials

C. (My/Our) gross income (anticipated total annual income) **does not exceed fifty percent (50%)** of the median income for the Riverside Primary Metropolitan Statistical Area as such income levels are established and amended from time to time pursuant to Section 8 of the

United States Housing Act of 1937 and published by the State Department of Housing and Community Development in the California Code of Regulations. (I/We) understand that the applicable median income is \$\_\_\_\_\_. The following computation includes all income (I/we) anticipate receiving for the 12 month period beginning on the date (I/we) execute a rental agreement for an Affordable Unit or the date on which (I/we) will initially occupy such unit, whichever is earlier.

\_\_\_\_\_  
Tenant(s)' Initials

- D. (My/Our) gross income (anticipated total annual income) exceeds fifty percent (50%) but **does not exceed eighty percent (80%)** of the median income for the Riverside Primary Metropolitan Statistical Area as such income levels are established and amended from time to time pursuant to Section 8 of the United States Housing Act of 1937 and published by the State Department of Housing and Community Development in the California Code of Regulations. (I/We) understand that the applicable median income is \$\_\_\_\_\_. The following computation includes all income (I/we) anticipate receiving for the 12-month period beginning on the date (I/we) execute a rental agreement for an Affordable Unit or the date on which (I/we) will initially occupy such unit, whichever is earlier.

\_\_\_\_\_  
Tenant(s)' Initials

- E. (My/Our) gross income (anticipated total annual income) exceeds eighty percent (80%) but **does not exceed one hundred twenty percent (120%)** of the median income for the Riverside Primary Metropolitan Statistical Area as such income levels are established and amended from time to time pursuant to Section 8 of the United States Housing Act of 1937 and published by the State Department of Housing and Community Development in the California Code of Regulations. (I/We) understand that the applicable median income is \$\_\_\_\_\_. The following computation includes all income (I/we) anticipate receiving for the 12-month period beginning on the date (I/we) execute a rental agreement for an Affordable Unit or the date on which (I/we) will initially occupy such unit, whichever is earlier.

\_\_\_\_\_  
Tenant(s)' Initials

- F. (My/Our) gross income (anticipated total annual income) **exceeds one hundred twenty (120%)** of the median income for the Riverside Primary Metropolitan Statistical Area as such income levels are established and amended from time to time pursuant to Section 8 of the United States Housing Act of 1937 and published by the State Department of Housing and Community Development in the California Code of Regulations. (I/We) understand that the applicable median income is \$\_\_\_\_\_. The following computation includes all income (I/we) anticipate receiving for the 12-month period beginning on the date (I/we) execute a rental agreement for an Affordable Unit or the date on which (I/we) will initially occupy such unit, whichever is earlier.

\_\_\_\_\_  
Tenant(s)' Initials

1. All tenants must complete the following:

**Monthly Gross Income  
(All Sources of Income of All Adult Household Members Must be Listed)**

Source	Head of Household	Co-Tenants	Total
Gross amount, before payroll deductions of wages, salaries, overtime pay, commissions, fees, tips and bonuses			
Interest and/or dividends			
Net income from business or from rental property			
Social security, annuities, insurance policies, pension/retirement funds, disability or death benefits received periodically			
Payment in lieu of earnings, such as unemployment and disability compensation, worker's compensation and severance pay			
Alimony, child support, other periodic allowances			
Public assistance, welfare payments			
Regular pay, special pay and allowances of members of Armed Forces			
Other			

Total: \_\_\_\_\_

Total x 12 \_\_\_\_\_ = Gross Annual Household Income

Note: The following items are **not** considered income: casual or sporadic gifts; amounts specifically for or in reimbursement of medical expenses; lump sum payments such as inheritances, insurance payments (including payments under health and accident insurance and worker's compensation),



capital gains and settlement for personal or property losses; educational scholarships paid directly to the student or educational institution; government benefits to a veteran for education; special pay to a serviceman head of family away from home and under hostile fire; foster child care payments; value of coupon allotments for purpose of food under Food Stamp Act of 1964 which is in excess of amount actually charged the eligible household; relocation payments under Title II of Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970; payments received pursuant to participation in the following programs: MORENO VALLEY, Service Learning Programs, and Special Volunteer Programs, SCORE, ACE, Retired Senior Volunteer Program, Foster Grandparent Program, Older American Community Services Program, and National Volunteer Program to Assist Small Business Experience.

- 2. This affidavit is made with the knowledge that it will be relied upon by the Landlord to determine maximum income for eligibility and (I/we) warrant that all information set forth in this document is true, correct and complete and based upon information (I/we) deem reliable and that the estimate contained in paragraph 1 of this Part III is reasonable and based upon such investigation as the undersigned deemed necessary.
- 3. (I/We) will assist the Landlord in obtaining any information or documents required to verify the statements made in this Part III and have attached hereto copies of federal income tax return for most recent tax year in which a return was filed (past two years federal income tax returns for self-employed persons).
- 4. (I/We) acknowledge that (I/we) have been advised that the making of any misrepresentation or misstatement in this affidavit will constitute a material breach of (my/our) agreement with the Landlord to rent the unit and will additionally enable the Landlord and/or the City of Moreno Valley to initiate and pursue all applicable legal and equitable remedies with respect to the unit and to me/us.

(I/We) do hereby swear under penalty of perjury that the foregoing statements are true and correct.

\_\_\_\_\_
Date

\_\_\_\_\_
Tenant

\_\_\_\_\_
Date

\_\_\_\_\_
Tenant

**INCOME VERIFICATION  
(for employed persons)**

The undersigned employee has applied for a rental unit located in a project financed under a multifamily housing program of the City of Moreno Valley for persons of very low income. Every income statement of a prospective tenant must be stringently verified. Please indicate below the employee's current annual income from wages, overtime, bonuses, commissions or any other form of compensation received on a regular basis.

Annual wages \_\_\_\_\_  
Overtime \_\_\_\_\_  
Bonuses \_\_\_\_\_  
Commissions \_\_\_\_\_  
Total current income \_\_\_\_\_

I hereby certify that the statements above are true and complete to the best of my knowledge.

\_\_\_\_\_  
Signature Date Title

I hereby grant you permission to disclose my income to \_\_\_\_\_ in order that they may determine my income eligibility for rental of an apartment located in their project which has been financed under a multifamily housing program of the City of Moreno Valley.

\_\_\_\_\_  
Signature Date

Please send to:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**INCOME VERIFICATION**  
**(for self-employed persons)**

I hereby attach copies of my individual federal and state income tax returns for the immediately preceding calendar year and certify that the information shown in such income tax returns is true and complete to the best of my knowledge.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING

ATTACHMENT NO. 13

CITY INITIAL NOTE

PROMISSORY NOTE

\_\_\_\_\_, 201\_ (“Date of Promissory Note”) \$3,500,000.00  
Moreno Valley, California

FOR VALUE RECEIVED, the undersigned RB BOULDER RIDGE LIMITED PARTNERSHIP, a California Limited Partnership, (“Maker” or “Developer”), having its principal place of business at 27700 Kalmia Avenue , Rancho Belago, California 92555-5200, promises to pay to the order of the CITY OF MORENO VALLEY, a municipal corporation (“Payee” or “City”), at 14177 Frederick Street, Moreno Valley, California 92552-0805, or at such other place as the holder of this Note from time to time may designate in writing, the principal sum of Three Million Five Hundred Thousand Dollars (\$3,500,000.00) (the “Original Principal Amount”), as well as additional amounts described in Section 1 below, together with interest on the unpaid principal amount of this Promissory Note (“Promissory Note”) from time to time outstanding at the “Applicable Interest Rate,” as defined in that certain Disposition and Development/Affordable Housing Agreement dated as of March 15, 2016 by and between City and the Developer (the “DDA”) in lawful money of the United States of America. This Promissory Note is being delivered pursuant to the DDA. The loan evidenced by this Promissory Note shall be governed by such provisions of the DDA (including without limitation the attachments thereto) as shall be applicable. Interest shall accrue on the Original Principal Amount at the rate of one percent (1%) simple per annum commencing as of the Date of Promissory Note. All capitalized terms used herein shall have the meanings set forth therefor in the DDA. Interest shall accrue only on the City Disbursement Amount and such additional amounts as may become payable under Section 1 of this Promissory Note.

1. Additional Amounts. The principal due under this Promissory Note shall be increased by: (a) any “Reporting Amounts” (as defined in Article II, Section 3 of the City Regulatory Agreement; (b) an amount equal to one hundred fifteen percent (115%) of the amounts paid by City for insurance premiums or costs to repair and maintain the Development upon the failure by the Developer to timely and fully provide insurance at the times and for the amounts provided therefor in Article III, Section 10 of the City Regulatory Agreement; and (c) in the event an Audited Financial Statement shows an underpayment to City of five percent (5%) or greater of the amount paid to City for the corresponding Year, Developer shall pay to City: (i) City’s costs (including accountant and consultant fees, attorneys’ fees, and a reasonable estimation of the cost of staff time) incurred in connection with City’s audit of Developer, and (ii) an amount equal to ten percent (10%) of the shortfall.

2. Payments of Principal and Interest. Payments hereunder shall be due and payable on the ninetieth (90th) day following the last day of each Year. This Promissory Note shall be payable from \_\_\_\_\_ percent (\_\_\_%) [to come: percentage to be based upon the ratio of the amount loaned under this City Initial Note to the total amounts loaned under the City Subsequent Note and the City Initial Note; for example, if \$3,500,000 is loaned under the City Initial Note and \$1,000,000 is loaned under the City Subsequent Note, 11.1% of Residual Receipts would be payable to City under the City Subsequent Note and 38.9% of Residual Receipts would be payable to City

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under the City Initial Note of Residual Receipts. Payments to City may, at the option of Payee, be accelerated and shall be due and payable hereunder in the event of the occurrence of any default under the DDA, the City Initial Deed of Trust, the City Subsequent Note, the City Subsequent Deed of Trust, or the City Developer CC&Rs.

Except in the event of a transfer of Developer's interest in Area A (or the Improvements) contrary to the provisions of the DDA (including without limitation the City Disposition Deed), the Maker's payments to City hereunder shall not be deemed in default hereunder so long as Maker makes payments to City of fifty percent (50%) of Residual Receipts for the corresponding Year.

Notwithstanding anything to the contrary contained herein, to the extent not sooner paid hereunder, payment of all amounts accrued as of the maturity date which shall be the fifty-fifth (55<sup>th</sup>) anniversary of the Date of Agreement (herein, the "Maturity Date" or "Maturity Date (Acquisition)") shall be due and payable as of the Maturity Date.

3. Other Loan Documents. Repayment of this Promissory Note is secured by a deed of trust (the "City Initial Deed of Trust") of this date executed by Maker for the benefit of Payee encumbering the property described in the Deed of Trust (the "Property" or "Area A").

4. Prepayment. Maker shall have the right to prepay amounts owing under this Promissory Note at any time.

5. Due on Sale or Encumbrance. In the event of any Transfer (as defined below) of the Property, or any portion thereof or interest therein, Payee shall have the absolute right at its option, without prior demand or notice, to declare all sums secured hereby immediately due and payable. As used herein, the term "Transfer" means and includes the direct or indirect sale, transfer, conveyance, mortgage, further encumbrance, assignment, or other alienation of the Property, or any portion thereof or interest therein, whether voluntary, involuntary, by operation of law or otherwise, the execution of any installment land sale contract, sales agreement or similar instrument affecting all or a portion of the Property, granting of an option to purchase any portion of or interest in the Property or any interest therein, or the lease of all or substantially all of the Property or of all or substantially all of the improvements located thereon. Transfer shall not include the sale, transfer, assignment, pledge, hypothecation or encumbrance by Developer's limited partner of its partnership interest to the extent permitted by the DDA nor shall Transfer include the removal of any general partner of Developer by the limited partner for cause and the replacement of such removed general partner by another person or entity in accordance with the terms of Developer's partnership agreement to the extent permitted by the DDA. "Transfer" shall not include a Transfer permitted in the DDA or the leasing of individual Units on the Property so long as Trustor complies with the provisions of the City Developer CC&Rs, the City Disposition Deed and the DDA relating to such leasing activity. Failure of Beneficiary to exercise the option to declare all sums secured hereby immediately due and payable upon a Transfer will not constitute waiver of the right to exercise this option in the event of any subsequent Transfer.

6. Subordination to Multifamily Note. Developer and the Payee each makes the following representations and warranties to [name of lender's agent: to come], as Agent ("Agent"):

"The indebtedness evidenced by this Promissory Note is and shall be subordinate in right of payment to the prior payment in full of the indebtedness evidenced by a Multifamily Note of even date herewith in the original principal amount of [approximately \$\_\_\_\_\_] issued

by RB Boulder Ridge Limited Partnership and payable to [to come] (“Senior Lender”), or order, to the extent and in the manner provided in that certain Subordination Agreement, dated as of \_\_\_\_\_, 201\_, between the payee of this Promissory Note, and the Senior Lender and the maker of the Promissory Note (the “Subordination Agreement”). The mortgage or deed of trust securing this Promissory Note is and shall be subject and subordinate in all respects to the Assignment of Rents, Security Agreement and Fixture Filing securing the rights and remedies of the payee and each subsequent holder of this Promissory Note under the mortgage or deed of trust securing this Promissory Note are subject to the restrictions and limitations set forth in the Subordination Agreement. Each subsequent holder of this Promissory Note shall be deemed, by virtue of such holder’s acquisition of the Promissory Note, to have agreed to perform and observe all of the terms, covenants and conditions to be performed or observed by the Subordinate Lender under the Subordination Agreement.”

In the event of the refinancing of the senior loan for an amount not in excess of the outstanding principal balance of the existing senior loan and reasonable and customary closing costs, City will execute an instrument or instruments evidencing the subordination of the indebtedness evidenced by this Promissory Note to such new senior loan.

7. Miscellaneous.

(a) Governing Law. All questions with respect to the construction of this Promissory Note and the rights and liabilities of the parties to this Promissory Note shall be governed by the laws of the State of California.

(b) Binding on Successors. This Promissory Note shall inure to the benefit of, and shall be binding upon, the successors and assigns of each of the parties to this Promissory Note.

(c) Attorneys’ Fees.

(i) Maker shall reimburse Payee for all reasonable attorneys’ fees, costs and expenses, incurred by Payee in connection with the enforcement of Payee’s rights under this Promissory Note, including, without limitation, reasonable attorneys’ fees, costs and expenses for trial, appellate proceedings, out-of-court negotiations, workouts and settlements or for enforcement of rights under any state or federal statute, including, without limitation, reasonable attorneys’ fees, costs and expenses incurred to protect Payee’s security and attorneys’ fees, costs and expenses incurred in bankruptcy and insolvency proceedings such as (but not limited to) seeking relief from stay in a bankruptcy proceeding. The term “expenses” means any expenses incurred by Payee in connection with any of the out-of-court, or state, federal or bankruptcy proceedings referred to above, including, without limitation, the fees and expenses of any appraisers, consultants and expert witnesses retained or consulted by Payee in connection with any such proceeding.

(ii) Payee shall also be entitled to its attorneys’ fees, costs and expenses incurred in any post-judgment proceedings to collect and enforce the judgment. This provision is separate and several and shall survive the merger of this Promissory Note into any judgment on this Promissory Note.

(d) Entire Agreement. This Promissory Note and the relevant provisions of the DDA constitute the entire agreement and understanding between and among the parties in respect of

the subject matter of such agreements and supersede all prior agreements and understandings with respect to such subject matter, whether oral or written.

(e) Time of the Essence. Time if of the essence with respect to every provision hereof.

(f) Waivers by Maker. Except as otherwise provided in any agreement executed in connection with this Promissory Note, Maker waives: presentment; demand; notice of dishonor; notice of default or delinquency; notice of acceleration; notice of protest and nonpayment; notice of costs, expenses or losses and interest thereon; and diligence in taking any action to collect any sums arising under this Promissory Note or in any proceeding against any of the rights or interests in or to properties securing payment of this Promissory Note.

(g) Non-waivers. No previous waiver and no failure or delay by Maker in acting with respect to the terms of this Promissory Note or the Capital Deed of Trust shall constitute a waiver of any breach, default, or failure of condition under this Promissory Note, the City Initial Deed of Trust or the obligations secured thereby. A waiver of any term of this Promissory Note, the Capital Deed of Trust or of any of the obligations secured thereby must be made in writing and shall be limited to the express written terms of such waiver. In the event of any inconsistencies between the terms of this Promissory Note and the terms of any other document related to the loan evidenced by this Promissory Note, the terms of this Promissory Note shall prevail.

(h) Non-recourse Liability of Developer. Notwithstanding anything to the contrary of this Promissory Note, neither Developer nor any of its partners shall be personally liable for any default, loss, claim, damage, expense or liability or any person and the sole remedy against Developer hereunder shall be limited to its interest in the Development.

**RB BOULDER RIDGE LIMITED  
PARTNERSHIP,**  
a California Limited Partnership

By: Rancho Belago Developers, Inc.,  
a California corporation,  
its General Partner

By: \_\_\_\_\_  
Name: James M. Jernigan  
Title: President

**ATTACHMENT NO. 14  
CITY INITIAL DEED OF TRUST**

Order No.  
Escrow No.  
Loan No.

WHEN RECORDED MAIL  
TO:

City of Moreno Valley  
14177 Frederick Street  
Moreno Valley, California  
92552-0805  
Attention: City Manager

SPACE ABOVE THIS LINE FOR RECORDER'S USE

**DEED OF TRUST WITH ASSIGNMENT OF RENTS  
(SHORT FORM)**

This DEED OF TRUST, made as of \_\_\_\_\_, 201\_, among

RB BOULDER RIDGE LIMITED PARTNERSHIP, a California limited partnership, herein called TRUSTOR,  
whose address is:

27700 Kalmia Avenue, Rancho Belago, California 92555-5200

FIRST AMERICAN TITLE INSURANCE COMPANY, a California corporation, herein called TRUSTEE, and  
the CITY OF MORENO VALLEY, a municipal corporation, herein called BENEFICIARY,

WITNESSETH: That Trustor grants to Trustee in trust, with power of sale, that property in the City of Moreno  
Valley, County of Riverside, State of California, described as:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF.

together with the rents, issues and profits thereof, subject, however, to the right, power and authority hereinafter  
given to and conferred upon Beneficiary to collect and apply such rents, issues and profits for the purpose of  
securing (1) payment of the sum of \$3,500,000.00 with interest thereon according to the terms of a promissory note  
or notes of even date herewith made by Trustor, payable to order of Beneficiary, and extensions or renewals  
thereof, (2) the performance of each and every obligation, covenant, promise or agreement of Trustor contained in  
the Loan Agreement between Beneficiary and Trustor, the City Developer CC&Rs recorded as to the Property of  
even date herewith, and that certain Disposition and Development/Affordable Housing Agreement by and between

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the Beneficiary, the City of Moreno Valley (“City”) and the Trustor dated as of March 15, 2016 (the “DDA”), which is on file with the Beneficiary as a public record and is incorporated herein by reference, or contained herein, and (3) payment of additional sums and interest thereon which may hereafter be loaned to Trustor, or his successors or assigns, when evidenced by a promissory note or notes reciting that they are secured by this Deed of Trust. A breach or default under the promissory note or a breach or default under the “Agreement” or any instrument referenced in Exhibit B hereto, or under any obligation to which this deed of trust is subordinated, shall be deemed to constitute a default hereunder.

To protect the security of this Deed of Trust, and with respect to the property above described, Trustor expressly makes each and all of the agreements, and adopts and agrees to perform and be bound by each and all of the terms and provisions set forth in subdivision A, and it is mutually agreed that each and all of the terms and provisions set forth in subdivision B of the fictitious deed of trust recorded in Riverside County on August 18, 1964, at Book 6213, commencing at Page 768, among the Official Records of said County, shall inure to and bind the parties hereto, with respect to the property above described. Said agreements, terms and provisions contained in said subdivisions A and B, (identical in all counties, and printed on pages 3 and 4 hereof) are by the within reference thereto, incorporated herein and made a part of this Deed of Trust for all purposes as fully as set forth at length herein, and Beneficiary may charge for a statement regarding the obligation secured hereby, provided the charge therefor does not exceed the maximum allowed by law.

The undersigned Trustor, requests that a copy of any notice of default and any notice of sale hereunder be mailed to him at his address hereinbefore set forth.

**RB BOULDER RIDGE LIMITED PARTNERSHIP,**  
a California Limited Partnership

By: Rancho Belago Developers, Inc.,  
a California corporation,  
its General Partner

By: \_\_\_\_\_  
Name: James M. Jernigan  
Title: President

**EXHIBIT "A"**  
**LEGAL DESCRIPTION**

[to come; legal description of Area A]

APN: [APNs to come]

**EXHIBIT "B"****RIDER TO DEED OF TRUST**

Exhibit B to Deed of Trust with Assignment of Rents dated as of \_\_\_\_\_, 201\_, executed by RB Boulder Ridge Limited Partnership, a California limited partnership, as "Trustor", to First American Title Insurance Company, a California corporation, as Trustee, for the benefit of the City of Moreno Valley, a municipal corporation, as "Beneficiary" ("Deed of Trust").

1. **DEFAULT - OTHER DEEDS OF TRUST, DEED, COVENANTS CONDITIONS AND RESTRICTIONS (CC&Rs) AND AGREEMENT.** A default under any of the following shall, at Beneficiary's option, constitute a default under this Deed of Trust:
  - (a) A default under that certain Disposition and Development/Affordable Housing Agreement dated as of March 15, 2016, by and between the City of Moreno Valley ("City"), Trustor and Beneficiary (the "DDA") or any default under any City Initial Note or City Initial Deed of Trust delivered under the Agreement, whether senior or junior to this Deed of Trust (all capitalized terms not defined herein shall have the meanings established therefor under the Agreement);
  - (b) A default under the "City Developer CC&Rs" (as executed and recorded pursuant to the DDA);
  - (c) A default under the City Disposition Deed (as entered into pursuant to the DDA).
2. **NON-IMPAIRMENT.** Except as supplemented and/or modified by this Deed of Trust, all of the terms, covenants and conditions of the Other Deeds of Trust and the other loan documents executed in connection therewith shall remain in full force and effect.
3. **DUE ON SALE OR ENCUMBRANCE.** In the event of any Transfer (as defined below) of the Property, or any portion thereof or interest therein, Beneficiary shall have the absolute right at its option, without prior demand or notice, to declare all sums secured hereby immediately due and payable. As used herein, the term "Transfer" means and includes the direct or indirect sale, transfer, conveyance, mortgage, further encumbrance, assignment, or other alienation of the Property, or any portion thereof or interest therein, whether voluntary, involuntary, by operation of law or otherwise, the execution of any installment land sale contract, sales agreement or similar instrument affecting all or a portion of the Property, granting of an option to purchase any portion of or interest in the Property or any interest therein, or the lease of all or substantially all of the Property or of all or substantially all of the improvements situated on the Property. "Transfer" shall not include a Transfer permitted in the DDA or the leasing of individual dwelling units on the Property so long as Trustor complies with the provisions of the Agreement relating to such leasing activity and such transfers as are permitted under that certain agreement entitled "Regulatory Agreement" by and between the City of Moreno Valley and RB Boulder Ridge Limited Partnership, a California limited partnership", dated as of \_\_\_\_\_, 201\_. Failure of Beneficiary to exercise the option to declare all sums secured hereby immediately due and payable upon a Transfer will not constitute waiver of the right to exercise this option in the event of any subsequent Transfer.

4. **PRIORITY OF DEED OF TRUST.** This Deed of Trust is subject and subordinate to the following:

(i) the City Disposition Deed; and (ii) the City Developer CC&Rs.

5. **NOTICE AND CURE RIGHTS BY LIMITED PARTNERS.** Notwithstanding anything to the contrary contained in the City Disposition Deed, City hereby agrees that any cure of any default made or tendered by Developer's limited partners shall be deemed to be a cure by Developer and shall be accepted or rejected on the same basis as if made or tendered by Developer. Copies of all notices which are sent to Developer under the terms of the City Disposition Deed shall also be sent to Developer's Limited Partner,

\_\_\_\_\_.

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 )  
 ) ss.  
COUNTY OF \_\_\_\_\_ )

On \_\_\_\_\_, before me, \_\_\_\_\_, Notary Public,  
(Print Name of Notary Public)

personally appeared \_\_\_\_\_

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 of Notary Public

**OPTIONAL**

Though the data below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent reattachment of this form.

**CAPACITY CLAIMED BY SIGNER**

**DESCRIPTION OF ATTACHED DOCUMENT**

- Individual
- Corporate Officer

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

- Partner(s)       Limited       General
- Attorney-In-Fact
- Trustee(s)
- Guardian/Conservator
- Other: \_\_\_\_\_

\_\_\_\_\_  
Title Or Type Of Document

\_\_\_\_\_  
Number Of Pages

Signer is representing:  
Name Of Person(s) Or Entity(ies)

\_\_\_\_\_  
Date Of Documents

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Signer(s) Other Than Named Above

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**ATTACHMENT NO. 15**  
**AREA B LICENSE AGREEMENT**

**LICENSE AGREEMENT**  
**BETWEEN**  
**THE CITY OF MORENO VALLEY**  
**AND**  
**RB BOULDER RIDGE LIMITED PARTNERSHIP**

**THIS LICENSE AGREEMENT** (“License”) is entered into as of \_\_\_\_\_, 201\_ (“Effective Date” and “Commencement Date”), between the **CITY OF MORENO VALLEY**, a chartered municipal corporation (“City”), and **RB BOULDER RIDGE LIMITED PARTNERSHIP**, a California limited partnership (“Licensee”). The City (“Licensor”) holds all interest in the Real Property, as defined below, and hereby agrees to license temporary access to and use of those respective interests, as they now or do exist in the future, to Licensee pursuant to this License.

**Recitals**

A. Licensor acquired and is the owner of real property (“Real Property”) located at the southeast corner of Alessandro Boulevard and Lasalle Street (“Site”) as set forth in Exhibit “A” hereto (“Vicinity Map”), including all rights appurtenant to that unimproved Site within the parameters herein set forth. The Site consists of two portions, “Area A” and “Area B” as depicted on the Vicinity Map.

B. Licensor and Licensee have entered into an agreement entitled “Disposition and Development/Affordable Housing Agreement” dated as of March 15, 2016 (the “DDA”), a copy of which is on file with City as a public record. Capitalized terms not defined herein shall have the respective meanings set forth therefor in the DDA. Under the DDA, Licensee has acquired or shall acquire title to Area A, upon which Licensee shall develop the Improvements and operate an affordable rental housing project thereon as more particularly provided in the DDA.

C. In connection with its construction activities under the DDA, Licensee desires to license from Licensor, and Licensor desires to license to Licensee, temporary use of Area B (which, during the period of and within the exercise of the license herein granted is referred to as the “Licensed Premises”) for the conduct of grubbing, grading, drainage/erosion control and remediation activities to be conducted on Area B, and for the storage of materials and equipment, and associated ingress and egress, for construction of the Improvements on Area A pursuant to the DDA.

**NOW THEREFORE**, for good and valuable consideration the receipt and adequacy of which are acknowledged, the parties agree as follows:

**Section 1. License of Premises**

Licensor hereby grants an nonexclusive license to Licensee and Licensee hereby licenses from Licensor for the License Term (as defined in Section 3 below), at the License Fee, and upon all of the terms and conditions set forth herein, the Licensed Premises.

## Section 2. Use

(A) The Licensed Premises shall be used and occupied only for the Authorized Use as described in paragraph B below. Licensee, at its expense, shall immediately comply with all laws, ordinances, rules, regulations, requirements, or orders of municipal, state and federal authorities now in force or that may later be in force, including, but not limited to, all provisions of the Americans with Disabilities Act of 1990 (the “ADA”) and Title 24 of the California Administrative Code (“Title 24”) (collectively, “Legal Requirements”) applicable to the Licensed Premises or Licensee’s use or occupancy thereof or alterations thereto, as well as all federal and state laws, Rules and Regulations as referenced in the DDA (including without limitation concerning labor standards and the Davis-Bacon Act). Licensee shall not cause or permit any hazardous material to be brought upon, kept, used, released, discharged, or disposed of in or about the Licensed Premises, except for such discharge, release or disposal of existing hazardous materials which are present on the Licensed Premises as of the Effective Date that occurs as part of Licensee’s planned remediation work.

(B) The Authorized Use consists solely of the conduct of grubbing, grading, drainage/erosion control and remediation activities to be conducted on Area B and the installation of certain infrastructure improvements to the extent set forth in Attachment No. 2 hereto, and for the storage of materials and equipment, and associated ingress and egress, for construction of the Improvements on Area A pursuant to the DDA which Licensee shall complete in the manner and on the schedule set forth in Attachment No. 2 which is appended hereto and incorporated herein by reference. The Authorized Use includes installation of security fencing, on a temporary basis, intended to secure construction materials and equipment stored on-site.

## Section 3. License Term

The term (“License Term”) of this License shall be month to month, and may be terminated on thirty (30) days advance written notice by either party. There shall be no property rights of any kind imparted by virtue of this License Agreement notwithstanding the construction of infrastructure improvements on Area B.

## Section 4. As-Is Condition

Licensee agrees that it is licensing the Licensed Premises on an “AS IS” basis, with all defects, without any representation or warranty by Licensor or its agents as to the condition of the Licensed Premises or their fitness for Licensee’s use, and subject to all applicable zoning, municipal, county and state laws, ordinances and regulations governing and regulating the use of the Licensed Premises.

## Section 5. License Fee

None. This license is granted without charge.

## Section 6. Compliance with Law

Licensee shall, at Licensee’s sole cost, comply with all of the requirements of all municipal, state, and federal authorities now in force or that may later be in force pertaining to the use of the Licensed Premises, and shall faithfully observe in this use all municipal ordinances and state and federal statutes now in force or that shall later be in force.

## Section 7. Indemnity; Waiver of Liability; Insurance

### (A) Indemnity

Licensee shall protect, indemnify, defend and hold harmless Licensor, the City and its directors, officers, partners, employees, agents, successors and assigns (collectively, "Indemnitees") from and against any and all claims, demands, obligations, damages (including consequential and/or punitive damages), costs, liabilities, actions and judgments (collectively, "Claims") including, without limitation, Claims for injury or damage to persons or property, and Claims for penalties, fines and reasonable attorney's fees and costs (including attorney's fees and costs incurred to enforce this indemnity), incurred in connection with or arising from this License; provided, however, that this indemnity shall not apply to the sole active negligence or willful misconduct of Indemnitees which occurs after the Effective Date. Further, Licensee shall have no liability to Indemnitees or to any other person or entity by reason of, nor shall Licensee have any duty to indemnify, defend or hold any person harmless against, any claim, demand, damage, loss, action, liability, cause of action or judgment, including, without limitation, any claim for diminution in value of the Licensed Premises or for environmental remediation or clean-up costs, arising out of or in connection with the mere fact of having discovered, inadvertently disturbed and/or reported (as may be required by law) any adverse physical condition, existing hazardous materials, or other defect with respect to the Licensed Premises.

### (B) Insurance

(1) During the entire License Term of this License, Licensee shall, at Licensee's sole cost, but for the mutual benefit of Licensor and Licensee, maintain general public liability insurance against claims for personal injury, death, or property damage occurring in or about the Licensed Premises and on any sidewalks directly adjacent to the Licensed Premises. The limitation of liability of this insurance shall be not less than \$1,000,000 in respect to injury or death of one person and to the limit of not less than \$1,000,000 in respect to any one accident and to the limit of not less than \$1,000,000 with respect to property damage, or other lesser amounts of coverage as approved by Licensor in its sole and absolute discretion.

(2) Licensee's insurance policies shall contain the following clauses:

(i) Licensor is named as an additional insured as respects operations of the named insured.

(ii) It is agreed that any insurance maintained by Licensor shall apply in excess of, and not contribute with insurance provided by this policy.

(iii) This insurance shall not be canceled, limited or non-renewed until after thirty (30) days written notice has been given to Licensor.

(3) Certificates of insurance evidencing the coverages required by the clauses set forth shall be filed with Licensor prior to the Commencement Date of this License Agreement, or to a date not more than five (5) days thereafter, if approved by the City.

(4) At all times during the License Term and any extensions or renewals, Licensee agrees to keep and maintain, or cause Licensee's agents, contractors, or subcontractors to



keep and maintain workmen's compensation insurance and other forms of insurance as may from time to time be required by law or may otherwise be necessary to protect Licensor and the Premises from claims of any person who may at any time work on the Premises, whether as a servant, agent, or employee of Licensee or otherwise. This insurance shall be maintained at the expense of the Licensee or Licensee's agents, contractors, or subcontractors and not at the expense of Licensor.

(5) Licensor agrees that it will tender and turn over to Licensee or to Licensee's insurers the defense of any claims, demands, or suits instituted, made, or brought against Licensor or against Licensor and Licensee jointly within the scope of this Section. However, Licensor shall have the right to approve the selection of legal counsel, to the extent that selection is within Licensee's control, which approval shall not be unreasonably withheld or delayed. In addition, Licensor shall retain the right at Licensor's election to have Licensor's own legal counsel participate as co-counsel, to the extent that claims are made that may be covered by Licensee's insurers.

(C) Waiver of Liability

(1) Licensor shall not be liable to Licensee, and Licensee hereby waives all claims against Licensor for any loss, injury, or other damage to person or property in or about the Licensed Premises from any cause whatsoever, except Licensor's sole negligence or willful misconduct which occurs after the Effective Date. Licensee expressly assumes all responsibility for security, in, on or about the Licensed Premises, and Licensor shall not be liable for any damage to goods, wares, merchandise or other property located in the Licensed Premises, or injury or death to Licensee's employees, invitees, customers or any other person in or about the Licensed Premises, unless caused by Licensor's sole active negligence or willful misconduct. The foregoing waiver includes criminal acts of third parties.

**Section 8. Free From Liens**

Licensee shall keep the Licensed Premises and the Property free from any liens arising out of any work performed, material furnished, or obligation incurred by Licensee.

**Section 9. Condition at Termination; Abandonment**

Prior to the expiration or earlier termination of this License, Licensee shall, at the request of Licensor, remove any goods, wares, merchandise, machinery, equipment or other property placed on the Licensed Premises by Licensee, its agents, employees and contractors or by third parties during the time Licensee has access to the Licensed Premises and the Property under this Agreement.

**Section 10. [Reserved]**

**Section 11. Notices**

Wherever in this License it shall be required or permitted that notice and demand be given or served by either party to the other, this notice or demand shall be given or served and shall not be deemed to have been given or served unless in writing and forwarded by certified mail, addressed as follows:

If to Licensor: City of Moreno Valley  
 14177 Frederick Street  
 Moreno Valley, California 92552-0805  
 Attn: Assistant City Manager

If to Licensee: RB Boulder Ridge Limited Partnership  
 27700 Kalmia Avenue  
 Rancho Belago, California 92128  
 Attn: James M. Jernigan

Either party may change this address by written notice by certified mail to the other.

**Section 12. Successors in Interest; Other Agreements**

All of the rights and obligations of the parties under this License shall apply to (i) their respective heirs, executors, administrators and assignees. This Agreement shall not be deemed to modify any existing written agreements between the parties hereto.

**Section 13. Governing Law; Venue**

This License shall be governed by and construed in accordance with the laws of the State of California. Venue for any action or proceeding involving this License shall be in San Diego County, California.

**Section 14. Counterparts**

This Agreement may be executed in two (2) or more counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the parties have executed this License Agreement as of the day and year first above written.

**CITY OF MORENO VALLEY,**  
a municipal corporation

**RB BOULDER RIDGE LIMITED  
PARTNERSHIP,**  
a California Limited Partnership

By: \_\_\_\_\_  
Thomas DeSantis, Assistant City Manager

By: Rancho Belago Developers, Inc.,  
a California corporation,  
its General Partner

By: \_\_\_\_\_  
Name: James M. Jernigan  
Title: President

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING

**EXHIBIT "A"**  
**VICINITY MAP**

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING

**ATTACHMENT NO. 2****SCOPE OF WORK**

Licensee shall comply with all applicable laws and regulations in performing and overseeing the work. Work shall include the conduct of grubbing, grading, drainage/erosion control and remediation activities to be conducted on Area B, and may include the storage of materials and equipment, and associated ingress and egress, for construction of the Improvements on Area A pursuant to the DDA. Activities will also include the installation of infrastructure improvements on Area B to the extent provided under the “Existing Entitlements Actions” (as defined in the DDA).

**ATTACHMENT NO. 16  
ACQUISITION GRANT DEED**

**RECORDING REQUESTED  
BY AND  
WHEN RECORDED MAIL  
TO:**

City of Moreno Valley  
14177 Frederick Street  
Moreno Valley, California 92552-  
0805  
Attn: City Manager

APN(s): \_\_\_\_\_

[Space above for recorder.]

Exempt from recording fee and documentary transfer tax  
pursuant to Government Code Section 27383.

**GRANT DEED**

FOR VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, Lakeridge Marketplace, LLC, a California limited liability company (“Grantor”), hereby grants to the City of Moreno Valley, a municipal corporation, that certain real property located in the County of Riverside, State of California, more particularly described on Exhibit A attached hereto and incorporated herein by this reference.

IN WITNESS WHEREOF, Grantor has executed this Grant Deed as of \_\_\_\_\_, 201\_.

**LAKERIDGE MARKETPLACE, LLC,**  
a California limited liability company

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Its: Managing Member

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**EXHIBIT “A” TO GRANT DEED**  
**LEGAL DESCRIPTION**

[to come: legal description of the Site]

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING

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 )  
 ) ss.  
COUNTY OF \_\_\_\_\_ )

On \_\_\_\_\_, before me, \_\_\_\_\_, Notary Public,  
(Print Name of Notary Public)

personally appeared \_\_\_\_\_

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 of Notary Public

**OPTIONAL**

Though the data below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent reattachment of this form.

**CAPACITY CLAIMED BY SIGNER**

**DESCRIPTION OF ATTACHED DOCUMENT**

- Individual
- Corporate Officer

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

- Partner(s)       Limited       General
- Attorney-In-Fact
- Trustee(s)
- Guardian/Conservator
- Other: \_\_\_\_\_

\_\_\_\_\_  
Title Or Type Of Document

\_\_\_\_\_  
Number Of Pages

Signer is representing:  
Name Of Person(s) Or Entity(ies)

\_\_\_\_\_  
Date Of Documents

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Signer(s) Other Than Named Above

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING



**CERTIFICATE OF ACCEPTANCE**

This is to certify that the fee interest in real property conveyed under the foregoing Grant Deed by Lakeridge Marketplace, LLC, a California limited liability company, as to the following property:

Real property in the City of Moreno Valley, County of Riverside, State of California, described as follows:

[to come]

is hereby accepted by the City Manager of the City of Moreno Valley on behalf of the City Council of the City of Moreno Valley pursuant to authority conferred by action of the City Council of the City of Moreno Valley on March 15, 2016, and the Grantee consents to recordation thereof by its duly authorized officer.

**CITY OF MORENO VALLEY,**  
a municipal corporation

By: \_\_\_\_\_  
Thomas DeSantis, Assistant City Manager

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING

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STATE OF CALIFORNIA )  
 ) ss.  
COUNTY OF \_\_\_\_\_ )

On \_\_\_\_\_, before me, \_\_\_\_\_, Notary Public,  
(Print Name of Notary Public)

personally appeared \_\_\_\_\_

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 of Notary Public

**OPTIONAL**

Though the data below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent reattachment of this form.

**CAPACITY CLAIMED BY SIGNER**

**DESCRIPTION OF ATTACHED DOCUMENT**

- Individual
- Corporate Officer

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

- Partner(s)       Limited       General
- Attorney-In-Fact
- Trustee(s)
- Guardian/Conservator
- Other: \_\_\_\_\_

Signer is representing:  
Name Of Person(s) Or Entity(ies)

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Title Or Type Of Document

\_\_\_\_\_  
Number Of Pages

\_\_\_\_\_  
Date Of Documents

\_\_\_\_\_  
Signer(s) Other Than Named Above

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING

**ATTACHMENT NO. 17  
CITY SUBSEQUENT NOTE**

**PROMISSORY NOTE**

\_\_\_\_\_, 201\_ (“Date of Promissory Note”) [\$1,000,000.00]  
Moreno Valley, California

FOR VALUE RECEIVED, the undersigned RB BOULDER RIDGE LIMITED PARTNERSHIP, a California Limited Partnership, (“Maker” or “Developer”), having its principal place of business at 27700 Kalmia Avenue , Rancho Belago, California 92555-5200, promises to pay to the order of the CITY OF MORENO VALLEY, a municipal corporation (“Payee” or “City”), at 14177 Frederick Street, Moreno Valley, California 92552-0805, or at such other place as the holder of this Note from time to time may designate in writing, the principal sum of [One Million Dollars (\$1,000,000.00)] (the “Original Principal Amount”), as well as additional amounts described in Section 1 below, together with interest on the unpaid principal amount of this Promissory Note (“Promissory Note”) from time to time outstanding at the “Applicable Interest Rate,” as defined in that certain Disposition and Development/Affordable Housing Agreement dated as of March 15, 2016 by and between City and the Developer (the “DDA”) in lawful money of the United States of America. This Promissory Note is being delivered pursuant to the DDA. The loan evidenced by this Promissory Note shall be governed by such provisions of the DDA (including without limitation the attachments thereto) as shall be applicable. Interest shall accrue on the Original Principal Amount at the rate of one percent (1%) simple per annum commencing as of the Date of Promissory Note. All capitalized terms used herein shall have the meanings set forth therefor in the DDA. Interest shall accrue only on the City Disbursement Amount and such additional amounts as may become payable under Section 1 of this Promissory Note.

1. Additional Amounts. The principal due under this Promissory Note shall be increased by: (a) any “Reporting Amounts” (as defined in Article II, Section 3 of the City Regulatory Agreement; (b) an amount equal to one hundred fifteen percent (115%) of the amounts paid by City for insurance premiums or costs to repair and maintain the Development upon the failure by the Developer to timely and fully provide insurance at the times and for the amounts provided therefor in Article III, Section 10 of the City Regulatory Agreement; and (c) in the event an Audited Financial Statement shows an underpayment to City of five percent (5%) or greater of the amount paid to City for the corresponding Year, Developer shall pay to City: (i) City’s costs (including accountant and consultant fees, attorneys’ fees, and a reasonable estimation of the cost of staff time) incurred in connection with City’s audit of Developer under Section 26.5 of the City Disposition Deed, and (ii) an amount equal to ten percent (10%) of the shortfall.

2. Payments of Principal and Interest. Payments hereunder shall be due and payable on the ninetieth (90th) day following the last day of each Year. This Promissory Note shall be payable from \_\_\_\_\_ percent (\_\_\_%) [to come: percentage to be based upon the ratio of the amount loaned under this City Subsequent Note to the total amounts loaned under the City Subsequent Note and the City Initial Note; for example, if \$3,500,000 is loaned under the City Initial Note and \$1,000,000 is loaned under the City Subsequent Note, 11.1% of Residual Receipts would be payable to City under the City Subsequent Note and 38.9% of Residual Receipts would be payable

to City under the City Initial Note] of Residual Receipts, less that amount paid to City for the corresponding Year under the City Initial Note. Payments to City may, at the option of Payee, be accelerated and shall be due and payable hereunder in the event of the occurrence of any default under the DDA, the City Initial Note, the City Initial Deed of Trust, the City Subsequent Deed of Trust, or the City Developer CC&Rs.

Except in the event of a transfer of Developer's interest in Area A (or the Improvements) contrary to the provisions of the DDA (including without limitation the City Disposition Deed), the Maker's payments to City hereunder shall not be deemed in default hereunder so long as Maker makes payments to City of that portion of Residual Receipts required hereunder for the corresponding Year.

Notwithstanding anything to the contrary contained herein, to the extent not sooner paid hereunder, payment of all amounts accrued as of the maturity date which shall be the fifty-fifth (55<sup>th</sup>) anniversary of the Date of Agreement (herein, the "Maturity Date (Construction)") shall be due and payable as of the Maturity Date.

3. Other Loan Documents. Repayment of this Promissory Note is secured by a deed of trust (the "Construction Deed of Trust") of this date executed by Maker for the benefit of Payee encumbering the property described in the Deed of Trust (the "Property" or "Area A").

4. Prepayment. Maker shall have the right to prepay amounts owing under this Promissory Note at any time.

5. Due on Sale or Encumbrance. In the event of any Transfer (as defined below) of the Property, or any portion thereof or interest therein, Payee shall have the absolute right at its option, without prior demand or notice, to declare all sums secured hereby immediately due and payable. As used herein, the term "Transfer" means and includes the direct or indirect sale, transfer, conveyance, mortgage, further encumbrance, assignment, or other alienation of the Property, or any portion thereof or interest therein, whether voluntary, involuntary, by operation of law or otherwise, the execution of any installment land sale contract, sales agreement or similar instrument affecting all or a portion of the Property, granting of an option to purchase any portion of or interest in the Property or any interest therein, or the lease of all or substantially all of the Property or of all or substantially all of the improvements located thereon. Transfer shall not include the sale, transfer, assignment, pledge, hypothecation or encumbrance by Developer's limited partner of its partnership interest to the extent permitted by the DDA nor shall Transfer include the removal of any general partner of Developer by the limited partner for cause and the replacement of such removed general partner by another person or entity in accordance with the terms of Developer's partnership agreement to the extent permitted by the DDA. "Transfer" shall not include a Transfer permitted in the DDA or the leasing of individual Units on the Property so long as Trustor complies with the provisions of the City Developer CC&Rs, the City Disposition Deed and the DDA relating to such leasing activity. Failure of Beneficiary to exercise the option to declare all sums secured hereby immediately due and payable upon a Transfer will not constitute waiver of the right to exercise this option in the event of any subsequent Transfer.

6. Subordination to Multifamily Note. Developer and the Payee each makes the following representations and warranties to [name of lender's agent: to come], as Agent ("Agent"):

"The indebtedness evidenced by this Promissory Note is and shall be subordinate in right of payment to the prior payment in full of the indebtedness evidenced by a Multifamily Note of even date herewith in the original principal amount of [approximately \$\_\_\_\_\_] issued by RB Boulder Ridge Limited Partnership and payable to [to come] ("Senior Lender"), or order, to the extent and in the manner provided in that certain Subordination Agreement, dated as of \_\_\_\_\_, 201\_, between the payee of this Promissory Note, and the Senior Lender and the maker of the Promissory Note (the "Subordination Agreement"). The mortgage or deed of trust securing this Promissory Note is and shall be subject and subordinate in all respects to the Assignment of Rents, Security Agreement and Fixture Filing securing the rights and remedies of the payee and each subsequent holder of this Promissory Note under the mortgage or deed of trust securing this Promissory Note are subject to the restrictions and limitations set forth in the Subordination Agreement. Each subsequent holder of this Promissory Note shall be deemed, by virtue of such holder's acquisition of the Promissory Note, to have agreed to perform and observe all of the terms, covenants and conditions to be performed or observed by the Subordinate Lender under the Subordination Agreement."

In the event of the refinancing of the senior loan for an amount not in excess of the outstanding principal balance of the existing senior loan and reasonable and customary closing costs, City will execute an instrument or instruments evidencing the subordination of the indebtedness evidenced by this Promissory Note to such new senior loan.

7. Miscellaneous.

(a) Governing Law. All questions with respect to the construction of this Promissory Note and the rights and liabilities of the parties to this Promissory Note shall be governed by the laws of the State of California.

(b) Binding on Successors. This Promissory Note shall inure to the benefit of, and shall be binding upon, the successors and assigns of each of the parties to this Promissory Note.

(c) Attorneys' Fees.

(i) Maker shall reimburse Payee for all reasonable attorneys' fees, costs and expenses, incurred by Payee in connection with the enforcement of Payee's rights under this Promissory Note, including, without limitation, reasonable attorneys' fees, costs and expenses for trial, appellate proceedings, out-of-court negotiations, workouts and settlements or for enforcement of rights under any state or federal statute, including, without limitation, reasonable attorneys' fees, costs and expenses incurred to protect Payee's security and attorneys' fees, costs and expenses incurred in bankruptcy and insolvency proceedings such as (but not limited to) seeking relief from stay in a bankruptcy proceeding. The term "expenses" means any expenses incurred by Payee in connection with any of the out-of-court, or state, federal or bankruptcy proceedings referred to above, including, without limitation, the fees and expenses of any appraisers, consultants and expert witnesses retained or consulted by Payee in connection with any such proceeding.

(ii) Payee shall also be entitled to its attorneys' fees, costs and expenses incurred in any post-judgment proceedings to collect and enforce the judgment. This provision is separate and several and shall survive the merger of this Promissory Note into any judgment on this Promissory Note.

(d) Entire Agreement. This Promissory Note and the relevant provisions of the DDA constitute the entire agreement and understanding between and among the parties in respect of the subject matter of such agreements and supersede all prior agreements and understandings with respect to such subject matter, whether oral or written.

(e) Time of the Essence. Time if of the essence with respect to every provision hereof.

(f) Waivers by Maker. Except as otherwise provided in any agreement executed in connection with this Promissory Note, Maker waives: presentment; demand; notice of dishonor; notice of default or delinquency; notice of acceleration; notice of protest and nonpayment; notice of costs, expenses or losses and interest thereon; and diligence in taking any action to collect any sums arising under this Promissory Note or in any proceeding against any of the rights or interests in or to properties securing payment of this Promissory Note.

(g) Non-waivers. No previous waiver and no failure or delay by Maker in acting with respect to the terms of this Promissory Note or the City Subsequent Deed of Trust shall constitute a waiver of any breach, default, or failure of condition under this Promissory Note, the Capital Deed of Trust or the obligations secured thereby. A waiver of any term of this Promissory Note, the Capital Deed of Trust or of any of the obligations secured thereby must be made in writing and shall be limited to the express written terms of such waiver. In the event of any inconsistencies between the terms of this Promissory Note and the terms of any other document related to the loan evidenced by this Promissory Note, the terms of this Promissory Note shall prevail.

(h) Non-recourse Liability of Developer. Notwithstanding anything to the contrary of this Promissory Note, neither Developer nor any of its partners shall be personally liable for any default, loss, claim, damage, expense or liability or any person and the sole remedy against Developer hereunder shall be limited to its interest in the Development.

**RB BOULDER RIDGE LIMITED PARTNERSHIP,**  
a California Limited Partnership

By: Rancho Belago Developers, Inc.,  
a California corporation,  
its General Partner

By: \_\_\_\_\_  
Name: James M. Jernigan  
Title: President

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**ATTACHMENT NO. 18  
CITY INITIAL DEED OF TRUST**

Order No.  
Escrow No.  
Loan No.

WHEN RECORDED MAIL TO:

City of Moreno Valley  
14177 Frederick Street  
Moreno Valley, California  
92552-0805  
Attention: City Manager

SPACE ABOVE THIS LINE FOR RECORDER'S USE

**DEED OF TRUST WITH ASSIGNMENT OF RENTS  
(SHORT FORM)**

This DEED OF TRUST, made as of \_\_\_\_\_, 201\_, among

RB BOULDER RIDGE LIMITED PARTNERSHIP, a California limited partnership, herein called TRUSTOR, whose address is:

27700 Kalmia Avenue, Rancho Belago, California 92555-5200

FIRST AMERICAN TITLE INSURANCE COMPANY, a California corporation, herein called TRUSTEE, and the CITY OF MORENO VALLEY, a municipal corporation, herein called BENEFICIARY,

WITNESSETH: That Trustor grants to Trustee in trust, with power of sale, that property in the City of Moreno Valley, County of Riverside, State of California, described as:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF.

together with the rents, issues and profits thereof, subject, however, to the right, power and authority hereinafter given to and conferred upon Beneficiary to collect and apply such rents, issues and profits for the purpose of securing (1) payment of the sum of \$1,000,000.00 with interest thereon according to the terms of a promissory note or notes of even date herewith made by Trustor, payable to order of Beneficiary, and extensions or renewals thereof, (2) the performance of each and every obligation, covenant, promise or agreement of Trustor contained in the Loan Agreement between Beneficiary and Trustor, the City Developer CC&Rs recorded as to the Property of even date herewith, and that certain Disposition and Development/Affordable Housing Agreement by and between

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING

the Beneficiary, the City of Moreno Valley (“City”) and the Trustor dated as of March 15, 2016 (the “DDA”), which is on file with the Beneficiary as a public record and is incorporated herein by reference, or contained herein, and (3) payment of additional sums and interest thereon which may hereafter be loaned to Trustor, or his successors or assigns, when evidenced by a promissory note or notes reciting that they are secured by this Deed of Trust. A breach or default under the promissory note or a breach or default under the “Agreement” or any instrument referenced in Exhibit B hereto, or under any obligation to which this deed of trust is subordinated, shall be deemed to constitute a default hereunder.

To protect the security of this Deed of Trust, and with respect to the property above described, Trustor expressly makes each and all of the agreements, and adopts and agrees to perform and be bound by each and all of the terms and provisions set forth in subdivision A, and it is mutually agreed that each and all of the terms and provisions set forth in subdivision B of the fictitious deed of trust recorded in Riverside County on August 18, 1964, at Book 6213, commencing at Page 768, among the Official Records of said County, shall inure to and bind the parties hereto, with respect to the property above described. Said agreements, terms and provisions contained in said subdivisions A and B, (identical in all counties, and printed on pages 3 and 4 hereof) are by the within reference thereto, incorporated herein and made a part of this Deed of Trust for all purposes as fully as set forth at length herein, and Beneficiary may charge for a statement regarding the obligation secured hereby, provided the charge therefor does not exceed the maximum allowed by law.

The undersigned Trustor, requests that a copy of any notice of default and any notice of sale hereunder be mailed to him at his address hereinbefore set forth.

**RB BOULDER RIDGE LIMITED PARTNERSHIP,**  
a California Limited Partnership

By: Rancho Belago Developers, Inc.,  
a California corporation,  
its General Partner

By: \_\_\_\_\_  
Name: James M. Jernigan  
Title: President

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING



**EXHIBIT "A"**  
**LEGAL DESCRIPTION**

[to come]

APN: [APNs to come]

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING

## EXHIBIT "B"

## RIDER TO DEED OF TRUST

Exhibit B to Deed of Trust with Assignment of Rents dated as of \_\_\_\_\_, 201\_, executed by RB Boulder Ridge Limited Partnership, a California limited partnership, as "Trustor", to First American Title Insurance Company, a California corporation, as Trustee, for the benefit of the City of Moreno Valley, a municipal corporation, as "Beneficiary" ("Deed of Trust").

1. **DEFAULT - OTHER DEEDS OF TRUST, DEED, COVENANTS CONDITIONS AND RESTRICTIONS (CC&Rs) AND AGREEMENT.** A default under any of the following shall, at Beneficiary's option, constitute a default under this Deed of Trust:
  - (a) A default under that certain Disposition and Development/Affordable Housing Agreement dated as of March 15, 2016, by and between the City of Moreno Valley ("City"), Trustor and Beneficiary (the "DDA") or any default under any City Initial Note or City Initial Deed of Trust delivered under the Agreement, whether senior or junior to this Deed of Trust (all capitalized terms not defined herein shall have the meanings established therefor under the Agreement);
  - (b) A default under the "City Developer CC&Rs" (as executed and recorded pursuant to the DDA);
  - (c) A default under the City Initial Note; and
  - (d) A default under the City Disposition Deed (as entered into pursuant to the DDA).
2. **NON-IMPAIRMENT.** Except as supplemented and/or modified by this Deed of Trust, all of the terms, covenants and conditions of the Other Deeds of Trust and the other loan documents executed in connection therewith shall remain in full force and effect.
3. **DUE ON SALE OR ENCUMBRANCE.** In the event of any Transfer (as defined below) of the Property, or any portion thereof or interest therein, Beneficiary shall have the absolute right at its option, without prior demand or notice, to declare all sums secured hereby immediately due and payable. As used herein, the term "Transfer" means and includes the direct or indirect sale, transfer, conveyance, mortgage, further encumbrance, assignment, or other alienation of the Property, or any portion thereof or interest therein, whether voluntary, involuntary, by operation of law or otherwise, the execution of any installment land sale contract, sales agreement or similar instrument affecting all or a portion of the Property, granting of an option to purchase any portion of or interest in the Property or any interest therein, or the lease of all or substantially all of the Property or of all or substantially all of the improvements situated on the Property. "Transfer" shall not include a Transfer permitted in the DDA or the leasing of individual dwelling units on the Property so long as Trustor complies with the provisions of the Agreement relating to such leasing activity and such transfers as are permitted under that certain agreement entitled "Regulatory Agreement by and between the City of Moreno Valley and RB Boulder Ridge Limited Partnership, a California limited partnership", dated as of \_\_\_\_\_, 201\_. Failure of Beneficiary to exercise the option to declare all sums secured hereby immediately due and payable upon a Transfer will not constitute waiver of the right to exercise this option in the event of any subsequent Transfer.
4. **PRIORITY OF DEED OF TRUST.** This Deed of Trust is subject and subordinate to the following:
  - (i) the City Disposition Deed; and (ii) the City Developer CC&Rs.

5. **NOTICE AND CURE RIGHTS BY LIMITED PARTNERS.** Notwithstanding anything to the contrary contained in the City Disposition Deed, City hereby agrees that any cure of any default made or tendered by Developer’s limited partners shall be deemed to be a cure by Developer and shall be accepted or rejected on the same basis as if made or tendered by Developer. Copies of all notices which are sent to Developer under the terms of the City Disposition Deed shall also be sent to Developer’s Limited Partner, \_\_\_\_\_.

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING

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 )  
 ) ss.  
COUNTY OF \_\_\_\_\_ )

On \_\_\_\_\_, before me, \_\_\_\_\_, Notary Public,  
(Print Name of Notary Public)

personally appeared \_\_\_\_\_

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 of Notary Public

**OPTIONAL**

Though the data below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent reattachment of this form.

**CAPACITY CLAIMED BY SIGNER**

**DESCRIPTION OF ATTACHED DOCUMENT**

- Individual
- Corporate Officer

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

- Partner(s)       Limited       General
- Attorney-In-Fact
- Trustee(s)
- Guardian/Conservator
- Other: \_\_\_\_\_

\_\_\_\_\_  
Title Or Type Of Document

\_\_\_\_\_  
Number Of Pages

Signer is representing:  
Name Of Person(s) Or Entity(ies)

\_\_\_\_\_  
Date Of Documents

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Signer(s) Other Than Named Above

Attachment: DOCSOC-#1746698-v5-Boulder\_Ridge\_DDA [Revision 2] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING

## ATTACHMENT NO. 19

HOME DOCUMENTATION, RECORDKEEPING,  
REPORTING AND MONITORING REQUIREMENTS

**[Note: Attachment No. 19 shall be applicable only if HOME Moneys are used for the Rental Project]**

Developer shall comply with the requirements set forth in this Attachment No. 19 at all times during the term of that certain Agreement (“HOME Agreement”) and that certain agreement entitled “Disposition and Development/Affordable Housing Agreement” dated as of March 27, 2016 (the “DDA”) between City and Developer, to which this Attachment is attached.

### 1. Documentation and Recordkeeping.

(a) Records to be maintained. Developer shall maintain all records required by the federal regulations specified in 24 CFR 92.508(a)(3), which are pertinent to the Construction and operation of the Rental Project funded under this Agreement. Records shall be maintained for each tenant household, each Unit, and each expenditure of HOME Moneys for the acquisition of Area A and construction of the Rental Project pursuant to the HOME Agreement. Such records shall include but are not limited to:

(i) Records providing a full description of each activity undertaken for which HOME Moneys were applied;

(ii) Records required to determine the eligibility of activities for use of HOME Moneys;

(iii) Records (including property inspection reports) demonstrating that each Unit meets the property standards of 24 CFR 92.251(d) and 24 CFR 982.401 upon occupancy and at the time of each annual inspection and was constructed and is maintained in accordance with the HOME Agreement and the DDA.

(iv) Records demonstrating compliance with the property standards and financial reviews and actions pursuant to 24 CFR §92.504(d).

(v) Records demonstrating the eligibility of each tenant household, including documentation showing income eligibility in accordance with 24 CFR 92.203 (for the HOME Units) and Section 5.3 of the DDA. Retained documentation shall include all source documentation collected by the Developer or the Property Manager, written eligibility determinations and documentation regarding any appeals of eligibility determinations.

(vi) Records indicating the designation of each Unit assisted with HOME Moneys as a HOME Unit.

(vii) With respect to the HOME Units, records demonstrating that Developer is in compliance with the City’s written tenant selection policies and criteria of 24 CFR 92.209(c), including any targeting requirements, the rent reasonableness requirements of 24 CFR

92.209(f), the maximum subsidy provisions of 24 CFR 92.209(h), and calculation of each subsidy payment.

(viii) Records demonstrating that each rental agreement or lease for tenant household occupying a Unit complies with the tenant and participant protections of 24 CFR 92.253 (for the HOME Units) and the DDA and the HOME Agreement (for all Units).

(ix) Records documenting compliance with Developer's marketing and outreach obligations under the DDA and the HOME Agreement, including compliance with the fair housing and equal opportunity components of the HOME program, HUD's Affirmative Fair Housing and Marketing regulations and the City's Affirmative Fair Housing Marketing Plan, when adopted.

(x) Records documenting compliance with the lead-based hazards requirements under the DDA and the HOME Agreement, the HOME Program, and 24 CFR Part 35, subparts A, B, J, K, M and R.

(xi) Financial records as required by 24 CFR §92.508(a)(5) and 24 CFR §84.21–28.

(xii) Records documenting the expenditures at the Rental Project that may be eligible to be applied to the HOME Matching Requirement pursuant to the HOME Program, specifically including 24 CFR 92.218 through 24 CFR 92.222.

(xiii) The specific waiting list or person or entity from which tenant household referrals were received for each tenant household occupying a Unit at the Rental Project.

(xiv) Records demonstrating compliance by Developer, contractor and each subcontractor with Section 3 and all applicable labor compliance requirements set forth in the Agreement or otherwise required by applicable law.

(b) Retention. Developer shall retain all financial records, supporting documents, statistical records, and all other records pertinent to the DDA and the HOME Agreement for a period of five (5) years after the end of each Developer's fiscal year. Notwithstanding the above, if there are litigation matters, claims, audits, negotiations or other actions that involve any of the records cited and that have started before the expiration of the five-year period, then all pertinent records must be retained until completion of the actions and resolution of all issues, or the expiration of the five-year period, whichever occurs later.

(c) Client Data. Developer shall maintain data regarding each tenant household that rents and occupies a Unit at the Rental Project demonstrating eligibility under the DDA and the HOME Agreement. Such data shall include, but not be limited to, client name, address, income level, or other basis for determining eligibility, Unit occupied and all written notices or other communications with the household, including any defaults under the applicable lease for nonpayment of rent or otherwise. Such information shall be made available to City monitors or their designees for review upon request.

(d) Disclosure. Developer understands that client information collected under this Agreement is private and the use or disclosure of such information, when not directly connected with the administration of the City's or Developer's responsibilities with respect to Developer's

performance under this Agreement, is prohibited unless written consent is obtained from such person receiving housing or any services and, in the case of a minor, that of a responsible parent/guardian.

(e) Close Outs. Developer's obligation to City shall not end until all close-out requirements are completed. Activities during the close-out period shall include, but are not limited to: making final payments, disposing of program assets (including the return of all unused materials, equipment, unspent cash advances, program income balances, and accounts receivable to the City), and determining the custodianship of records. Notwithstanding the foregoing, the terms of the DDA and the HOME Agreement shall remain in effect during any period that Developer has control over HOME Moneys, including program income.

(f) Audits and Inspections. In accordance with the DDA and the HOME Agreement, all Developer records with respect to any matters covered by the HOME Agreement shall be made available to City, HUD and the Comptroller General of the United States or any of their authorized representatives, at any time during normal business hours, as often as deemed necessary, to audit, examine, and make excerpts or transcripts of all relevant data. Any deficiencies noted in audit reports must be fully cleared by Developer within 30 days after receipt by Developer. Failure of Developer to comply with the above audit requirements will constitute a violation of the HOME Agreement and may result in the withholding of future payments. Developer hereby agrees to have an annual agency audit conducted in accordance with current City policy concerning Developer audits and OMB Circular A-122.

**2. Annual Reports.** Developer shall submit annual reports to City in a form approved or directed by City on or before each June 30, which shall include all of the following information regarding Developer's activities during the prior calendar:

(a) The number of tenant applications received, processed, approved and disapproved.

(b) The property inspection report for Area A, the Rental Project and each Unit therein and confirmation of compliance with the applicable property standards as set forth in the Agreement.

(c) Specific information regarding the number of and ages of all tenant household members, income categories, and Affordable Rent amounts for each Unit and a description of each tenant household's participation in optional social services programs made available to tenant households at the Rental Project or through Developer's social services provider. Documentation regarding the eligibility of each new tenant household to occupy a Unit, in accordance with Section 1(a)(v) above.

(d) The designation of each Unit that is assisted with HOME Moneys as a HOME Unit.

(e) The Affordable Rent charged for each Unit and an explanation for the calculation of each such Affordable Rent.

(f) Budget reconciliation information (construction and/or operating budgets, as applicable), including year-to-date expenditures and remaining balance available for Operating

Expenses, Debt Service and outstanding Construction Costs or Project costs (as applicable) in accordance with the Agreement.

(g) Number of vacant Units and an explanation for any vacancies lasting over 60 days.

(h) Information regarding any complaints received from tenant households and any correspondence received from community members or organizations or other nonprofit organizations regarding the Rental Project, Area A, or the construction or operation of the Rental Project or Area A.

(i) Documentation of expenditures at the Rental Project that may be eligible to be applied to the HOME Matching Requirement pursuant to the HOME Program, specifically including 24 CFR 92.218 through 24 CFR 92.222.

(j) Evidence that Developer is maintaining a waiting list.

### **3. Performance Monitoring.**

(a) Periodic Meetings. Developer shall be available to attend meetings with City staff every two weeks during construction, to review construction progress and pending or upcoming draw requests on the City Subsequent Loan and/or other funding sources for the Rental Project. Following completion of construction, Developer shall be available upon request by City staff to review Developer's activities under the DDA and the HOME Agreement and to ensure the Rental Project is operating in accordance with the DDA and the HOME Agreement and the HOME Program.

(b) Authority Oversight and Review. City will monitor the performance of the Developer against the goals and performance standards set forth in the DDA and the HOME Agreement. From time to time, City shall be entitled to audit and review Developer's performance under the DDA and the HOME Agreement and compliance with the DDA and the HOME Agreement and the HOME Program. Substandard performance as determined by City will constitute noncompliance with the DDA and the HOME Agreement. If action to correct such substandard performance is not taken by the Developer within the applicable cure period set forth in the DDA or the HOME Agreement, such substandard performance will constitute a Default under each of the DDA and the HOME Agreement.



# Proposed Boulder Ridge Site SEC Alessandro/Lasselle



### Legend

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

### Notes

8.61 acres, approximately 6 useable acres



*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 errors or omissions resulting from the use of this map.*

## RESOLUTION NO. 2016-13

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MORENO VALLEY, CALIFORNIA SUPPORTING THE BOULDER RIDGE AFFORDABLE HOUSING DEVELOPMENT AND AFFIRMING ITS INTENTION TO PROVIDE FINANCIAL ASSISTANCE TO RANCHO BELAGO DEVELOPERS, INC. FOR THE FIRST PHASE

WHEREAS, Rancho Belago Developers, Inc., proposed to develop approximately one hundred forty one (141) rental units on certain vacant property located generally at the southeast corner of Alessandro Boulevard and Lasselle Street (the "Site"); and

WHEREAS, Rancho Belago Developers, Inc., proposes that dwelling units on the Site shall be restricted to rental to households of limited income, including very low income households and low income households for a period of at least fifty-five (55) years under covenants to be recorded as to the Site, which covenants would be enforceable by the City of Moreno Valley (the "City"); and

WHEREAS, Rancho Belago Developers, Inc., proposes to submit an application for land use approvals to develop one hundred forty one (141) rental units (the "Development"). The Development is proposed to be constructed in two phases. The first phase will consist of seventy-two (72) rental units, composed of a mix of one-bedroom, two-bedroom, and three-bedroom units, plus a manager's unit; the second phase will consist of the remaining sixty-nine (69) rental units, composed of a mix of one-bedroom, two-bedroom, and three-bedroom units; and

WHEREAS, Rancho Belago Developers, Inc., proposes to restrict ten (10) of the seventy-two (72) dwelling units as age-restricted units on the Site for senior households sixty-two (62) years or older, the units shall be restricted to households of limited income, including very low income households and low income households for a period of at least fifty-five (55) years under covenants to be recorded as to the Site, which covenants would be enforceable by the City; and

WHEREAS, in connection with the proposed development and use of the Site, Rancho Belago Developers, Inc., has requested that the City provide financial support for the proposed project from the City's available HOME and NSP funds in not-to-exceed amounts of Three Million Five Hundred Thousand Dollars (\$3,500,000) from NSP funds and One Million Dollars (\$1,000,000) from HOME funds, plus City fees in an amount up to Seven Hundred Thirty-Three Thousand Thirty-Two Dollars (\$733,032) (as aggregated, the "Requested Amount"), to accrue interest at the rate of 1% simple interest, per annum over the term of fifty-five (55) years until repaid, repayment to be subject to deferral to the extent necessary to defray debt service; and

WHEREAS, the negotiation and implementation of an agreement formally committing the HOME funding will be subject to the Developer obtaining a preliminary tax credit reservation allocation and all federal rules and regulations, in accordance with the Final 2013 HOME Rule; and

WHEREAS, the California Tax Allocation Committee administers the Federal and State Tax Allocation, a competitive allocation for tax credits to providers of housing units for low income households; and

WHEREAS, the California Tax Allocation Committee seeks affirmation from local agencies that proposed projects will receive additional financial assistance and that they meet specific housing objectives; and

WHEREAS, the City has reviewed the proposed request for financial participation by the City as to the Requested Amount, including the proposed project pro forma and sources and uses (which sources are shown to include equity based upon the allocation to the proposed development of 9% tax credits) and the City has obtained an analysis from the land economist fair with such matters, Keyser Marston Associates, hereinafter referred to as KMA (the "Economist"), who is currently reviewing and analyzing the request for the benefit of the City. The City's final approval of said commitment will be based upon the written report submitted by KMA in connection therewith (the "KMA Report"); and

WHEREAS, the City's analysis of the proposal indicates that the development would meet specific housing objectives. The final commitment will be based upon the KMA Report and the additional information made available in connection with the consideration of this matter; and

WHEREAS, it is significant inducement of the City that Rancho Belago Developers, Inc., proposes to make equity available to the project based upon obtaining 9% tax credits for the development;

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

Section 1. The City instructs and directs City staff to reserve moneys equal to the Requested Amount for the use in implementing the Development as proposed by Rancho Belago Developers, Inc., subject to the applicable legal requirements and negotiation of an Affordable Housing Agreement or other similar form of agreement (herein, "AHA") in form and substance satisfactory to the City (and including, without limitation, conformance with those matters enumerated in this Resolution), for the development of the first phase which consists of seventy-two (72) rental units on the Site, all of which, with the exception of the manager's unit, shall be required by the City to be made available solely to very low and low income households.

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Resolution No. 2016-13  
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- Section 2. The City instructs and directs City staff to negotiate an AHA which incorporates the Basic Loan Terms and complies with all requirements and provisions which the City customarily includes in agreements in connection with the provision of affordable housing conditioned on the receipt of Rancho Belago Developers, Inc., of 9% low income housing tax credits for the Development.
  
- Section 3. The effectiveness of this Resolution terminates at the first to occur of (i) the approval of an AHA; (II) receipt of notification from Rancho Belago Developers, Inc. that Rancho Belago Developers, Inc. has not obtained a preliminary reservation for 9% tax credits; or (ii) the expiration of the Developer Disposition Agreement dated March 15, 2016, this Resolution shall thereafter be of no further force and effect.

APPROVED AND ADOPTED this 15<sup>th</sup> day of March, 2016.

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

ATTEST:

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

APPROVED AS TO FORM:

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

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Resolution No. 2016-13  
Date Adopted: March 15, 2016

**RESOLUTION JURAT**

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

I, Jane Halstead, City Clerk of the City of Moreno Valley, California, do hereby certify that Resolution No. 2016-13 was duly and regularly adopted by the City Council of the City of Moreno Valley at a regular meeting thereof held on the 15th day of March, 2016 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

(Council Members, Mayor Pro Tem and Mayor)

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

(SEAL)

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Resolution No. 2016-13  
Date Adopted: March 15, 2016

Attachment: Resolution 2016-13 [Revision 1] (1885 : DISPOSITION AND DEVELOPMENT/AFFORDABLE HOUSING AGREEMENT BY AND