

PUBLIC UTILITIES COMMISSION
505 Van Ness Avenue
San Francisco CA 94102-3298



Pacific Gas & Electric Company
GAS (Corp ID 39)
Status of Advice Letter 4436G
As of June 16, 2021

Subject: Sale of Tracy Gas Yard and Surplus Property and Daylight Road Right-of-Way Request for Approval Under Section 851 and General Order 173

Division Assigned: Energy

Date Filed: 05-21-2021

Date to Calendar: 05-26-2021

Authorizing Documents: None

Disposition:	Accepted
Effective Date:	06-20-2021

Resolution Required: No

Resolution Number: None

Commission Meeting Date: None

CPUC Contact Information:

edtariffunit@cpuc.ca.gov

AL Certificate Contact Information:

Annie Ho

415-973-8794

PGETariffs@pge.com

PUBLIC UTILITIES COMMISSION
505 Van Ness Avenue
San Francisco CA 94102-3298



To: Energy Company Filing Advice Letter

From: Energy Division PAL Coordinator

Subject: Your Advice Letter Filing

The Energy Division of the California Public Utilities Commission has processed your recent Advice Letter (AL) filing and is returning an AL status certificate for your records.

The AL status certificate indicates:

- Advice Letter Number
- Name of Filer
- CPUC Corporate ID number of Filer
- Subject of Filing
- Date Filed
- Disposition of Filing (Accepted, Rejected, Withdrawn, etc.)
- Effective Date of Filing
- Other Miscellaneous Information (e.g., Resolution, if applicable, etc.)

The Energy Division has made no changes to your copy of the Advice Letter Filing; please review your Advice Letter Filing with the information contained in the AL status certificate, and update your Advice Letter and tariff records accordingly.

All inquiries to the California Public Utilities Commission on the status of your Advice Letter Filing will be answered by Energy Division staff based on the information contained in the Energy Division's PAL database from which the AL status certificate is generated. If you have any questions on this matter please contact the:

Energy Division's Tariff Unit by e-mail to
edtariffunit@cpuc.ca.gov



May 21, 2021

Advice 4436-G

(Pacific Gas and Electric Company ID U 39 G)

Public Utilities Commission of the State of California

Subject: Sale of Tracy Gas Yard and Surplus Property and Daylight Road Right-of-Way Request for Approval Under Section 851 and General Order 173

Purpose

Pacific Gas and Electric Company (PG&E) requests California Public Utilities Commission (CPUC) approval under Public Utilities Code Section 851 and General Order 173 for PG&E to (i) execute a Lot Line Adjustment for its Tracy Gas Yard property located at 1115 N. International Parkway and (ii) dispose of its surplus property located at 24110 International Parkway (Surplus Property) to Prologis, LLC (Buyer). The sale of the surplus property will include the construction of a smaller, safer access road to this location which will be named Daylight Road.

PG&E has determined that these activities do not interfere with PG&E's operations or PG&E's ability to provide safe and reliable utility service to its customers. In addition, these activities will not be adverse to the public interest.

Background

PG&E acquired the Tracy Gas Yard in 1929. Previously PG&E operated the facility as a gas yard. PG&E currently operates the site as a maintenance station and engineering office. Eight PG&E gas transmission lines converge at this site. PG&E currently has no facilities located within the proposed Lot Line Adjustment area.

PG&E acquired the Surplus Property site in 1953. PG&E has two gas transmission lines traversing this property for which an easement will be retained.

International Parkway is a two lane road which currently sees 8,000 to 9,000 trucks a day. International Parkway is slated to become an eight lane road which will enable an increase in traffic. PG&E currently accesses the Tracy Gas Yard from a gate located on the east side of the property along International Parkway. The Buyer is proposing to relocate the existing access gate to the south side of the property. A median will be installed in the center of Daylight Road enabling a right hand turn only for both ingress

and egress from the site. There will also be a traffic signal constructed at the intersection of International Parkway and Daylight Road. Both of these features will increase the safety for PG&E's employees entering and existing the facility.

PG&E agreed to enter into a Purchase and Sale Agreement (Attachment 3, PSA) to transfer the Surplus Property and effect the Lot Line Adjustment, which is conditioned on CPUC approval under Section 851. Buyer agrees to pay PG&E \$70,000 for the 6,789 square feet of the Tracy Gas Yard portion and \$12,312 for the fee transfer of the Surplus Property comprised of 4,500 square feet. PG&E now seeks approval from the CPUC for the Purchase and Sale Agreement.

The plan to adjust the lot line and sell the Surplus Property contains a condition of approval by the City of Tracy to create a new street called Daylight Road. Both PG&E's Gas Transmission Pipeline Services and Facility Integrity Management have reviewed the proposed road improvements for Daylight Road and concluded that they will not impair PG&E's operations.

PG&E has reviewed the proposal and has determined that it is in the public interest does not affect PG&E's provision of safe and reliable utility service to its customers. For all the above reasons, PG&E requests that the Commission approve this Section 851 request.

Tribal Land Transfer Policy

On December 5, 2019, the Commission adopted a policy titled, "Investor-Owned Utility Real Property – Land Disposition - First Right of Refusal for Disposition of Real Property Within the Ancestral Territories of California Native American Tribes" (Policy). While the Policy notes that guidelines for its implementation are not yet in place, it directs investor-owned utilities to (1) notify the appropriate local Native American Tribes of any proposed dispositions of utility-owned real property that are subject to Section 851 and (2) to allow 90 days for the Tribes to respond as to their interest in purchasing the subject real property.

In accordance with the policy, PG&E notified The North Valley Yokuts Tribe and The Confederated Villages of Lisjan of the proposed sale July 10, 2020 and a second notification was made on February 12, 2021. Neither Tribe expressed an interest in the property or responded to our notification.

Other Information

In accordance with General Order 173, Rule 4, PG&E provides the following information related to the proposed transaction:

(a) Identity and Addresses of All Parties to the Proposed Transaction:

Pacific Gas and Electric Company	Prologis L.P.
Steven Frank	Tom Martin
Law Department	Development Manager
P.O. Box 7442	3353 Gateway Boulevard
San Francisco, CA 94120	Fremont, CA 94538
Telephone: (415) 973-6840	Telephone: (510) 661-4032
Facsimile: (415) 973-5520	Cell Phone: (510) 516-5522
Email: Steven.Frank@pge.com	Email: tjmartin@prologis.com

(b) Complete Description of the Property Including Present Location, Condition and Use:

The properties are located on Assessor's Parcel Number 209-080-06 and 209-460-26 in the City of Tracy, California, approximately 850 feet south of the intersection of Interstate 205 and International Parkway. APN 209-080-06 is developed and is zoned Business Park Industrial. PG&E's has six buildings at this location whose uses include a maintenance station, welding shop, storage, gas pump building and a building that houses a gas pipeline engineering team. APN 209-460-26 is undeveloped, zoned as general commercial, and is currently vacant land.

The current size of parcel 209-080-06 is 217,776 square feet of which 6,789 sq. ft will be used for the new street right-of-way. The size of parcel 209-460-26 is 75 feet by 60 feet wide (4,500 sf) and will be vacated completely.

(c) Intended Use of the Property:

A new road right-of-way, Daylight Road, will be established.

(d) Complete Description of Financial Terms of the Proposed Transaction:

Applicant agrees to pay a combined total of \$82,312.00 for the Tracy Gas Yard Portion and the Surplus Property and for all costs associated with the proposed work.

(e) Description of How Financial Proceeds of the Transaction Will Be Distributed:

Proceeds from the sale of the property will be made in accordance with the policy for the allocation of the gains and losses on the sale of land (non-depreciable asset) adopted in the California Public Utilities Commission's (CPUC or

Commission) Gain on Sale Rulemaking, in Decision (D.) 06-05-041 as modified in D.06-12-043. Pursuant to the forgoing authority, PG&E will credit an estimated \$48,000 to the Ratepayer after-tax Gain on Sale of Gas Utility Plant Account. The remaining estimated \$23,000 from the after-tax gain on sale will be credited to the Gain of Disposition Property Account. The final gain-on-sale will depend on the date the sale closes, which is contingent on the Commission approval of this advice letter.

The property has been declared Surplus and the value of property has been removed from PG&E rate base in May 2021.

(f) Statement on the Impact of the Transaction on Ratebase and Any Effect on the Ability of the Utility to Serve Customers and the Public:

There will be no financial impact of this transaction for the reason described in Section (e) above. This transaction will not impact PG&E's rate base or affect PG&E's ability to provide reliable service to its customers and the public.

(g) The Original Cost, Present Book Value, and Present Fair Market Value for Sales of Real Property and Depreciable Assets, and a Detailed Description of How the Fair Market Value Was Determined (e.g., Appraisal):

A table showing estimated sales price, expenses, and tax effects is attached as Attachment 6. The pre-tax gain-on-sale is estimated to be \$80,000, and the after-tax gain on-sale is estimated to be \$71,000. The net book value as of November 30, 2020 is \$2,000 and the original cost of the Surplus Property was \$2,000. For the Tracy Gas Yard the offer of compensation was based on a valuation performed by Associated Right of Way Services, Inc. using comparable sales transactions. The valuation analyzed five similar local property sales of land to determine an average cost of \$11 per square foot and that amount was applied to the 6,789 square feet. Using this methodology, the fair market value of the Easement was valued at \$70,000. PG&E appraisers have reviewed the valuation and support the appraised amount of \$70,000 and the valuation methodology used to determine the fair market value.

For the Surplus Property the offer of compensation was based on a valuation performed by Associated Right of Way Services, Inc. using comparable sales transactions. The valuation analyzed four similar local property sales of land to determine an average cost of \$2.50 per square foot and that amount was applied to the 4,500 square feet. Using this methodology, the fair market value of the Easement was valued at \$12,312.00. PG&E appraisers have reviewed the valuation and support the appraised amount of \$12,312.00 and the valuation methodology used to determine the fair market value.

The final gain-on-sale will depend on the date the sale closes, which is contingent on the Commission approval of this advice letter. (Please see Attachment 6 – Tracy Gas Yard Land Sale Gain and Loss Calculation with Tax Impact.)

(h) The Fair Market Rental Value for Leases of Real Property, and a Detailed Description of How the Fair Market Rental Value Was Determined:

Not Applicable.

(i) The Fair Market Value of the Easement or Right-of-Way, and a Detailed Description of How the Fair Market Value Was Determined:

See discussion in Section (g) above.

(j) A Complete Description of any Recent Past (Within the Prior Two Years) or Anticipated Future Transactions that May Appear To Be Related to the Present Transaction:

There are no recent past or anticipated future transactions anticipated by PG&E that are related to the present transactions.

(k) Sufficient Information and Documentation (Including Environmental Information) to Show that All of Eligibility Criteria Set Forth in Rule 3 of General Order 173 are Satisfied:

PG&E has provided information in this Advice Letter to satisfy the eligibility criteria under General Order 173 in that:

- The activity proposed in the transaction will not require environmental review by the CPUC as a Lead Agency;
- The transaction will not have an adverse effect on the public interest or on the ability of PG&E to provide safe and reliable service to its customers at reasonable rates;
- The transaction will not materially impact the rate base of PG&E; and
- The transaction does not warrant a more comprehensive review that would be provided through a formal Section 851 application.

(l) Additional Information to Assist in the Review of the Advice Letter:

PG&E does not believe any additional information is necessary for the review of the Advice Letter.

(m) Environmental Information

Pursuant to General Order 173, the Advice Letter program applies to proposed transactions that will not require environmental review by the CPUC as a lead

agency under the California Environmental Quality Act ("CEQA") either because: (a) a statutory or categorical exemption applies (the applicant must provide a Notice of Exemption from the Lead Agency or explain why an exemption applies), or (b) because the transaction is not a project under CEQA (the applicant must explain the reasons why it believes that the transaction is not a project), or (c) because another public agency, acting as the Lead Agency under CEQA, has completed environmental review of the project, and the Commission is required to perform environmental review of the project only as a Responsible Agency under CEQA.

This transaction does not require the Commission’s review under CEQA because (c) another agency is acting as the Lead Agency.

- a. The name, address, and phone number of the Lead Agency, the type of CEQA document that was prepared (Environmental Impact Report, Negative Declaration, Mitigated Negative Declaration), the date on which the Lead Agency approved the CEQA document, the date on which a Notice of Determination was filed.

Lead Agency	City of Tracy Bill Dean 333 Civic Center Plaza Tracy, CA 95376
Type of CEQA Prepared	City of Tracy under the Cordes Ranch EIR, reviewed by CEQA 4/5/2013-5/20/2013 (SCH number 2011122015)

- b. A copy of all CEQA documents prepared by or for the Lead Agency regarding the project and the Lead Agency’s resolution or other document approving the CEQA documents.

This project has been submitted for full review by City of Tracy under the Cordes Ranch EIR, reviewed by CEQA 4/5/2013-5/20/2013 (SCH number 2011122015).

- c. A list of section and page numbers for the environmental impacts, mitigation measures, and findings in the prior CEQA documents that relate to the approval sought from the Commission.

See the following documents for reference to PG&E’s station; Draft EIR 4.14 Transportation and Traffic (see “Road A”)(Attachment 4, EIR 4.14), Appendix M Utilities (page 40) (Attachment 5, Appendix M).

- d. An explanation of any aspect of the project or its environmental setting which has changed since the issuance of the prior CEQA document.

The environmental setting described in the CEQA document prepared by City of Tracy for this project has not changed.

- e. A statement of whether the project will require approval by additional public agencies other than the Commission and the Lead Agency, and, if so, the name and address of each agency and the type of approval required.

PG&E does not believe that additional approvals are required.

Protests

*****Due to the COVID-19 pandemic, PG&E is currently unable to receive protests or comments to this advice letter via U.S. mail or fax. Please submit protests or comments to this advice letter to EDTariffUnit@cpuc.ca.gov and PGETariffs@pge.com*****

Anyone wishing to protest this submittal may do so by letter sent via U.S. mail, facsimile or E-mail, no later than June 10, 2021, which is 20 days after the date of this submittal. Protests must be submitted to:

CPUC Energy Division
ED Tariff Unit
505 Van Ness Avenue, 4th Floor
San Francisco, California 94102

Facsimile: (415) 703-2200
E-mail: EDTariffUnit@cpuc.ca.gov

Copies of protests also should be mailed to the attention of the Director, Energy Division, Room 4004, at the address shown above.

The protest shall also be sent to PG&E either via E-mail or U.S. mail (and by facsimile, if possible) at the address shown below on the same date it is mailed or delivered to the Commission:

Sidney Dietz
Director, Regulatory Relations
c/o Megan Lawson
Pacific Gas and Electric Company
77 Beale Street, Mail Code B13U
P.O. Box 770000
San Francisco, California 94177

Facsimile: (415) 973-3582
E-mail: PGETariffs@pge.com

Any person (including individuals, groups, or organizations) may protest or respond to an advice letter (General Order 96-B, Section 7.4). The protest shall contain the following information: specification of the advice letter protested; grounds for the protest; supporting factual information or legal argument; name, telephone number, postal address, and (where appropriate) e-mail address of the protestant; and statement that the protest was sent to the utility no later than the day on which the protest was submitted to the reviewing Industry Division (General Order 96-B, Section 3.11).

Effective Date

Pursuant to the review process outlined in General Order 173, PG&E requests that this Tier 3 advice letter become effective upon Commission approval.

Notice

In accordance with General Order 96-B, Section IV, a copy of this advice letter is being sent electronically and/or via U.S. mail to parties shown on the attached list. Address changes to the General Order 96-B service list should be directed to PG&E at email address PGETariffs@pge.com. For changes to any other service list, please contact the Commission's Process Office at (415) 703-2021 or at Process_Office@cpuc.ca.gov. Send all electronic approvals to PGETariffs@pge.com. Advice letter submittal can also be accessed electronically at: <http://www.pge.com/tariffs>.

_____/S/
Sidney Dietz
Director, Regulatory Relations

Attachment 1 – Grant Deed - LLA
Attachment 2 – Grant Deed
Attachment 3 - PSA
Attachment 4 - EIR 4.14
Attachment 5 - Appendix M
Attachment 6 - Tracy Gas Yard Land Sale Gain and Loss Calculation with Tax Impact

***** SERVICE LIST for Advice 4436-G *****
APPENDIX A

Jonathan Reiger
Legal Division
505 Van Ness Avenue
San Francisco, CA 94102
(415) 355-5596
jzr@cpuc.ca.gov

Mary Jo Borak
Energy Division
505 Van Ness Avenue
San Francisco, CA 94102
(415) 703-1333
bor@cpuc.ca.gov

Robert (Mark) Pocta
Public Advocates Office
505 Van Ness Avenue
San Francisco, CA 94102
(415) 703- 2871
robert.pocta@cpuc.ca.gov

Andrew Barnsdale
Energy Division
505 Van Ness Avenue
San Francisco, CA 94102
(415) 703-3221
bca@cpuc.ca.gov

*****3rd Party*****

Prologis L.P.
Tom Martin
Development Manager
3353 Gateway Boulevard
Fremont, CA 94538
Telephone: (510) 661-4032
Cell Phone: (510) 516-5522
Email: tjmartin@prologis.com

*****AGENCIES*****

Steve J. Bestolarides
Assessor/Recorder/County Clerk
44 North San Joaquin Street
Second Floor, Suite 260
Stockton, CA 95202
Phone: (209) 468-3939
Fax: (209) 468-8040
Email: recorder@sjgov.org

*****Tribes*****

North Valley Yokuts Tribe
Katherine Perez, Chairperson
P.O. Box 717
Linden, CA 95236
huskanam@gmail.com

North Valley Yokuts Tribe
Timothy Perez, MLD Contact
P.O. Box 717
Linden, CA 95236
canutes@verizon.net

The Confederated Villages of Lisjan
Corrina Gould, Chairperson
10926 Edes Avenue
Oakland, CA 94603
cvltribe@gmail.com



ADVICE LETTER SUMMARY

ENERGY UTILITY



MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No.: Pacific Gas and Electric Company (ID U39 G)

Utility type:

- ELC GAS WATER
 PLC HEAT

Contact Person: Annie Ho

Phone #: (415) 973-8794

E-mail: PGETariffs@pge.com

E-mail Disposition Notice to: AMHP@pge.com

EXPLANATION OF UTILITY TYPE

ELC = Electric GAS = Gas WATER = Water
 PLC = Pipeline HEAT = Heat

(Date Submitted / Received Stamp by CPUC)

Advice Letter (AL) #: 4436-G

Tier Designation: 3

Subject of AL: Sale of Tracy Gas Yard and Surplus Property and Daylight Road Right-of-Way Request for Approval Under Section 851 and General Order 173

Keywords (choose from CPUC listing): Agreements, Section 851

AL Type: Monthly Quarterly Annual One-Time Other:

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #:

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL: No

Summarize differences between the AL and the prior withdrawn or rejected AL:

Confidential treatment requested? Yes No

If yes, specification of confidential information:

Confidential information will be made available to appropriate parties who execute a nondisclosure agreement. Name and contact information to request nondisclosure agreement/ access to confidential information:

Resolution required? Yes No

Requested effective date:

No. of tariff sheets: N/A

Estimated system annual revenue effect (%): N/A

Estimated system average rate effect (%): N/A

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected:

Service affected and changes proposed¹: N/A

Pending advice letters that revise the same tariff sheets: N/A

¹Discuss in AL if more space is needed.

Protests and all other correspondence regarding this AL are due no later than 20 days after the date of this submittal, unless otherwise authorized by the Commission, and shall be sent to:

CPUC, Energy Division
Attention: Tariff Unit
505 Van Ness Avenue
San Francisco, CA 94102
Email: EDTariffUnit@cpuc.ca.gov

Name: Sidney Dietz, c/o Megan Lawson
Title: Director, Regulatory Relations
Utility Name: Pacific Gas and Electric Company
Address: 77 Beale Street, Mail Code B13U
City: San Francisco, CA 94177
State: California Zip: 94177
Telephone (xxx) xxx-xxxx: (415)973-2093
Facsimile (xxx) xxx-xxxx: (415)973-3582
Email: PGETariffs@pge.com

Name:
Title:
Utility Name:
Address:
City:
State: District of Columbia Zip:
Telephone (xxx) xxx-xxxx:
Facsimile (xxx) xxx-xxxx:
Email:

Attachment 1

Grant Deed – LLA

RECORDING REQUESTED BY AND RETURN TO:

PACIFIC GAS AND ELECTRIC COMPANY
245 Market Street, N10A, Room 1015
P.O. Box 770000
San Francisco, California 94177

Location: City/Uninc _____

Recording Fee \$ _____

Document Transfer Tax \$ _____

- This is a conveyance where the consideration and Value is less than \$100.00 (R&T 11911).
- Computed on Full Value of Property Conveyed, or
- Computed on Full Value Less Liens & Encumbrances Remaining at Time of Sale
- Exempt from the fee per GC 27388.1 (a) (2); This document is subject to Documentary Transfer Tax

(SPACE ABOVE FOR RECORDER'S USE ONLY)

Signature of declarant or agent determining tax

LD# 2202-04-10025

DEED

2020135 (74032743) 10 20 1
Tracy Valve Lot Grant Deeds

GRANT DEED

PACIFIC GAS AND ELECTRIC COMPANY, a California corporation, hereinafter called Grantor, hereby grants, (without warranty express or implied), to PROLOGIS, L.P., a Delaware limited partnership, hereinafter called Grantee, the real property, situate in the City of Tracy, County of San Joaquin, State of California, described as follows (the "Property"):

(APN 209-080-06)
(SBE 135-39-052-1)

The parcel of land described in Exhibit "A" and shown upon Exhibit "B" attached hereto and made a part hereof.

Reserving to Grantor an easement and the right, from time to time, to excavate for, construct, reconstruct, replace (of initial or any other size), remove, maintain, inspect, and use existing and additional facilities and associated equipment for public utility purposes, including, but not limited to electric, gas, and communication facilities (hereinafter referred to collectively as "the Facilities"); together with a right of way, on, over and under the Property.

MAIL TAX STATEMENTS TO:

Prologis L.P.
Name

1800 Wazee St. Denver, CO
Address

80202
Zip

Further reserving to Grantor:

(a) the right of ingress to and egress from the Facilities over and across the Property by means of roads and lanes thereon, if such there be, otherwise by such route or routes as shall occasion the least practicable damage and inconvenience to Grantee;

(b) the right, from time to time, to trim or to cut down, without Grantor paying compensation, any and all trees and brush now or hereafter within the Property which now or hereafter in the opinion of Grantor may interfere with or be a hazard to the Facilities, or as Grantor deems necessary to comply with applicable state or federal regulations;

(c) to install, maintain and use gates in all fences which now cross or shall hereafter cross the Property; and

(d) to mark the location of the Facilities by suitable markers set in the ground; provided that said markers shall be placed in fences or other locations which will not interfere with any reasonable use Grantee shall make of the Property.

Grantee hereby covenants and agrees:

(a) not to place or construct, nor allow a third party to place or construct, any building or other structure, or store flammable substances, or drill or operate any well, or construct any reservoir or other obstruction within the Property, or diminish or substantially add to the ground level within the Property, or construct any fences that will interfere with the maintenance and operation of the Facilities.

(b) not to commence, nor allow a third party to commence, any construction activity (surface or subsurface) within the Property without the written approval of Grantor, which approval shall not be unreasonably withheld. No construction activity shall commence until such time that Grantor approves the request. Grantee shall submit requests to the following address, or to such other address as Grantor may designate by written notice:

PACIFIC GAS AND ELECTRIC COMPANY
245 Market Street, N10A, Room 1015
P.O. Box 770000
San Francisco, California 94177

(c) not to plant any trees, brush, or vines within the Property. Grantee may plant and maintain ground covers, grasses, flowers, crops, and low-growing plants that grow unsupported to a maximum of four (4) feet in height at maturity within the Property.

The Property hereby conveyed is no longer necessary or useful to Grantor in the performance by it of its duties to the public.

The provisions hereof shall inure to the benefit of and bind the successors and assigns of the respective parties hereto, and all covenants shall apply to and run with the Property.

Dated _____, 20____.

PACIFIC GAS AND ELECTRIC COMPANY,
a California corporation

By _____
Andrew Williams
Vice President
Shared Services

Attach to LD: 2202-04-10025
Area, Region or Location: 5
Land Service Office: Sacramento
Line of Business: Gas Transmission (52)
Business Doc Type: Fee Ownership
MTRSQ: 22.02.04.21.22,
FERC License Number: N/A
PG&E Drawing Number: N/A
Plat No.: N/A
LD of Affected Documents: 2202-04-0392
LD of Cross Referenced Documents: N/A
Type of interest: Fee Ownership (1)
SBE Parcel: 135-39-52A
% Being Quitclaimed: N/A
Order or PM: 74032743
JCN: N/A
County: San Joaquin
Utility Notice Number: N/A
851 Approval Application No: N/A ;Decision: N/A
Prepared By: dtw0
Checked By: cxoq
Approved By:
Revised by:

EXHIBIT 'A'
LEGAL DESCRIPTION
PACIFIC GAS & ELECTRIC COMPANY PARCEL

REAL PROPERTY SITUATE IN THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 21, TOWNSHIP 2 SOUTH, RANGE 4 EAST, MOUNT DIABLO BASE AND MERIDIAN, IN THE CITY OF TRACY, COUNTY OF SAN JOAQUIN, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

BEING A PORTION OF PARCEL A AS DESCRIBED IN THAT CERTAIN GRANT DEED SIGNED SEPTEMBER 17, 1969, AS BOOK 3358, PAGE 248, OFFICIAL RECORDS OF SAN JOAQUIN COUNTY, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF SAID SECTION 21;

THENCE ALONG THE EAST LINE OF SECTION 21, NORTH $00^{\circ} 37' 32''$ EAST, 819.16 FEET;

THENCE LEAVING SAID EAST LINE, NORTH $89^{\circ} 22' 28''$ WEST, 30.00 FEET, TO THE **POINT OF BEGINNING**, SAID POINT BEING THE SOUTHEAST CORNER OF SAID PARCEL A (BOOK 3358 PAGE 248);

THENCE ALONG THE SOUTHERLY LINE OF SAID PARCEL A, NORTH $89^{\circ} 22' 28''$ WEST, 209.40 FEET, TO THE SOUTHWEST CORNER THEREOF;

THENCE ALONG THE WESTERLY LINE OF SAID PARCEL A, NORTH $00^{\circ} 37' 32''$ EAST, 42.47 FEET;

THENCE LEAVING SAID LINE, SOUTH $74^{\circ} 28' 11''$ EAST, 16.22 FEET, TO THE POINT OF CURVATURE OF A 459.00 FOOT RADIUS CURVE TO THE LEFT;

THENCE ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF $14^{\circ} 21' 57''$, AN ARC LENGTH OF 115.09 FEET;

THENCE SOUTH $88^{\circ} 50' 08''$ EAST, 16.26 FEET;

THENCE NORTH $80^{\circ} 41' 21''$ EAST, 10.91 FEET, TO THE POINT OF CURVATURE OF A 59.00 FOOT RADIUS CURVE TO THE LEFT;

THENCE ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF $80^{\circ} 50' 44''$, AN ARC LENGTH OF 83.25 FEET;

THENCE NORTH $00^{\circ} 09' 22''$ WEST, 18.19 FEET;

THENCE SOUTH $89^{\circ} 24' 16''$ EAST, 4.41 FEET, TO A POINT ON THE EASTERLY LINE OF SAID PARCEL A (BOOK 3358 PAGE 248);

THENCE ALONG SAID EASTERLY LINE SOUTH 00° 37' 32" WEST, 101.72 FEET, TO THE **POINT OF BEGINNING**;

CONTAINING 6,789 SQUARE FEET OR 0.1559 ACRES, MORE OR LESS.

THE BASIS OF BEARINGS FOR THIS PLAT AND LEGAL DESCRIPTION IS THE LINE TAKEN AS S89°05'42"E, BETWEEN TWO FOUND MONUMENTS (STATION NUMBER 2043 AND STATION NUMBER 2044) OF THE CITY OF TRACY GEODETIC CONTROL NETWORK, WHICH IS BASED UPON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 3, NAD83 (EPOCH 2004.0), AS SHOWN ON THE RECORD OF SURVEY FILED JUNE 26, 2007, IN BOOK 36 OF SURVEYS AT PAGE 118, SAN JOAQUIN COUNTY RECORDS. THE DISTANCES SHOWN ARE GROUND DISTANCES. MULTIPLY DISTANCES SHOWN BY 0.99992068 TO OBTAIN GRID DISTANCES.

AS SHOWN ON EXHIBIT B, ATTACHED HERETO AND MADE A PART HEREOF.

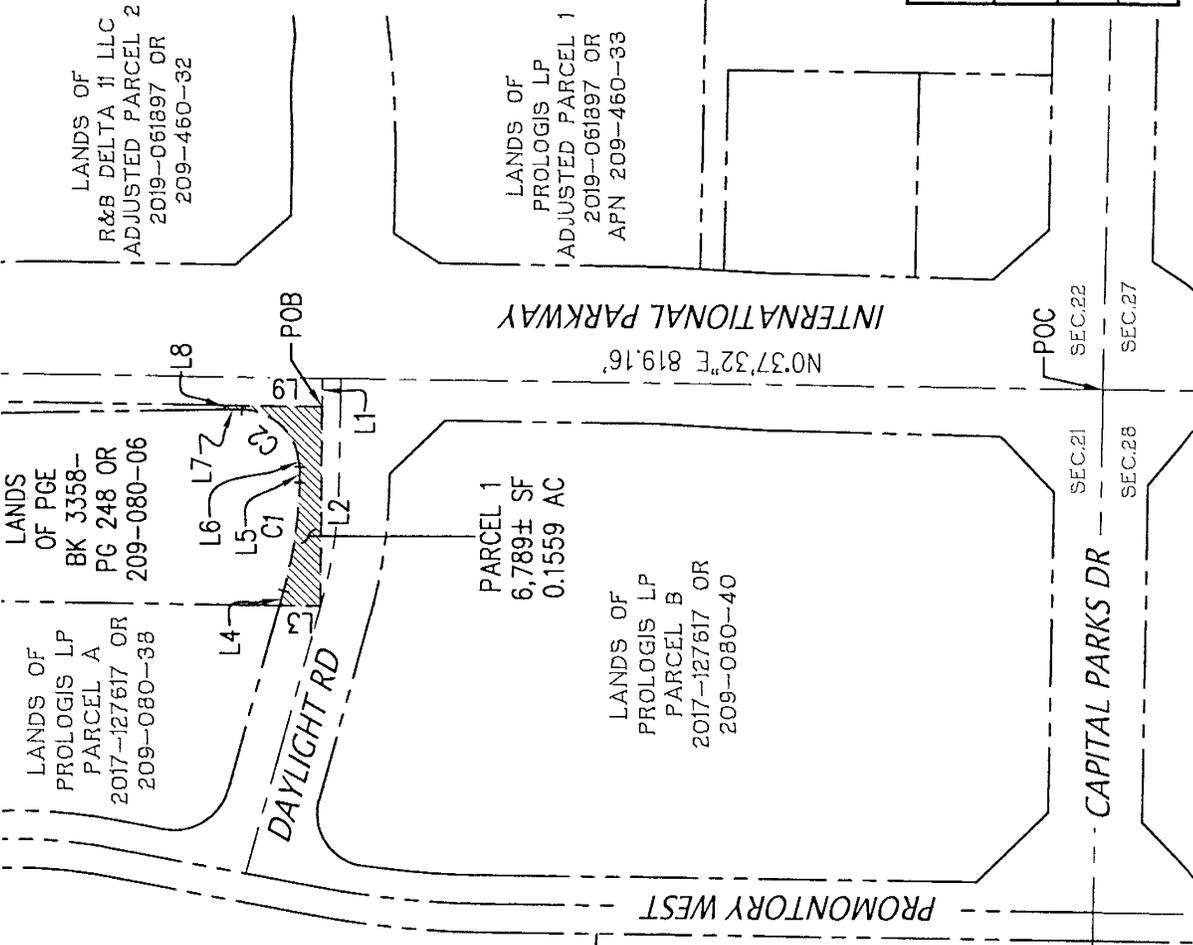
KIER & WRIGHT CIVIL ENGINEERS & SURVEYORS, INC.


DEAN A. JURADO, P.L.S. 9032

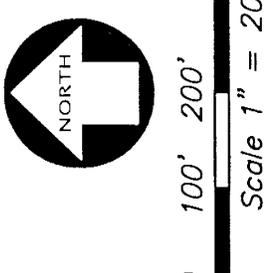
12-16-20
DATE



T2S, R4E, SE 1/4 OF THE SE 1/4 OF SECTION 21 M.D.B.&M.



- LEGEND**
- PARCEL LINE
 - - - PROPERTY LINE
 - - - PROPOSED PROPERTY LINE
 - AC ACRES
 - OR OFFICIAL RECORDS
 - PG&E PACIFIC GAS & ELECTRIC COMPANY
 - POB POINT OF BEGINNING
 - POC POINT OF COMMENCEMENT
 - SF SQUARE FEET



LINE TABLE		
LINE #	DIRECTION	LENGTH
L1	N89°22'28"W	30.00'
L2	N89°22'28"W	209.40'
L3	N0°37'32"E	42.47'
L4	S74°28'11"E	16.22'
L5	S88°50'08"E	16.26'
L6	N80°41'21"E	10.91'
L7	N0°09'22"W	18.19'
L8	S89°24'16"E	4.41'
L9	S0°37'32"W	101.72'

CURVE TABLE			
CURVE #	RADIUS	DELTA	LENGTH
C1	459.00'	14°21'57"	115.09'
C2	59.00'	80°50'44"	83.25'

DATE	SEPT., 2020
SCALE	1" = 200'
BY	GKL
JOB NO.	A09500-170
SHEET	1 OF 1

EXHIBIT "B"
 PACIFIC GAS & ELECTRIC
 PARCEL 1

TRACY, CALIFORNIA

KIER+WRIGHT
 250 Cherry Lane, Suite 107, 208 Manteca, CA 95337
 Phone: (209) 328-1123
 www.kierwright.com

Attachment 2

Grant Deed

RECORDING REQUESTED BY AND RETURN TO:

PACIFIC GAS AND ELECTRIC COMPANY
245 Market Street, N10A, Room 1015
P.O. Box 770000
San Francisco, California 94177

Location: City/Uninc _____

Recording Fee \$ _____

Document Transfer Tax \$ _____

- This is a conveyance where the consideration and Value is less than \$100.00 (R&T 11911).
- Computed on Full Value of Property Conveyed, or
- Computed on Full Value Less Liens & Encumbrances Remaining at Time of Sale
- Exempt from the fee per GC 27388.1 (a) (2); This document is subject to Documentary Transfer Tax

(SPACE ABOVE FOR RECORDER'S USE ONLY)

Signature of declarant or agent determining tax

LD# 2202-04-10026

DEED

2020136 (74032743) 10 20 2
Grant Deed for International Parkway Improvements

GRANT DEED

PACIFIC GAS AND ELECTRIC COMPANY, a California corporation, hereinafter called Grantor, hereby grants, (without warranty express or implied), to PROLOGIS, L.P., a Delaware limited partnership, hereinafter called Grantee, the real property, situate in the City of Tracy, County of San Joaquin, State of California, described as follows (the "Property"):

(APN 209-460-26)

The parcel of land described in Exhibit "A" and shown upon Exhibit "B" attached hereto and made a part hereof.

Reserving to Grantor an easement and the right, from time to time, to excavate for, construct, reconstruct, replace (of initial or any other size), remove, maintain, inspect, and use existing and additional facilities and associated equipment for public utility purposes, including, but not limited to electric, gas, and communication facilities (hereinafter referred to collectively as "the Facilities"); together with a right of way, on, over and under the Property.

Further reserving to Grantor:

(a) the right of ingress to and egress from the Facilities over and across the Property by means of roads and lanes thereon, if such there be, otherwise by such route or routes as shall occasion the least practicable damage and inconvenience to Grantee;

MAIL TAX STATEMENTS TO:

Prologis L.P.
Name

1800 Wazee St. Denver, CO
Address

80202
Zip

(b) the right, from time to time, to trim or to cut down, without Grantor paying compensation, any and all trees and brush now or hereafter within the Property which now or hereafter in the opinion of Grantor may interfere with or be a hazard to the Facilities, or as Grantor deems necessary to comply with applicable state or federal regulations;

(c) to install, maintain and use gates in all fences which now cross or shall hereafter cross the Property; and

(d) to mark the location of the Facilities by suitable markers set in the ground; provided that said markers shall be placed in fences or other locations which will not interfere with any reasonable use Grantee shall make of the Property.

Grantee hereby covenants and agrees:

(a) not to place or construct, nor allow a third party to place or construct, any building or other structure, or store flammable substances, or drill or operate any well, or construct any reservoir or other obstruction within the Property, or diminish or substantially add to the ground level within the Property, or construct any fences that will interfere with the maintenance and operation of the Facilities.

(b) not to commence, nor allow a third party to commence, any construction activity (surface or subsurface) within the Property without the written approval of Grantor, which approval shall not be unreasonably withheld. No construction activity shall commence until such time that Grantor approves the request. Grantee shall submit requests to the following address, or to such other address as Grantor may designate by written notice:

PACIFIC GAS AND ELECTRIC COMPANY
245 Market Street, N10A, Room 1015
P.O. Box 770000
San Francisco, California 94177

(c) not to plant any trees, brush, or vines within the Property. Grantee may plant and maintain ground covers, grasses, flowers, crops, and low-growing plants that grow unsupported to a maximum of four (4) feet in height at maturity within the Property.

The Property hereby conveyed is no longer necessary or useful to Grantor in the performance by it of its duties to the public.

The provisions hereof shall inure to the benefit of and bind the successors and assigns of the respective parties hereto, and all covenants shall apply to and run with the Property.

Dated _____, 20_____.

PACIFIC GAS AND ELECTRIC COMPANY,
a California corporation

By _____
Andrew Williams
Vice President
Shared Services

Attach to LD: 2202-04-10026
Area, Region or Location: 5
Land Service Office: Sacramento
Line of Business: Gas Transmission (52)
Business Doc Type: Fee Ownership
MTRSQ: 22.02.04.22.33,
FERC License Number: N/A
PG&E Drawing Number: N/A
Plat No.: N/A
LD of Affected Documents: 2202-04-0270
LD of Cross Referenced Documents: N/A
Type of interest: Fee Ownership (1)
SBE Parcel: N/A
% Being Quitclaimed: N/A
Order or PM: 74032743
JCN: N/A
County: San Joaquin
Utility Notice Number: N/A
851 Approval Application No: N/A ;Decision: N/A
Prepared By: dtw0
Checked By: cxoq
Approved By:
Revised by:

EXHIBIT 'A'
LEGAL DESCRIPTION
PACIFIC GAS & ELECTRIC COMPANY

ALL THAT REAL PROPERTY SITUATE IN THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 22, TOWNSHIP 2 SOUTH, RANGE 4 EAST, MOUNT DIABLO BASE AND MERIDIAN, IN THE CITY OF TRACY, COUNTY OF SAN JOAQUIN, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

BEING THAT PARCEL OF LAND GRANTED TO THE PACIFIC GAS & ELECTRIC COMPANY (PG&E), AS DESCRIBED IN THAT CERTAIN DOCUMENT DATED DECEMBER 21, 1988 AS DOCUMENT NO. 88-110849, OFFICIAL RECORDS OF THE COUNTY OF SAN JOAQUIN, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWESTERLY CORNER OF SAID SECTION 22, THENCE ALONG THE WEST LINE OF SECTION 22, NORTH 00° 37' 32" EAST, 900.60 FEET;

THENCE LEAVING SAID LINE, SOUTH 89° 22' 28" EAST, 50.00 FEET, TO THE **POINT OF BEGINNING**, BEING THE SOUTHWEST CORNER OF SAID PARCEL (88-110849 OR);

THENCE ALONG THE WESTERLY LINE THEREOF, NORTH 00° 37' 32" EAST, 60.00 FEET, TO THE NORTHWEST CORNER OF SAID PARCEL;

THENCE ALONG THE NORTHERLY LINE THEREOF, SOUTH 89° 22' 28" EAST, 75.00 FEET, TO THE NORTHEAST CORNER OF SAID PARCEL;

THENCE ALONG THE EASTERLY LINE THEREOF, SOUTH 00° 37' 32" WEST, 60.00 FEET, TO THE SOUTHEAST CORNER OF SAID PARCEL;

THENCE ALONG THE SOUTHERLY LINE THEREOF, NORTH 89° 22' 28" WEST, 75.00, TO THE **POINT OF BEGINNING**.

CONTAINING 4,500 SQUARE FEET OR 0.1033 ACRES OF LAND, MORE OR LESS.

THE BASIS OF BEARINGS FOR THIS PLAT AND LEGAL DESCRIPTION IS THE LINE TAKEN AS S89°05'42"E, BETWEEN TWO FOUND MONUMENTS (STATION NUMBER 2043 AND STATION NUMBER 2044) OF THE CITY OF TRACY GEODETIC CONTROL NETWORK, WHICH IS BASED UPON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 3, NAD83 (EPOCH 2004.0), AS SHOWN ON THE RECORD OF SURVEY FILED JUNE 26, 2007, IN BOOK 36 OF SURVEYS AT PAGE 118, SAN JOAQUIN COUNTY RECORDS. THE DISTANCES SHOWN ARE GROUND DISTANCES. MULTIPLY DISTANCES SHOWN BY 0.99992068 TO OBTAIN GRID DISTANCES.

AS SHOWN ON EXHIBIT B, ATTACHED HERETO AND MADE A PART HEREOF.

KIER & WRIGHT CIVIL ENGINEERS & SURVEYORS, INC.



DEAN A. JURADO, P.L.S. 9032

12-14-20

DATE

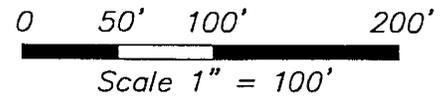


T2S, R4E, SW 1/4 OF THE SW 1/4 OF SECTION 22 M.D.B.&M.

LEGEND

- PARCEL LINE
- PROPERTY LINE
- PROPOSED PROPERTY LINE

- AC ACRES
- OR OFFICIAL RECORDS
- PG&E PACIFIC GAS & ELECTRIC COMPANY
- POB POINT OF BEGINNING
- POC POINT OF COMMENCEMENT
- SF SQUARE FEET



LANDS OF PGE
BK 3358, PG 248 OR
209-080-06

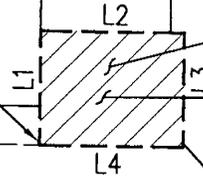
INTERNATIONAL PARKWAY

LANDS OF
R&B DELTA II LLC
ADJUSTED PARCEL 2
2019-061897 OR
209-460-32

PARCEL 2
4,500± SF
0.1033 AC

LANDS OF PG&E
88-110849 OR
209-460-26

POB



S89°22'28"E 50.00'

DAYLIGHT RD.

N0°37'32"E 900.60'

LANDS OF PROLOGIS LP
ADJUSTED PARCEL 1
2019-061897 OR
APN 209-460-33

POC

SEC.21

SEC.22

CAPITAL PARKS DR

SEC.28

SEC.27

LINE TABLE

LINE #	DIRECTION	LENGTH
L1	N0°37'32"E	60.00'
L2	S89°22'28"E	75.00'
L3	S0°37'32"W	60.00'
L4	N89°22'28"W	75.00'



KIER+WRIGHT

250 Cherry Lane, Suite 107, 208
Manteca, CA 95337

Phone: (209) 328-1123
www.kierwright.com

EXHIBIT "B"
PACIFIC GAS & ELECTRIC
PARCEL 2
TRACY, CALIFORNIA

DATE SEPT., 2020

SCALE 1" = 100'

BY GKL

JOB NO. A09500-170

SHEET 1 OF 1

Attachment 3

PSA

PURCHASE AND SALE AGREEMENT

Between

Pacific Gas and Electric Company, as Seller

and

Prologis, L.P., as Buyer

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PURCHASE AND SALE AGREEMENT

THIS PURCHASE AND SALE AGREEMENT ("Agreement") is made as of 04 May 2021, 2021 ("Effective Date") by and between **PACIFIC GAS AND ELECTRIC COMPANY**, a California corporation ("Seller"), and **PROLOGIS, L.P.**, a Delaware limited partnership ("Buyer").

R E C I T A L S:

A. Seller is the owner of two parcels of real property located in the City of Tracy ("City"), County of San Joaquin ("County") and State of California, identified by the County Assessor as (1) Assessor's Parcel Number ("APN") 209-460-26, the State Board of Equalization as SBE No. 135-39-65-1, and more particularly described in Exhibit A-1; and (2) a portion of APN 209-080-06, the State Board of Equalization as SBE No. 135-39-65-1, and more particularly described in Exhibit A-2 (such real property, together with any structures and other improvements located thereon, and all easements, rights and privileges appurtenant thereto, is hereinafter referred to collectively as the "Property").

B. Seller desires to sell the Property to Buyer, and Buyer desires to purchase the Property from Seller, on the terms and conditions contained in this Agreement.

NOW THEREFORE, in consideration of the mutual covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Seller and Buyer hereby agree as follows:

1. PURCHASE PRICE. Subject to the terms and conditions contained in this Agreement, Seller agrees to sell and convey the Property to Buyer, and Buyer agrees to purchase the Property from Seller, for a purchase price of Eighty-Two Thousand Three Hundred Twelve Dollars (\$82,312.00) ("Purchase Price"), at the Close of Escrow (as defined in Section 3.3).

OWNER	Assessor Parcel Number	Description of Transfer	Valuation
PG&E	209-460-26 Mountain House Parcel	Fee transfer with easement reservation for existing operating facilities	\$12,312.00
PG&E	209-080-06 (Portion) Tracy Gas Yard Portion	Lot Line Adjustment (fee transfer of 6,789 sf)	\$70,000.00
		Total Value	\$82,312.00

2. PAYMENT OF PURCHASE PRICE. Buyer shall pay the Purchase Price for the Property to Seller as follows:

2.1 Deposits.

(a) Buyer shall deposit Two Thousand Dollars (\$2,000.00) ("Deposit") in Escrow with First American Title Insurance Company, 101 Mission Street, Suite 1600, San Francisco, CA 94105, Attn: Heather Kucala ("Title Company") within five (5) business days after the Effective Date. The Deposit shall be considered to have been deposited only if it is made by bank wire transfer, certified check or cashier's check payable to the Title Company and drawn by a commercial bank or savings and loan

association licensed to do business in the State of California. Buyer's failure to deliver the Deposit as required under this Agreement shall entitle Seller, by written notice to Buyer, to terminate this Agreement as of the date of the notice. Buyer and Seller hereby instruct the Title Company to comply with the joint deposit instructions set forth on Exhibit C concerning the handling of Deposit. Buyer and Seller shall also provide the Title Company with Joint Escrow Instructions set forth in Exhibit D.

(b) Buyer shall deposit in Escrow with the Title Company, the additional sum of Five Thousand Dollars (\$5,000.00) (the "Additional Deposit"), not later than one (1) business day after expiration of the Inspection Period (unless Buyer terminates this Agreement pursuant to Section 5.4 below). The Additional Deposit shall be made by bank wire transfer, certified check or cashier's check drawn by a commercial bank or saving and loan association licensed to do business in the State of California. Buyer's failure to deliver the Additional Deposit as required under this Agreement shall constitute a default hereunder. The Additional Deposit, if and when made, shall be included in the term "Deposit" for all purposes under this Agreement, and the Additional Deposit shall be applied and disbursed in the same manner as the Deposit.

(c) The Deposit shall be delivered to Seller and applied to the Purchase Price at Close of Escrow. If this Agreement terminates prior to Close of Escrow pursuant to Sections 4.2, 5.4, 7.5, 8, 9.2(b), 9.3, or 11.6, then provided that Buyer is not in default, the Deposit shall be promptly returned to Buyer by the Title Company. If this Agreement terminates prior to Close of Escrow due to Buyer's default, Seller shall be entitled to retain the Deposit as set forth in Section 9.1.

2.2 Independent Consideration. In addition to the Deposit, Buyer shall deposit with the Title Company One Hundred Dollars (\$100.00) ("Independent Consideration"), in immediately available funds, within five (5) business days after the Effective Date, as consideration for Buyer's right to inspect the Property and for Seller's execution, delivery and performance of this Agreement. The Independent Consideration is in addition to and independent of any other consideration or payment provided in this Agreement, is nonrefundable, not applicable to the Purchase Price, and, notwithstanding any other provision of this Agreement, shall be retained by Seller if this Agreement terminates for any reason.

2.3 Balance of Purchase Price. Buyer shall deposit in Escrow with the Title Company an additional sum, in immediately available funds, equal to the balance of the Purchase Price (after application of the Deposit made by Buyer pursuant to Section 2.1) no later than 10 a.m. on the Closing Date.

3. ESCROW.

3.1 Establishment and the Close of Escrow. Buyer shall open an escrow ("Escrow") with the Title Company by delivering to the Title Company, the Deposit and a fully executed copy of this Agreement, within five (5) business days after the Effective Date. The Close of Escrow shall occur no later than 5:00 p.m. Pacific time on a date or before thirty (30) days following Seller notifying Buyer in writing of receipt of the approval of the California Public Utilities Commission ("CPUC") as more specifically set forth in Section 7.3; provided that all conditions precedent set forth in Section 7 have been satisfied or waived, as more specifically set forth in Section 7; and provided further that such CPUC Approval (as defined below) is received by Seller within one (1) year following the Effective Date (the "Closing Date") If Seller has not received CPUC Approval within such one (1) year period, Seller shall have the right (but not the obligation) to extend the Closing Date for up to an additional six (6) months to obtain CPUC Approval by sending written notice to Buyer and Title Company prior to the initial Closing Date. If the Close of Escrow has not occurred on or before the Closing Date, then either Buyer or Seller may terminate this Agreement and the Escrow by giving written notice of such termination to the other party, in which event Buyer shall be entitled to return of the Deposit, and this Agreement, the Escrow and the rights and obligations of the parties hereunder shall terminate as of the date of such notice, except for obligations that expressly survive the termination of this Agreement.

3.2 Deposits into Escrow.

(a) At least one (1) business day before the Closing Date (except as otherwise set forth below), Buyer shall deposit or cause to be deposited with the Title Company the following:

(i) The balance of the Purchase Price to be deposited by Buyer pursuant to Section 2.3, which will be deposited by no later than 10:00 a.m. on the Closing Date;

(ii) Buyer's share of the fees and charges described in Section 3.4, which will be deposited by no later than 10:00 a.m. on the Closing Date;

(iii) The amount, if any, payable to Seller pursuant to Section 3.5, which will be deposited by no later than 10:00 a.m. on the Closing Date;

(iv) A Preliminary Change of Ownership Report in a form suitable for filing with the County assessor;

(v) Buyer's escrow instructions consistent with the provisions of this Agreement; and

(vi) Such other instruments and documents as are reasonably required by the terms of this Agreement or by the Title Company.

(b) At least one (1) business day before Close of Escrow, Seller shall deposit or cause to be deposited with the Title Company the following:

(i) A grant deed, prepared and duly executed by Seller in recordable form, conveying fee title of the Mountain House Parcel to Buyer, with an easement reservation to Seller for its existing facilities, in the form attached hereto as Exhibit B-1 ("Mountain House Grant Deed");

(ii) A grant deed, prepared and duly executed by Seller in recordable form, conveying fee title of Tracy Gas Yard Portion to Buyer, with an easement reservation to Seller for its existing facilities, in the form attached hereto as Exhibit B-2 ("Tracy Gas Yard Portion Grant Deed"), and this grant deed along with the grant deed in 3.2(b)(i) shall be referred to as "Grant Deeds";

(iii) Affidavits certifying that Seller is not a "foreign person" within the meaning of Section 1445(f)(3) of the Internal Revenue Code of 1986, as amended, and California Revenue and Taxation Code Section 18662(e) ("Affidavits");

(iv) Seller's escrow instructions consistent with the provisions of this Agreement; and

(v) Such other instruments and documents as are reasonably required by the terms of this Agreement or by the Title Company to issue the owner's policy of title insurance described in Section 4.3.

3.3 Closing. The "Close of Escrow" shall mean the time that the Grant Deeds are recorded in the official records of the County. After all the requirements of Section 3.2 have been satisfied and all conditions precedent set forth in Section 7 have been satisfied or waived, the parties shall instruct the Title Company to close Escrow by, among other actions:

(a) Recording the Grant Deeds and instructing the San Joaquin County Recorder to deliver the Grant Deeds to Buyer after recording;

(b) Delivering to or for the account of Seller, the Purchase Price paid by Buyer pursuant to Sections 2.1 and 2.3, and the amount, if any, payable to or payable by Seller pursuant to Sections 3.4 and 3.5;

(c) Delivering to Seller, "as-recorded" conformed copies of the Grant Deeds;
and

(d) Delivering to Buyer, the Affidavits and "as-recorded" conformed copies of the Grant Deeds and issuing and delivering to Buyer the title insurance policy described in Section 4.3.

3.4 Costs. Seller and Buyer shall pay all transfer taxes and closing costs as follows:

(a) Seller shall pay the recording fees for recordation of the Grant Deeds, one-half (1/2) of the escrow fees, and the real property conveyance or documentary transfer taxes charged by the County and by the City, if any; and

(b) Buyer shall pay (i) one-half (1/2) of the escrow fees, (ii) the cost of the premium for the owner's title policy and endorsement charges requested by Buyer, and (iii) the cost of any ALTA or other survey required by the Title Company in order to issue the owner's policy of title insurance described in Section 4.3.

(c) All other closing costs shall be allocated between Seller and Buyer in accordance with customary practices of the County.

3.5 Prorations.

(a) Rents and other charges under any leases, utility charges, and all other income and expense items related to the Property shall be prorated as of the Close of Escrow. The net amount due Seller from Buyer under this Section 3.5(a), if any, shall be delivered by Buyer to the Title Company no later than 10:00 a.m. on the Closing Date. The net amount due Buyer from Seller under this Section 3.5(a), if any, shall be charged to Seller by the Title Company at the Close of Escrow.

(b) All current general and special real estate taxes, bond interest (if applicable), assessments, improvement district assessments and similar items ("Taxes") owed at the time of the Close of Escrow shall be prorated between Buyer and Seller as of the Close of Escrow. If the amount of any proration cannot be determined at the Close of Escrow or if any "escape" assessments are assessed against the Property after the Close of Escrow that relate to the period before the Close of Escrow, the adjustments will be made between the parties as soon after the Close of Escrow as possible. Any supplemental assessments assessed for any time period after the Close of Escrow (including any supplemental County and City assessments based on the increased value of the Property above the state-assessed value) are Buyer's sole responsibility. **Buyer expressly acknowledges that Seller, as a regulated public utility, pays Taxes on the Property as assessed by the California State Board of Equalization ("SBE") as of January 1 of each year. Once the Property is so assessed, Seller automatically is obligated to pay Taxes thereon for the subsequent fiscal year commencing the following July 1. In this regard, Seller represents and warrants that it has paid, or will pay, all Taxes assessed as of January 1, 2021, for the tax fiscal year period from July 1, 2021, through June 30, 2022. If the Close of Escrow occurs between January 1 and June 30, Buyer shall deposit into Escrow, the full amount to pay Taxes or to reimburse Seller for Taxes paid for the tax year beginning on the July 1 immediately following the Close of Escrow, in addition to the prorated amount of Taxes for the current tax year (ending June 30). At the Close of Escrow, Taxes shall be prorated between Seller and Buyer in light of the foregoing, with Seller responsible for all Taxes allocable to the period before the Close of Escrow, and Buyer responsible for all Taxes allocable to the period on and after the Close of Escrow.** The Taxes, for proration purposes, shall be based on the actual figures for the applicable fiscal year as provided by Seller, unless Escrow is to close before these figures are available, in which case the proration shall be based on the immediately preceding year's figures, subject to

reconciliation between the parties following the Close of Escrow. The 365-day year shall be used for proration purposes. If applicable, Seller shall pay the Taxes for the subsequent tax year (and paid by Buyer through Escrow) before they become delinquent; provided, however, that Seller shall have the right to pay such Taxes in installments as permitted by law. Buyer shall cooperate with Seller and the SBE to complete any documentation necessary to transfer the assessment process out of SBE jurisdiction and terminate the assessment of Taxes by the SBE. The obligations of the parties under this Section 3.5 shall survive the Close of Escrow.

3.6 Possession of Property. Seller shall deliver possession of the Property to Buyer upon the Close of Escrow subject only to the Permitted Encumbrances as defined in Section 4.1.

3.7 Early Termination of Escrow. If this Agreement terminates pursuant to Sections 4.2, 5.4, 7.5, 8, 9.2(b), 9.3, or 11.6, then: the Escrow shall terminate; each party shall pay one-half (1/2) of the Escrow termination fee, if any; the Deposit shall be handled in the manner set forth in Section 2.1(c); and Seller and Buyer shall thereupon each be released from any further obligations under this Agreement, except for obligations that expressly survive termination.

4. TITLE; TITLE INSURANCE.

4.1 Title. It shall be a condition precedent to Buyer's obligation to purchase the Property that Seller convey title to the Property to Buyer, subject only to the following exceptions ("Permitted Encumbrances"):

- (a) The lien of Taxes, not delinquent;
- (b) All matters and exceptions of record approved or deemed approved by Buyer pursuant to Section 4.2 below, and the standard printed exceptions to the form of policy of title insurance described in Section 4.3;
- (c) Any matters affecting title to the Property created by or with the consent of Buyer; and
- (d) All matters which would be disclosed by an inspection of the Property.

At the Close of Escrow, Buyer shall take title to the Property subject to the Permitted Encumbrances, and shall not be entitled to any credit against the Purchase Price with respect to any of the Permitted Encumbrances.

4.2 Title and survey Review. Prior to the date hereof, Seller has provided Buyer with a preliminary title report for the Property, together with copies of the instruments underlying any exceptions referred to therein. Within five (5) days after the Effective Date, Seller or Buyer shall cause the Title Company to issue an updated title report ("Title Report"). Within twenty (20) days after Buyer's receipt of the Title Report (the "Title Review Period"), Buyer shall give Seller and the Title Company written notice ("Buyer's Title Notice") of Buyer's approval or disapproval of any matters shown in the Title Report or the survey of the Property. The failure of Buyer to give Buyer's Title Notice prior to expiration of the Title Review Period shall be deemed Buyer's approval of all matters shown in the Title Report and the survey. If Buyer timely disapproves of any matter shown in the Title Report and/or the survey, Seller shall, within fifteen (15) days after receipt of Buyer's Title Notice ("Seller's Title Response Period"), give Buyer written notice ("Seller's Title Notice") of those disapproved title matters, if any, which Seller is willing and able to eliminate from title to the Property by Close of Escrow, including by the issuance of endorsements to Buyer's title policy or other manner reasonably satisfactory to Buyer. Seller shall have no obligation to remove, but may, in its sole discretion, elect to remove any title or survey matters disapproved by Buyer. Seller's failure to deliver Seller's Title Notice prior to expiration of Seller's Title Response Period shall be deemed Seller's refusal to remove the disapproved title matters. If Seller is unwilling or unable to remove, or is deemed to refuse to remove, any of the title matters disapproved by Buyer, then Buyer shall have the right, upon written

notice given to Seller within five (5) days after the earlier of (a) receipt of Seller's Title Notice or (b) expiration of Seller's Title Response Period, to terminate this Agreement. If Buyer so elects to terminate this Agreement, then, provided that Buyer shall not be in default hereunder, Buyer shall be entitled to return of the Deposit, and this Agreement, the Escrow and the rights and obligations of the parties hereunder shall terminate, except for obligations that expressly survive the termination of this Agreement. If Buyer fails to timely notify Seller of its election to terminate this Agreement, then Buyer shall be deemed to have elected to take title to the Property subject to the disapproved title matters.

4.3 Title Insurance. Upon the Close of Escrow, Buyer shall cause the Title Company to issue to Buyer either an ALTA or CLTA owner's title insurance policy in the amount of the Purchase Price (or other such amount as may be reasonably acceptable to Buyer) insuring that fee simple title to the Property is vested in Buyer, subject only to the Permitted Encumbrances.

5. CONDITION OF PROPERTY.

5.1 AS IS CONDITION. BUYER HAS BEEN STRONGLY ADVISED TO INVESTIGATE THE CONDITION AND SUITABILITY OF ALL ASPECTS OF THE PROPERTY AND ALL MATTERS AFFECTING THE VALUE OR DESIRABILITY OF THE PROPERTY, INCLUDING THE PRESENCE OF ANY DISTRIBUTION OR TRANSMISSION LINES AND/OR DISTRIBUTION OR TRANSMISSION LINE FACILITIES ON THE PROPERTY AND POTENTIAL ENVIRONMENTAL HAZARDS ARISING FROM THE PRESENCE IN, ON, UNDER, AROUND OR ABOUT THE PROPERTY OF HAZARDOUS SUBSTANCES. EXCEPT AS EXPRESSLY HEREINAFTER PROVIDED IN THIS AGREEMENT, NEITHER SELLER, NOR ITS OFFICERS, DIRECTORS, EMPLOYEES OR AGENTS MAKES OR HAS MADE ANY REPRESENTATIONS OR WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, WRITTEN OR ORAL, AS TO ANY ASPECT, PORTION OR COMPONENT OF THE PROPERTY, INCLUDING THE PHYSICAL CONDITION OF THE PROPERTY, THE USES OF THE PROPERTY OR ANY LIMITATIONS THEREON, INCLUDING ANY REPRESENTATION OR WARRANTY PERTAINING TO ZONING, ENVIRONMENTAL OR OTHER LAWS, REGULATIONS OR GOVERNMENTAL REQUIREMENTS; THE UTILITIES ON THE PROPERTY, THE COSTS OF OPERATING THE PROPERTY OR ANY OTHER ASPECT OF THE ECONOMIC OPERATIONS OF THE PROPERTY; THE CONDITION OF THE SOILS OR GROUNDWATER OF THE PROPERTY; TOXIC MATERIALS OR HAZARDOUS SUBSTANCES IN, ON, UNDER, AROUND OR ABOUT THE PROPERTY; OR ANY OTHER MATTER BEARING ON THE USE, VALUE OR CONDITION OF THE PROPERTY. FURTHER, SELLER MAKES AND HAS MADE NO REPRESENTATIONS OR WARRANTIES WITH RESPECT TO THE CONDITION OF TITLE TO THE PROPERTY. FURTHER, BUYER AGREES THAT IT WILL RELY SOLELY ON ITS POLICY OF TITLE INSURANCE ISSUED PURSUANT TO SECTION 4.3.

5.2 Right of Inspection.

(a) For a period of sixty (60) days following the Effective Date ("Inspection Period"), subject to the terms and conditions of this Section 5.2, Buyer and Buyer's authorized representatives, may enter onto the Property at any reasonable time and from time to time to survey and inspect the Property. Notwithstanding any terms of this Agreement to the contrary, if prior to the expiration of the Inspection Period, Buyer notifies Seller in writing that it approves the physical condition of the Property, the Inspection Period shall terminate on such notification date. No non-invasive or invasive testing, including soil or groundwater sampling, may be conducted on the Property unless and until the testing plans and procedures are approved in writing by Seller, which approval may be withheld, or granted upon such conditions as Seller may determine, in Seller's sole and absolute discretion. If Seller approves of such testing, Buyer shall prepare, at Buyer's sole cost and expense, a work plan that describes in detail the nature, scope, location and purpose of all of Buyer's activities to be performed on the Property, including methods and procedures for restoration of any alteration to Property, and a health and safety plan. In addition, at Buyer's sole cost and expense, Buyer shall comply with all laws, statutes, ordinances, rules, regulations, requirements or orders of municipal, state, and federal authorities now in force or that may later be in force in conducting its due diligence on the Property. In the event that Buyer conducts any such testing, Buyer shall return the Property as nearly as possible to the same condition the Property was in before any entry or testing activities.

(b) Buyer shall notify Paul Sensibaugh III, Seller's representative for the Property ("Seller's Representative"), by telephone at (209) 423-7874, at least three (3) business days before Buyer or Buyer's representatives enter the Property in each instance. No such entry shall interfere with Seller's use of the Property or the use of the Property by any tenants, easement holders, licensees, permittees or other third parties occupying the Property. Seller shall have the right to have a representative accompany Buyer on each such entry.

(c) At Buyer's sole expense, Buyer shall provide Seller, as soon as they are available, with copies of the results of all analytical tests, photos, geological logs, studies and drafts of any and all reports generated as a result of Buyer's environmental investigations. Seller shall have ten (10) business days to comment thereon. Thereafter, Buyer shall incorporate any and all of Seller's reasonable comments into such reports before such reports are prepared in final form. Buyer shall provide Seller with copies of any and all final reports resulting from Buyer's activities on the Property as soon as they are available. Buyer shall keep such reports confidential as more specifically set forth in Section 5.8.

5.3 Indemnification; Release; Insurance. Buyer shall indemnify, defend (with counsel approved by Seller), protect and hold Seller, its officers, directors, employees, agents and contractors (collectively, "Indemnitees") harmless from and against any and all actual losses, costs, claims, demands, actions, suits, orders, causes of action (including attorneys' fees and costs), obligations, controversies, debts, expenses, accounts, damages, judgments, and liabilities of whatever kind or nature, and by whomsoever asserted, in law, equity, or otherwise (collectively, "Claims") arising out of or in any way connected with the Property and occurring as a result of any entry upon the Property, or activities conducted thereon by Buyer, Buyer Affiliates, or any of their respective employees, agents, contractors, subcontractors or consultants (each, "Buyer's Representative", and collectively, "Buyer's Representatives"), including Claims arising from the passive or active negligence of the Indemnitees. In no event will Buyer have any liability to Seller for consequential, special or punitive damages. Buyer's entry upon the Property and activities conducted thereon by or on behalf of Buyer shall be at Buyer's sole risk and expense. **Seller shall not be liable to Buyer for, and Buyer hereby waives and releases Seller and the other Indemnitees from, any and all Claims arising out of or in any way connected with the Property and occurring as a result of any entry upon the Property, or activities conducted thereon by Buyer or Buyer's Representatives, including Claims arising from the passive or active negligence of any of the Indemnitees.** In addition, Seller may require Buyer's Representatives to execute and deliver to Seller, a release reasonably satisfactory in form and substance to Seller, prior to any entry upon the Property by such Buyer Representative. Buyer shall, and shall cause each of Buyer's Representatives (other than its employees) to, procure, carry and maintain in effect before and throughout the period of time that Buyer or such Buyer Representative shall be entering the Property, not less than \$2,000,000.00 in comprehensive general liability insurance coverage, insuring all activities and conduct of such parties on the Property, issued by an insurance company licensed in the State of California, having a Best's rating of not less than XII A-, and otherwise reasonably acceptable to Seller. Seller shall be an additional insured under such policy(ies). Buyer shall deliver to Seller certificates of insurance evidencing the coverages required hereunder, as well as original endorsements evidencing additional insured status, prior to any entry upon the Property by Buyer or the applicable Buyer's Representative. The provisions of this Section 5.3 shall survive the expiration or earlier termination of this Agreement or the Close of Escrow.

5.4 Right to Terminate. If, for any reason, Buyer is not satisfied with the results of its inspection of the Property, Buyer shall have the right to terminate this Agreement by written notice to Seller given within the Inspection Period, but before 5:00 p.m. Pacific Time on the last day of the Inspection Period. Buyer's notice of termination shall specify in detail the basis for Buyer's termination of this Agreement. Buyer's failure to terminate this Agreement before the expiration of the Inspection Period shall be deemed Buyer's approval of all matters relating to the Property, including the physical condition of the Property, the possible uses of the Property, and any limitations thereon. If Buyer elects not to terminate this Agreement as permitted above, then: (a) Buyer shall have no further right to terminate this Agreement, except as expressly set forth in this Agreement, and (b) in addition to all other Claims waived by Buyer hereunder, Buyer shall be deemed to have waived any and all rights or Claims against Seller with respect to matters discovered before the expiration of the Inspection Period.

5.5 Hazardous Substances.

(a) Seller has not conducted an initial investigation of the Property for Hazardous Substances nor obtained any reports and documents.

(b) "Hazardous Substance" means any material or substance: (i) now or hereafter defined as a "hazardous substance," "hazardous waste," "hazardous material," "extremely hazardous waste," "restricted hazardous waste" or "toxic substance" or words of similar nature under any applicable local, state or federal law or under the regulations adopted or promulgated pursuant thereto, including, without limitation, any and all rules and regulations of the United States or California Environmental Protection Agency or any successor agency, or any other state or federal department, board or agency, or any other agency or governmental board or entity having jurisdiction, as any of the foregoing have been, or are hereafter amended from time to time; or (ii) that is now or hereafter regulated as a Hazardous Substance by any governmental authority, agency, department, commission, board, agency or instrumentality of the United States, any State of the United States or any political subdivision thereof; or which cause, or are listed by the State of California as being known to the State of California to cause, cancer or reproductive toxicity; or including without limitation substances containing petroleum hydrocarbons, lead-based paint or other lead contamination, asbestos or asbestos-containing materials, or radon gas; or (iii) the presence of which on the Property poses or threatens to pose a hazard to the health or safety of persons or to the environment.

5.6 Buyer's Release of Seller. As a material inducement to Seller for sale of the Property to Buyer, Buyer hereby waives, releases, and forever discharges Seller and the other Indemnitees from any and all Claims that Buyer may have at the Close of Escrow or that may arise in the future on account of or in any way arising out of or connected with the Property, including, but not limited to, the physical condition, nature or quality of the Property, the presence of Hazardous Substances on, under, about or otherwise affecting the Property, or the ownership, management or operation of the Property, except for a breach by Seller of its representations and warranties set forth in Section 6.1 and 10.1 below. Buyer hereby waives the protection of California Civil Code Section 1542, which reads as follows:

A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS THAT THE CREDITOR OR RELEASING PARTY DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE AND THAT, IF KNOWN BY HIM OR HER, WOULD HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR OR RELEASED PARTY.

Buyer: Prologis, L.P.

By:  _____

Name: Megan Robert

5.7 Natural Hazard Disclosures. Seller is, or may be, required under California law to disclose if the Property lies within the following natural hazard areas or zones: (a) a special flood hazard area designated by the Federal Emergency Management Agency (Government Code Section 8589.3); (b) an area of potential flooding shown on a dam failure inundation map (Government Code Section 8589.4); (c) a very high fire hazard severity zone ("Fire Hazard Severity Zone") (Government Code Section 51183.5); (d) a wildland area that may contain substantial forest fire risks and hazards ("Wildland Fire Zone") (Public Resources Code Section 4136); (e) an earthquake fault zone (Public Resources Code Section 2621.9); or (f) a seismic hazard zone (Public Resources Code Section 2694). Buyer acknowledges and understands that: (i) if the Property is located in a Fire Hazard Severity Zone, the owner is subject to the maintenance requirements of Government Code Section 51182; and (ii) if the Property is located in a Wildland Fire Zone, it is subject to the maintenance requirements of Public Resources Code Section 4291, and it is not the State of California's responsibility to provide fire protection services to any building or structure located within a Wildland Fire Zone unless the Department of Forestry and Fire Protection has entered into a

cooperative agreement with a local agency for those purposes pursuant to Public Resources Code Section 4142. In addition, if the Property is situated in one or more of the hazard zones described above, Buyer's ability to develop the Property, obtain insurance, or receive assistance after a disaster may be limited. Buyer further acknowledges that the maps on which the natural hazard disclosures are based only estimate where natural hazards exist, and are not definitive indicators of whether or not a property will be affected by a natural disaster. Except as expressly provided herein, Seller is making and has made no representations regarding the seismic, geologic or other natural hazards affecting the Property, or the effect thereof on the future use or development of the Property, and Buyer should make its own inquiry and investigation of such hazards. Further, Buyer hereby waives, to the fullest extent permitted by law, any other disclosure requirements relating to natural hazards imposed on Seller by California law.

5.8 Confidentiality. Until the Close of Escrow, unless disclosure is otherwise required under this Agreement or under applicable law, Buyer shall keep, and shall cause Buyer's Representatives to keep, confidential all tests, inspections and reports, documents, analyses, and opinions obtained or generated by Buyer with respect to the Property, including any information provided by Seller or received or prepared by Buyer in Buyer's independent factual, physical and legal examinations and inquiries respecting the Property (collectively, "Confidential Information"), except that Buyer may disclose the same to its legal counsel and consultants, provided that Buyer obtains the agreement in writing of such legal counsel and consultants agree to keep the Confidential Information confidential. Confidential Information does not include information that was in the public domain at the time of disclosure or that is subsequently made available to the general public without restriction and without breach of this Agreement, or information that is disclosed as part of the application for and approval of the lot line adjustment, as set forth in Section 7.4 below. Until the Close of Escrow, neither the contents nor the results of any Confidential Information shall be disclosed by Buyer or Buyer's Representatives without Seller's prior written approval, which Seller may grant or withhold at Seller's sole and absolute discretion, unless and until Buyer is legally compelled to make such disclosure.

5.9 Survival. The covenants, agreements and obligations of Buyer contained in this Section 5 shall survive the expiration or earlier termination of this Agreement or the Close of Escrow for a period of six months after the expiration or termination of this Agreement or the Close of Escrow, or as otherwise set forth above.

6. REPRESENTATIONS AND WARRANTIES.

6.1 Seller's Representations. Seller hereby represents and warrants to Buyer, to Seller's actual knowledge, as defined below in this Section 6.1, as follows:

(a) Seller has full right, power and authority to enter into this Agreement and to sell, convey and transfer the Property and all rights appurtenant thereto to Buyer; provided, however, that the foregoing representation and warranty is subject to Seller's receipt of any court or commission approvals (as more particularly described in Section 7.3 below). All corporate action on the part of Seller necessary for the valid authorization, execution, and delivery of this Agreement, and the consummation of the transactions contemplated hereby has been taken, or will be taken at or before the Close of Escrow.

(b) The execution and delivery of this Agreement and the consummation of the transactions contemplated hereby will not conflict with or constitute a default under any of the terms, conditions or provisions of any other agreement to which Seller is a party or by which Seller is bound, and will not violate any provision of, or require any consent, authorization or approval under, any applicable law, regulation, or order; provided, however, that the foregoing representation and warranty is subject to Seller's receipt of any court or commission approvals (as more particularly described in Section 7.3 below).

(c) Seller has received no written notice from any governmental agency or private person during the six (6) month period preceding the Effective Date that the condition, use or operation of the Property violates any law or any order or requirement of any governmental agency that could materially and adversely affect the operation or value of the Property (other than violations which have been cured).

(d) During the six (6) month period preceding the Effective Date, Seller has received no written notice of any pending or threatened lawsuits of any kind against Seller that could materially and adversely affect the operation or value of the Property or prohibit the sale thereof.

(e) During the six (6) month period preceding the Effective Date, Seller has received no written notice of any pending, threatened or contemplated condemnation proceedings affecting the Property or any part thereof.

(f) There are no leases or occupancy agreements pertaining to the Property.

(g) Other than as disclosed in the Permitted Encumbrances, there is no other agreement, understanding or restriction with or for the benefit of any person or entity, whether private, public or quasi-public, that will be binding upon Buyer or the Property after Closing and which may prevent or limit in any way Buyer's intended use of the Property.

Seller's "actual knowledge" as used in this Section 6.1 or elsewhere in this Agreement shall mean the actual knowledge of, or receipt of written notice by, Seller's Representative as of the Effective Date (or as of the Close of Escrow as set out in Section 7.1(c) below), without any duty of inquiry. Buyer acknowledges and agrees that Seller may have records or files not in the possession of Seller's Representative, which may include information concerning the Property. Buyer understands that Seller will not undertake to determine whether any of such other files and/or records contain information concerning the Property, and Seller will not make such other files and records available to Buyer for its review. In light of the voluminous files and records of Seller, and the uncertainty of the location or content of such files, Buyer acknowledges and agrees that Buyer will, except for the limited representations and warranties contained in this Section 6.1, rely solely on its own investigations in making its decision to acquire the Property.

6.2 Buyer's Representations. In consideration of Seller entering into this Agreement and as an inducement to Seller to sell the Property to Buyer, Buyer makes the following representations and warranties, each of which is material, is being relied upon by Seller (the continued truth and accuracy of which shall constitute a condition precedent to Seller's obligations hereunder) and shall fully survive the Close of Escrow for the period set forth in Section 11.2 below:

(a) Buyer is duly organized, validly existing and in good standing under the laws of the state of its organization and is qualified to do business in the state in which the Property is located and the persons executing this Agreement on behalf of Buyer have the full right and authority to execute this Agreement on behalf of Buyer and to bind Buyer without the consent or approval of any other person or entity. This Agreement and all documents executed by Buyer which are to be delivered to Seller upon the Close of Escrow are, or at the time of the Close of Escrow will be, (i) duly authorized, properly executed and delivered by Buyer, (ii) legal, valid and binding obligations of Buyer enforceable in accordance with their terms at the time of the Close of Escrow, and (iii) not in violation of any agreement or judicial order to which Buyer is a party or to which it is subject.

(b) Buyer is an experienced real property operator and investor, and is represented or has had an opportunity to be represented by counsel in connection with this transaction. Except for the express representations and warranties of Seller contained in Section 6.1 above, Buyer specifically acknowledges that it is acquiring the Property "AS IS, WHERE IS, WITH ALL FAULTS", without any representations or warranties of Seller, express or implied, written or oral, as to the nature or condition of title to the Property, the physical condition of the Property, the uses of the Property or any limitations thereon. Buyer is relying solely upon, and, as of the expiration of the Inspection Period will have conducted, its own analysis of the Property as it deems necessary or appropriate in acquiring the Property from Seller, including an analysis of any and all matters concerning the physical or environmental condition, condition of title, use, development or suitability for development of the Property. Buyer is not relying in any way upon any representations, statements, agreements, warranties, studies, plans, reports, descriptions, guidelines or other information or material furnished by Seller or its representatives, whether oral or written, express or implied, of any nature whatsoever regarding any of the foregoing matters.

(c) Buyer is not, and at no time during the term of this Agreement will Buyer be: (i) in violation of any Anti-Terrorism Law (defined below); (ii) conducting any business or engaging in any transaction or dealing with any Prohibited Person (defined below), including the making or receiving of any contribution of funds, goods or services to or for the benefit of any Prohibited Person; (iii) dealing in, or otherwise engaging in any transaction relating to, any property or interests in property blocked pursuant to Executive Order No. 13224 (defined below); or (iv) engaging in or conspiring to engage in any transaction that evades or avoids, or has the purpose of evading or avoiding, or attempts to violate any of the prohibitions set forth in, any Anti-Terrorism Law. Neither Buyer nor any of its Affiliates, officers, directors, shareholders, partners or members is, or at any time during the term of this Agreement will be, a Prohibited Person. As used herein, "Anti-Terrorism Law" means any law or regulation relating to terrorism, anti-terrorism, money-laundering or anti-money laundering activities, including the United States Bank Secrecy Act, the United States Money Laundering Control Act of 1986, Executive Order No. 13224, and Title 3 of the USA Patriot Act (defined below), and any regulations promulgated under any of them, each as may be amended from time to time. As used herein, "Executive Order No. 13224" means Executive Order No. 13224 on Terrorist Financing effective September 24, 2001, and relating to "Blocking Property and Prohibiting Transactions With Persons Who Commit, Threaten to Commit, or Support Terrorism," as may be amended from time to time. As used herein, "Prohibited Person" means (1) a person or entity that is listed in, or owned or controlled by a person or entity that is listed in, the Annex to Executive Order No. 13224; (2) a person or entity with whom Seller is prohibited from dealing or otherwise engaging in any transaction by any Anti-Terrorism Law; or (3) a person or entity that is named as a "specially designated national and blocked person" on the most current list published by the U.S. Treasury Department Office of Foreign Assets Control at its official website, <http://www.treas.gov/ofac/t11sdn.pdf>, or at any replacement website or other official publication of such list. As used herein, "USA Patriot Act" means the "Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001" (Public Law 107-56). As used herein, "Affiliate" means, with respect to any party, a person or entity that controls, is under common control with, or is controlled by such party.

7. CONDITIONS PRECEDENT

7.1 Conditions to Buyer's Obligations. Buyer's obligation to purchase the Property pursuant to this Agreement is subject to the fulfillment or waiver of each of the following conditions precedent:

(a) The Title Company shall be prepared to issue at the Close of Escrow the title insurance policy described in Section 4.3 upon payment of its regularly scheduled premium therefor;

(b) Seller shall have performed each and every covenant contained in this Agreement to be performed by Seller at or before the Close of Escrow; and

(c) Subject to Section 9.3, the representations and warranties made by Seller shall be true and correct as of the Close of Escrow as if those representations and warranties were made on said date.

7.2 Conditions to Seller's Obligations. Seller's obligation to sell the Property to Buyer pursuant to this Agreement is subject to the fulfillment or waiver of each of the following conditions precedent:

(a) Buyer shall have timely performed each and every covenant contained in this Agreement to be performed by Buyer at or before the Close of Escrow; and

(b) The representations and warranties made by Buyer shall be true and correct as of the Close of Escrow as if those representations and warranties were made on said date.

7.3 CPUC Approval. Seller has determined that approval of the CPUC ("CPUC Approval") will be required as a condition precedent to Seller's sale of property to Buyer set forth in Section

1.1, and therefore, the obligation of each party to close the sale of its property to the other party shall be conditioned upon Seller obtaining such CPUC Approval before the Close of Escrow. CPUC Approval shall not be deemed to have occurred for purposes of this Agreement unless and until the CPUC approves the sale of the property in a form that is final, unconditional and un-appealable, including exhaustion of all administrative appeals or remedies before the CPUC, and such CPUC Approval is approved by Seller in its sole and absolute discretion, including Seller's approval of the proposed accounting and ratemaking treatment of the sale. Agency further acknowledges and agrees that Seller makes no representation or warranty with respect to the likelihood of, or timing of, CPUC Approval. Buyer waives all claims against Seller for losses, expenses or damages suffered or incurred as a result of the need for CPUC Approval, any delay in receipt of CPUC approval or the failure of the CPUC to approve the sale of the property.

7.4 Subdivision Map Act Compliance. At the Close of Escrow, the Property must comply with the California Subdivision Map Act ("Map Act") (Government Code Section 66410, et seq.) ("Map Act Compliance"). During the period that Seller has owned the Property, certain exemptions to the Map Act may apply due to Seller's status as a public utility. Said exemptions will not apply to Buyer, unless Buyer is also a public utility. The obligation of each party to close the sale of the Property shall be conditioned upon confirming Map Act Compliance or obtaining such Map Act Compliance before the Close of Escrow, which compliance shall be determined by Seller, in Seller's sole and absolute discretion. Buyer acknowledges and agrees that Seller makes no representation or warranty with respect to Map Act Compliance, and Buyer hereby waives all Claims against Seller that may arise out of losses, expenses or damages suffered or incurred by Buyer as a result of the need for Map Act Compliance, or the failure to obtain Map Act Compliance.

The Parties agree that the portion of APN 209-080-06 will be conveyed by Seller to Buyer following a lot line adjustment, to be approved by the City of Tracy pursuant to Chapter 12.04 of the City's Municipal Code. Seller agrees at no expense to Seller, to cooperate with Buyer to enable Buyer to apply for and obtain the lot line adjustment. As such, approval of the lot line adjustment under the Map Act and Municipal Code will be a condition precedent to closing the transaction contemplated by this Agreement.

7.5 Termination of Agreement for Failure of Conditions.

(a) Failure of Buyer's Conditions. If any one or more of the conditions to Buyer's obligations, as set forth in Section 7.1 or elsewhere in this Agreement, is not either fully performed, satisfied or waived in writing on or before the Closing Date, then Buyer may elect, by written notice to Seller, to terminate this Agreement.

(b) Failure of Seller's Conditions. If any one or more of the conditions to Seller's obligations, as set forth in Section 7.2 or elsewhere in this Agreement, is not either fully performed, satisfied or waived in writing on or before the Closing Date, then Seller may elect, by written notice to Buyer, to terminate this Agreement. Nothing in this paragraph shall be construed to limit Seller's rights under Section 9.1 in the event of a default by Buyer.

(c) Subdivision Map Act Compliance. The condition set forth in Section 7.4 may not be waived by either party. If Seller notifies Buyer before the Closing Date that Seller has not either confirmed Map Act Compliance or determined that conveyance of the Property to Buyer as contemplated in this Agreement is exempt from the Map Act, then this Agreement shall automatically terminate as of the date of such notice.

8. CONDEMNATION. In the event of any taking of more than twenty-five percent (25%) of the land area of the Property in eminent domain proceedings or under threat of condemnation before the Close of Escrow, Buyer shall have the right to terminate this Agreement by giving to Seller written notice of termination within five (5) days following the date of such taking. In the event of a taking of twenty-five percent (25%) or less of the land area of the Property before the Close of Escrow or in the event that Buyer shall not elect to terminate this Agreement as provided above, Buyer shall remain obligated to perform its obligations under this Agreement, and Seller shall assign to Buyer, at the Close of Escrow, the portion of any condemnation award attributable to Seller's interest in the Property. For purposes of this Agreement,

a taking in condemnation shall mean the taking of possession or the vesting of fee title to the Property in a governmental entity pursuant to the exercise of the power of eminent domain or pursuant to a deed given in lieu or in contemplation thereof.

9. **DEFAULT.**

9.1 **Buyer's Default.**

(a) IF THE SALE OF THE PROPERTY TO BUYER UNDER THIS AGREEMENT DOES NOT CLOSE BECAUSE OF A DEFAULT BY BUYER, SELLER MAY UNILATERALLY TERMINATE THIS AGREEMENT AND THE ESCROW BY GIVING WRITTEN NOTICE TO BUYER AND THE TITLE COMPANY. THEREUPON, SELLER SHALL BE RELEASED FROM ALL OBLIGATIONS UNDER THIS AGREEMENT, AND TITLE COMPANY IS HEREBY IRREVOCABLY INSTRUCTED BY BUYER AND SELLER TO DISBURSE THE DEPOSIT TO SELLER AS LIQUIDATED DAMAGES. IN ADDITION, TITLE COMPANY SHALL RETURN ALL DOCUMENTS AND INSTRUMENTS TO THE PARTIES WHO DEPOSITED SAME, AND ALL TITLE AND ESCROW CANCELLATION CHARGES SHALL BE CHARGED TO BUYER. SELLER'S RETENTION OF THE DEPOSIT IS NOT INTENDED AS A FORFEITURE OR A PENALTY WITHIN THE MEANING OF CALIFORNIA CIVIL CODE SECTIONS 3275 OR 3369, BUT IS INTENDED TO COMPENSATE SELLER FOR DAMAGES IT WILL SUSTAIN BY REASON OF SUCH DEFAULT BY BUYER PURSUANT TO CALIFORNIA CIVIL CODE SECTIONS 1671, 1676 AND 1677, INCLUDING DAMAGES RESULTING FROM THE REMOVAL OF THE PROPERTY FROM THE MARKET, THE LOSS OF BUSINESS AND DEVELOPMENT OPPORTUNITIES AND THE LOSS OF PROSPECTIVE INVESTMENT IN OTHER PROPERTY. THE PARTIES AGREE AND ACKNOWLEDGE THAT THE AMOUNT OF SELLER'S ACTUAL DAMAGES AS A RESULT OF BUYER'S DEFAULT WOULD BE EXTREMELY DIFFICULT OR IMPRACTICABLE TO ASCERTAIN, AND THE AMOUNT PROVIDED FOR HEREIN IS A REASONABLE ESTIMATE OF SUCH DAMAGES. BY THEIR SIGNATURES BELOW, SELLER AND BUYER SPECIFICALLY ACKNOWLEDGE THEIR ACCEPTANCE AND APPROVAL OF THE FOREGOING LIQUIDATED DAMAGES PROVISION.

(b) NOTHING CONTAINED IN THIS SECTION 9.1 SHALL SERVE TO WAIVE OR OTHERWISE LIMIT (1) SELLER'S REMEDIES OR DAMAGES FOR CLAIMS WITH RESPECT TO ANY OBLIGATIONS OF BUYER THAT, BY THE TERMS OF THIS AGREEMENT, SURVIVE THE CLOSE OF ESCROW OR ANY TERMINATION OF THIS AGREEMENT BEFORE THE CLOSE OF ESCROW, INCLUDING BUYER'S CONFIDENTIALITY OBLIGATIONS UNDER SECTIONS 5.8 AND 11.11 AND INDEMNIFICATION OBLIGATIONS UNDER SECTION 5.3 AND SECTION 10, OR (2) SELLER'S RIGHTS TO OBTAIN FROM BUYER ALL COSTS AND EXPENSES OF ENFORCING THE LIQUIDATED DAMAGE PROVISION CONTAINED IN SECTION 9.1(a) ABOVE, INCLUDING ATTORNEYS' FEES AND COSTS PURSUANT TO SECTION 11.10 BELOW.

(c) THE PARTIES AGREE THAT SELLER WOULD SUFFER MATERIAL INJURY OR DAMAGE NOT COMPENSABLE BY THE PAYMENT OF MONEY IF BUYER WERE TO BREACH OR VIOLATE ITS CONFIDENTIALITY OBLIGATIONS UNDER SECTIONS 5.8 AND 11.11 OF THIS AGREEMENT. ACCORDINGLY, NOTWITHSTANDING THE PROVISIONS OF SECTION 9.1(a) ABOVE, IN ADDITION TO ALL OTHER REMEDIES THAT SELLER MAY HAVE, SELLER MAY BRING AN ACTION IN EQUITY OR OTHERWISE FOR SPECIFIC PERFORMANCE TO ENFORCE COMPLIANCE WITH SUCH SECTIONS, OR AN INJUNCTION TO ENJOIN THE CONTINUANCE OF ANY SUCH BREACH OR VIOLATION THEREOF. BUYER AGREES TO WAIVE ANY REQUIREMENT FOR A BOND IN CONNECTION WITH ANY SUCH INJUNCTIVE OR OTHER EQUITABLE RELIEF.

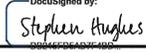
BY SIGNING BELOW, BUYER AND SELLER EACH ACKNOWLEDGE AGREEMENT TO THE FOREGOING PROVISIONS OF SECTION 9.1:

Buyer: PROLOGIS, L.P.

Seller: PACIFIC GAS AND ELECTRIC COMPANY

By: Prologis, Inc., its general partner

By:  _____

By:  _____

Print Name: Megan Robert

Print Name: Stephen Hughes

Its: Senior Vice President

Its: Supervisor, Land Rights

9.2 Seller's Default. Buyer shall notify Seller of any default by Seller under this Agreement, in which event Seller shall have the right to cure such default within thirty (30) days after receipt of such default notice (and the Close of Escrow shall be postponed to the extent necessary to allow for expiration of such thirty (30) day cure period). If Seller fails to cure the default within said thirty (30) day cure period, then Buyer shall elect as its sole remedies, either of the following:

(a) The right to pursue specific performance of this Agreement, provided that Buyer waives in writing any right it may have to bring an action for, or assert, any damages against Seller for such default of Seller. Any action for specific performance must be commenced within sixty (60) days after the scheduled Closing Date. Buyer specifically waives the right to file any lis pendens or any lien against the Property unless and until it has elected to seek specific performance and has filed and is diligently pursuing an action seeking such remedy.

(b) The right to terminate this Agreement. In no event shall Buyer be entitled to any damages as a result of a default by Seller under this Agreement prior to the Close of Escrow.

NOTHING CONTAINED IN THIS SECTION 9.2 SHALL SERVE TO WAIVE OR OTHERWISE LIMIT BUYER'S RIGHTS TO OBTAIN FROM SELLER ATTORNEYS' FEES AND COSTS PURSUANT TO SECTION 11.10 BELOW.

9.3 Failure of Conditions. If, before the Close of Escrow, Seller discloses to Buyer or Buyer otherwise discovers that (a) title to the Property is subject to defects, limitations or encumbrances other than as shown on the Title Report, or (b) Seller failed to make any material disclosures to Buyer regarding the Property, or (c) any representation or warranty of Seller contained in this Agreement is, or as of the Closing Date will be, untrue (collectively, "Disclosure Defects") then Seller shall bear no liability for such Disclosure Defects, but Buyer shall have the right, within three (3) business days following Buyer's receipt of written notice from Seller or Buyer's first knowledge of the existence of a Disclosure Defect, to give Seller written notice of its objection thereto, which objection shall be in writing and shall specifically delineate the reasons therefor. If Buyer fails to furnish Seller with such an objection notice within said three (3) business day period, Buyer shall be deemed to have irrevocably waived any right to object to the Disclosure Defect, and this Agreement shall continue in full force and effect. However, if Buyer furnishes Seller with such an objection notice within said three (3) business day period, Seller may elect by notice to Buyer either (i) to attempt to cure or otherwise remedy Buyer's objection (in which event, Seller may postpone the Close of Escrow up to thirty (30) days to effect such cure) or (ii) not to cure or otherwise remedy Buyer's objection. Seller's failure to so notify Buyer shall be deemed to be Seller's election not to cure or otherwise remedy Buyer's objection. Buyer acknowledges and agrees that Seller shall have no obligation to cure any objection. If Seller is unable or unwilling to cure Buyer's objection within ten (10) days after notice thereof to Seller ("Seller's Cure Period"), then Buyer, as Buyer's sole remedies, shall elect to either (A) waive the Disclosure Defect and complete the purchase of the Property in accordance with the terms of this Agreement or (B) terminate this Agreement by giving written notice to Seller within ten (10) days after expiration of Seller's Cure Period. If Buyer fails to give Seller Buyer's written notice to terminate within ten (10) days after expiration Seller's Cure Period, then Buyer shall be deemed to have elected to

waive such Disclosure Defect and Buyer's right to terminate this Agreement pursuant to this Section 9.3. Notwithstanding anything to the contrary in this Agreement, Buyer's consent to the Close of Escrow in this transaction shall conclusively evidence Buyer's waiver of any Disclosure Defects known to Buyer before the Close of Escrow, and Buyer shall not be entitled to make any Claim or bring any action for rescission or damages or any other cause of action against Seller arising out of any Disclosure Defects.

10. BROKERS.

10.1 Seller. Seller hereby represents and warrants to Buyer that Seller has incurred no obligation to any finder or real estate broker or salesperson with respect to this transaction, and in the event that any contrary claim is made, Seller shall indemnify, defend and hold Buyer harmless from and against any and all losses, costs, claims, damages, liabilities or causes of action (including attorneys' fees and costs) with respect to any such additional finder, broker or salesperson. The representations, warranties and covenants of Seller contained in this Section 10.1 shall survive the expiration or earlier termination of this Agreement or the Close of Escrow.

10.2 Buyer. Buyer hereby represents and warrants to Seller that Buyer has not incurred any obligation to any finder or real estate broker or salesperson with respect to this transaction, and in the event that any contrary claim is made, Buyer shall indemnify, defend and hold Seller harmless from and against any and all losses, costs, claims, damages, liabilities or causes of action (including attorneys' fees and costs) with respect to any such finder, broker or salesperson. The representations, warranties and covenants of Buyer contained in this Section 10.2 shall the expiration or earlier termination of this Agreement or the Close of Escrow.

11. MISCELLANEOUS.

11.1 Operation of the Property Prior to the Close of Escrow. During the period from the date of Seller's execution of this Agreement to the Close of Escrow, Seller shall operate the Property in accordance with its pre-existing practices, as if the Property were not to be sold to Buyer. In addition, Seller agrees during such interim period not to enter into any lease, management agreement or maintenance or service contract, or to alter or amend any of the material terms of any such existing agreements that will be binding on Buyer, without the prior written consent of Buyer, which consent shall not be unreasonably withheld, conditioned or delayed.

11.2 Survival. The representations and warranties of Seller and Buyer contained in this Agreement shall survive the Close of Escrow and continue for a period of six (6) months thereafter and shall thereupon expire and be of no further force and effect; provided, however, that Buyer's representation and warranty set forth in Section 6.2(b) shall survive the Close of Escrow until all Claims within the scope of said section are fully and finally barred by the applicable statute of limitations. Any claim for breach of any such representations and warranties must be made in writing within such six (6) month period or shall be waived; provided that any such claim that is initiated within such six (6) month period may be pursued to completion by the claiming party. Notwithstanding the foregoing two sentences, discovery by Buyer of any Disclosure Defects before the Close of Escrow shall be exclusively governed by Section 9.3 above. The waivers of claims or rights, the releases and the obligations of Buyer under this Agreement to indemnify, protect, defend and hold harmless Seller and other Indemnitees shall survive the expiration or earlier termination of this Agreement or the Close of Escrow, and so shall all other obligations or agreements of Seller and Buyer which by their nature or by their terms survive.

11.3 Time of Essence. Time is of the essence of this Agreement and each and every provision hereof.

11.4 Submission of Agreement. Submission of this document for examination or signature by Buyer does not constitute an option or offer to sell the Property to Buyer. This document is not effective as a purchase and sale agreement or otherwise until executed and delivered by both Seller and Buyer.

11.5 Binding Effect; Assignment. This Agreement shall be binding upon, and shall inure to the benefit of, the heirs, successors and assigns of the parties hereto. Notwithstanding the foregoing, Buyer shall have no right to assign its rights and obligations under this Agreement unless (a) Buyer shall obtain the prior written consent of Seller to such assignment, which consent shall not be unreasonably withheld, (b) Buyer shall not then be in default of any of its obligations under this Agreement, (c) Seller shall have approved the form of assignment, (d) the assignee shall have expressly assumed all of the obligations of Buyer under this Agreement, (e) Buyer shall furnish Seller with evidence acceptable to Seller that the proposed assignee possesses the financial ability to perform Buyer's obligations contemplated by this Agreement, and (f) Buyer shall continue to be primarily liable under this Agreement; provided, however, that Buyer may freely assign its rights and obligations under this Agreement to any parent company, subsidiary or affiliate of Buyer, or to any partnership or other entity to be formed by Buyer for the purpose of acquiring the Property, provided that Buyer shall not be released of its obligations under this Agreement. Buyer agrees to reimburse Seller, within thirty (30) days after demand, for all costs and expenses (including attorneys' fees and costs) incurred by Seller in connection with any assignment of Buyer's interest in this Agreement, whether or not Seller's consent to such assignment is required or obtained, including all costs and expenses (including attorneys' fees and costs) incurred to amend any pending application for approval(s) described in Section 7 above as a result of such assignment. Buyer acknowledges and agrees that Seller shall have the right to assign or otherwise convey its rights and/or obligations under this Agreement and/or with respect to the Property without the consent of Buyer, provided that Seller provides written notice of such assignment or conveyance, and the assignee assumes the remaining obligations of Seller under this Agreement. Said assignee shall be substituted as Seller hereunder and shall be entitled to the benefit of and may enforce Buyer's covenants, representations and warranties hereunder as if such assignee were the original Seller hereunder.

11.6 Severability. If any provision of this Agreement shall be unenforceable or invalid, the same shall not affect the remaining provisions of this Agreement and to this end the provisions of this Agreement are intended to be and shall be severable; provided, however, if such unenforceability or invalidity alters the substance of this Agreement (taken as a whole) so as to deny either party, in a material way, the realization of the intended benefit of its bargain, such party may terminate this Agreement by notice to the other party within thirty (30) days after the final determination.

11.7 Governing Laws. This Agreement shall be governed by, and construed and enforced in accordance with, the laws of the State of California.

11.8 Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

11.9 Notices. Any notice or other communication required or permitted under this Agreement shall be in writing and shall be either personally delivered or transmitted by registered or certified mail, return receipt requested, postage prepaid, or by a nationally recognized overnight courier, such as FedEx or United Parcel Service, addressed to the parties as follows:

If to Seller: If by registered or certified mail, return receipt requested:

Manager, Surplus Property
PG&E Land Management
P.O. Box 770000, Mail Code N10A
San Francisco, CA 94177
landsales@pge.com

With a concurrent copy to:

Law Department
Pacific Gas and Electric Company
P.O. Box 7442
San Francisco, CA 94120
Attn: Managing Counsel, Environmental and Real Estate

And:

Jeff Williams
PG&E Land Management
6111 Bollinger Canyon Road BR1Y3
San Ramon, CA 94583

If by personal delivery or courier service:

Manager, Surplus Property
PG&E Land Management
245 Market Street, Room 1017B
San Francisco, CA 94105
landsales@pge.com

With a concurrent copy to:

Law Department
Pacific Gas and Electric Company
77 Beale Street, Mail Code B30A
San Francisco, CA 94105
Attn: Managing Counsel, Environmental and Real Estate

And:

Jeff Williams
PG&E Land Management
6111 Bollinger Canyon Road BR1Y3
San Ramon, CA 94583

If to Buyer: Prologis, L.P.
c/o Prologis Inc.
1800 Wazee Street, Suite 500
Denver, CO 80202
Attn: Tom Martin and Ali Harandi
tmartin@prologis.com
aharandi@prologis.com

With a copy to:

Prologis, Inc.
1800 Wazee Street, Suite 600
Denver, CO 80202
Attn: Megan Robert, Kris Kucharski, Andrew Spiegel, Dewey F. Horton,
Angela Kane and Kirsten Pederson
Email: (MR) mrobert@prologis.com
(KK) kkucharski@prologis.com

(AS) aspiegel@prologis.com
(DFH) dfhorton@prologis.com
(AK) akane@prologis.com
(KJP) kpederson@prologis.com

The date of any notice or communication shall be deemed to be the date of receipt if delivered personally, or the date of the receipt or refusal of delivery if transmitted by mail or overnight courier. Any party may change the address for notice by giving notice to the other party in accordance with this Section. Seller and Buyer may elect to send copies of any notices or other communications under this Agreement via electronic mail to the email addresses set forth above or such other email addresses as Seller or Buyer may designate, provided that such email notices or communications shall constitute courtesy copies only, and shall not be effective for purposes of providing notice under this Agreement.

11.10 Legal Fees. If either party shall bring an action to enforce its rights under this Agreement, or relating to the interpretation hereof, whether for declaratory or other relief, the prevailing party in any such proceeding shall be entitled to recover from the other party its reasonable attorneys' fees, costs, expenses and disbursements that the prevailing party incurred in connection with such proceeding and any appeal thereof (including, but not limited to, the reasonable costs of discovery, investigation, preparation for trial, professional or expert consultation and testimony). A party shall be deemed to have prevailed in any such action (without limiting the generality of the foregoing) if such action is dismissed upon the payment by the other party of the sums allegedly due or the performance of obligations allegedly not complied with, or if such party obtains substantially the relief sought by it in the action, irrespective of whether such action is prosecuted to judgment. The costs to which the prevailing party is entitled shall include all costs that are allowable under any applicable statute, including Code of Civil Procedure Sections 1032 and 1033.5, as well as non-statutory costs, including costs of investigation, copying costs, electronic discovery costs, electronic research costs, telephone charges, mailing and delivery charges, information technology support charges, consultant and expert witness fees and costs, travel expenses, court reporter fees, transcripts of court proceedings not ordered by the court, mediator fees and attorneys' fees incurred in discovery and contempt proceedings. The non-prevailing party shall also pay the reasonable attorneys' fees and costs incurred by the prevailing party in any post-judgment proceedings to collect and enforce the judgment. For purposes hereof, the reasonable fees of Seller's in-house attorneys and/or Buyer's in-house attorneys who perform services in connection with any such action are recoverable, and shall be based on the fees regularly charged by private attorneys with the equivalent number of years of experience in the relevant subject matter area of the law, in law firms in the City of San Francisco with approximately the same number of attorneys as are employed by Seller's or Buyer's Law Department. Any such fees and costs incurred before judgment, award, or decree may be included in any judgment, award or decree entered in such proceeding in favor of the prevailing party. Any such fees, costs and expenses incurred by the prevailing party in enforcing a judgment, award or decree in its favor shall be recoverable separately from and in addition to any other amount included in such judgment, award or decree. This provision is separate and several and shall survive the merger of this Agreement into any judgment on this Agreement.

11.11 Confidentiality; No Recorded Memorandum; No Publicity.

(a) Except to the extent required by law and except to the extent requested by any governmental or quasi-governmental authority (including the Federal Energy Regulatory Commission), Buyer shall not disclose the terms of this Agreement to any third party without the prior written consent of Seller, except that Buyer may disclose such information about this Agreement to its affiliates, agents, attorneys and consultants on a need-to-know basis to assist Buyer with this transaction, provided that such affiliates, agents, attorneys and consultants agree in a written agreement to maintain the confidentiality of such information. It is understood that the confidentiality of the terms hereof is critical to preserve the financial integrity of the Property. Buyer shall not record this Agreement or any short form memorandum of this Agreement.

(b) The parties agree to coordinate all communication relating to this transaction. Buyer shall not issue any news releases, respond to any media inquiries, or otherwise make any statements, even in an "off the record" conversation, regarding this transaction. This prohibition includes making posts on internet and intranet site(s). All communication about this transaction, both verbal and in writing, must be approved in advance in writing by Seller or be presented in a manner that is consistent with communications prepared by Seller.

(c) For purposes of this Agreement, it shall not be a breach or default of the confidentiality provisions of this Agreement if any documents, information or material is or becomes publicly available without breach of this Agreement by Buyer; or is rightfully received by Buyer from a third party without obligations of confidentiality.

11.12 Limitation on Liability. Buyer expressly agrees that the obligations and liabilities of Seller under this Agreement and any document referenced herein shall not constitute personal obligations of the officers, directors, employees, agents, affiliates, members, representatives, stockholders or other principals and representatives of Seller. Seller's liability, if any, arising pursuant to or in connection with the representations, warranties, indemnities, covenants or other obligations of Seller under this Agreement or in any document executed and delivered in connection herewith shall be limited to Seller's interest in the Property, or to the sales proceeds from the Property subsequent to the Close of Escrow, for the recovery of any judgment against Seller, and Seller's liability shall not extend to any other property or assets of Seller. The limitations of liability contained in this Section shall apply equally and inure to the benefit of Seller's present and future officers, directors, employees, agents, affiliates, members, representatives, stockholders or other principals and representatives, and their respective heirs, successors and assigns.

11.13 Required Actions of Buyer and Seller. Buyer and Seller agree to take such reasonable actions, including acknowledging, delivering or executing instruments and documents, as may be required to effectuate the purposes of this Agreement or to close the purchase and sale of the Property as contemplated herein.

11.14 Back-Up Offers. Seller shall have the right to solicit, receive, consider and accept so-called "back-up" offers to purchase the Property.

11.15 Joint and Several Liability. If two or more individuals, corporations, partnerships or other business associations (or any combination of two or more thereof) shall sign this Agreement as Buyer, the liability of each such individual, corporation, partnership or other business association to perform Buyer's obligations hereunder shall be deemed to be joint and several, and all notices, payments and agreements given or made by, with or to any one of such individuals, corporations, partnerships or other business associations shall be deemed to have been given or made by, with or to all of them. In like manner, if Buyer shall be a partnership or other business association, the members of which are, by virtue of statute or federal law, subject to personal liability, then the liability of each such member shall be joint and several.

11.16 Captions. Captions to the paragraphs and sections in this Agreement are included for convenience only and do not modify any of the terms of this Agreement.

11.17 Interpretation. This Agreement shall be construed according to the fair meaning of its language. The rule of construction to the effect that ambiguities are to be resolved against the drafting party shall not be employed in interpreting this Agreement. The captions in this Agreement are for convenience of reference only and shall not be used to define or interpret any provision hereof. Unless the context clearly requires otherwise, (i) the plural and singular shall each be deemed to include the other; (ii) the masculine, feminine, and neuter genders shall each be deemed to include the others; (iii) "shall," "will," or "agrees" are mandatory, and "may" is permissive; (iv) "and/or" means either or both of the persons, items or circumstances referenced; (v) "include," "includes," and "including" are not intended to be restrictive, and lists following such words shall not be interpreted to be exhaustive or limited to items of the same type as those enumerated; and (vi) "days" means calendar days, except if the last day for

performance occurs on a Saturday, Sunday, or any legal holiday, then the next succeeding business day shall be the last day for performance.

11.18 Mandatory Negotiation and Mediation.

(a) Except as provided in this Section, Seller and Buyer agree to first negotiate and then mediate with respect to any claim or dispute arising out of or relating to this Agreement, before resorting to court action. Either party may initiate settlement negotiations by providing written notice to the other party, setting forth the subject of the claim or dispute. Buyer and Seller agree to cooperate in scheduling negotiations and to participate in the settlement negotiations in good faith. If Buyer and Seller fail to settle such claim or dispute within thirty (30) days after the date of mailing of the notice initiating settlement negotiations or within such additional time period as the parties may agree in writing, the parties agree to submit the matter to JAMS for mediation within thirty (30) days thereafter. Either party may commence mediation by providing to JAMS and the other party a written request for mediation, setting forth the subject of the claim or dispute and the relief requested (the "Mediation Notice"). Except as provided herein or by written agreement of the parties, the mediation shall be conducted in San Francisco pursuant to the JAMS rules. The parties will cooperate in selecting a mediator from the JAMS panel of neutrals, and in scheduling the mediation proceedings. If the parties do not select a mediator within thirty (30) days after the Mediation Notice, the parties agree that either party may request that JAMS in San Francisco, California, facilitate the choice of mediator by applying the "strike and rank" process used for appointment of arbitrators in arbitration proceedings, or to appoint a mediator, if necessary, and both parties agree to the appointment of such mediator as so selected. The parties agree to participate in the mediation in good faith, and to share equally in its costs. All offers, promises, conduct and statements, whether oral or written, made in the course of the mediation by either of the parties, their employees, agents, experts and attorneys, and by the mediator and any other JAMS employees, are confidential, privileged and inadmissible for any purpose, including impeachment, in any litigation or other proceeding involving the parties, but evidence that is otherwise admissible or discoverable shall not be rendered inadmissible or non-discoverable as a result of its use in the mediation. If JAMS should no longer exist at the time the claim or dispute arises, the matter shall be submitted to its successor entity, or if there is no such successor entity, to the American Arbitration Association or other similar organization mutually agreed upon by the parties, and except as provided herein or by mutual agreement of the parties, the mediation rules of such successor or alternate organization shall apply. Except as may be expressly set forth in any written settlement agreement, should the matter be settled by negotiation or mediation before commencing court action, each party shall pay its own attorneys' fees and costs. Except as provided in Section 11.18(b), neither party may commence an action arising out of or relating to this Agreement until expiration of the negotiation period and completion of the initial mediation session in accordance with this Section. If either party commences an action with respect to a claim or dispute covered by this Section without first attempting to resolve the matter through negotiation and mediation, or refuses to negotiate or mediate after a request has been made, then that party shall not be entitled to recover attorneys' fees and costs, even if such fees and costs would otherwise be available to that party in such action.

(b) Either party may seek equitable relief to preserve the status quo before participating in the negotiation and mediation proceedings required pursuant to Section 11.18(a). In addition, matters that are within the jurisdiction of probate, small claims, or bankruptcy court are excluded from mandatory negotiation and mediation hereunder.

(c) The provisions of this Section 11.18 may be enforced by any court of competent jurisdiction, and the party seeking enforcement shall be entitled to an award of all fees and costs, including reasonable attorneys' fees, to be paid by the party against whom enforcement is ordered. The covenants of Seller and Buyer contained in this Section 11.18 shall survive the expiration or earlier termination of this Agreement or the Close of Escrow.

Buyer: PROLOGIS, L.P.

Seller: PACIFIC GAS AND ELECTRIC COMPANY

By: Prologis, Inc., its general partner

By:  _____
882EFA7C0947E

By:  _____
0B215ED5A07E48D

Print Name: Megan Robert

Print Name: Stephen Hughes

Its: Senior Vice President

Its: Supervisor, Land Rights

11.19 Exhibits. The following Exhibits are attached hereto and incorporated by reference into this Agreement:

- Exhibit A-1 – Legal Description of Mountain House Parcel
- Exhibit A-2 – Legal Description of Tracy Gas Yard Portion
- Exhibit B-1 – Mountain House Grant Deed
- Exhibit B-2 – Tracy Gas Yard Portion Grant Deed
- Exhibit C – Deposit Instructions
- Exhibit D – Joint Escrow Instructions
- Exhibit E-1 – Depiction of Mountain House Parcel
- Exhibit E-2 – Depiction of Tracy Gas Yard Portion

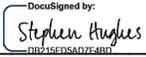
11.20 Electronic Signatures. This Agreement may be executed by electronic signatures (e.g., using DocuSign or e-SignLive) or signatures transmitted in portable document format ("pdf"), and copies of this Agreement executed and delivered by means of electronic or pdf signatures shall have the same force and effect as copies hereof executed and delivered with manually executed original signatures. The parties may rely upon electronic and pdf signatures as if such signatures were manually executed originals and agree that an electronic or pdf signature page may be introduced into evidence in any proceeding arising out of or related to this Agreement as if it were an original manually executed signature page.

11.21 Entire Agreement; Amendment. This Agreement and the exhibits hereto contain the entire understanding of the parties relating to the subject matter hereof and shall supersede any prior written or oral agreements or communications between the parties pertaining to such subject matter. Seller's or Buyer's obligations under this Agreement may not be altered or amended in any respect, except by a writing executed by both Buyer and Seller.

IN WITNESS WHEREOF, the parties have duly executed this Agreement.

SELLER:

PACIFIC GAS AND ELECTRIC COMPANY,
a California corporation

By: 
Print Name: Stephen Hughes
Its: Supervisor, Land Rights
Date: 04 May 2021

BUYER:

Prologis, L.P.


By: Prologis, Inc., its general partner
Print Name: Megan Robert
Its: Senior Vice President
Date: 04 May 2021

[NOTE: BUYER AND SELLER ARE TO SPECIFICALLY ACKNOWLEDGE THEIR AGREEMENT WITH SECTIONS 9.1 AND 11.18 HEREOF BY PLACING THEIR SIGNATURES WHERE INDICATED BELOW SUCH SECTION.]

Title Company has executed this Agreement in order to confirm that Title Company shall act as escrow agent with respect to and hold in escrow the Deposit and the interest earned thereon, and shall disburse the Deposit and the interest earned thereon, pursuant to the provisions of Section 2.1(a).

FIRST AMERICAN TITLE INSURANCE
COMPANY

DocuSigned by:

Ted V. Bigornia

77F5CEBFBA6349B...

By: _____

Name: Ted V. Bigornia

Title: Commercial Escrow Officer

Date: May-04-2021

EXHIBIT A-1

Legal Description of Mountain House Parcel

EXHIBIT 'A'
LEGAL DESCRIPTION
PACIFIC GAS & ELECTRIC COMPANY

ALL THAT REAL PROPERTY SITUATE IN THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 22, TOWNSHIP 2 SOUTH, RANGE 4 EAST, MOUNT DIABLO BASE AND MERIDIAN, IN THE CITY OF TRACY, COUNTY OF SAN JOAQUIN, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

BEING THAT PARCEL OF LAND GRANTED TO THE PACIFIC GAS & ELECTRIC COMPANY (PG&E), AS DESCRIBED IN THAT CERTAIN DOCUMENT DATED DECEMBER 21, 1988 AS DOCUMENT NO. 88-110849, OFFICIAL RECORDS OF THE COUNTY OF SAN JOAQUIN, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWESTERLY CORNER OF SAID SECTION 22, THENCE ALONG THE WEST LINE OF SECTION 22, NORTH 00° 37' 32" EAST, 900.60 FEET;

THENCE LEAVING SAID LINE, SOUTH 89° 22' 28" EAST, 50.00 FEET, TO THE **POINT OF BEGINNING**, BEING THE SOUTHWEST CORNER OF SAID PARCEL (88-110849 OR);

THENCE ALONG THE WESTERLY LINE THEREOF, NORTH 00° 37' 32" EAST, 60.00 FEET, TO THE NORTHWEST CORNER OF SAID PARCEL;

THENCE ALONG THE NORTHERLY LINE THEREOF, SOUTH 89° 22' 28" EAST, 75.00 FEET, TO THE NORTHEAST CORNER OF SAID PARCEL;

THENCE ALONG THE EASTERLY LINE THEREOF, SOUTH 00° 37' 32" WEST, 60.00 FEET, TO THE SOUTHEAST CORNER OF SAID PARCEL;

THENCE ALONG THE SOUTHERLY LINE THEREOF, NORTH 89° 22' 28" WEST, 75.00, TO THE **POINT OF BEGINNING**.

CONTAINING 4,500 SQUARE FEET OR 0.1033 ACRES OF LAND, MORE OR LESS.

THE BASIS OF BEARINGS FOR THIS PLAT AND LEGAL DESCRIPTION IS THE LINE TAKEN AS S89°05'42"E, BETWEEN TWO FOUND MONUMENTS (STATION NUMBER 2043 AND STATION NUMBER 2044) OF THE CITY OF TRACY GEODETIC CONTROL NETWORK, WHICH IS BASED UPON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 3, NAD83 (EPOCH 2004.0), AS SHOWN ON THE RECORD OF SURVEY FILED JUNE 26, 2007, IN BOOK 36 OF SURVEYS AT PAGE 118, SAN JOAQUIN COUNTY RECORDS. THE DISTANCES SHOWN ARE GROUND DISTANCES. MULTIPLY DISTANCES SHOWN BY 0.99992068 TO OBTAIN GRID DISTANCES.

AS SHOWN ON EXHIBIT B, ATTACHED HERETO AND MADE A PART HEREOF.

KIER & WRIGHT CIVIL ENGINEERS & SURVEYORS, INC.



DEAN A. JURADO, P.L.S. 9032

12-14-20

DATE



EXHIBIT A-2

Legal Description of Tracy Gas Yard Portion

EXHIBIT 'A'
LEGAL DESCRIPTION
PACIFIC GAS & ELECTRIC COMPANY PARCEL

REAL PROPERTY SITUATE IN THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 21, TOWNSHIP 2 SOUTH, RANGE 4 EAST, MOUNT DIABLO BASE AND MERIDIAN, IN THE CITY OF TRACY, COUNTY OF SAN JOAQUIN, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

BEING A PORTION OF PARCEL A AS DESCRIBED IN THAT CERTAIN GRANT DEED SIGNED SEPTEMBER 17, 1969, AS BOOK 3358, PAGE 248, OFFICIAL RECORDS OF SAN JOAQUIN COUNTY, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF SAID SECTION 21;

THENCE ALONG THE EAST LINE OF SECTION 21, NORTH 00° 37' 32" EAST, 819.16 FEET;

THENCE LEAVING SAID EAST LINE, NORTH 89° 22' 28" WEST, 30.00 FEET, TO THE **POINT OF BEGINNING**, SAID POINT BEING THE SOUTHEAST CORNER OF SAID PARCEL A (BOOK 3358 PAGE 248);

THENCE ALONG THE SOUTHERLY LINE OF SAID PARCEL A, NORTH 89° 22' 28" WEST, 209.40 FEET, TO THE SOUTHWEST CORNER THEREOF;

THENCE ALONG THE WESTERLY LINE OF SAID PARCEL A, NORTH 00° 37' 32" EAST, 42.47 FEET;

THENCE LEAVING SAID LINE, SOUTH 74° 28' 11" EAST, 16.22 FEET, TO THE POINT OF CURVATURE OF A 459.00 FOOT RADIUS CURVE TO THE LEFT;

THENCE ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 14° 21' 57", AN ARC LENGTH OF 115.09 FEET;

THENCE SOUTH 88° 50' 08" EAST, 16.26 FEET;

THENCE NORTH 80° 41' 21" EAST, 10.91 FEET, TO THE POINT OF CURVATURE OF A 59.00 FOOT RADIUS CURVE TO THE LEFT;

THENCE ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 80° 50' 44", AN ARC LENGTH OF 83.25 FEET;

THENCE NORTH 00° 09' 22" WEST, 18.19 FEET;

THENCE SOUTH 89° 24' 16" EAST, 4.41 FEET, TO A POINT ON THE EASTERLY LINE OF SAID PARCEL A (BOOK 3358 PAGE 248);

THENCE ALONG SAID EASTERLY LINE SOUTH 00° 37' 32" WEST, 101.72 FEET, TO THE **POINT OF BEGINNING**;

CONTAINING 6,789 SQUARE FEET OR 0.1559 ACRES, MORE OR LESS.

THE BASIS OF BEARINGS FOR THIS PLAT AND LEGAL DESCRIPTION IS THE LINE TAKEN AS S89°05'42"E, BETWEEN TWO FOUND MONUMENTS (STATION NUMBER 2043 AND STATION NUMBER 2044) OF THE CITY OF TRACY GEODETIC CONTROL NETWORK, WHICH IS BASED UPON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 3, NAD83 (EPOCH 2004.0), AS SHOWN ON THE RECORD OF SURVEY FILED JUNE 26, 2007, IN BOOK 36 OF SURVEYS AT PAGE 118, SAN JOAQUIN COUNTY RECORDS. THE DISTANCES SHOWN ARE GROUND DISTANCES. MULTIPLY DISTANCES SHOWN BY 0.99992068 TO OBTAIN GRID DISTANCES.

AS SHOWN ON EXHIBIT B, ATTACHED HERETO AND MADE A PART HEREOF.

KIER & WRIGHT CIVIL ENGINEERS & SURVEYORS, INC.



DEAN A. JURADO, P.L.S. 9032

12-16-20
DATE



EXHIBIT B-1

Mountain House Grant Deed

Grant Deed Out (REV. 10/18)

RECORDING REQUESTED BY AND RETURN TO:

PACIFIC GAS AND ELECTRIC COMPANY
245 Market Street, N10A, Room 1015
P.O. Box 770000
San Francisco, California 94177

Location: City/Uninc _____

Recording Fee \$ _____

Document Transfer Tax \$ _____

This is a conveyance where the consideration and Value is less than \$100.00 (R&T 11911).

Computed on Full Value of Property Conveyed, or

Computed on Full Value Less Liens

& Encumbrances Remaining at Time of Sale

Exempt from the fee per GC 27388.1 (a) (2); This document is subject to Documentary Transfer Tax

(SPACE ABOVE FOR RECORDER'S USE ONLY)

Signature of declarant or agent determining tax

LD# 2202-04-10026

DEED

2020136 (74032743) 10 20 2

Grant Deed for International Parkway Improvements

GRANT DEED

PACIFIC GAS AND ELECTRIC COMPANY, a California corporation, hereinafter called Grantor, hereby grants, (without warranty express or implied), to PROLOGIS, L.P., a Delaware limited partnership, hereinafter called Grantee, the real property, situate in the City of Tracy, County of San Joaquin, State of California, described as follows (the "Property"):

(APN 209-460-26)

The parcel of land described in Exhibit "A" and shown upon Exhibit "B" attached hereto and made a part hereof.

Reserving to Grantor an easement and the right, from time to time, to excavate for, construct, reconstruct, replace (of initial or any other size), remove, maintain, inspect, and use existing and additional facilities and associated equipment for public utility purposes, including, but not limited to electric, gas, and communication facilities (hereinafter referred to collectively as "the Facilities"); together with a right of way, on, over and under the Property.

Further reserving to Grantor:

(a) the right of ingress to and egress from the Facilities over and across the Property by means of roads and lanes thereon, if such there be, otherwise by such route or routes as shall occasion the least practicable damage and inconvenience to Grantee;

- 1 -

MAIL TAX STATEMENTS TO:

Prologis L.P.
Name

1800 Wazee St. Denver, CO
Address

80202
Zip

(b) the right, from time to time, to trim or to cut down, without Grantor paying compensation, any and all trees and brush now or hereafter within the Property which now or hereafter in the opinion of Grantor may interfere with or be a hazard to the Facilities, or as Grantor deems necessary to comply with applicable state or federal regulations;

(c) to install, maintain and use gates in all fences which now cross or shall hereafter cross the Property; and

(d) to mark the location of the Facilities by suitable markers set in the ground; provided that said markers shall be placed in fences or other locations which will not interfere with any reasonable use Grantee shall make of the Property.

Grantee hereby covenants and agrees:

(a) not to place or construct, nor allow a third party to place or construct, any building or other structure, or store flammable substances, or drill or operate any well, or construct any reservoir or other obstruction within the Property, or diminish or substantially add to the ground level within the Property, or construct any fences that will interfere with the maintenance and operation of the Facilities.

(b) not to commence, nor allow a third party to commence, any construction activity (surface or subsurface) within the Property without the written approval of Grantor, which approval shall not be unreasonably withheld. No construction activity shall commence until such time that Grantor approves the request. Grantee shall submit requests to the following address, or to such other address as Grantor may designate by written notice:

PACIFIC GAS AND ELECTRIC COMPANY
245 Market Street, N10A, Room 1015
P.O. Box 770000
San Francisco, California 94177

(c) not to plant any trees, brush, or vines within the Property. Grantee may plant and maintain ground covers, grasses, flowers, crops, and low-growing plants that grow unsupported to a maximum of four (4) feet in height at maturity within the Property.

The Property hereby conveyed is no longer necessary or useful to Grantor in the performance by it of its duties to the public.

The provisions hereof shall inure to the benefit of and bind the successors and assigns of the respective parties hereto, and all covenants shall apply to and run with the Property.

Dated _____, 20____.

PACIFIC GAS AND ELECTRIC COMPANY,
a California corporation

By _____
Stephen M. Hughes
Supervisor
Land Rights Services - Central

Attach to LD: 2202-04-10026
Area, Region or Location: 5
Land Service Office: Sacramento
Line of Business: Gas Transmission (52)
Business Doc Type: Fee Ownership
MTRSQ: 22.02.04.22.33,
FERC License Number: N/A
PG&E Drawing Number: N/A
Plat No.: N/A
LD of Affected Documents: 2202-04-0270
LD of Cross Referenced Documents: N/A
Type of interest: Fee Ownership (1)
SBE Parcel: N/A
% Being Quitclaimed: N/A
Order or PM: 74032743
JCN: N/A
County: San Joaquin
Utility Notice Number: N/A
851 Approval Application No: N/A ;Decision: N/A
Prepared By: dtw0
Checked By: cxoq
Approved By:
Revised by:

EXHIBIT 'A'
LEGAL DESCRIPTION
PACIFIC GAS & ELECTRIC COMPANY

ALL THAT REAL PROPERTY SITUATE IN THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 22, TOWNSHIP 2 SOUTH, RANGE 4 EAST, MOUNT DIABLO BASE AND MERIDIAN, IN THE CITY OF TRACY, COUNTY OF SAN JOAQUIN, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

BEING THAT PARCEL OF LAND GRANTED TO THE PACIFIC GAS & ELECTRIC COMPANY (PG&E), AS DESCRIBED IN THAT CERTAIN DOCUMENT DATED DECEMBER 21, 1988 AS DOCUMENT NO. 88-110849, OFFICIAL RECORDS OF THE COUNTY OF SAN JOAQUIN, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHWESTERLY CORNER OF SAID SECTION 22, THENCE ALONG THE WEST LINE OF SECTION 22, NORTH 00° 37' 32" EAST, 900.60 FEET;

THENCE LEAVING SAID LINE, SOUTH 89° 22' 28" EAST, 50.00 FEET, TO THE **POINT OF BEGINNING**, BEING THE SOUTHWEST CORNER OF SAID PARCEL (88-110849 OR);

THENCE ALONG THE WESTERLY LINE THEREOF, NORTH 00° 37' 32" EAST, 60.00 FEET, TO THE NORTHWEST CORNER OF SAID PARCEL;

THENCE ALONG THE NORTHERLY LINE THEREOF, SOUTH 89° 22' 28" EAST, 75.00 FEET, TO THE NORTHEAST CORNER OF SAID PARCEL;

THENCE ALONG THE EASTERLY LINE THEREOF, SOUTH 00° 37' 32" WEST, 60.00 FEET, TO THE SOUTHEAST CORNER OF SAID PARCEL;

THENCE ALONG THE SOUTHERLY LINE THEREOF, NORTH 89° 22' 28" WEST, 75.00, TO THE **POINT OF BEGINNING**.

CONTAINING 4,500 SQUARE FEET OR 0.1033 ACRES OF LAND, MORE OR LESS.

THE BASIS OF BEARINGS FOR THIS PLAT AND LEGAL DESCRIPTION IS THE LINE TAKEN AS S89°05'42"E, BETWEEN TWO FOUND MONUMENTS (STATION NUMBER 2043 AND STATION NUMBER 2044) OF THE CITY OF TRACY GEODETIC CONTROL NETWORK, WHICH IS BASED UPON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 3, NAD83 (EPOCH 2004.0), AS SHOWN ON THE RECORD OF SURVEY FILED JUNE 26, 2007, IN BOOK 36 OF SURVEYS AT PAGE 118, SAN JOAQUIN COUNTY RECORDS. THE DISTANCES SHOWN ARE GROUND DISTANCES. MULTIPLY DISTANCES SHOWN BY 0.99992068 TO OBTAIN GRID DISTANCES.

AS SHOWN ON EXHIBIT B, ATTACHED HERETO AND MADE A PART HEREOF.

KIER & WRIGHT CIVIL ENGINEERS & SURVEYORS, INC.



DEAN A. JURADO, P.L.S. 9032

12-14-20

DATE

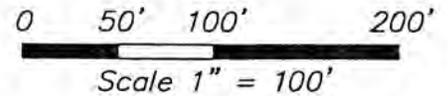


T2S, R4E, SW 1/4 OF THE SW 1/4 OF SECTION 22 M.D.B.&M.

LEGEND

- PARCEL LINE
- PROPERTY LINE
- PROPOSED PROPERTY LINE

- AC ACRES
- OR OFFICIAL RECORDS
- PG&E PACIFIC GAS & ELECTRIC COMPANY
- POB POINT OF BEGINNING
- POC POINT OF COMMENCEMENT
- SF SQUARE FEET



LANDS OF PGE
BK 3358, PG 248 OR
209-080-06

INTERNATIONAL PARKWAY

LANDS OF
R&B DELTA II LLC
ADJUSTED PARCEL 2
2019-061897 OR
209-460-32

PARCEL 2
4,500± SF
0.1033 AC

LANDS OF PG&E
88-110849 OR
209-460-26

POB

S89°22'28"E 50.00'

DAYLIGHT RD.

N0°37'32"E 900.60'

LANDS OF PROLOGIS LP
ADJUSTED PARCEL 1
2019-061897 OR
APN 209-460-33

POC

CAPITAL PARKS DR

SEC.21

SEC.22

SEC.28

SEC.27

LINE TABLE

LINE #	DIRECTION	LENGTH
L1	N0°37'32"E	60.00'
L2	S89°22'28"E	75.00'
L3	S0°37'32"W	60.00'
L4	N89°22'28"W	75.00'



KIER+WRIGHT

250 Cherry Lane, Suite 107, 208
Manteca, CA 95337

Phone: (209) 328-1123
www.kierwright.com

EXHIBIT "B"
PACIFIC GAS & ELECTRIC
PARCEL 2

TRACY, CALIFORNIA

DATE	SEPT., 2020
SCALE	1" = 100'
BY	GKL
JOB NO.	A09500-170
SHEET	1 OF 1

EXHIBIT B-2

Tracy Gas Yard Portion Grant Deed

Grant Deed Out (REV. 10/18)

RECORDING REQUESTED BY AND RETURN TO:

PACIFIC GAS AND ELECTRIC COMPANY
245 Market Street, N10A, Room 1015
P.O. Box 770000
San Francisco, California 94177

Location: City/Uninc _____

Recording Fee \$ _____

Document Transfer Tax \$ _____

This is a conveyance where the consideration and Value is less than \$100.00 (R&T 11911).

Computed on Full Value of Property Conveyed, or

Computed on Full Value Less Liens

& Encumbrances Remaining at Time of Sale

Exempt from the fee per GC 27388.1 (a) (2); This document is subject to Documentary Transfer Tax

(SPACE ABOVE FOR RECORDER'S USE ONLY)

Signature of declarant or agent determining tax

LD# 2202-04-10025

DEED

2020135 (74032743) 10 20 1
Tracy Valve Lot Grant Deeds

GRANT DEED

PACIFIC GAS AND ELECTRIC COMPANY, a California corporation, hereinafter called Grantor, hereby grants, (without warranty express or implied), to PROLOGIS, L.P., a Delaware limited partnership, hereinafter called Grantee, the real property, situate in the City of Tracy, County of San Joaquin, State of California, described as follows (the "Property"):

(APN 209-080-06)
(SBE 135-39-052-1)

The parcel of land described in Exhibit "A" and shown upon Exhibit "B" attached hereto and made a part hereof.

Reserving to Grantor an easement and the right, from time to time, to excavate for, construct, reconstruct, replace (of initial or any other size), remove, maintain, inspect, and use existing and additional facilities and associated equipment for public utility purposes, including, but not limited to electric, gas, and communication facilities (hereinafter referred to collectively as "the Facilities"); together with a right of way, on, over and under the Property.

MAIL TAX STATEMENTS TO:

Prologis L.P.
Name

1800 Wazee St. Denver, CO
Address

80202
Zip

Further reserving to Grantor:

(a) the right of ingress to and egress from the Facilities over and across the Property by means of roads and lanes thereon, if such there be, otherwise by such route or routes as shall occasion the least practicable damage and inconvenience to Grantee;

(b) the right, from time to time, to trim or to cut down, without Grantor paying compensation, any and all trees and brush now or hereafter within the Property which now or hereafter in the opinion of Grantor may interfere with or be a hazard to the Facilities, or as Grantor deems necessary to comply with applicable state or federal regulations;

(c) to install, maintain and use gates in all fences which now cross or shall hereafter cross the Property; and

(d) to mark the location of the Facilities by suitable markers set in the ground; provided that said markers shall be placed in fences or other locations which will not interfere with any reasonable use Grantee shall make of the Property.

Grantee hereby covenants and agrees:

(a) not to place or construct, nor allow a third party to place or construct, any building or other structure, or store flammable substances, or drill or operate any well, or construct any reservoir or other obstruction within the Property, or diminish or substantially add to the ground level within the Property, or construct any fences that will interfere with the maintenance and operation of the Facilities.

(b) not to commence, nor allow a third party to commence, any construction activity (surface or subsurface) within the Property without the written approval of Grantor, which approval shall not be unreasonably withheld. No construction activity shall commence until such time that Grantor approves the request. Grantee shall submit requests to the following address, or to such other address as Grantor may designate by written notice:

PACIFIC GAS AND ELECTRIC COMPANY
245 Market Street, N10A, Room 1015
P.O. Box 770000
San Francisco, California 94177

(c) not to plant any trees, brush, or vines within the Property. Grantee may plant and maintain ground covers, grasses, flowers, crops, and low-growing plants that grow unsupported to a maximum of four (4) feet in height at maturity within the Property.

The Property hereby conveyed is no longer necessary or useful to Grantor in the performance by it of its duties to the public.

The provisions hereof shall inure to the benefit of and bind the successors and assigns of the respective parties hereto, and all covenants shall apply to and run with the Property.

Dated _____, 20____.

PACIFIC GAS AND ELECTRIC COMPANY,
a California corporation

By _____
Stephen M. Hughes
Supervisor
Land Rights Services - Central

Attach to LD: 2202-04-10025
Area, Region or Location: 5
Land Service Office: Sacramento
Line of Business: Gas Transmission (52)
Business Doc Type: Fee Ownership
MTRSQ: 22.02.04.21.22,
FERC License Number: N/A
PG&E Drawing Number: N/A
Plat No.: N/A
LD of Affected Documents: 2202-04-0392
LD of Cross Referenced Documents: N/A
Type of interest: Fee Ownership (1)
SBE Parcel: 135-39-52A
% Being Quitclaimed: N/A
Order or PM: 74032743
JCN: N/A
County: San Joaquin
Utility Notice Number: N/A
851 Approval Application No: N/A ;Decision: N/A
Prepared By: dtw0
Checked By: cxoq
Approved By:
Revised by:

EXHIBIT 'A'
LEGAL DESCRIPTION
PACIFIC GAS & ELECTRIC COMPANY PARCEL

REAL PROPERTY SITUATE IN THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 21, TOWNSHIP 2 SOUTH, RANGE 4 EAST, MOUNT DIABLO BASE AND MERIDIAN, IN THE CITY OF TRACY, COUNTY OF SAN JOAQUIN, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

BEING A PORTION OF PARCEL A AS DESCRIBED IN THAT CERTAIN GRANT DEED SIGNED SEPTEMBER 17, 1969, AS BOOK 3358, PAGE 248, OFFICIAL RECORDS OF SAN JOAQUIN COUNTY, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF SAID SECTION 21;

THENCE ALONG THE EAST LINE OF SECTION 21, NORTH $00^{\circ} 37' 32''$ EAST, 819.16 FEET;

THENCE LEAVING SAID EAST LINE, NORTH $89^{\circ} 22' 28''$ WEST, 30.00 FEET, TO THE **POINT OF BEGINNING**, SAID POINT BEING THE SOUTHEAST CORNER OF SAID PARCEL A (BOOK 3358 PAGE 248);

THENCE ALONG THE SOUTHERLY LINE OF SAID PARCEL A, NORTH $89^{\circ} 22' 28''$ WEST, 209.40 FEET, TO THE SOUTHWEST CORNER THEREOF;

THENCE ALONG THE WESTERLY LINE OF SAID PARCEL A, NORTH $00^{\circ} 37' 32''$ EAST, 42.47 FEET;

THENCE LEAVING SAID LINE, SOUTH $74^{\circ} 28' 11''$ EAST, 16.22 FEET, TO THE POINT OF CURVATURE OF A 459.00 FOOT RADIUS CURVE TO THE LEFT;

THENCE ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF $14^{\circ} 21' 57''$, AN ARC LENGTH OF 115.09 FEET;

THENCE SOUTH $88^{\circ} 50' 08''$ EAST, 16.26 FEET;

THENCE NORTH $80^{\circ} 41' 21''$ EAST, 10.91 FEET, TO THE POINT OF CURVATURE OF A 59.00 FOOT RADIUS CURVE TO THE LEFT;

THENCE ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF $80^{\circ} 50' 44''$, AN ARC LENGTH OF 83.25 FEET;

THENCE NORTH $00^{\circ} 09' 22''$ WEST, 18.19 FEET;

THENCE SOUTH $89^{\circ} 24' 16''$ EAST, 4.41 FEET, TO A POINT ON THE EASTERLY LINE OF SAID PARCEL A (BOOK 3358 PAGE 248);

THENCE ALONG SAID EASTERLY LINE SOUTH 00° 37' 32" WEST, 101.72 FEET, TO THE POINT OF BEGINNING;

CONTAINING 6,789 SQUARE FEET OR 0.1559 ACRES, MORE OR LESS.

THE BASIS OF BEARINGS FOR THIS PLAT AND LEGAL DESCRIPTION IS THE LINE TAKEN AS S89°05'42"E, BETWEEN TWO FOUND MONUMENTS (STATION NUMBER 2043 AND STATION NUMBER 2044) OF THE CITY OF TRACY GEODETIC CONTROL NETWORK, WHICH IS BASED UPON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 3, NAD83 (EPOCH 2004.0), AS SHOWN ON THE RECORD OF SURVEY FILED JUNE 26, 2007, IN BOOK 36 OF SURVEYS AT PAGE 118, SAN JOAQUIN COUNTY RECORDS. THE DISTANCES SHOWN ARE GROUND DISTANCES. MULTIPLY DISTANCES SHOWN BY 0.99992068 TO OBTAIN GRID DISTANCES.

AS SHOWN ON EXHIBIT B, ATTACHED HERETO AND MADE A PART HEREOF.

KIER & WRIGHT CIVIL ENGINEERS & SURVEYORS, INC.


DEAN A. JURADO, P.L.S. 9032

12-16-20
DATE



T2S, R4E, SE 1/4 OF THE SE 1/4 OF SECTION 21 M.D.B.&M.

LEGEND

- PARCEL LINE
- PROPERTY LINE
- PROPOSED PROPERTY LINE
- AC ACRES
- OR OFFICIAL RECORDS
- PG&E PACIFIC GAS & ELECTRIC COMPANY
- POB POINT OF BEGINNING
- POC POINT OF COMMENCEMENT
- SF SQUARE FEET

Scale 1" = 200'



LINE TABLE

LINE #	DIRECTION	LENGTH
L1	N89°22'28"W	30.00'
L2	N89°22'28"W	209.40'
L3	N0°37'32"E	42.47'
L4	S74°28'11"E	16.22'
L5	S88°50'08"E	16.26'
L6	N80°41'21"E	10.91'
L7	N0°09'22"W	18.19'
L8	S89°24'16"E	4.41'
L9	S0°37'32"W	101.72'

CURVE TABLE

CURVE #	RADIUS	DELTA	LENGTH
C1	459.00'	14°21'57"	115.09'
C2	59.00'	80°50'44"	83.25'

DATE	SEPT., 2020
SCALE	1" = 200'
BY	GKL
JOB NO.	A09500-170
SHEET	1 OF 1

EXHIBIT "B"
PACIFIC GAS & ELECTRIC
PARCEL 1

TRACY, CALIFORNIA

KIER+WRIGHT

250 Cherry Lane, Suite 107, 208 Manteca, CA 95337
 Phone: (209) 328-1123
 www.kierwright.com

EXHIBIT C

Deposit Instructions

1. Investment and Use of Funds. The Title Company shall invest the Deposit in government insured interest-bearing accounts at an institution having assets of not less than \$125,000,000, shall not commingle the Deposit with any funds of the Title Company or others and shall promptly provide Buyer and Seller with confirmation of the investments made. If the Closing under this Agreement occurs, the Title Company shall deliver the Deposit to Seller, on the Closing Date. Provided such supplemental escrow instructions are not in conflict with this Agreement as it may be amended in writing from time to time, Seller and Buyer agree to execute such supplemental escrow instructions as may be appropriate to enable Title Company to comply with the terms of this Agreement.

2. Termination before Expiration of Inspection Period. Buyer shall notify the Title Company of the date that the Inspection Period ends promptly after such date is established under this Agreement, and Title Company may rely upon such notice. If Buyer elects to terminate this Agreement pursuant to Section 5.4 of the Agreement, Title Company shall pay the entire Deposit to Buyer, one (1) business day following receipt of Buyer's notice that such termination has occurred (as long as the current investment can be liquidated in 1 day). No notice to Title Company from Seller shall be required for the release of the Deposit to Buyer by Title Company. The Deposit shall be released and delivered to Buyer from Title Company upon Title Company's receipt of such notice, despite any objection or potential objection by Seller. Seller agrees it shall have no right to bring any action against Title Company which would have the effect of delaying, preventing or in any way interrupting Title Company's delivery of the Deposit to Buyer pursuant to this Section, any remedy of Seller being against Buyer, not Title Company.

3. Other Terminations. Upon a termination of this Agreement other than as described in Section 2 above, the Title Company shall retain the Deposit until it receives written instructions executed by both Seller and Buyer as to the disposition and disbursement of the Deposit as described within the Agreement..

4. Interpleader. Except as provided in Section 2 above, Seller and Buyer mutually agree that in the event of any controversy regarding the Deposit, unless mutual written instructions are received by the Title Company directing the disposition of the Deposit, the Title Company shall not take any action, but instead shall await the disposition of any proceeding relating to the Deposit or, at the Title Company's option, the Title Company may interplead all parties and deposit the Deposit with a court of competent jurisdiction in which event the Title Company may recover all of its court costs and reasonable attorneys' fees. Seller or Buyer, whichever loses in any such interpleader action, shall be solely obligated to pay such costs and fees of the Title Company, as well as the reasonable attorneys' fees of the prevailing party in accordance with the other provisions of this Agreement.

5. Reporting Person Responsibilities. The "Reporting Person" within the meaning of Section 1.6045-4(e)(5) of the Regulations (the "Regulations") of the Code with respect to the transactions contemplated by this Agreement shall be Title Company. It is agreed that Title Company is an eligible person under Section 1.6045-4(e)(5)(ii) of the Regulations. Title Company hereby agrees to be responsible for complying with the reporting and other requirements of Section 6045(e) of the Code. Pursuant to the Regulations, the address for the transferor and transferee are as set forth for Seller and Buyer in this Agreement, and the identifying information regarding the real estate transferred is the legal description for the Property set forth in this Agreement. Title Company agrees to file the form required by the Regulations between the end of the calendar year in which the Closing Date occurs and February 28 of the following calendar year. Buyer and Seller agree to cooperate with Title Company and with each other in completing any report and/or other information required to be delivered to the Internal Revenue Service pursuant to Section 6045(e) of the Code regarding the real estate sales transaction contemplated by this Agreement, including without limitation, Internal Revenue Service Form 1099-S as such may be hereafter modified or amended by the Internal Revenue Service, or as may be required pursuant to any Regulation now or hereafter promulgated by the Treasury Department with respect thereto.

6. Liability of Title Company. The parties acknowledge that the Title Company is acting solely as a stakeholder at their request and for their convenience, that the Title Company shall not be deemed to be the agent of either of the parties, and that the Title Company shall not be liable to either of the parties for any action or omission on its part taken or made in good faith, and not in disregard of this Agreement, but shall be liable for its negligent acts and for any loss, cost or expense incurred by Seller or Buyer resulting from the Title Company's mistake of law respecting the Title Company's scope or nature of its duties. Seller and Buyer shall jointly and severally indemnify and hold the Title Company harmless from and against all costs, claims and expenses, including reasonable attorneys' fees, incurred in connection with the performance of the Title Company's duties hereunder, except with respect to actions or omissions taken or made by the Title Company in bad faith, in disregard of this Agreement or involving negligence on the part of the Title Company.

EXHIBIT D

Joint Escrow Closing Instructions

Date: _____

First American Title Insurance Company
101 Mission Street, Suite 1600
San Francisco, CA 94105
Attn: Heather Kucala

Re: Escrow No. _____
PG&E's Mountain House Parcel APN 209-460-26 and a portion of the Tracy Gas Yard
Portion APN 209-080-06 in Tracy, San Joaquin County, California

Ms. Kucala:

This letter shall constitute the Joint Escrow Closing Instructions of Pacific Gas and Electric Company ("PG&E" or "Seller") and Prologis L.P. ("Buyer") under that certain Purchase and Sale Agreement dated _____, _____ ("Purchase Agreement") with regard to the following property: Mountain House Parcel, APN 209-460-26 and a portion of the Tracy Gas Yard Portion, APN 209-080-06 San Joaquin County, California ("Property"). The purchase price for the Property is \$82,312.00 ("Purchase Price"). First American Title Insurance Company ("Title Company") has received a copy of the Purchase Agreement and California Public Utilities Commission's Decision _____ dated _____, approving the sale of the Property by PG&E. Unless otherwise defined herein, all capitalized words or terms used in these Joint Escrow Closing Instructions shall have the meanings ascribed to them in the Purchase Agreement.

1. DOCUMENTS AND FUNDS.

You shall be in a position to close escrow upon fulfillment of all of the conditions set forth below:

1.1. When you have received from PG&E and Buyer, as indicated below, the following funds and documents:

- (a) From PG&E:
- (i) The PG&E Grant Deeds duly executed and acknowledged by PG&E;
 - (ii) Any other instructions PG&E may deem necessary which are not inconsistent with the terms of this Agreement; and
 - (iii) Such other instruments and documents as are reasonably required by the terms of this Agreement or by the Title Company, including an Owner's Affidavit, if required by the Title Company to issue the title insurance policy.

(b) From Buyer:

- (i) The Purchase Price in the amount of \$82,312.00;

- (ii) Both California and U.S. non-foreign person affidavits ("Affidavits") executed by Buyer;
- (iii) Any additional funds required to pay Buyer's share of closing costs and pro-rations;
- (iv) Any other instructions Buyer may deem necessary which are not inconsistent with the terms of this Agreement; and
- (v) Such other instruments and documents as are reasonably required by the terms of this Agreement or by the Title Company.

1.2. The Title Company shall be prepared to issue to grantee party the title insurance policy in accordance with Section 4.3 of the Purchase Agreement.

1.3. You have received telephonic confirmation from Buyer and PG&E, or their respective counsel, that all of the conditions to the Close of Escrow to be fulfilled outside of this escrow have been fulfilled to the satisfaction of Buyer and PG&E.

1.4. Upon satisfaction of the foregoing conditions, you are to inform Buyer and PG&E by telephone that all such conditions have been satisfied.

2. SPECIAL NOTE: REAL PROPERTY TAXES.

Real property owned by PG&E is assessed by the California State Board of Equalization and not by the County Assessor. Property is assessed as of January 1 in each year and the tax becomes a lien on the property as of January 1 for the subsequent July 1 - June 30 tax year. Property will not be removed from the state tax rolls to the county tax rolls until the tax year following the one in which title to the property is transferred. **Therefore, if this escrow closes between January 1 and June 30, you are instructed to collect from Buyer its pro rata share of taxes for the current tax year. If escrow closes between July 1 and December 31, you are instructed to collect from Buyer its pro rata share of the taxes for the current tax year only.** PG&E has undertaken directly with Buyer to pay property taxes due and payable for the tax years for which PG&E has collected funds from Buyer.

3. STEPS TO CLOSE ESCROW.

When you are in a position to close escrow, assemble all documents that have been submitted to escrow in counterpart by attaching the signature page received from Buyer to the document received from PG&E, date all documents that are undated as of the closing date, and proceed as follows, and record documents exactly in the order set forth below:

3.1. Record the PG&E Grant Deeds and instruct the San Joaquin County Recorder to deliver the original deeds to the party and address listed at the top of page 1 of each deed after recording;

3.2. Charge the respective accounts of Buyer and PG&E for recording fees, filing fees, real property conveyance or documentary transfer taxes, title insurance premiums, notary fees, escrow fees and other costs and prorations in accordance with Sections 3.4 and 3.5 of the Purchase Agreement;

3.3. Pay to or for the account of PG&E the amount of the Purchase Price, plus the prorated real property taxes for the current tax year and, if applicable, all of the real property taxes for the following tax year, and less any closing costs and prorations agreed to by PG&E and in the manner directed by PG&E;

3.4. Deliver the Affidavits to Buyer;

3.5. Deliver final escrow settlement statements, as approved by Buyer and PG&E, to Buyer and PG&E;

3.6. Issue and deliver the title insurance policies (as described in Purchase Agreement Section 4.3) to each grantee party/insured; and

3.7. Comply with any additional supplemental instructions submitted by Buyer or PG&E, which are not inconsistent with these instructions.

4. MISCELLANEOUS.

4.1. These instructions may not be modified except in writing executed by the undersigned or the party to be charged. If this escrow is not in a position to close by 5:00 p.m. on _____, then you are to hold all documents and funds until further instructed by the undersigned.

4.2. These instructions may be executed in counterparts, and when taken together, the counterparts shall constitute one set of escrow instructions.

4.3. If you have any questions regarding these instructions, please contact the undersigned.

4.4. All funds due to PG&E are to be wire transferred to Mellon GCM (Boston Safe Deposit and Trust Co.), Boston, MA, ABA Routing Number: 011001234, for credit to: PG&E Depository Account, Account Number 075477. Please include the following information with the wire transfer: Contact Person: _____, Company Number _____, SAP Order Number _____, Billing Document _____.

4.5. All documents to be forwarded to PG&E, and any extra originals of any documents held by the Title Company after disbursement of documents as directed herein, should be sent to:

Pacific Gas and Electric Company
Land Management
Attention: Dawn Plise - Manager
5016 Fitzwilliam Street
Roseville CA 95747

If you agree to be bound by these instructions, please acknowledge the enclosed two copies of these instructions and return one copy each to Buyer and PG&E.

Very truly yours,

Date: _____, _____

PACIFIC GAS AND ELECTRIC COMPANY,
a California corporation

By: _____
Dawn Plise,
Manager, Land Rights North

Date: _____, _____

PROLOGIS, LP,
a Delaware limited partnership

By: Prologis, Inc., its general partner

By: _____

Name: _____

Its: _____

RECEIPT AND ACKNOWLEDGMENT:

FIRST AMERICAN TITLE INSURANCE COMPANY

By: _____

Print Name: _____

Its: _____

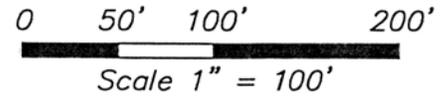
EXHIBIT E-1

Depiction of Mountain House Parcel

T2S, R4E, SW 1/4 OF THE SW 1/4 OF SECTION 22 M.D.B.&M.

LEGEND

- PARCEL LINE
- PROPERTY LINE
- PROPOSED PROPERTY LINE
- AC ACRES
- OR OFFICIAL RECORDS
- PG&E PACIFIC GAS & ELECTRIC COMPANY
- POB POINT OF BEGINNING
- POC POINT OF COMMENCEMENT
- SF SQUARE FEET



LANDS OF PGE
BK 3358, PG 248 OR
209-080-06

INTERNATIONAL PARKWAY

LANDS OF
R&B DELTA II LLC
ADJUSTED PARCEL 2
2019-061897 OR
209-460-32

PARCEL 2
4,500± SF
0.1033 AC

LANDS OF PG&E
88-110849 OR
209-460-26

POB

S89°22'28"E 50.00'

DAYLIGHT RD.

N0°37'32"E 900.60'

LANDS OF PROLOGIS LP
ADJUSTED PARCEL 1
2019-061897 OR
APN 209-460-33

POC

SEC.21

SEC.22

CAPITAL PARKS DR

SEC.28

SEC.27

LINE TABLE

LINE #	DIRECTION	LENGTH
L1	N0°37'32"E	60.00'
L2	S89°22'28"E	75.00'
L3	S0°37'32"W	60.00'
L4	N89°22'28"W	75.00'



KIER+WRIGHT

250 Cherry Lane, Suite 107, 208
Manteca, CA 95337

Phone: (209) 328-1123
www.kierwright.com

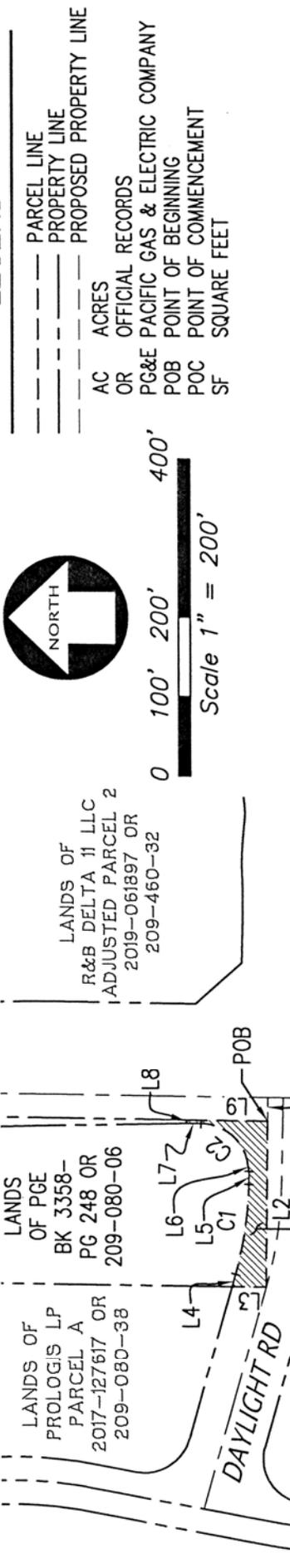
EXHIBIT "B"
PACIFIC GAS & ELECTRIC
PARCEL 2
TRACY, CALIFORNIA

DATE	SEPT., 2020
SCALE	1" = 100'
BY	GKL
JOB NO.	A09500-170
SHEET	1 OF 1

EXHIBIT E-2

Depiction of Tracy Gas Yard Portion

T2S, R4E, SE 1/4 OF THE SE 1/4 OF SECTION 21 M.D.B.&M.



LEGEND

- PARCEL LINE
- PROPERTY LINE
- PROPOSED PROPERTY LINE
- AC ACRES
- OR OFFICIAL RECORDS
- PG&E PACIFIC GAS & ELECTRIC COMPANY
- POB POINT OF BEGINNING
- POC POINT OF COMMENCEMENT
- SF SQUARE FEET



LINE TABLE		
LINE #	DIRECTION	LENGTH
L1	N89°22'28"W	30.00'
L2	N89°22'28"W	209.40'
L3	N0°37'32"E	42.47'
L4	S74°28'11"E	16.22'
L5	S88°50'08"E	16.26'
L6	N80°41'21"E	10.91'
L7	N0°09'22"W	18.19'
L8	S89°24'16"E	4.41'
L9	S0°37'32"W	101.72'

CURVE TABLE			
CURVE #	RADIUS	DELTA	LENGTH
C1	459.00'	14°21'57"	115.09'
C2	59.00'	80°50'44"	83.25'

DATE	SEPT., 2020
SCALE	1" = 200'
BY	GKL
JOB NO.	A09500-170
SHEET	1 OF 1

EXHIBIT "B"
PACIFIC GAS & ELECTRIC
PARCEL 1

TRACY, CALIFORNIA

KIER+WRIGHT
 250 Cherry Lane, Suite 107, 208 Manteca, CA 95337
 Phone: (209) 328-1123
 www.kierwright.com

Attachment 4

EIR 4.14

4.14 TRANSPORTATION AND TRAFFIC

A. Introduction and Methodology Overview

This chapter presents the existing conditions, regulatory setting, and impact analysis for the Project, related to transportation. The purpose of the transportation impact analysis is to identify the impacts of developing the Project on the surrounding transportation system and to identify feasible measures to mitigate significant impacts, as necessary. The following sections present an overview of existing transportation conditions in the transportation study area; a description of the agencies with jurisdiction over transportation in the study area, including relevant policies; and a description of the Project's impacts on transportation systems, including the methodologies used, thresholds of significance, impact identification, and mitigation measures.

As described more fully below, the analysis of the impacts relating to the construction and operation of Phase 1 of the Project (Phase 1 Project) is performed on an intersection level, and the analysis of the impacts relating to the construction and operation of the Project at full buildout (Project Buildout) is performed on a roadway segment level. This is because Phase 1 of the Project is expected to be fully developed by the horizon year of 2035, whereas full Project Buildout may take additional time beyond 2035 to develop. The longer horizon for Project Buildout makes intersection-level forecasting infeasible for several reasons including: (1) a longer-term travel demand model is not available; (2) there are many variables about how the rest of the region will develop both in terms of land use and infrastructure; and (3) detailed engineering design of roadways for the network under Project Buildout conditions for purposes of analyzing when intersection improvements beyond 2035 would be triggered is not currently available.

Unlike detailed intersection-level forecasts, roadway segment forecasts can be projected for the Project Buildout scenario. Based on the consultants' technical expertise and industry standards, the roadway segment forecasts are useful metrics of Project traffic impacts because, in urban conditions, when segment operations fail, intersection operations would also fail because intersections govern the roadway network capacity.

Based on the above considerations, the following scenarios are assessed in this EIR:

- Existing Plus Phase 1 Project: *Intersection analysis*
- Existing Plus Project Buildout: *Roadway segment analysis*
- 2035 Plus Phase 1 Project: *Intersection analysis*
- 2035 Plus Project Buildout: *Roadway segment analysis*

In addition, freeway segment analysis is provided for all the above cases.

B. Regulatory Framework

This section summarizes existing policies and regulations relevant to transportation and traffic in the Specific Plan area.

1. State Laws and Regulations

Caltrans has jurisdiction over state highway facilities, including I-205, I-580 and related ramps, of relevance here. Caltrans endeavors to maintain a target Level of service (LOS) at the transition between LOS C and LOS D on State highway facilities; however, the agency acknowledges that this may not always be feasible, particularly in urban environments where right-of-way is constrained. Where maintaining LOS C/D is not feasible, Caltrans attempts to maintain the existing LOS when assessing the impact of new development.

2. Regional Regulations

a. San Joaquin Council of Governments

i. Regional Transportation Plan

The San Joaquin Regional Transportation Plan (RTP), administered by the San Joaquin Council of Governments (SJCOG), was most recently updated in 2011. The RTP outlines transportation priorities along with associated goals, objectives, and performance indicators for the coming 25 years in the County. The 2011 RTP goals are listed below:

- A) Enhance the Environment/Quality of Life/&Conserve Energy
- B) Increase Regional Roadway System Performance

- C) Increase Safety & Security
- D) Preserve the Existing Regional Transportation System & Promote Efficient Roadway System Management & Operations
- E) Support Economic Vitality
- F) Promote Interagency Coordination & Public Participation for Transportation Decision-Making & Planning Efforts
- G) Maximize Cost Effectiveness

The RTP rates proposed infrastructure projects with regional significance against these goals and associated performance indicators as part of the planning process. Project costs and potential financing sources are also estimated and tracked in the RTP. Planned projects of regional significance from the 2011 document in the study area include the construction of auxiliary lanes on I-205 between the Mountain House Parkway interchange and the Tracy Boulevard interchange; widening Lammers Road from two to four lanes between I-205 and Old Schulte Road; and extending Schulte Road as a four-lane roadway from Faith Lane to Lammers Road; and widening I-205 from 6 to 8 lanes between I-5 and I-580.

ii. Capital Improvement Program

The SJCOG Capital Improvement Program (CIP) is a seven-year list of transportation projects. These projects are developed as part of the Congestion Management Program and are intended to maintain or improve transportation system operational performance and safety.

CIP projects in the study area include the construction of eastbound and westbound auxiliary lanes on I-205 between Tracy Boulevard and Mountain House Parkway; and widening Lammers Road from two to four lanes between I-205 and Old Schulte Road. These projects are fully funded in the RTIP Tier 1 projects list and are scheduled for completion in 2013 and 2017, respectively.

iii. Travel Demand Management Plan

The San Joaquin County Travel Demand Management (TDM) Plan exists primarily for the purpose of establishing an institutional and planning framework between SJCOG and local agencies in San Joaquin County for coordination on issues of demand management and how to more efficiently make use of the existing transportation system.

The document also outlines several potential TDM strategies and their potential for effectiveness in different land use and new development contexts. Strategies include financial incentives, such as roadway pricing, parking cash-out, and employee transit subsidies; system incentives, such as expanding HOV lane, park and ride, and bicycle facilities; and demand incentives, such as expanding rideshare programs and telecommuting options for workers. All strategies are intended to reduce vehicle demand on the roadway system.

iv. San Joaquin Congestion Management Plan

The San Joaquin County Regional Congestion Management Plan (RCMP), most recently updated in October 2012, outlines a set of strategies and performance measures to reduce congestion within the County in compliance with federal guidance, state legislation, and the County's Measure K "Traffic Relief, Safety, Transit, and Road Maintenance Program" Ordinance. The list of County CIP projects is contained within the RCMP.

The RCMP also contains a list of roadways that are considered to be part of the CMP Network. This is the list of roadways to which the RCMP's performance measures are applied. For roadways, performance criteria are dependent on traffic volume and roadway classification. Study area roadways in the RCMP network are: I-205, I-580, and Lammers Road. The LOS standard adopted for the San Joaquin county RCMP is LOS D. The *SJCOG Regional Deficiency Plan*, prepared in 2010, did not identify any deficient facilities in Tracy.

v. Alameda County Congestion Management Plan

The Alameda County Congestion Management Plan most recently updated in 2009, requires a LOS E standard be maintained on all CMP routes in Alameda County, except those areas designated as infill opportunity zones or those segments that were already operating at LOS F in the 1991 CMP baseline year. I-580 is an Alameda County CMP designated route. The most recent monitoring, in 2010, indicated LOS F conditions for westbound I-580 between Greenville Road and Portola Avenue, in Livermore.

3. City of Tracy Regulations and Policies

a. City of Tracy General Plan

The Circulation Element of the City of Tracy General Plan establishes the following goals, policies, and objectives, which apply to the study area (Table 4.14-1).

b. Citywide Roadway and Transportation Master Plan

Over the past two years, the City of Tracy has prepared a comprehensive update to the citywide infrastructure master plans. The Citywide Roadway and Transportation Master Plan (TMP), adopted in December 2012, describes the transportation network and systems required to serve the City of Tracy. The TMP describes the citywide roadway network needed to serve local and regional trips, including anticipated intersection lane configurations at numerous intersections; bicycle and pedestrian facilities; truck routes; park and ride lot locations; and other related topics. The Project has been designed to be consistent with the TMP's roadway network.

c. Overview of City and Regional Transportation Funding

i. City of Tracy Finance and Implementation Plans

Within the City of Tracy, there are multiple specific financing plans, otherwise known as "Finance and Implementation Plans" (FIPs), to fund required Master Plan ("program") roadway improvements. The purpose of an FIP is to provide estimates of the funds required to mitigate each impact, calculate the development impact fees, and to update the City's Capital Improvement Program Construction Schedule for program infrastructure

TABLE 4.14-1 GENERAL PLAN POLICIES RELEVANT TO TRANSPORTATION AND TRAFFIC

Goal/ Policy No.	Goal/Policy Content
Circulation Element	
<i>Objective CIR-1.1</i>	<i>Implement a hierarchical street system in which each street serves a specific, primary function and is sensitive to the context of the land uses served.</i>
Policy P1	<p>The City should develop context-based street designs that allow for variations based on the expected function and location of the facility, and the surrounding land use context. These context-sensitive designs should have the following aims:</p> <ul style="list-style-type: none"> • Create aesthetically attractive streetscapes. • Enhance multi-modal transportation by increasing mobility and improving safety for autos, trucks, transit, pedestrians, and bicyclists.
Policy P2	The City shall preserve rights-of way needed for future roadway and freeway interchange improvements through dedication or acquisition as adjacent properties develop or redevelop.
Policy P3	The City shall continue to apply traffic mitigation fee programs to fund transportation infrastructure, based on a fair share of facility use.
Policy P4	The City should continue to pursue regional, county, and State funding to fund roadway projects. These potential funding sources may include Measure K sales tax revenues, a regional or countywide transportation impact fee, and other existing and future revenue sources.
Policy P5	The City shall continue to participate in regional transportation funding decisions, including Measure K reauthorization, regional or countywide transportation fees, and prioritization of State funded projects.
Policy P6	The Roadway Master Plan update shall identify necessary improvements to various intersections on I-205 and I-580 based on land use designations and with particular attention to Terminal Access Routes in accordance with Surface Transportation Assistance Act of 1982 (STAA).
<i>Objective CIR-1.2</i>	<i>Provide a high level of street connectivity.</i>

TABLE 4.14-1 **GENERAL PLAN POLICIES RELEVANT TO TRANSPORTATION AND TRAFFIC**

Goal/ Policy No.	Goal/Policy Content
Policy P1	The City shall ensure that the street system results in a high level of connectivity, especially between residences and common local destinations, such as schools, Village Centers, retail areas, and parks. The standard for roadway (vehicular) connectivity is defined as appropriate spacing of arterials and collectors and local roads as detailed in Section of [the Circulation] Element “Roadway Classifications and Standards”.
Policy P2	The City shall implement a connected street pattern with multiple route options of vehicles, bikes, and pedestrians.
Policy P3	New development shall be designed to provide vehicular, bicycle and pedestrian connections with adjacent developments.
Policy P4	The City should develop residential street alignments and designs that provide connectivity while discouraging high-speed cut-through traffic.
Policy P5	New development shall be designed with a grid or modified grid pattern to facility traffic flows and to provide multiple connections to arterial streets.
Policy P6	Street patterns in hillside areas may reflect existing topography and minimize grading impacts.
<i>Objective CIR-1.3</i>	<i>Adopt and enforce LOS standards that provide a high level of mobility and accessibility, for all modes, for residents and workers.</i>
Policy P1	<p>To the extent feasible, the City shall strive for LOS D on all streets and intersections, with the LOS standard for each facility to be defined in the Transportation Master Plan in accordance with the opportunities and constraints identified through the traffic projections and analysis performed for that Plan. The following exceptions to the LOS D standard may be allowed:</p> <ul style="list-style-type: none"> “ LOS E or lower shall be allowed on streets and at intersections within ¼-mile of any freeway. This lower standard is intended to discourage inter-regional traffic from using Tracy streets. “ LOS E or lower shall be allowed in the Downtown and Bowtie area of Tracy, in order to create a pedestrian-friendly urban design character and densities necessary to support transit, bicycling and walking.

TABLE 4.14-1 GENERAL PLAN POLICIES RELEVANT TO TRANSPORTATION AND TRAFFIC

Goal/ Policy No.	Goal/Policy Content
Policy P2	The City may allow individual locations to fall below the City's LOS standards in instances where the construction of physical improvements would be infeasible, prohibitively expensive, significantly impact adjacent properties or the environment, or have a significant adverse effect on the character of the community, including pedestrian mobility, crossing times, and comfort/convenience.
Policy P3	Intersections may be permitted to fall below their adopted LOS standard on a temporary basis when the improvements necessary to preserve the LOS standard are in the process of construction or have been designed and funded but not yet constructed.
Policy P4	Roadways and freeways that are subject to State and regional agency oversight and/or are candidates for State-funded or federally-funded improvements should conform to the operational service requirements of the applicable agency.
Policy P5	For long-range planning purposes, the LOS of major streets shall be determined based on an estimation of peak hour conditions using future average daily traffic forecasts and standard Tracy relationships between daily traffic and peak PM hour traffic.
Policy P6	For project-specific development approvals, the LOS at major street intersections shall be determined based on the direct estimation of peak hour conditions and should reflect the average conditions prevailing throughout the peak hour of a typical weekday for all traffic using the intersection.
Policy P7	Traffic studies for new developments within the City may be prepared if necessary and appropriate to determine the impacts of the project's traffic on the transportation system.
Policy P8	Access control and minimization of median openings shall be a key consideration in the design of expressways, boulevards, arterials, and major collectors.
Policy P9	The City shall encourage the use of right-turn-in/right-turn-out only turning movements where local and collector streets intersect arterial streets with medians. The purpose is to increase the safety of the roadway and to avoid traffic signals that are spaced too close together.

TABLE 4.14-1 GENERAL PLAN POLICIES RELEVANT TO TRANSPORTATION AND TRAFFIC

Goal/ Policy No.	Goal/Policy Content
Policy P10	Exclusive right turn lanes in and out of major residential, commercial, industrial and office developments shall not reduce the width of public or private landscaping requirements.
<i>Objective CIR-1.4</i>	<i>Protect residential areas from commercial truck traffic.</i>
Policy P1	Significant new truck traffic generating uses shall be limited to locations along designated truck routes, in industrial areas or within ¼-mile of freeways.
Policy P2	The City shall enforce designated truck routes based on the existing City ordinance.
<i>Objective CIR-1.5</i>	<i>Protect residential areas from through traffic and high travel speeds by facilitating free flow of traffic on major streets.</i>
Policy P1	Use of local residential streets by non-local and commercial traffic shall be discouraged. The City may consider techniques such as route signs and route maps. This policy should not restrict the ability of local vehicle and non-motorized transportation to utilize residential collectors as an effort to encourage higher levels of roadway connectivity.
Policy P2	The City shall coordinate the timing of traffic signals on arterials to facilitate traffic movement.
<i>Objective CIR-1.6</i>	<i>Maximize traffic safety for automobile, transit, bicycle users, and pedestrians.</i>
Policy P1	The City shall design streets using context-sensitive design principles that enhance safety for all modes of travel.
Policy P2	New development shall implement traffic calming measures where necessary so long as connectivity is not diminished.
<i>Objective CIR-1.7</i>	<i>Minimize traffic-related impacts such as noise and emissions on adjacent land uses.</i>
Policy P1	Appropriate buffering and screening mechanisms shall be incorporated in development projects to limit the impacts associated with traffic. These buffering and screening mechanisms may include setbacks, landscaping, berms, soundwalls, or other methods as appropriate.
Policy P2	Soundwalls shall only be used next to major arterials, and other high-speed, high-volume facilities in accordance with the policies in the Community Character Element.
<i>Objective CIR-1.8</i>	<i>Minimize transportation-related energy use and impacts on the environment.</i>

TABLE 4.14-1 GENERAL PLAN POLICIES RELEVANT TO TRANSPORTATION AND TRAFFIC

Goal/ Policy No.	Goal/Policy Content
Policy P1	Transportation projects shall avoid disrupting sensitive environmental resources.
Policy P2	When possible, road construction and repair project shall use sustainable materials.
Policy P3	The City shall encourage the use of non-motorized transportation and low-emission vehicles.
<i>Objective CIR-2.1</i>	<i>Support regional planning and implementation efforts to improve interregional highways and interregional travel efficiency.</i>
Policy P1	The city shall continue to cooperate with regional and State agencies, including Caltrans and San Joaquin Council of Governments (SJCOG) to study, plan and fund improvements to the regional transportation system. These regional transportation improvements may include freeway widening, the construction of regional roadways, regional passenger rail expansions, additions to the existing commuter bus system and provision of the park-and-ride lots near facilities heavily used by commuters.
Policy P2	The City should ensure that land needed for park-and-ride facilities is conserved in new development areas.
Policy P3	The City shall work with other local jurisdictions, SJCOG, and Caltrans to identify and develop alternative routes to allow locally-generated traffic to bypass congestion on I-205 and I-580 without impacting city streets.
Policy P4	The City shall work with the City of Lathrop and San Joaquin County to preserve a right-of-way along the existing alignment of Middle Road/Arbor Avenue north of I-205 (a.k.a. Golden Valley Parkway) for the future construction of a regional parallel to I-205. This process should determine appropriate funding mechanisms and the design of an interchange with I-205 at Chrisman Road.
<i>Objective CIR-2.2</i>	<i>Discourage interregional travel from diverting from freeways onto Tracy streets.</i>
Policy P1	The City shall consider techniques, such as freeway ramp metering or traffic signal timing changes, to discourage the diversion of inter-regional travel from the freeways onto Tracy streets.
<i>Objective CIR-3.1</i>	<i>Achieve a comprehensive system of citywide bikeways and pedestrian facilities.</i>

TABLE 4.14-1 **GENERAL PLAN POLICIES RELEVANT TO TRANSPORTATION AND TRAFFIC**

Goal/ Policy No.	Goal/Policy Content
Policy P1	The City shall incorporate appropriate bicycle and pedestrian facilities on all roadways constructed by the City, Class I to the extent feasible.
Policy P2	To the extent possible, the city shall separate vehicular from bicycle and pedestrian traffic on higher-speed and higher-volume roadways through the use of off-street bicycle and pedestrian facilities.
Policy P3	The city may separate bicycle from pedestrian users on high usage bicycle and pedestrian paths
Policy P4	The City's bicycle and pedestrian system shall have a high level of connectivity, especially between residences and common local destinations, such as schools, shopping, and parks. A higher level of bicycle and pedestrian connectivity is defined as a shorter or similar distance to common destinations for bicycles and pedestrians compared to distances for vehicles.
Policy P5	The City shall establish a ½-mile walkability standard for residents to access goods, services, and recreational facilities.
Policy P6	New development shall include pedestrian and bicycle facilities internal to the development and that connect to city-wide facilities, such as parks, school, and recreational corridors, as well as adjacent development and other services.
Policy P7	New development sites for commercial, employment, educational, recreational, and park-and-ride land uses shall provide bicycle parking and/or storage facilities.
<i>Objective CIR-4.1</i>	<i>Promote public transit as an alternative to the automobile.</i>
Policy P1	The City shall promote efficient and affordable public transportation that serves all users.
Policy P2	The City shall continue to partner with SJCOG, SJRTD, and Caltrans in efforts to locate park-and-ride lots and other transit-related facilities in the City of Tracy.
Policy P3	The City shall continue to operate the Tracer fixed-route and paratransit transit service and expand service to new residential and non-residential areas if funding for additional service is available and is warranted by ridership demand.
Policy P4	The City shall seek funding from regional and State and federal agencies to fund additional transit service expansions and improvements.

TABLE 4.14-1 GENERAL PLAN POLICIES RELEVANT TO TRANSPORTATION AND TRAFFIC

Goal/ Policy No.	Goal/Policy Content
Policy P5	The City shall require development to provide for transit and transit-related increased modal opportunities, such as adequate street widths and curb radii, bus turnouts, bus shelters, park-and-ride lots and multi-modal transit center through the development and environmental review processes, if appropriate.
Policy P6	The City shall encourage efforts for additional regional transit service, including expansion of the existing commuter bus service, and new commuter rail serve from Tracy to other areas in the region.
<i>Objective CIR-421</i>	<i>Work to achieve connectivity between all modes of transportation.</i>
Policy P1	The City shall complete the Multi Modal Transit Center at Central Avenue and 6 th Street.
Policy P2	The City shall preserve the necessary rights-of-way by continuing the implementation of current arterial street standards and ensuring the preservation of existing rail corridors to facilitate the development of an expanded transit program in the future.
Policy P3	The City shall encourage the expansion of transit services through consultation and cooperation with the Bay Area Rapid Transit District (BART), San Joaquin Regional Rail Commission, San Joaquin Regional Transit District, the Altamont Commuter Express (ACE), on services that expand the mobility and accessibility of transporting people, goods and services in and through Tracy and the region.
Policy P4	The City shall develop a fully integrated multi-modal transportation system that takes into account access to employment, education, shops, medical services and that facilitates participation in social and recreational opportunities.
Policy P5	The City shall provide efficient, effective, and coordinated transit system that maximizes use of regional, state, and federal funds.
Policy P6	The City shall pursue economical, long term solutions to transportation problems by encouraging community designs which encourage transit use and walking, bicycling, and other non-motorized forms of transportation.

based on cash flow estimates generated from development impact fees. An FIP also identifies an estimated obligation for program roadway improvements. FIPs are periodically updated to keep pace with construction cost increases.

In order to ensure that the Project fully funds its fair share of required improvements, an FIP will be prepared for the Project. The Cordes Ranch FIP will calculate the Project's proportional share contribution to required improvements. Future traffic growth throughout the City will cumulatively fund the required improvements. As fees are collected, the City will use the fees to implement the improvements. If the City has not collected enough of the fees to fund an improvement at the time an impact is triggered, the Project applicant must construct or provide, in a manner acceptable to the City, for the funding to construct the required improvement upfront, subject to any applicable credit and/or reimbursement provisions, as determined by the City.

ii. San Joaquin COG Regional Transportation Impact Fee (RTIF)

The City is a member agency of the San Joaquin Council of Governments (SJCOG), a joint powers agency consisting of the County of San Joaquin and the seven cities situated in San Joaquin County. Acting in concert, the member agencies of SJCOG developed the RTIF Program whereby the shortfall in funds needed to expand the capacity of the Regional Transportation Network could be made up in part by a Regional Transportation Impact Fee (RTIF Program Fee) on future residential and non-residential development. The RTIF Program Fee will augment other funding sources and help ensure that needed improvements to the Regional Transportation Network are completed. The City adopted this fee on January 3, 2006. The latest RTIF update was completed in December 2011. In the study area, the I-580/Lammers Interchange and the Lammers Road widening from two to four lanes between I-205 and Old Schulte Road are RTIF projects.

d. Sustainability Action Plan

As part of the General Plan update, the City of Tracy prepared a Sustainability Action Plan to respond to recent state legislation on climate change and greenhouse gas reduction, and integration of transportation and land use planning. The SAP includes policies and programs designed to reduce greenhouse gas emissions generated by a range of activities, including transportation. The transportation targets include:

- “ Target #5a: 20 percent increase in the percentage of non-City employees who participate in travel demand management programs from 2006 baseline levels
- “ Target #5b: 20 percent increase in the percentage of City employees who participate in travel demand management programs from 2006 baseline levels
- “ Target #6a: 20 percent reduction in the community vehicle miles travelled (VMT) per capita from current (2006) levels
- “ Target #6b: 20 percent reduction in the municipal VMT from 2006 baseline levels

The SAP presents 21 sustainability measures within the Transportation and Land Use category, which have quantifiable effects, based on available research, on greenhouse gas production – mostly through VMT reduction, including the following measures:

Measure T-2: Reduced parking requirements.

Measure T-3: Support for bicycling.

Measure T-4: Support for transit.

Measure T-5: Smart growth, urban design, and planning.

Measure T-13: Reduce commute trips.

Measure T-14: Parking cash-out for employees.

Measure T-16: Transit passes for residents and employees of new developments.

C. Existing Conditions

1. Regional Location

The Specific Plan Area is located in southwest San Joaquin County, in western Tracy. The City of Tracy is located on the western edge of the Central Valley along Interstate 205 (I-205), just east of the Altamont Pass and the Interstate 580 (I-580)/I-205 interchange. The City of Tracy is situated approximately an hour and half east of San Francisco and 68 miles of south of Sacramento, as shown in Figure 4.14-1. Neighboring cities include Stockton, to the north, Manteca, to the east, Modesto, to the southeast, and Livermore to the west across the Altamont Pass.

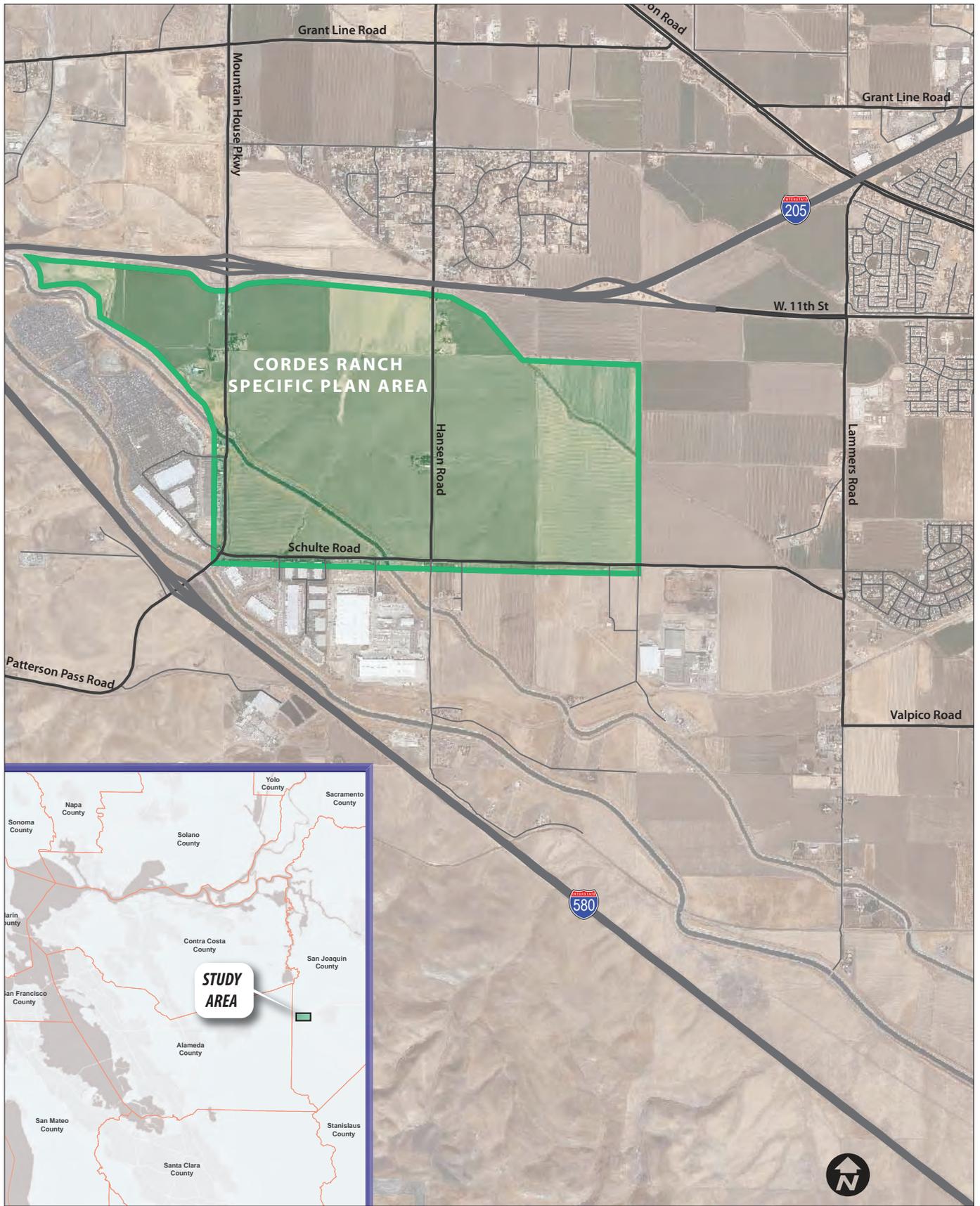
2. Specific Plan Area

The Specific Plan Area is located along the western edge of Tracy, adjacent to City limits and within the City's SOL. The Project limits to the north are I-205, the Delta-Mendota Canal, and Mountain House Parkway to the west, and Old Schulte Road to the south. Lammers Road meets the eastern border of the Project. The Project is designed to take advantage of its close proximity to I-205 and I-580.

There are a number of existing buildings and structures within the Specific Plan Area as follows: twelve existing residences and associated structures; a PG&E gas facility; two public roadways (Mountain House Parkway and Hansen Road); and a cell tower installation and related equipment building. The remainder of the Specific Plan Area consists primarily of agricultural land, currently utilized for irrigated crop production, dry farming, and periodic cattle grazing.

3. Transportation Impact Study Area

Following is a description of the methodology used to determine the appropriate study area for this analysis.



Source: Fehr and Peers, 2013.

FIGURE 4.14-1
EXISTING ROADWAY NETWORK

The transportation impact study area (study area) is the area in which circulation is most likely to be affected by the Project. This area extends north to I-205, south to I-580, east to Lammers Road, and west to west of the I-205/I-580 interchange. The area includes roadways and intersections under the jurisdictions of the City of Tracy and Caltrans.

For purposes of this analysis, the study area was defined as follows. The technical consultants utilized a screening methodology that takes the assumed Project distribution of traffic to the north, south, east, and west, and compares it to the estimated Project trip assignment to a threshold test of 5 percent or more of total 2035 Plus Phase 1 traffic volumes. In addition, the projected 2035 Plus Phase 1 traffic volumes were compared to those studied in the Tracy Roadway and Transportation Master Plan. After applying the screening methodology, for the intersections that satisfied the threshold test of 5 percent or more traffic being added, then the technical consultants considered other relevant criteria to determine whether the “qualifying” intersections should be scoped out in any event.

The study area boundaries are based in the screening analysis results and additional relevant criteria, and are described more fully below and in Appendix L.

- “ *Mountain House Parkway between the I-205 Interchange the I-580 Interchange.* Phase 1 of the Project is projected to add less than 5 percent of the cumulative traffic volume to this roadway north of I-205 and to Patterson Pass Road west of I-580.
- “ *Hansen Road between Capital Parks Drive and Lammers Road.* The traffic analysis assumes that 1 percent of Project traffic would travel north of Capital Parks Drive under cumulative conditions. Because traffic volumes on Hansen Road are very low, the projected volumes would remain very low (less than 300 peak hour trips), although the Project’s contribution to cumulative traffic would be more than 5 percent. Based on the low volumes, no intersection or roadway operational problems are expected to the north of I-205, under cumulative conditions. However, this roadway serves as a residential collector and adjacent residences may be adversely

affected by increased traffic; therefore, the Specific Plan includes traffic calming measures to minimize Project traffic use of Hansen north of Capital Parks Drive. These measures may include, but are not limited to, the following, in addition to other traffic calming measures that may be imposed by the City on individual, site-specific developments:

- ÿ Peak hour turn restrictions on Capital Parks Drive at Hansen Road;
- ÿ Corner bulbs, raised crosswalks, and other intersection design features to slow traffic at this intersection;
- ÿ Speed humps on Hansen Road north of Capital Parks Drive;
- ÿ Speed feedback signs on Hansen Road north of Capital Parks Drive;
- ÿ Driver education signs (for example, “Respect our Neighborhood/ Drive 25”)

Because the Specific Plan addresses the control of Hansen Road traffic in this way such that it is anticipated that few if any trips would use the section of Hansen Road north of I-205 and thus any traffic impacts here would be less than significant; accordingly, this section of Hansen Road is not included in the study area.

- “ *Pavilion Parkway between Capital Parks Drive and Hansen Road.* Phase 1 of the Project is projected to add more than 5 percent of cumulative traffic to Pavilion Parkway north of Capital Parks Drive. However, the forecast volumes are not expected to exceed those assumed in the Tracy Roadway and Transportation Master Plan, and the Project will contribute to the TMP improvements through payment of the TMP fee, which will further facilitate traffic movements. Therefore, this section of Pavilion Parkway is not included in the study area.
- “ *Lammers Extension between I-205 and Eleventh Street.* Phase 1 of the Project is projected to add more than 5 percent of cumulative traffic to the Lammers Extension north of I-205. While the forecasted volumes are somewhat higher than those in the Citywide Roadway and Transportation Master Plan due to the refined traffic assignment process for the study area in this EIR, it was not included in the detailed traffic analysis because (1)

the design (alignment, connection to other new roadways, etc.) of this future roadway will be defined as part of future development planning efforts for the properties in the vicinity of Lammers Extension; and (2) the Project will contribute to the ultimate improvements on Lammers Extension through payment of the TMP fee.

- “ *Eleventh Street between Lammers Road and I-205.* Phase 1 of the Project is projected to add more than 5 percent of cumulative traffic to Eleventh Street east of Lammers Road; however, the forecast volumes are not expected to exceed those assumed in the Tracy Roadway and Transportation Master Plan, and the Project will contribute to the TMP improvements through payment of the TMP fee, which will further facilitate traffic movement. Therefore, this section is not included in the study area.
- “ *New Schulte Road between Mountain House Parkway and Lammers Road.* Phase 1 of the Project is projected to add more than 5 percent of cumulative traffic to New Schulte Road east of Lammers Road; however, the forecast volumes are not expected to exceed those assumed in the Tracy Roadway and Transportation Master Plan, and the Project will contribute to the TMP improvements through payment of the TMP fee, which will further facilitate traffic movement. Therefore, this section is not included in the study area.
- “ *Valpico Road between Hansen Road and Lammers Road.* Phase 1 of the Project is projected to add more than 5 percent of 2035 Plus Phase 1 traffic to Valpico Road east of Lammers Road; however, the forecast volumes are not expected to exceed those assumed in the Tracy Roadway and Transportation Master Plan, and the Project will contribute to the TMP improvements through payment of the TMP fee, which will further facilitate traffic movement. Therefore, this section is not included in the study area.

4. Study Area Roadways

The following major roadways provide circulation within the study area. Figure 4.14-1 shows the existing roadway network in the study area.

- “ **I-205** is a major east-west freeway in the northern portion of Tracy that connects I-580 and I-5. I-205 provides three mixed-flow lanes in each direction, with a posted speed limit of 65 mph to west of and within Tracy. The interchange at Mountain House Parkway provides direct access to the Project site.
- “ **I-580** is a major east-west freeway originating that connects the San Francisco Bay Area to the Central Valley. It originates in Marin County and runs throughout Alameda County to San Joaquin County, eventually terminating at its intersection with I-5 to the southeast of Tracy. West of I-205, I-580 provides four mixed-flow lanes in each direction and a posted speed limit of 65 mph. Between I-205 and I-5, I-580 provides two mixed-flow lanes in each direction and a posted speed limit of 65 mph. The I-580/I-205 interchange provides connectors only between I-205 Westbound and I-580 Westbound, and between I-580 Eastbound and I-205 Eastbound. Ramps at Mountain House Parkway/S. Patterson-Pass Road provide the nearest access to the project site on I-580.
- “ **Mountain House Parkway** is a north-south arterial running from Byron Road in Mountain House to I-580, where it becomes Patterson Pass Road. North of I-205, Mountain House Parkway is a median-separated four-lane roadway with a posted speed limit of 45 mph, where it serves primarily residential and agricultural uses. From I-205 to Berkeley Road through the Plan Area, the road narrows to one-lane in each direction with a 45 mph speed limit with limited adjacent land uses. South of Berkeley Road, the road widens to 2 southbound lanes and 1 northbound lane with large-scale light-industrial uses and eventually widens to two lanes in each direction at its intersection with I-580. In the study area, the parkway currently has only two intersections: at Berkeley Road and Old Schulte Road.
- “ **Lammers Road** is a north-south collector originating at Byron Road and terminating at the canals south of Valpico Road. Lammers Road is a two-lane road with a posted speed limit of 40 mph that marks a portion of Tracy’s western municipal boundary and serves agricultural uses as well as single-family housing developments. Lammers widens significantly at its intersection with West 11th Street to a seven-lane cross-section and narrows

back to two-through lanes with a striped median north of West 11th Street. The roadway has a northbound bike lane from Fabian Road to Byron Road.

- “ **Old Schulte Road** is an east-west roadway that runs from Stanford Road, just west of Mountain House Parkway, to Lammers Road. Old Schulte Road is a two-lane road east of the Delta Mendota Canal. To the west of the Delta Mendota Canal, it widens to five lanes, moving toward Mountain House Parkway.
- “ **Schulte Road** is currently an east-west arterial that runs from Barcelona Drive, just east of Corral Hollow Road, to Chrisman Road on the eastern edge of Tracy, serving continuous single-family housing developments and some agricultural land. West Schulte is a four-lane road with a separated median that widens to six lanes at Corral Hollow Road. Bike lanes present on Schulte from Barcelona Drive to South Central Avenue.
- “ **11th Street** is an east-west arterial that runs parallel to I-205 through the center of Tracy. 11th Street is the I-205 Business Route and runs from I-205 on the western edge of the Tracy its intersection with I-5 to the east of Tracy. 11th Street is a four-lane divided arterial that supports agricultural uses in the vicinity of the study area and widens to 6-lanes at Lammers Road where it supports continuous residential development, narrowing to four lanes at Corral Hollow road, where it supports a mix of residential and commercial development through central Tracy. The roadway as a 45 mph posted speed limit, west of Corral Hollow Road. 11th Street has bike lanes from Coral Hollow Drive to the train tracks just west of Lincoln Boulevard.
- “ **Hansen Road** is a north-south two-lane collector that runs from Byron Road to the industrial area south of Schulte Road, supporting primarily agricultural uses with limited low-density residential and industrial developments.
- “ **Valpico Road** is an east-west arterial that runs from Lammers Roads to Chrisman Road. Under the TMP, Valpico is extended west to a new road that parallels the Delta-Mendota Canal. In the vicinity of the study area,

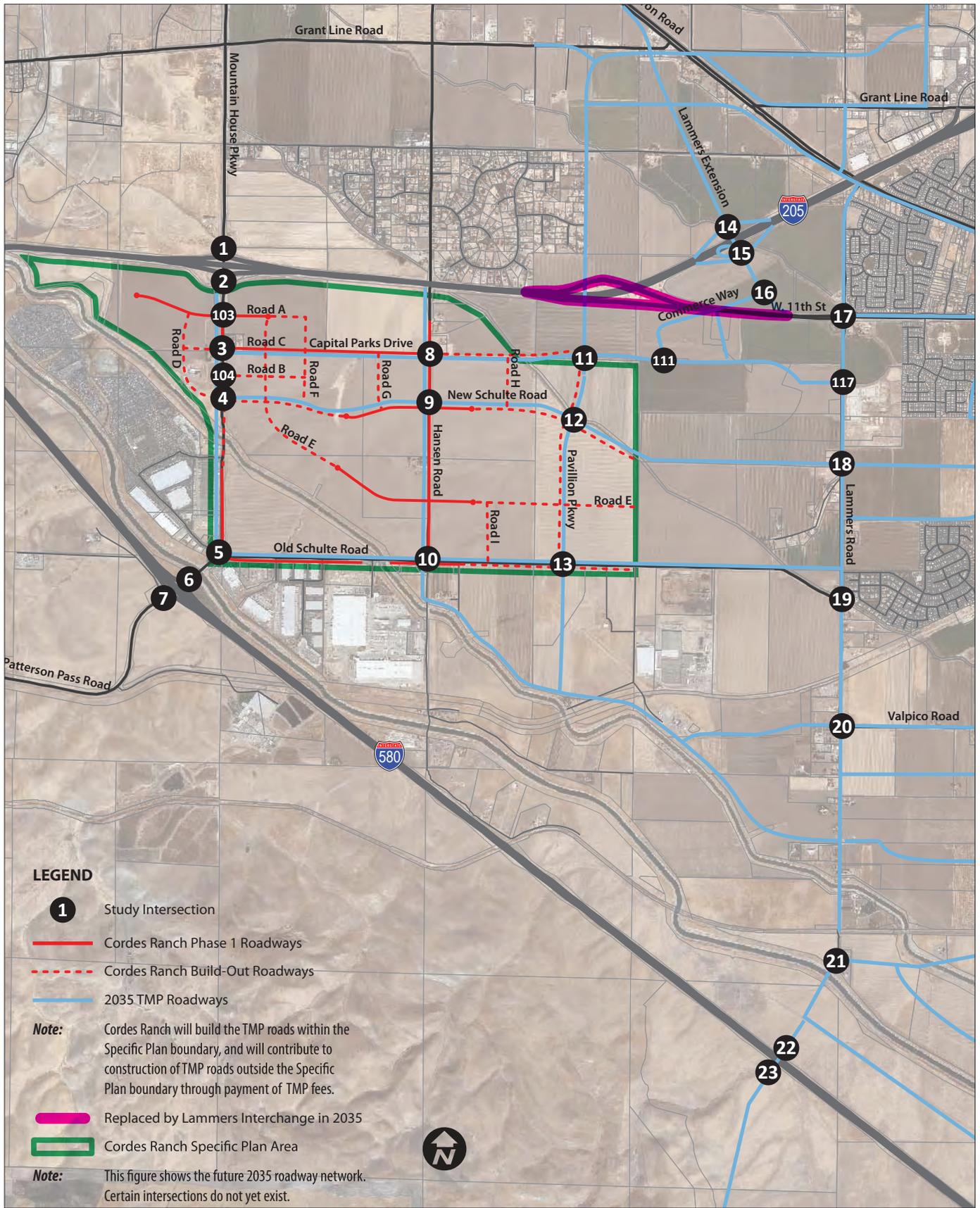
Valpico is a two-lane roadway, widening to four lanes at Cagney Way and narrowing back to two-lanes just east of MacArthur Drive. The posted speed limit ranges from 35 to 45 mph. Valpico has bike lanes in both directions from Cagney Way to just east of Tracy Boulevard and again from Pebblebrook Drive to MacArthur Drive.

5. Study Area Intersections

The study area is depicted in Figure 4.14-2, which shows both existing roadways and intersections, and planned future roadways and intersections.

As described at the beginning of this chapter, the Phase 1 Project traffic impact analysis focuses on the operations of key intersections on the roadway network serving the Specific Plan Area, while the Project buildout analysis uses a roadway segment capacity methodology for impact analysis. Intersections usually form the critical components of the roadway system capacity because of the delay introduced by traffic signals, stop signs, or other control devices. The study intersections assessed for the Phase 1 analysis are listed below and shown on Figure 4.14-2. Future intersections to be constructed as part of the Project or as part of the Tracy Roadway and Transportation Master Plan denoted with an asterisk below.

1. Mountain House Parkway / I-205 WB Ramps
2. Mountain House Parkway / I-205 EB Ramps
103. Mountain House Parkway / Road A (Project Road)*
3. Mountain House Parkway / Capital Parks Drive*
104. Mountain House Parkway/Road B*
4. Mountain House Parkway / New Schulte Road*
5. Mountain House Parkway / Old Schulte Road
6. Mountain House Parkway / I-580 WB Ramps
7. Mountain House Parkway / I-580 EB Ramps
8. Hansen Road / Capital Parks Drive*
9. Hansen Road / New Schulte Road*
10. Hansen Road / Old Schulte Road
11. Pavilion Parkway / Capital Parks Drive*
111. Commerce Way / Capital Parks Drive*



Source: Fehr and Peers, 2013.

FIGURE 4.14-2

STUDY AREA ROADWAY NETWORK AND INTERSECTIONS

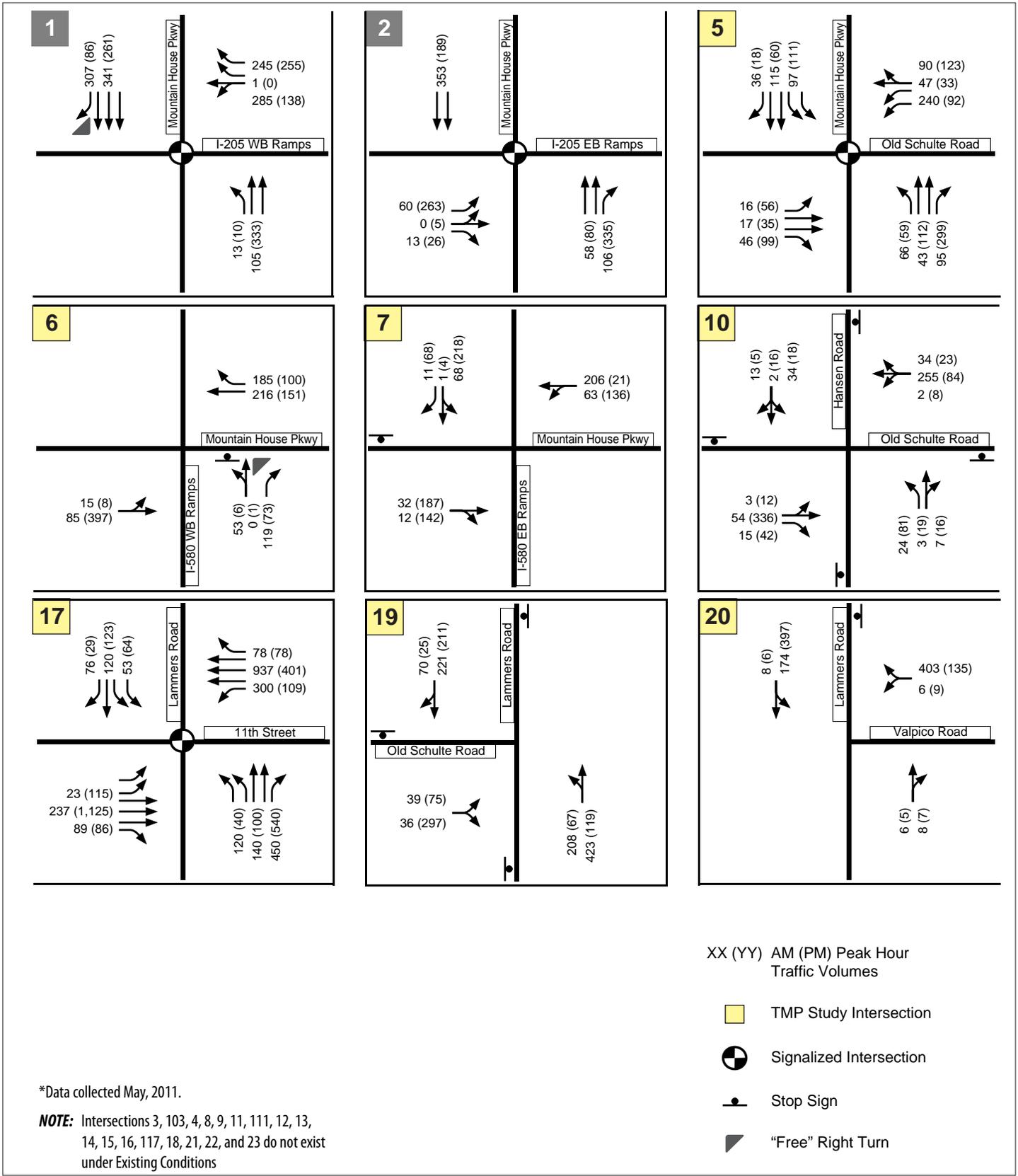
12. Pavilion Parkway / New Schulte Road*
13. Pavilion Parkway / Old Schulte Road*
14. Lammers Extension / I-205 WB Ramps*
15. Lammers Extension / I-205 EB Ramps*
16. Lammers Extension / Commerce Way*
17. Lammers Road / 11th Street
117. Lammers Road / Capital Parks Drive*
18. Lammers Road / New Schulte Road*
19. Lammers Road / Old Schulte Road
20. Lammers Road / Valpico Road
21. Lammers Road / Linne Road
22. Lammers Road / I-580 WB Ramps*
23. Lammers Road / I-580 EB Ramps*

6. Intersection Peak Hour Traffic Volumes

Intersection operations are evaluated for the weekday AM and PM peak hours. These conditions represent the regularly occurring peak time for the commercial, office, and business park industrial uses proposed under the Specific Plan. Counts of traffic, pedestrians, and bicyclists were taken in May 2011 at the study intersections, for the AM peak period (7:00 – 9:00 a.m.) and the PM peak period (4:00 to 6:00 p.m.). The AM and PM peak hour traffic volumes are shown in Figure 4.14-3.

7. Intersection Level of Service Methodology

The operational performance of a roadway network is commonly described with the term “level of service” (LOS). LOS is a qualitative description of operating conditions, ranging from LOS A (free flow traffic conditions with little or no delay) to LOS F (oversaturated conditions where traffic flows exceed design capacity, resulting in long queues and delays). The LOS analysis methods outlined in the Highway Capacity Manual (Transportation Research Board 2000) were used in this study. The Highway Capacity Manual is considered the state of the art methodology for assessing intersection operations and defining impacts, and allows for the accurate



Source: Fehr and Peers, 2013.

FIGURE 4.14 - 3

EXISTING INTERSECTION LANE GEOMETRY AND PEAK HOUR VOLUMES

definition of mitigation measures, such as lengthening or adding turning lanes, modifying the signal phasing or timing, and other options. The 2000 HCM was used for this analysis rather than the recently released 2010 HCM, to provide consistency with the analysis in the recently adopted Tracy Roadway and Transportation Master Plan. It is noted that the 2010 and 2000 methodologies for intersection traffic operations are substantially the same; however, the 2010 HCM is not yet in wide use by jurisdictions.

The HCM methods for calculating LOS for signalized and unsignalized intersections are described below.

a. Signalized Intersections – Methodology

Traffic operations at signalized intersections are evaluated using the LOS method described in Chapter 16 of the 2000 Highway Capacity Manual. A signalized intersection's LOS is based on the weighted average control delay IS measured in seconds per vehicle. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration. **Table 4.14-2** summarizes the relationship between the control delay and LOS for signalized intersections.

b. Unsignalized Intersections – Methodology

In Chapter 17 of the Transportation Research Board's 2000 Highway Capacity Manual, the LOS for unsignalized intersections (side-street or all-way stop controlled intersections) is also defined by the average control delay per vehicle (measured in seconds). The control delay incorporates delay associated with deceleration, acceleration, stopping, and moving up in the queue. For side-street stop-controlled intersections, delay is calculated for each stop-controlled movement and for the uncontrolled left turns, if any, from the main street. The delay and LOS for the intersection as a whole and for the worst movement are reported for side-street stop intersections. The intersection average delay is reported for all-way stop intersections. **Table 4.14-3** summarizes the relationship between delay and LOS for unsignalized intersections. The delay ranges for unsignalized intersections are lower than

TABLE 4.14-2 SIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Description	Average Control Delay (Seconds)
A	Operations with very low delay occurring with favorable traffic signal progression and/or short cycle lengths.	< 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10.0 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 20.0 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	> 35.0 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	> 55.0 to 80.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	> 80.0

Source: Highway Capacity Manual, Transportation Research Board, 2000.

for signalized intersections as drivers expect less delay at unsignalized intersections.

8. Intersection Level of Service Standards

a. City of Tracy

As described in General Plan Objective CIR 1.3, Policy P1, the City of Tracy strives for an intersection level of service standard of LOS D to the extent feasible. LOS E or lower is allowed on streets and at intersections within

TABLE 4.14-3 UNSIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Description	Average Control Delay Per Vehicle (Seconds)
A	Little or no delays	< 10.0
B	Short traffic delays	> 10.0 to 15.0
C	Average traffic delays	> 15.0 to 25.0
D	Long traffic delays	> 25.0 to 35.0
E	Very long traffic delays	> 35.0 to 50.0
F	Extreme traffic delays with intersection capacity exceeded	> 50.0

Source: Highway Capacity Manual, Transportation Research Board, 2000.

¼-mile of a freeway and in the downtown and bowtie areas. Objective CIR 1.3, Policy P2 allows the City to allow individual locations to fall below the City’s LOS standards in instances where the construction of physical improvements would be infeasible, prohibitively expensive, significantly impact adjacent properties or the environment, or have a significant adverse effect on the character of the community, including pedestrian mobility, crossing times, and comfort/convenience.

b. Caltrans

Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on State highway facilities; however, the agency acknowledges that this may not always be feasible, particularly in urban environments where right-of-way is constrained. Where maintaining LOS C/D is not feasible, Caltrans attempts to maintain the existing LOS when assessing the impact of new development.

c. San Joaquin County Congestion Management Agency

The San Joaquin County CMP LOS standard for I-205, I-580, and Lammers Road is LOS D.

d. Alameda County Congestion Management Agency

The Alameda County CMP standard for I-580 is LOS E.

9. Existing Intersection Levels of Service

Table 4.14-4 shows the existing weekday AM and PM peak hour service levels, based on the counts conducted at the existing study area intersections. Currently, all of the intersections operate at LOS C or better (with most operating at LOS A or B), except for one intersection – Lammers Road/Old Schulte Road (#19) – operates at LOS D. This all-way stop-controlled intersection operates at LOS D in the AM peak hour and LOS B in the PM peak hour. At one other intersection, I-580 Eastbound Ramps/Mountain House Parkway, the overall intersection LOS in the PM peak hour is B, but the side-street left turn operates at LOS D.

10. Existing Roadway Segment Volumes and Capacities

Table 4.14-5 shows the existing weekday AM and PM peak hour roadway segment volumes, derived from the 2011 intersection counts. The capacities shown are taken from the Tracy Travel Demand Model. As indicated in the table, the roadways in the study area currently operate well below capacity.

11. Existing Freeway Volumes

The LOS for a freeway section is based on measures of density (passenger cars/ lane/ mile). Freeway LOS is a qualitative description of traffic flow based on speed, travel time, delay, and freedom to maneuver. There are six levels, ranging from LOS A (i.e., the best operating conditions) to LOS F (i.e., the worst). LOS E represents “at-capacity” operation. When volumes exceed capacity, stop-and-go conditions result and operations are designated as LOS F. Caltrans’ policy is to maintain LOS D operations or better on State Route 99. **Table 4.14-6** presents a summary of the relationship between LOS and density for freeway sections and ramp junctions

TABLE 4.14-4 EXISTING (2011) INTERSECTION LEVELS OF SERVICE

Intersection	Control	Peak Hour	Existing	
			Delay	LOS
1. I-205 Westbound Ramps/ Mountain House Parkway ^b	Signal	AM	8.2	A
		PM	7.6	A
2. I-205 Eastbound Ramps/ Mountain House Parkway ^b	Signal	AM	5.1	A
		PM	7.6	A
5. Old Schulte Road/ Mountain House Parkway ^b	Signal	AM	29.4	C
		PM	7.6	A
6. I-580 Westbound Ramps/ Mountain House Parkway ^b	SSSC ^a	AM	2.9 (NB 10.7)	A (B)
		PM	1.4 (NB 11.9)	A (B)
7. I-580 Eastbound Ramps/ Mountain House Parkway ^b	SSSC ^a	AM	4.4 (SB 14.1)	A (B)
		PM	12.6 (SB 29.6)	B (D)
10. Old Schulte Road/ Hansen Road	AWSC	AM	10.4	B
		PM	12.2	B
17. 11 th Street/Lammers Road ^b	Signal	AM	25.6	C
		PM	28.6	C
19. Old Schulte Road/ Lammers Road	AWSC	AM	30.7	D
		PM	11.2	B
20. Valpico Road/ Lammers Road	SSSC ²	AM	9.7 (WB 11.1)	A (B)
		PM	8.2 (WB 9.7)	A (A)

Notes: Signal = Signalized intersection; AWSC = All-way stop-controlled intersection; SSSC = Side-street stop-controlled intersection.

^a For side-street stop-controlled intersections, average delay is listed first followed by the delay for the worst approach.

^b LOS Criteria: Within ¼-mile of a freeway, LOS E shall be allowed.

Source: Fehr & Peers, January 2013.

Table 4.14-7 presents the existing AM and PM peak hour freeway volumes on I-580 and I-205 in the study area. The vehicle density, in passenger cars per hour per lane, as calculated with the 2000 HCM methodology, is also given along with the corresponding LOS. All segments currently operate at acceptable service levels (LOS D or better for the I-205 and I-580 segments in San Joaquin County, and LOS E or better for I-580 west of I-205 in Alameda County).

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TABLE 4.14-5 EXISTING (2011) ROADWAY VOLUMES, CAPACITIES, AND VOLUME-TO-CAPACITY RATIOS

Street	Segment	Existing Capacity	Volume		V/C	
			AM Existing	PM Existing	AM Existing	PM Existing
MHP SB	N/O I-205	890	650	350	0.7	0.4
	I-205 to Road A	890	370	220	0.4	0.2
	Road A to Capital Parks Drive	890	370	220	0.4	0.2
	Capital Parks Drive to New Schulte Road	890	370	220	0.4	0.2
	New Schulte Road to Old Schulte Road	890	370	220	0.4	0.2
	Old Schulte Road to I-580	1,490	400	250	0.3	0.2
	S/O I-580	1,490	220	90	0.1	0.1
MHP NB	N/O I-205	890	350	590	0.4	0.7
	I-205 to Road A	890	160	420	0.2	0.5
	Road A to Capital Parks Drive	890	160	420	0.2	0.5
	Capital Parks Drive to New Schulte Road	890	160	420	0.2	0.5
	New Schulte Road to Old Schulte Road	890	160	420	0.2	0.5
	Old Schulte Road to I-580	1,490	200	470	0.1	0.3
	S/O I-580	1,490	40	330	0.0	0.2
Hansen SB	N/O Capital Parks Drive	890	50	40	0.1	0.0
	Capital Parks Drive to New Schulte Road	890	50	40	0.1	0.0
	New Schulte Road to Old Schulte Road	890	50	40	0.1	0.0
	S/O Old Schulte Road	890	20	70	0.0	0.1

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TABLE 4.14-5 EXISTING (2011) ROADWAY VOLUMES, CAPACITIES, AND VOLUME-TO-CAPACITY RATIOS

Street	Segment	Existing Capacity	Volume		V/C	
			AM Existing	PM Existing	AM Existing	PM Existing
Hansen NB	N/O Capital Parks Drive	890	40	50	0.0	0.1
	Capital Parks Drive to New Schulte Road	890	40	50	0.0	0.1
	New Schulte Road to Old Schulte Road	890	40	50	0.0	0.1
	S/O Old Schulte Road	890	30	120	0.0	0.1
Lammers SB	N/O 11th Street	890	250	220	0.3	0.2
	11th Street to Capital Parks Drive	890	510	320	0.6	0.4
	Capital Parks Drive to New Schulte Road	890	510	320	0.6	0.4
	New Schulte Road to Old Schulte Road	890	290	240	0.3	0.3
	Old Schulte Road to Valpico Road	890	260	510	0.3	0.6
	S/O Valpico Road	890	10	20	0.0	0.0
Lammers NB	N/O 11th Street	890	240	290	0.3	0.3
	11th Street to Capital Parks Drive	890	630	340	0.7	0.4
	Capital Parks Drive to New Schulte Road	890	630	340	0.7	0.4
	New Schulte Road to Old Schulte Road	890	460	190	0.5	0.2
	Old Schulte Road to Valpico Road	890	630	190	0.7	0.2
	S/O Valpico Road	890	10	10	0.0	0.0

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TABLE 4.14-5 EXISTING (2011) ROADWAY VOLUMES, CAPACITIES, AND VOLUME-TO-CAPACITY RATIOS

Street	Segment	Existing Capacity	Volume		V/C	
			AM Existing	PM Existing	AM Existing	PM Existing
Old Schulte Road EB	W/O MHP	1,490	80	190	0.1	0.1
	MHP to Hansen Road	1,490	210	450	0.1	0.3
	Hansen Road to Lammers Road	890	100	370	0.1	0.4
Old Schulte Road WB	W/O MHP	1,490	150	110	0.1	0.1
	MHP to Hansen Road	1,490	380	250	0.3	0.2
	Hansen Road to Lammers Road	890	290	120	0.3	0.1
Valpico EB	E/O Lammers Road	740	180	370	0.2	0.5
Valpico WB	E/O Lammers Road	740	410	140	0.6	0.2
11th EB	W/O Lammers Road	1,780	350	1,330	0.2	0.7
	E/O Lammers Road	2,230	660	1,390	0.3	0.6
11th WB	W/O Lammers Road	1,780	1,130	470	0.6	0.3
	E/O Lammers Road	2,230	1,320	590	0.6	0.3

Notes: Volumes derived from the 2011 intersection counts. Capacities derived from the City of Tracy 2035 Travel Demand Model.

V/C ratios are correlated with LOS as follows: < 0.60=LOS A; 0.60 - 0.69=LOS B; 0.70 - 0.79=LOS C; 0.80 - 0.89=LOS D; 0.90 - 0.99=LOS E; ≥ 1.00=LOS F.

Source: Fehr & Peers, February 2013.

TABLE 4.14-6 FREEWAY LEVEL OF SERVICE DEFINITIONS

Level of Service (LOS)	Freeway Maximum Density (Passenger cars/mile/lane)
A	11
B	18
C	26
D	35
E	45
F	> 45

Note: Freeway mainline LOS based on a 65 MPH free-flow speed.

Source: *Highway Capacity Manual*, Chapter 23 (Basic Freeway Sections) and Chapter 25 (Ramps and Ramp Junctions Methodology), Transportation Research Board, 2000.

12. Pedestrian Facilities

Existing roadways in the Specific Plan Area do not have sidewalks. However, most roadways have paved shoulders with a wide graded shoulder area adjacent to it, which can allow for pedestrian circulation in a rural context. Some roadways have wider paved shoulders—5 feet in width or more—such as Schulte Road and Mountain House Parkway. Intersections in the Specific Plan Area are 1 mile or more apart.

Where recent development has occurred in the vicinity of the Specific Plan Area, sidewalks have been built. In the Patterson Pass Business Park industrial area west of Mountain House Parkway and north of I-580, 6-foot-wide sidewalks exist on both sides of Schulte Road, Stanford Road, and Berkeley Road, as well as on the west side of Mountain House Parkway. At both the Mountain House Parkway/Old Schulte Road and Mountain House Parkway/Berkeley Road intersections, at least one leg of the intersection has a signalized pedestrian crossing. The wide cross-section of roadways in the area creates long crossing distances at both intersections—180 feet at Mountain House Parkway/Old Schulte Road and 80 feet at Mountain House Parkway/Berkeley Road.

TABLE 4.14-7 EXISTING FREEWAY VOLUMES AND SERVICE LEVELS

Segment	Segment Capacity	Direction	Volume (Density) [Level of Service]	
			Existing AM	Existing PM
<i>I-205</i>				
West of Mountain House Parkway	6,600	EB	2,300 (14) [B]	4,910 (31) [D]
	6,600	WB	4,180 (25) [C]	2,390 (14) [B]
Mountain House Parkway to Tracy Boulevard	8,140	EB	2,340 (14) [B]	4,980 (31) [D]
	8,140	WB	4,390 (27) [D]	2,690 (16) [B]
East of Tracy Boulevard	6,600	EB	2,620 (16) [B]	4,320 (26) [D]
	6,600	WB	3,750 (23) [C]	2,620 (16) [B]
<i>I-580</i>				
West of I-205 Interchange	8,800	EB	3,140 (15) [B]	6,960 (35) [D]
	11,000	WB	6,430 (25) [C]	3,140 (12) [B]
I-205 Interchange to Patterson Pass Road	4,400	EB	840 (8) [A]	2,050 (18) [C]
	4,400	WB	2,250 (22) [C]	750 (7) [A]
Patterson Pass Road to Corral Hollow Road	4,400	EB	840 (8) [A]	2,040 (18) [C]
	4,400	WB	2,220 (21) [C]	720 (6) [A]
East of Corral Hollow Road	4,400	EB	840 (8) [A]	1,650 (15) [B]
	4,400	WB	1,670 (16) [B]	760 (7) [A]

Notes: I-205 volumes from Caltrans 2012 PeMS database.

I-580 volumes from Caltrans 2009 traffic volumes database (latest available complete set of data; matches more recent spot counts).

Analysis completed using HCM basic segment freeway operations method. Density is given in passenger cars/hour/lane.

Source: Fehr & Peers, February 2013.

13. Bicycle Facilities

The existing roadways in the study area do not have bicycle facilities. Wide shoulders, such as those on Old Schulte Road and Mountain House Parkway, can provide a place for bicyclists to ride outside of the travel lane; however, these are not designated bicycle routes. Bicycle facilities do exist in the developed areas to the east of the study area, most notably Class 1 bicycle paths on 11th Street between Lammers Road and Corral Hollow Road.

14. Transit Service

The City of Tracy operates fixed-route bus and paratransit services with the TRACER bus system. Additionally, San Joaquin Regional Transit District (SJRTD) operates several routes that pick up passengers in Tracy. The service is described below. The fixed routes all operate in central Tracy, and do not extend into the study area.

a. TRACER Fixed-Route Bus Service

As the study area is primarily agricultural in character in its present form, no service currently exists on the site. However, TRACER operates two fixed route service adjacent to the study area. All routes operate Monday through Friday from 7:00 a.m. to 7:00 p.m., and Saturday from 9:00 a.m. to 5:00 p.m. TRACER does not offer service on Sundays.

The one-way cash fare for the TRACER fixed route service is \$1.25 for adults, discounted to \$1.00 for students and \$0.50 for seniors and the disabled. Additionally, day passes offering unlimited trips in a single day are available for \$3.00 for adults (\$2.50 for students, \$1.25 for seniors and the disabled) as are 10-ride tickets and weekly passes for \$12.50 (\$10.00 for students, \$5.00 for seniors and the disabled).

TRACER currently operates the following routes near to the study area:

- “ *Commuter Route*—runs both clockwise and counterclockwise throughout the City of Tracy, serving a variety of residential neighborhoods as well as the Tracy Transit Station and the Downtown Civic Center. To the east of the study area, the Commuter route travels along Schulte Road, heading

northwest through the residential areas south of 11th Street. The route then travels along 11th Street, north along Lammers Road, and makes a loop in the residential neighborhood to the east of Lammers.

- “ *Route B*—serves many of the commercial and institutional sites in central Tracy as well as major retailers north of I-205.

b. TRACER Paratransit Service

The Transit Service Area incorporates most of the City of Tracy and is generally bounded by Lammers Road to the west, Larch Road and Arbor Avenue to the north, and Chrisman Road to the east. Service is available during the fixed route TRACER service. One-way rides are \$1.50 for seniors, disabled individuals, and those on medicare, and the cash fare increases to \$1.75 for the general public living in unincorporated areas and guests and companions of paratransit users. The Paratransit Subsidized Taxi Service is available to TRACER Paratransit users during non-operating hours.

c. San Joaquin Regional Transit District (SJRTD)

SJRTD provides intercity fixed route service between Tracy and Stockton. As of January 1, 2012, a one-way fare on an RTD costs \$1.50 (\$0.75 discounted for seniors or Medicate card-holders). One-day passes are available for \$4.00 (\$2.00 discounted), and 31-day passes are available for \$65.00 (\$40.00 for students, \$30.00 discounted). Additionally, the RTD-BART Commuter service costs \$7.00 each way with monthly fares ranging from \$132.00 to \$144.00 depending on destination and origin. SJRTD operates the following three routes in Tracy:

- “ *Route 90*—runs from Stockton’s Downtown Transit Center along 1-5 to Tracy, where it runs east-west along Grant Line Road, ending at the Wal-Mart just west of I-205. Route 90 operates on weekdays from 5:30AM to 11:00PM with 8 trips staggered with 1-3 hour headways.
- “ *RTD-BART Commuter*—runs from Stockton’s Downtown Transit Center via the Naglee Park and Ride lot in Tracy to the Lawrence Livermore National Laboratories and Dublin BART. Another route runs from Manteca to the Naglee Park and Ride in Tracy. The route operates from

4:45 a.m. to 8:10 p.m., with three trips during the AM peak and three trips during the PM peak service.

d. Altamont Commuter Express (ACE)

Altamont Commuter Express (ACE) operates commuter trains from San Jose to Stockton, stopping in Lathrop/Manteca, Tracy, Livermore, Pleasanton, Fremont, and Santa Clara before reentering San Jose. The ACE in Tracy is located on the northeast corner of the intersection of West Linne Road and Tracey Boulevard. In service Monday through Friday, ACE offers three trains in the AM peak period operating from 4:20 a.m. to 8:50 a.m. and three trains during the PM peak period, operating from 3:35 p.m. to 7:45 p.m. ACE does not run on the weekends.

Monthly, weekly, 20-trip, and one-way passes are available and vary in price based on distance traveled. Adult fares range from \$11.75 for a one-way trip (\$300 monthly pass) from Stockton to San Jose to \$3.50 for a one-way trip (\$72.75) from Santa Clara to San Jose.

15. Park-and-Ride Facilities

Park-and-ride lots near major travel corridors facilitate accessibility to transit usage and encourage carpooling. No Park and Ride lots currently exist in the vicinity of the study area despite its close location to the I-205/I-580 interchange. The City of Tracy has three park and ride facilities. The nearest one is located at I-205/Grant Line Road/Naglee Road and has 180 parking spaces and four bike lockers. San Joaquin Regional Transit District (SJRTD) provides inter-regional bus service from this location along its 150, 166, 172, and 173 routes. The Factory Outlet Stores at I-205 and MacArthur Drive provide 25 parking spaces, and a lot at 6th Street and Central Avenue has 40 parking spaces.

According to the *SJCOG Park and Ride Lot Master Plan Study* (November 2007), a park and ride lot has been considered to the northwest of Mountain House Road as part of an interchange improvement project there.

Additionally, a park and ride is recommended as a condition of future new development along 11th Street, near to Lammers Road.

16. Truck Routes

As described in the TMP, the following are existing through truck routes in the study area:

- “ Eleventh Street from I-205 Ramps to Lammers Road (through)
- “ Lammers Road from Byron Road to Eleventh Street (through)
- “ I-205 north of project area (STAA)
- “ I-580 southwest of project area (STAA)

D. Impact Analysis Methodology

This section describes the key elements of the transportation impact analysis methodology, including:

- “ Project Description (Roadway Network, Pedestrian and Bicycle Facilities, Transit Network, and Truck Routes)
- “ Scenarios Analyzed and Analysis Methodology
- “ Forecasting Methodology
- “ Project Trip Generation, Distribution and Assignment
- “ Traffic Operations and Capacity Analysis
- “ Significance Criteria

1. Project Description

The Project Description and Land Use Chapters of the DEIR present a detailed description of the Project as a whole, including land uses and phasing. This section describes key transportation elements relevant to the transportation and traffic impact analysis.

2. Project Roadway Network

The Project's roadway network is consistent with the City's Transportation Master Plan roadway network and includes multiple connections to that network. TMP roadways that serve as primary east-west circulators on the Specific Plan Area include Capital Parks Drive, New Schulte Road, and Old

Schulte Road; the Project adds an additional on-site east-west roadway located between Old Schulte and New Schulte. TMP roadways that serve as primary north-south circulators on the site include Mountain House Parkway, Hansen Road, and Pavillion Parkway; the Project supplements these with additional north-south connectors within the Specific Plan Area. The Project roadway network will distribute traffic within the Specific Plan Area and to/from the freeways and downtown Tracy, and will also provide mobility for bicycles, pedestrians, and transit vehicles.

The Project will implement roadway improvements in phases. Figure 4.14-4 illustrates the planned roadway improvements for Phase I and Buildout.

a. Existing Plus Phase I Roadway Network Assumptions

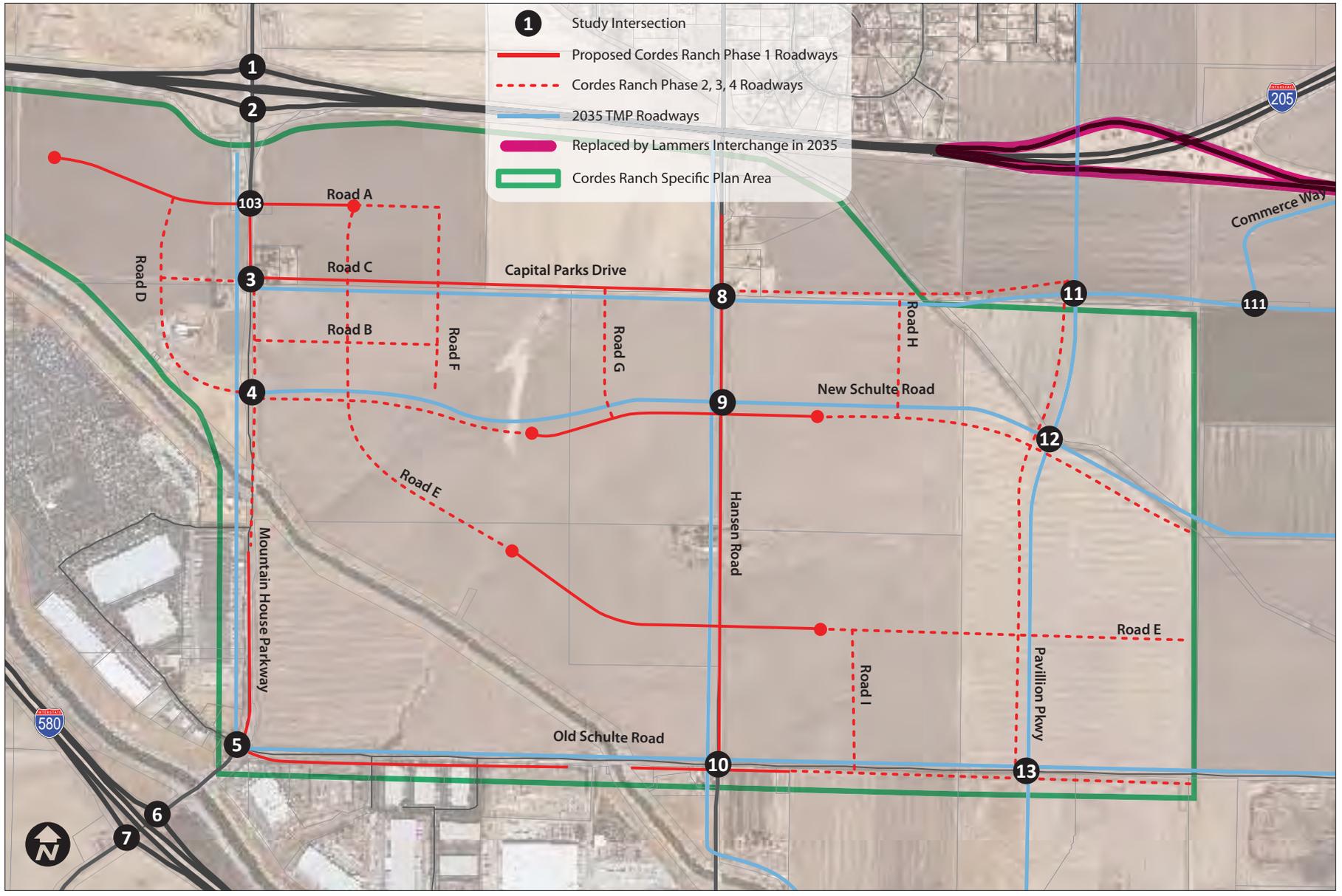
For the Existing Plus Phase 1 Project scenario, the Project Phase 1 network as shown in Figure 4.14-4 is assumed to be fully constructed and connected to the existing roadway network. All new Project streets are assumed to be constructed to the minimum width, including turn lanes at intersections, necessary to serve the projected traffic volume for the Existing Plus Phase 1 Project scenario. In some but not all cases, these configurations match the ultimate street widths in the Project; in others, the Existing Plus Phase 1 configurations are narrower/provide less capacity than the ultimate street widths in the Project. However, the existing streets themselves – Mountain House Parkway, Old Schulte Road and Hansen Road – are not assumed to be widened beyond their current configurations to ensure consistency in the methodology.

b. Existing Plus Buildout Roadway Network Assumptions

For this case, the Project Buildout roadway network is assumed to be fully constructed and connected to the existing roadway network.

c. Cumulative (2035) Plus Phase I Roadway Network Assumptions

For the purposes of the cumulative traffic analysis, Phase I of the Project is assumed to be built by 2035. The roadway network assumed in the 2035 cumulative analysis includes the following improvements in the TMP.



Source: Fehr and Peers, 2013.

FIGURE 4.14-4
 ROADWAY NETWORK: CORDES RANCH SPECIFIC PLAN AND SURROUNDING TMP NETWORK

11th Street Interchange will be removed by 2035. Under existing conditions, the west leg of the 11th Street and Lammers intersection serves as the on- and off-ramps to Interstate 205. As planned in the TMP, the interchange will be removed and traffic accessing the 11th Street ramps will use the proposed Lammers interchange, just east of the existing ramps.

New Schulte Road will be completely constructed in 2035. As planned in the TMP, the roadway will provide a continuous east-west connection beginning in west Tracy at Mountain House Parkway and terminating east of downtown Tracy at Chrisman Road. New Schulte Road begins as a two-lane roadway at Mountain House Parkway and expands to four lanes east of Hansen Road.

Capital Parks Drive will be completely constructed in 2035. Like New Schulte Road, the roadway will provide an east-west connection beginning in west Tracy at Mountain House Parkway and terminating at Lammers Road. Capital Parks Drive starts as a four-lane roadway and expands to six-lanes east of Pavilion Parkway.

Hansen Road is currently planned to be widened from a two-lane roadway to a four-lane roadway, from just south of Old Schulte Road to south of the I-205 overpass. Per the TMP improvements, Hansen Road, south of Old Schulte Road, will continue as a two-lane roadway and is planned to extend south providing connections to Pavilion Parkway, Valpico Road and finally terminating at Lammers Road. No improvements are expected on Hansen Road, north of the I-205 overpass. Additional pedestrian and bicycle facilities should be provided with the roadway widening.

Pavillion Parkway will be completely constructed in 2035. As planned from the TMP, Pavillion Parkway will extend south-west of the Power Road and Pavillion Parkway intersection, just west of the Pavillion Parkway and I-205 interchange. From the existing roadway, Pavillion Parkway will widen to six- or eight-lanes until connecting to Grant Line Road, at which point Pavillion Parkway will become a four-lane road, terminating at Hansen Road.

Lammers Road will be extended to the proposed I-580 Lammers interchange and widened from two to four-lanes between the proposed I-580 interchange to New Schulte Road and six-lanes between New Schulte Road and 11th Street. Lammers Road will also be extended to a new interchange at I-205 which will replace the Eleventh Street Interchange.

Commerce Way will be completely constructed by 2035. The roadway will provide a north-south connection between Capital Parks Drive and Lammers Extension. The planned six-lane roadway will provide a direct connection to the propose Lammers interchange at I-205.

d. Cumulative Plus Buildout Roadway Network Assumptions

For this case, the Project Buildout roadway network is assumed to be fully constructed and connected to the 2035 TMP roadway network.

3. Pedestrian and Bicycle Facilities

The Specific Plan provides descriptions of the proposed bicycle and pedestrian facilities in the Infrastructure chapter. All major circulation streets will include a separated 5-foot sidewalk on one side, and a 10- to 12-foot Class I bike path on the opposite side to serve both pedestrians and bicyclists. Streets without the bicycle path have sidewalks on both sides.

The bicycle network exceeds the system envisioned in the TMP, providing Class 1 paths on New Schulte Road and along the PG&E Power Transmission Easement, in addition to Mountain House Parkway, Old Schulte Road, and Capital Parks Drive. On other streets without the bicycle path (Roads A, B, D, E, F, G, H, and I), bicycles are accommodated within 12- to 13-foot travel lanes or in 6- to 8-foot shoulders. The Specific Plan identifies the following roadways as having “Class 2 Bike Paths within the street,” but in fact these are Class 3 bicycle routes, because striped bicycle lanes are not proposed:

- “ Road A
- “ Road B between Mountain House Parkway and Road F
- “ Road D

- “ Road E between Road A and New Schulte Road
- “ Road F

General Office Streets Road B and Road F between Capital Parks Drive and New Schulte Road have diagonal parking, with a 12-foot travel lane. On these streets, it is recommended that the diagonal parking be angled such that there is a 2-foot buffer between the backs of cars and the travel lane edge stripe, and that sharrows be used to designate the appropriate place for bicyclists to ride within the travel lane.

The Project roadway network and associated bicycle/pedestrian facilities are laid out in a grid to maximize connectivity and minimize trip lengths for bicyclists and pedestrians. The Specific Plan Design Guidelines chapter also contains guidance on maximizing development site and individual building access for pedestrians, particularly in Section 4.3.c describing Site Planning/Building Orientation for the I-205/BPI Overlay:

Site Planning should promote pedestrian circulation by creating pathways, linkages, and visual connections between buildings; include multiple connections to public sidewalks and pathways between buildings and parcels to encourage pedestrian circulation between buildings and adjacent uses.

4. Transit Routes

The Specific Plan describes the current available transit service in Tracy, but does not lay out a planned transit network to serve the site at completion of Phase 1 or full buildout. Rather, the Specific Plan states:

It is anticipated that the City of Tracy will take a phased approach to providing public transit to the project. The City will explore the needs based on construction phasing and will evaluate appropriate routes to serve multiple businesses. The businesses in Cordes Ranch will work cooperatively with the City to modify and expand routes as necessary and when feasible to efficiently accommodate demand. It is understood that in determining the final bus stop locations additional right-of-way

may be required to accommodate bus stops and shall be dedicated through the development review and/or mapping process.”

Transit service will be extended westward along the east-west roadways connecting the Project site to central Tracy, as demand grows with development. Initially this may include a route along Old Schulte Road, followed by routes along New Schulte Road and Capital Parks Drive.

5. Truck Routes

The Specific Plan identifies truck routes in Figure 6.26. The routes are consistent with those identified in the Tracy Roadway and Transportation Master Plan, and include additional Project roadways within the Specific Plan. STAA¹ trucks are accommodated at all intersections of the truck routes, with the exception of the intersection of Capital Parks Drive and Road H. Truck routes include the following:

North-South Roadways

Mountain House Parkway
Hansen Road (south of Capital Parks Drive)
Pavillion Parkway (south of Capital Parks Drive)
Roads D, G, I, and H
Road F between Road A and Capital Parks Drive

East-West Roadways

Capital Parks Drive
New Schulte Road up to Hansen Road
Old Schulte Road up to Hansen Road
Roads A (except between Road D and Mountain House Parkway), C and E

The Project will generate a substantial volume of truck traffic, based on the proposed uses, which include warehousing, manufacturing, and light

¹ The Surface Transportation Assistance Act defines the legal dimensions for trucks allowed to use the STAA National Network and Terminal Access Routes.

industrial uses, in addition to retail and office uses. The truck volume assumptions are discussed in the trip generation section below.

6. Scenarios Analyzed and Analysis Methodologies

As stated at the beginning of this chapter, the analysis of the Phase 1 Project is performed on an intersection level, and the analysis of Project Buildout is performed on a roadway segment level. This is because Phase 1 of the Project is expected to be fully developed by the horizon year of 2035, whereas full Project Buildout may take additional time beyond 2035 to develop. The longer horizon for Project Buildout makes intersection-level forecasting infeasible for several reasons including: (1) a longer-term travel demand model is not available; (2) there are many variables about how the rest of the region will develop both in terms of land use and infrastructure; and (3) detailed engineering design of roadways for the network under Project Buildout conditions for purposes of analyzing when intersection improvements beyond 2035 would be triggered are not currently available.

Unlike detailed intersection-level forecasts, roadway segment forecasts can be projected for the Project Buildout scenario. Based on the consultants' technical expertise and industry standards, the roadway segment forecasts are useful metrics of Project traffic impacts because, in urban conditions, when segment operations fail, intersection operations would also fail because intersections govern the roadway network capacity.

Based on the above considerations, the following scenarios are assessed in this EIR:

- Existing Plus Phase 1 Project: *Intersection analysis*
- Existing Plus Project Buildout: *Roadway segment analysis*
- 2035 Plus Phase 1 Project: *Intersection analysis*
- 2035 Plus Project Buildout: *Roadway segment analysis*

In addition, freeway segment analysis is provided for all the above cases.

7. Traffic Forecasting

a. Existing Plus Project Phase 1 and Existing Plus Project Buildout

Existing Plus Phase 1 Project and Existing Plus Project Buildout traffic volumes were developed by adding the Project trips (for Phase 1 and full buildout) to the existing traffic counts. See the Project Trip Generation, Distribution, and Assignment, below, for a description of this process.

b. 2035 No Project, 2035 Plus Phase 1 Project, and 2035 Plus Project Buildout

The 2035 traffic forecasts were prepared using the 2035 Tracy Travel Demand Model, supplemented by a manual trip generation and assignment process for the Project traffic. The 2035 Tracy Travel Demand Model is consistent with the model used to prepare the Transportation Master Plan. The baseline model reflects Year 2010 conditions, and the future conditions model represents expected development throughout the City of Tracy Sphere of Influence, to the year 2035.

To obtain 2035 No Project peak hour traffic forecasts, the Cordes Ranch land uses were removed from the 2035 TMP model, and the baseline and 2035 models were run. Using the peak hour intersection turn movements from the baseline and future models, the difference method was applied, which calculates the growth between the baseline and future year for each intersection turning movement. The growth calculated using the difference method was added to existing volumes to obtain 2035 No Project traffic forecasts. Roadway segment volumes were derived from these intersection volumes, to form the baseline for the 2035 Plus Buildout analysis.

To obtain 2035 Plus Phase 1 Project peak-hour intersection forecasts, the following process was used:

- “ In the baseline and 2035 models, the Specific Plan Area was broken down into 17 traffic analysis zones (TAZs) to provide a more refined traffic assignment
- “ The peak hour trip generation calculated as described further below, in Project Trip Generation, Distribution, and Assignment, was entered into

the 17 zones in the baseline and future models. After the models were run, a select-zone process was used to remove the Project trips.

- “ Similar to the 2035 No Project forecasts, the difference method was applied to the resulting baseline and 2035 output, to establish 2035 with Project background forecasts.
- “ To obtain 2035 Plus Phase 1 Project forecasts, the Project trips described below in the Project Trip Generation, Distribution, and Assignment section were added to the background forecasts.

The 2035 Plus Buildout roadway segment volumes were derived similarly, but on a roadway segment basis as opposed to an intersection turning movement basis.

8. Project Trip Generation, Distribution and Assignment

a. Project Trip Generation

The Project’s Land Use Plan as set forth in the Specific Plan includes land use estimates in three categories: commercial, office, and business park industrial. The Specific Plan quantifies the net building floor area allocated to each land use.

The trip generation rates used for the commercial and office uses are Uses #820 (Shopping Center) and #710 (General Office Building) in the Institute of Transportation Engineers *Trip Generation, Eighth Edition*. For the business park industrial use, the net area was allocated to five types of specific land use categories: general warehouse, high-cube warehouse, office, manufacturing, and light industrial. These allocations differed for Phase 1 and Phases 2-4, as shown below:²

Business Park Industrial, Phase 1:

Warehouse = 35%

² The assumptions on the mix of uses for the BPI use are based on discussions with the Project applicants and reflect anticipated market demand and absorption rates.

Hi-Cube Warehouse = 55%

Office = 5%

Manufacturing = 0%

Light Industrial = 5%

Business Park Industrial, Project excluding Phase 1:

Warehouse = 30%

Hi-Cube Warehouse = 30%

Office = 5%

Manufacturing = 19%

Light Industrial = 16%

The number of employees was estimated using the following densities, which are consistent with those in the Tracy Travel Demand Model and are commonly used in most travel demand models:

Commercial: 2 employees / 1,000 square feet

Office: 3 employees / 1,000 square feet

Business Park Industrial: 1 employee / 1,000 square feet

Tables 4.14-8 and 4.14-9 show the land uses converted into employees and broken down into TAZs for the Phase 1 and Full Buildout cases, respectively.

The TAZ map is shown in Figure 4.14-5. Phase 1 of the Project is expected to generate approximately 12,545 employees, primarily in the BPI category. Full buildout of the Project is expected to generate approximately 36,708 employees, with 77 percent in the BPI category.

Tables 4.14-10 and 4.14-11 present the trip generation for the Phase 1 of the Project and for full buildout of the Project, respectively. The Phase 1 Project generates an estimated 3,832 AM and 4,888 PM peak hour trips. Full buildout of the Project generates an estimated 15,215 AM and 16,865 PM peak hour trips.

TABLE 4.14-8 PHASE 1 EMPLOYMENT

Zone ID	Commercial Employees	Office Employees	Business Park	
			Industrial Employees	Total Employees
829	220	0	1,093	1,313
830	444	0	731	1175
834	0	0	1,596	1,596
835	0	0	1607	1607
837	0	0	2614	2614
838	0	0	4,066	4,066
854	0	0	669	669
857	0	0	455	455
Total	664	0	11,881	12,545

Source: Cordes Ranch Specific Plan, Kier & Wright (November 2012); converted to employees and allocated to TAZs by Fehr & Peers.

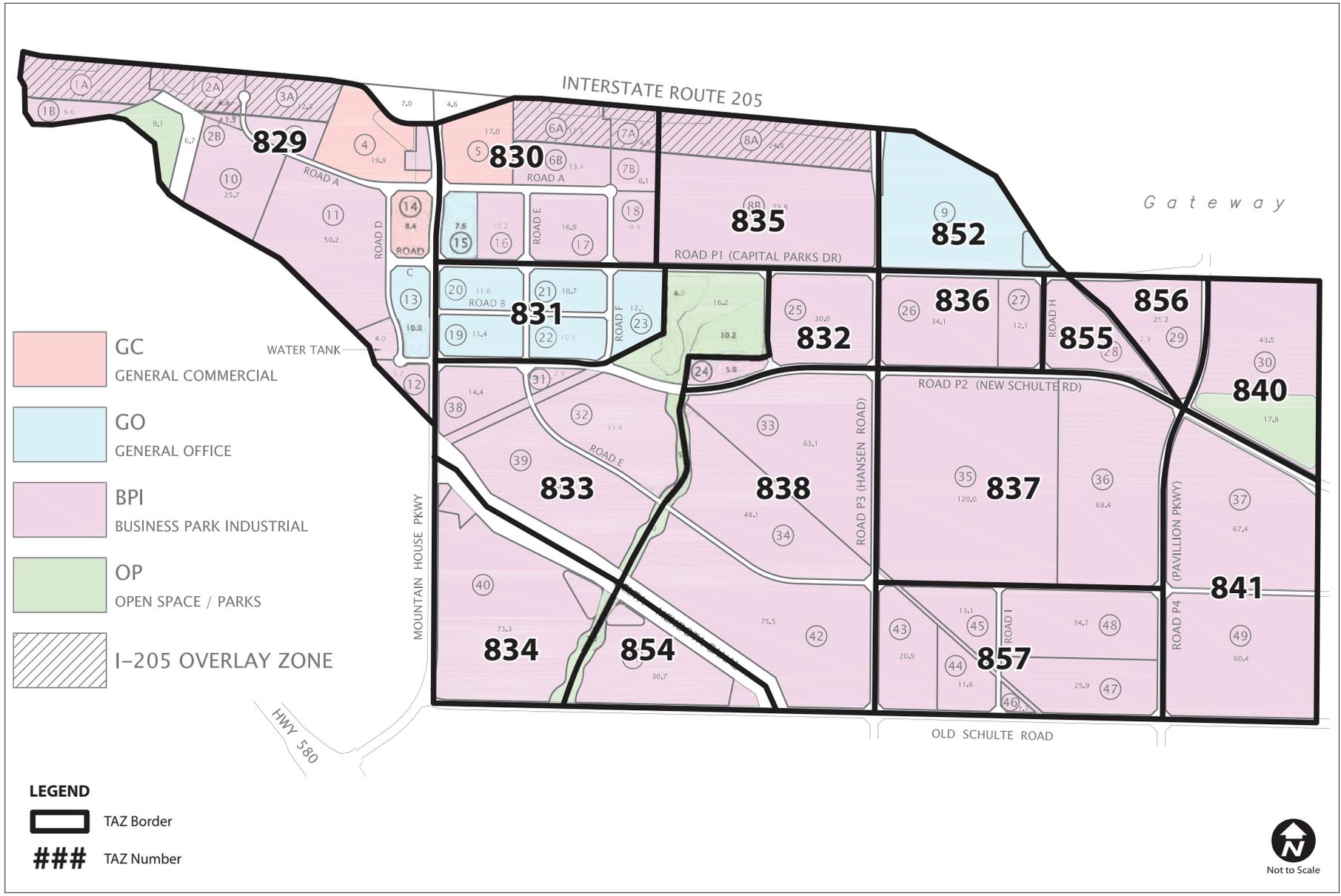
The trip generation in Tables 4.14-11a and 11b includes trips generated by trucks. Because the Project land uses – warehousing, manufacturing and light industrial uses – will generate relatively high truck trips, the intersection analysis assumes the following truck trip percentages, derived from existing counts of trucks as a proportion of total traffic at the industrial area near the I-580/Patterson Pass interchange, as well as from studies of similar industrial sites in Stockton and other San Joaquin Valley locations:

- For the With Project cases, generally 10 percent trucks was assumed, except:
 - On Old Schulte Road and the I-580/Patterson Pass Ramps, 15 percent trucks was assumed; and

TABLE 4.14-9 BUILDOUT EMPLOYMENT

Zone ID	Commercial Employees	Office Employees	Business Park	
			Industrial Employees	Total Employees
829	740	588	3,580	4,908
830	444	447	1,862	2,753
831	0	3,311	0	3,311
832	0	0	775	775
833	0	0	2,150	2,150
834	0	0	1,597	1,597
835	0	3,052	2,580	5,632
836	0	0	1,006	1,006
837	0	0	4,104	4,104
838	0	0	4,735	4,735
840	0	0	1,974	1,974
841	0	0	5,134	5,134
852	0	3,052	0	3,052
854	0	0	669	669
855	0	0	457	457
856	0	0	571	571
857	0	0	2,350	2,350
Total	1,184	7,398	28,126	36,708

Source: Cordes Ranch Specific Plan, Kier & Wright (November 2012); converted to employees and allocated to TAZs by Fehr & Peers.



Source: Fehr and Peers, 2013.

FIGURE 4.14-5
 TRAFFIC ANALYSIS ZONE MAP

TABLE 4.14-10A PHASE 1 AM PEAK HOUR TRIP GENERATION

Zone ID	Commercial		Office ^a		Warehouse		High-Cube Warehouse		Light Industrial		Manufacturing		Total	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
829	67	43	75	10	91	24	35	19	44	6	0	0	312	102
830	136	87	33	5	40	11	16	8	20	3	0	0	245	113
834	0	0	109	15	132	35	51	28	65	9	0	0	357	87
835	0	0	110	15	133	35	52	28	65	9	0	0	360	87
837	0	0	178	24	217	58	84	45	106	14	0	0	585	142
838	0	0	277	38	337	90	131	70	165	22	0	0	910	220
854	0	0	46	6	55	15	22	12	27	4	0	0	150	36
857	0	0	31	4	38	10	15	8	18	3	0	0	102	25
Total	202	129	858	117	1,044	278	405	218	510	69	0	0	3,020	812

^a The Office generated trips are part of the 'BPI' land use, which contains some office development potential.
Source: Based on rates contained in ITE *Trip Generation, 8th Edition*.

TABLE 4.14-10B PHASE 1 PM PEAK HOUR TRIP GENERATION

Zone ID	Commercial		Office ^a		Warehouse		High-Cube Warehouse		Light Industrial		Manufacturing		Total	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
829	201	209	14	68	31	92	20	40	6	47	0	0	271	455
830	406	423	6	30	14	41	9	18	3	21	0	0	438	532
834	0	0	20	99	45	134	29	59	9	68	0	0	103	360
835	0	0	20	99	45	135	29	59	9	69	0	0	104	362
837	0	0	33	162	73	220	47	96	15	112	0	0	169	589
838	0	0	52	251	114	342	74	150	24	174	0	0	263	916
854	0	0	8	41	19	56	12	25	4	29	0	0	43	151
857	0	0	6	28	13	38	8	17	3	19	0	0	29	103
Total	607	631	159	778	352	1,057	228	464	73	537	0	0	1,420	3,468

^a The Office generated trips are part of the 'BPI' land use, which contains some office development potential.
Source: Based on rates contained in ITE *Trip Generation, 8th Edition*.

TABLE 4.14-11A BUILDOUT AM PEAK HOUR TRIP GENERATION

Zone ID	Commercial		Office		Warehouse		High-Cube Warehouse		Light Industrial		Manufacturing		Total	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
829	226	144	456	62	209	56	64	35	260	35	180	51	1,396	383
830	136	87	306	42	113	30	34	18	152	21	111	31	852	229
831	0	0	1,505	205	0	0	0	0	0	0	0	0	1,505	205
832	0	0	53	7	55	15	14	7	100	14	84	24	306	67
833	0	0	147	20	153	41	38	20	278	38	233	66	848	185
834	0	0	109	15	132	35	51	28	65	9	0	0	357	87
835	0	0	139	19	164	44	59	32	121	17	47	13	530	124
836	0	0	69	9	72	19	18	10	130	18	109	31	397	86
837	0	0	280	38	323	86	110	59	299	41	161	45	1,173	270
838	0	0	277	38	337	90	131	70	165	22	0	0	910	220
840	0	0	65	9	67	18	17	9	123	17	102	29	374	81
841	0	0	190	26	198	53	49	26	361	49	301	85	1,098	239
852	0	0	1,388	189	0	0	0	0	0	0	0	0	1,388	189
854	0	0	46	6	55	15	22	12	27	4	0	0	150	36
855	0	0	31	4	33	9	8	4	59	8	49	14	180	39
856	0	0	39	5	41	11	10	5	74	10	62	17	225	49
857	0	0	160	22	172	46	48	26	264	36	205	58	850	187
Total	361	231	5,259	717	2,125	565	672	362	2,478	338	1,644	464	12,539	2,676

Source: Based on rates contained in ITE *Trip Generation, 8th Edition*.

TABLE 4.14-11B BUILDOUT PM PEAK HOUR TRIP GENERATION

Zone ID	Commercial		Office		Warehouse		High-Cube Warehouse		Light Industrial		Manufacturing		Total	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
829	676	704	85	413	71	212	36	74	37	274	83	79	988	1,756
830	406	423	57	278	38	115	19	39	22	161	51	48	593	1,062
831	0	0	280	1,365	0	0	0	0	0	0	0	0	280	1,365
832	0	0	10	48	19	56	8	16	14	106	39	37	89	262
833	0	0	27	133	52	155	21	43	40	294	107	101	247	726
834	0	0	20	99	45	134	29	59	9	68	0	0	103	360
835	0	0	26	126	55	166	33	68	17	128	22	20	154	508
836	0	0	13	62	24	72	10	20	19	137	50	47	116	340
837	0	0	52	254	109	327	62	126	43	315	74	70	340	1,092
838	0	0	52	251	114	342	74	150	24	174	0	0	263	916
840	0	0	12	59	23	68	9	19	18	129	47	45	109	320
841	0	0	35	172	67	200	28	56	52	380	139	131	320	940
852	0	0	258	1,258	0	0	0	0	0	0	0	0	258	1,258
854	0	0	8	41	19	56	12	25	4	29	0	0	43	151
855	0	0	6	28	11	33	5	9	9	62	23	22	53	154
856	0	0	7	35	14	41	6	11	11	78	28	27	66	193
857	0	0	30	145	58	175	27	55	38	278	95	89	248	742
Total	1,082	1,126	977	4,768	717	2,152	379	769	356	2,613	759	717	4,270	12,145

Source: Based on rates contained in ITE *Trip Generation, 8th Edition*.

On Lammers Road between 11th Street and Old Schulte Road, 2 percent trucks was assumed, reflecting the TMP truck route plan which does not designate Lammers as a truck route, and the City's desire to minimize the impacts of heavy trucks on Lammers Road and adjacent residential and new development areas. Three percent trucks was assumed on Lammers Road between Old Schulte Road and I-580 (in the future case), to reflect some additional local truck traffic use with the provision of the new Lammers interchange in that case.

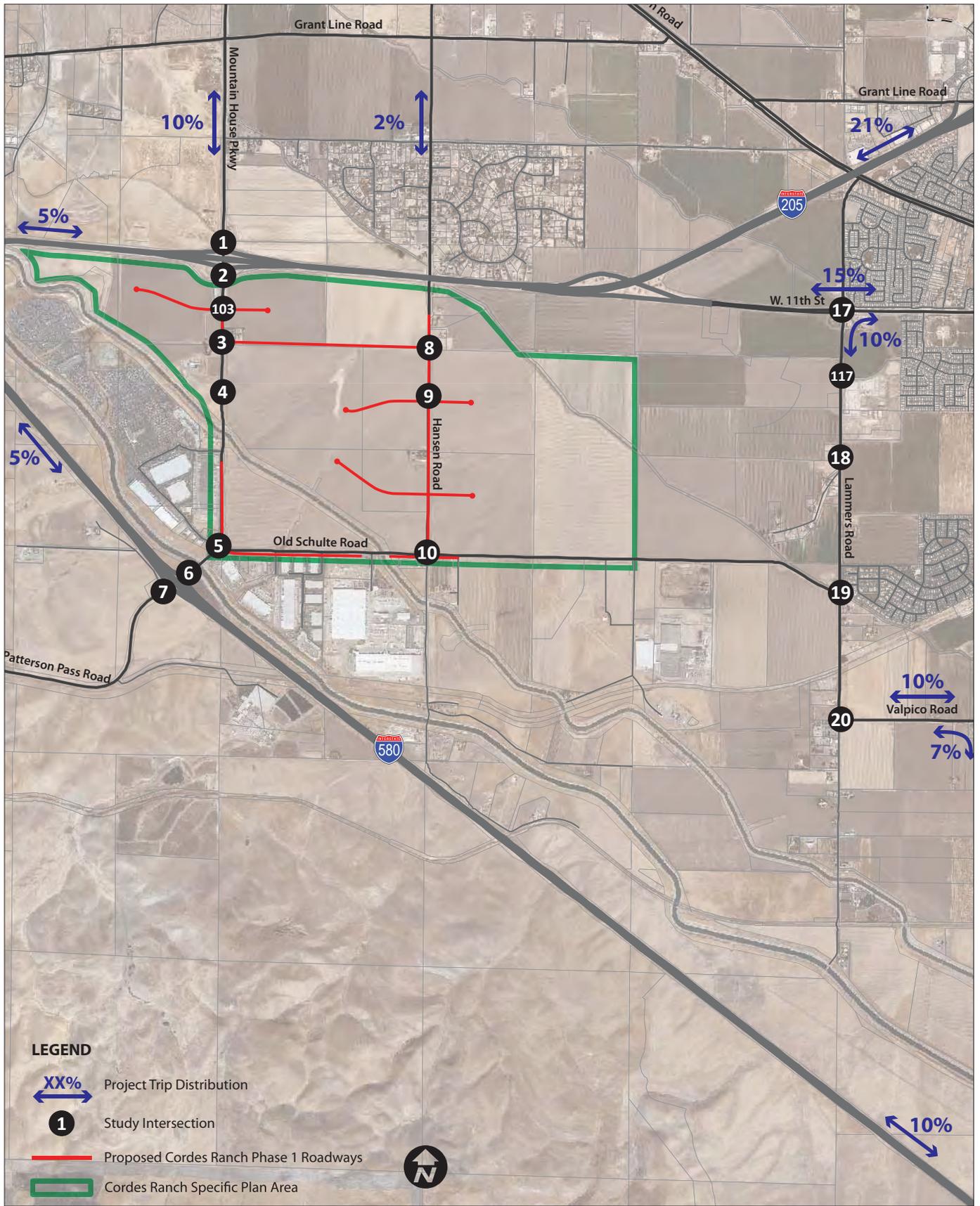
b. Project Trip Distribution and Assignment

Figure 4.14-6 and 4.14-7 show the estimated trip distribution for Project trips, for the Existing Plus Phase 1 Project / Existing Plus Buildout cases and the 2035 Plus Phase 1 Project / 2035 Plus Buildout cases, respectively. The distributions were derived from the Tracy Travel Demand Model. The difference in the distribution patterns reflects the network differences and the different levels of traffic on the various routes to the Specific Plan Area, for the two cases.

c. Traffic Operations and Capacity Evaluation

For the Existing Plus Phase 1 and 2035 Plus Phase 1 cases, intersection traffic operations are assessed using the HCM 2000 methodology and the Synchro software package. For the intersections along the northern section of Mountain House Parkway, including the I-205 interchange ramps intersections, the SimTraffic microsimulation software was used to more accurately evaluate operations and queuing, due to the closely-spaced configuration of those intersections. This information is included in the technical appendix.

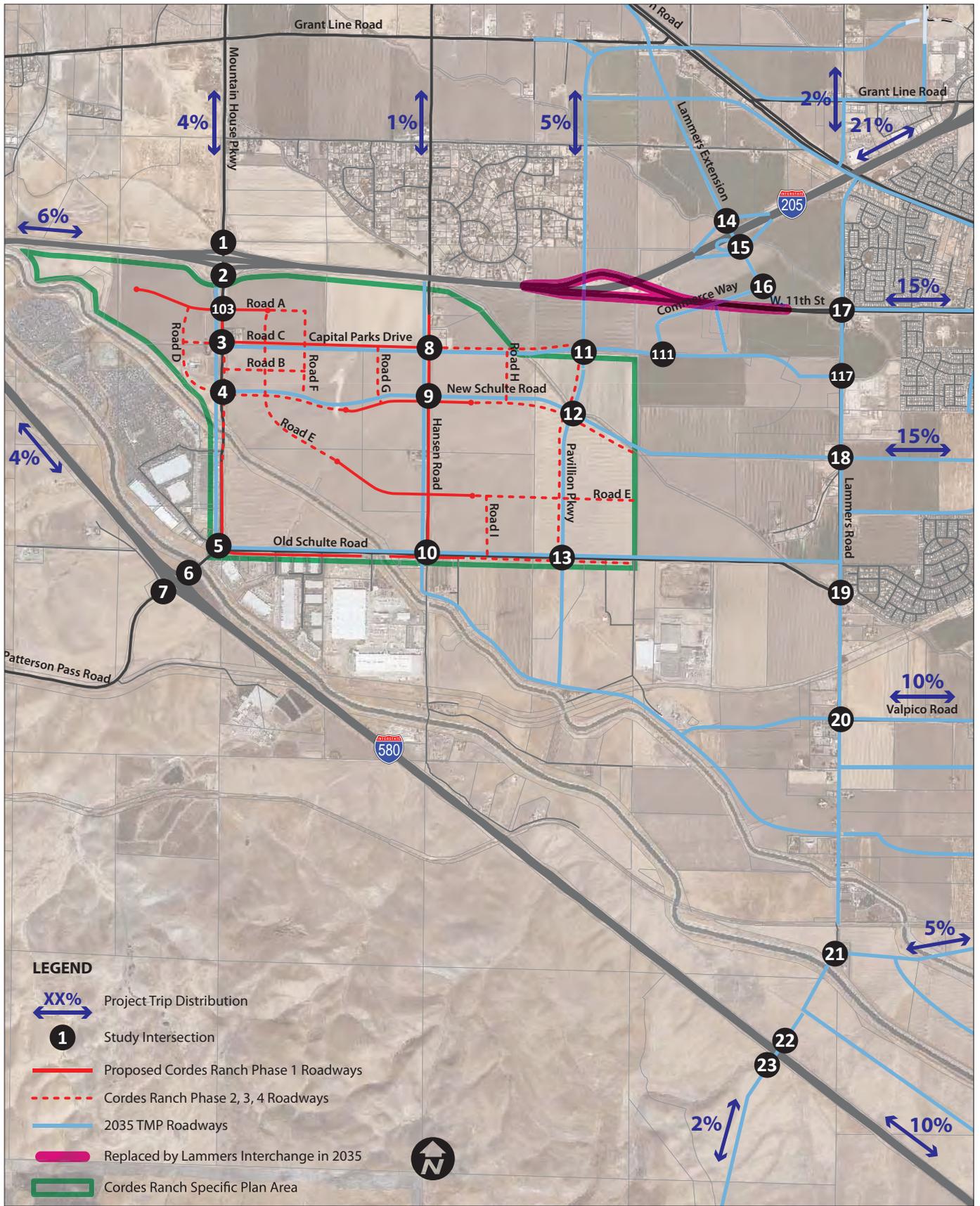
For the Existing Plus Buildout and 2035 Plus Buildout cases, roadway segment volumes and volume-to-capacity ratios are provided. See section C.6 for further discussion of the difference in analysis approaches for Phase 1 and Buildout.



Source: Fehr and Peers, 2013.

FIGURE 4.14 - 6

EXISTING + PHASE I PROJECT TRIP DISTRIBUTION



Source: Fehr and Peers, 2013.

FIGURE 4.14-7

2035 + PHASE I AND 2035 + FULL BUILD PROJECT TRIP DISTRIBUTION

Freeway operations are assessed using the HCM basic segment analysis methodology, which calculates vehicle density in passenger cars per hour per lane.

E. Significance Criteria

The proposed project would have a significant impact with regard to transportation and traffic if it would:

- “ Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel, and all relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. For the purposes of this EIR, the project will have a significant impact on traffic operations if it will:
 - ÿ Cause an intersection LOS at an intersection under the City of Tracy’s jurisdiction to fall from acceptable (LOS D, or LOS E within ¼ mile of a freeway) to unacceptable;³
 - ÿ Cause an intersection under the City of Tracy’s jurisdiction that is already operating at an unacceptable LOS in the Existing case (or in the Cumulative No Project case for the Cumulative impact assessment) to worsen by 5 seconds of delay due to Project traffic;
 - ÿ For roadways within Tracy’s jurisdiction, cause a roadway segment volume to exceed the planning-level capacity (LOS D, V/C=0.89), for analyses conducted on a roadway segment basis.

³ Note that for the purposes of this EIR, City’s LOS criteria are applied to the I-205/Mountain House Parkway intersections. Caltrans does not provide LOS standards for these intersections.

- “ Conflict with an applicable congestion management program, including, but not limited to, LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways. For the purposes of this EIR, the following CMP network standards apply:
 - ÿ For I-205 and I-580 segments in San Joaquin County, an impact is significant if the Project causes a segment to fall from LOS D to LOS E or F, or if it adds 5 percent to the total future traffic volume on a segment already operating at LOS F;
 - ÿ For the analysis segment of I-580 in Alameda County, an impact is significant if the Project causes the segment to fall from LOS E to LOS F, or if it adds 5 percent to the segment already operating at LOS F without the Project.
- “ 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.
- “ Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment).
- “ Result in inadequate emergency access.
- “ Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

F. Impact Assessment

1. Traffic Forecasts and Intersection LOS/Roadway Segment Capacity Evaluation

a. Existing Plus Phase 1 Project

i. Intersection Volumes and Levels of Service

Figure 4.14-8 shows the intersection volumes for the Existing Plus Phase 1 Project case. Table 4.14-12 shows the corresponding intersection service levels.

TABLE 4.14-12 INTERSECTION LEVELS OF SERVICE – EXISTING PLUS PHASE I PROJECT

Intersection	Control ^a	Peak Hour	Existing		Existing Plus Phase I		Existing Plus Phase 1 Mitigated		Project Mitigation	Is Mitigation Configured the same as the Cumulative Mitigated Configuration?
			Delay	LOS	Delay	LOS	Delay	LOS		
1. I-205 Westbound Ramps/ Mountain House Parkway ^c	Signal	AM PM	8.2 7.6	A A	117.2 30.1	F C	29.3 27.0	C C	Restripe WB approach to provide two left-turn lanes and one shared through right lane, and optimize signal timings	No
2. I-205 Eastbound Ramps/Mountain House Parkway ^c	Signal	AM PM	5.1 7.6	A A	19.0 > 120	B F	15.7 63.8	B E	Convert the NB right-turn lane to a free right with acceptance lane, and optimize signal timings	No
3. Road A/Mountain House Parkway ^c	Signal	AM PM	Intersection created as part of the project		23.9 60.2	C E	18.1 57.6	B E		
4. Capital Parks Drive/ Mountain House Park ^c	Signal	AM PM	Intersection created as part of the project		26.8 27.1	C C	29.7 31.3	C C		
5. Old Schulte Road/ Mountain House Parkway ^c	Signal	AM PM	29.4 7.6	C A	76.8 70.8	E E	57.5 53.9	E D		
6. I-580 Westbound Ramps/ Mountain House Parkway ^c	SSSC ^b	AM PM	2.9 (NB 10.7) 1.4 (NB 11.9)	A (B) A (B)	9.6 (NB 25.9) 2.7 (NB 16.4)	A (D) A (C)	22.4 25.9	C C	Signalize the intersection with EB-WB split phasing OR Convert to roundabout (Note: this improvement is recommended to allow the intersection to function acceptably with intersection 7 improvements, below).	Yes
7. I-580 Eastbound Ramps/ Mountain House Parkway ^c	SSSC ^b	AM PM	4.4 (SB 14.1) 12.6 (SB 29.6)	A (B) B (D)	33.9 (SB 77.7) > 120 (SB > 120)	D (F) F (F)	23.2 35.3	C D	Signalize the intersection with EB-WB split phasing OR Convert to roundabout	Yes
8. Capital Parks Drive/ Hansen Road	Signal	AM PM	Intersection created as part of the project		12.8 14.2	B B	15.2 22.9	B C		

TABLE 4.14-12 INTERSECTION LEVELS OF SERVICE – EXISTING PLUS PHASE I PROJECT

Intersection	Control ^a	Peak Hour	Existing		Existing Plus Phase I		Existing Plus Phase 1 Mitigated		Project Mitigation	Is Mitigation Configured the same as the Cumulative Mitigated Configuration?
			Delay	LOS	Delay	LOS	Delay	LOS		
9. New Schulte Road/ Hansen Road	Signal	AM PM	Intersection created as part of the project		5.0 8.6	A A	8.6 15.5	A B		
10. Old Schulte Road/ Hansen Road	AWSC	AM PM	10.4 12.2	B B	> 120 > 120	F F	51.9 37.4	D D	Signalize intersection. Construct WB left, EB left and right, SB left	Yes
17. 11 th Street/ Lammers Road ^c	Signal	AM PM	25.6 28.6	C C	42.8 77.0	D E	44.3 77.6	D E		
18. New Schulte Road / Lammers Road	Signal	AM PM	Does Not Exist		Does Not Exist		9.7 12.4	A B	Construct New Schulte Road between Hansen Road and Lammers Road; include right turn pocket for NB and SB approach and left turn pocket for EB approach. Signalize intersection.	Yes
19. Old Schulte Road/ Lammers Road	AWSC	AM PM	30.7 11.2	D B	> 120 > 120	F F	20.5 32.3	C C	Signalize intersection. Construct NB and SB right turn pockets, and EB left-turn pocket.	Yes
20. Valpico Road/ Lammers Road	SSSC ^b	AM PM	9.7 (WB 11.1) 8.2 (WB 9.7)	A (B) A (A)	35.6 (WB 46.5) 13.9 (WB 24.1)	E (E) B (C)	18.2 20.2	B C	Signalize the intersection Construct SB left pocket.	Yes

Note: **Bold** = Intersection does not meet City of Tracy LOS standard.

^a Signal = Signalized intersection; AWSC = All-way stop-controlled intersection; SSSC = Side-street stop-controlled intersection.

^b For side-street stop-controlled intersections, average delay is listed first followed by the delay for the worst approach.

^c LOS Criteria: Within ¼ of mile of a freeway, LOS E shall be allowed.

^d The slight change in delay relative to Existing Plus Phase I is due to these intersections being in a coordinated system with intersections 1 and 2, which have mitigation measures.

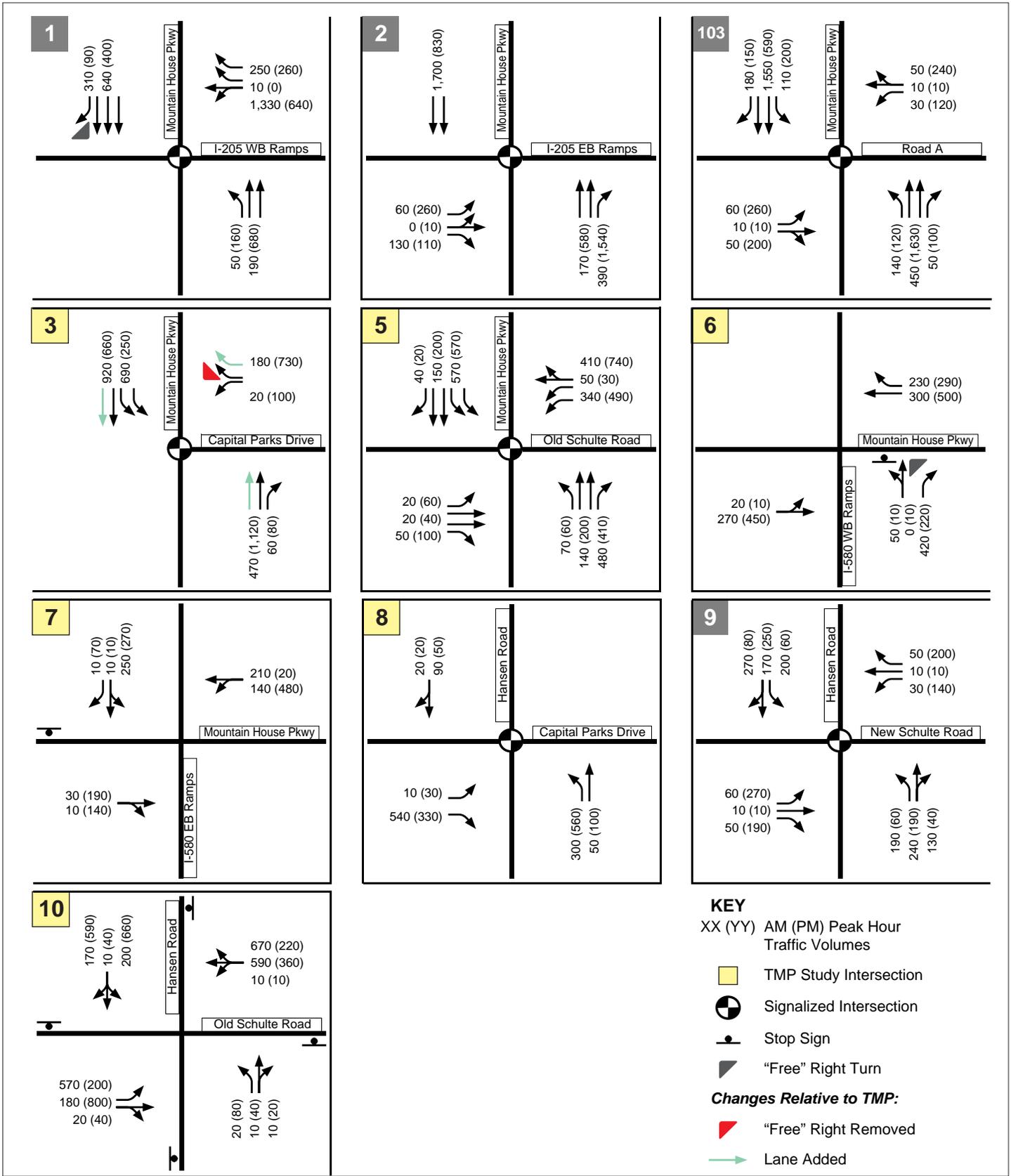
Source: Fehr & Peers, February 2013.

For purposes of this analysis, a two-step process was employed, due to the methodology utilized in defining the assumed background improvements. As described above, the new Phase 1 Project roadways would be constructed to the required widths but for purposes of the background network, it was assumed that existing roadways would not be widened.

Based on this methodology, an initial evaluation of the Project's impacts was completed. From that initial evaluation, it was determined that extensive improvements at several intersections would be necessary to mitigate impacts (see Appendix L). This is because the limited existing roadway network is serving all the Phase 1 Project trips; with the eventual construction of the TMP network, the Project trips will be distributed onto a more complete network. To mitigate such impacts (which would only be temporary, at most), extensive capacity improvements – which would well exceed the envisioned TMP improvements– would need to be constructed. Such extensive improvements, which would result in “over-building” of improvements at the identified locations, would be inconsistent with the infrastructure planning set forth in the TMP. Furthermore, such overbuilding may be determined by the City, after considering this analysis, to not be desirable or feasible for several reasons, among others, cost efficiency, preservation of the pedestrian and bicycle environment, desire to achieve other land use and planning goals rather than building extensive road improvements, etc.

Accordingly, the technical consultants performed an additional analysis, which evaluated the Project's impacts if a key TMP roadway– New Schulte Road between the eastern terminus of the Phase 1 Project network (just east of Hansen Road) and Lammers Road – were built by the Project as required mitigation. In other words, the analysis assumed the imposition of the “New Schulte extension,” and then re-ran the model and conducted further analysis to determine what Project impacts would occur in Phase 1 if the New Schulte extension were built.

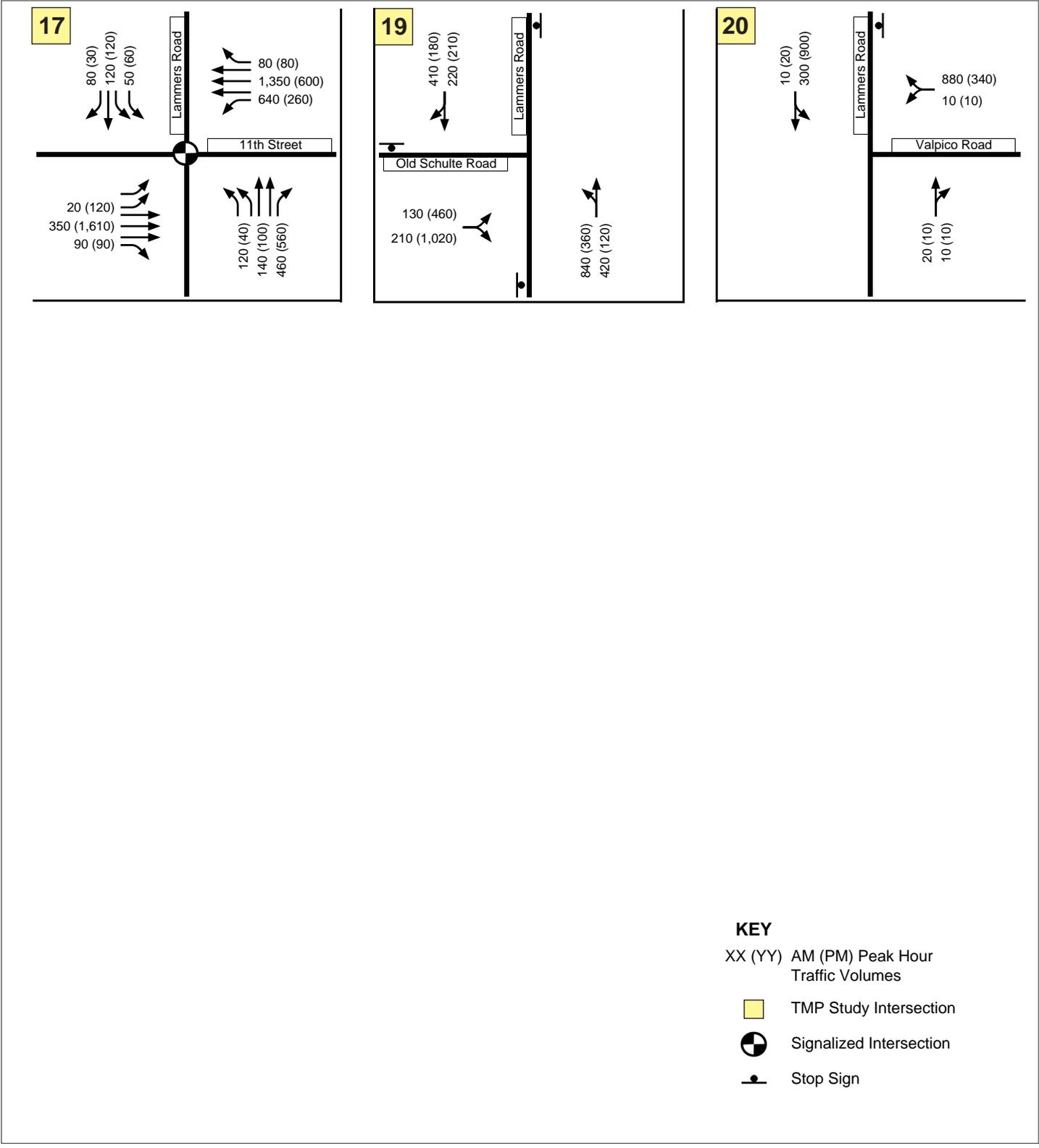
The results of this analysis are shown on Table 4.14-12 and discussed below.



Source: Fehr and Peers, 2013.

FIGURE 4.14-8A

EXISTING + PHASE 1 PROJECT INTERSECTION LANE GEOMETRY AND PEAK HOUR VOLUMES



Source: Fehr and Peers, 2013.

FIGURE 4.14-8B

EXISTING + PHASE 1 PROJECT INTERSECTION LANE GEOMETRY AND PEAK HOUR VOLUMES

With the construction of the New Schulte extension, the Project would trigger the need for improvements at seven additional intersections to mitigate the Existing Plus Phase 1 Project impacts. The mitigations and corresponding service levels are also shown in Table 4.14-12. A graphic showing the Existing Plus Phase 1 traffic volumes with the extension of New Schulte Road is included in the technical appendix.

In addition to identifying impacts and recommended improvements, additional analysis was performed for each of the mitigation measures shown in Table 4.14-12, to determine when such improvements would be triggered during Phase 1; i.e., what percentage of Phase 1 construction could be completed, and what corresponding number of trips could be generated, before the mitigation would be needed. This information is provided in Table 4.14-13.

ii. Freeway Volumes and Levels of Service

Table 4.14-14A and 14B present the Existing Plus Phase 1 Project peak hour freeway volumes on I-205 and I-580. All segments but one are projected to continue to operate at acceptable service levels (LOS D or better for the I-205 and I-580 segments in San Joaquin County, and LOS E or better for I-580 west of I-205 in Alameda County), with the addition of Phase 1 Project traffic. The one segment which falls below the LOS standard is:

- In the PM peak hour, I-205 eastbound between Mountain House Parkway and Tracy Boulevard falls from LOS D to LOS E with the addition of Phase 1 Project traffic.

b. Existing Plus Project Buildout

i. Roadway Segment Volumes and V/C Ratios

Table 4.14-15 shows the roadway volumes and volume-to capacity ratios for the Existing Plus Buildout case. The roadway capacities are derived from the Tracy Travel Demand Model. As indicated by the bold values in the table, the addition of Project Buildout traffic to the existing roadway system would cause significant overloading of many of the existing roadways serving travel

TABLE 4.14-13 EXISTING PLUS PHASE 1 PROJECT – MITIGATION PHASING

Intersection	Peak Period	Percent of Project	Total Project Trips
1. I-205 Westbound Ramps/ Mountain House Parkway	AM	90%	3,450
	PM		4,400
2. I-205 Eastbound Ramps/ Mountain House Parkway	AM	95%	3,640
	PM		4,640
7. I-580 Eastbound Ramps/ Mountain House Parkway	AM	30%	1,150
	PM		1,470
10. Old Schulte Road/ Hansen Road	AM	20%	770
	PM		980
19. Old Schulte Road/ Lammers Road	AM	5%	190
	PM		240
20. Valpico Road/Lammers Road	AM	100%	3,830
	PM		4,890
New Schulte Road extension to Lammers	AM	35%	1,340
	PM		1,710

Notes: **Bold** indicates the peak period which produces an unacceptable LOS at the lowest percent buildout of Phase 1.

Source: Fehr & Peers, February 2013.

to and from the Specific Plan Area, even if the full Buildout Project roadway network is constructed within the Specific Plan Area. This is not surprising, since the City of Tracy is planning many roadway network improvements to accommodate traffic growth generated by the Project and other development areas in the City and its sphere of influence.

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TABLE 4.14-14A FREeway VOLUMES AND LEVEL OF SERVICE – EXISTING PLUS PHASE 1 (AM)

Segment	Segment Capacity	Direction	Volume (Density) [Level of Service]	
			Existing No Project	Existing Plus Phase I
<i>I-205</i>				
West of Mountain House Parkway	6,600	EB	2,300 (14) [B]	2,470 (15) [B]
	6,600	WB	4,180 (25) [C]	4,230 (26) [C]
Mountain House Parkway to Tracy Boulevard	8,140	EB	2,340 (14) [B]	2,470 (15) [B]
	8,140	WB	4,390 (27) [D]	4,850 (30) [D]
East of Tracy Boulevard	6,600	EB	2,620 (16) [B]	2,790 (17) [B]
	6,600	WB	3,750 (23) [C]	4,390 (27) [D]
<i>I-580</i>				
West of I-205 Interchange	8,800	EB	3,140 (15) [B]	3,450 (17) [B]
	11,000	WB	6,430 (25) [C]	6,510 (25) [C]
I-205 Interchange to Patterson Pass Road	4,400	EB	840 (8) [A]	980 (9) [A]
	4,400	WB	2,250 (22) [C]	2,280 (22) [C]
Patterson Pass Road to Corral Hollow Road	4,400	EB	840 (8) [A]	8,90 (9) [A]
	4,400	WB	2,220 (21) [C]	2,420 (23) [C]
East of Corral Hollow Road	4,400	EB	840 (8) [A]	920 (9) [A]
	4,400	WB	1,670 (16) [B]	1,970 (19) [C]

Notes: Analysis completed using HCM basic segment freeway operations method.

Source: Fehr & Peers, February 2013.

TABLE 4.14-14B **FREEWAY VOLUMES AND LEVEL OF SERVICE – EXISTING PLUS PHASE 1 (PM)**

Segment	Segment Capacity	Direction	Volume (Density) [Level of Service]	
			Existing No Project	Existing Plus Phase I
<i>I-205</i>				
West of Mountain House Parkway	6,600	EB	4910 (31) [D]	5010 (32) [D]
	6,600	WB	2390 (14) [B]	2600 (16) [B]
Mountain House Parkway to Tracy Boulevard	8,140	EB	4980 (31) [D]	5540 (38) [E]
	8,140	WB	2690 (16) [B]	2950 (18) [B]
East of Tracy Boulevard	6,600	EB	4320 (26) [D]	5040 (32) [D]
	6,600	WB	2620 (16) [B]	2920 (18) [B]
<i>I-580</i>				
West of I-205 Interchange	8,800	EB	6960 (35) [D]	7100 (36) [E]
	11,000	WB	3140 (12) [B]	3480 (13) [B]
I-205 Interchange to Patterson Pass Road	4,400	EB	2050 (18) [C]	2090 (19) [C]
	4,400	WB	750 (7) [A]	880 (8) [A]
Patterson Pass Road to Corral Hollow Road	4,400	EB	2040 (18) [C]	2280 (21) [C]
	4,400	WB	720 (6) [A]	830 (7) [A]
East of Corral Hollow Road	4,400	EB	1650 (15) [B]	2000 (18) [C]
	4,400	WB	760 (7) [A]	910 (8) [A]

Notes: **Bold** indicates a segment operating below the applicable standard. **Shading** indicates a significant impact based on the applicable standard. Analysis completed using HCM basic segment freeway operations method.

Source: Fehr & Peers, February 2013.

The shaded values in Table 4.14-15 indicate segments that would continue to exceed planning-level capacities (LOS D, $V/C \leq 0.89$), even with provision of the Right-of-Way network as defined in the Roadway and Transportation Master Plan (TMP Figure 3.5). The Right-of-Way network is defined in the TMP for purposes of long-term right-of-way preservation, and exceeds the roadway widths (number of lanes and corresponding capacities) of the TMP roadway network on many (but not all) TMP roadways. The Right-of-Way network capacities, which are derived from the Tracy Travel Demand Model, are shown in Table 4.14-16 for reference. These are planning-level capacities; the actual capacities of the roadways, if ultimately widened to the Right-of-Way network width, may be higher or lower than these capacities, depending on the ultimate roadway design (intersection spacing, lane widths, etc.).

ii. Freeway Volumes and LOS

Tables 4.14-17A and 4.14-17B present the Existing Plus Project Buildout peak hour freeway volumes on I-205 and I-580. With the addition of Project Buildout traffic, the following significant impacts occur:

- “ In the AM peak hour, two segments of I-205 westbound would fall to an unacceptable LOS F: I-205 east of Tracy Boulevard, and I-205 between Tracy Boulevard and Mountain House Parkway;
- “ In the PM peak hour, two segments of I-205 eastbound would fall to an unacceptable LOS F: I-205 east of Tracy Boulevard, and I-205 between Tracy Boulevard and Mountain House Parkway.

c. 2035 Plus Phase 1

i. Intersection Volumes and Levels of Service

Figures 4.14-9 and 4.14-10 show the intersection volumes for the 2035 No Project and 2035 Plus Phase 1 Project case. Table 4.14-18 shows the corresponding intersection service levels.

TABLE 4.14-15 ROADWAY VOLUMES – EXISTING PLUS BUILDOUT

Street	Segment	Existing Capacity	Volume				V/C			
			AM		PM		AM		PM	
			Existing	Existing + Buildout						
MHP SB	N/O I-205	1,780	650	1,930	350	780	0.4	1.1	0.2	0.4
	I-205 to Road A	890	370	6,580	220	2,380	0.4	7.4	0.2	2.7
	Road A to Capital Parks Drive	890	370	5,590	220	2,570	0.4	6.3	0.2	2.9
	Capital Parks Drive to New Schulte Road	890	370	2,270	220	2,380	0.4	2.5	0.2	2.7
	New Schulte Road to Old Schulte Road	890	370	1,870	220	2,410	0.4	2.1	0.2	2.7
	Old Schulte Road to I-580	1,490	400	810	250	2,060	0.3	0.5	0.2	1.4
	S/O I-580	1,490	220	220	90	90	0.1	0.1	0.1	0.1
MHP NB	N/O I-205	890	350	620	590	1,820	0.4	0.7	0.7	2.0
	I-205 to Road A	890	160	1,480	420	6,470	0.2	1.7	0.5	7.3
	Road A to Capital Parks Drive	890	160	1,990	420	5,530	0.2	2.2	0.5	6.2
	Capital Parks Drive to New Schulte Road	890	160	2,060	420	2,420	0.2	2.3	0.5	2.7
	New Schulte Road to Old Schulte Road	890	160	2,100	420	2,100	0.2	2.4	0.5	2.4
	Old Schulte Road to I-580	1,490	200	2,100	470	1,080	0.1	1.4	0.3	0.7
	S/O I-580	1,490	40	40	330	330	0.0	0.0	0.2	0.2

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TABLE 4.14-15 ROADWAY VOLUMES – EXISTING PLUS BUILDOUT

Street	Segment	Existing Capacity	Volume				V/C			
			AM		PM		AM		PM	
			Existing	Existing + Buildout						
Hansen SB	N/O Capital Parks Drive	890	50	420	40	1,090	0.1	0.5	0.0	1.2
	Capital Parks Drive to New Schulte Road	890	50	2,160	40	1,620	0.1	2.4	0.0	1.8
	New Schulte Road to Old Schulte Road	890	50	1,260	40	3,330	0.1	1.4	0.0	3.7
	S/O Old Schulte Road	890	20	40	70	150	0.0	0.0	0.1	0.2
Hansen NB	N/O Capital Parks Drive	890	40	1,160	50	470	0.0	1.3	0.1	0.5
	Capital Parks Drive to New Schulte Road	890	40	1,630	50	2,140	0.0	1.8	0.1	2.4
	New Schulte Road to Old Schulte Road	890	40	3,780	50	1,430	0.0	4.2	0.1	1.6
	S/O Old Schulte Road	890	30	110	120	150	0.0	0.1	0.1	0.2
Lammers SB	N/O 11th Street	890	250	250	220	220	0.3	0.3	0.2	0.2
	11th Street to Capital Parks Drive	890	510	2,120	320	850	0.6	2.4	0.4	1.0
	Capital Parks Drive to New Schulte Road	890	510	2,080	320	1,060	0.6	2.3	0.4	1.2
	New Schulte Road to Old Schulte Road	890	290	1,590	240	900	0.3	1.8	0.3	1.0
	Old Schulte Road to Valpico Road	890	260	830	510	3,120	0.3	0.9	0.6	3.5
	S/O Valpico Road	890	10	110	20	280	0.0	0.1	0.0	0.3

TABLE 4.14-15 ROADWAY VOLUMES – EXISTING PLUS BUILDOUT

Street	Segment	Existing Capacity	Volume				V/C			
			AM		PM		AM		PM	
			Existing	Existing + Buildout						
Lammers NB	N/O 11th Street	890	240	240	290	290	0.3	0.3	0.3	0.3
	11th Street to Capital Parks Drive	890	630	970	340	1,860	0.7	1.1	0.4	2.1
	Capital Parks Drive to New Schulte Road	890	630	1,230	340	1,860	0.7	1.4	0.4	2.1
	New Schulte Road to Old Schulte Road	890	460	1,010	190	1,480	0.5	1.1	0.2	1.7
	Old Schulte Road to Valpico Road	890	630	3,350	190	1,100	0.7	3.8	0.2	1.2
	S/O Valpico Road	890	10	290	10	140	0.0	0.3	0.0	0.2
Old Schulte Road EB	W/O MHP	1,490	80	80	190	190	0.1	0.1	0.1	0.1
	MHP to Hansen Road	1,490	210	2,920	450	2,530	0.1	2.0	0.3	1.7
	Hansen Road to Lammers Road	890	100	1,830	370	4,180	0.1	2.1	0.4	4.7
Old Schulte Road WB	W/O MHP	1,490	150	150	110	110	0.1	0.1	0.1	0.1
	MHP to Hansen Road	1,490	380	2,130	250	2,910	0.3	1.4	0.2	2.0
	Hansen Road to Lammers Road	890	290	4,190	120	2,170	0.3	4.7	0.1	2.4
Valpico EB	E/O Lammers Road	740	180	590	370	2,200	0.2	0.8	0.5	3.0
Valpico WB	E/O Lammers Road	740	410	2,300	140	790	0.6	3.1	0.2	1.1
11th EB	W/O Lammers Road	1,780	350	690	1,330	2,890	0.2	0.4	0.7	1.6
	E/O Lammers Road	2,230	660	1,340	1,390	4,480	0.3	0.6	0.6	2.0

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TABLE 4.14-15 ROADWAY VOLUMES – EXISTING PLUS BUILDOUT

Street	Segment	Existing Capacity	Volume				V/C			
			AM		PM		AM		PM	
			Existing	Existing + Buildout						
11th WB	W/O Lammers Road	1,780	1,130	2,720	470	1,020	0.6	1.5	0.3	0.6
	E/O Lammers Road	2,230	1,320	4,510	590	1,670	0.6	2.0	0.3	0.7

Notes: Capacities and Buildout volumes derived from the City of Tracy 2035 Travel Demand Model and the Project Buildout traffic assignment.

V/C ratios are correlated with LOS as follows: < 0.60=LOS A; 0.60 – 0.69=LOS B; 0.70 – 0.79=LOS C; 0.80 – 0.89=LOS D; 0.90 – 0.99=LOS E; ≥1.00=LOS F.

Bold values indicated volumes exceeding LOS D (i.e. V/C ratio of 0.90 or greater.)

Shaded values indicate segments in the Existing Plus Buildout case for which volumes would continue to exceed the LOS D capacity even with the higher TMP Right-of-Way Roadway Network capacities (see Table 4.14-16).

Source: Fehr & Peers, February 2013.

TABLE 4.14-16 TMP RIGHT-OF-WAY ROADWAY CAPACITIES

Roadway	Segment	Existing Capacity	TMP Right-of-Way Capacity
MHP SB	N/O I-205	1,780	1,780
	I-205 to Road A	890	3,560
	Road A to Capital Parks Drive	890	3,560
	Capital Parks Drive to New Schulte Road	890	3,560
	New Schulte Road to Old Schulte Road	890	1,780
	Old Schulte Road to I-580	1,490	2,240
	S/O I-580	1,490	2,240
MHP NB	N/O I-205	890	890
	I-205 to Road A	890	3,560
	Road A to Capital Parks Drive	890	3,560
	Capital Parks Drive to New Schulte Road	890	3,560
	New Schulte Road to Old Schulte Road	890	1,780
	Old Schulte Road to I-580	1,490	2,240
	S/O I-580	1,490	2,240
Hansen SB	N/O Capital Parks Drive	890	890
	Capital Parks Drive to New Schulte Road	890	1,780
	New Schulte Road to Old Schulte Road	890	1,780
	S/O Old Schulte Road	890	1,780

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TABLE 4.14-16 TMP RIGHT-OF-WAY ROADWAY CAPACITIES

Roadway	Segment	Existing Capacity	TMP Right-of-Way Capacity
Hansen NB	N/O Capital Parks Drive	890	890
	Capital Parks Drive to New Schulte Road	890	1,780
	New Schulte Road to Old Schulte Road	890	1,780
	S/O Old Schulte Road	890	1,780
Lammers SB	N/O 11th Street	890	3,560
	11th Street to Capital Parks Drive	890	2,670
	Capital Parks Drive to New Schulte Road	890	2,670
	New Schulte Road to Old Schulte Road	890	2,670
	Old Schulte Road to Valpico Road	890	2,670
Lammers NB	S/O Valpico Road	890	2,670
	N/O 11th Street	890	3,560
	11th Street to Capital Parks Drive	890	2,670
	Capital Parks Drive to New Schulte Road	890	2,670
	New Schulte Road to Old Schulte Road	890	2,670
Old Schulte Road EB	Old Schulte Road to Valpico Road	890	2,670
	S/O Valpico Road	890	2,670
	W/O MHP	1,490	2,240
	MHP to Hansen Road	1,490	1,490
	Hansen Road to Lammers Road	890	1,780

TABLE 4.14-16 TMP RIGHT-OF-WAY ROADWAY CAPACITIES

Roadway	Segment	Existing Capacity	TMP Right-of-Way Capacity
Old Schulte Road WB	W/O MHP	1,490	2,240
	MHP to Hansen Road	1,490	1,490
	Hansen Road to Lammers Road	890	1,780
Valpico EB	E/O Lammers Road	740	1,480
Valpico WB	E/O Lammers Road	740	1,480
11th EB	W/O Lammers Road	1,780	3,560
	E/O Lammers Road	2,230	2,230
11th WB	W/O Lammers Road	1,780	3,560
	E/O Lammers Road	2,230	2,230

Note: Capacities derived from the City of Tracy Travel Demand Model.
Source: Fehr & Peers, February 2013.

a) Discussion of Intersection Impacts and Mitigation Measures: 2035 Plus Phase 1 Project

As noted in the preceding methodology section, the 2035 Plus Phase 1 Project analysis assumes intersection lane geometries consistent with the Project's Phase 1 roadway network and the 2035 TMP roadway network. Therefore, most intersections are projected to operate acceptably. However, two intersections are projected to operate below the applicable LOS standard: Intersection #1 (I-205 Westbound Ramps/Mountain House Parkway) and intersection #18 (New Schulte Road/Lammers Road). In addition, two intersections require improvements to function acceptably, even though the LOS meets the standard: #4 (New Schulte Road/Mountain House Parkway) and intersection #20 (Valpico Road/Lammers Road.)

TABLE 4.14-17A FREEWAY VOLUMES AND LEVEL OF SERVICE – EXISTING PLUS BUILDOUT (AM)

Segment	Segment Capacity	Direction	Volume (Density) [Level of Service]	
			Existing No Project	Existing Plus Buildout
<i>I-205</i>				
West of Mountain House Parkway	6,600	EB	2,300 (14) [B]	3,130 (19) [C]
	6,600	WB	4,180 (25) [C]	4,350 (27) [D]
Mountain House Parkway to Tracy Boulevard	8,140	EB	2,340 (14) [B]	2,900 (18) [B]
	8,140	WB	4,390 (27) [D]	6,370 (-) [F]
East of Tracy Boulevard	6,600	EB	2,620 (16) [B]	3,180 (19) [C]
	6,600	WB	3,750 (23) [C]	6,390 (-) [F]
<i>I-580</i>				
West of I-205 Interchange	8,800	EB	3,140 (15) [B]	4,400 (21) [C]
	11,000	WB	6,430 (25) [C]	6,690 (26) [C]
I-205 Interchange to Patterson Pass Road	4,400	EB	840 (8) [A]	1,270 (12) [B]
	4,400	WB	2,250 (22) [C]	2,340 (22) [C]
Patterson Pass Road to Corral Hollow Road	4,400	EB	840 (8) [A]	1,020 (10) [A]
	4,400	WB	2,220 (21) [C]	3,090 (31) [D]
East of Corral Hollow Road	4,400	EB	840 (8) [A]	1,100 (11) [A]
	4,400	WB	1,670 (16) [B]	2,930 (29) [D]

Notes: **Bold** indicates a segment that falls below the applicable standard. **Shading** indicates a significant impact based on the applicable standard. Analysis completed using HCM basic segment freeway operations method.

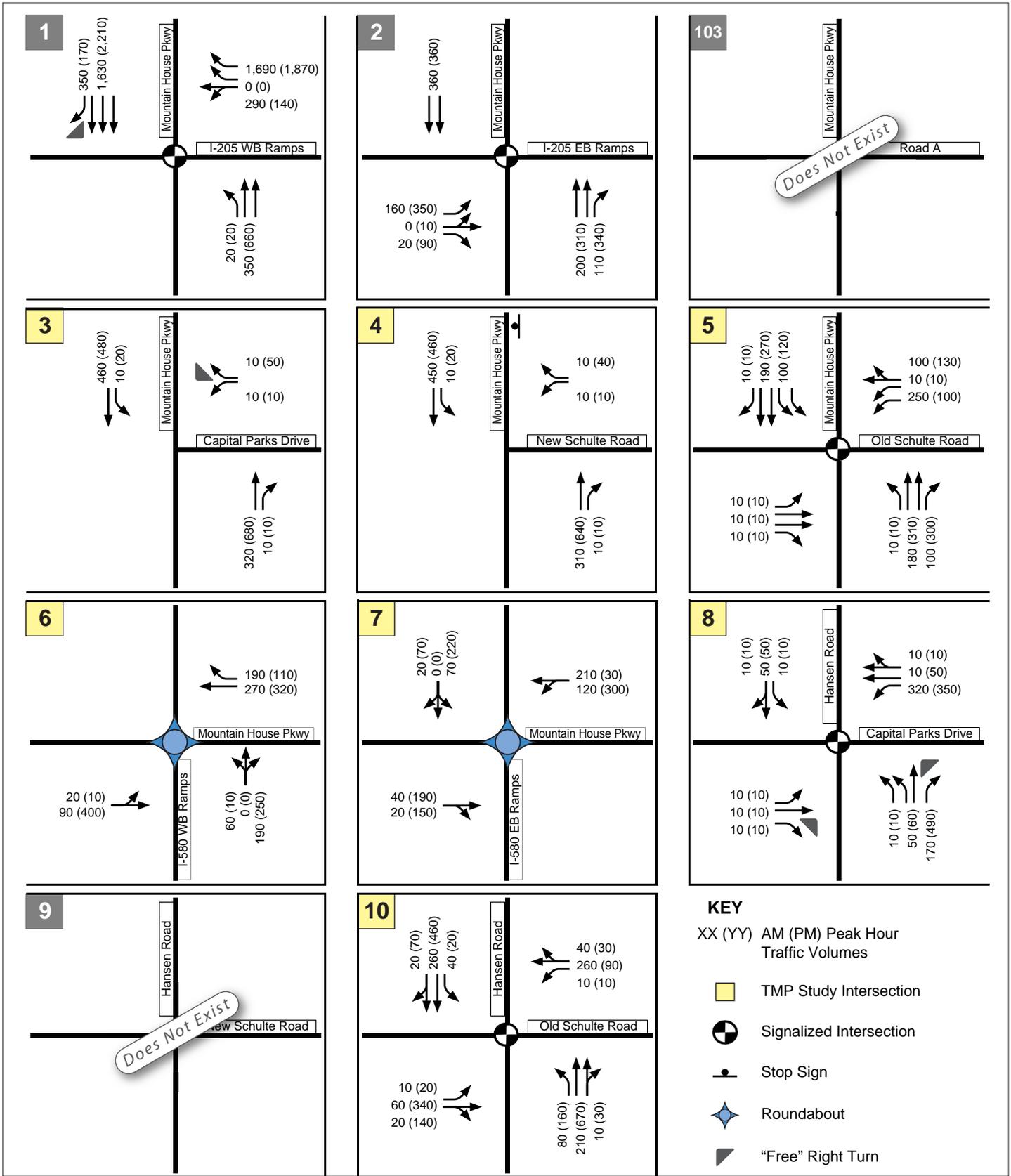
Source: Fehr & Peers, February 2013.

TABLE 4.14-17B **FREEWAY VOLUMES AND LOS – EXISTING PLUS BUILDOUT (PM)**

Segment	Segment Capacity	Direction	Volume (Density) [Level of Service]	
			Existing No Project	Existing Plus Buildout
<i>I-205</i>				
West of Mountain House Parkway	6,600	EB	4,910 (31) [D]	5,220 (34) [D]
	6,600	WB	2,390 (14) [B]	3,210 (19) [C]
Mountain House Parkway to Tracy Boulevard	8,140	EB	4,980 (31) [D]	6,970 (-) [F]
	8,140	WB	2,690 (16) [B]	3,520 (21) [C]
East of Tracy Boulevard	6,600	EB	4,320 (26) [D]	6,870 (-) [F]
	6,600	WB	2,620 (16) [B]	3,520 (21) [C]
<i>I-580</i>				
West of I-205 Interchange	8,800	EB	6,960 (35) [D]	7,390 (39) [E]
	11,000	WB	3,140 (12) [B]	4,350 (16) [B]
I-205 Interchange to Patterson Pass Road	4,400	EB	2,050 (18) [C]	2,170 (19) [C]
	4,400	WB	750 (7) [A]	1,140 (10) [A]
Patterson Pass Road to Corral Hollow Road	4,400	EB	2,040 (18) [C]	2,900 (26) [D]
	4,400	WB	720 (6) [A]	1,040 (9) [A]
East of Corral Hollow Road	4,400	EB	1,650 (15) [B]	2,860 (26) [D]
	4,400	WB	760 (7) [A]	1,190 (11) [A]

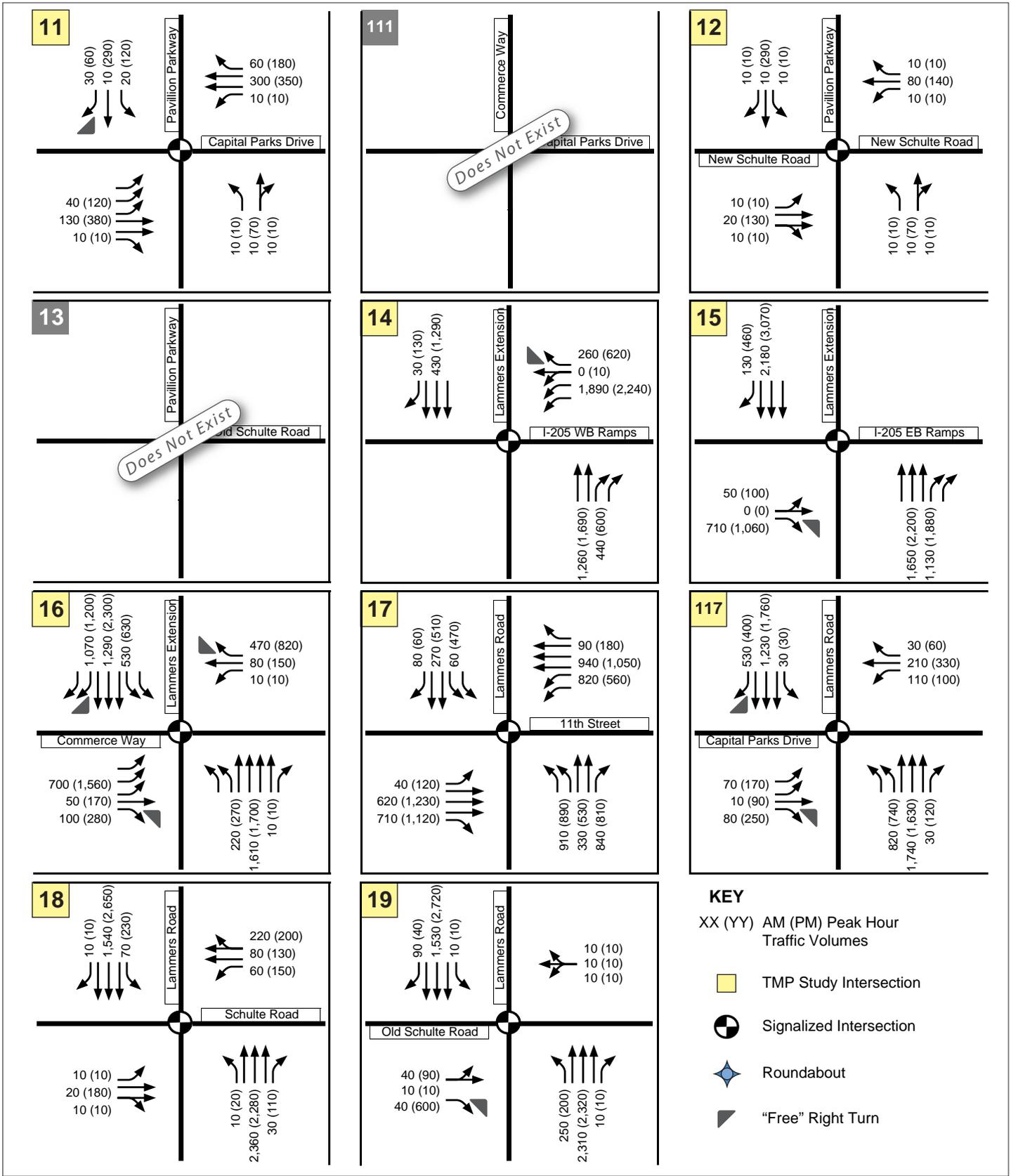
Notes: **Bold** indicates a segment that falls below the applicable standard. **Shading** indicates a significant impact based on the applicable standard. Analysis completed using HCM basic segment freeway operations method.

Source: Fehr & Peers, February 2013.



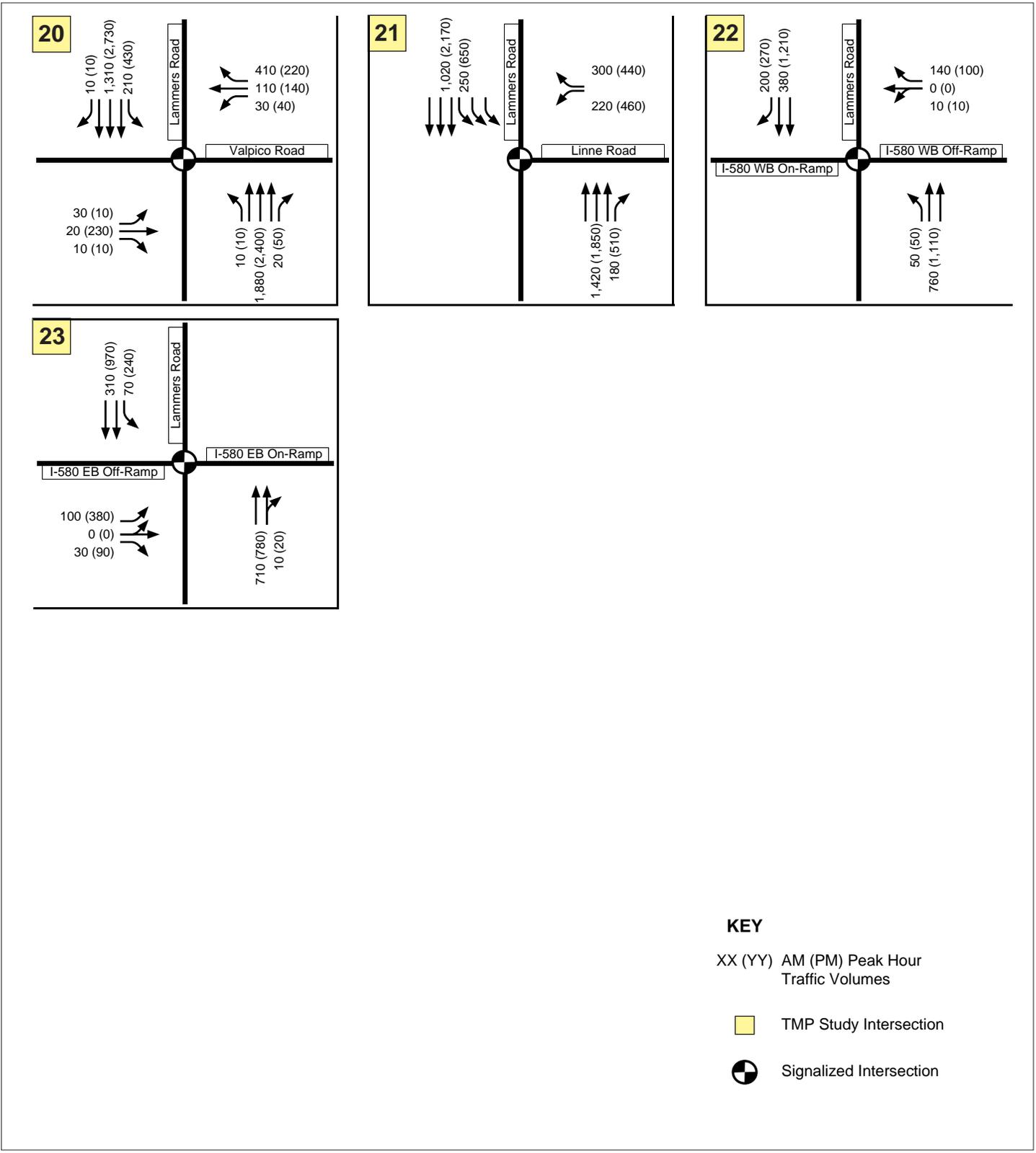
Source: Fehr and Peers, 2013.

FIGURE 4.14-9A



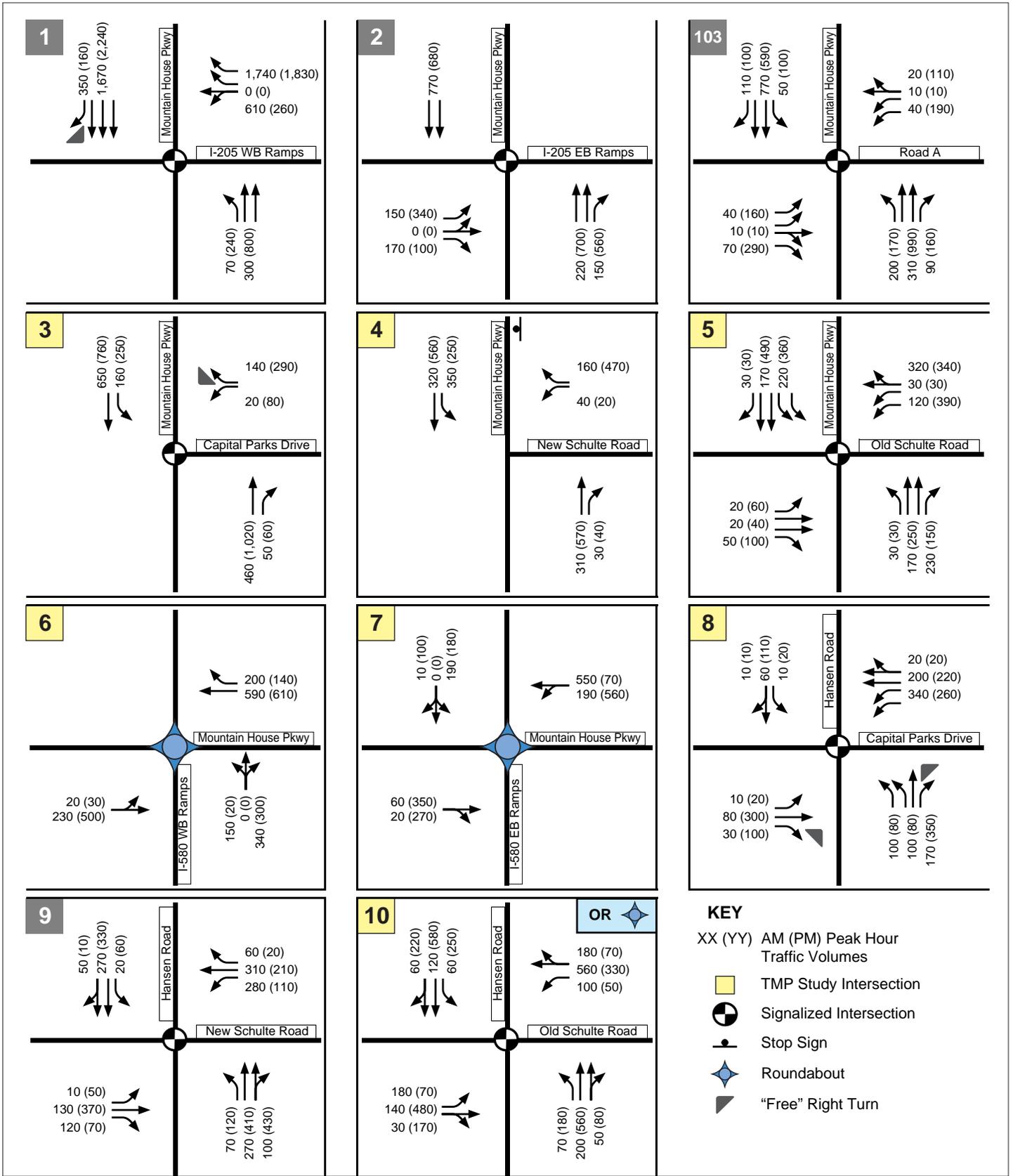
Source: Fehr and Peers, 2013.

FIGURE 4.14-9B



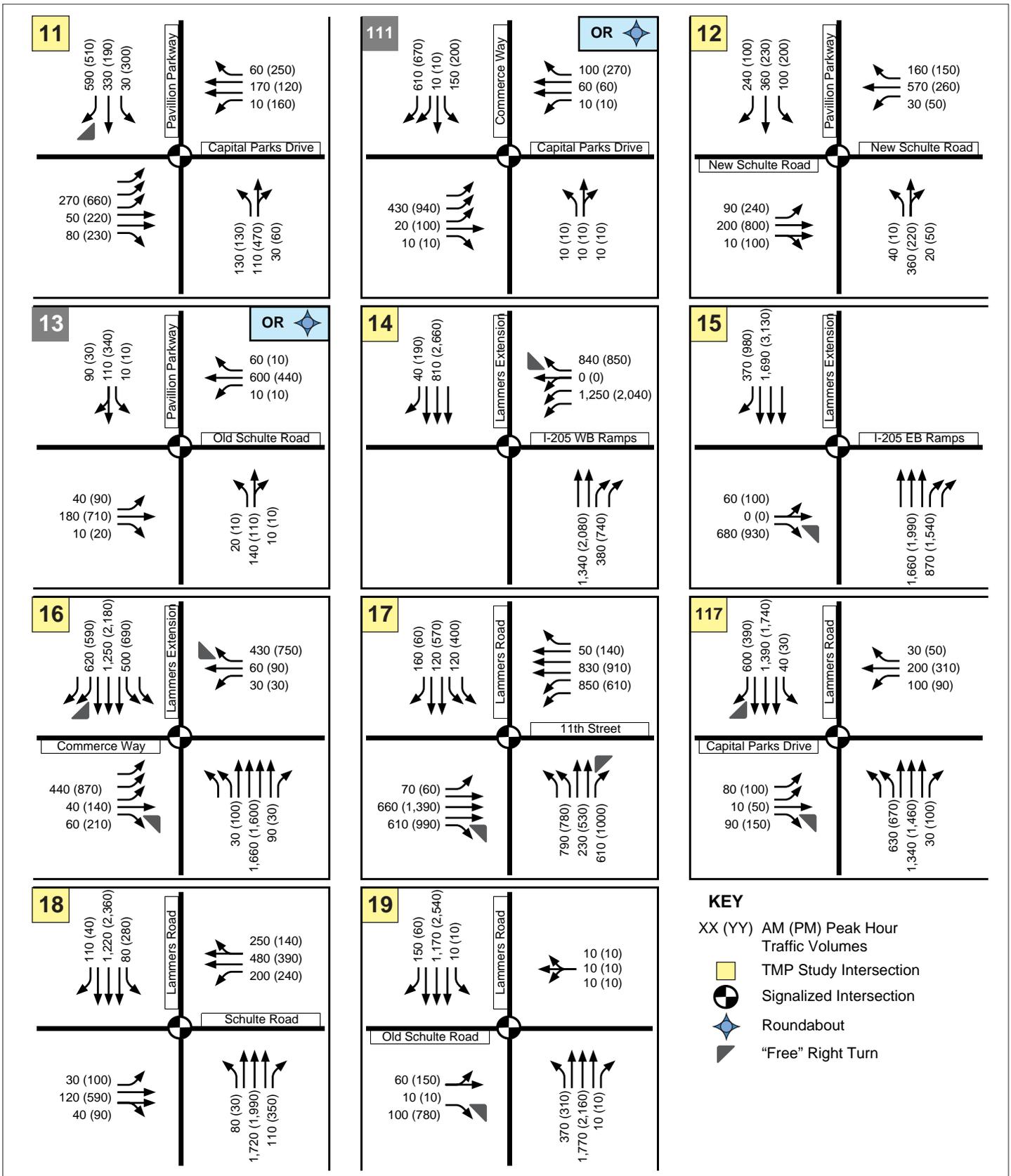
Source: Fehr and Peers, 2013.

FIGURE 4.14-9C



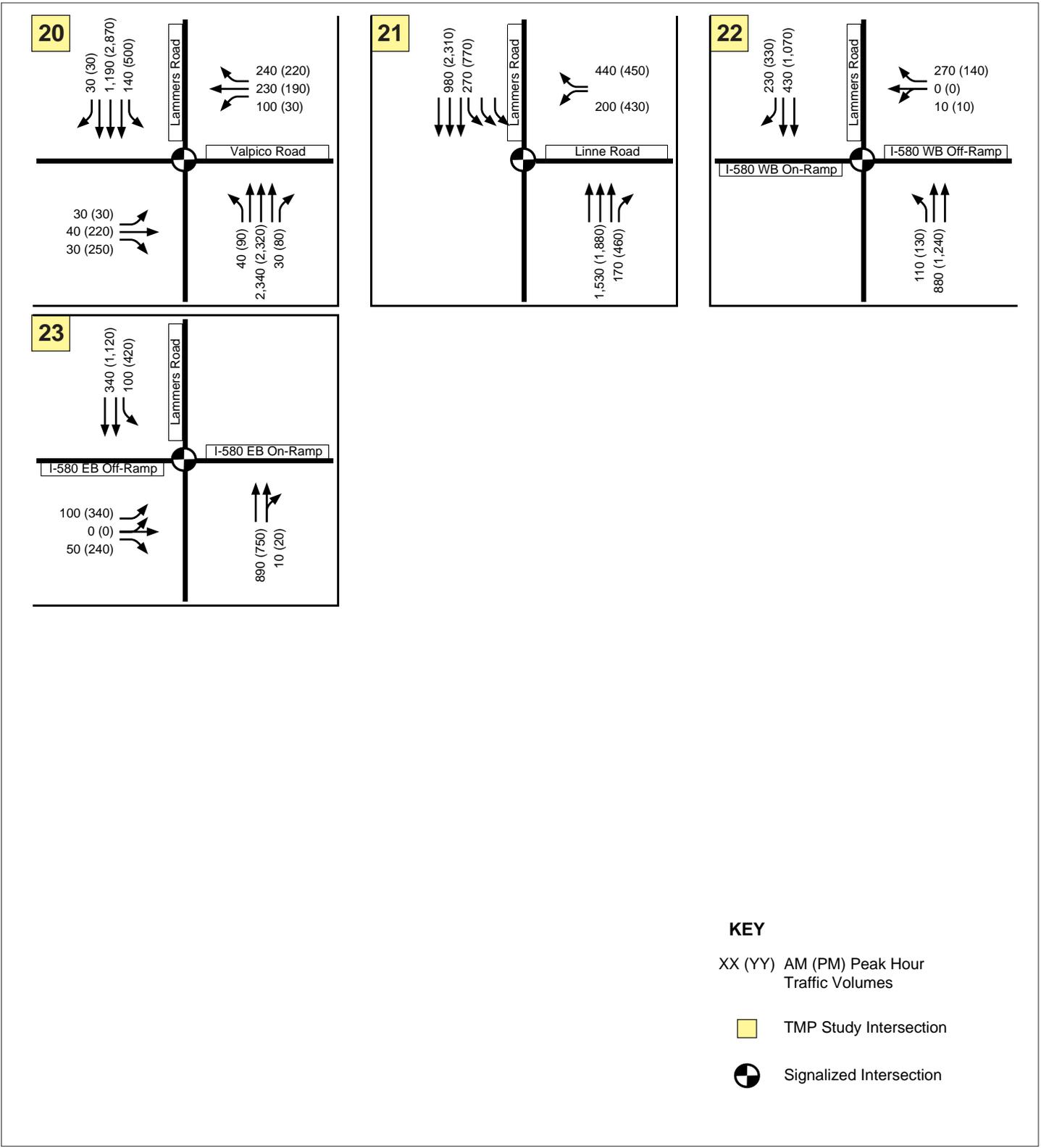
Source: Fehr and Peers, 2013.

FIGURE 4.14-10A



Source: Fehr and Peers, 2013.

FIGURE 4.14-10B



Source: Fehr and Peers, 2013.

FIGURE 4.14-10C

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TABLE 4.14-18 INTERSECTION LEVELS OF SERVICE – CUMULATIVE (2035) NO PROJECT AND (2035) PLUS PHASE I

Intersection	Control ^a	Peak Hour	2035 No Project		2035 Plus Phase I		2035 Plus Phase I Mitigated		Project Mitigation
			Delay	LOS ^{b,c}	Delay	LOS ^{b,c}	Delay	LOS ^{b,c}	
1. I-205 Westbound Ramps/ Mountain House Parkway ^d	Signal	AM	54.4	D	58.0	E			None identified (see text)
		PM	> 120.0	F	> 120.0	F ^e			
2. I-205 Eastbound Ramps/ Mountain House Parkway ^d	Signal	AM	7.9	A	9.1	A			
		PM	12.0	B	12.3	B			
3. Road A/Mountain House Parkway ^d	Signal	AM	Intersection created as part of the project		20.9	C			
		PM			33.0	C			
4. Capital Parks Drive/ Mountain House Parkway ^d	Signal	AM	1.7	A	4.0	A			
		PM	1.9	A	14.1	B			
5. New Schulte Road/ Mountain House Parkway	SSSC	AM	0.4 (WB 13.1)	A (B)	6.1 (WB 20.3)	A	19.6	B	Signalize the intersection
		PM	0.8 (WB 15.9)	A (C)	16.4 (WB 58.7)	C	17.7	C	
6. Old Schulte Road/ Mountain House Parkway ^d	Signal	AM	26.7	C	30.5	C			
		PM	24.3	C	35.6	D			
7. I-580 Westbound Ramps/ Mountain House Parkway ^d	Roundabout	AM	9.2	A	12.9	B			
		PM	8.4	A	9.1	A			
8. I-580 Eastbound Ramps/ Mountain House Parkway ^d	Roundabout	AM	10.4	B	13.9	B			
		PM	13.1	B	47.3	E			
9. Capital Parks Drive/ Hansen Road	Signal	AM	3.7	A	4.4	A			
		PM	2.9	A	3.9	A			
10. New Schulte Road/ Hansen Road	Signal	AM	Intersection created as part of the project		23.5	C			
		PM			27.4	C			
11. Old Schulte Road/ Hansen Road	Signal	AM	6.8	A	12.0	B			
		PM	10.1	B	26.1	C			
12. Capital Parks Drive/ Pavilion Parkway	Signal	AM	2.8	A	5.1	A			
		PM	6.6	A	12.5	B			
13. Capital Parks Drive/ Commerce Way	Signal	AM	Intersection created as part of the project		14.2	B			
		PM			18.9	B			
14. New Schulte Road/ Pavilion Parkway	Signal	AM	5.1	A	12.0	B			
		PM	6.5	A	9.5	A			

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TABLE 4.14-18 INTERSECTION LEVELS OF SERVICE – CUMULATIVE (2035) NO PROJECT AND (2035) PLUS PHASE I

Intersection	Control ^a	Peak Hour	2035 No Project		2035 Plus Phase I		2035 Plus Phase I Mitigated		Project Mitigation
			Delay	LOS ^{b,c}	Delay	LOS ^{b,c}	Delay	LOS ^{b,c}	
15. Old Schulte Road/ Pavilion Parkway	Signal	AM PM	Intersection created as part of the project		21.8 30.2	C C			
16. I-205 Westbound Ramps/ Lammers Extension ^d	Signal	AM PM	19.5 51.4	B D	20.3 57.9	C E			
17. I-205 Eastbound Ramps/ Lammers Extension ^d	Signal	AM PM	1.6 17.6	A A	3.4 20.6	A C			
18. Commerce Way/ Lammers Extension ^d	Signal	AM PM	32.8 107.3	C F	37.5 39.0	D D			
19. 11 th Street/Lammers Road ^d	Signal	AM PM	44.8 60.5	D E	56.9 48.4	E D			
20. Capital Parks Drive/Lammers Road	Signal	AM PM	25.0 45.2	C D	38.6 47.0	D D			
21. New Schulte Road/ Lammers Road	Signal	AM PM	15.0 33.6	B C	29.5 61.3	C E	29.5 52.8	C D	Add a right-turn lane to the eastbound approach, for a mitigated configuration of one left turn lane, two through lanes and one right-turn lane
22. Old Schulte Road/ Lammers Road	Signal	AM PM	9.3 16.4	A B	12.5 22.7	B C			
23. Valpico Road/ Lammers Road	Signal	AM PM	20.1 36.2	C D	22.4 45.0	C D	21.0 30.5	C C	Add a second southbound left turn lane to reduce queue length, mitigated configuration is two left-turn lanes, three through lanes, and one right-turn lane
24. Linne Road/ Lammers Road	Signal	AM PM	13.5 31.6	B C	15.6 32.8	B C			

TABLE 4.14-18 INTERSECTION LEVELS OF SERVICE – CUMULATIVE (2035) NO PROJECT AND (2035) PLUS PHASE I

Intersection	Control ^a	Peak Hour	2035 No Project		2035 Plus Phase I		2035 Plus Phase I Mitigated		Project Mitigation
			Delay	LOS ^{b,c}	Delay	LOS ^{b,c}	Delay	LOS ^{b,c}	
25. I-580 Eastbound Ramps/ Lammers Road ^d	Signal	AM	6.6	A	10.0	B			
		PM	6.3	A	8.5	A			
19. I-580 Eastbound Ramps/ Lammers Road ^d	Signal	AM	7.9	A	9.3	A			
		PM	15.1	B	16.2	B			

Note: **Bold:** Intersection does not meet City of Tracy LOS standard.

^a Signal = Signalized intersection; SSSC = Side-street stop-controlled intersection; Roundabout = Roundabout control.

^b Signalized level of service based on average intersection control delay according to the *Highway Capacity Manual*, Transportation Research Board, 2000.

^c Roundabout level of service based on SIDRA analysis.

^d City of Tracy LOS standard: Within ¼- mile of a freeway, LOS E shall be allowed.

^e LOS F due primarily to high westbound off-ramp movement toward Mountain House (1,830 vehicles in the PM peak hour).

Source: Fehr & Peers, February 2013.

In the case of intersection #1, I-205 Westbound Ramps/Mountain House Parkway, the poor PM peak hour service level is projected to occur with or without the Project, and is primarily related to a very large projected increase in the right turn volume from the westbound off-ramp to northbound Mountain House Parkway. This increase is related primarily to the anticipated completion of the development of the Mountain House community in the 2035 Tracy Travel Demand Model. The projected increase for this movement (1,600 trips) is over three times the Phase 1 Project's PM peak hour volume contribution to the intersection (510 total trips). The very high right turn volume renders it one of the "critical movements" for the intersection, thereby controlling the intersection delay and service level. It is noted that this high right turn volume was not forecast in the traffic study performed in 2002 for the I-205/Mountain House Parkway interchange project. That study was performed in 2002 with a different travel demand model and different regional land use and roadway network assumptions. In more recent studies performed by the City for the General Plan Update EIR and the Roadway and Transportation Master Plan environmental review, operations of the Mountain House Parkway interchange intersections were not assessed

Because this cumulative impact is created by a turn movement volume – the westbound right turn – to which the Project contributes no traffic, the Project has no feasible way to meaningfully mitigate this impact. The City will monitor traffic conditions at this intersection as part of its ongoing roadway maintenance programs, and, if actual volume increases over time indicate the need to plan for capacity improvements, the City will work with Caltrans and San Joaquin County to develop and implement improvements.

In the second case, intersection 18 (New Schulte Road/Lammers Road), the impact is primarily due to the different amount and distribution of land use in Phase 1 of the Project, relative to that assumed in the TMP analysis, and also due to a more detailed and refined trip distribution and assignment process, relative to the TMP which provided a citywide traffic assessment. For this intersection, a relatively minor change in the lane configuration on

the eastbound approach will mitigate the impact: re-stripe the approach to provide a left-turn lane, two through lanes and one right turn lane. This mitigation, and the resulting improved service levels, are shown in the far-right columns of Table 4.14-18.

Additional, non-LOS based, mitigations are identified for intersection 4 (New Schulte Road/Mountain House Parkway) and intersection 20 (Valpico Road/Lammers Road). In the case of intersection 4, a signal is warranted with the Project, based on the California MUTCD Peak Hour Signal Warrant. In the case of intersection 20, an additional southbound left turn is needed to reduce excessive queue lengths. These mitigations are noted in the right-hand column of Table 4.14-18, along with the mitigated LOS.

b) Roundabout Option

Table 4.14-19 shows the LOS results for roundabout designs at intersections 10, 13, and 111, as roundabouts have been proposed as alternate intersection designs for these three intersections in the TMP. This information is presented for informational purposes only.

a) Signal Option at Intersections 5 and 6 (I-580/Mountain House Parkway Interchange)

An additional analysis was completed for the Mountain House Parkway/I-580 Ramp intersections, which assumed that signals would be constructed as opposed to potential roundabouts. The levels of service are summarized in Table 4.14-20. All of the intersections perform at LOS D or higher during the AM and PM peak hours, with the lane configurations indicated in Figure 4.14-11, which assume a widening of the Mountain House Parkway bridge over I-580 to four lanes. A micro-simulation model analyzed the estimated queues for the AM and PM peak hour with the signal alternative. AM and PM peak hour queues are summarized in Tables 4.14-21A and 4.14-21B, respectively. All of the average queues are contained within the storage capacity, with the exception of the I-580 westbound off-ramp left-turn lane during the AM peak hour, which exceeds its storage capacity. However, there is sufficient capacity on the off-ramp to contain any

TABLE 4.14-19 2035 + PHASE I LEVELS OF SERVICE: SIGNALS VS. ROUNDABOUTS

Intersection	Peak Hour	Signal		Roundabout	
		Delay	LOS ^a	Delay	LOS ^b
1. Old Schulte Road/ Hansen Road	AM	32.0	C	13.5	B
	PM	35.1	C	24.8	C
2. Capital Parks Drive/ Commerce Way	AM	14.2	B	3.8	A
	PM	18.9	B	8.8	A
3. Old Schulte Road/ Pavilion Parkway	AM	21.8	B	9.0	A
	PM	30.2	C	10.7	B

^a Signalized level of service based on average intersection control delay according to the *Highway Capacity Manual*, Transportation Research Board, 2000.

^b Roundabout level of service based on SIDRA analysis.

Source: Fehr & Peers, December 2012.

TABLE 4.14-20 INTERSECTION LEVELS OF SERVICE – 2035 PLUS PHASE I WITH OPTION

Intersection	Control ^a	Peak Hour	2035 No Project		2035 Plus Phase I		2035 Plus Phase I with Option ^c	
			Delay	LOS	Delay	LOS	Delay	LOS
1. Old Schulte Rd/Mtn House Pkwy ^c	Signal	AM	26.7	C	32.0	C	38.5	D
		PM	24.3	C	34.2	C	39.9	D
2. I-580 WB Ramps/Mtn House Pkwy ^c	Roundabout/Signal ^b	AM	9.2	A	10.4	B	31.0	C
		PM	8.4	A	8.8	A	19.5	B
3. I-580 EB Ramps/Mtn House Pkwy ^c	Roundabout/Signal ^b	AM	10.4	B	11.4	B	25.4	C
		PM	13.1	B	33.8	D	32.0	C

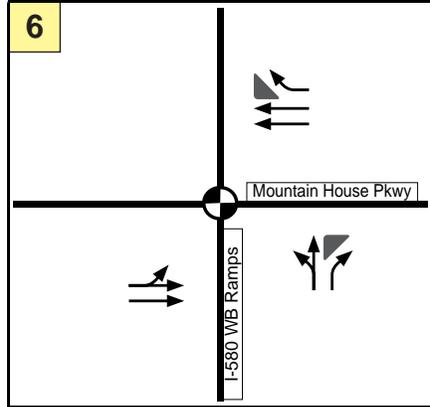
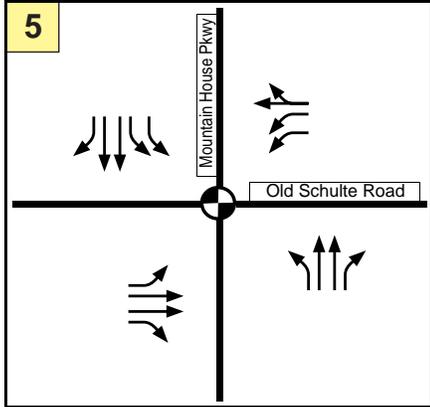
Note: **Bold**: Intersection does not meet City of Tracy LOS standard.

^a Signal = Signalized intersection; AWSC = All-way stop-controlled intersection; SSSC = Side-street stop-controlled intersection.

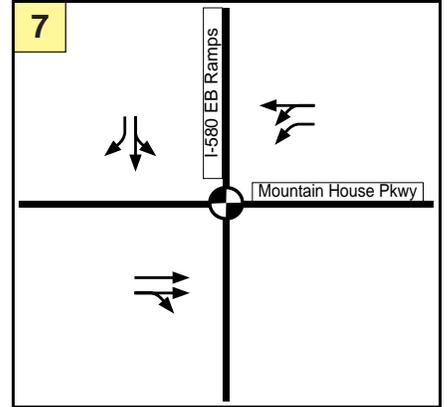
^b Alternative analysis signalizes the I-580 Westbound Ramps/Mountain House Parkway and I-580 Eastbound Ramps/Mountain House Parkway intersections.

^c Intersections analyzed using SimTraffic software.

Source: Fehr & Peers, February 2013



NOTE: Alternative analysis signalizes intersection.



NOTE: Alternative analysis signalizes intersection.

KEY

XX (YY) AM (PM) Peak Hour
 Traffic Volumes

 TMP Study Intersection

 Signalized Intersection

 "Free" Right Turn

Source: Fehr and Peers, 2013.

FIGURE 4.14-11

TABLE 4.14-21A ESTIMATED QUEUES – 2035 PLUS PHASE I WITH OPTION AM PEAK HOUR

Intersection	Approach	Storage (Feet)	2035 Plus Phase I Queues		
			Average Queue (Feet)	95th Percentile Queue (Feet)	Maximum Queue (Feet)
Old Schulte Road/ Mountain House Parkway	EBL	120	21	62	83
	EBT	850	46	178	250
	EBR	850	99	183	160
	WBL	1,600	146	255	307
	WBTR	1,600	172	363	451
	NBL	250	49	114	150
	NBT	1,090	241	583	637
	NBR	250	252	373	310
	SBL	500	117	195	215
	SBT	1,140	121	213	228
I-580 Westbound Ramps/ Mountain House Parkway	SBR	210	13	40	55
	EBLT	380	117	219	257
	EBT	380	177	305	352
	WBT	1,090	325	801	802
	WBR	150	49	194	210
	NBL	100	108	172	159
I-580 Eastbound Ramps/ Mountain House Parkway	NBR	660	83	318	561
	EBT	650	22	65	95
	EBTR	650	54	125	155
	WBL	380	55	170	258
	WBLT	380	268	476	402
	SBLT	770	214	347	405
	SBR	60	7	51	120

Note: **Bold:** Intersection queues exceed available storage.

Source: Fehr & Peers, February 2013

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TABLE 4.14-21B ESTIMATED QUEUES – 2035 PLUS PHASE I WITH OPTION PM PEAK HOUR

		<u>2035 Plus Phase I Queues</u>			
Intersection	Approach	Storage (Feet)	95th		
			Average Queue (Feet)	Percentile Queue (Feet)	Maximum Queue (Feet)
Old Schulte Road/ Mountain House Parkway	EBL	120	64	135	158
	EBT	850	25	120	110
	EBR	850	53	132	143
	WBL	1,600	174	274	303
	WBTR	1,600	186	374	470
	NBL	250	40	91	118
	NBT	1,090	176	313	408
	NBR	250	184	321	310
	SBL	500	175	258	289
I-580 Westbound Ramps/ Mountain House Parkway	SBT	1,140	141	235	271
	SBR	210	19	76	144
	EBLT	380	130	191	203
	EBT	380	145	202	238
	WBT	1,090	90	179	206
	WBR	150	10	79	166
	NBL	100	18	53	73
	NBR	660	26	92	127
	EBT	650	113	227	312
I-580 Eastbound Ramps/ Mountain House Parkway	EBTR	650	286	500	598
	WBL	380	164	324	353
	WBLT	380	186	355	358
	SBLT	770	136	249	283
	SBR	60	34	121	120

Note: **Bold:** Intersection queues exceed available storage.

Source: Fehr & Peers, February 2013

spillback from the left turn movement; therefore signal operations on Mountain House Parkway are not expected to generate queues to the I-580 mainline. On occasion the maximum queue on Mountain House Parkway may extend to the upstream intersection; however, the queue would clear before the end of the peak hour.

ii. Freeway Peak Hour Volumes and LOS

Tables 4.14-22A and 4.14-22B show the peak hour freeway volumes for the 2035 Plus Phase 1 Project case. In 2035, several segments of I-205 and I-580 are projected to operate unacceptably in either the AM or PM peak hours, with or without the Project. The addition of Phase 1 Project traffic to the 2035 No Project volumes causes the following significant impacts:

In the AM peak hour, the Project adds more than 5 percent to the total 2035 Plus Phase 1 Project volume on I-205 westbound east of Tracy Boulevard, which is projected to operate at LOS E without the Project.

“ In the PM peak hour, the LOS falls from D (2035 No Project) to E (2035 Plus Phase 1 Project) on I-205 eastbound between I-580 and Mountain House Parkway.

d. 2035 Plus Buildout

i. Roadway Segment Volumes and V/C Ratios

Table 4.14-23 shows the peak hour roadway segment volumes forecast for the Buildout case, in which the Project is completely developed along with all other development potential through 2035 in Tracy, consistent with the forecasts in the TMP. As noted in the preceding methodology section, the Project Buildout is expected to occur sometime beyond 2035. Over the Buildout planning horizon, many changes in land use plans and roadway network plans (in the City of Tracy, the San Joaquin Valley and the Bay Area) are likely to occur, making detailed analysis and infrastructure planning (i.e. intersection-level analysis) infeasible at this time. The information in Table 4.14-23 is therefore presented to give a high-level view of roadway volumes at Project Buildout, assuming that the Tracy TMP roadway network (sized to serve 2035 forecasts only) is in place.

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TABLE 4.14-22A FREeway VOLUMES AND LOS – 2035 PLUS PHASE 1 (AM)

Segment	Segment Capacity	Direction	Volume (Density) [Level of Service]	
			2035 No Project	2035 Plus Phase I
<i>I-205</i>				
West of Mountain House Parkway	6,600	EB	3,330 (19) [C]	3,430 (20) [C]
Mountain House Parkway to Tracy Boulevard	6,600	WB	4,590 (26) [D]	4,640 (27) [D]
East of Tracy Boulevard	8,140	EB	4,480 (26) [C]	4,610 (27) [D]
	8,140	WB	4,820 (28) [D]	5,290 (32) [D]
East of Tracy Boulevard	6,600	EB	6,070 (40) [E]	6,240 (43) [E]
	6,600	WB	6,800 (-) [F]	7,540 (-) [F]
<i>I-580</i>				
West of I-205 Interchange	8,800	EB	4,260 (19) [C]	4,490 (20) [C]
I-205 Interchange to Patterson Pass Road	11,000	WB	7,070 (25) [C]	7,150 (25) [C]
Patterson Pass Road to Corral Hollow Road	4,400	EB	930 (8) [A]	1,060 (9) [A]
	4,400	WB	2,480 (21) [C]	2,510 (22) [C]
East of Corral Hollow Road	4,400	EB	920 (8) [A]	970 (8) [A]
	4,400	WB	2,450 (21) [C]	2,640 (23) [C]
East of Corral Hollow Road	4,400	EB	920 (8) [A]	1,000 (9) [A]
	4,400	WB	1,840 (16) [B]	2,140 (19) [C]

Notes: **Bold** indicates segments operating below the applicable standard. **Shading** indicates a significant impact based on the applicable standard. Volumes from City of Tracy Travel Demand Model. Analysis completed using HCM basic segment freeway operations method.

Source: Fehr & Peers, February 2013.

TABLE 4.14-22B FREeway VOLUMES AND LOS – 2035 PLUS PHASE 1 (PM)

Segment	Segment Capacity	Direction	Volume (Density) [Level of Service]	
			2035 No Project	2035 Plus Phase I
<i>I-205</i>				
West of Mountain House Parkway	6,600	EB	5,530 (34) [D]	5,640 (35) [E]
	6,600	WB	4,990 (29) [D]	5,170 (31) [D]
Mountain House Parkway to Tracy Boulevard	8,140	EB	6,980 (-) [F]	7,050 (-) [F]
	8,140	WB	6,780 (-) [F]	6,970 (-) [F]
East of Tracy Boulevard	6,600	EB	9,900 (-) [F]	10,280 (-) [F]
	6,600	WB	8,640 (-) [F]	8,760 (-) [F]
<i>I-580</i>				
West of I-205 Interchange	8,800	EB	8,000 (42) [E]	8,150 (44) [E]
	11,000	WB	5,950 (21) [C]	6,290 (22) [C]
I-205 Interchange to Patterson Pass Road	4,400	EB	2,470 (21) [C]	2,510 (22) [C]
	4,400	WB	960 (8) [A]	1,120 (10) [A]
Patterson Pass Road to Corral Hollow Road	4,400	EB	2,700 (24) [C]	2,880 (25) [C]
	4,400	WB	1,260 (11) [A]	1,360 (12) [B]
East of Corral Hollow Road	4,400	EB	2,430 (21) [C]	2,830 (25) [C]
	4,400	WB	1,030 (9) [A]	1,160 (10) [A]

Notes: **Bold** indicates segments operating below the applicable standard. **Shading** indicates a significant impact based on the applicable standard. Volumes from City of Tracy Travel Demand Model. Analysis completed using HCM basic segment freeway operations method.

Source: Fehr & Peers, February 2013.

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TABLE 4.14-23 ROADWAY VOLUMES – 2035 PLUS BUILDOUT

Street	Segment	Capacity	Volume				V/C			
			AM		PM		AM		PM	
			2035	2035+ Buildout	2035	2035+ Buildout	2035	2035+ Buildout	2035	2035+ Buildout
MHP SB	N/O I-205	1,780	1,980	2,320	2,380	2,510	1.1	1.3	1.3	1.4
	I-205 to Road A	890	380	3,330	400	1,520	0.4	3.7	0.5	1.7
	Road A to Capital Parks Drive	890	470	3,040	500	1,550	0.5	3.4	0.6	1.7
	Capital Parks Drive to New Schulte Road	890	470	1,960	490	1,880	0.5	2.2	0.6	2.1
	New Schulte Road to Old Schulte Road	890	460	670	470	1,690	0.5	0.8	0.5	1.9
	Old Schulte Road to I-580	1,490	460	980	430	1,770	0.3	0.7	0.3	1.2
	S/O I-580	1,490	230	230	170	170	0.2	0.2	0.1	0.1
MHP NB	N/O I-205	1,780	2,040	2,040	2,530	2,980	1.2	1.2	1.4	1.7
	I-205 to Road A	890	310	830	650	3,480	0.4	0.9	0.7	3.9
	Road A to Capital Parks Drive	890	330	950	730	3,200	0.4	1.1	0.8	3.6
	Capital Parks Drive to New Schulte Road	890	330	1,420	690	2,400	0.4	1.6	0.8	2.7
	New Schulte Road to Old Schulte Road	890	320	1,350	650	990	0.4	1.5	0.7	1.1
	Old Schulte Road to I-580	1,490	290	1,540	650	1,090	0.2	1.0	0.4	0.7
	S/O I-580	1,490	60	80	340	620	0.04	0.05	0.2	0.4

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TABLE 4.14-23 ROADWAY VOLUMES – 2035 PLUS BUILDOUT

Street	Segment	Capacity	Volume				V/C			
			AM		PM		AM		PM	
			2035	2035+ Buildout	2035	2035+ Buildout	2035	2035+ Buildout	2035	2035+ Buildout
Hansen SB	N/O Capital Parks Drive	890	70	300	70	1,150	0.1	0.3	0.1	1.3
	Capital Parks Drive to New Schulte Road	1,780	400	960	460	1,120	0.2	0.5	0.3	0.6
	New Schulte Road to Old Schulte Road	1,780	470	1,230	590	1,810	0.3	0.7	0.3	1.0
	S/O New Schulte Road	890	420	420	610	1,250	0.5	0.5	0.7	1.4
Hansen NB	N/O Capital Parks Drive	890	70	1,240	80	380	0.1	1.4	0.1	0.4
	Capital Parks Drive to New Schulte Road	1,780	230	1,100	580	1,010	0.1	0.6	0.3	0.6
	New Schulte Road to Old Schulte Road	1,780	260	1,410	720	1,510	0.2	0.8	0.4	0.9
	S/O Old Schulte Road	890	300	810	860	970	0.3	0.9	1.0	1.1
Pavilion SB	N/O Capital Parks Drive	1,490	60	1,140	470	1,030	0.0	0.8	0.3	0.7
	Capital Parks Drive to New Schulte Road	1,490	30	1,450	310	920	0.0	1.0	0.2	0.6
	New Schulte Road to Old Schulte Road	1,490	30	1,250	310	890	0.0	0.8	0.2	0.6
	S/O Old Schulte Road	1,490	30	170	290	560	0.0	0.1	0.2	0.4
Pavilion NB	N/O Capital Parks Drive	1,490	110	460	370	1,500	0.1	0.3	0.2	1.0
	Capital Parks Drive to New Schulte Road	1,490	30	980	90	1,450	0.0	0.7	0.1	1.0
	New Schulte Road to Old Schulte Road	1,490	30	870	90	980	0.0	0.6	0.1	0.7
	S/O New Schulte Road	1,490	30	390	30	190	0.0	0.3	0.0	0.1

TABLE 4.14-23 ROADWAY VOLUMES – 2035 PLUS BUILDOUT

Street	Segment	Capacity	Volume				V/C			
			AM		PM		AM		PM	
			2035	2035+ Buildout	2035	2035+ Buildout	2035	2035+ Buildout	2035	2035+ Buildout
Lammers SB	N/O 11th Street	1,490	410	410	1,040	1,040	0.3	0.3	0.7	0.7
	11th Street to Capital Parks Drive	2,670	1,800	2,430	2,190	2,450	0.7	0.9	0.8	0.9
	Capital Parks Drive to New Schulte Road	2,670	1,620	1,750	2,890	3,090	0.6	0.7	1.1	1.2
	New Schulte Road to Old Schulte Road	1,780	1,630	1,630	2,810	3,150	0.9	0.9	1.6	1.8
	Old Schulte Road to Valpico Road	1,780	1,580	1,580	3,330	4,470	0.9	0.9	1.9	2.5
	Valpico Road to Linne Road	1,780	1,350	1,440	2,820	3,930	0.8	0.8	1.6	2.2
	Linne Road to I-580	1,780	1,240	1,280	2,630	3,150	0.7	0.7	1.5	1.8
	S/O I-580	1,780	340	420	1,060	1,530	0.2	0.2	0.6	0.9
Lammers NB	N/O 11th Street	1,490	460	460	830	830	0.3	0.3	0.6	0.6
	11th Street to Capital Parks Drive	2,670	2,080	2,080	2,230	3,110	0.8	0.8	0.8	1.2
	Capital Parks Drive to New Schulte Road	2,670	2,590	2,590	2,490	2,490	1.0	1.0	0.9	0.9
	New Schulte Road to Old Schulte Road	1,780	2,400	2,430	2,420	2,500	1.3	1.4	1.4	1.4
	Old Schulte Road to Valpico Road	1,780	2,570	3,400	2,630	2,920	1.4	1.9	1.5	1.6
	Valpico Road to Linne Road	1,780	1,910	2,920	2,460	2,630	1.1	1.6	1.4	1.5
	Linne Road to I-580	1,780	1,600	2,170	2,360	2,470	0.9	1.2	1.3	1.4
	S/O I-580	1,780	720	1,090	800	830	0.4	0.6	0.4	0.5

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TABLE 4.14-23 ROADWAY VOLUMES – 2035 PLUS BUILDOUT

Street	Segment	Capacity	Volume				V/C			
			AM		PM		AM		PM	
			2035	2035+ Buildout	2035	2035+ Buildout	2035	2035+ Buildout	2035	2035+ Buildout
Lammers Extension SB / 11th EB	N/O I-205	2,230	460	990	1,420	1,860	0.2	0.4	0.6	0.8
	I-205 to Commerce Way	2,970	2,890	3,360	4,130	4,130	1.0	1.1	1.4	1.4
	Commerce Way to Lammers Road	2,970	1,400	1,440	2,590	2,920	0.5	0.5	0.9	1.0
	E/O Lammers Road	2,230	1,520	1,660	2,510	4,080	0.7	0.7	1.1	1.8
Lammers Extension NB / 11th WB	N/O I-205	2,230	1,520	1,930	1,950	2,250	0.7	0.9	0.9	1.0
	I-205 to Commerce Way	2,970	2,780	2,780	4,080	4,080	0.9	0.9	1.4	1.4
	Commerce Way to Lammers Road	2,970	1,930	2,340	2,000	1,880	0.6	0.8	0.7	0.6
	E/O Lammers Road	2,230	1,850	3,150	1,790	2,080	0.8	1.4	0.8	0.9
Capital Parks Drive EB	MHP to Hansen Road	1,490	30	1,240	30	1,620	0.0	0.8	0.0	1.1
	Hansen Road to Pavillion Parkway	1,490	190	880	510	3,060	0.1	0.6	0.3	2.1
	Pavillion Parkway to Commerce Way	2,230	160	1,030	510	3,670	0.1	0.5	0.2	1.6
	Commerce Way to Lammers Road	2,230	160	390	510	1,360	0.1	0.2	0.2	0.6
Capital Parks Drive WB	MHP to Hansen Road	1,490	30	1,490	70	1,360	0.0	1.0	0.0	0.9
	Hansen Road to Pavillion Parkway	1,490	340	2,960	420	1,430	0.2	2.0	0.3	1.0
	Pavillion Parkway to Commerce Way	2,230	370	3,520	540	1,590	0.2	1.6	0.2	0.7
	Commerce Way to Lammers Road	2,230	1560	1,560	1,470	1,470	0.7	0.7	0.7	0.7

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TABLE 4.14-23 ROADWAY VOLUMES – 2035 PLUS BUILDOUT

Street	Segment	Capacity	Volume				V/C			
			AM		PM		AM		PM	
			2035	2035+ Buildout	2035	2035+ Buildout	2035	2035+ Buildout	2035	2035+ Buildout
New Schulte Road EB	MHP to Hansen Road	1,490	30	1,370	40	1,340	0.0	0.9	0.0	0.9
	Hansen Road to Pavillion Parkway	1,490	40	740	150	2,170	0.0	0.5	0.1	1.5
	Pavillion Parkway to Lammers Road	1,490	40	790	200	2,420	0.0	0.5	0.1	1.6
	E/O Lammers Road	1,490	120	590	520	2,510	0.1	0.4	0.4	1.7
New Schulte Road WB	MHP to Hansen Road	1,490	30	1,330	50	1,420	0.0	0.9	0.0	1.0
	Hansen Road to Pavillion Parkway	1,490	100	2,010	160	900	0.1	1.4	0.1	0.6
	Pavillion Parkway to Lammers Road	1,490	100	2,340	160	1,100	0.1	1.6	0.1	0.7
	E/O Lammers Road	1,490	360	2,350	480	1,200	0.2	1.6	0.3	0.8
Old Schulte Road EB	MHP to Hansen Road	1,490	210	1,020	500	1,130	0.1	0.7	0.3	0.8
	Hansen Road to Pavillion Parkway	890	120	730	410	1,360	0.1	0.8	0.5	1.5
	Pavillion Parkway to Lammers Road	890	120	320	700	1,550	0.1	0.4	0.8	1.7
Old Schulte Road WB	MHP to Hansen Road	1,490	360	1,050	320	1,300	0.2	0.7	0.2	0.9
	Hansen Road to Pavillion Parkway	890	330	1,280	150	930	0.4	1.4	0.2	1.0
	Pavillion Parkway to Lammers Road	890	350	1,340	250	670	0.4	1.5	0.3	0.8
Valpico EB	W/O Lammers Road	890	40	160	250	760	0.04	0.2	0.3	0.9
	E/O Lammers Road	1,490	250	380	710	1,670	0.2	0.3	0.5	1.1
Valpico WB	W/O Lammers Road	890	130	560	160	390	0.2	0.6	0.2	0.4
	E/O Lammers Road	1,490	550	1,480	400	730	0.4	1.0	0.3	0.5

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TABLE 4.14-23 ROADWAY VOLUMES – 2035 PLUS BUILDOUT

Street	Segment	Capacity	Volume				V/C			
			AM		PM		AM		PM	
			2035	2035+ Buildout	2035	2035+ Buildout	2035	2035+ Buildout	2035	2035+ Buildout
Commerce Way EB	Capital Parks Dr. to Lammers Extension	2,230	850	890	2,010	2,780	0.4	0.4	0.9	1.2
Commerce Way WB	Capital Parks Dr. to Lammers Extension	2,230	1,370	2,490	1,620	1,620	0.6	1.1	0.7	0.7

Notes: V/C ratios are correlated with LOS as follows: < 0.60=LOS A; 0.60 – 0.69=LOS B; 0.70 – 0.79=LOS C; 0.80 – 0.89=LOS D; 0.90 – 0.99=LOS E; ≥ 1.00=LOS F. **Bold** values indicated volumes exceeding LOS D (i.e. V/C ratio of 0.90 or greater.) **Shaded** values indicate segments in the 2035 Plus Buildout case for which volumes would continue to exceed the LOS D capacity even with the higher TMP Right-of-Way Roadway Network capacities (see Table 4.14-24).

Source: Fehr & Peers, February 2013.

The shaded values in Table 4.14-23 indicate segments that would continue to exceed planning-level capacities (LOS D, $V/C \leq 0.89$), even with provision of the Right-of-Way network as defined in the Roadway and Transportation Master Plan (TMP Figure 3.5). The Right-of-Way network is defined in the TMP for purposes of long-term right-of-way preservation, and exceeds the roadway widths (number of lanes and corresponding capacities) of the TMP roadway network on many (but not all) TMP roadways. The Right-of-Way network capacities, which are derived from the Tracy Travel Demand Model, are shown in **Table 4.14-24** for reference, alongside the 2035 TMP network capacities. These are planning-level capacities; the actual capacities of the roadways, if ultimately widened to the Right-of-Way network width, may be higher or lower than these capacities, depending on the ultimate roadway design (intersection spacing, lane widths, etc.).

As indicated in the Table 4.14-23, many roadways would require additional lanes to provide the capacity needed to serve Project Buildout, if all other development potential included in the 2035 TMP forecasting is also realized, even with the provision of the full Right-of-Way network.

ii. Freeway Volumes and LOS

Tables 4.14-25A and 4.14-25B show the peak hour freeway volumes for the 2035 Plus Project Buildout case. In 2035, several segments of I-205 and I-580 are projected to operate unacceptably in either the AM or PM peak hours, with or without the addition of Project Buildout traffic.

The addition of Project Buildout traffic to the 2035 No Project volumes causes the following significant impacts:

In the AM peak hour:

- “ I-205 westbound between Tracy Boulevard and Mountain House Parkway falls from LOS D to LOS F;
- “ The Project adds more than 5 percent to the total 2035 Plus Project Build Out traffic on I-205 westbound, which is projected to operate at LOS F without Project traffic; and

TABLE 4.14-24 ROADWAY CAPACITIES: 2035 TMP AND TMP RIGHT-OF-WAY ROADWAY NETWORK

Roadway	Segment	2035 TMP Capacity	TMP Right-of-Way Capacity
MHP SB	N/O I-205	1,780	1,780
	I-205 to Road A	890	3,560
	Road A to Capital Parks Drive	890	3,560
	Capital Parks Dr to New Schulte Rd	890	3,560
	New Schulte Rd to Old Schulte Rd	890	1,780
	Old Schulte Road to I-580	1,490	2,240
	S/O I-580	1,490	2,240
MHP NB	N/O I-205	1,780	1,780
	I-205 to Road A	890	3,560
	Road A to Capital Parks Drive	890	3,560
	Capital Parks Dr to New Schulte Rd	890	3,560
	New Schulte Rd to Old Schulte Rd	890	1,780
	Old Schulte Road to I-580	1,490	2,240
	S/O I-580	1,490	2,240
Hansen SB	N/O Capital Parks Drive	890	890
	Capital Parks Dr to New Schulte Rd	1,780	1,780
	New Schulte Rd to Old Schulte Rd	1,780	1,780
	S/O Old Schulte Road	890	1,780
Hansen NB	N/O Capital Parks Drive	890	890
	Capital Parks Dr to New Schulte Rd	1,780	1,780
	New Schulte Rd to Old Schulte Rd	1,780	1,780
	S/O Old Schulte Road	890	1,780

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TABLE 4.14-24 ROADWAY CAPACITIES: 2035 TMP AND TMP RIGHT-OF-WAY ROADWAY NETWORK

Roadway	Segment	2035 TMP Capacity	TMP Right-of-Way Capacity
Pavilion SB	N/O Capital Parks Drive	1,490	1,490
	Capital Parks Dr to New Schulte Rd	1,490	1,490
	New Schulte Rd to Old Schulte Rd	1,490	1,490
	S/O New Schulte Road	1,490	1,490
Pavilion NB	N/O Capital Parks Drive	1,490	1,490
	Capital Parks Dr to New Schulte Rd	1,490	1,490
	New Schulte Rd to Old Schulte Rd	1,490	1,490
	S/O New Schulte Road	1,490	1,490
Lammers SB	N/O 11th Street	1,490	1,490
	11th Street to Capital Parks Drive	2,670	2,670
	Capital Parks Dr to New Schulte Rd	2,670	2,670
	New Schulte Rd to Old Schulte Rd	1,780	2,670
	Old Schulte Road to Valpico Road	1,780	2,670
	Valpico Road to Linne Road	1,780	2,670
	Linne Road to I-580	1,780	2,670
	S/O I-580	1,780	2,670
Lammers NB	N/O 11th Street	1,490	3,560
	11th Street to Capital Parks Drive	2,670	2,670
	Capital Parks Dr to New Schulte Rd	2,670	2,670
	New Schulte Rd to Old Schulte Rd	1,780	2,670
	Old Schulte Road to Valpico Road	1,780	2,670
	Valpico Road to Linne Road	1,780	2,670

TABLE 4.14-24 ROADWAY CAPACITIES: 2035 TMP AND TMP RIGHT-OF-WAY ROADWAY NETWORK

Roadway	Segment	2035 TMP Capacity	TMP Right-of-Way Capacity
Lammers NB <i>cont'd</i>	Linne Road to 580	1,780	2,670
	S/O I-580	1,780	2,670
	N/O I-205	2,230	2,230
Lammers Extension SB/11 th EB	I-205 to Commerce Way	2,970	2,970
	Commerce Way to Lammers Road	2,970	2,970
	E/O Lammers Road	2,230	2,230
Lammers Extension NB/11 th WB	N/O I-205	2,230	2,230
	I-205 to Commerce Way	2,970	2,970
	Commerce Way to Lammers Road	2,970	2,970
Capital Parks Drive EB	E/O Lammers Road	2,230	2,230
	MHP to Hansen Road	1,490	1,490
	Hansen Road to Pavillion Parkway	1,490	1,490
Capital Parks Drive WB	Pavillion Parkway to Commerce Way	2,230	2,230
	Commerce Way to Lammers Road	2,230	2,230
	MHP to Hansen Road	1,490	1,490
New Schulte Road EB	Hansen Road to Pavillion Parkway	1,490	1,490
	Pavillion Parkway to Commerce Way	2,230	2,230
	Commerce Way to Lammers Road	2,230	2,230
New Schulte Road EB	MHP to Hansen Road	1,490	2,240
	Hansen Road to Pavillion Parkway	1,490	2,240
	Pavillion Parkway to Lammers Road	1,490	2,240
	E/O Lammers Road	1,490	1,490

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TABLE 4.14-24 ROADWAY CAPACITIES: 2035 TMP AND TMP RIGHT-OF-WAY ROADWAY NETWORK

Roadway	Segment	2035 TMP Capacity	TMP Right-of-Way Capacity
New Schulte Road WB	MHP to Hansen Road	1,490	2,240
	Hansen Road to Pavillion Parkway	1,490	2,240
	Pavillion Parkway to Lammers Road	1,490	2,240
	E/O Lammers Road	1,490	1,490
Old Schulte Road EB	MHP to Hansen Road	1,490	1,490
	Hansen Road to Pavillion Parkway	890	1,780
	Pavillion Parkway to Lammers Road	890	1,780
	E/O Lammers Road	1,780	1,780
Old Schulte Road WB	MHP to Hansen Road	1,490	1,490
	Hansen Road to Pavillion Parkway	890	1,780
	Pavillion Parkway to Lammers Road	890	1,780
	E/O Lammers Road	1,780	1,780
Valpico EB	E/O Lammers Road	1,490	1,490
	W/O Lammers Road	890	2,240
Valpico WB	E/O Lammers Road	1,490	1,490
	W/O Lammers Road	890	2,240
Commerce Way EB	Capital Parks Drive to Lammers Extension	2,230	2,230
Commerce Way WB	Capital Parks Drive to Lammers Extension	2,230	2,230

Note: Capacities derived from the City of Tracy Travel Demand Model
 Source: Fehr & Peers, February 2013.

TABLE 4.14-25A FREEWAY VOLUMES AND LOS – 2035 PLUS BUILDOUT (AM)

Segment	Segment Capacity	Direction	Volume (Density) [Level of Service]	
			2035 No Project	2035 Plus Buildout
<i>I-205</i>				
West of Mountain House Parkway	6,600	EB	3,330 (19) [C]	4,080 (23) [C]
	6,600	WB	4,590 (26) [D]	4,770 (28) [D]
Mountain House Parkway to Tracy Boulevard	8,140	EB	4,480 (26) [C]	4,870 (28) [D]
	8,140	WB	4,820 (28) [D]	6,810 (-) [F]
East of Tracy Boulevard	6,600	EB	6,070 (40) [E]	6,430 (-) [F]
	6,600	WB	6,800 (-) [F]	9,540 (-) [F]
<i>I-580</i>				
West of I-205 Interchange	8,800	EB	4,260 (19) [C]	5,430 (24) [C]
	11,000	WB	7,070 (25) [C]	7,340 (26) [D]
I-205 Interchange to Patterson Pass Road	4,400	EB	930 (8) [A]	1,350 (12) [B]
	4,400	WB	2,480 (21) [C]	2,570 (22) [C]
Patterson Pass Road to Corral Hollow Road	4,400	EB	920 (8) [A]	1,110 (10) [A]
	4,400	WB	2,450 (21) [C]	3,310 (30) [D]
East of Corral Hollow Road	4,400	EB	920 (8) [A]	1,190 (10) [A]
	4,400	WB	1,840 (16) [B]	3,090 (28) [D]

Notes: **Bold** indicates segments operating below the applicable standard. **Shading** indicates a significant impact based on the applicable standard. Volumes from City of Tracy Travel Demand Model. Analysis completed using HCM basic segment freeway operations method.

Source: Fehr & Peers, February 2013.

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TABLE 4.14-25B **FREEWAY VOLUMES AND LOS – 2035 PLUS BUILDOUT (PM)**

Segment	Segment Capacity	Direction	Volume (Density) [Level of Service]	
			2035 No Project	2035 Plus Buildout
<i>I-205</i>				
West of Mountain House Parkway	6,600	EB	5,530 (34) [D]	5,840 (38) [E]
	6,600	WB	4,990 (29) [D]	5,780 (37) [E]
Mountain House Parkway to Tracy Boulevard	8,140	EB	6,980 (-) [F]	8,480 (-) [F]
	8,140	WB	6,780 (-) [F]	7,540 (-) [F]
East of Tracy Boulevard	6,600	EB	9,900 (-) [F]	12,100 (-) [F]
	6,600	WB	8,640 (-) [F]	9,360 (-) [F]
<i>I-580</i>				
West of I-205 Interchange	8,800	EB	8,000 (42) [E]	8,340 (-) [F]
	11,000	WB	5,950 (21) [C]	7,160 (25) [C]
I-205 Interchange to Patterson Pass Road	4,400	EB	2,470 (21) [C]	2,500 (22) [C]
	4,400	WB	960 (8) [A]	1,380 (12) [B]
Patterson Pass Road to Corral Hollow Road	4,400	EB	2,700 (24) [C]	3,510 (32) [D]
	4,400	WB	1,260 (11) [A]	1,570 (14) [B]
East of Corral Hollow Road	4,400	EB	2,430 (21) [C]	3,690 (36) [E]
	4,400	WB	1,030 (9) [A]	1,450 (13) [B]

Notes: **Bold** indicates segments operating below the applicable standard. **Shading** indicates a significant impact based on the applicable standard. Volumes from City of Tracy Travel Demand Model. Analysis completed using HCM basic segment freeway operations method.

Source: Fehr & Peers, February 2013.

The Project adds more than 5 percent to the total 2035 Plus Project Buildout traffic on I-205 eastbound, which is projected to operate at LOS E without the Project, and which falls to LOS F with the addition of Project traffic.

In the PM peak hour:

- “ On I-580 eastbound west of the I-205 interchange, in Alameda County, the LOS falls from E (acceptable) to F (unacceptable);
- “ On I-205 eastbound and westbound between the I-580 interchange and Mountain House Parkway, the LOS falls from D (acceptable) to E unacceptable);
- “ On I-205 eastbound and westbound between Mountain House Parkway and Tracy Boulevard, which are projected to operate at LOS F without Project Buildout, the Project adds more than 5 percent to the total 2035 Plus Project Buildout traffic;
- “ On I-580 eastbound east of Corral Hollow Road, the LOS is projected to fall from C to E.

G. Impacts and Mitigation Measures

The impacts identified based on the above analysis, and associated mitigation measures, are presented below. Project impacts are presented first, followed by Cumulative Impacts. Within each of these two sections, Phase 1 Project impacts are presented first, followed by Project Buildout impacts.

1. Project Impacts and Mitigation Measures

a. Existing Plus Phase 1 Project

Impact TRANS-1: Construction of Phase 1 of the Project would cause a significant impact at intersections 1, 2, 6, 7, 10, 18, 19, and 20, under Existing Plus Project Phase 1 conditions. This is a *significant* impact.

This impact and the identified mitigation measures are described in Section E.1.a.i and summarized in Table 4.14-12. The mitigations are listed below.

Mitigation Measure TRANS-1: The Project will construct the following improvements, in accordance with then-applicable engineering standards and requirements, and as determined by the City Engineer:

- “ *Intersection #1 (Mountain House Parkway/I-205 Westbound Ramps)*: Restripe westbound off-ramp to provide two left-turn lanes and one shared through/right lane, and optimize signal timings.
- “ *Intersection #2 (Mountain House Parkway/I-205 Eastbound Ramps)*: Convert the northbound right-turn lane to a free right with an acceptance lane on the eastbound on-ramp, and optimize signal timings.
- “ *Intersection #6 (Mountain House Parkway/I-580 Westbound Ramps)*: Signalize the intersection with eastbound/westbound split phasing, or install a roundabout.
- “ *Intersection #7 (Mountain House Parkway/I-580 Eastbound Ramps)*: Signalize the intersection with eastbound/westbound split phasing, or install a roundabout.
- “ *Intersection #10 (Old Schulte Road/Hansen Road)*: Signalize the intersection, and construct an additional westbound left turn lane, eastbound left-turn and right-turn lanes, and a southbound left-turn lane.
- “ *New Schulte Road*: Construct New Schulte Road from the eastern terminus of the Project Phase 1 network (east of Hansen Road) east to Lammers Road, as a two-lane road. At Intersection #18, New Schulte Road/Lammers Road, signalize the intersection and construct a left-turn lane on the eastbound approach, and right-turn lanes on the northbound and southbound approaches.
- “ *New Schulte Road*: Construct New Schulte Road between Hansen Road (the end of the Phase 1 proposed network) and Lammers Road as a two-lane road.

- “ *Intersection #18 (New Schulte Road/Lammers Road):* Install a signal and construct a left-turn lane on the eastbound approach, and right-turn lanes on the northbound and southbound approaches.
- “ *Intersection #19 (Old Schulte Road/Lammers Road):* Install a signal and construct a left-turn lane on the eastbound approach, and right-turn lanes on the northbound and eastbound approaches.
- “ *Intersection #20 (Valpico Road/Lammers Road):* Signalize the intersection and construct a left-turn lane on the southbound approach.

A “trigger” analysis, provided in Table 4.14-13 in Section E.1.a.i, provides the estimated timing for provision of each of the above mitigations, based on Project AM and PM peak hour trip generation. In terms of when the above improvements would need to be constructed, as part of the application process for each individual, site-specific development under the Specific Plan, the applicant will submit a trip generation study for the development at issue or will fund the preparation of this study by the City’s consultants. This information will be utilized by the City to determine whether the relevant trip generation thresholds are met, taking into account past Project trip generation studies and the running cumulative total. The City may also take actual traffic counts and operations at the mitigation locations into account (funded by the applicant), in determining when specific improvements need to be constructed. With construction of the required improvements at intersections 10, 18, 19, and 20, impacts to these identified intersections would be less than significant.

Because the improvements to the freeway interchange intersections require the approval of Caltrans, the impacts at intersections 1, 2, 6 and 7 remain significant and unavoidable.

Significance After Mitigation: Intersections 1, 2, 6, and 7: Significant and Unavoidable. Intersections 10, 18, 19 and 20: Less Than Significant.

Impact TRANS-2: Construction of Phase 1 of the Project would cause a significant impact on one freeway segment – I-205 Eastbound between Mountain House Parkway and Tracy Boulevard, which would fall from LOS D to LOS E in the PM peak hour (refer to Table 4.14-14). This is a *significant* impact.

Auxiliary lanes are currently being constructed on this section of I-205, and were therefore assumed in the Existing Plus Phase 1 Project analysis. However, the Existing Plus Phase 1 Project volume will still result in LOS E conditions on one segment in the PM peak hour, as noted above. The SJCOG Regional Transportation Plan includes a Tier 1 project to expand I-205 from 6 to 8 lanes. This project is scheduled for environmental clearance by 2025 and construction by 2030. However, it is not currently funded, and this improvement project is not included in the Regional Transportation Improvement Fee. Therefore, there is currently no mechanism for the Project to contribute to this I-205 capacity project. If the capacity project is added to the RTIF in the future, individual development projects in the Specific Plan will contribute to the capacity project through payment of the RTIF, as may be required under applicable laws and regulations.

Mitigation Measure TRANS-2: The Project will contribute to capacity improvements in San Joaquin County through payment of the RTIF in accordance with applicable laws and regulations. However, because the I-205 capacity project is not currently included in the RTIF, payment of the RTIF will not mitigate this impact.

Significance After Mitigation: Significant and unavoidable.

Impact TRANS-3: The Project does not conflict with the City of Tracy's adopted policies, plans and programs regarding bicycle facilities and does not degrade the performance or safety of bicycle facilities. This impact applies to both the Phase 1 Project and the Buildout Project. This is a *less-than-significant* impact.

As described above in the Project Description section of this chapter, the Project's roadway network includes a comprehensive set of bicycle routes, composed of bicycle/pedestrian paths on many streets and bicycle routes on most other streets. Bicycle/pedestrian paths are buffered from the automobile travel lanes by landscaped strips, include street canopies of trees, street furniture and other amenities to encourage use of alternative modes of transportation and enhance connectivity. As such, the Project facilitates achievement of the City's policies that are designed to foster bicycle use and safety. Furthermore, the Project would be subject to all applicable local policies and programs to further support bicycle use and safety, including, among others, those measures reflected in the City's SAP. Therefore, the Project's impacts, in this regard would be less than significant.

Mitigation Measure TRANS-3: None required.

Significance After Mitigation: Less than Significant.

Impact TRANS-4: The Project does not conflict with the City of Tracy's adopted policies, plans and programs regarding pedestrian facilities and does not degrade the performance or safety of pedestrian facilities. This is a *less-than-significant* impact.

As described above in the Project Description section of this chapter, the Project's roadway network accommodates pedestrians on all streets, with a combination of 5-foot sidewalks and 10-foot and 12-foot shared bicycle/pedestrian paths. In addition, the design guidelines refer to site design elements to promote pedestrian circulation by creating pathways, linkages, and visual connections between buildings; and by including multiple connections to public sidewalks and pathways between buildings and areas throughout the Specific Plan Area to foster connectivity.

Mitigation Measure TRANS-4: None required.

Significance After Mitigation: Less than Significant.

Impact TRANS-5: The Project does not conflict with the City of Tracy's adopted policies, plans and programs regarding public transit service and does not degrade the performance or safety of transit facilities. This is a *less-than-significant* impact.

As described above in section C.1, Project Description, of this chapter, the Project developers/businesses within the Specific Plan Area will be required to work cooperatively with the City to modify and expand routes as necessary and when feasible to efficiently accommodate demand. Projected transit route extensions are not identified at this time; rather transit routes would be identified in response to actual development patterns and resulting transit demand based on the pace and ultimate geographic locations of developments within the Specific Plan Area, in consultation with the City and transit providers. As part of this development of transit routes, the Specific Plan confirms that "in determining the final bus stop locations additional right-of-way may be required to accommodate bus stops and shall be dedicated through the mapping process."

The SAP's Measure T-4, Support for Transit, outlines an array of directives aimed primarily at residential service and service near transit centers. However, in any event, the Project is consistent with the spirit of Measure T-4, which is to serve transit demand in the City. The Project's commitment to its businesses working with the City to extend transit service when warranted demonstrates a basic consistency with SAP measure T-4.

Mitigation Measure TRANS-5: None required.

Significance After Mitigation: Less than Significant.

Impact TRANS-6: The Project does not conflict with the City of Tracy Sustainability Action Plan (SAP) and the San Joaquin County Travel Demand Management Plan, with respect to key goals that are designed to reduce vehicle trips, congestion, VMT, and greenhouse gas emissions. This is a *less-than-significant* impact.

As discussed more fully in Chapter 4.7, Greenhouse Gas Emissions, the Project has been designed to facilitate achievement of key goals relating to reduction in VMT, congestion, and GHG emissions. For example, Specific Plan Chapter 7, Natural Resources and Sustainability, lists the transportation sustainability elements that would apply to the Project that would contribute to promotion of alternative mode use and minimization of vehicle miles travelled. These elements include, among other things, the roadway network grid layout, bicycle and pedestrian infrastructure (sidewalks and paths, and pedestrian-friendly intersection design), cooperation with the City on transit route extensions, carpool parking supply requirements, and bicycle parking requirements including covered/indoor storage. These are all important components of a sustainable development plan, and they align with relevant SAP Transportation Measures. In addition, the Project's developers and businesses would be required to encourage carpooling, ridesharing, transit use, and other travel demand measures (see SAP measures T-3, T-4, and T-16) to further foster a reduction in VMTs. The Project would also have opportunities to provide incentives or credits within the Project for reduced parking ratios (consistent with Tracy Mun. Code § 10.08.3440 – 10.08.3590), and would be required to adhere to all applicable SJVUAPCD rules, including Rule 9410 (addressing trip reduction plans).

Mitigation Measure TRANS-6: None required.

Significance After Mitigation: Less than Significant.

b. Existing Plus Project Buildout

Impact TRANS-7: Project Buildout would cause over-capacity conditions on the existing roadway and freeway network. This is a *significant* impact.

As shown in Tables 4.14-15 and 4.14-17, the addition of Project Buildout traffic to the existing roadway and freeway system would cause significant overloading on many segments of the existing City roadway system, and cause significant impacts on two segments of I-205 in the AM and PM peak hours. This is not surprising, since Project Buildout will take many years; the

City of Tracy is planning many roadway network improvements to accommodate traffic growth generated by the Project and other development areas in the city, and the San Joaquin Council of Governments is also planning capacity improvements on I-205 to handle regional growth over the coming decades. Each Project applicant's payment of the TMP Program fee, the RTIF, and any other applicable transportation fees that may be in place when individual projects are processed under the Specific Plan, would partially mitigate this impact. However, the impact would remain significant and unavoidable after mitigation because the timing of when the construction of such improvements would take place is uncertain (since they are program improvements dependent on funding from development throughout Tracy).

Mitigation Measure TRANS-7: Each Project applicant will pay the applicable TMP Program Fee, the RTIF, and any other applicable transportation fees that may be in place when individual projects are processed under the Specific Plan in accordance with applicable laws and regulations.

Significance After Mitigation: Significant and Unavoidable.

2. Cumulative Impacts and Mitigation Measures

a. 2035 Plus Phase 1 Project

Impact TRANS-8: Construction of Phase 1 of the Project results in significant impacts at four intersections (#1, #4, #18, and #20), based on 2035 conditions with the Tracy Roadway and Transportation Master Plan roadway network in place. This is a *significant* impact.

This impact and the identified mitigation measures are described in Section E.1c.i and summarized in Table 4.14-18. The mitigations are listed in Mitigation Measure TRANS-8, below. As described in Section E.1.c.i, in the case of intersection #1, I-205 Westbound Ramps/Mountain House Parkway, the poor PM peak hour service level is projected to occur with or without the Project, and is primarily related to a very large projected increase in the right turn volume from the westbound off-ramp to northbound Mountain House

Parkway. This increase is related primarily to the anticipated completion of the development of the Mountain House community in the 2035 Tracy Travel Demand Model. The projected increase for this movement (1,600 trips) is over three times the Phase 1 Project's PM peak hour volume contribution to the intersection (510 total trips). The very high right turn volume renders it one of the "critical movements" for the intersection, thereby controlling the intersection delay and service level. It is noted that this high right turn volume was not forecast in the traffic study performed in 2002 for the I-205/Mountain House Parkway interchange project. That study was performed in 2002 with a different travel demand model and different regional land use and roadway network assumptions. In more recent studies performed by the City for the General Plan Update EIR and the Roadway and Transportation Master Plan environmental review, operations of the Mountain House Parkway interchange intersections were not assessed

Because this cumulative impact is created by a turn movement volume – the westbound right turn – to which the Project contributes no traffic, the Project has no feasible way to meaningfully mitigate this impact. The City will monitor traffic conditions at this intersection as part of its ongoing roadway maintenance programs, and, if actual volume increases over time indicate the need to plan for capacity improvements, the City will work with Caltrans and San Joaquin County to develop and implement improvements.

Mitigation Measure TRANS-8: The Project will construct the following improvements, in accordance with then-applicable engineering standards and requirements and as determined by the City Engineer:

- “ *Intersection #4 (New Schulte Road/Mountain House Parkway):* Signalize the intersection.
- “ *Intersection #18 (New Schulte Road/Lammers Road):* Add a right-turn lane to the eastbound approach, for a mitigated configuration of one left turn lane, two through lanes, and one right-turn lane.

- “ *Intersection #20 (Valpico Road/Lammers Road):* Add a second southbound left-turn lane, for a mitigated configuration of two left-turn lanes, three through lanes, and one right-turn lane.

Significance After Mitigation: Less than significant for intersections #4, #18 and #20; significant and unavoidable (for the reasons stated above) for intersection #1.

Impact TRANS-9: In 2035, the addition of Phase 1 Project traffic to the 2035 No Project volumes causes the following significant freeway impacts:

- “ In the AM peak hour, the Project adds more than 5 percent to the total 2035 Plus Phase 1 Project volume on I-205 westbound east of Tracy Boulevard, which is projected to operate at LOS E without the Project.
- “ In the PM peak hour, the LOS falls from D (2035 No Project) to E (2035 Plus Phase 1 Project) on I-205 eastbound between I-580 and Mountain House Parkway.

This is a *significant* impact.

The SJCOG Regional Transportation Plan includes a Tier 1 project to expand I-205 from 6 to 8 lanes. This project is scheduled for environmental clearance by 2025 and construction by 2030. However, it is not currently funded, and this improvement project is not included in the Regional Transportation Improvement Fee. Therefore, there is currently no mechanism for the Project to contribute to this I-205 capacity project. If the capacity project is added to the RTIF in the future, individual development projects in the Specific Plan will contribute to the capacity project through payment of the RTIF, as may be required under applicable laws and regulations.

Mitigation Measure TRANS-9: The Project will contribute to capacity improvements in San Joaquin County through payment of the RTIF in accordance with applicable laws and regulations. However, because the I-205 capacity project is not currently included in the RTIF, payment of

the RTIF will not mitigate this impact. (Note: Mitigation TRANS-9 is the same as Mitigation TRANS-2).

Significance After Mitigation: Significant and Unavoidable.

b. 2035 Plus Project Buildout

Impact TRANS-10: Project Buildout would cause over-capacity conditions on the 2035 roadway and freeway network. This is a *significant* impact.

Tables 4.14-23 and 4.14-25 show the peak hour roadway and freeway segment volumes forecast for the Buildout case, in which the Project is completely developed along with all other development potential through 2035 in Tracy, consistent with the forecasts in the TMP. Many of the roadway segments and freeway segments are projected to be over-capacity in this scenario. Project Buildout is expected to occur many years beyond 2035. Over the Buildout planning horizon, many changes in land use plans and roadway network plans (in the City of Tracy, the San Joaquin Valley and the Bay Area) are likely to occur, reducing the reliability of forecasts and making detailed analysis and infrastructure planning (i.e. intersection-level analysis) infeasible at this time. The information in Tables 4.14-23 and 4.14-25 is therefore presented to give a high-level view of roadway and freeway volumes at Project Buildout, assuming that the Tracy TMP roadway network (sized to serve 2035 forecasts only) is in place.

As indicated in the table, many roadways would require additional lanes to provide the capacity needed to serve Project Buildout, if all other development potential included in the 2035 TMP forecasting is also realized.

Payment of the applicable fees under the TMP Program fee, the RTIF, and any other applicable transportation fees that may be in place when individual projects are processed under the Specific Plan, would partially mitigate this impact. However, the impact would remain significant and unavoidable after mitigation given that the timing for construction of said improvements is not certain.

Mitigation Measure TRANS-10: Each Project applicant will pay the applicable TMP Program Fee, the RTIF, and any other applicable transportation fees that may be in place when individual projects are processed under the Specific Plan in accordance with applicable laws and regulations.

Significance After Mitigation: Significant and Unavoidable.

Impact TRANS-11: The Project (Phase 1 and Buildout) will not cause a change in air traffic patterns in Tracy area, either in terms of an increase in traffic levels or a change in location, that results in substantial safety risks. This is a less-than-significant impact.

Based on the Project description, no substantial new air traffic will be generated at the local airports in San Joaquin County. The industrial uses allowed for in the Project will rely primarily on trucking for goods movement, which in turn will utilize the services of the Port of Oakland, the Port of Stockton, and major airports including Oakland International Airport, San Francisco International Airport, and San Jose International Airport. While projections of increased air traffic at these airports have not been prepared for the Project, it is assumed that any increased demand for goods movement by air would be within the airport's capacities.

Mitigation Measure TRANS-11: None required.

Impact TRANS-12: The Project (Phase 1 and Buildout) will not substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment). This is a *less-than-significant* impact.

The Project roadway system, including facilities for vehicles (autos, trucks and buses), bicyclists and pedestrians, will be designed in conformance with the City of Tracy Transportation Master Plan, including all design guidelines contained therein, as well as in conformance with the City's standard plans. As the City reviews each development project, it will require conformance

with City standards in terms of driveway design and location, traffic controls, and other traffic engineering requirements.

Mitigation Measure TRANS-12: None required.

Impact TRANS-13: The Phase 1 Project will not result in inadequate emergency access. This is a *less-than-significant* impact.

As demonstrated in the Existing Plus Phase 1 and 2035 Plus Phase 1 traffic analyses, acceptable operation on City of Tracy roadways will be provided with the mitigation identified. Therefore, adequate emergency vehicle access to the various building sites to be constructed within the Project site will be provided with the roadway network proposed. As the Phase 1 project builds out, the Tracy Fire Department may determine that a new or relocated fire station is warranted to better serve the expanded service area. However, such a decision will be based on many variables including other growth over time in the City, changes in the service model, joint-defense agreements, and other factors.

Mitigation Measure TRANS-13: None required.

Impact TRANS-14: Full Buildout of the Project may result in inadequate emergency access. This is a *significant* impact.

As described in the Existing Plus Full Buildout and 2035 Plus Full Buildout traffic analyses, the existing and 2035 roadway networks would be substantially overloaded by traffic from full Buildout of the Project. For the Existing Plus Full Buildout case, this results primarily from the fact that the Project will take many years to buildout, and many future roadways that are planned to be constructed over that time period are not included in the analysis. For the 2035 Plus Full Buildout case, the overloading results from the addition of the Full Project Buildout traffic to 2035 forecasted traffic growth, which exceeds in some places the 2035 TMP roadway network capacity.

As discussed under Impacts TRANS-7 (Existing Plus Full Buildout) and TRANS-10 (2035 Plus Full Buildout), the traffic impacts of Full Project Buildout are significant and unavoidable after mitigation. Therefore, this impact remains significant and unavoidable.

Mitigation Measure TRANS-14: Implement Mitigation Measures TRANS-7 and TRANS-10.

Significance After Mitigation: Significant and Unavoidable.

Attachment 5

Appendix M

A P P E N D I X M

UTILITIES

- POTABLE AND RECYCLED WATER
TECHNICAL MEMORANDUM
- WATER SUPPLY ASSESSMENT
- WWTP TECHNICAL MEMORANDUM



APPENDIX M
UTILITIES

M.1: Potable and Recycled Water Technical Memorandum

CORDES RANCH SPECIFIC PLAN EIR
APPENDIX M: UTILITIES

TECHNICAL MEMORANDUM

DATE: December 19, 2012

TO: Alison Bouley, Harris & Associates
Kul Sharma, City of Tracy
Steve Bayley, City of Tracy

FROM: Gerry Nakano, R.C.E. #29524
Elizabeth Drayer, R.C.E. #46872
Jim Connell, R.C.E. #63052
Amy Kwong, R.C.E. #73213

SUBJECT: Cordes Ranch Specific Plan Tier 2 Infrastructure Evaluation of Potable and Recycled Water Systems

Project No.: 404-02-11-90



OVERVIEW

This Technical Memorandum (TM) summarizes West Yost Associates' (West Yost's) technical evaluation of potable and recycled water systems for the City of Tracy's (City) proposed Cordes Ranch Specific Plan (Proposed Project). The City requested a Water System Analysis for the Proposed Project to identify the required potable and recycled water system facilities to support projected demands, determine the Proposed Project's share of on-site future potable and recycled water system improvements that will be required, and estimate the associated costs.

The Cordes Ranch Specific Plan Project is located on the western side of the City's General Plan Sphere of Influence (SOI), just outside the existing City limits. Figure 1 illustrates the Proposed Project location and the existing potable water system pressure zone boundaries. As shown on Figure 1, the Proposed Project will require potable water service from both Pressure Zones 2 and 3. Similar to the potable water system, recycled water demands for the Proposed Project will also need to be served from two separate pressure zones due to the topography of the Proposed Project location.

Figure 2 presents the proposed land use and identifies parcels anticipated for inclusion in Phase 1 of the Proposed Project.¹ Based on a comparison with the land use data presented in the Citywide Water System Master Plan, it was determined that the land use designations currently

¹ Proposed land use has changed slightly based on new information received on October 16, 2012. A brief review of this new land use data indicates that these changes are minimal and do not affect the results and recommendations presented in this TM.

proposed for the Proposed Project are not identical to, but are comparable with those previously designated for this area.

The following infrastructure evaluation will focus on buildout and Phase 1 of the Cordes Ranch Specific Plan. A subset of Phase 1 will also be evaluated to determine if there are any parcels that could potentially be served with minimal infrastructure improvements. A brief background on the Proposed Project and a summary of recommended potable and recycled water infrastructure from this evaluation are provided below.

BACKGROUND

In May 2011, the City requested West Yost to provide technical engineering support to the City related to an analysis of water storage, pumping facilities, transmission and distribution system infrastructure, and surface water supply and treatment capacity required to support the Cordes Ranch Specific Plan. Specifically, this evaluation is considered to be a “Tier 2” analysis that includes evaluation of required “on-site” infrastructure to meet the needs of this specific proposed development project for Phase 1 and buildout and is considered to be a refinement of the “Tier 1” evaluation presented in the Citywide Water System Master Plan.

West Yost received authorization from the City to proceed with this work on October 18, 2011. As detailed in our professional services agreement, this TM summarizes our findings and conclusions related to the following tasks:

1. Calculate water demands and identify infrastructure at buildout;
2. Identify required infrastructure for Phase 1; and
3. Evaluate a subset of Phase 1 which requires minimal new infrastructure; if possible.

The recommended water system infrastructure presented in this TM was initially based on the proposed buildout backbone potable and recycled water systems developed from the Tier 1 evaluation presented in the December 2012 Citywide Water System Master Plan. However, for this Tier 2 evaluation, recommended potable and recycled water system improvements are somewhat different than those identified in the Tier 1 evaluation due to changes proposed in the new Cordes Ranch Specific Plan. These changes include slight variations in proposed land use and shifts in roadway alignments.

Proposed Tier 2 Specific Plan

As shown previously on Figure 1, the Proposed Project consists of approximately 1,780 acres on the western side of the City’s SOI, just outside the existing City limits. The Proposed Project is generally bounded on the north by Interstate 205, on the south by Old Schulte Road, on the west by Mountain House Parkway, and on the east by the current City limits.

Development of the Proposed Project is anticipated to occur over approximately 30 years and will likely occur in several development phases. Phase 1 of the Proposed Project is anticipated to be developed in the next 10 to 12 years. Buildout of the Proposed Project is anticipated to occur in about the year 2040.

Attachment A summarizes key data such as Proposed Project parcel locations, land use, and phasing including preliminary potable and recycled water system infrastructure, which was provided by Cordes Ranch representatives (Kier and Wright) on May 9, 2012 and replaces data previously provided in November 2011. As noted above, revised land use data was received on October 16, 2012 and is provided in Attachment B for reference. A brief review of this data indicated that the land use changes were minimal and do not affect the results and recommendations presented in this TM.

Summary of Recommendations from Infrastructure Evaluation

Tier 1 Infrastructure

Buildout backbone potable and recycled water system infrastructure improvements were identified and presented in the Tier 1 Citywide Water System Master Plan evaluation. The required Tier 1 backbone infrastructure to support the Proposed Project is summarized below, and the costs of these backbone facilities will be proportionately shared by all future planning projects. The Proposed Project's proportionate cost share of the Tier 1 backbone potable and recycled water system facilities was determined as part of the Tier 1 Development Impact Fee Analysis.

It should be noted that at a minimum, the Proposed Project will need to pay for a proportionate share of the Tier 1 backbone potable and recycled water system infrastructure costs; however, depending on the timing of the Proposed Project and other future planning projects in the City, the Proposed Project may be required to fund and construct Tier 1 backbone potable and recycled water system facilities if those facilities have not yet been constructed when the construction of the Proposed Project begins.

In summary, West Yost's technical evaluation of the Proposed Project confirmed that the following Tier 1 backbone potable and recycled water system infrastructure will be required to serve the projected buildout demands of the proposed Cordes Ranch Specific Plan²:

Potable Water System Improvements

- Proportionate share of the new 2.0 million gallon (MG) clearwell at the John Jones Water Treatment Plant (JJWTP);
- Proportionate share of a new Zone 3 booster pump station to meet maximum day demands and minimum pressure requirements;
- Proportionate share of the recommended Zone 2 booster pump station upgrade;

² Identification of water supply or treatment required to serve the Proposed Project is not included in this evaluation. Consequently, costs presented in this TM do not include the cost to acquire sufficient water supply to meet projected water demands. The Water Supply Assessment being prepared for the Proposed Project addresses availability and reliability of water supplies to serve the Proposed Project, but will not address the water supply cost issue.

- Proportionate share of a recommended 20-inch diameter pipeline from JJWTP to the intersection of Corral Hollow Road and Linne Road;
- Proportionate share of a recommended 20-inch diameter pipeline from the intersection of Corral Hollow Road and Linne Road to the intersection of Hansen Road and Old Schulte Road;
- Proportionate share of the recommended ASR groundwater well;
- Proportionate share of a new Zone 2 storage tank (1.5 MG) and booster pump station to meet peak hour and fire flow demands;
- Proportionate share of a new Zone 3 storage tank (1.5 MG) and booster pump station to meet peak hour and fire flow demands;
- Proportionate share of two new Pressure Regulating Stations (PRS) to serve parcels located in Zone 2; and
- Proportionate share of backbone pipelines.

Recycled Water System Improvements

- Proportionate share of the recycled water storage tanks located at the Holly Drive wastewater treatment plant (WWTP), near the southwest corner of the Cordes Ranch Specific Plan area, and in the Tracy Hills development;
- Proportionate share of the Zone A pump station (located at Holly Drive WWTP), the Zone B Pump Station (located near the south end of the Gateway Project on Lammers Road), the Zone C pump station (located near the southwest corner of the Cordes Ranch Specific Plan area, and the Tracy Hills Zone C and Zone D pump stations; and
- Proportionate share of the required pipelines to convey recycled water from Holly Drive WWTP to the use areas, and in program streets.

Additional details regarding the Tier 1 backbone infrastructure listed above are provided in West Yost's Citywide Water System Master Plan and the Tier 1 Development Impact Fee Analysis. Therefore, this TM only provides the estimated cost for on-site (*i.e.*, Tier 2) infrastructure, for which funding and construction will be the responsibility of the Proposed Project.

Tier 2 Infrastructure

Based on the evaluations completed and discussed further below, the total estimated costs for the recommended on-site (Tier 2) buildout potable and recycled water facilities for the Proposed Project are \$10,565,000 and \$8,256,000, respectively.³ The total estimated cost for both on-site potable and recycled water facilities at buildout of the Proposed Project is \$18,821,000.

³ As discussed with City staff, costs include economic adjustment factors of 15 and 30 percent to reduce the anticipated potable and recycled water system construction costs in Summer 2012, respectively. These factors reflect the Summer 2012 (more favorable) bidding climate.

Figures 3 and 4 present the recommended on-site potable and recycled water infrastructure at buildout of the Cordes Ranch Specific Plan, respectively, and also show some of the shared Tier 1 backbone facilities.

The following sections present the detailed Water System Analysis performed for the Proposed Project.

PLANNING AND MODELING CRITERIA

The general planning and hydraulic modeling criteria used by West Yost in the evaluation of the Proposed Project's potential impacts to the City's existing potable water system infrastructure and proposed recycled water system infrastructure are listed below:

- Design criteria for the potable water system
 - As presented in the Citywide Water System Master Plan:
 - ❖ Surface water treatment and pumping capacity are sized to meet maximum day demands;
 - ❖ Storage facilities are sized to include operational, short-term emergency, and fire flow storage;
 - ❖ Long-term emergency water storage will be provided by the groundwater basin and the City's groundwater wells;
 - ❖ Pumping facilities are sized to meet the greater of either a maximum day demand concurrent with fire flow or peak hour demand conditions within each pressure zone with a minimum pressure of 30 pounds per square inch (psi) or 40 psi, respectively; and
 - ❖ Transmission and distribution mains are sized to provide required peak hour flows at a minimum pressure of 40 psi.
- Design criteria for the recycled water system
 - As presented in the Citywide Water System Master Plan:
 - ❖ Seasonal storage is not required since projected average dry weather flow treatment, and hence recycled water production capacity, is projected to exceed buildout maximum daily recycled water demands;
 - ❖ Pumping capacity and recycled water storage are sized to meet projected peak hour demand; and
 - ❖ Transmission and distribution piping are sized to provide peak hour flows at a minimum service pressure of 60 psi.
- Potable and recycled water demands
 - Average day water demand will be calculated using the unit water demand factors presented in the Citywide Water System Master Plan;
 - Maximum day and peak hour demands for the potable water system will be calculated using the peaking factors of 2.0 and 3.4 times the average day demand, respectively, consistent with factors adopted in the Citywide Water System Master Plan; and

- Maximum day and peak hour demands for the recycled water system will be calculated using the peaking factors of 5.8 and 6.4 times the average day demand, respectively, consistent with factors adopted in the Citywide Water System Master Plan.
- Potable water supply
 - An evaluation of the City's existing and future potable water supplies to meet the Proposed Project potable water demands will be presented in a separate Water Supply Assessment; and
 - This infrastructure evaluation assumes that there will be sufficient potable water supplies to meet projected buildout potable water demands for the Proposed Project.
- Hydraulic modeling criteria
 - New pipelines will be hydraulically modeled using a roughness coefficient (C-factor) of 130; and
 - The 2010 calibrated hydraulic model of the City's potable water system and the hydraulic model developed for the City's proposed recycled water system (as developed for the Citywide Water System Master Plan) will serve as the basis for evaluation of the hydraulic conditions for the Proposed Project.
- Land use
 - Proposed land use by parcel was provided to the City and West Yost by Kier and Wright on May 9, 2012 and is included in Attachment A.⁴

PROJECTED TIER 2 WATER DEMANDS

Although the land use designations currently planned for the Proposed Project are comparable with those previously designated for this area as presented in the Citywide Water System Master Plan, there are refinements and changes in land use identified in the new Cordes Ranch Specific Plan that required re-calculation of projected potable and recycled water demands for the Proposed Project. Average day potable water demands for the Proposed Project were calculated based on the number of potable water acres⁵ by land use designation multiplied with the corresponding adopted unit water demand factor for each land use designation. This demand projection methodology and the adopted unit water demand factors used are consistent with those developed and used in the Citywide Water System Master Plan. The unit water demand factors used in this evaluation are presented in Table 1.

⁴ A revised land use plan was received on October 16, 2012 (refer to Attachment B for data). A brief review of this new land use data indicates that these changes are minimal and do not affect the results and recommendations presented in this TM.

⁵ Potable water acres assumed to be 85 percent of the total gross acres. Recycled water assumed to be used on the remaining 15 percent of the total gross acres.

Table 1. Unit Water Demand Factors for the Proposed Project ^(a)	
Land Use Designation	Unit Water Demand Factor, af/ac/yr
Commercial ^(b)	2.0
Office ^(b)	1.5
Industrial ^(b)	1.5
Parks (exterior water use)	4.0
^(a) Assumes exterior water use will be with recycled water (<i>i.e.</i> , 15 percent of the gross acres will be landscaped and irrigated with recycled water). ^(b) Applied to 85 percent of the gross acres only (assumes the remaining 15 percent of the gross acres will use recycled water).	

Average day recycled water demands for the Proposed Project were calculated based on the number of recycled water acres⁶ multiplied by the corresponding adopted unit water demand factor for exterior water use. The new Cordes Ranch Specific Plan also identifies additional recycled water use areas such as on Open Space and detention basins. These additional recycled water demands were calculated based on the number of acres to be irrigated multiplied by the corresponding adopted unit water demand factor for exterior water use.

Maximum day and peak hour demands were calculated by multiplying the average day demand with the appropriate maximum day demand and peak hour demand peaking factors, respectively. A summary of the projected potable and recycled water demands are presented in Tables 2 and 3, respectively. Detailed water demand calculations by parcel are provided in Attachment C.

Table 2. Projected Potable Water Demand ^(a,b)						
Demand Condition	Average Day Demand		Maximum Day Demand ^(c)		Peak Hour Demand ^(d)	
	gpm	mgd	gpm	mgd	gpm	mgd
Phase 1	534	0.77	1,068	1.54	1,816	2.62
Buildout (includes Phase 1)	1,390	2.00	2,780	4.00	4,726	6.81
^(a) Based on data provided by Kier and Wright on 5/9/12. Detailed calculations by parcel are provided in Attachment C. ^(b) Includes unaccounted-for water equal to 7.5 percent. ^(c) Maximum day demand is equal to 2.0 times the average day demand. ^(d) Peak hour demand is equal to 3.4 times the average day demand.						

⁶ Recycled water acres assumed to be 15 percent of the total gross acres.

Table 3. Projected Recycled Water Demand^(a,b)						
Demand Condition	Average Day Demand		Maximum Day Demand ^(c)		Peak Hour Demand ^(d)	
	gpm	mgd	gpm	mgd	gpm	mgd
Phase 1	257	0.37	1,491	2.15	1,645	2.37
Buildout (includes Phase 1)	768	1.10 ^(e)	4,454	6.41	4,915	7.08

(a) Based on data provided by Kier and Wright on 5/9/12. Detailed calculations by parcel are provided in Attachment C.
 (b) Includes unaccounted-for water equal to 7.5 percent.
 (c) Maximum day demand is equal to 5.8 times the average day demand.
 (d) Peak hour demand is equal to 6.4 times the average day demand.
 (e) Equates to a total annual demand of approximately 1,240 acre-feet per year, which includes unaccounted-for water equal to 7.5 percent of the total demand.

In summary, projected Phase 1 and buildout potable water demands are approximately 860 af/yr and 2,240 af/yr, respectively (includes 7.5 percent unaccounted-for water); and projected Phase 1 and buildout recycled water demands are approximately 410 af/yr and 1,240 af/yr, respectively (includes 7.5 percent unaccounted-for water). When compared with the Citywide Water System Master Plan, projected Tier 2 buildout potable water demands are approximately 170 af/yr (or 7 percent) lower and projected Tier 2 buildout recycled water demands are approximately 120 af/yr (or 11 percent) higher than the Tier 1 evaluation. These differences between the projected Tier 1 and Tier 2 water demands for the Proposed Project are reasonable as land uses have been refined and modified in the new Cordes Ranch Specific Plan. Because the differences between the Tier 1 and Tier 2 potable and recycled water demands for the Proposed Project are small, the sizing of the major backbone infrastructure remains similar to the recommendations presented in the Tier 1 (Citywide Water System Master Plan) evaluation as discussed further below.

It should be noted that the City’s proposed recycled water system may not yet be available during Phase 1 of the Proposed Project; therefore, in the interim, water demands for landscape irrigation are assumed to be served from the potable water system during Phase 1 (*i.e.*, potable water would be served to the landscape irrigation sites using the recycled water pipelines installed in Phase 1). An alternative supply to interimly meet these landscape water demands (prior to the availability of recycled water supply) might be non-potable water. Project proponents would have to secure approval from the City to allow the interim use of non-potable water supplies.

As described further below, to minimize operational impacts of this interim operation, it is assumed that Phase 1 landscape irrigation demands will be supplied during off-peak times and will not require any additional water storage or peak pumping capacity in the potable water system to meet the recycled water demands in Phase 1. Beyond Phase 1 of the Proposed Project, all landscape irrigation demands within the Proposed Project (including those developed in Phase 1) must be served from the City’s recycled water system to avoid impacts to potable water supply and system operations.

POTABLE WATER SYSTEM FACILITIES EVALUATION

To determine the necessary Proposed Project facilities required to connect to and function within the City's potable water system, the following analyses of the potable water system were conducted:

- Surface Water Treatment and Pumping Capacity,
- Water Storage Capacity,
- Pumping Capacity,
- Interconnections between Pressure Zones, and
- Transmission and Distribution Pipelines.

The results from the potable water system facilities analyses are discussed below.

Surface Water Treatment and Pumping Capacity

Sufficient surface water treatment and pumping capacity from the JJWTP and the City's treated surface water supplies from the South County Water Supply Project (SCWSP) will be required to meet a buildout maximum day demand condition. Based on the projected potable water demands presented previously in Table 2, the Proposed Project would require a minimum surface water treatment and pumping capacity equal to 1.6 and 4.0 mgd to serve Phase 1 and buildout of the Proposed Project, respectively. Recommended infrastructure improvements to supply the required surface water treatment and pumping capacity to the Proposed Project are discussed below by phase (Buildout and Phase 1).

Buildout

Evaluations from the Citywide Water System Master Plan indicate that there will not be sufficient existing surface water treatment and pumping capacity to meet the City's total anticipated buildout potable water demands, including those from the Proposed Project. The Citywide Water System Master Plan recommends that the existing treatment capacity at JJWTP be expanded by 21 mgd to serve buildout potable water demands. In addition, a new 2.0 MG clearwell, 6.48 mgd Zone 3-City-side booster pump station, and 9.65 mgd of additional pumping capacity at the Zone 2 booster pump station (all to be located at the existing JJWTP) are required to serve buildout potable water demands. A new 20-inch diameter transmission main from the new clearwell and Zone 3-City-side booster pump station will also be required for transmission of treated surface water to the Proposed Project.

The City currently uses multiple water supply sources to meet the needs of its customers. Some of these water supplies require treatment at the City's JJWTP, while others are purchased by the City already treated. The water supply for the Proposed Project will be from a blend of the City's future supply acquisitions. Costs for water supply are discussed in West Yost's Tier 1 Development Impact Fee Analysis. A potential alternative for the Proposed Project, in lieu of paying the City's water supply and treatment fee, may be to provide funding to the City for the acquisition of additional treated water supplies.

Phase 1

Evaluations from the Citywide Water System Master Plan indicate that there is currently existing surface water treatment capacity intermly available to supply Phase 1 potable water demands for the Proposed Project. If the Project proponents opt to utilize this currently available treatment capacity and corresponding supply, fees for both the water supply and treatment components will be required as discussed in West Yost’s Tier 1 Development Impact Fee Analysis. However, pumping, storage, and conveyance facilities to distribute the treated surface water to Phase 1 of the Proposed Project (new clearwell, Zone 3-City-side booster pump station and 20-inch diameter transmission main) will still be required.

Water Storage Capacity

The principal advantages that storage provides for the water system are the ability to equalize demands on supply sources, production facilities, and transmission mains; to provide emergency storage in case of a short-term supply failure (at the water treatment plant); and to provide water to fight fires. The City’s water service area has two sources of available storage: above ground storage (*i.e.*, clearwells and storage tanks) and long-term storage available through the groundwater basin and the City wells. Together, these two sources of storage must be sufficient to meet the City’s operational, emergency, and fire flow storage criteria.

Based on the projected potable water demands presented previously in Table 2, the Proposed Project would require a minimum water storage capacity equal to approximately 3.0 MG and 6.2 MG to serve Phase 1 and buildout of the Proposed Project, respectively. Table 4 summarizes the required water storage capacity components at Phase 1 and buildout of the Proposed Project.

Table 4. Required Water Storage Capacity				
Demand Condition	Operational Storage, MG^(a)	Emergency Storage, MG^(b)	Fire Flow Storage, MG^(c)	Total, MG
Phase 1	0.47	1.54	0.96	3.0
Buildout (includes Phase 1)	1.20	4.00	0.96	6.2
^(a) Based on 30 percent of a maximum day demand. ^(b) Based on two times the average day demand. ^(c) Based on an Industrial fire flow event.				

As discussed in the Citywide Water System Master Plan, the groundwater basin can account for a portion of the recommended emergency storage, in the form of a groundwater credit. Therefore, consistent with the recommendations of the Citywide Water System Master Plan, a new Aquifer Storage and Recovery (ASR) groundwater well is recommended for the Proposed Project to reduce the required emergency storage component. Assuming that the capacity of the proposed ASR groundwater well will eliminate the need for the above-ground emergency storage component, the Proposed Project would then require a minimum usable (does not include dead storage or overflow) water storage capacity equal to approximately 1.5 MG and 2.2 MG to serve Phase 1 and buildout of the Proposed Project, respectively. Recommended infrastructure improvements to supply the required water storage capacity to the Proposed Project are

discussed below by phase (Buildout and Phase 1). A discussion on the storage capacity required for a subset of Phase 1 is also provided below.

Buildout

Evaluations from the Citywide Water System Master Plan indicate that there will not be sufficient existing water storage capacity to meet buildout potable water demands for the Proposed Project. Therefore, to provide localized operational and fire flow storage capacity in Zone 3 for the Proposed Project, a new 1.5 MG storage tank and Zone 3 booster pump station is recommended. This recommendation is consistent with the Citywide Water System Master Plan. Another 1.5 MG storage tank and booster pump station is also recommended in the Citywide Water System Master Plan to support localized operational and fire flow storage requirements in Zone 2 (to be located at the Tracy Gateway Project; east of the Proposed Project). Localized storage is recommended as it provides supply reliability in the event that storage from the new clearwell or any other storage facility is unavailable for any reason.

Phase 1

Evaluations from the Citywide Water System Master Plan indicate that there will not be sufficient existing water storage capacity to meet Phase 1 potable water demands for the Proposed Project. Therefore, to provide localized operational and fire flow storage capacity for the Proposed Project, a new 1.5 MG storage tank and booster pump station in Zone 3 is recommended. This recommendation is consistent with the Citywide Water System Master Plan. It is assumed that operational and fire flow storage for Proposed Project demands in Zone 2 will be served in the interim from Zone 3 during Phase 1, if the 1.5 MG (Tracy Gateway) storage tank and booster pump station in Zone 2 has not yet been constructed.

It is assumed that the City's proposed recycled water system may not be available during Phase 1 of the Proposed Project; therefore, in the interim, water demands for landscape irrigation are assumed to be served from the potable water system. It is also assumed that landscape irrigation demands will be supplied during off-peak times and will not require any additional storage capacity in the potable water system to meet recycled water demands. The City will need to establish and enforce a strict irrigation schedule for the Proposed Project in Phase 1 to eliminate landscape irrigation water use that may prohibit effective operations of the potable water system during peak potable water demands, prior to the delivery of recycled water supplies to meet these landscape irrigation demands.

Subset of Phase 1

West Yost was requested to evaluate a subset of Phase 1 to determine if there were any parcels that could initially be served with minimal water system infrastructure improvements. Initial discussions with Cordes Ranch representatives during a meeting held on October 5, 2011 indicated that parcels located adjacent to existing water pipelines on Old Schulte Road and Mountain House Parkway would most likely be developed first (*e.g.*, Parcels No. 40, 41 and/or 42). It was also assumed by Cordes Ranch representatives that water service to Zone 3 for a subset of Phase 1 will be served from Zone 2 via a connection downstream of the Patterson Pass Booster Pump Station.

Based on the existing potable water system infrastructure, there is currently no operational, emergency or fire flow storage available in Zone 3. Also, there is currently no storage located in Zone 2 to serve the western portion of the City's buildout service area. Therefore, at a minimum, the Proposed Project will require a new 1.5 MG storage tank and booster pump station in order to serve the first unit built as a subset of Phase 1. Based on the proposed storage capacity of the new storage tank in Zone 3 (*i.e.*, 1.5 MG of useable storage), and if this storage tank is constructed as part of the subset of Phase 1, there will be sufficient operational, emergency, and fire flow storage to serve approximately 160 total gross acres of Industrial land use or an equivalent of 220 af/yr of potable water use. For example, Parcels No. 40, 41, and approximately half of Parcel No. 42 could be served once the new Zone 3 storage tank and booster pump station is constructed. However, if the Zone 3 storage tank and booster pump station are not constructed as part of the subset of Phase 1, the City's existing potable water system infrastructure cannot support any new units.

Pumping Capacity

The pumping capacity criterion requires the City's potable water system to have sufficient firm pumping capacity to meet the greater of either a maximum day demand concurrent with a fire flow event or a peak hour demand. Based on the projected potable water demands presented previously in Table 2, the Proposed Project would require a minimum firm pumping capacity equal to 5,568 gpm and 7,280 gpm to serve Phase 1 and buildout of the Proposed Project, respectively; this pumping capacity is required to meet a peak demand condition equal to a maximum day demand plus fire flow⁷. Recommended infrastructure improvements to supply the required firm pumping capacity to the Proposed Project are discussed below by phase (Buildout and Phase 1). A discussion on the firm pumping capacity required for a subset of Phase 1 is also provided below.

Buildout

Evaluations from the Citywide Water System Master Plan indicate that there will not be sufficient existing firm pumping capacity to meet buildout potable water demands from the Proposed Project. Therefore, to provide sufficient firm pumping capacity for the Proposed Project (7,280 gpm at buildout), a new 4,500 gpm booster pump station at the new clearwell and a new 4,500 gpm booster pump station at the proposed Zone 3 Cordes Ranch storage tank are recommended. These recommendations are consistent with the Citywide Water System Master Plan. Another 4,500 gpm booster pump station is also recommended for the Tracy Gateway Project Zone 2 storage tank (located east of the Proposed Project) in the Citywide Water System Master Plan to support firm pumping capacity requirements in Zone 2.

⁷ The highest fire flow requirement (4,500 gpm) based on Industrial land use was assumed.

Phase 1

Evaluations from the Citywide Water System Master Plan indicate that there will not be sufficient existing firm pumping capacity to meet Phase 1 potable water demands from the Proposed Project. Therefore, to provide sufficient firm pumping capacity for the Proposed Project (5,568 gpm in Phase 1), a new 4,500 gpm booster pump station at the new clearwell and a new 4,500 gpm booster pump station at the proposed Zone 3 Cordes Ranch storage tank are recommended. These recommendations are consistent with the Citywide Water System Master Plan. With the construction of the Cordes Ranch Zone 3 storage tanks and booster pump station, it is assumed that some of the peak demands including fire flow in Zone 2 of the Proposed Project will be served in the interim from the Cordes Ranch Zone 3 storage tank and booster pump station during Phase 1.

Again, it is assumed that the proposed recycled water system may not be available during Phase 1 of the Proposed Project; therefore, in the interim, water demands for landscape irrigation are assumed to be served from the potable water system. It is also assumed that landscape irrigation demands will be supplied during off-peak times and will not require any additional peak pumping capacity in the potable water system to meet recycled water demands. However, sufficient pumping capacity from the JJWTP will be required to fill the recommended Zone 3 Cordes Ranch storage tank and serve peak irrigation demands, concurrently, during an eight-hour period. A review of the proposed buildout firm pumping capacity of the recommended Zone 3-City-side booster pump station indicates that the recommended booster pump station will meet this criterion.

Subset of Phase 1

As described in the water storage capacity evaluation, a new 4,500 gpm booster pump station at the proposed Zone 3 Cordes Ranch storage tank will be required to serve any portion of a subset of Phase 1. Without the proposed Zone 3 Cordes Ranch storage tank and booster pump station constructed, no units can be developed as a part of the subset of Phase 1. The proposed firm pumping capacity from this booster pump station will be sufficient to meet the recommended fire flow demand for Industrial land use. The remaining maximum day water demands from the Proposed Project will need to be served from the existing Patterson Pass Booster Pump Station, which has a firm pumping capacity of 3,000 gpm. However, it should be noted that the amount of water demand that could be served as a subset of Phase 1 is limited by the storage capacity criterion (as discussed previously).

Interconnections between Pressure Zones

Because the Proposed Project is located in both Zone 2 and Zone 3, additional interconnections in the form of Pressure Regulating Stations (PRS) will be required to supply demands from Zone 3 into Zone 2. These PRS facilities will be required during Phase 1 to support parcels located in Zone 2. The Citywide Water System Master Plan recommends PRS #9 and PRS #10 to provide supply interconnections between Zones 2 and 3. Because the current selected subset of Phase 1 only includes parcels located in Zone 3 (does not include service to parcels in Zone 2), these recommended pressure regulating stations will not be required unless Proposed Project parcels are developed in Zone 2.

Transmission and Distribution Pipelines

Pipeline alignments developed in Tier 1 from the Citywide Water System Master Plan were adjusted to match the slightly modified roadway alignments for this Tier 2 evaluation, and additional pipelines were also added based on Tier 2 data (see Attachment A). Initial pipeline sizing for the Tier 2 evaluations was based on the Tier 1 evaluation and updated with data supplied by Kier and Wright. However, some additional 8-inch diameter pipelines were added for system looping near Parcels No. 8, 10, 11, 23, 24 and 32.

Additional modifications required to meet the City's performance criteria are identified and discussed in the potable water system performance evaluation presented below, and the final recommended buildout potable water system was presented previously on Figure 3. It should be noted that additional 8-inch diameter pipelines required for water service and hydrants in the interior of each parcel were not identified for this evaluation, but will be determined later when each parcel is developed and more specific on-site water system infrastructure is designed.

POTABLE WATER SYSTEM PERFORMANCE EVALUATION

Improvements identified above for surface water treatment, storage, pumping, interconnections, and transmission and distribution pipelines were added into the City's hydraulic model for the potable water system evaluation. A summary of the results from the potable water system performance evaluation is provided below by project phase.

Buildout

Figure 5 presents the results from the peak hour demand evaluation at buildout of the Proposed Project. All proposed pipeline velocities are within the maximum allowable pipeline velocity criteria for transmission and distribution pipelines, and all junctions met the minimum pressure criterion of 40 psi, except for one junction at the southwest corner of Parcel No. 35. The low pressure simulated at this location is due to the high elevation that is above the Zone 2 service range. Therefore, to meet the minimum pressure criterion, any services above an elevation of 150 feet must be served by a connection to Zone 3. Parcels that will require water service from two separate pressure zones are highlighted previously on Figure 3.

InfoWater's "Available Fire Flow Analysis" tool was used to determine the available fire flow (while meeting the maximum day demand plus fire flow minimum residual pressure and maximum velocity performance criteria of 30 psi and 12 feet per second (fps), respectively) at each fire flow junction within the Proposed Project during a maximum day demand scenario. Figure 6 presents the results from the maximum day plus fire flow evaluation at buildout of the Proposed Project. Based on a required fire flow of 3,500 gpm and 4,500 gpm for Office and Industrial land use, respectively, results indicate that the simulated fire flow junctions located near the boundary of Zones 2 and 3 did not meet the minimum fire flow requirement of 4,500 gpm for Industrial land use.

To mitigate the fire flow deficiency observed near the southwest corner of Parcel 24 at buildout of the Proposed Project, the 8-inch diameter pipeline located on Parcels No. 24 and OP2 is recommended to be upsized to 12-inches in diameter as shown on Figure 6. The remaining fire flow junctions that do not meet the minimum fire flow requirement are relatively close, except for the junction at the corner of Parcel No. 35. Again, the low fire flow availability simulated at

this location is due to high elevation above the Zone 2 service range; it is recommended that fire flow at the southwest corner of Parcel No. 35 be served from Zone 3.

Phase 1

Figure 7 presents the results from the peak hour demand evaluation at Phase 1 of the Proposed Project. All proposed pipelines met the maximum pipeline velocity criteria for transmission and distribution pipelines, and all junctions met the minimum pressure criterion of 40 psi.

InfoWater's "Available Fire Flow Analysis" tool was used to determine the available fire flow (while meeting the maximum day demand plus fire flow minimum residual pressure and maximum velocity performance criteria of 30 psi and 12 fps, respectively) at each fire flow junction within the Proposed Project during a maximum day demand scenario. Figure 8 presents the results from the maximum day plus fire flow evaluation at Phase 1 of the Proposed Project. Based on a required fire flow of 3,500 gpm and 4,500 gpm for Office and Industrial land use, respectively, results indicate that the simulated fire flow junctions located (1) in Zone 3, at the most northern part of the system and (2) in Zone 2, near the boundary of Zones 2 and 3 did not meet the minimum fire flow requirement of 4,500 gpm for Industrial land use.

To mitigate these fire flow deficiencies at Phase 1 of the Proposed Project, the following pipeline improvements are recommended to meet the Industrial fire flow requirement:

- Include additional 12-inch diameter looping pipelines located near the most northern part of the system and by Parcel No. 8; and
- Upsize proposed 12-inch diameter pipelines located near Parcel No. 35 to 16-inch diameter pipelines to reduce pipeline head loss simulated during a fire flow condition.

Locations of these pipeline improvements are illustrated on Figure 8. It should be noted that the recommended upsize of proposed 12-inch diameter pipelines to 16-inch diameter pipelines is only required due to the proposed phasing of the Proposed Project and location of the Phase 1 parcels to be served.

Subset of Phase 1

Based on the facilities evaluation presented above for a subset of Phase 1, it was determined that approximately 160 total gross acres of Industrial land use could be served if the new 1.5 MG storage tank and booster pump station is constructed at the Proposed Project in Zone 3. If this facility is not constructed, the City's existing potable water system cannot provide service to any portion of the subset of Phase 1. To evaluate system performance while serving a subset of Phase 1, potable water demands (for 160 total gross acres of Industrial land use) were added to the hydraulic model of the City's existing potable water system. The proposed 1.5 MG storage tank and associated 4,500 gpm booster pump station was also included into the hydraulic model for the City's existing water system.

Subsequent peak hour and maximum day plus fire flow simulations indicate that the City's potable water system can sufficiently support water demands from a subset of Phase 1 if the new Zone 3 storage tank and booster pump station are constructed. However, the City's Operations staff will need to adjust operations at the existing Patterson Pass Booster Pump Station to serve

this subset of Phase 1 due to changes in system conditions initiated from additional water demands and the new Zone 3 Cordes Ranch storage tank and booster pump station. Therefore, during design of the proposed storage tank and booster pump station, it will be critical for the Project proponents and the City to work closely and interface with Operations staff to better understand existing system constraints and coordinate how to best serve this subset of Phase 1.

RECYCLED WATER SYSTEM FACILITIES EVALUATION

The recycled water system facilities were evaluated to confirm or adjust the facility recommendations documented in the Citywide Water System Master Plan. Recommended facilities included:

- Recycled Water Diurnal Storage Tanks
- Recycled Water Pumping Facilities
- Recycled Water Transmission Mains

These facilities are discussed below.

Recycled Water Diurnal Storage Tanks

The total recycled water diurnal storage recommended in the Citywide Water System Master Plan is 10 MG. This value was determined by comparing the projected maximum day demand of 41.5 mgd to an assumed constant recycled water production rate of 13.8 mgd, resulting in a required volume of 10 MG (includes a 10 percent volume contingency). The proposed locations and capacity of the diurnal storage tanks are:

- Holly Drive WWTP – 3 MG
- Cordes Ranch at Zone A Hydraulic Grade – 5 MG
- Tracy Hills – 2 MG

The cost for the 10 MG of storage would be included in the shared recycled water facility cost. Tracy Hills is planning on installing 2 MG of recycled water storage. Because the Zone B and Zone C pump stations pump out of the Zone A hydraulic grade storage located near the southwest corner of Cordes Ranch property, 5 MG of storage, equal to the Zone B and Zone C maximum day demand, is required at that location. The remaining 3 MG of storage would be located at the Holly Drive WWTP.

As indicated in Table 3, the projected recycled water demand of the Cordes Ranch Project is slightly more than 10 percent greater than the demand indicated in Table 9-2 of the Citywide Water System Master Plan. This change, however, is less than two percent of the total system recycled water demand and does not affect the storage facility sizing.

Recycled Water Pumping Facilities

The recycled water pumping capacity was modified from the Citywide Water System Master Plan due to the changes in the Cordes Ranch Specific Plan land use types and projected recycled water demand. The recycled water pumping capacity from the Citywide Water System Master Plan and the revised Cordes Ranch Specific Plan are shown in Table 5.

Table 5. Recycled Water Distribution System Pump Station Design Criteria^(a)				
Pump Station	Citywide Water System Master Plan		Cordes Ranch Specific Plan	
	Design Flow Rate, gpm (mgd)	Design Total Dynamic Head, feet	Design Flow Rate, gpm (mgd)	Design Total Dynamic Head, feet
Zone A ^(b)	16,000 (23.0)	240	16,000 (23.0)	240
Zone B ^(c)	9,600 (14.0)	80	10,200 (15.0)	100
Zone C ^(d)	2,830 (4.1)	115	2,700 (3.9)	123
Tracy Hills Zone C	4,500 (6.5)	280	4,500 (6.5)	280
Tracy Hills Zone D	3,000 (4.3)	350	3,000 (4.3)	350

(a) Modified from Table 9-5 of the Citywide Water System Master Plan.
 (b) Includes flow to all other pump stations.
 (c) Includes flow to the Tracy Hills Storage Tank.
 (d) Pumps directly out of Zone A Storage located within Zone C.

As shown in Table 5, the Zone B pump station must be upsized to account for greater demands in Cordes Ranch Zone B while the Zone C pump station capacity can be reduced because some demands that were assumed to be in Zone C will actually be delivered to Zone B.

Recycled Water Transmission Mains

Because the increased demand in the Cordes Ranch Specific plan was small relative to the overall projected buildout recycled water demand, there were no changes to the shared pipelines.

The changes to the shared facilities due to the changes in recycled water demand in the Cordes Ranch Specific Plan are very minor. The Zone B pump station firm capacity would be increased from 14.0 mgd to 15.0 mgd while the Zone C pump station firm capacity would be reduced from 4.1 mgd to 3.9 mgd.

RECYCLED WATER SYSTEM PERFORMANCE EVALUATION

Substantial revisions to the on-site recycled water piping were required to conform the proposed recycled water distribution system to the Cordes Ranch Specific Plan revised land use (refer to Attachment A). The revised piping is shown previously on Figure 4. Figure 9 presents the recycled water pipelines that would serve landscape irrigation demand in Phase 1, which are assumed to be connected initially with the potable water system as the recycled water system may not be available yet. The on-site Cordes Ranch recycled water piping presented in the Citywide Water System Master Plan and the revised pipeline quantities based on the Cordes Ranch Specific Plan are shown in Table 6.

Table 6. On-site Recycled Water Distribution System Piping^(a)		
Pipeline diameter	Length of Pipe, lineal feet	
	Citywide Water System Master Plan	Cordes Ranch Specific Plan
8-inch diameter	64,600	32,500
12-inch diameter	5,400	23,200
16-inch diameter	2,600	2,400
Total	72,600	58,100

^(a) Modified from Table 10-4 of the Citywide Water System Master Plan.

The revised roadway and hence pipeline alignments reduced the overall length of pipeline required, but required some pipe diameters to be increased because recycled water demand increased and fewer pipe loops would be constructed. Under both studies, the minimum service pressure in the Cordes Ranch Specific Plan area would be 60 psi.

The quantities of required recycled water distribution system piping to serve Phase 1 and Buildout are shown in Table 7.

Table 7. On-site Recycled Water Distribution System Piping by Phase			
Pipeline diameter	Length of Pipe, lineal feet		
	Phase 1	Remaining Phases	Buildout
8-inch diameter	17,800	14,700	32,500
12-inch diameter	9,900	13,300	23,200
16-inch diameter	—	2,400	2,400
Total	27,700	30,400	58,100

RECOMMENDED TIER 2 INFRASTRUCTURE FOR THE PROPOSED PROJECT

The following section summarizes the recommended potable and recycled water system infrastructure based on the evaluations discussed above.

Potable Water System Recommendations

Table 8 summarizes the recommended potable water system infrastructure improvements and associated phasing required to serve projected potable water demands from the Proposed Project.

Improvement Description	Required Phase
New 1.5 MG Storage Tank and 6.48 mgd Booster Pump Station (BPS) in Zone 3	Subset of Phase 1
New 2.0 MG Clearwell at JJWTP	Phase 1
New 6.48 mgd Zone 3-City-side BPS	Phase 1
New 20-inch Diameter Transmission Pipeline	Phase 1
New ASR Groundwater Well (minimum 1,500 gpm capacity)	Phase 1
Two New Pressure Regulating Stations (PRS #9 and PRS #10)	Phase 1
9.65 mgd Zone 2 BPS Upgrade	Buildout
New 1.5 MG Storage Tank and 6.48 mgd BPS in Zone 2	Buildout
New 16-inch Diameter Pipelines	Subset of Phase 1
New 8-inch, 12-inch and 16-inch Diameter Pipelines	Phase 1 and Buildout

Recycled Water System Recommendations

Table 9 summarizes the recommended recycled water system infrastructure improvements required to serve projected recycled water demands from the Proposed Project

Improvement Description	Required Phase
New 3.0 MG Storage Tank at Holly Drive WWTP	Buildout
New 5.0 MG Storage Tank near southwest corner of Cordes Ranch	Buildout
New 2.0 MG Storage Tank in Tracy Hills	Buildout
New 23 mgd Zone A Pump Station	Buildout
New 15 mgd Zone B Pump Station	Buildout
New 3.9 mgd Zone C Pump Station	Buildout
New 6.5 mgd Tracy Hills Zone C Pump Station	Buildout
New 4.3 mgd Tracy Hills Zone D Pump Station	Buildout
New Shared Recycled Water Transmission Pipelines	Buildout
New 8-inch, 12-inch, and 16-inch Diameter Distribution Pipelines	Phase 1 and Buildout

Based on this summary of recommended Tier 2 infrastructure for the Proposed Project, probable construction costs for on-site infrastructure at buildout of the Proposed Project are developed and discussed below.

ESTIMATE OF PROBABLE COSTS FOR RECOMMENDED WATER SYSTEM INFRASTRUCTURE

Figures 3 and 4 presented the recommended on-site potable and recycled water system infrastructure required to serve the Proposed Project at buildout, respectively. The Proposed Project's costs for the required on-site potable and recycled water system infrastructure to serve projected demands are detailed in Tables 10 and 11, respectively. The total estimated cost with economic adjustment⁸ for both the on-site potable and recycled water facilities at buildout of the Proposed Project is \$18,821,000.

As noted in the previous sections, the Proposed Project will also at a minimum need to pay a proportionate share of (1) backbone potable and recycled water system infrastructure and (2) water supply and treatment fees based on the Tier 1 Development Impact Fee Analysis. However, as discussed in the Tier 1 Development Impact Fee Analysis TM, the water supply and/or treatment fees can be waived by the City if the Proposed Project has an agreement with the City to acquire an alternative water supply (other than one of the water supplies included in the water supply fee) and/or does not require treatment at the City's JJWTP. An alternative fee or funding to cover the costs associated with the acquisition of the alternative water supply and/or cover the costs associated with treatment of the alternative water supply may be required.

⁸ As discussed with City staff, costs include economic adjustment factors of 15 and 30 percent to reduce the anticipated potable and recycled water system construction costs in Summer 2012, respectively. These factors reflect the Summer 2012 (more favorable) bidding climate.

Table 10. Summary of Probable On-Site Buildout Potable Water System Construction Costs for the Proposed Project^(a)

Improvement Type	Improvement Description	Quantity		Estimated Construction Cost ^(b)	CIP Cost (includes mark-ups) ^(c,d)
New Pipeline (Undeveloped Area)	8-inch diameter	8,740	lf	1,136,200	1,591,000
New Pipeline (Undeveloped Area)	12-inch diameter	26,770	lf	4,818,600	6,746,000
New Pipeline (Undeveloped Area)	16-inch diameter	12,420	lf	2,856,600	3,999,000
Bore and Jack	16-inch diameter (24-inch casing)	120	lf	66,600	93,000
				TOTAL	\$ 12,429,000
				TOTAL w/ Economic Adjustment^(e)	\$ 10,565,000

^(a) Costs shown are presented 2012 dollars. Unit costs based on Appendix G of the Citywide Water System Master Plan.

^(b) Estimated construction costs do not yet reflect an adjustment, as discussed with the City's Engineer, to account for the current economic bidding climate.

^(c) Costs include mark-ups equal to 40 percent (General Contingency: 15 percent; Design and Planning: 10 percent; Construction Management: 10 percent; and Program Administration: 5 percent), as determined by the City.

^(d) Total rounded to nearest \$1,000.

^(e) As discussed with City staff, an economic adjustment factor of 15 percent was applied to reduce the anticipated potable water system construction costs in Summer 2012. These factors reflect the Summer 2012 (more favorable) bidding climate and will need to be adjusted to match current costs.

Table 11. Summary of Probable On-Site Buildout Recycled Water System Construction Costs for the Proposed Project^(a)

Improvement Type	Improvement Description	Quantity		Estimated Construction Cost ^(b)	CIP Cost (includes mark-ups) ^(c,d)
New Pipeline (Undeveloped Area)	8-inch diameter	32,500	lf	3,835,000	5,369,000
New Pipeline (Undeveloped Area)	12-inch diameter	23,200	lf	4,036,800	5,652,000
New Pipeline (Undeveloped Area)	16-inch diameter	2,400	lf	552,000	773,000
				TOTAL	\$ 11,794,000
				TOTAL w/ Economic Adjustment^(e)	\$ 8,256,000

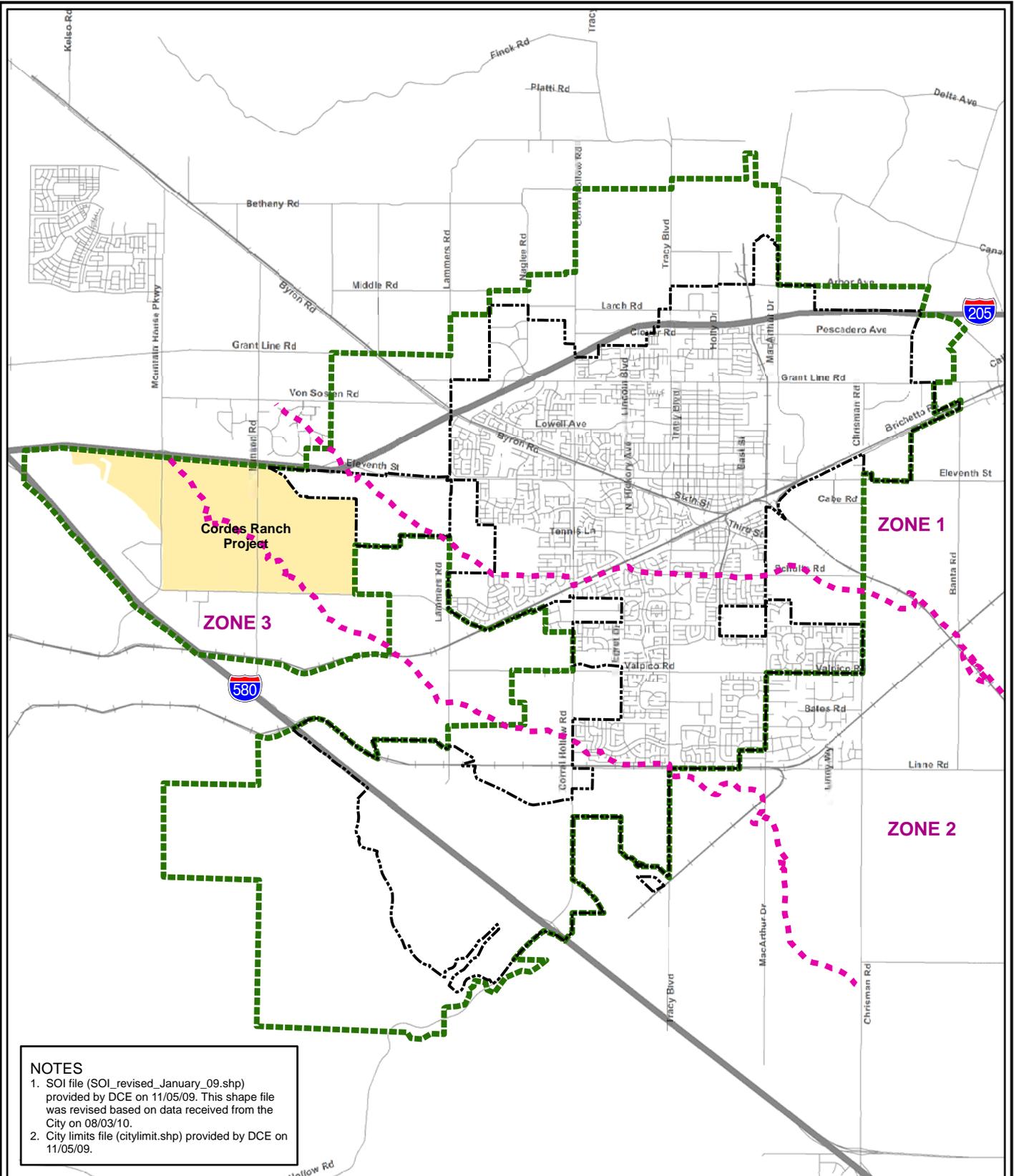
^(a) Costs shown are presented 2012 dollars. Unit costs based on Appendix G of the Citywide Water System Master Plan.

^(b) Estimated construction costs do not yet reflect an adjustment, as discussed with the City's Engineer, to account for the current economic bidding climate.

^(c) Costs include mark-ups equal to 40 percent (General Contingency: 15 percent; Design and Planning: 10 percent; Construction Management: 10 percent; and Program Administration: 5 percent), as determined by the City.

^(d) Total rounded to nearest \$1,000.

^(e) As discussed with City staff, an economic adjustment factor of 30 percent was applied to reduce the anticipated recycled water system construction costs in Summer 2012. These factors reflect the Summer 2012 (more favorable) bidding climate and will need to be adjusted to match current costs.



NOTES
 1. SOI file (SOI_revised_January_09.shp) provided by DCE on 11/05/09. This shape file was revised based on data received from the City on 08/03/10.
 2. City limits file (citylimit.shp) provided by DCE on 11/05/09.

- LEGEND:**
- Existing Pressure Zone Boundary
 - City Limits
 - - - SOI
 - Railroad
 - Highway
 - Existing Street

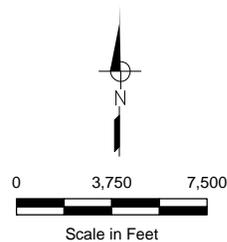
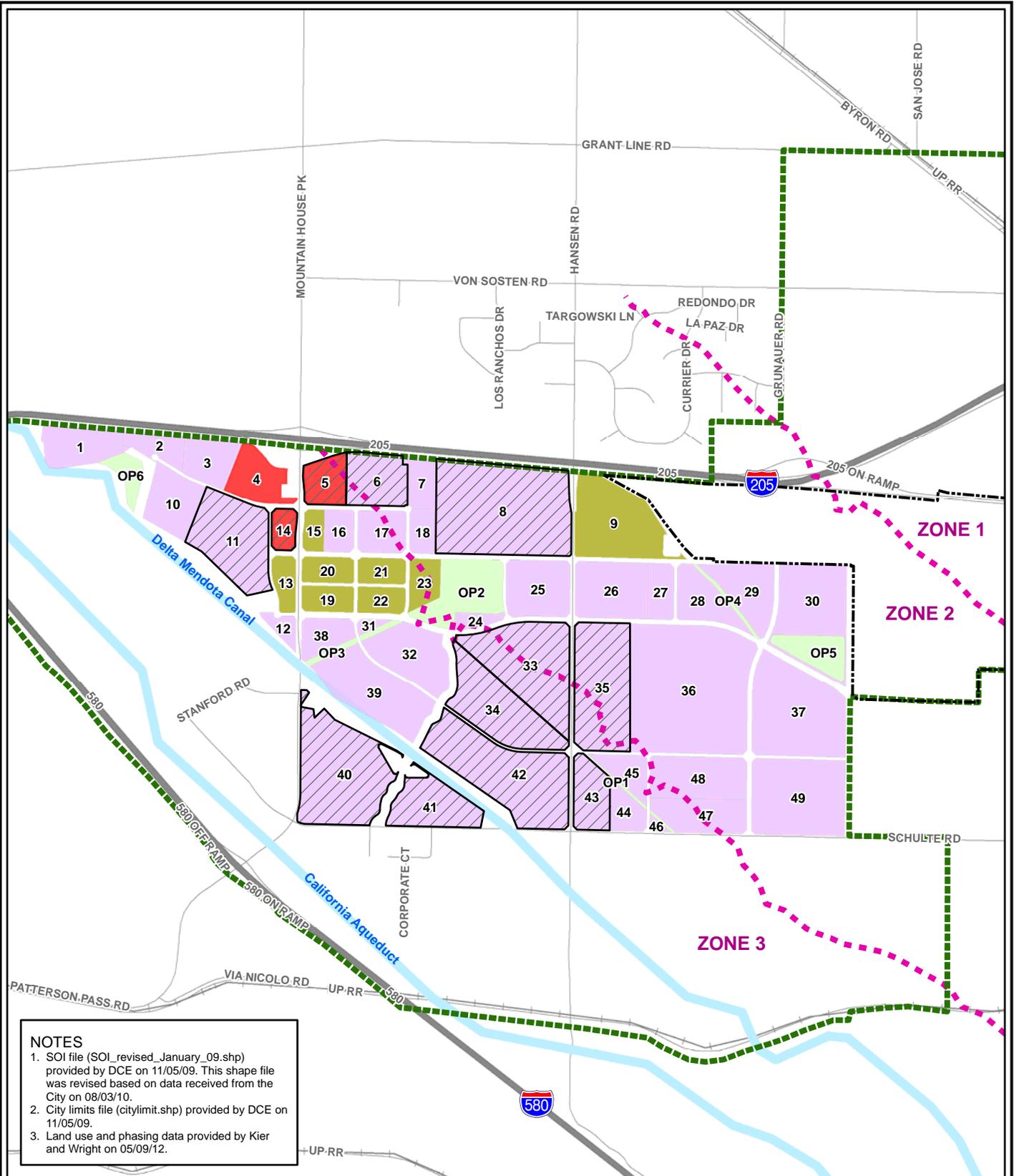


FIGURE 1
City of Tracy
Cordes Ranch Specific Plan
Tier 2 Infrastructure Evaluation
PROPOSED PROJECT
LOCATION



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NOTES

1. SOL file (SOL_revised_January_09.shp) provided by DCE on 11/05/09. This shape file was revised based on data received from the City on 08/03/10.
2. City limits file (citylimit.shp) provided by DCE on 11/05/09.
3. Land use and phasing data provided by Kier and Wright on 05/09/12.

- LEGEND:**
- Existing Pressure Zone Boundary
 - Phase 1 Parcel
 - Commercial
 - Office
 - Industrial
 - Open Space

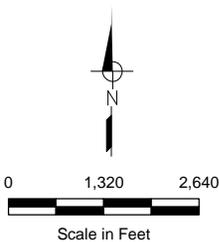
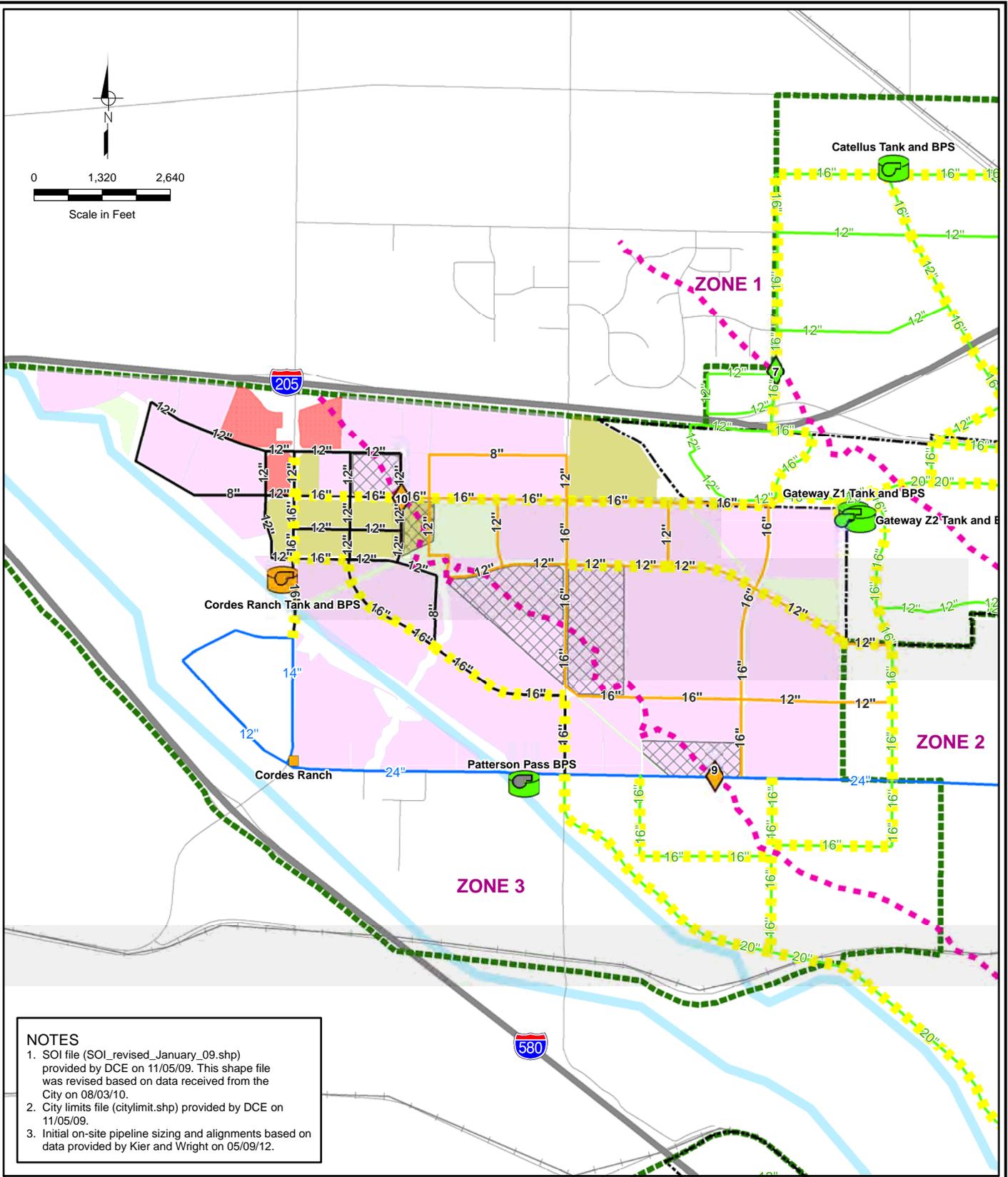
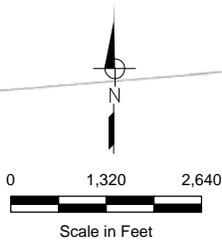


FIGURE 2

**City of Tracy
Cordes Ranch Specific Plan
Tier 2 Infrastructure Evaluation**

**PROPOSED LAND USE
AND PHASING**





NOTES

1. SOL file (SOL_revised_January_09.shp) provided by DCE on 11/05/09. This shape file was revised based on data received from the City on 08/03/10.
2. City limits file (citylimit.shp) provided by DCE on 11/05/09.
3. Initial on-site pipeline sizing and alignments based on data provided by Kier and Wright on 05/09/12.

LEGEND:

- Parcels Located in Both Zones 2 and 3
- Backbone Pipeline (Tier 1)
- Proposed Pipelines**
- Cordes Ranch - Zone 2
- Cordes Ranch - Zone 3
- Other Development Projects
- Existing Pipeline

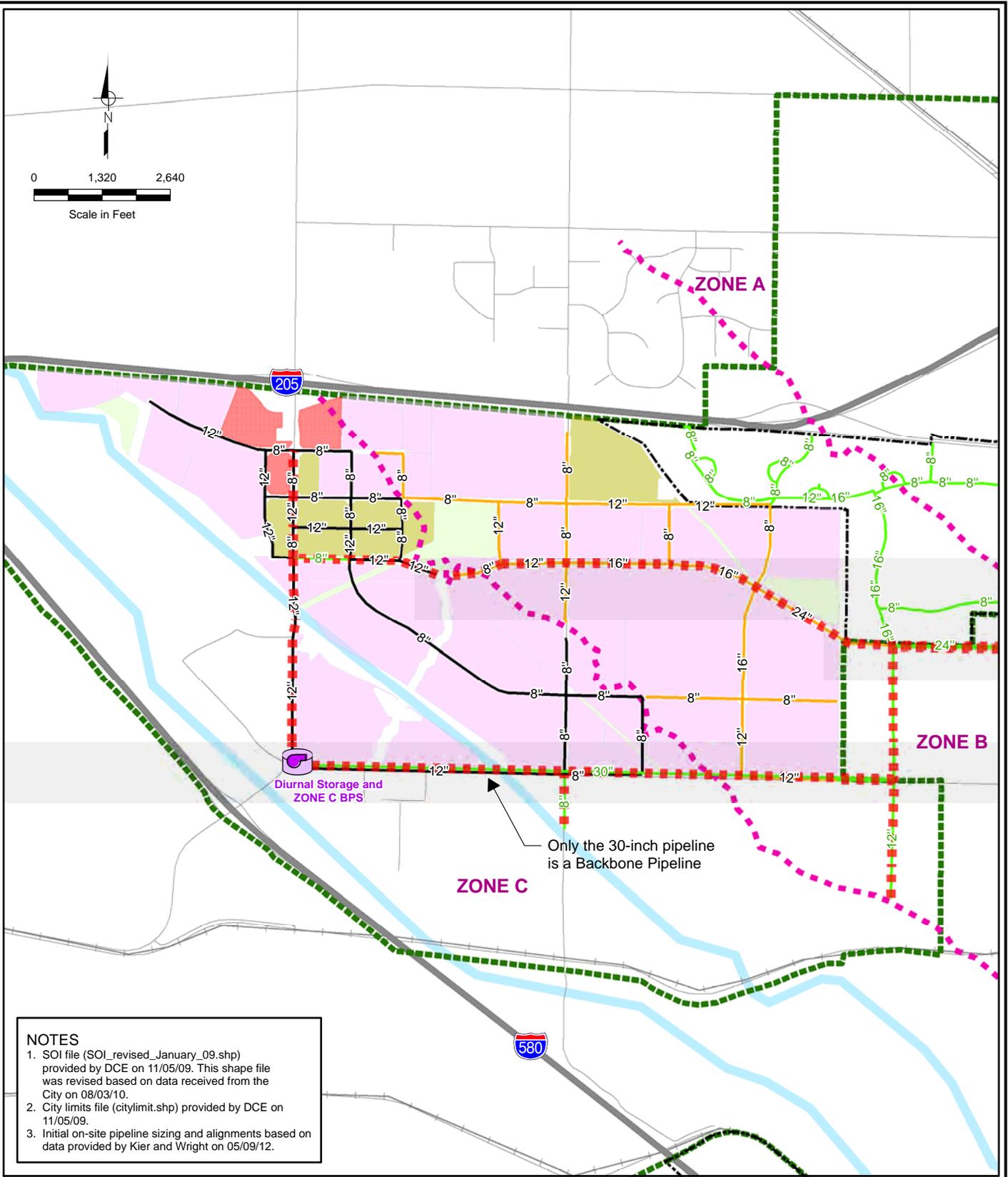
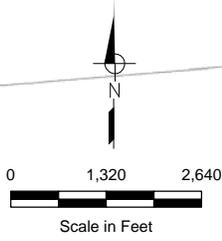
FIGURE 3

**City of Tracy
Cordes Ranch Specific Plan
Tier 2 Infrastructure Evaluation**

**RECOMMENDED ON-SITE
POTABLE WATER SYSTEM**



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NOTES

1. SOL file (SOL_revised_January_09.shp) provided by DCE on 11/05/09. This shape file was revised based on data received from the City on 08/03/10.
2. City limits file (citylimit.shp) provided by DCE on 11/05/09.
3. Initial on-site pipeline sizing and alignments based on data provided by Kier and Wright on 05/09/12.

- LEGEND:**
- ■ ■ ■ Backbone Pipeline (Tier 1)
 - Proposed Pipelines**
 - Cordes Ranch - Zone 2
 - Cordes Ranch - Zone 3
 - Other Development Projects

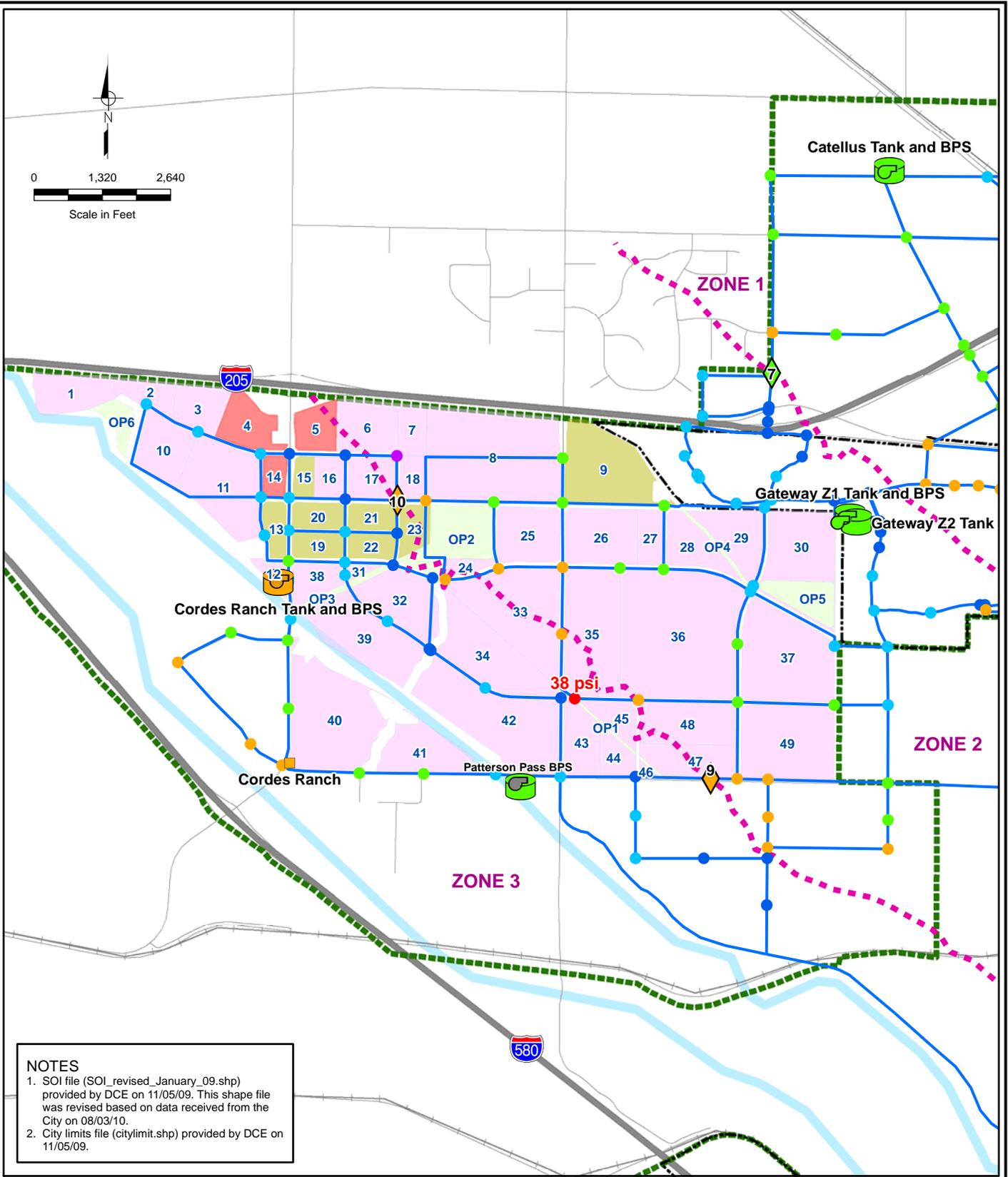
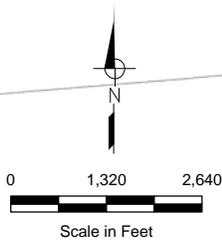
FIGURE 4

City of Tracy
Cordes Ranch Specific Plan
Tier 2 Infrastructure Evaluation

RECOMMENDED ON-SITE
RECYCLED WATER SYSTEM



O:\Clients\404 City of Tracy\02-11-90 Cordes Ranch Specific Plan Support-Tier 2\GIS\Figures\Infrastructure TMI\Fig 4_PropRecycledOnsite_BO.mxd 9/4/2012



NOTES
 1. SOL file (SOL_revised_January_09.shp) provided by DCE on 11/05/09. This shape file was revised based on data received from the City on 08/03/10.
 2. City limits file (citylimit.shp) provided by DCE on 11/05/09.

LEGEND:

- | | |
|------------------------------|---|
| ● Pressure < 40 psi | Pipeline Diameter ≥ 18-inches |
| ● 40 psi < Pressure ≤ 50 psi | — Velocity ≤ 6 fps |
| ● 50 psi < Pressure ≤ 60 psi | — Velocity > 6 fps |
| ● 60 psi < Pressure ≤ 70 psi | Pipeline Diameter < 18-inches |
| ● 70 psi < Pressure ≤ 80 psi | — Velocity ≤ 8 fps |
| ● Pressure > 80 psi | — Velocity > 8 fps |

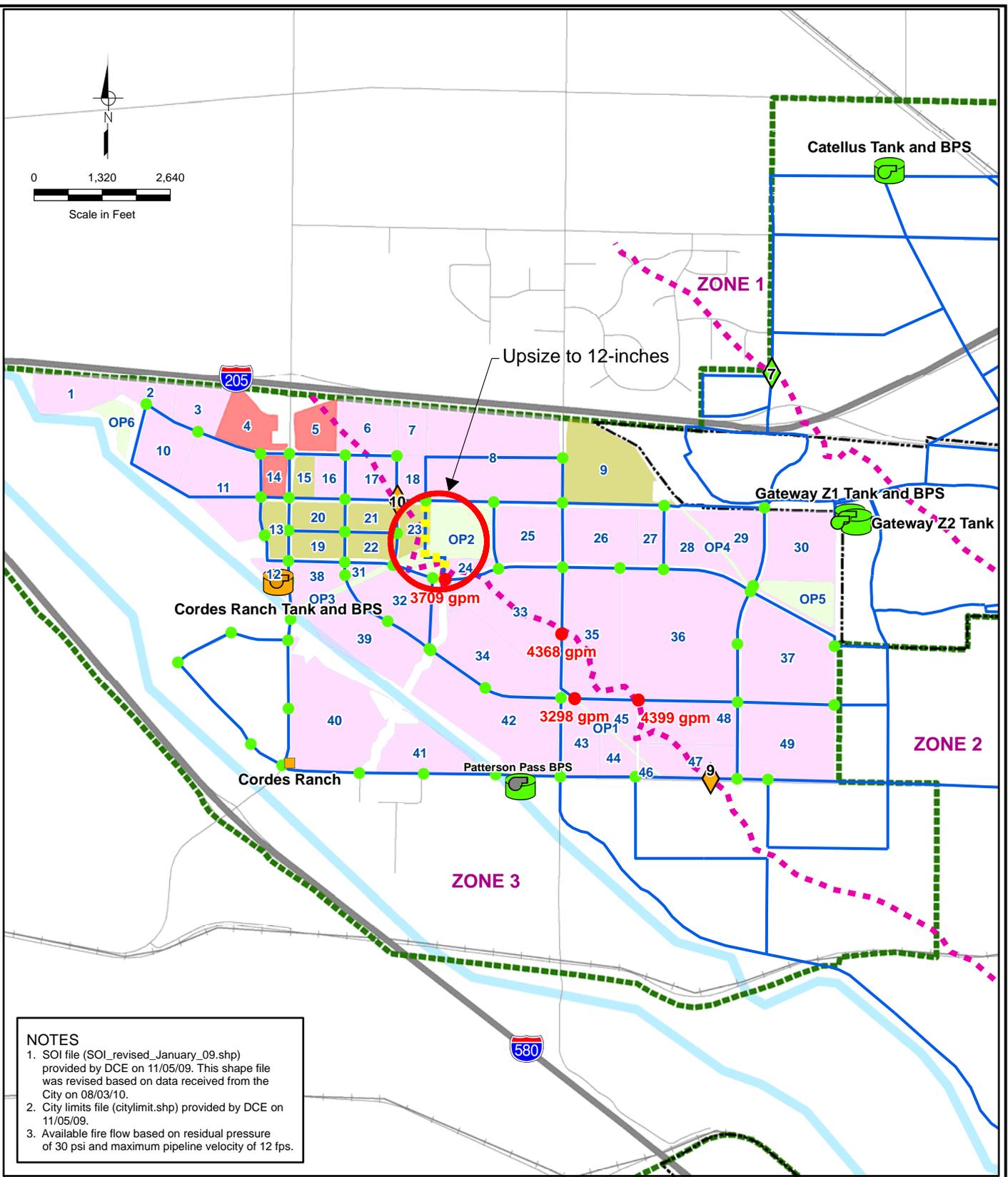
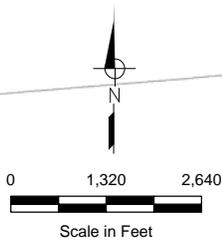
FIGURE 5

**City of Tracy
 Cordes Ranch Specific Plan
 Tier 2 Infrastructure Evaluation**

**BUILDOUT POTABLE
 PEAK HOUR EVALUATION**



O:\Clients\404 City of Tracy\02-11-90 Cordes Ranch Specific Plan Support-Tier 2\GIS\Figures\Infrastructure TMI\Fig 5_BOPH.mxd 8/2/2012



NOTES

1. SOL file (SOL_revised_January_09.shp) provided by DCE on 11/05/09. This shape file was revised based on data received from the City on 08/03/10.
2. City limits file (citylimit.shp) provided by DCE on 11/05/09.
3. Available fire flow based on residual pressure of 30 psi and maximum pipeline velocity of 12 fps.

LEGEND:

- Fail (Available Fire Flow < 4,500 gpm)
- Pass (Available Fire Flow ≥ 4,500 gpm)
- Upsize Pipeline to 12-inches

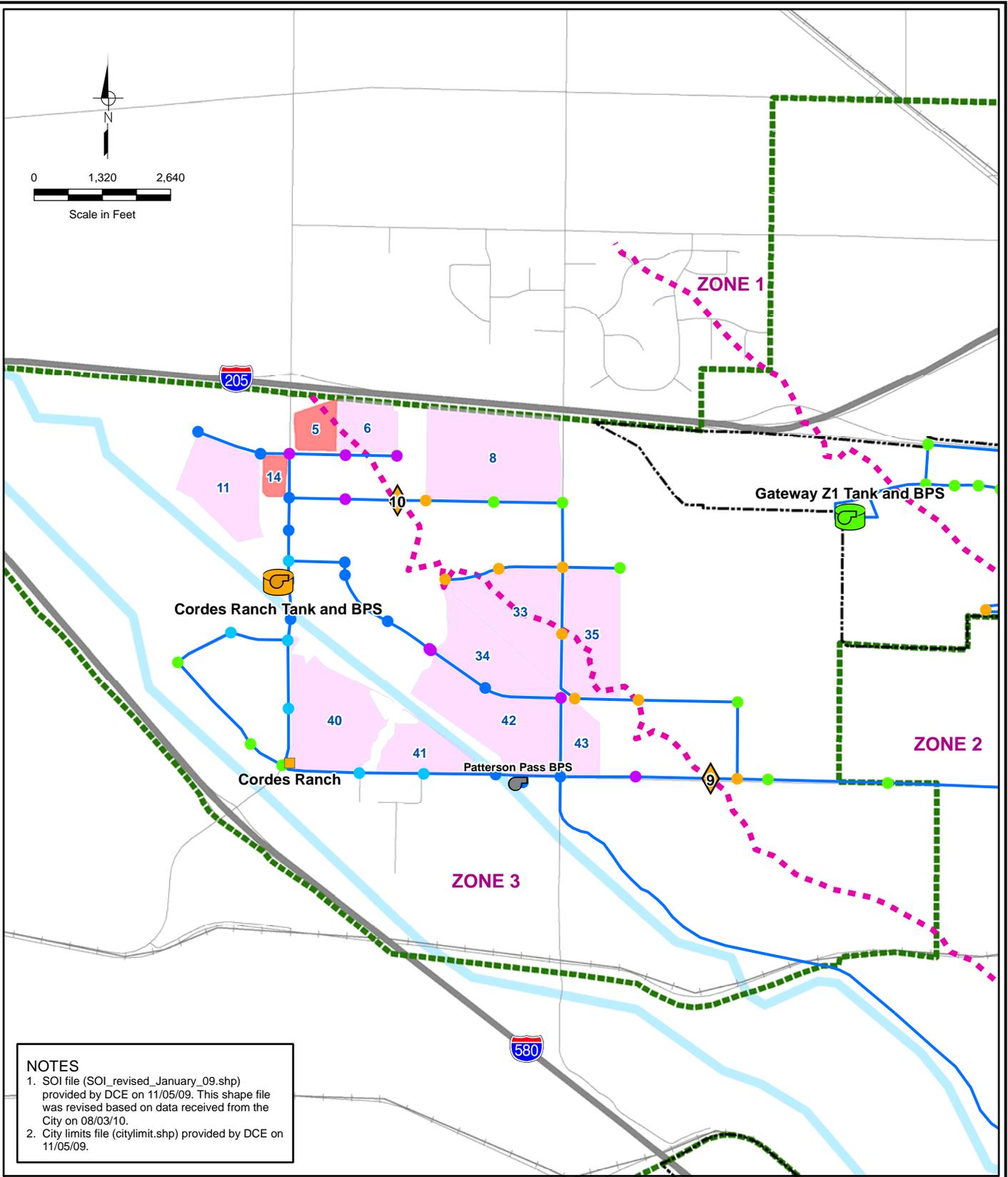
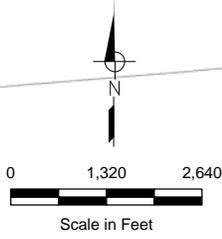
FIGURE 6

**City of Tracy
Cordes Ranch Specific Plan
Tier 2 Infrastructure Evaluation**

**BUILDOUT POTABLE
MAX DAY + FIRE EVALUATION**



O:\Clients\404 City of Tracy\02-11-90 Cordes Ranch Specific Plan Support-Tier 2\GIS\Figures\Infrastructure TM\Fig 6_BOFF.mxd 9/4/2012



NOTES
 1. SOL file (SOL_revised_January_09.shp) provided by DCE on 11/05/09. This shape file was revised based on data received from the City on 08/03/10.
 2. City limits file (citylimit.shp) provided by DCE on 11/05/09.

LEGEND:

- | | |
|------------------------------|---|
| ● Pressure < 40 psi | Pipeline Diameter ≥ 18-inches |
| ● 40 psi < Pressure ≤ 50 psi | — Velocity ≤ 6 fps |
| ● 50 psi < Pressure ≤ 60 psi | — Velocity > 6 fps |
| ● 60 psi < Pressure ≤ 70 psi | Pipeline Diameter < 18-inches |
| ● 70 psi < Pressure ≤ 80 psi | — Velocity ≤ 8 fps |
| ● Pressure > 80 psi | — Velocity > 8 fps |

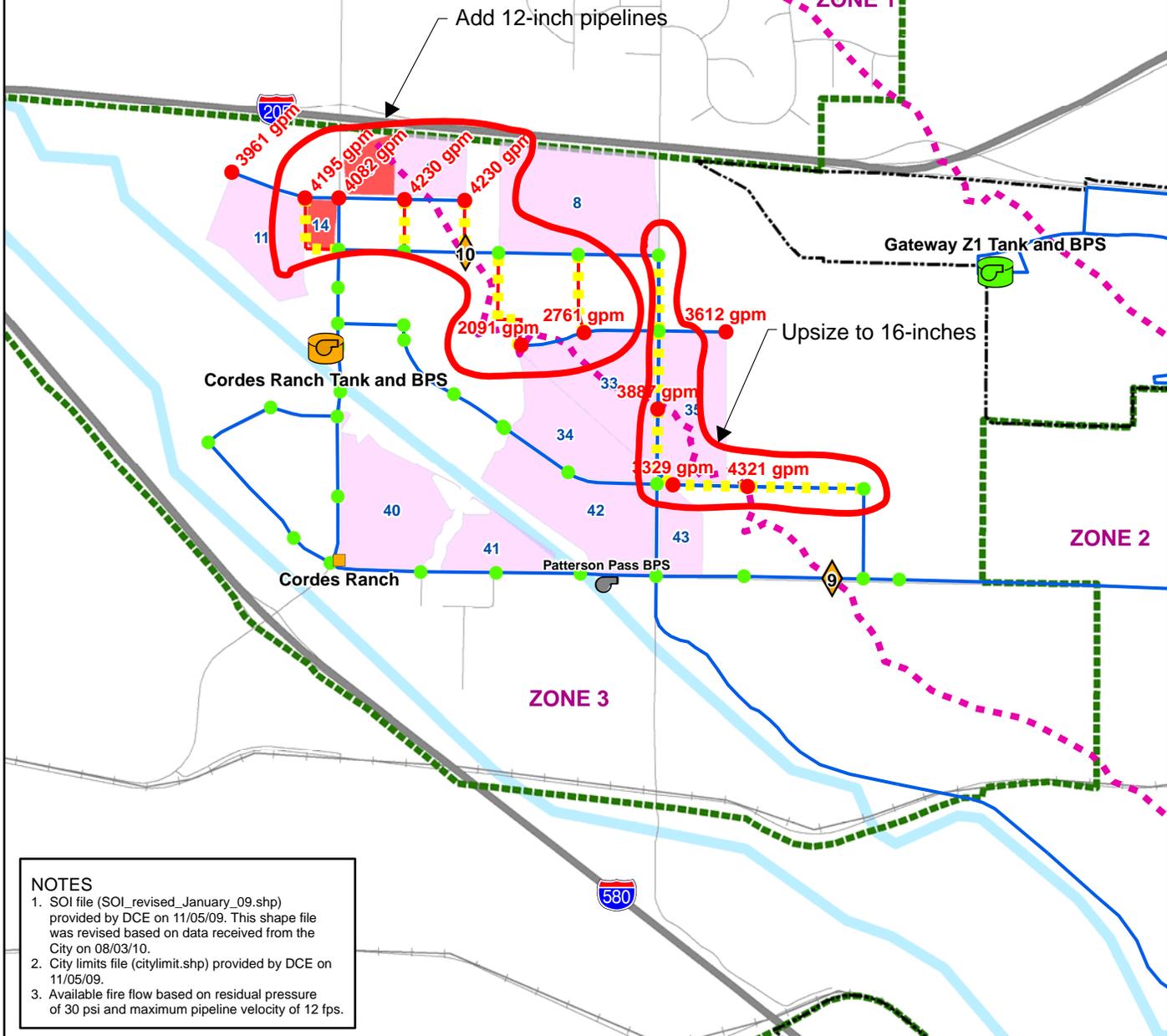
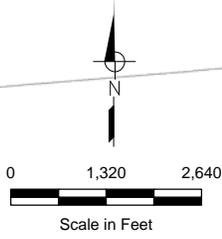
FIGURE 7

**City of Tracy
 Cordes Ranch Specific Plan
 Tier 2 Infrastructure Evaluation**

**PHASE 1 POTABLE
 PEAK HOUR EVALUATION**



O:\Clients\404 City of Tracy\02-11-90 Cordes Ranch Specific Plan Support-Tier 2\GIS\Figures\Infrastructure TM\Fig 7_P1PH.mxd 8/2/2012



NOTES

1. SOL file (SOL_revised_January_09.shp) provided by DCE on 11/05/09. This shape file was revised based on data received from the City on 08/03/10.
2. City limits file (citylimit.shp) provided by DCE on 11/05/09.
3. Available fire flow based on residual pressure of 30 psi and maximum pipeline velocity of 12 fps.

LEGEND:

- Fail (Available Fire Flow < 4,500 gpm)
- Pass (Available Fire Flow ≥ 4,500 gpm)
- Add Pipeline (12-inches)
- Upsize Pipeline to 16-inches

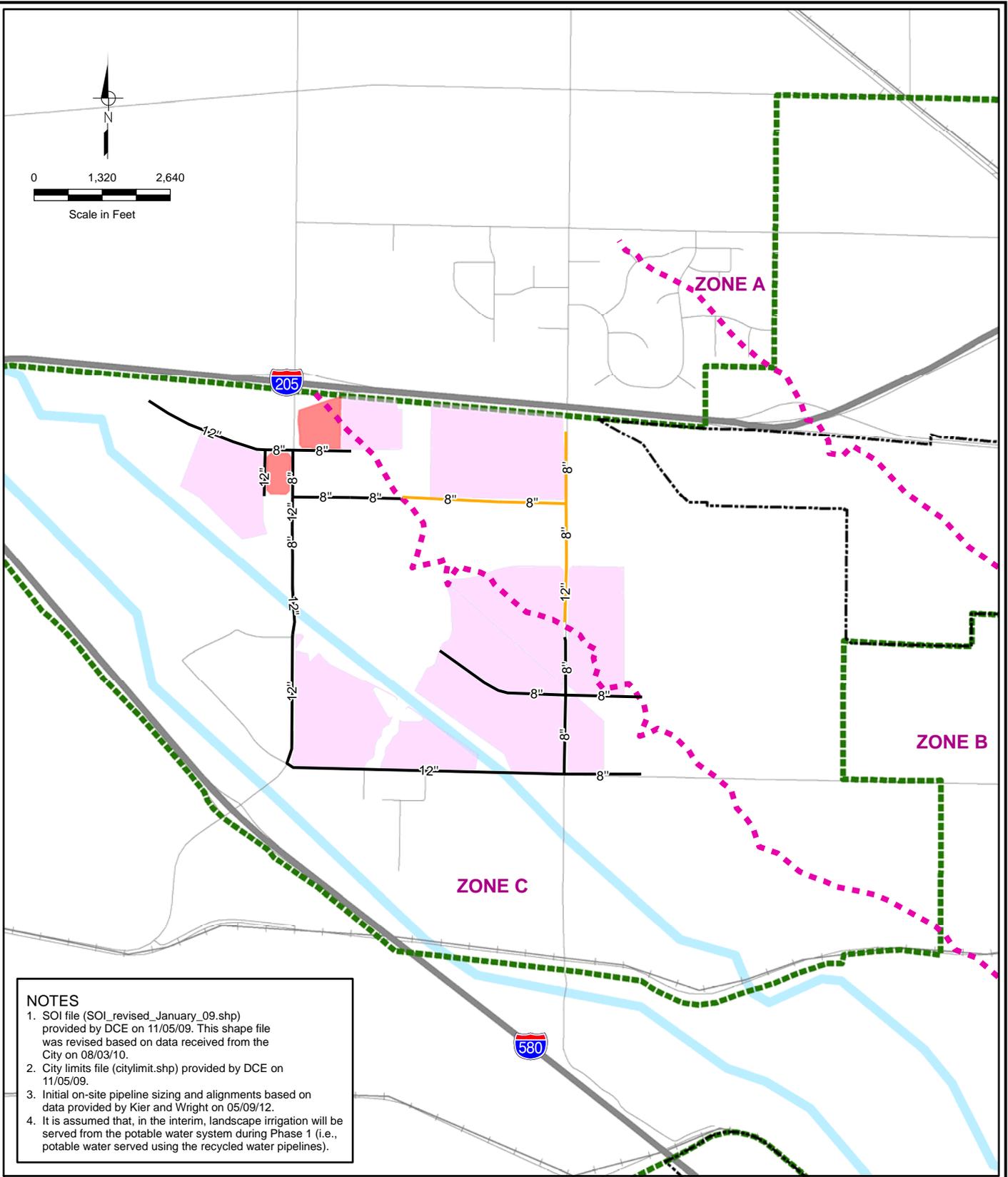
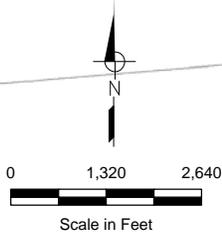
FIGURE 8

**City of Tracy
Cordes Ranch Specific Plan
Tier 2 Infrastructure Evaluation**

**PHASE 1 POTABLE
MAX DAY + FIRE EVALUATION**



O:\Clients\404 City of Tracy\02-11-90 Cordes Ranch Specific Plan Support-Tier 2\GIS\Figures\Infrastructure TM\Fig 8_P1FF.mxd 9/4/2012



NOTES

1. SOI file (SOI_revised_January_09.shp) provided by DCE on 11/05/09. This shape file was revised based on data received from the City on 08/03/10.
2. City limits file (citylimit.shp) provided by DCE on 11/05/09.
3. Initial on-site pipeline sizing and alignments based on data provided by Kier and Wright on 05/09/12.
4. It is assumed that, in the interim, landscape irrigation will be served from the potable water system during Phase 1 (i.e., potable water served using the recycled water pipelines).

LEGEND:

Proposed Pipelines

— Cordes Ranch - Zone 2

— Cordes Ranch - Zone 3

FIGURE 9

**City of Tracy
Cordes Ranch Specific Plan
Tier 2 Infrastructure Evaluation**

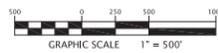
**PHASE 1 RECYCLED
WATER SYSTEM PIPELINES**



O:\Clients\404 City of Tracy\02-11-90 Cordes Ranch Specific Plan Support-Tier 2\GIS\Figures\Infrastructure TMI\Fig 9_ProptRecycledOnsite_P1.mxd 9/4/2012

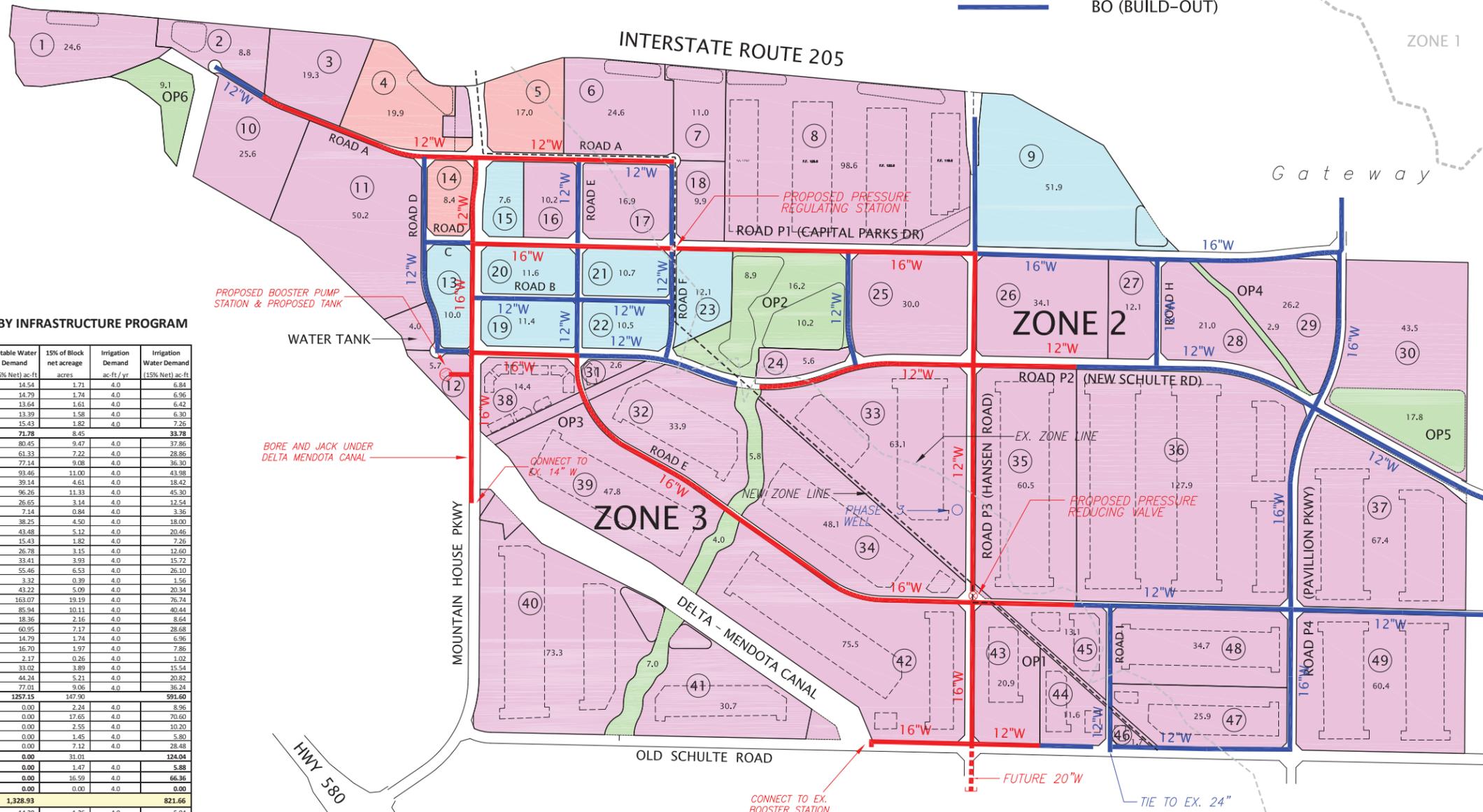
ATTACHMENT A

Key Data Received from Kier and Wright on May 9, 2012



WATER PHASES

- PHASE 1
- BO (BUILD-OUT)



ESTIMATED WATER DEMAND PER PROPERTY BY INFRASTRUCTURE PROGRAM

Property Owner	Land Use	Block Number	Phase	Block Total Net Area (acres)	85% of Block net acreage (acres)	Proposed Water Demand (ac-ft/yr)	Potable Water Demand (85% Net) (ac-ft)	15% of Block net acreage (acres)	Irrigation Demand (ac-ft/yr)	Irrigation Water Demand (15% Net) (ac-ft)	
GO	19	BO		11.4	9.69	1.5	14.54	1.71	4.0	6.84	
	20	BO		11.6	9.86	1.5	14.79	1.74	4.0	6.96	
	21	BO		10.7	9.10	1.5	13.64	1.61	4.0	6.42	
	22	BO		10.5	8.93	1.5	13.39	1.58	4.0	6.30	
23	BO		12.1	10.29	1.5	15.43	1.82	4.0	7.26		
Total				56.3	47.86		71.78	8.45		33.78	
BPI	33	1		63.1	53.64	1.5	80.45	9.47	4.0	37.86	
	34	1		48.1	40.89	1.5	61.33	7.22	4.0	28.86	
	35	1		60.5	51.43	1.5	77.14	9.08	4.0	36.30	
	40	1		73.3	62.31	1.5	93.46	11.00	4.0	43.98	
	41	1		30.7	26.10	1.5	39.14	4.61	4.0	18.42	
	42	1		75.5	64.18	1.5	96.36	11.33	4.0	45.30	
	43	1		20.9	17.77	1.5	26.65	3.14	4.0	12.54	
	24	BO		5.6	4.76	1.5	7.34	0.84	4.0	3.36	
	25	BO		30.0	25.50	1.5	38.25	4.50	4.0	18.00	
	26	BO		34.1	28.99	1.5	43.48	5.12	4.0	20.46	
	27	BO		12.1	10.29	1.5	15.43	1.82	4.0	7.26	
	28	BO		21.0	17.85	1.5	26.78	3.15	4.0	12.60	
	29	BO		26.2	22.17	1.5	33.41	3.93	4.0	15.72	
	30	BO		43.5	36.98	1.5	55.46	6.53	4.0	26.10	
	31	BO		2.6	2.21	1.5	3.32	0.39	4.0	1.56	
	32	BO		33.9	28.82	1.5	43.22	5.09	4.0	20.34	
	36	BO		127.9	108.72	1.5	163.07	19.19	4.0	76.74	
	37	BO		67.4	57.29	1.5	85.94	10.11	4.0	40.44	
	38	BO		14.4	12.24	1.5	18.36	2.16	4.0	8.64	
	39	BO		47.8	40.63	1.5	60.95	7.17	4.0	28.68	
44	BO		11.6	9.86	1.5	14.79	1.74	4.0	6.96		
45	BO		13.1	11.14	1.5	16.70	1.97	4.0	7.86		
46	BO		1.7	1.45	1.5	2.17	0.26	4.0	1.02		
47	BO		25.9	22.02	1.5	33.02	3.89	4.0	15.54		
48	BO		34.7	29.50	1.5	44.24	5.21	4.0	20.82		
49	BO		60.4	51.34	1.5	77.01	9.06	4.0	36.24		
Total				986.0	838.10		1257.15	147.90		591.60	
OP	OP1	BO		2.8	80% Irrigated	0.00	2.24	4.0		3.96	
	OP2	BO		35.3	50% Irrigated	0.00	17.65	4.0		70.60	
	OP3	BO		5.1	80% Irrigated	0.00	2.55	4.0		10.20	
	OP4	BO		2.9	80% Irrigated	0.00	1.45	4.0		5.80	
	OP5	BO		17.8	40% Irrigated	0.00	7.12	4.0		28.48	
Total				63.90		0.00	31.01			124.04	
Detention Basins				4.90	30% Irrigated	0.00	1.47	4.0		5.88	
Street Landscaping				110.60	15% Landscape Area	0.00	16.59	4.0		66.36	
Drainage Ditch				20.60	No Irrigation	0.00	0.00	4.0		0.00	
TOTAL				1242.3	= (1242.3 + 1.2 WSPD)		1,328.93			621.66	
GC	14	1		8.4	7.14	2.0	14.28	1.26	4.0	5.04	
	4	BO		19.9	16.92	2.0	33.83	2.99	4.0	11.94	
	Total				28.3	24.06		48.11	4.25		16.98
	13	BO		10.0	8.50	1.5	12.75	1.50	4.0	6.00	
Total				10.0	8.50		12.75	1.50		6.00	
BPI	11	1		50.2	42.67	1.5	64.01	7.53	4.0	30.12	
	1	BO		23.0	19.55	1.5	29.33	3.45	4.0	13.80	
	2	BO		10.4	8.84	1.5	13.26	1.56	4.0	6.24	
	3	BO		19.3	16.41	1.5	24.61	2.90	4.0	11.58	
	10	BO		25.6	21.76	1.5	32.64	3.84	4.0	15.36	
	12	BO		5.7	4.85	1.5	7.27	0.86	4.0	3.42	
Total				134.2	114.07		171.11	20.13		80.52	
OP	OP6	BO		9.1	40% Irrigated	0.00	3.64	4.0		14.56	
	Detention Basins				6.20	30% Irrigated	0.00	1.86	4.0	7.44	
Street Landscaping				15.40	15% Landscape Area	0.00	2.31	4.0		9.24	
TOTAL				203.2	= (203.2 + 4.0 Water Tank + 2.7 PG&E)		231.97			134.74	
GC	5	1		17.0	14.45	2.0	28.90	2.55	4.0	10.20	
	Total				17.0	14.45		28.90	2.55		10.20
GO	15	BO		7.6	6.46	1.5	9.69	1.14	4.0	4.56	
	Total				7.6	6.46		9.69	1.14		4.56
BPI	6	1		24.6	20.91	1.5	31.37	3.69	4.0	14.76	
	7	BO		11.0	9.35	1.5	14.03	1.65	4.0	6.60	
	16	BO		10.2	8.67	1.5	13.01	1.53	4.0	6.12	
	17	BO		16.9	14.37	1.5	21.55	2.54	4.0	10.14	
	18	BO		9.9	8.42	1.5	12.63	1.49	4.0	5.94	
Total				72.6	61.71		92.57	10.89		43.56	
Detention Basins				3.80	30% Irrigated	0.00	1.14	4.0		4.56	
Street Landscaping				13.60	15% Landscape Area	0.00	2.04	4.0		8.16	
TOTAL				114.6			121.47			66.48	
BPI	8	1		98.6	83.81	1.5	125.72	14.79	4.0	59.16	
	Detention Basins				4.60	30% Irrigated	0.00	1.38	4.0	5.52	
Street Landscaping				4.90	15% Landscape Area	0.00	0.74	4.0		2.94	
TOTAL				108.1			125.72			67.62	
GO	9	BO		51.9	44.12	1.5	66.17	7.79	4.0	31.14	
	Detention Basins				2.20	30% Irrigated	0.00	0.66	4.0	2.64	
Street Landscaping				4.30	15% Landscape Area	0.00	0.65	4.0		2.58	
TOTAL				58.4			66.17			36.36	
GRAND TOTAL				1726.6			1,874.25			1,126.86	

OVERALL WATER DEMAND CALCULATIONS

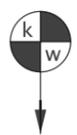
Land Use	Description	Master Plan Water Demand (ac-ft/ac/yr)	Master Plan Area (Gross)	Percentage of Acreage requiring Potable Water	Master Plan FAR	Master Plan Building Square Footage	Master Plan Total Water Demand	Demand per Square Footage of building (ac-ft/yr/sf)	Weighted Demand per Square Footage of building	Specific Plan Area (Net)	Specific Plan FAR	Specific Plan Potable Water Demand (Based on Net Acres)	Percent Reduction from Master Plan Based on Acreage	Specific Plan Building Square Footage	Potable Water Demand based on building square footage	Percent Reduction from Master Plan Based on Bldg SF
GC	General Commercial	2.0	85	85%	0.30	1,110,780	145	0.000130	0.105219	45.3	0.30	91	37.30%	591,980	77	46.71%
GO	General Office	1.5	150	85%	0.45	2,940,300	191	0.000065	0.000065	125.8	0.45	189	1.33%	2,465,932	160	16.13%
BPI	Business Park Industrial	1.5	1,488	85%	0.50	32,408,640	1,897	0.000059	0.048485	1,291.4	0.50	1,937	-2.10%	28,126,692	1,647	13.21%
			1,723			36,459,720	2,233			1,462.5		2,216	0.74%	31,184,604	1,884	15.63%

LAND USE LEGEND

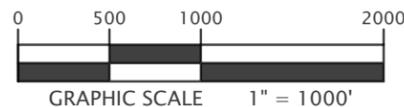
- GC GENERAL COMMERCIAL
- GO GENERAL OFFICE
- BPI BUSINESS PARK INDUSTRIAL
- OP OPEN SPACE / PARKS

WATER - INFRASTRUCTURE PROGRAM
ESTIMATED IMPACTS PER PROPERTY BY INFRASTRUCTURE PROGRAM
CORDES RANCH
TRACY
CALIFORNIA

DATE	05/02/2012
SCALE	1" = 500'
DESIGNER	M.F.B.
JOB NO.	A09500
SHEET	W
OF SHEETS	



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 Livermore, California 94551 Fax (925) 245-8796



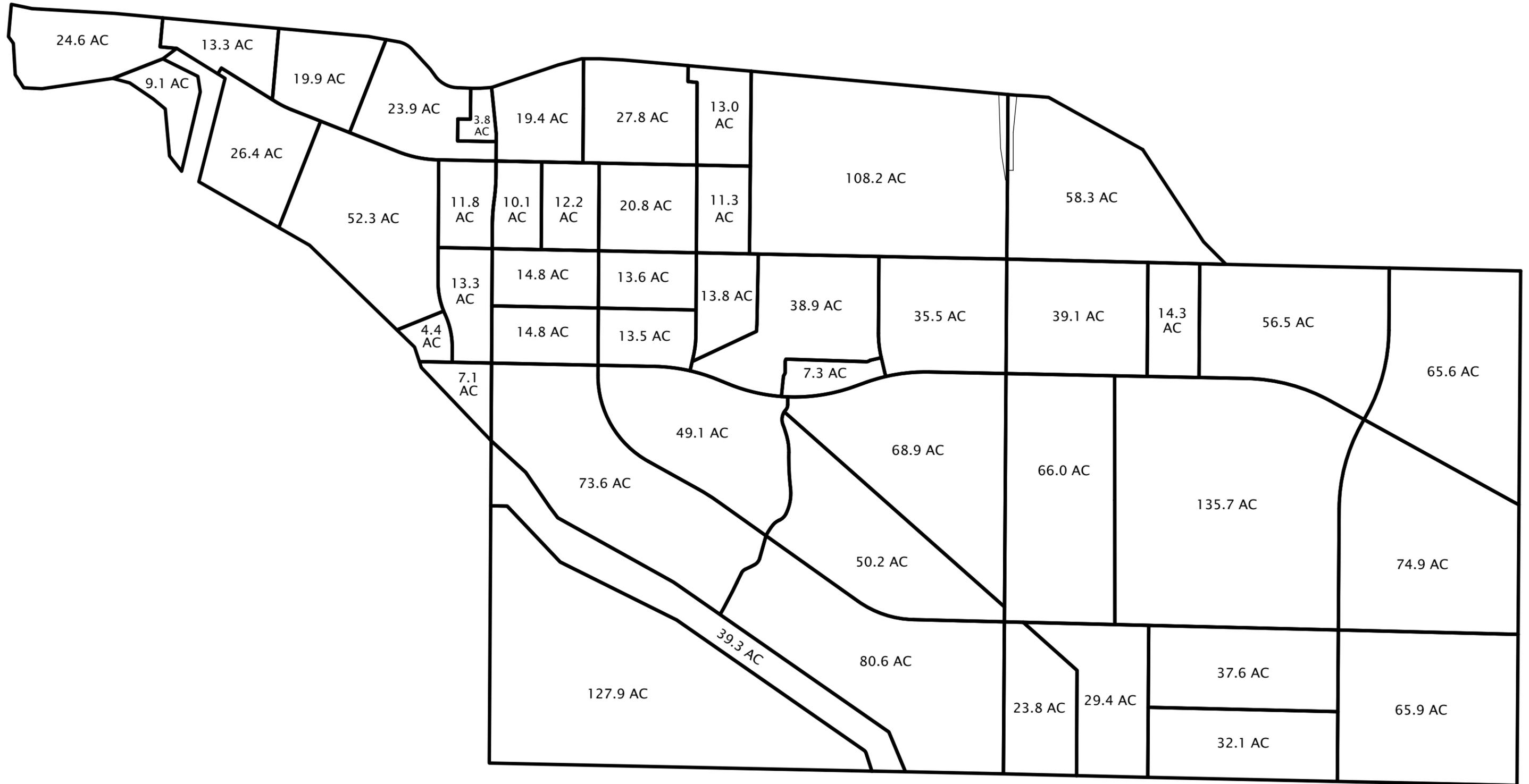
NET AREAS CALCULATIONS

CORDES RANCH AREA CALCULATIONS EXHIBIT

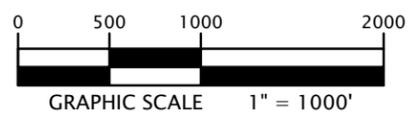
TRACY

CALIFORNIA

DATE	05/01/2012
BY	M.F.B.
JOB NO.	A09500
SCALE	1" = 1000'
SHEET	A-NET



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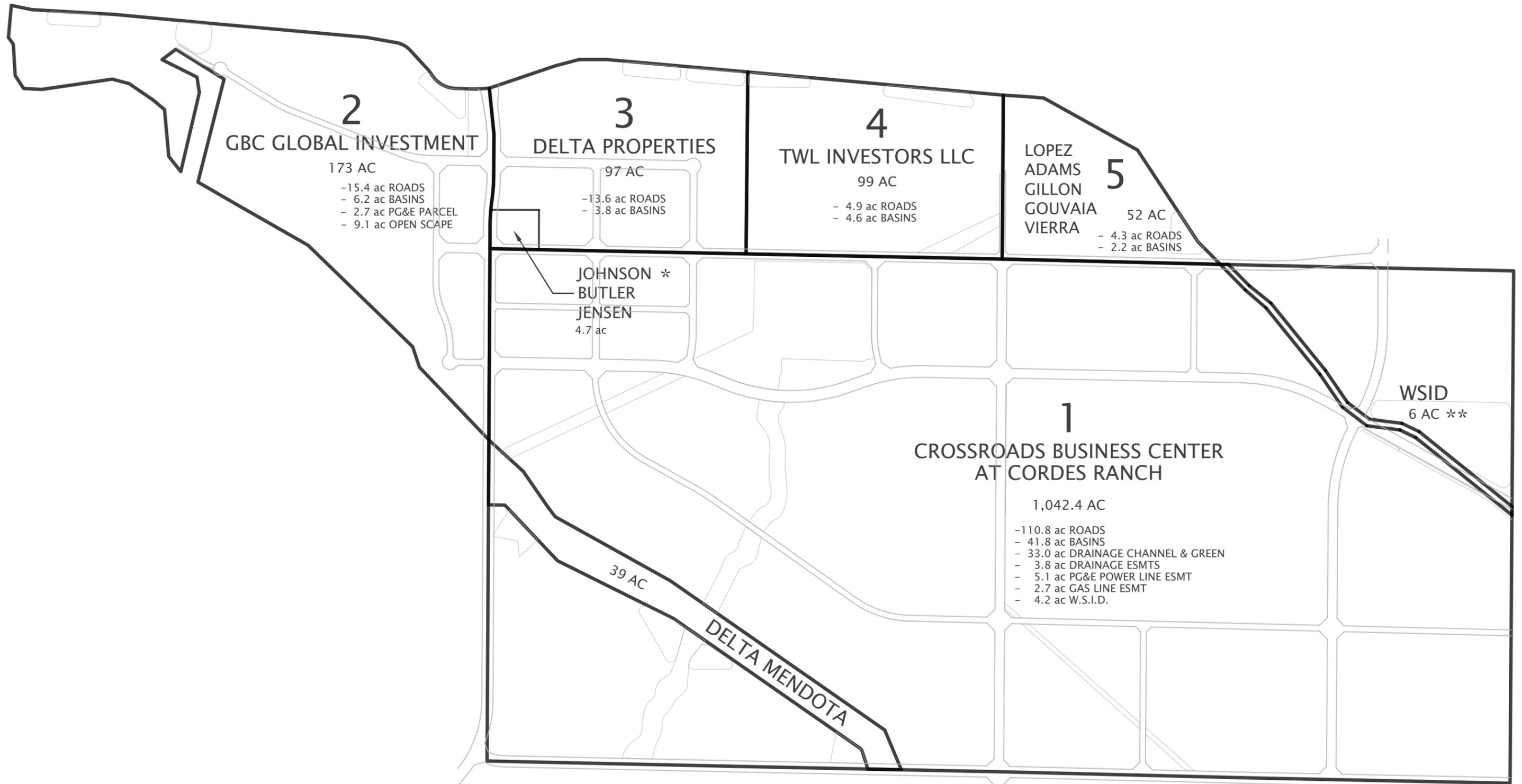
GROSS AREAS CALCULATIONS

CORDES RANCH AREA CALCULATIONS EXHIBIT

TRACY

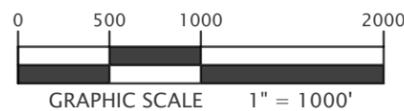
CALIFORNIA

DATE	05/01/2012
BY	M.F.B.
JOB NO.	A09500
SCALE	1" = 1000'
SHEET	A-GROSS



* EXISTING RESIDENTIAL PROPERTIES TO BE DEVELOPED WITH DELTA PROPERTIES DEVELOPMENT
 ** 2 AC OF WSID ARE WITHIN PROPOSED ROAD RIGHT-OF-WAY

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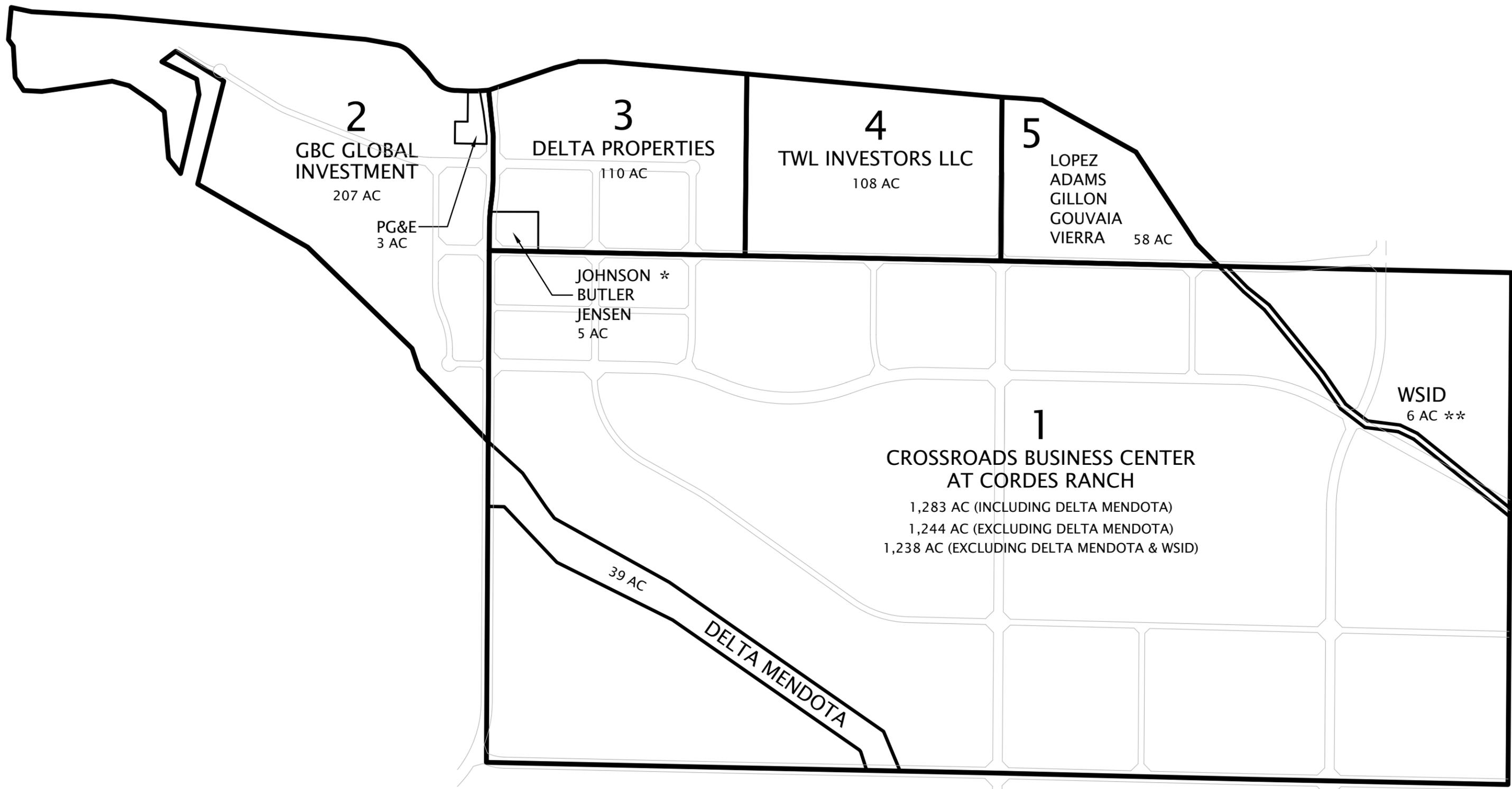
**TOTAL NET AREA
1,464 ACRES**

**CORDES RANCH
AREA CALCULATIONS EXHIBIT**

TRACY

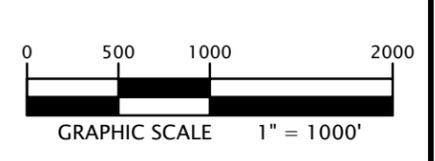
CALIFORNIA

DATE	05/01/2012
BY	M.F.B.
JOB NO.	A09500
SCALE	1" = 1000'
SHEET	TOTAL NET



* EXISTING RESIDENTIAL PROPERTIES TO BE DEVELOPED WITH DELTA PROPERTIES DEVELOPMENT (5 AC)
 ** 2 AC OF WSID ARE WITHIN PROPOSED ROAD RIGHT-OF-WAY

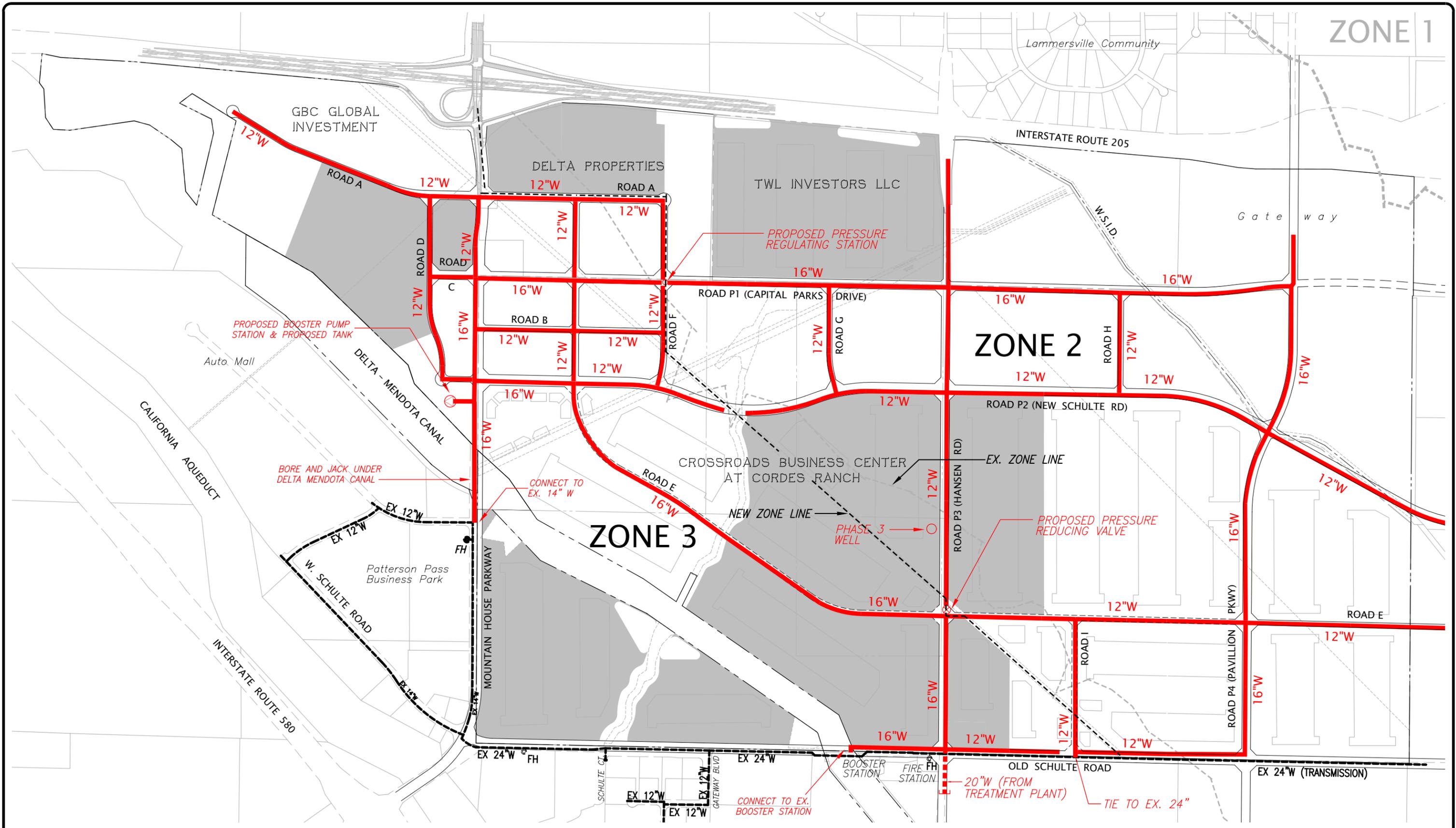
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 Livermore, California 94551 Fax (925) 245-8796



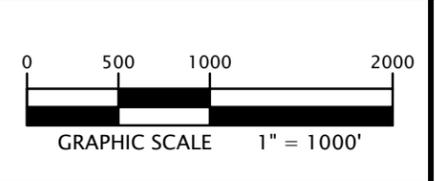
TOTAL GROSS AREA
1,774 ACRES

CORDES RANCH
AREA CALCULATIONS EXHIBIT
 TRACY CALIFORNIA

DATE	04/26/2012
BY	M.F.B.
JOB NO.	A09500
SCALE	1" = 1000'
SHEET	TOTAL GROSS



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 2850 Collier Canyon Road (925) 245-8788
 Livermore, California 94551 Fax (925) 245-8796

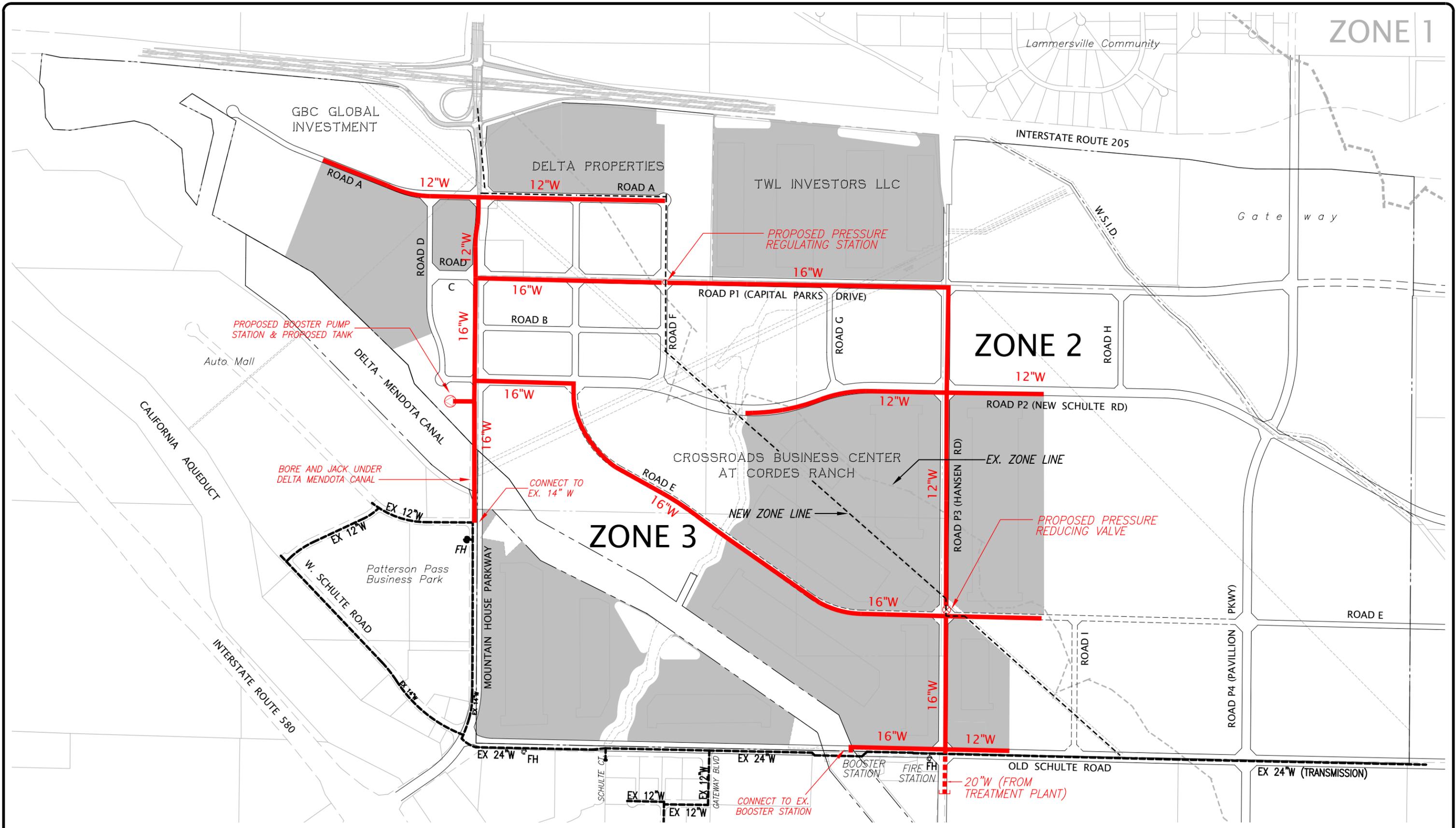


**CROSSROADS BUSINESS CENTER
 AT CORDES RANCH**

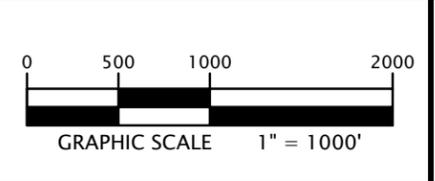
**CORDES RANCH
 BUILD-OUT - WATER**

TRACY CALIFORNIA

DATE	05/08/2012
BY	M.F.B.
JOB NO.	A09500
SCALE	1" = 1000'
SHEET	WATER-5



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 Livermore, California 94551 Fax (925) 245-8796

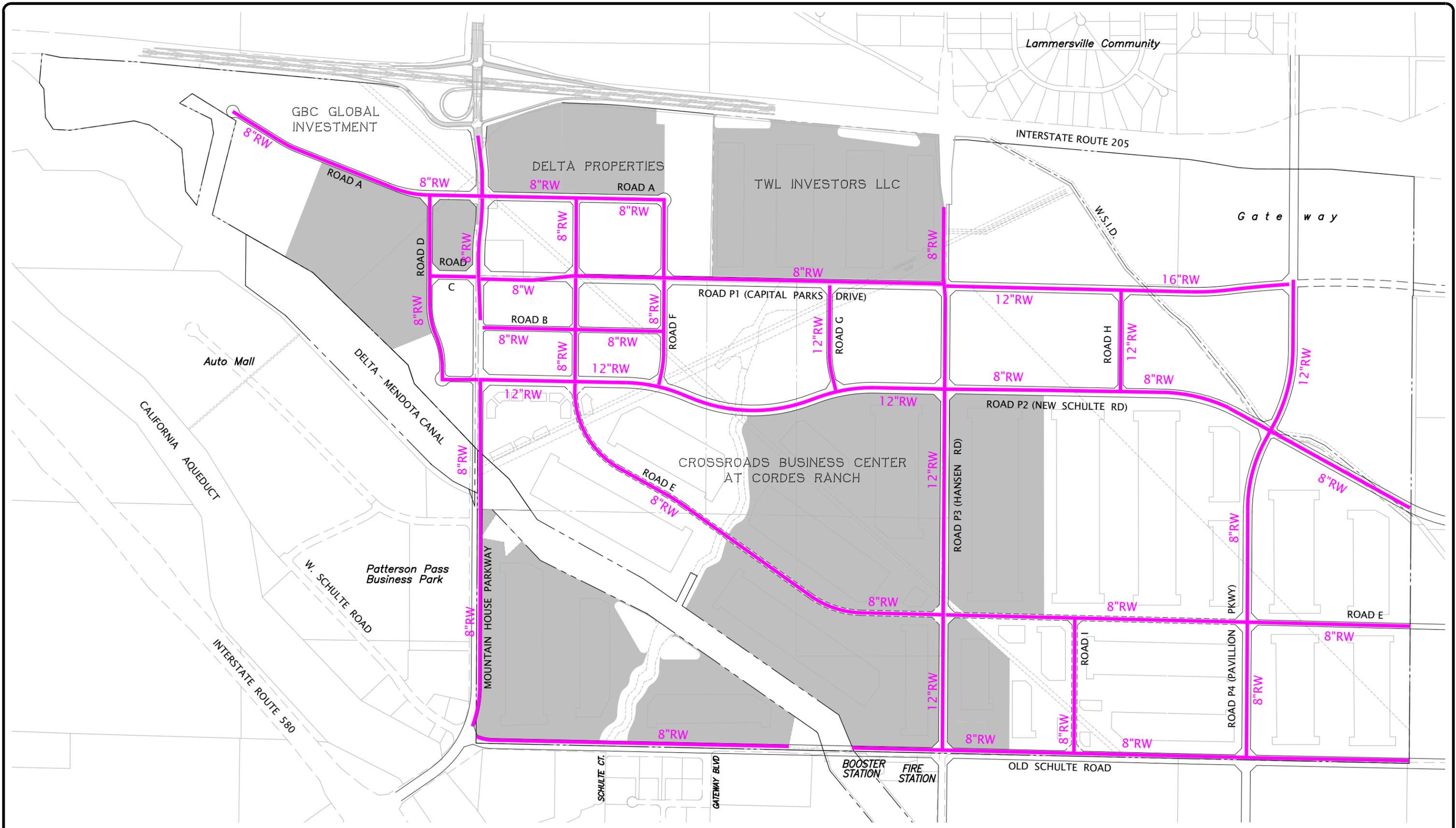


**CROSSROADS BUSINESS CENTER
 AT CORDES RANCH**

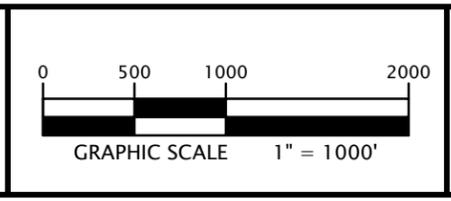
**CORDES RANCH
 PHASE 1 - WATER**

TRACY CALIFORNIA

DATE	05/08/2012
BY	M.F.B.
JOB NO.	A09500
SCALE	1" = 1000'
SHEET	WATER-1



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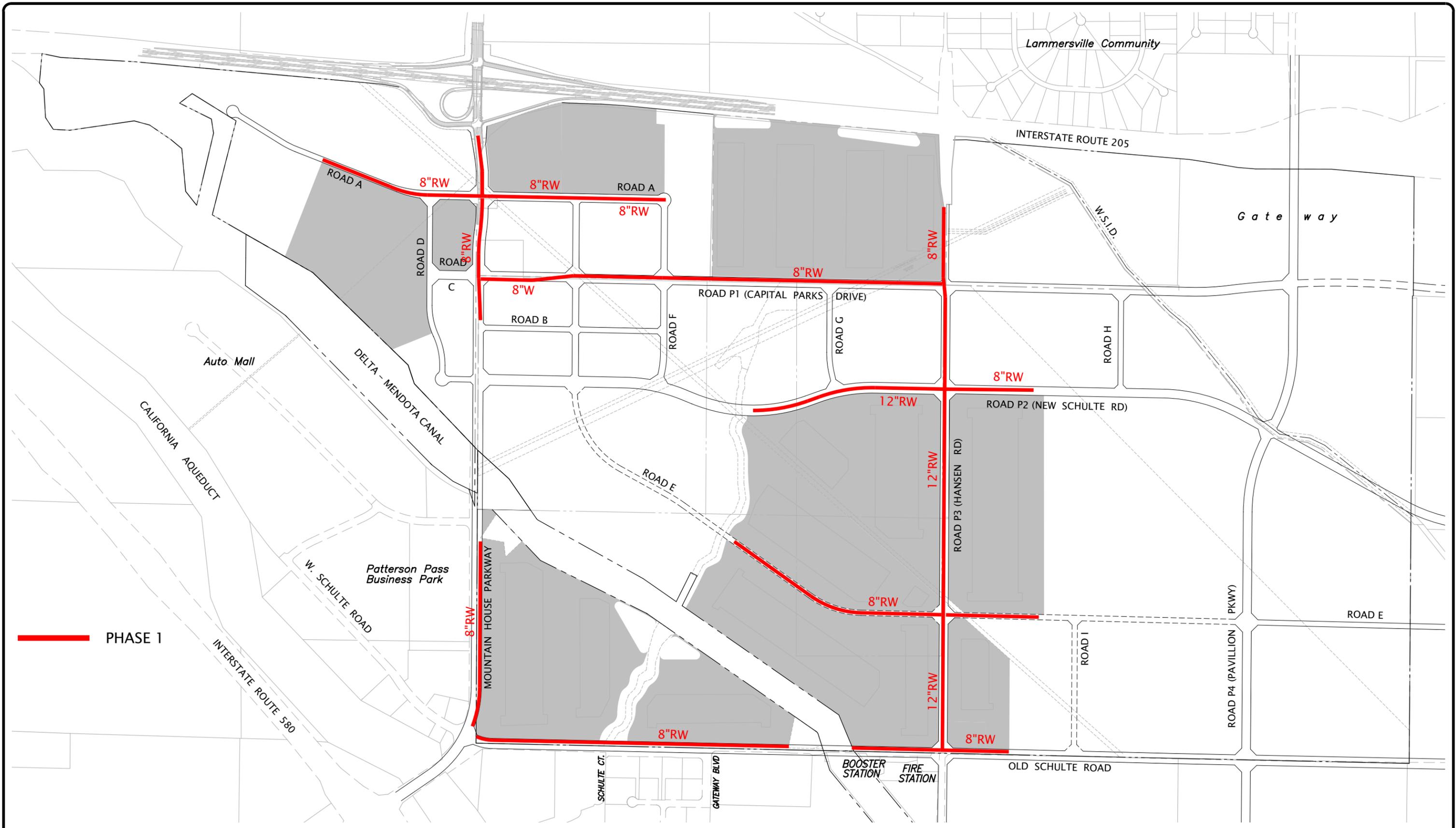


**CROSSROADS BUSINESS CENTER
 AT CORDES RANCH**

**CORDES RANCH
 BUILD-OUT - RECLAIMED WATER**

TRACY CALIFORNIA

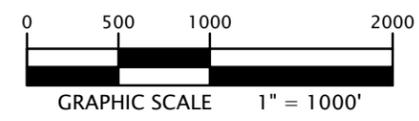
DATE	05/08/2012
BY	M.F.B.
JOB NO.	A09500
SCALE	1" = 1000'
SHEET	RW-5



PHASE 1



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**CROSSROADS BUSINESS CENTER
 AT CORDES RANCH**

**CORDES RANCH
 PHASE 1 - RECLAIMED WATER**

TRACY

CALIFORNIA

DATE	05/08/2012
BY	M.F.B.
JOB NO.	A09500
SCALE	1" = 1000'
SHEET	RW-1

ATTACHMENT B

Revised Data Received from Kier and Wright on October 16, 2012



WATER PHASES

- PHASE 1
- BO (BUILD-OUT)

ESTIMATED WATER DEMAND PER PROPERTY BY INFRASTRUCTURE PROGRAM

Property Owner	Land Use	Block Number	Phase	Block Total Net Area acres	85% of Block net acreage	Proposed Water Demand ac-ft/yr	Potable Water Demand (85% Net) ac-ft	15% of Block net acreage	Irrigation Demand ac-ft/yr	Irrigation Water Demand (15% Net) ac-ft		
CROSSROADS BUSINESS CENTER AT CORDES RANCH	GO	19	BO	11.4	9.69	1.5	14.54	1.71	4.0	6.84		
		20	BO	11.6	9.86	1.5	14.79	1.74	4.0	6.96		
		21	BO	10.7	9.10	1.5	13.64	1.61	4.0	6.42		
		22	BO	10.5	8.93	1.5	13.39	1.58	4.0	6.30		
		23	BO	12.1	10.29	1.5	15.43	1.82	4.0	7.26		
		Total		56.3	47.86		71.78	8.45		33.78		
		BPI	BPI	33	1	63.1	53.64	1.5	80.45	9.47	4.0	37.86
				34	1	48.1	40.89	1.5	61.33	7.22	4.0	28.86
				35	1	120.0	102.00	1.5	153.00	18.00	4.0	72.00
				40	1	73.3	62.31	1.5	93.46	11.00	4.0	43.98
				41	1	30.7	26.10	1.5	39.14	4.61	4.0	18.42
				42	1	75.5	64.18	1.5	96.26	11.33	4.0	45.30
				43	1	20.9	17.77	1.5	26.65	3.14	4.0	12.54
				44	BO	5.6	4.76	1.5	7.14	0.84	4.0	3.36
				25	BO	30.0	25.50	1.5	38.25	4.50	4.0	18.00
				26	BO	34.1	28.99	1.5	43.48	5.12	4.0	20.46
				27	BO	12.1	10.29	1.5	15.43	1.82	4.0	7.26
				28	BO	21.0	17.85	1.5	26.78	3.15	4.0	12.60
				29	BO	26.2	22.27	1.5	33.41	3.93	4.0	15.72
				30	BO	43.5	36.98	1.5	55.46	6.53	4.0	26.10
				31	BO	2.6	2.21	1.5	3.32	0.39	4.0	1.56
				32	BO	33.9	28.82	1.5	43.22	5.09	4.0	20.34
				36	BO	68.4	58.14	1.5	87.21	10.26	4.0	41.04
37	BO			67.4	57.29	1.5	85.94	10.11	4.0	40.44		
38	BO			14.4	12.24	1.5	18.36	2.16	4.0	8.64		
39	BO			47.8	40.63	1.5	60.95	7.17	4.0	28.68		
44	BO			11.6	9.86	1.5	14.79	1.74	4.0	6.96		
45	BO			13.1	11.14	1.5	16.70	1.97	4.0	7.86		
46	BO			1.7	1.45	1.5	2.17	0.26	4.0	1.02		
47	BO	25.9	22.02	1.5	33.02	3.89	4.0	15.54				
48	BO	34.7	29.50	1.5	44.24	5.21	4.0	20.82				
49	BO	60.4	51.34	1.5	77.01	9.06	4.0	36.24				
Total		986.0	838.10		1257.15	147.90		591.60				
OP	OP	OP1	BO	2.8	80% Irrigated	0.00	2.24	4.0	8.96			
		OP2	BO	35.3	50% Irrigated	0.00	17.65	4.0	70.60			
		OP3	BO	5.1	80% Irrigated	0.00	2.55	4.0	10.20			
		OP4	BO	2.9	80% Irrigated	0.00	1.45	4.0	5.80			
		OP5	BO	17.8	40% Irrigated	0.00	7.13	4.0	28.48			
		Total		63.90		0.00	31.01		124.04			
Detention Basins		4.90	30% Irrigated	0.00	1.47	4.0	5.88					
Street Landscaping		110.60	15% Landscape Area	0.00	16.59	4.0	66.36					
Drainage Ditch		20.60	No Irrigation	0.00	0.00	4.0	0.00					
TOTAL		1242.3	(=1242.3 + 1.2 WSD)		1,328.93		821.66					
GBC GLOBAL INVESTMENTS	GC	14	1	8.4	7.14	2.0	14.28	1.26	4.0	5.04		
		4A+AB	BO	19.9	16.92	2.0	33.83	2.99	4.0	11.94		
		Total		28.3	24.06		48.11	4.25		16.98		
		GO	13	BO	10.0	8.50	1.5	12.75	1.50	4.0	6.00	
		Total		10.0	8.50		12.75	1.50		6.00		
		BPI	BPI	11	1	50.2	42.67	1.5	64.01	7.53	4.0	30.12
				1A	BO	16.4	13.94	1.5	20.91	2.46	4.0	9.84
				1B	BO	6.6	5.61	1.5	8.42	0.99	4.0	3.96
				2A	BO	8.9	7.57	1.5	11.35	1.34	4.0	5.34
				2B	BO	1.3	1.11	1.5	1.66	0.20	4.0	0.78
3A	BO			12.3	10.46	1.5	15.68	1.85	4.0	7.38		
3B	BO			7.3	6.21	1.5	9.31	1.10	4.0	4.38		
10	BO			25.7	21.85	1.5	32.77	3.86	4.0	15.42		
12	BO			5.7	4.85	1.5	7.27	0.86	4.0	3.42		
Total				134.4	114.24		171.36	20.16		80.64		
OP	OP	OP6	BO	9.1	40% Irrigated	0.00	3.64	4.0	14.56			
		Detention Basins		6.20	30% Irrigated	0.00	1.86	4.0	7.44			
		Street Landscaping		15.40	15% Landscape Area	0.00	2.31	4.0	9.24			
		TOTAL		203.4	(=203.2 + 4.0 Water Tank + 2.7 PG&E)		232.22		134.86			
DELTA PROPERTIES	GC	5A+5B	1	17.0	14.45	2.0	28.90	2.55	4.0	10.20		
		Total		17.0	14.45		28.90	2.55		10.20		
		GO	15	BO	7.6	6.46	1.5	9.69	1.14	4.0	4.56	
Total		7.6	6.46		9.69	1.14		4.56				
BPI	BPI	6A	1	11.7	9.92	1.5	14.28	1.68	4.0	6.72		
		6A	1	13.4	11.39	1.5	17.09	2.01	4.0	8.04		
		7A	BO	4.9	4.17	1.5	6.25	0.74	4.0	2.98		
		7A	BO	6.1	5.19	1.5	7.78	0.92	4.0	3.66		
		16	BO	10.2	8.67	1.5	13.01	1.53	4.0	6.12		
		17	BO	16.9	14.37	1.5	21.55	2.54	4.0	10.14		
		18	BO	9.9	8.42	1.5	12.62	1.49	4.0	5.94		
		Total		72.6	61.71		92.57	10.89		43.56		
		Detention Basins		3.80	30% Irrigated	0.00	1.14	4.0	4.56			
		Street Landscaping		13.60	15% Landscape Area	0.00	2.04	4.0	8.16			
TOTAL		114.6			121.47		66.48					
TWI INVESTORS LLC	BPI	8A	1	24.8	21.08	1.5	31.62	3.72	4.0	14.88		
		8B	1	73.8	62.73	1.5	94.10	11.07	4.0	44.28		
		Detention Basins		4.60	30% Irrigated	0.00	1.38	4.0	5.52			
		Street Landscaping		4.90	15% Landscape Area	0.00	0.74	4.0	2.94			
		TOTAL		108.1			125.72		67.62			
OP	OP	9A+9B	BO	51.9	44.12	1.5	66.17	7.79	4.0	31.14		
		Detention Basins		2.20	30% Irrigated	0.00	0.66	4.0	2.64			
		Street Landscaping		4.30	15% Landscape Area	0.00	0.65	4.0	2.58			
		TOTAL		58.4			66.17		36.36			
GRAND TOTAL		1726.8			1,874.51		1,126.98					

PROPOSED BOOSTER PUMP STATION & PROPOSED TANK

BORE AND JACK UNDER DELTA MENDOTA CANAL

CONNECT TO EX. 14" W

CONNECT TO EX. BOOSTER STATION

FUTURE 20"W

FUTURE 16"W

TIE TO EX. 24"

No impact on Water Demand for the I-205 Overlay Zone over BPI Zoning
Proposed Water Demand is the same for GO and BPI (1.5 ac-ft/yr)

OVERALL WATER DEMAND CALCULATIONS

Land Use	Description	Master Plan Water Demand (ac-ft/ac/yr)	Master Plan Area (Gross)	Percentage of Acreage requiring Potable Water	Master Plan FAR	Master Plan Building Square Footage	Master Plan Total Water Demand	Demand per Square Footage of building ac-ft/yr/sf	Weighted Demand per Square Footage of building	Specific Plan Area (Net)	Specific Plan FAR	Specific Plan Potable Water Demand (Based on Net Acres)	Percent Reduction from Master Plan Based on Acreage	Specific Plan Building Square Footage	Potable Water Demand based on building square footage	Percent Reduction from Master Plan Based on Bldg SF
GC	General Commercial	2.0	85	85%	0.30	1,110,780	145	0.000130	0.105219	45.3	0.30	91	37.30%	591,980	77	46.71%
GO	General Office	1.5	150	85%	0.45	2,940,300	191	0.000065	0.000065	125.8	0.45	189	1.33%	2,465,932	160	16.13%
BPI	Business Park Industrial	1.5	1,488	85%	0.50	32,408,640	1,897	0.000059	0.048485	1,291.4	0.50	1,937	-2.10%	28,126,692	1,647	13.21%
			1,723			36,459,720	2,233			1,462.5		2,216	0.74%	31,184,604	1,884	15.63%

LAND USE LEGEND

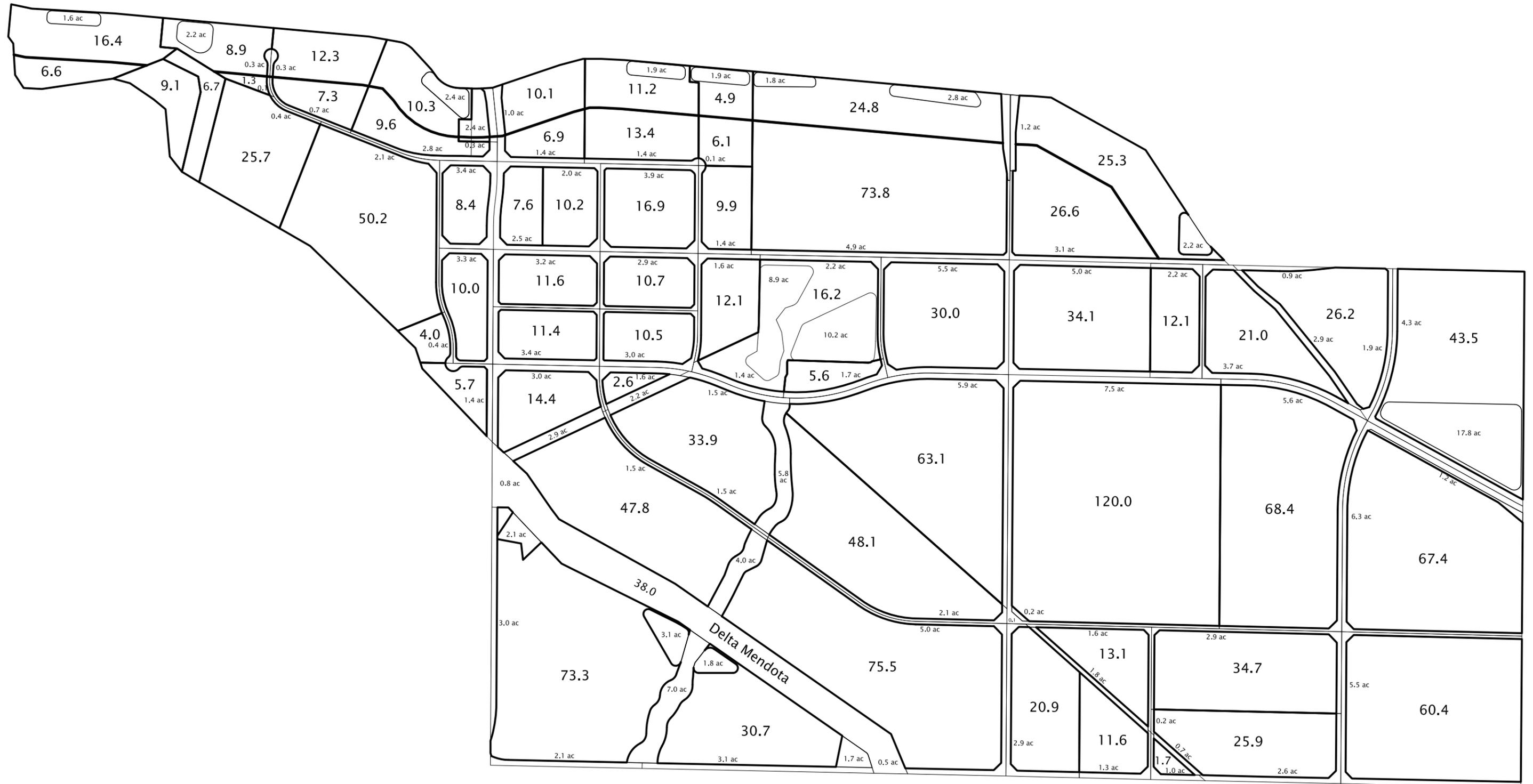
- GC GENERAL COMMERCIAL
- GO GENERAL OFFICE
- BPI BUSINESS PARK INDUSTRIAL
- OP OPEN SPACE / PARKS
- I-205 OVERLAY ZONE

WATER - INFRASTRUCTURE PROGRAM
 ESTIMATED IMPACTS BY INFRASTRUCTURE PROGRAM
 CORDES RANCH
 TRACY, CALIFORNIA

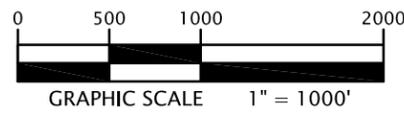
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 2540
 Livermore, California 94551
 Fax: (925) 245-8796

NO.	BY	REVISION
1		
2		
3		
4		
5		

DATE: 10/16/2012
 SCALE: 1" = 500'
 DESIGNER: M.F.B.
 JOB NO.: A09500
 SHEET: W
 OF: SHEETS



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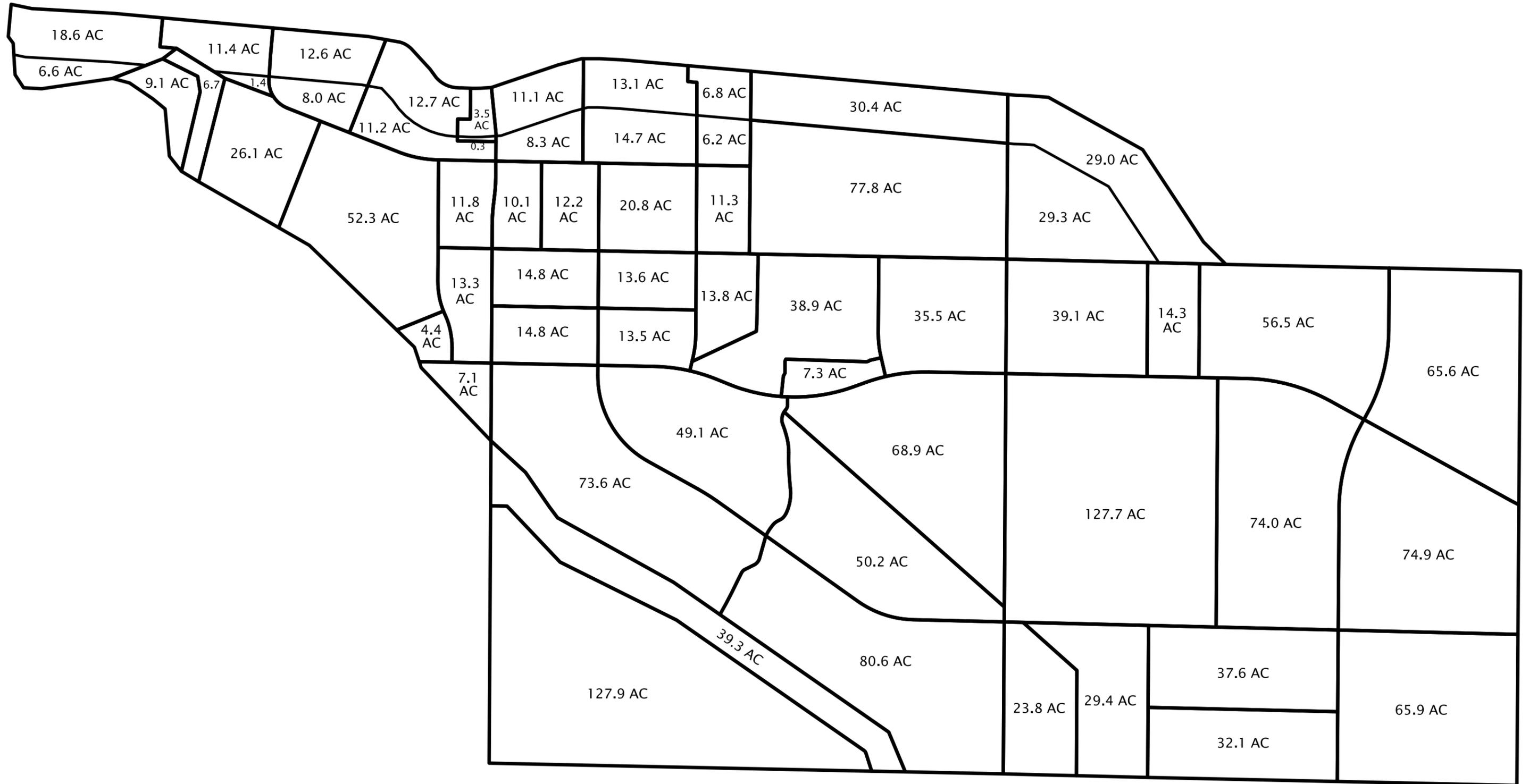
NET AREA CALCULATIONS

**CORDES RANCH
 AREA CALCULATIONS EXHIBIT**

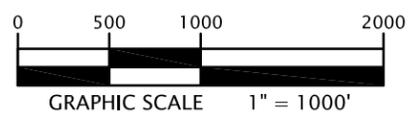
TRACY

CALIFORNIA

DATE	10/16/2012
BY	M.F.B.
JOB NO.	A09500
SCALE	1" = 1000'
SHEET	I-205 AREA



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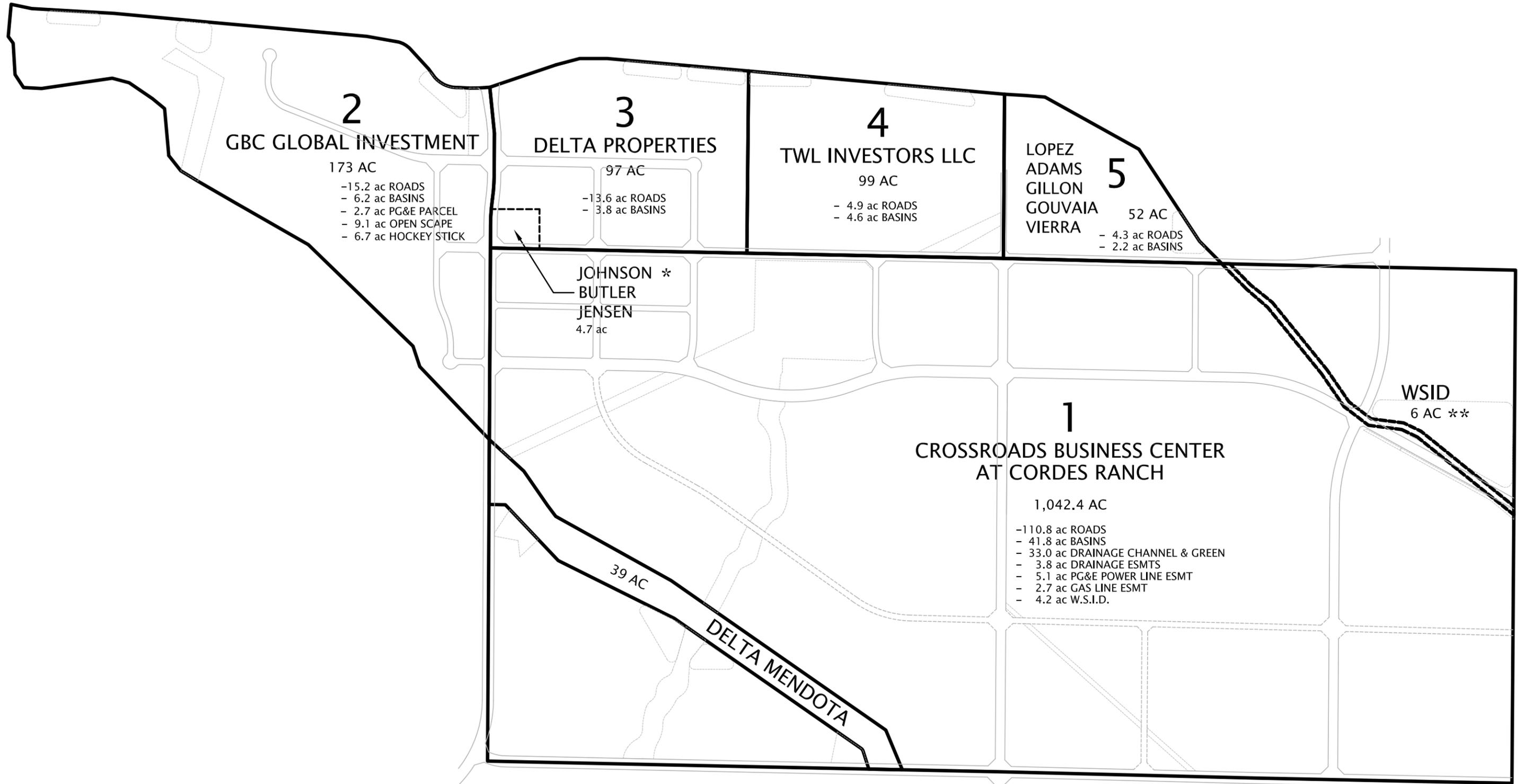
GROSS AREA CALCULATIONS

**CORDES RANCH
 AREA CALCULATIONS EXHIBIT**

TRACY

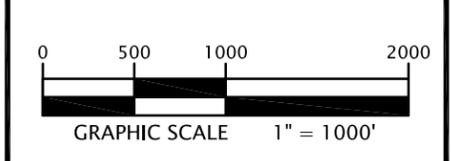
CALIFORNIA

DATE	10/16/2012
BY	M.F.B.
JOB NO.	A09500
SCALE	1" = 1000'
SHEET	I-205 AREA



* EXISTING RESIDENTIAL PROPERTIES TO BE DEVELOPED WITH DELTA PROPERTIES DEVELOPMENT
 ** 2 AC OF WSID ARE WITHIN PROPOSED ROAD RIGHT-OF-WAY

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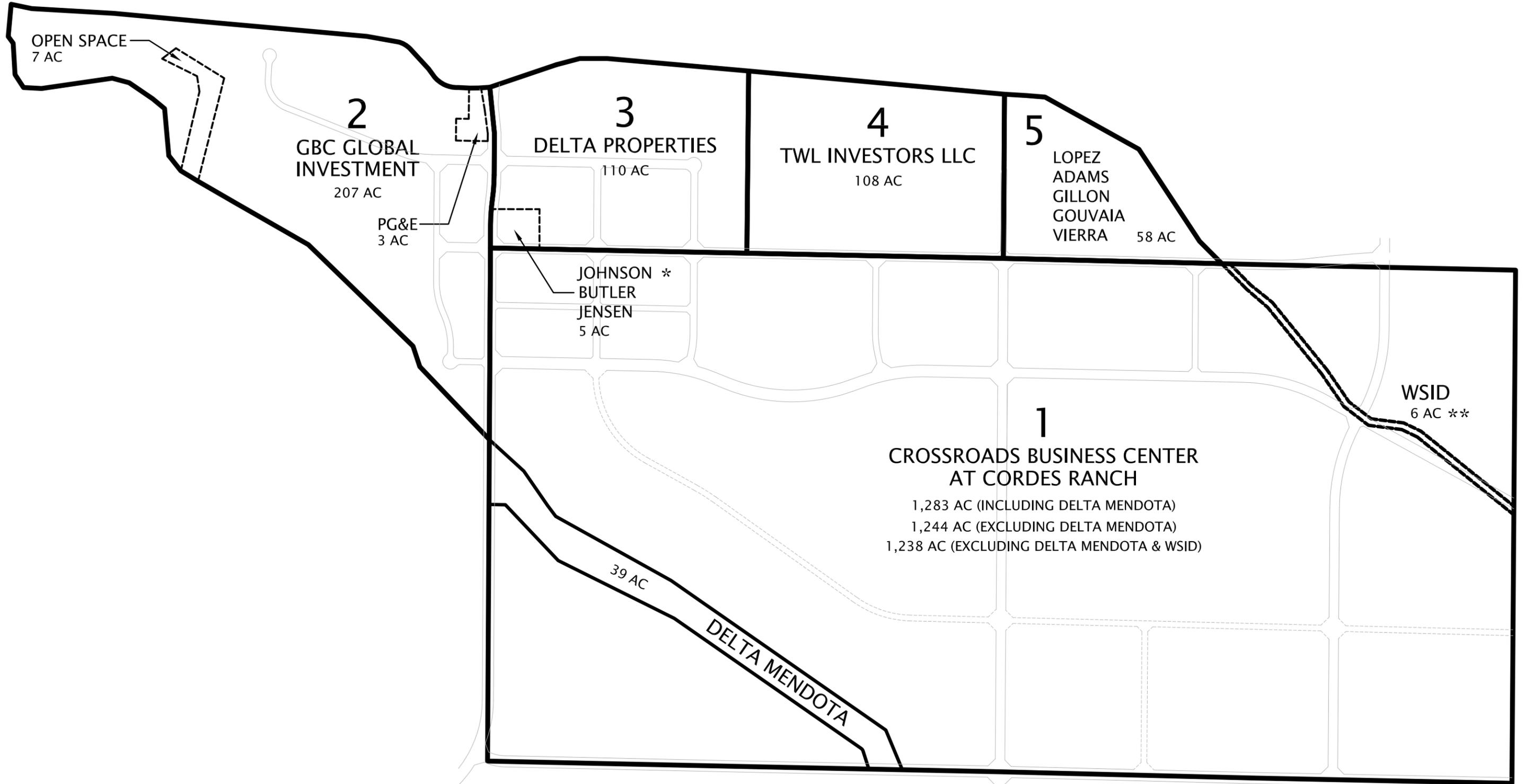


**TOTAL NET AREA
 1,464 ACRES**

**CORDES RANCH
 AREA CALCULATIONS EXHIBIT**

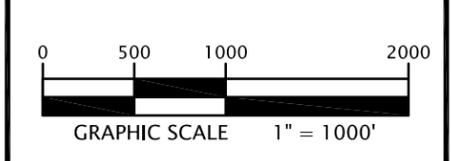
TRACY CALIFORNIA

DATE	10/16/2012
BY	M.F.B.
JOB NO.	A09500
SCALE	1" = 1000'
SHEET	TOTAL NET



* EXISTING RESIDENTIAL PROPERTIES TO BE DEVELOPED WITH DELTA PROPERTIES DEVELOPMENT (5 AC)
 ** 2 AC OF WSID ARE WITHIN PROPOSED ROAD RIGHT-OF-WAY

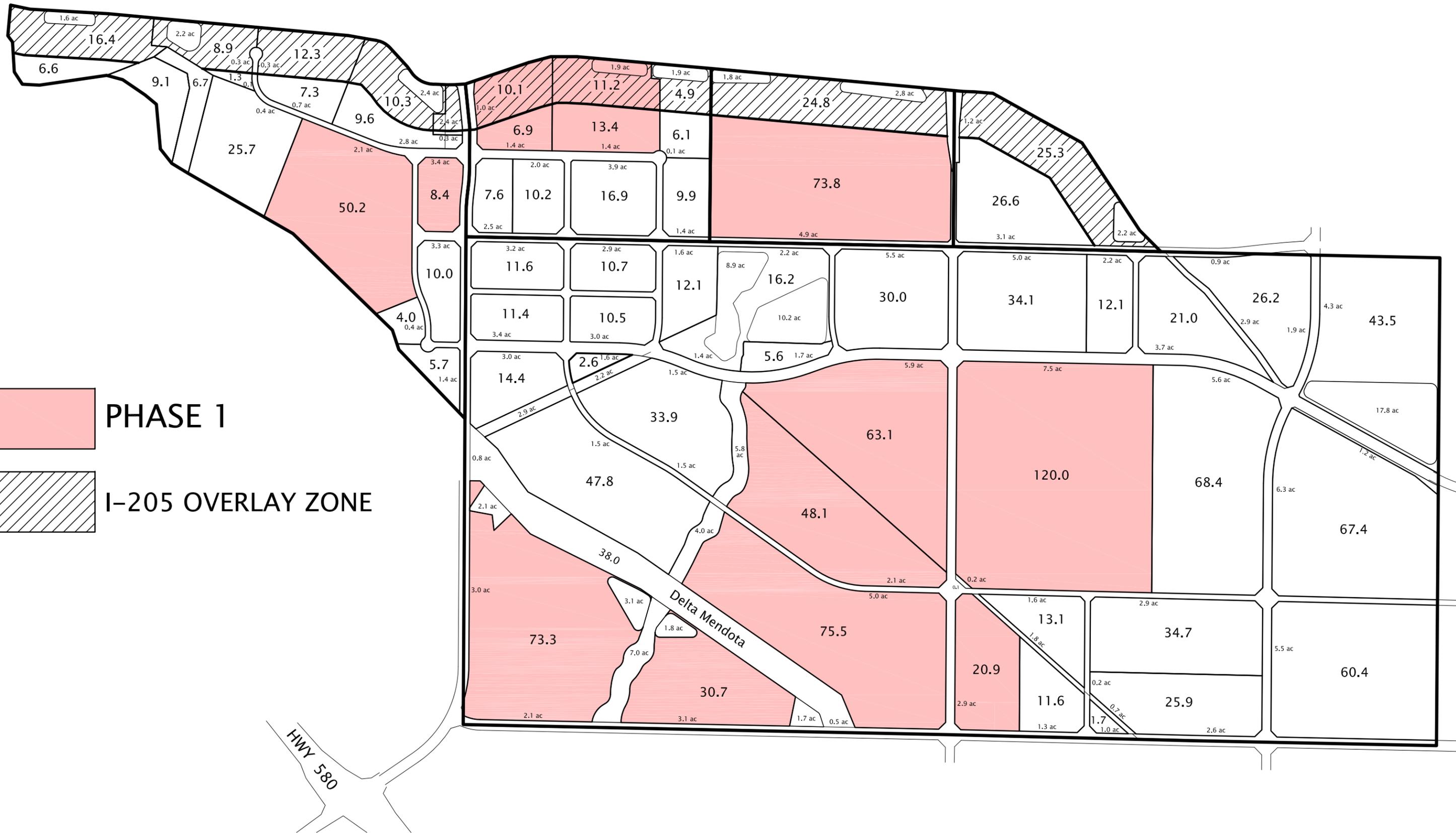
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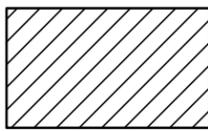
TOTAL GROSS AREA
1,774 ACRES

CORDES RANCH
AREA CALCULATIONS EXHIBIT
 TRACY CALIFORNIA

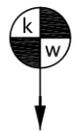
DATE	10/16/2012
BY	M.F.B.
JOB NO.	A09500
SCALE	1" = 1000'
SHEET	TOTAL GROSS



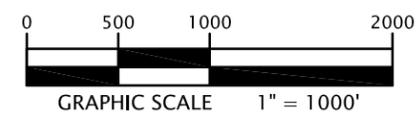
PHASE 1



I-205 OVERLAY ZONE



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NET PHASING EXHIBIT

TRACY

**CORDES RANCH
 NET - PHASING EXHIBIT**

CALIFORNIA

DATE	10/16/2012
BY	M.F.B.
JOB NO.	A09500
SCALE	1" = 1000'
SHEET	PHASING - NET

ATTACHMENT C

Detailed Water Demand Calculations by Parcel

Table C-1. Summary of Projected Potable and Recycled Water Demands by Block Number - Buildout ^(a)

Land Use Designation	Property Owner	Phase	Block Number	Gross Area, acres ^(b)	Potable Water Acres ^(c)	Unit Water Demand Factor, af/ac/yr ^(d)	Potable Water Demand, af/yr	Percent Irrigated	Recycled Water Acres ^(e)	Unit Water Demand Factor, af/ac/yr ^(d)	Recycled Water Demand, af/yr
Office	Crossroads Business Center	BO	19	14.8	12.58	1.5	18.87	15%	2.22	4.0	8.88
Office	Crossroads Business Center	BO	20	14.8	12.58	1.5	18.87	15%	2.22	4.0	8.88
Office	Crossroads Business Center	BO	21	13.6	11.56	1.5	17.34	15%	2.04	4.0	8.16
Office	Crossroads Business Center	BO	22	13.5	11.48	1.5	17.21	15%	2.03	4.0	8.10
Office	Crossroads Business Center	BO	23	13.7	11.65	1.5	17.47	15%	2.06	4.0	8.22
Industrial	Crossroads Business Center	1	33	69.0	58.65	1.5	87.98	15%	10.35	4.0	41.40
Industrial	Crossroads Business Center	1	34	50.2	42.67	1.5	64.01	15%	7.53	4.0	30.12
Industrial	Crossroads Business Center	1	35	65.8	55.93	1.5	83.90	15%	9.87	4.0	39.48
Industrial	Crossroads Business Center	1	40	78.4	66.64	1.5	99.96	15%	11.76	4.0	47.04
Industrial	Crossroads Business Center	1	41	33.8	28.73	1.5	43.10	15%	5.07	4.0	20.28
Industrial	Crossroads Business Center	1	42	80.6	68.51	1.5	102.77	15%	12.09	4.0	48.36
Industrial	Crossroads Business Center	1	43	23.8	20.23	1.5	30.35	15%	3.57	4.0	14.28
Industrial	Crossroads Business Center	BO	24	7.3	6.21	1.5	9.31	15%	1.10	4.0	4.38
Industrial	Crossroads Business Center	BO	25	35.5	30.18	1.5	45.26	15%	5.33	4.0	21.30
Industrial	Crossroads Business Center	BO	26	39.1	33.24	1.5	49.85	15%	5.87	4.0	23.46
Industrial	Crossroads Business Center	BO	27	14.3	12.16	1.5	18.23	15%	2.15	4.0	8.58
Industrial	Crossroads Business Center	BO	28	24.7	21.00	1.5	31.49	15%	3.71	4.0	14.82
Industrial	Crossroads Business Center	BO	29	29.0	24.65	1.5	36.98	15%	4.35	4.0	17.40
Industrial	Crossroads Business Center	BO	30	47.8	40.63	1.5	60.95	15%	7.17	4.0	28.68
Industrial	Crossroads Business Center	BO	31	4.2	3.57	1.5	5.36	15%	0.63	4.0	2.52
Industrial	Crossroads Business Center	BO	32	36.9	31.37	1.5	47.05	15%	5.54	4.0	22.14
Industrial	Crossroads Business Center	BO	36	135.7	115.35	1.5	173.02	15%	20.36	4.0	81.42
Industrial	Crossroads Business Center	BO	37	74.9	63.67	1.5	95.50	15%	11.24	4.0	44.94
Industrial	Crossroads Business Center	BO	38	17.4	14.79	1.5	22.19	15%	2.61	4.0	10.44
Industrial	Crossroads Business Center	BO	39	49.3	41.91	1.5	62.86	15%	7.40	4.0	29.58
Industrial	Crossroads Business Center	BO	44	12.9	10.97	1.5	16.45	15%	1.94	4.0	7.74
Industrial	Crossroads Business Center	BO	45	14.7	12.50	1.5	18.74	15%	2.21	4.0	8.82
Industrial	Crossroads Business Center	BO	46	2.7	2.30	1.5	3.44	15%	0.41	4.0	1.62
Industrial	Crossroads Business Center	BO	47	28.7	24.40	1.5	36.59	15%	4.31	4.0	17.22
Industrial	Crossroads Business Center	BO	48	37.6	31.96	1.5	47.94	15%	5.64	4.0	22.56
Industrial	Crossroads Business Center	BO	49	65.9	56.02	1.5	84.02	15%	9.89	4.0	39.54
Open Space	Crossroads Business Center	BO	OP1	2.5				80%	2.00	4.0	8.00
Open Space	Crossroads Business Center	BO	OP2	38.9				50%	19.45	4.0	77.80
Open Space	Crossroads Business Center	BO	OP3	5.1				80%	4.08	4.0	16.32
Open Space	Crossroads Business Center	BO	OP4	2.9				80%	2.32	4.0	9.28
Open Space	Crossroads Business Center	BO	OP5	17.8				40%	7.12	4.0	28.48
Detention Basin	Crossroads Business Center	1	--	4.9				30%	1.47	4.0	5.88
Drainage Ditch	Crossroads Business Center	BO	--	20.6				0%	-	4.0	-
Commercial	GBC Global Investment	1	14	11.8	10.03	2.0	20.06	15%	1.77	4.0	7.08
Commercial	GBC Global Investment	BO	4	22.7	19.30	2.0	38.59	15%	3.41	4.0	13.62
Office	GBC Global Investment	BO	13	13.3	11.31	1.5	16.96	15%	2.00	4.0	7.98
Industrial	GBC Global Investment	1	11	52.3	44.46	1.5	66.68	15%	7.85	4.0	31.38
Industrial	GBC Global Investment	BO	1	23.0	19.55	1.5	29.33	15%	3.45	4.0	13.80
Industrial	GBC Global Investment	BO	2	11.0	9.35	1.5	14.03	15%	1.65	4.0	6.60
Industrial	GBC Global Investment	BO	3	19.9	16.92	1.5	25.37	15%	2.99	4.0	11.94
Industrial	GBC Global Investment	BO	10	26.4	22.44	1.5	33.66	15%	3.96	4.0	15.84
Industrial	GBC Global Investment	BO	12	7.1	6.04	1.5	9.05	15%	1.07	4.0	4.26
Open Space	GBC Global Investment	BO	OP6	9.1				40%	3.64	4.0	14.56
Detention Basin	GBC Global Investment	BO	--	6.2				30%	1.86	4.0	7.44
Commercial	Delta Properties	1	5	19.4	16.49	2.0	32.98	15%	2.91	4.0	11.64
Office	Delta Properties	BO	15	10.1	8.59	1.5	12.88	15%	1.52	4.0	6.06
Industrial	Delta Properties	1	6	26.0	22.10	1.5	33.15	15%	3.90	4.0	15.60
Industrial	Delta Properties	BO	7	11.0	9.35	1.5	14.03	15%	1.65	4.0	6.60
Industrial	Delta Properties	BO	16	12.2	10.37	1.5	15.56	15%	1.83	4.0	7.32
Industrial	Delta Properties	BO	17	20.8	17.68	1.5	26.52	15%	3.12	4.0	12.48
Industrial	Delta Properties	BO	18	11.3	9.61	1.5	14.41	15%	1.70	4.0	6.78
Detention Basin	Delta Properties	1	--	1.9				30%	0.57	4.0	2.28
Detention Basin	Delta Properties	BO	--	1.9				30%	0.57	4.0	2.28
Industrial	TWL Investors LLC	1	8	103.5	87.98	1.5	131.96	15%	15.53	4.0	62.10
Detention Basin	TWL Investors LLC	1	--	4.6				30%	1.38	4.0	5.52
Office	Lopez/Adams/Gillon/Gouvaia/Vierra	BO	9	56.2	47.77	1.5	71.66	15%	8.43	4.0	33.72
Detention Basin	Lopez/Adams/Gillon/Gouvaia/Vierra	BO	--	2.2				30%	0.66	4.0	2.64
Total				1,727.2	1,367.31		2,074		286.41		1,146
Total with UAFW ^(f)							2,242				1,239

^(a) Based on data provided by Kier and Wright on May 9, 2012.

^(b) Includes proposed acreage from Streets.

^(c) Equal to 85 percent of gross area from Commercial, Office and Industrial land uses.

^(d) Adopted unit water demand factors established in the Citywide Water System Master Plan, prepared by West Yost Associates and dated December 2012.

^(e) Calculated based on portion of "percent irrigated" from the gross area.

^(f) Unaccounted-for water (UAFW) equal to 7.5 percent.

Table C-2. Summary of Projected Potable and Recycled Water Demands by Block Number - Phase 1 ^(a)

Land Use Designation	Property Owner	Phase	Block Number	Gross Area, acres ^(b)	Potable Water Acres ^(c)	Unit Water Demand Factor, af/ac/yr ^(d)	Potable Water Demand, af/yr	Percent Irrigated	Recycled Water Acres ^(e)	Unit Water Demand Factor, af/ac/yr ^(d)	Recycled Water Demand, af/yr
Industrial	Crossroads Business Center	1	33	69.0	58.65	1.5	87.98	15%	10.35	4.0	41.40
Industrial	Crossroads Business Center	1	34	50.2	42.67	1.5	64.01	15%	7.53	4.0	30.12
Industrial	Crossroads Business Center	1	35	65.8	55.93	1.5	83.90	15%	9.87	4.0	39.48
Industrial	Crossroads Business Center	1	40	78.4	66.64	1.5	99.96	15%	11.76	4.0	47.04
Industrial	Crossroads Business Center	1	41	33.8	28.73	1.5	43.10	15%	5.07	4.0	20.28
Industrial	Crossroads Business Center	1	42	80.6	68.51	1.5	102.77	15%	12.09	4.0	48.36
Industrial	Crossroads Business Center	1	43	23.8	20.23	1.5	30.35	15%	3.57	4.0	14.28
Detention Basin	Crossroads Business Center	1	--	4.9				30%	1.47	4.0	5.88
Commercial	GBC Global Investment	1	14	11.8	10.03	2.0	20.06	15%	1.77	4.0	7.08
Industrial	GBC Global Investment	1	11	52.3	44.46	1.5	66.68	15%	7.85	4.0	31.38
Commercial	Delta Properties	1	5	19.4	16.49	2.0	32.98	15%	2.91	4.0	11.64
Industrial	Delta Properties	1	6	26.0	22.10	1.5	33.15	15%	3.90	4.0	15.60
Detention Basin	Delta Properties	1	--	1.9				30%	0.57	4.0	2.28
Industrial	TWL Investors LLC	1	8	103.5	87.98	1.5	131.96	15%	15.53	4.0	62.10
Detention Basin	TWL Investors LLC	1	--	4.6				30%	1.38	4.0	5.52
Total				626.0	522.41		797		95.61		382
Total with UAFW ^(f)							862				413

^(a) Based on data provided by Kier and Wright on May 9, 2012.

^(b) Includes proposed acreage from Streets.

^(c) Equal to 85 percent of gross area from Commercial, Office and Industrial land uses.

^(d) Adopted unit water demand factors established in the Citywide Water System Master Plan, prepared by West Yost Associates and dated December 2012.

^(e) Calculated based on portion of "percent irrigated" from the gross area.

^(f) Unaccounted-for water (UAFW) equal to 7.5 percent.

APPENDIX M
UTILITIES

M.2: Water Supply Assessment

CORDES RANCH SPECIFIC PLAN EIR
APPENDIX M: UTILITIES



CITY OF TRACY

WATER SUPPLY ASSESSMENT FOR THE CORDES RANCH SPECIFIC PLAN FINAL REPORT

Prepared for

City of Tracy

January 2013



404-02-11-90

WEST YOST ASSOCIATES

consulting engineers

CITY OF TRACY

CORDES RANCH SPECIFIC PLAN

SB 610 WATER SUPPLY ASSESSMENT

Prepared for

City of Tracy

January 2013

WEST YOST

ASSOCIATES
Consulting Engineers

404-02-11-90



Elizabeth Drayer



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EXECUTIVE SUMMARY

The Cordes Ranch Specific Plan Project (Proposed Project) is one of the City of Tracy's (City) future service areas as defined in the City's General Plan Sphere of Influence (SOI). The Proposed Project consists of 1,774 acres on the western side of the City's SOI, just outside of the City's current City limits. The Proposed Project meets the definition of a "Project" per California Water Code sections 10910 through 10915, as established by SB 610 in 2001, thus requiring the preparation of this Water Supply Assessment (WSA).

The Proposed Project is generally bounded on the north by Interstate 205, on the south by West Schulte Road, on the west by Mountain House Parkway and the Delta Mendota Canal, and on the east by the current City limits. Per the Cordes Ranch Specific Plan, currently being prepared by others, land uses for the Proposed Project consist of a mix of General Commercial (GC), General Office (GO), Business Park Industrial (BPI) and Park/Open Space (P/OS) land uses. No residential land uses are proposed within the Proposed Project.

Development of the Proposed Project will occur over approximately 30 years with buildout by approximately the year 2040. The Cordes Ranch Specific Plan includes approximately 592,000 square feet of General Commercial development, 2.5 million square feet of General Office development, and 28 million square feet of Business Park Industrial development.

As explained more fully herein, the Cordes Ranch Specific Plan and the Citywide Water System Master Plan (based on the City's 2010 Urban Water Management Plan) used slightly different land use assumptions and acreages as they relate to the Proposed Project site. Accordingly, the water demand estimates are slightly different as well. For purposes of ensuring a conservative analysis, this WSA uses the higher of the estimates as follows: the potable water demand for the Proposed Project has been estimated to be 2,233 af/yr (based on the Citywide Water System Master Plan and the City's 2010 Urban Water Management Plan) and the recycled water demand has been estimated to be 1,127 af/yr (based on the Cordes Ranch Specific Plan). The water demands for the Proposed Project will be served using the City's existing and future portfolio of water supplies. Proponents of the Proposed Project will provide their proportionate share of required funding to the City for the acquisition and delivery of treated potable and recycled water supplies to the Proposed Project area.

Pursuant to Water Code section 10910(c)(4), and based on the technical analyses described in this Water Supply Assessment, this Water Supply Assessment demonstrates that the City's existing and additional planned future water supplies are sufficient to meet the City's existing and projected future water demands, including those future water demands associated with the Proposed Project, to the year 2035 under all hydrologic conditions (including Normal Years, Single Dry Years, and Multiple Dry Years).



1.0 INTRODUCTION

1.1 Legal Requirement for Water Supply Assessment

California Senate Bill 610 (SB 610) was approved by Governor Gray Davis on October 9, 2001 and made effective on January 1, 2002. SB 610 amended California state law to improve the link between information on water supply availability and certain land use decisions made by cities and counties. Specifically, certain sections of the California Water Code were amended to require coordination between land use lead agencies and public water purveyors. The purpose of this coordination is to ensure that prudent water supply planning has been conducted, and that planned water supplies are adequate to meet existing demands, anticipated demands from approved projects and tentative maps, and the demands of proposed projects.

The amended Water Code sections 10910 through 10915 (inclusive) require land use lead agencies to:

- Identify any public water purveyor that may supply water for a proposed development project; and
- Request from the identified purveyor a Water Supply Assessment (WSA).

The purpose of the WSA is to demonstrate the sufficiency of the purveyor's water supplies to satisfy the water demands of the proposed project, while still meeting the water purveyor's existing and planned future uses. Water Code sections 10910 through 10915 delineate the specific information that must be included in the WSA.

1.2 Need For and Purpose of Water Supply Assessment

The purpose of this WSA is to perform the evaluation required by Water Code sections 10910 through 10915 in connection with the City of Tracy's (City) proposed Cordes Ranch Specific Plan Project (Proposed Project). It is not to reserve water, or to function as a "will serve" letter or any other form of commitment to supply water (see Water Code section 10914). The provision of water service will continue to be undertaken in a manner consistent with applicable City policies and procedures, consistent with existing law.

1.3 Water Supply Assessment Preparation, Format and Organization

This WSA for the Proposed Project has been prepared by West Yost Associates (West Yost), as requested by the City, the identified water purveyor for the Proposed Project.

The format of this WSA is intended to follow Water Code sections 10910 through 10915 to clearly delineate compliance with the specific requirements for a WSA. The WSA includes the following sections:

- Section 1: Introduction
- Section 2: Description of Proposed Project
- Section 3: Required Determinations



- Section 4: City of Tracy Water Service Area
- Section 5: City of Tracy Water Demands
- Section 6: City of Tracy Water Supplies
- Section 7: Determination of Water Supply Sufficiency
- Section 8: Water Supply Assessment Approval Process
- Section 9: References

Relevant citations of Water Code sections 10910 through 10915 are included throughout this WSA in *italics* to demonstrate compliance with the specific requirements of SB 610.

1.4 Acronyms and Abbreviations Used in this Water Supply Assessment

The following acronyms and abbreviations have been used throughout this WSA.

af	acre-feet
af/ac/yr	acre-feet per acre per year
af/yr	acre-feet per year
ASR	Aquifer Storage and Recovery
BBID	Byron Bethany Irrigation District
BCID	Banta Carbona Irrigation District
BiOps	Biological Opinions
Bookman	Bookman-Edmonston (a.k.a. GEI Consultants and Navigator)
bgs	below ground surface
BMO	Basin Management Objectives
CEQA	California Environmental Quality Act
City	City of Tracy
CVP	Central Valley Project
DMC	Delta-Mendota Canal
DPH	California Department of Public Health
DWR	California Department of Water Resources
EIR	Environmental Impact Report
ET _o	Evapotranspiration
FONSI	Finding of No Significant Impact
GMO	Growth Management Ordinance
GMP	Groundwater Management Plan
gpm	gallons per minute
JJWTP	John Jones Water Treatment Plant
K/J/C	Kennedy/Jenks/Chilton
LAFCo	Local Area Formation Commission
M&I	Municipal and industrial
mgd	million gallons per day

City of Tracy: Cordes Ranch Specific Plan

SB 610 Water Supply Assessment



mg/L	milligrams per liter
msl	mean sea level
NEPA	National Environmental Policy Act
Proposed Project	City of Tracy Cordes Ranch Project
PVWD	Plain View Water District
RGA	Residential Growth Allotment
RWQCB	Regional Water Quality Control Board
SB 610	California State Senate Bill 610 of 2001
SCWSP	South County Water Supply Project
Semitropic	Semitropic Water Storage District Groundwater Storage Bank
Sf	square feet
SOI	Sphere of Influence
SSJID	South San Joaquin Irrigation District
TBD	To be determined
TDS	Total Dissolved Solids
USBR	United States Bureau of Reclamation
UWMP	Urban Water Management Plan
WSA	Water Supply Assessment
WSID	West Side Irrigation District
West Yost	West Yost Associates
WWTP	Wastewater Treatment Plant



2.0 DESCRIPTION OF PROPOSED PROJECT

2.1 Proposed Project Location

The Proposed Project is located in the City of Tracy’s (City) General Plan Sphere of Influence (SOI), and consists of 1,774 acres on the western side of the City’s SOI, just outside the City’s existing City limits. The Proposed Project is generally bounded on the north by Interstate 205, on the south by West Schulte Road, on the west by Mountain House Parkway and the Delta Mendota Canal, and on the east by the current City limits. Figure 1 illustrates the location of the Proposed Project in relation to the current City Limits and the City’s General Plan SOI.

The Proposed Project area is currently owned by a number of different property owners and portions of the Proposed Project overlie the Byron Bethany Irrigation District (BBID) and the West Side Irrigation District (WSID) service areas (see Figure 2).

2.2 Proposed Land Uses and Acreages

Per the Cordes Ranch Specific Plan, currently being prepared by others, land uses for the Proposed Project consist of a mix of General Commercial (GC), General Office (GO), Business Park Industrial (BPI) and Park/Open Space (P/OS) land uses. No residential land uses are proposed within the Proposed Project. Proposed land uses for the Proposed Project based on the Cordes Ranch Specific Plan are summarized in Table 1.

Table 1. Proposed Land Uses for the Cordes Ranch Specific Plan	
Proposed Land Use and Developed Square Footage^(a)	Cordes Ranch Specific Plan Acres^(a)
General Commercial (GC) (approximately 592,000 square feet (sf))	45.3
General Office (GO) (approximately 2.5 million sf)	125.8
Business Park Industrial (BPI) (approximately 28 million sf)	1,291.4
Park/Open Space (P/OS)	73.0
Street Landscaping	148.8
Other Miscellaneous Land Uses within Proposed Project area:	
Detention Basins	21.7
Drainage Ditch	20.6
Total Area (Net)^(b)	1,726.6

^(a) Based on Cordes Ranch Specific Plan land use data provided by Kier & Wright on May 1, 2012.
^(b) Total net area does not include portions of the Delta Mendota Canal and the WSID Canal and a PG&E parcel that are located within the Proposed Project area. Gross acreage including these areas equals 1,774 acres.



The land uses designated in the Specific Plan for the Proposed Project are somewhat different than those assumed for the Proposed Project site in the City's Citywide Water System Master Plan¹, which was based on the projected future water demands included in the City's 2010 Urban Water Management Plan (2010 UWMP)². However, the total area for the Proposed Project is essentially the same under both plans (1,723 gross acres in the Citywide Water System Master Plan versus 1,774 gross acres based on the Cordes Ranch Specific Plan; the difference in acreage reflects the inclusion of the rights of way for the Delta Mendota Canal and WSID Canal) and the land uses, while slightly different, are consistent with the Citywide Water System Master Plan.

Development of the Proposed Project is anticipated to occur over approximately 30 years and will likely occur in several development phases. Phase 1 of the Proposed Project is anticipated to be developed in the next 10 to 12 years. Buildout of the Proposed Project is anticipated to occur around the year 2040.

It should be noted that this WSA evaluates the availability and reliability of the City's water supplies to serve buildout of the Proposed Project; no evaluation of individual development phases is provided.

2.3 Projected Water Demand

2.3.1 Water Use Factors and Assumptions

The projected water demand for the Proposed Project site was calculated as part of the development of the City's Citywide Water System Master Plan. The City adopted unit water use factors for use in projecting potable and recycled water demand based on the proposed future land uses within the City's General Plan SOI³.

Potable water use factors for various land uses were established based on historical metered water use data for various land use types, taking into consideration reduced water use as a result of new building codes, improved water use efficiency and water conservation measures. The potable water use factor for Commercial land uses was established to be 2.0 acre-feet per acre per year (af/ac/yr), and the potable water use factor for Office and Industrial land uses was established to be 1.5 af/ac/yr. Both of these factors were applied to the gross acres to estimate the total potable water demand.

¹ For the Citywide Water System Master Plan (December 2012) the following land uses were assumed for the Proposed Project site: Industrial: 1,488 acres; Office: 150 acres; Commercial (Retail): 85 acres; Total Gross Acres: 1,723 acres.

² City of Tracy 2010 Urban Water Management Plan, adopted by the City of Tracy in May 2011, prepared by Erler & Kalinowski, Inc., May 2011.

³ As established in the City of Tracy Citywide Water System Master Plan, prepared by West Yost Associates, Final Report dated December 2012, and included in the City's 2010 UWMP.



Exterior recycled water use was assumed to be 4.0 af/ac/yr for irrigated landscape areas, including roadway medians and other landscape areas. Since irrigated landscape areas were not specifically defined for each parcel within the Proposed Project site, it was assumed that 15 percent of the gross acreage for each land use designation within the Proposed Project site would be landscaped and irrigated with recycled water, and would not receive potable water.

Table 2 summarizes the City’s adopted unit water use factors for the land use designations applicable to the Proposed Project site.

Table 2. City of Tracy Adopted Water Use Factors	
Land Use Designation	Water Use Factor, af/ac/yr^(a,b)
Commercial	2.0
Business Park	1.5
Industrial	1.5
Landscape Irrigation (using Recycled Water)	4.0
<small>(a) As established in the Citywide Water System Master Plan, prepared by West Yost Associates, Final Report dated December 2012, and included in the City’s 2010 UWMP. (b) Water use factor to be applied based on gross acres. This WSA assumes that 85 percent of the gross acres of the Proposed Project would use potable water and the remaining 15 percent would use recycled water to serve the Proposed Project’s non-potable water demand.</small>	

2.3.2 Water Demand Calculations

As explained above, the land uses and acreages assumed in the Cordes Ranch Specific Plan and the Citywide Water System Master Plan (based on the 2010 UWMP) are slightly different. The total projected water demand for the Proposed Project site at buildout, as calculated as part of the development of the Citywide Water System Master Plan (based on the City’s 2010 UWMP), is presented in Table 3, and is compared to the total projected water demand as calculated in the Cordes Ranch Specific Plan. As shown in Table 3, the Citywide Water System Master Plan (based on the 2010 UMWP) estimates the projected potable water demand for the Proposed Project site to be 2,233 acre-feet per year (af/yr) and the projected recycled water demand to be 1,034 af/yr. This is compared to the Cordes Ranch Specific Plan estimates, which calculate the projected potable water demand for the Proposed Project site to be 1,874 af/yr and the projected recycled water demand to be 1,127 af/yr.



**Table 3. Projected Water Demand for Proposed Project Site
(as calculated in the Citywide Water System Master Plan)^(a)**

Land Use Designation	Gross Acres ^(b)	Water Use Factor, af/ac/yr	Potable Water		Recycled Water	
			Acres ^(c)	Potable Water Demand, af/yr	Acres ^(d)	Recycled Water Demand, af/yr
Commercial	85	2.0	72	145		
Business Park	150	1.5	128	191		
Manufacturing/ Distribution (Industrial)	1,488	1.5	1,265	1,897		
Landscape Irrigation		4.0			259	1,034
Total Demand as calculated in the Citywide Water System Master Plan ^(e)				2,233		1,034
Total Demand as calculated in the Cordes Ranch Specific Plan ^(f)				1,874		1,127

(a) For buildout of the Proposed Project site, as established in the Citywide Water System Master Plan, prepared by West Yost Associates, Final Report dated December 2012.
 (b) Gross acres for the Proposed Project site as assumed in the Citywide Water System Master Plan.
 (c) Potable water use acres based on 85% of gross acres for each land use designation.
 (d) Recycled water use acres based on 15% of total gross acres for the Proposed Project.
 (e) Water demands calculated for the Citywide Water System Master Plan were also used in the City's 2010 UWMP.
 (f) Cordes Ranch Specific Plan demand as calculated by Kier & Wright, May 1, 2012.

2.3.3 Comparison with Water Demand Calculations of the Cordes Ranch Specific Plan and the Citywide Water System Master Plan (based on the City's 2010 Urban Water Management Plan)

As shown in Table 3 above, the potable water demand calculated for the Proposed Project in the Cordes Ranch Specific Plan (1,874 af/yr) is lower than the 2,233 af/yr demand calculated in the Citywide Water System Master Plan (based on the City's 2010 UWMP).

However, also as shown in Table 3 above, the recycled water demand calculated for the Proposed Project in the Cordes Ranch Specific Plan (1,127 af/yr) is higher than the 1,034 af/yr demand calculated in the Citywide Water System Master Plan (based on the City's 2010 UWMP). However, this increase in recycled water demand (increase of 93 af/yr) is considered to be nominal. Recycled water facilities recommended in the Citywide Water System Master Plan have been sized to accommodate additional recycled water demands beyond those included in the City's 2010 UWMP and adequate recycled water supplies are anticipated to be available in the future to accommodate the additional recycled water demand associated with the Proposed Project (see Section 6.4.1).

For purposes of ensuring a conservative analysis, this WSA uses the higher of the estimates, as follows: the potable water demand for the Proposed Project has been estimated to be 2,233 af/yr (based on the Citywide Water System Master Plan/2010 UWMP) and the recycled water demand has been estimated to be 1,127 af/yr (based on the Cordes Ranch Specific Plan).



2.4 Projected Water Supply

The water demands for the Proposed Project will be served using the City's existing and future portfolio of water supplies. Proponents of the Proposed Project will provide their proportionate share of required funding to the City for the acquisition and delivery of treated potable and recycled water supplies to the Proposed Project area.



3.0 REQUIRED DETERMINATIONS

3.1 Does SB 610 apply to the Proposed Project?

10910 (a) Any city or county that determines that a project, as defined in Section 10912, is subject to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) under Section 21080 of the Public Resources Code shall comply with this part.

10912 (a) "Project" means any of the following:

- (1) A proposed residential development of more than 500 dwelling units.*
- (2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.*
- (3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.*
- (4) A proposed hotel or motel, or both, having more than 500 rooms.*
- (5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.*
- (6) A mixed-use project that includes one or more of the projects specified in this subdivision.*
- (7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project.*

Based on the following facts, SB 610 does apply to the Proposed Project.

- The City of Tracy has determined that the Proposed Project is subject to the California Environmental Quality Act (CEQA) and that an Environmental Impact Report (EIR) is required.
- The Proposed Project, with its proposed 592,000 square feet of General Commercial development, 2.5 million square feet of General Office development, and 28 million square feet of Business Park Industrial development, meets the definition of a "Project" as specified in Water Code section 10912(a) paragraph (3) as defined for commercial office buildings and paragraph (5) as defined for industrial, manufacturing, processing plants, or industrial parks.

Also, the Proposed Project has not been the subject of a previously adopted WSA and has not been included in an adopted WSA for a larger project. Therefore, according to Water Code section 10910(a), a WSA is required for the Proposed Project.



3.2 Who is the identified public water system?

10910(b) The city or county, at the time that it determines whether an environmental impact report, a negative declaration, or a mitigated negative declaration is required for any project subject to the California Environmental Quality Act pursuant to Section 21080.1 of the Public Resources Code, shall identify any water system that is, or may become as a result of supplying water to the project identified pursuant to this subdivision, a public water system, as defined by Section 10912, that may supply water for the project

10912 (c) "Public water system" means a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections...

As shown on Figure 1, the Proposed Project is located within the City's General Plan SOI. The Proposed Project is located outside the current City limits; however, it is anticipated that proponents for the Proposed Project area will seek to have the Proposed Project site annexed to the City in 2013.

The City's water system service area includes all areas within the City limits and the General Plan SOI area as they are annexed into the City. As of December 2010, the City had 23,449 water service connections. Therefore, the City is the identified public water system for the Proposed Project.

3.3 Does the City have an adopted Urban Water Management Plan (UWMP) and does the UWMP include the projected water demand for the Proposed Project?

10910(c)(1) The city or county, at the time it makes the determination required under Section 21080.1 of the Public Resources Code, shall request each public water system identified pursuant to subdivision (b) to determine whether the projected water demand associated with a proposed project was included as part of the most recently adopted urban water management plan adopted pursuant to Part 2.6 (commencing with Section 10610).

The City's most recently adopted UWMP (the City's 2010 UWMP) was adopted by the City Council in May 2011 and is incorporated by reference into this WSA⁴. The City's 2010 UWMP included existing and projected water demands for existing and projected future land uses to be developed within the City's General Plan SOI through buildout (estimated to occur in 2040). The water demand projections in the City's 2010 UWMP included existing City water demands (based on 2007 demands⁵), future water demands for developments with approved water supplies (e.g., those projects which have already been approved by the City but have not yet begun construction or have not yet built out), and future water demands for future service areas (including water demands for the Proposed Project site).

⁴ City of Tracy 2010 Urban Water Management Plan, prepared by Erler & Kalinowski, Inc., May 2011.

⁵ The 2007 water demands were used because they may be more representative of actual existing demands than the currently observed lower demands due to recent drought conditions and economic conditions.



Potable water demands for the Proposed Project site (2,233 af/yr) and recycled water demands for the Proposed Project site (1,034 af/yr) were included in the estimated water demands for development of the project site in the City's 2010 UWMP water demand estimates for future service areas⁶.

Recycled water demands calculated for the Proposed Project shown in Table 3 (1,127 af/yr) are higher than the 1,034 af/yr demand included for the Proposed Project site in the City's 2010 UWMP; however, this increase in recycled water demand is considered to be nominal. Recycled water facilities recommended in the Citywide Water System Master Plan have been sized to accommodate additional recycled water demands beyond those included in the City's 2010 UWMP and adequate recycled water supplies are anticipated to be available in the future to accommodate the additional recycled water demand associated with the Proposed Project.

⁶ See City of Tracy 2010 Urban Water Management Plan, Table 7. The Proposed Project is included in the Future Service (Planning) Areas as Cordes Ranch (UR 6).



4.0 CITY OF TRACY WATER SERVICE AREA

4.1 Water Service Area

The City is located in San Joaquin County, California, about 70 miles south of Sacramento and 60 miles east of San Francisco. The existing incorporated area of the City encompasses approximately 22 square miles. The SOI is the area outside of the City limits that the City expects to annex and urbanize in the future. It is the expected physical limit of the City based on the most current information. During the City's recent General Plan update process and in response to Local Agency Formation Commission (LAFCo) policies established in 2007, revisions to the City's SOI were made to more accurately reflect locations where the City may grow in the future and locations where no urban growth is expected. The recently adopted revised SOI encompasses an area of approximately 42 square miles and is 20 square miles larger than the current City limits.

The City's water service area is coterminous with the City limits. As future developments within the SOI, but outside the City Limits, are approved, they will be annexed into the City and served by the City water system. Figure 1 illustrates the current City limits and the SOI. The Proposed Project is located outside the City's existing City limits, however, it is anticipated that proponents for the Proposed Project area will seek to have the Proposed Project site annexed to the City in 2013 prior to development.

4.2 Population

The State of California Department of Finance population estimate for the City as of January 1, 2012 was 83,900 people⁷. Population growth has been rapid in the City, with the City growing by 142 percent between 1988 and 2003, a compounded rate of approximately 6 percent per year. The City's population growth, at least in the near-term, is not anticipated to be as rapid as it has been historically. The City adopted a residential Growth Management Ordinance (GMO) in 1987, which was amended in 2000 by Measure A. The objective of the GMO and Measure A was to achieve a steady and orderly growth rate that allows for the adequate provision of services and community facilities, and includes a balance of housing opportunities. Under the GMO, builders must obtain a Residential Growth Allotment (RGA) in order to secure a residential building permit. The GMO Guidelines were adopted by resolution of the City Council.

The City's projected population increase for 2010 through 2025 is based on the City's General Plan, and for 2025 through 2035 is based on assumed buildout of the City's SOI by 2040 (as assumed in the Citywide Water System Master Plan and the City's 2010 UWMP). However, due to the on-going economic conditions in the State and in the Tracy area, it is currently unclear if actual development will occur within this assumed time frame and if populations will increase as assumed. It is more likely that development within the General Plan SOI will occur over a longer period of time with buildout occurring sometime after the year 2040.

⁷ State of California, Department of Finance, E-1 Population Estimates for Cities, Counties, and the State with Annual Percent Change—January 1, 2011 and 2012, Sacramento, California, May 2012.



Table 4 shows the City’s projected population in five-year increments to the year 2035.

	Year	Population
Historical Population ^(a)	1990	32,827
	1995	44,923
	2000	56,447
	2005	78,546
	2010	82,484
Projected Population ^(a)	2015	89,503
	2020	99,440
	2025	109,377
	2030	117,744
	2035	126,110

^(a) Source: City of Tracy 2010 UWMP, Table 2 Historical and Projected Service Area Population, May 2011; includes 377 residents served by the City in the Larch Clover County Services District.

4.3 Climate

Spring, summer, and fall are generally hot in the City, with temperatures often climbing to over 100 degrees Fahrenheit on summer days. The City’s winters are usually mild, although the dense “Tule fog” can last for weeks. Mean winter temperatures range from 40 to 50 degrees Fahrenheit, with an average of 16 days per year having frost. Most precipitation occurs during the winter. The average annual precipitation from the years 1949 to 2012 is recorded by the Western Regional Climate Center as 9.86 inches.

Table 5 summarizes the City’s average temperature and rainfall data.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
Average E _{t0} , inches ^(a)	0.95	1.75	3.48	5.37	6.88	7.79	8.29	7.24	5.33	3.63	1.76	1.01	53.48
Average Max Temperature, °F ^(b)	54.1	61.0	66.7	73.1	80.7	88.0	93.6	92.1	87.9	78.5	64.9	54.7	74.6
Average Min Temperature, °F ^(b)	36.7	40.0	42.6	45.5	50.4	55.2	57.1	55.7	53.9	48.7	42.1	36.6	47.0
Average Rainfall, inches ^(b)	1.90	1.72	1.37	0.84	0.45	0.09	0.03	0.09	0.22	0.52	1.10	1.55	9.86

^(a) Source: CIMIS Website: www.cimis.water.ca.gov, Station 167 Tracy, Monthly Average Evapotranspiration (E_{t0}) Report, downloaded November 2012.
^(b) Source: Western Regional Climate Center website: www.wrcc.dri.edu, Tracy Carbona Weather Station (No. 048999), Period of Record 10/1/1949 to 7/31/2012.



5.0 CITY OF TRACY WATER DEMANDS

10910(c)(2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).

As described previously, the water demands for the Proposed Project are included in the City’s 2010 UWMP. Therefore, the descriptions provided below for the City’s water demands have been taken, for the most part, from the City’s 2010 UWMP, which was adopted by City Council in May 2011. Supplemental information from other available reports has been included to provide the most recent data available and to meet the specific requirements of SB 610.

5.1 Historical and Existing Water Demand

The City’s water demand has increased by over 100 percent in the last twenty years. In 1986, the City’s water demand was 8,104 af/yr and, in 2011, the City’s water demand was 16,868 af/yr. Figure 3 shows the City’s historical annual water demand (based on water production) from 1986 through 2011. Table 6 shows the City’s water demand (based on water production) for 2006 through 2011.

	2006	2007	2008	2009	2010	2011
Total UWMP Water Demand, af/yr ^(a)	18,000	19,176	17,118	16,693	16,603	16,868

^(a) Source: Table 6 Current and Historical Potable Water Demand by Water Demand Sector, City of Tracy 2010 Urban Water Management Plan, May 2011. 2011 data from City water production data.

As shown in Table 6 and Figure 3, the City’s 2009 to 2011 potable water demands (based on water production) were about 2,300 to 2,500 af/yr lower than 2007 demands. This reduction in potable water demand is partially due to additional water conservation measures which were implemented during the recent drought and relatively wet conditions in 2010 and 2011. The reduction in 2010 and 2011 demands may also be due to a large number of unoccupied homes and closed businesses due to recent poor economic conditions.

5.2 Future Water Demand

The City’s water demand is anticipated to continue to increase as approved projects build out and new developments are approved and constructed within the City’s water service area. However, as discussed above, the rate of growth within the City service area has slowed as a result of the Growth Management Ordinance and the current economic downturn. Hence, water demands are not anticipated to increase as rapidly as they have in past years.



The City’s projected future water demand was determined based on potable water use factors for various land uses based on historical metered water use data for various land use types, and taking into consideration reduced future water use as a result of new building codes, improved water use efficiency and water conservation measures. Table 7 shows the projected potable and recycled water demand through 2035 as presented in the City’s 2010 UWMP.

	2015	2020	2025	2030	2035
Total Potable Water Demand ^(a)	23,000	25,000	28,300	31,000	33,600
Total Recycled Water Demand ^(b,c)	1,200	2,410	3,620	4,830	6,040

^(a) Table 8 Projected Potable Water Demand by Water Demand Sector, City of Tracy 2010 Urban Water Management Plan, May 2011. Includes potable water demands for the Proposed Project.
^(b) Table 17 Projected Timing of Recycled Water Demand, City of Tracy 2010 Urban Water Management Plan, May 2011.
^(c) As discussed in Section 2.3.3, the recycled water demand calculated for the Proposed Project shown in Table 3 (1,127 af/yr) is higher than the 1,034 af/yr demand included for the Proposed Project in the City’s 2010 UWMP. However, recycled water facilities recommended in the Citywide Water System Master Plan have been sized to accommodate additional recycled water demands beyond those included in the City’s 2010 UWMP and adequate recycled water supplies are anticipated to be available in the future to accommodate the additional recycled water demand associated with the Proposed Project.

Figure 4 illustrates the City’s projected water demand through 2035 as presented in the City’s 2010 UWMP. As noted previously, buildout of the City’s General Plan SOI has been assumed to occur in the year 2040. However, due to the on-going poor economic conditions in the State and in the Tracy area, it is currently unclear if actual development will occur within this assumed time frame and if populations will also increase as assumed. It is likely that development within the General Plan SOI will occur over a longer period of time with buildout occurring sometime after the year 2040.

Table 8 summarizes the City’s projected water demand based on existing users, on-going development projects with approved water supply and future service areas. The Proposed Project is considered to be one of the City’s future service areas.



Table 8. Projected Future Potable Water Demand by Development Stage

	Existing Water Demand, af/yr	Future Water Demand, af/yr ^(a)	Total Future Water Demand, af/yr ^(b)
2007 Existing Users ^(c)	17,820 ^(c)		19,176 ^(d)
Development Projects with Approved Water Supply		3,839 ^(e)	4,150 ^(f)
<i>Residential Areas Specific Plan</i>		45	
<i>Industrial Areas Specific Plan</i>		574	
<i>I-205 Corridor Specific Plan</i>		271	
<i>Plan "C"</i>		74	
<i>Northeast Industrial</i>		702	
<i>South MacArthur</i>		59	
<i>Downtown Specific Plan</i>		185	
<i>Infill</i>		806	
<i>Ellis Specific Plan</i>		1,076	
<i>Gateway Phase 1</i>		-- ^(g)	
<i>Holly Sugar Sports Park</i>		47	
Subtotal	17,820	3,839	23,326
Cordes Ranch Specific Plan Project (Proposed Project)		2,233^(g)	2,414^(g)
Subtotal (with Proposed Project)			25,740
Other Future Service Areas		9,772 ^(g)	10,564
<i>Westside Residential (URs 5, 7, 8, 9)</i>		1,169	
<i>UR 1</i>		1,237	
<i>South Linne (UR 11)</i>		153	
<i>Tracy Hills</i>		2,985	
<i>Gateway PUD (excluding Phase 1)</i>		-- ^(h)	
<i>Bright (UR 4)</i>		411	
<i>Catellus (UR 3)</i>		839	
<i>Filios (UR 2)</i>		70	
<i>I-205 Expansion</i>		292	
<i>Westside Industrial</i>		618	
<i>Eastside Industrial</i>		469	
<i>Larch Clover County Services District</i>		847	
<i>Chrisman Road</i>		150	
<i>Rocha</i>		248	
<i>Berg/Byron</i>		164	
<i>Kagehiro</i>		120	
Total Potable Water Demand at Buildout	17,820	15,844	36,304
<p>^(a) Does not include unaccounted for water. ^(b) Represents projected water demands at buildout. Includes 7.5% unaccounted for water (based on City's historical unaccounted for water). ^(c) Based on actual water sales data for 2007 (not including unaccounted for water) (reference: City of Tracy Water Inventory Report, February 5, 2008). As noted above, 2007 water demands are used for the evaluation in this WSA, as 2007 water demands more closely represent normal year conditions. ^(d) Based on actual water production in 2007 (includes actual water sales and calculated unaccounted for water in 2007 of 7.1%). ^(e) See Development Projects with Approved Water Supply in Table 7 Projected Potable Water Demand Itemized by Future Development, City of Tracy 2010 UWMP, May 2011. ^(f) Includes 7.5% unaccounted for water (3,839 af/yr divided by 92.5%). ^(g) See Future Service (Planning) Areas in Table 7 Projected Potable Water Demand Itemized by Future Development Area, City of Tracy 2010 UWMP, May 2011. Includes the Cordes Ranch Project with a projected potable water demand at buildout of 2,233 af/yr (with 7.5% unaccounted for water equals 2,414 af/yr (2,233 af/yr divided by 92.5%)). ^(h) Based on Gateway's participation in the Water Exchange Program.</p>			



As shown in Table 8, based on existing users and the development projects with approved water supply, the projected potable water demand is 23,326 af/yr; this projected potable water demand increases to 25,740 af/yr if the Proposed Project is included (includes unaccounted-for water). With the inclusion of other future projects to be developed within the SOI, the projected potable water demand increases to 36,304 af/yr at buildout (assumed to occur in about 2040).

Figure 5 shows the City’s projected future potable water demand by development stage based on the currently available water demand estimates.

5.3 Dry Year Water Demand

The City currently has an extensive water conservation program in place, as described in Chapter 6 of the City’s 2010 UWMP. The projected future water demand presented in Table 8 includes continued implementation of the City’s existing water conservation program, and is based on future normal hydrologic years. In single dry or multiple dry years, the projected future water demand presented in Table 8 does not assume any additional water conservation beyond that assumed in normal years. This is because, as water demands begin to increase in the spring due to the warmer weather conditions, due to the lack of rainfall during the previous winter/spring period, and the subsequent public notification of dry conditions, some water conservation will occur, and summer water demands will likely decrease, essentially balancing out the demands within that year. This is a conservative assumption as additional water conservation may indeed occur in subsequent years as a result of the City’s implementation of additional water conservation measures as outlined in the City’s Water Shortage Contingency Plan in response to multiple dry years⁸. However, this additional water conservation is not relied upon for purposes of this WSA.

Table 9 presents the projected future dry year potable water demand.

Hydrologic Condition	Demand Reduction	2015	2020	2025	2030	2035
Single Dry Year	0%	23,000	25,000	28,300	31,000	33,600
Multiple Dry Years ^(b)	0%	23,000	25,000	28,300	31,000	33,600

^(a) See Table 8 Projected Potable Water Demand by Water Demand Sector of the City’s 2010 UWMP. Includes unaccounted for water of 7.5% based on the City’s historical unaccounted for water.
^(b) Represents demands for each year of the 3-year multiple dry year period.

⁸ The City’s Water Shortage Contingency Plan is included as an appendix to the City’s 2010 Urban Water Management Plan.



6.0 CITY OF TRACY WATER SUPPLIES

10910(c)(2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f) and (g).

10910(d)(1) The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts

10910(d)(2) An identification of existing water supply entitlements, water rights, or water service contracts held by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall be demonstrated by providing information related to all of the following:

- (A) Written contracts or other proof of entitlement to an identified water supply.*
- (B) Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system.*
- (C) Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.*
- (D) Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.*

10910(e) If no water has been received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts, the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall also include in its water supply assessment pursuant to subdivision (c), an identification of the other public water systems or water service contract-holders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has identified as a source of water supply within its water supply assessments..

It is anticipated that the Proposed Project, if approved by the City, would be served from City's existing and future portfolio of water supplies. The water supply for the Proposed Project will have the same water supply reliability and high water quality as the water supply available to all of the City's other existing and future water customers. Proponents of the Proposed Project will provide their proportionate share of required funding to the City for the acquisition and delivery of treated potable and recycled water supplies to the Proposed Project area.

The water demands for the Proposed Project (together with existing water demands and planned future uses) are included in the City's 2010 UWMP. Therefore, the descriptions provided below for the City's water supplies have been taken, for the most part, from the City's 2010 UWMP, which was adopted in May 2011. Supplemental information from other available reports has also been included to provide the most recent data available and to meet the specific requirements of SB 610.

The City's existing water supplies and some of the additional planned future water supplies have undergone previous environmental review. These reviews are referenced in the following descriptions and are incorporated by reference as applicable.



6.1 Existing Potable Water Supplies

The City currently receives water supplies from three sources:

- Surface water from the Delta-Mendota Canal (Central Valley Project),
- Surface water from the Stanislaus River via the South County Water Supply Project (delivered by the South San Joaquin Irrigation District (SSJID)), and
- Groundwater pumped from nine groundwater wells located within the City.

Each of these existing supplies is described below and documentation regarding these supplies (e.g., contracts and agreements) is provided in Appendix A of this WSA. Summary tables listing the City's existing and additional water supplies, and historical and anticipated future quantities, are provided following the discussion of the City's additional water supplies. Figure 6 shows the City's historical use of these water supplies.

The City's Capital Improvement Plan (CIP) for the five-year period from Fiscal Year (FY) 2012/13 through FY 2016/17 for water system improvements to serve existing and future customers is provided in Appendix B.

6.1.1 Central Valley Project Water via the Delta-Mendota Canal

6.1.1.1 *M&I-Reliability Supplies from the CVP*

In 1974, the City entered into a 40-year contract with the USBR for an annual entitlement of 10,000 af/yr of surface water from the CVP via the Delta-Mendota Canal (DMC). The contract is due to expire in 2014. The City has agreed with the USBR to renew this contract prior to 2014. Contract negotiations are on-going and it is the intent to renew the contract prior to 2014. In the event the contract is not renewed prior to expiration, the City and the USBR will enter into an interim renewal contract to provide water service until the long-term renewal contract is executed. A copy of the City's contract with the USBR is included in Appendix A.

In the CVP system, in accordance with the USBR's Central Valley Project Municipal and Industrial (M&I) Draft Water Shortage Policy dated September 11, 2001, an M&I contractor is eligible for 75 percent M&I reliability applied to the contractor's historical use, with certain adjustments. This M&I reliability may be reduced when the allocation of Ag-reliability water is reduced below 25 percent of contract entitlement. Historical allocations for the M&I-reliability CVP water for the last several years are summarized below:

- | | |
|--------------------------------|--------------------------------|
| • 2005: 100 percent allocation | • 2009: 60 percent allocation |
| • 2006: 100 percent allocation | • 2010: 75 percent allocation |
| • 2007: 75 percent allocation | • 2011: 100 percent allocation |
| • 2008: 75 percent allocation | • 2012: 75 percent allocation |

The City's allocations of M&I-reliability water in the last five years (2008 to 2012) have averaged 77 percent of the City's contractual entitlement.



Litigation has created uncertainty regarding the reliability of water deliveries through the Bay-Delta. Most of this litigation addresses compliance with the federal and State endangered species acts (see NRDC v. Kempthorne, and Watershed Enforcers v. DWR). In August 2007, the federal court in the Kempthorne case ordered that, as an interim remedy, Delta pumping be curtailed from late December through June to protect the Delta smelt (this became known as the Wanger Decision). In December 2008, a Biological Opinion (BiOp) regarding the Delta smelt was issued by the U.S. Fish and Wildlife Service which applied Delta pumping restrictions that are similar to the August 2007 interim court remedy, and a revised BiOp related to three salmon species was issued in June 2009 which included additional pumping restrictions. After the BiOps were released, numerous parties filed suit. The court overturned the BiOps and remanded the BiOps to the fishery agencies. The final impacts of the BiOps on future SWP and CVP deliveries remain uncertain.

6.1.1.2 Ag-Reliability Supplies from the CVP

In 2004, the USBR approved the assignment of 5,000 af/yr of Ag-reliability CVP contract entitlement to the City from the Banta Carbona Irrigation District (BCID). Also in 2004, the USBR approved the assignment of another 2,500 af/yr of Ag-reliability CVP contract entitlement water to the City from the WSID, with the option to purchase an additional 2,500 af/yr of CVP contract entitlement from the WSID (see discussion under *Section 6.2.1.1 Additional CVP Supplies from WSID*). For both of these assignments, Negative Declarations were prepared pursuant to the provisions of the California Environmental Quality Act (CEQA) (BCID Assignment: SCH No. 2002072106; WSID Assignment: SCH No. 2002072107) and for each a Finding of No Significant Impact (FONSI) was issued.

Deliveries of Ag-reliability water can vary significantly, and during severe water shortages supply may be reduced as much as 100 percent. Allocations for the Ag-reliability CVP water for the last several years are summarized below:

- 2005: 85 percent allocation
- 2006: 100 percent allocation
- 2007: 50 percent allocation
- 2008: 40 percent allocation
- 2009: 10 percent allocation
- 2010: 45 percent allocation
- 2011: 80 percent allocation
- 2012: 40 percent allocation

Deliveries of Ag-reliability water during the last five years (2008 to 2012) have averaged 43 percent of the contractual entitlement.

6.1.1.3 Treatment of CVP Supplies

The City's CVP water supplies are treated at the City's John Jones Water Treatment Plant (JJWTP), which was originally constructed in 1979, expanded in 1988, and then expanded again in 2008. The JJWTP is located just north of the Delta-Mendota Canal in the southern portion of the City. With the recent plant expansion now complete, the current treatment capacity of the JJWTP is 30 million gallons per day (mgd). Future additional expansion of the JJWTP is planned in conjunction with buildout of the City's General Plan SOI and is described in the Citywide Water System Master Plan.



The City also treats and serves relatively small quantities of CVP/DMC water purchased by others through a “treatment and wheeling agreement” for use at the Patterson Pass Business Park only. The Patterson Pass Business Park is now built out. In 2011, 527 acre-feet of water from the Plain View Water District (PVWD) (now part of the BBID) USBR allocation was treated at the City’s JJWTP and delivered to the Patterson Pass Business Park. Deliveries to the Patterson Pass Business Park in the last several years are shown below:

- 2005: 407 af
- 2006: 354 af
- 2007: 450 af
- 2008: 378 af
- 2009: 363 af
- 2010: 419 af
- 2011: 527 af

A comparable quantity of BBID CVP/DMC water is anticipated to be available for annual delivery to the Patterson Pass Business Park in the future. A copy of the agreement between the City and BBID (PVWD) for this water supply, treatment and wheeling is included in Appendix A.

6.1.2 Stanislaus River Water

The City, in partnership with the cities of Manteca, Lathrop and Escalon, and the SSJID, have constructed a surface water treatment plant near Woodward Reservoir in Stanislaus County and a transmission pipeline to deliver treated surface water to each city. The project is called the South County Water Supply Project (SCWSP). This water supply is based on SSJID’s senior pre-1914 appropriative water rights to the Stanislaus River, coupled with an agreement with the USBR to store water in New Melones Reservoir. As part of the SCWSP, the City has been allocated up to 10,000 af/yr of water⁹. A Final EIR for the SCWSP was prepared in May 2000 (SCH No. 98022018).

Treated water deliveries commenced in July 2005, and deliveries have been essentially uninterrupted since then (see Figure 6). In the first few years, SCWSP deliveries were less than the City’s full project allotment; however, during these years the City did not require its full SCWSP allotment, even though the full 10,000 acre-feet was available from SCWSP. However, as shown below, since 2009 the City has actually received more than its allotment. Historical deliveries from the SCWSP to the City are shown in Table 10.

⁹ An additional amount of SCWSP supplies may be available to the City on an annual basis and in the future; see *Section 6.2.4 Additional Supplies from the SCWSP*.



Table 10. SCWSP Deliveries to City of Tracy and Other Project Participants

Year	SCWSP Deliveries to City of Tracy, af	Total SCWSP Deliveries to All Project Participants, af ^(a)
2005	3,146	6,493
2006	8,918	16,763
2007	9,130	17,139
2008	8,017	16,816
2009	10,401	19,746
2010	10,850	17,430
2011	11,786	^(b)

^(a) Table 4.4 of the SSJID 2010 Urban Water Management Plan, August 2011.
^(b) Data not available for 2011.

The Draft and Final EIRs for the SCWSP analyzed the environmental impact of deliveries to the project participants of up to 44,000 af/yr (Draft EIR page 3-13). Total SCWSP deliveries to all project participants during 2006 to 2010 ranged from 16,763 af/yr in 2006 up to a maximum of 19,746 af/yr in 2009. The SCWSP is expected to have high reliability as a result of its senior pre-1914 rights. SSJID’s 2010 UWMP¹⁰, adopted by SSJID in September 2011, indicates that it will meet 100 percent of urban demands in normal years, 84.8 to 91.5 percent of urban demands in single dry years (the percent of urban demand met increases in the future as agricultural demands decrease), and 98 to 100 percent of urban demand in multiple dry years. The City has assumed that it will be able to receive 95 percent of its allocation, even during single dry years. This increase in supply reliability is premised upon the other project participants not using their entire project allotment and that water being available to the City.

A copy of the agreement between the City and SSJID for this water supply is included in Appendix A.

¹⁰ Provost & Pritchard Consulting Group, *South San Joaquin Irrigation District 2010 Urban Water Management Plan*, August 2011.



6.1.3 Groundwater

10910(f) If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water supply assessment.

- 10910(f)(1) *A review of any information contained in the urban water management plan relevant to the identified water supply for the proposed project.*
- 10910(f)(2) *A description of any groundwater basin or basins from which the proposed project will be supplied. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long-term overdraft condition.*
- 10910(f)(3) *A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historical use records.*
A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historical use records.
- 10910(f)(4) *An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project.*
A water assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631.

6.1.3.1 Groundwater Overview

The City overlies a portion of the San Joaquin Valley Groundwater Basin-Tracy Sub-basin (Tracy Sub-basin). The City currently operates nine groundwater wells, with a total extraction capacity of about 15 mgd. Four wells (Production Wells 1, 2, 3 and 4) are located near the City's JJWTP and pump directly into the JJWTP clearwells, where the groundwater is blended with treated surface water. The other wells (Lincoln Well, Lewis Manor Well (Well 5), Park and Ride Well (Well 6), Ball Park Well (Well 7) and Well 8) are located throughout the City and pump water directly into the distribution system after disinfection. The City's newest well, Well 8, located near the intersection of Tracy Boulevard and 6th Street, was designed as an Aquifer Storage and Recovery Well (ASR Well), but has been put into service initially as an extraction well.



Figure 7 shows the locations of the City's wells and the Tracy Sub-basin.

6.1.3.2 Basin Description

The following section describes the Tracy Sub-basin, including its water-bearing formations, water levels, and water quality. Much of the following information has been incorporated from the City's 2010 UWMP. Except where noted, the description of the sub-basin is based largely on information provided in the 2003 California Department of Water Resources (DWR) Bulletin 118, in which the groundwater basin description was last updated in January 2006 (see Appendix C).

The sub-basin consists of unconsolidated to semi-consolidated sedimentary deposits that are bounded by the Diablo Range on the west, the Mokelumne and San Joaquin Rivers on the north, the San Joaquin River to the east, and the San Joaquin-Stanislaus County line on the south. Adjacent to the Tracy Sub-basin are the Eastern San Joaquin Sub-basin to the east, the Delta-Mendota Sub-basin to the south, and the Sacramento Valley Groundwater Basin to the north. The three sub-basins, not including the Sacramento Valley Groundwater Basin, are part of the San Joaquin Valley Groundwater Basin. The San Joaquin River and one of its major west side tributaries, Corral Hollow Creek, provide drainage from the Tracy Sub-basin. The San Joaquin River flows northward into the Sacramento and San Joaquin Delta and discharges into San Francisco Bay.

The Tracy Sub-basin is comprised of continental deposits of Late Tertiary to Quaternary age. These deposits include the Tulare Formation, Older Alluvium, Flood Basin Deposits, and Younger Alluvium. The cumulative thickness of these deposits increases from a few hundred feet near the Coast Range foothills on the west to about 3,000 feet along the eastern margin of the sub-basin.

Each of these formations is described below.

- The Tulare Formation is exposed in the Coast Range foothills along the western margin of the sub-basin and dips eastward toward the axis of the San Joaquin Valley. The Tulare Formation is approximately 1,400 feet thick and consists of semi-consolidated, poorly sorted, discontinuous deposits of clay, silt, and gravel. The Corcoran Clay occurs near the top of the Tulare Formation and confines the underlying fresh water deposits. The eastern limit of the Corcoran Clay is near the eastern boundary of the sub-basin. The Tulare Formation is moderately permeable, with most of the larger agricultural, municipal, and industrial wells completed below the Corcoran Clay and capable of producing up to about 3,000 gallons per minute (gpm). Smaller, domestic wells are typically completed above the Corcoran Clay, where the groundwater is often of poor quality. Specific yield values for the Tulare Formation in the San Joaquin Valley and Delta area range from 7 to 10 percent.
- The Older Alluvium is approximately 150 feet thick and consists of loosely to moderately compacted sand, silt, and gravel deposited in alluvial fans during the Pliocene and Pleistocene eras. The Older Alluvium is widely exposed between the Coast Range foothills and the Delta and is moderately to locally highly permeable.



- The Flood Basin Deposits occur in the Delta portion of the sub-basin and are the distal equivalents of the Tulare Formation and Older and Younger alluvial units. The Flood Basin Deposits consist primarily of silts and clays with occasional interbeds of gravel along the present waterways. Because of their fine-grained nature, the Flood Basin Deposits have low permeability and generally yield low quantities of water to wells. Occasional zones of fresh water are found in the Flood Basin Deposits, but they generally contain poor quality groundwater. The maximum thickness of the Flood Basin Deposits is about 1,400 feet.
- The Younger Alluvium includes those deposits that are currently accumulating, including sediments deposited in the channels of active streams, as well as overbank deposits and terraces of these active streams. The Younger Alluvium, consisting of unconsolidated silt, fine- to medium-grained sand, and gravel, is present to depths of less than 100 ft below ground surface (bgs) along the channel of Corral Hollow Creek. Sand and gravel zones in the Younger Alluvium are highly permeable and, where saturated, yield significant quantities of water to wells.

6.1.3.3 Groundwater Level Trends

The potentiometric surface in the semi-confined aquifer above the Corcoran Clay is located approximately 90 to 150 ft above mean sea level (msl). Review of hydrographs from wells throughout the sub-basin indicates that, except for seasonal variation resulting from recharge and pumping, water levels in most of these wells have remained stable over at least the last 10 years. As discussed below, as part of the City's Groundwater Management Policy, groundwater levels in the Tracy area are being monitored by the City on a semi-annual basis. These measurements indicate that groundwater levels in the City's wells have increased over the last few years, likely as a direct result of reduced groundwater pumpage by the City since 2005.

6.1.3.4 Groundwater Storage

There are no published groundwater storage values for the entire sub-basin (DWR, 2003). However, Hotchkiss and Balding (1971) estimated the groundwater storage capacity for the Tracy-Patterson Storage Unit at 4,040,000 af. The Tracy-Patterson Storage Unit includes the southern portion of the currently-defined Tracy Sub-basin, from approximately one mile north of Tracy to the San Joaquin-Stanislaus County line. Since the Tracy Sub-basin comprises roughly one-third of the Tracy-Patterson Storage Unit, it can be inferred that the approximate storage capacity of the Tracy Sub-basin is on the order of 1,300,000 af.

In an eight-year study conducted by Stoddard & Associates (1996), the average change in the entire sub-basin storage was approximately negative 13,000 af per year. Stoddard & Associates (1996) indicates a major contributor to this sub-basin storage decline was due to rainfall during the study period being well below average. Stoddard concluded that the sub-basin is in a hydrologically-balanced condition and is not overdrafted¹¹. Similarly, DWR has not identified the Tracy Sub-basin as being in an overdrafted condition (per DWR Bulletin 118-80).

¹¹ Page 23, City of Tracy 2010 Urban Water Management Plan, prepared by Erler & Kalinowski, Inc., May 2011.



6.1.3.5 Groundwater Yield

A 1990 Kennedy/Jenks/Chilton (K/J/C) study estimated a perennial groundwater yield of 6,700 af/yr in the Tracy Sub-basin within the Tracy Study Area. However, in 2001, to determine if additional groundwater resources were available in the Tracy Study Area, the City conducted an updated groundwater analysis. The Estimated Groundwater Yield Study, prepared by Bookman-Edmonston Engineering (included as an appendix to the City's Groundwater Management Policy Mitigated Negative Declaration--see Appendix C) provided an evaluation of potential groundwater yield and determined that a 2,300 af/yr increase of the average annual operational groundwater yield above the groundwater yield recommended in the 1990 K/J/C study could be provided within the estimated sustainable yield of the Tracy Sub-basin in the Tracy Study Area, without adverse impact to groundwater resources or quality in the Tracy Study Area over a 50-year timeframe. This expansion of groundwater usage to 9,000 af/yr would be within the City's estimated share of the aquifer's sustainable yield of 22,000 af/yr of the 28,000 af/yr total (which includes groundwater usage within West Side Irrigation District, Naglee-Burk Irrigation District, Plain View Water District (now part of the Byron Bethany Irrigation District), and Banta-Carbona Irrigation District). It was also estimated that this expansion of groundwater usage would result in a groundwater level drop of 10 feet, but would stabilize at this level.

6.1.3.6 Groundwater Quality

Groundwater quality in the Tracy Sub-basin varies spatially and with depth. In general, the northern part of the Tracy Sub-basin is characterized by a sodium water type, and the southern part of the Sub-basin is characterized by calcium-sodium type water. The northern part of the Tracy Sub-basin is also characterized by a wide range of anionic water types, including bicarbonate; chloride; and mixed bicarbonate-chloride. Major anions in the southern part of the Tracy Sub-basin include sulfate-chloride and bicarbonate-chloride.

There is also a difference between the water quality in the water-bearing zones above the Corcoran Clay (termed the "semi-confined aquifer") and below the Corcoran Clay (termed the "confined aquifer"). Generally, the water quality of the confined aquifer is better than that of the semi-confined aquifer. Total Dissolved Solids (TDS) concentrations in well water sampled in the semi-confined aquifer ranged between 1,000 milligrams per liter (mg/L) and 1,500 mg/L, while the measured TDS in the confined aquifer was less than 1,000 mg/L. In the vicinity of Tracy, the TDS of the confined aquifer is between 600 mg/L and 700 mg/L.

Constituents present at elevated concentrations throughout the Tracy Sub-basin in both the semi-confined and confined aquifers include chloride, nitrate, sulfate, and boron. Elevated chloride occurs in several areas near Tracy and along the San Joaquin River. Areas of elevated nitrate occur in the northwestern part of the Tracy Sub-basin and in the vicinity of Tracy. Elevated boron occurs over a large portion of the Sub-basin from south of Tracy extending to the northwest side of the Tracy Sub-basin. Sulfate concentrations of up to 500 mg/L have been detected in Tracy Sub-basin groundwater. The groundwater near Tracy is considered to be very hard.



6.1.3.7 Groundwater Management

The 1992 Groundwater Management Act, AB 3030, established provisions by which local water agencies could develop and implement groundwater management plans (GMPs). GMPs are generally designed to prevent local and regional aquifer overdrafting, which reduces available groundwater resources and which, under certain conditions, can lead to degradation of water quality and to land subsidence. The City has been, and continues to be, involved in both regional and local groundwater management efforts.

6.1.3.7.1 Groundwater Management Plan for the Northern Agencies in the Delta-Mendota Canal Service Area and a Portion of San Joaquin County

In 1996, the City Council adopted the Northern Delta-Mendota Canal Groundwater Management Plan pursuant to Water Code Sections 10750 et seq., also known as AB 3030. The plan was developed in coordination with other DMC northern agencies, including: Banta-Carbona Irrigation District, Byron-Bethany Irrigation District, Del Puerto Water District, Patterson Irrigation District, West Stanislaus Irrigation District, Westside Irrigation District, San Joaquin County, and the City of Tracy. The 1996 GMP included information on groundwater levels and quality, conjunctive management of groundwater and surface water resources, and measures to protect groundwater resources within the plan area.

In 2011, the GMP was revised to include additional information to comply with new provisions adopted by the State Legislature which included:

- The Department of Water Resources (DWR) to establish a priority schedule for monitoring groundwater basins and elevation reports as well as issuing recommendations to local entities to improve water quality;
- Permit local entities to determine best methods of groundwater monitoring to meet local demand;
- The DWR to implement groundwater monitoring if local agencies fail to do so. This will result in loss of eligibility for State grant funds.

The City of Patterson plans to become a northern agency member and the revised GMP will reflect their inclusion.

A public hearing regarding the revised GMP was held on February 7, 2012. The revised GMP was adopted by the Tracy City Council on May 1, 2012.

A copy of the revised GMP is included in Appendix C.

6.1.3.7.2 San Joaquin County Groundwater Export Ordinance

Occasional drought conditions and ongoing restrictions on Delta export pumping have reduced the imported CVP surface water supply available to entities located south of the Delta that rely on DMC/CVP water (Stoddard, 1996). Arrangements for water transfers between entities that receive DMC/CVP water were developed to allocate the reduced DMC/CVP supply to match demand, including pumping of groundwater into the DMC for conveyance and use in other areas.



This additional groundwater extraction, for the purpose of selling it to other DMC/CVP users, raised concerns amongst sub-basin groundwater users regarding groundwater overdraft and quality degradation. In response to these concerns, San Joaquin County enacted a Groundwater Export Ordinance in June 2000 that now requires an entity to secure a permit from San Joaquin County prior to exporting groundwater out of the County (such as by pumping extracted groundwater into the DMC for conveyance to other areas).

6.1.3.7.3 City Groundwater Management Policy and Mitigated Negative Declaration for City Groundwater Production of 9,000 af/yr

On a local level, in 2001, the City adopted a Groundwater Management Policy, and prepared a Groundwater Management Policy Mitigated Negative Declaration (see Appendix C). The Groundwater Management Policy and the Groundwater Management Policy Mitigated Negative Declaration are described below.

As discussed above, in 2001, the City anticipated that, to make up a projected temporary shortfall between supply and demand, groundwater extraction would have to increase from approximately 6,000 af/yr to a maximum of 9,000 af/yr over the three-year period from 2001 through 2004. Prior to 2001, it had been estimated that 6,700 af/yr was the City's sustainable groundwater extraction rate (K/J/C, 1990). However, the 2001 Estimated Groundwater Yield Study by Bookman-Edmonston, revised the estimated average annual operational groundwater yield to 9,000 af/yr. This operational yield, though larger than the earlier estimate, is still well under the City's estimated 22,000 to 28,000 af/yr share of the Tracy Sub-basin's sustainable yield.

Pursuant to the findings of the 2001 Bookman-Edmonston study, the Tracy City Council adopted a Groundwater Management Policy in 2001 that established the City's maximum annual groundwater extraction rate of 9,000 af/yr. To comply with CEQA and to evaluate the potential negative effects of increased groundwater extraction on water quality, water levels, and subsidence, the City also prepared a Groundwater Management Policy Mitigated Negative Declaration (see Appendix C). The Groundwater Management Policy Mitigated Negative Declaration specifies the frequency and type of monitoring and reporting the City must conduct to evaluate the sustainability of the increased groundwater extraction rate.

Consistent with the Groundwater Management Policy Mitigated Negative Declaration, the City has maintained groundwater production rates well below the estimated sustainable yield of 9,000 af/yr. In addition, the City hired Bookman to monitor the impacts of groundwater extraction on groundwater levels, groundwater quality, and land subsidence. Bookman's most recent Mitigation Monitoring Report dated January 23, 2009 covering the period from November 2007 through November 2008 includes well production data, water quality data, hydrographs, and groundwater contour maps for the City's production and monitoring wells (excerpts from this report are provided in Appendix C). As described in the report, there is no indication that pumping by the City is significantly or adversely affecting groundwater levels or water quality at this time. In fact, the report shows that groundwater levels in the City's wells have increased over the last couple of years, likely as a direct result of decreased groundwater pumpage by the City since 2005.



6.1.3.7.4 Tracy Regional Groundwater Management Plan (Regional City GMP)

In addition to participating in the development of the Tracy Sub-basin GMP, in 2005 the City was awarded a DWR grant for approximately \$185,000 to prepare a Tracy Regional Groundwater Management Plan (Tracy Regional GMP) for the portion of the Tracy Sub-basin that underlies the City of Tracy. The Tracy Regional GMP was completed in March 2007. A key objective of the Tracy Regional GMP was the development of Basin Management Objectives (BMOs) for groundwater levels, groundwater quality, and land subsidence in the region.

Excerpts from the Tracy Regional GMP are provided in Appendix C.

6.1.3.8 Historical Groundwater Use

As discussed previously, the City currently operates nine groundwater extraction wells (see Figure 6):

- Well 1 (at JJWTP)
- Well 2 (at JJWTP)
- Well 3 (at JJWTP)
- Well 4 (at JJWTP)
- Lincoln Well
- Well 5 (Lewis Manor Well)
- Well 6 (Ball Park Well)
- Well 7 (Park & Ride Well)
- Well 8

The City’s newest well, Well 8, was constructed in January 2004 and was permitted by the California Department of Public Health (DPH) for use as a municipal production well in September 2010. Well 8 is ultimately intended for use with the City’s future Aquifer Storage and Recovery Program (see discussion under *Section 6.2.4 Aquifer Storage and Recovery*).

Historically, groundwater has accounted for approximately 40 to 50 percent of the City’s annual water supply. Prior to 2000, groundwater extraction by the City totaled less than 6,000 af/yr. Between 2000 and 2004, to meet increased demands for water, the City began extracting additional groundwater, with annual usage up to about 7,700 af/yr. In 2005, groundwater extraction decreased to less than 6,000 af/yr primarily because: (1) the SCWSP was completed and the City began receiving Stanislaus River water; and (2) rainfall was above normal, meaning that the City received a higher percentage of its DMC/CVP contractual entitlements. The City’s groundwater production over the last seven years is provided in Table 11.

Table 11. City of Tracy Historical Groundwater Production							
	2005	2006	2007	2008	2009	2010	2011
Total Groundwater Production ^(a) , af/yr	5,826	3,034	3,672	2,598	1,327	498	292
^(a) Source: Table 11 Current and Historical Potable Water Supply, City of Tracy 2010 UWMP, May 2011 and 2011 Water Production Data.							



As noted above, other groundwater users in the Tracy area include the West Side Irrigation District, Naglee-Burk Irrigation District, Plain View Water District (now the Byron Bethany Irrigation District), Banta-Carbona Irrigation District. Although current groundwater pumpage by these users was not available for inclusion in this WSA, the 2001 Estimated Groundwater Yield Study, which established the City's estimated groundwater yield of 9,000 af/yr, considered the cumulative groundwater usage in the study area by the City and other users in the Tracy area.

6.1.3.9 Projected Future Groundwater Use

As discussed above, the 2001 Estimated Groundwater Yield Study indicated an average annual operational groundwater yield for the City of 9,000 af/yr. The study indicated that this increase in the City's groundwater yield was within the estimated sustainable yield of the groundwater sub-basin within the Tracy Study Area, and could be maintained without adverse impact to groundwater resources or quality in the Tracy Study Area over a 50-year timeframe. However, because the hard, high-TDS groundwater is of poorer quality compared with the City's surface water sources, the City is planning to scale back its future groundwater extractions during normal years. For example, at buildout of the General Plan, groundwater production in normal years is anticipated to be approximately 2,500 af/yr. However, the City will continue to rely on groundwater for peaking, drought, and emergency supplies, and may pump up to 9,000 af/yr or more during single dry or multiple dry years, as needed, to meet demands when surface water supplies may be limited.

The City's existing groundwater wells currently have the capability of pumping 9,000 af/yr. The City has replaced a number of older wells with new wells (*e.g.*, the Tidewater Well was replaced by Well 8). Well 8, which is ultimately intended for use as part of the City's future Aquifer Storage and Recovery Program (see further discussion below), was constructed in 2004, equipped in early 2010 and put into operation as an extraction well in September 2010. In the future, the City will construct new production and emergency supply wells, as needed, to replace and supplement existing, aging production wells and provide additional supply reliability in the event of a drought or other emergency situation.

The City's potential uses of groundwater during droughts are consistent with Tracy's Groundwater Management Policy (discussed above). In the event that the City is unable to secure additional high quality surface water supplies in the future, groundwater remains a sustainable water supply up to 9,000 af/yr. However, by reducing groundwater extraction on an average annual basis to approximately 2,500 af/yr, the City will:

- Increase the overall quality of its drinking water, thus increasing customer satisfaction and reducing system maintenance and repair caused by the lower-quality groundwater;
- Recharge the underlying aquifer, effectively increasing the availability of groundwater during a drought or emergency condition (*i.e.*, the City will effectively be practicing "in-lieu groundwater banking" of its groundwater); and
- Reduce salt loading to the City's wastewater treatment plant, which will help the City comply with wastewater discharge requirements.



If the City decreases future groundwater extraction during normal and wet years, current groundwater levels, groundwater flow directions and gradients, and groundwater quality would be expected to change correspondingly. Further, if the City moves ahead with its proposed future ASR Program (see discussion below), changes in groundwater flow patterns associated with the injection of treated surface water into the confined aquifer zone may occur. Groundwater quality would be expected to improve as a result of the introduction of higher quality surface water into the aquifer.

Table 12 shows the anticipated future groundwater production during a normal year.

	2015	2020	2025	2030	2035
Total Groundwater Production ^(a,b) , af/yr	2,500	2,500	2,500	2,500	2,500
<small>(a) Source: Table 18 Current and Projected Water Supply Allocations-Normal Year, City of Tracy 2010 UWMP, May 2011. (b) Although the City can sustainably extract up to 9,000 af/yr of groundwater, the City is planning to scale back its groundwater extraction in future years to increase the overall quality of its water supply. The City will continue to rely on groundwater for peaking and drought and emergency supplies, up to 9,000 af/yr, on an as-needed basis.</small>					

6.1.3.10 Groundwater Sufficiency

The City’s 2010 UWMP addressed the sufficiency of the City’s groundwater supplies, in conjunction with the City’s other existing and additional water supplies, to meet the City’s existing and planned future uses¹². Based on the information provided above and that included in the City’s 2010 UWMP, the City’s groundwater supply, together with the City’s other existing and additional planned future water supplies, is sufficient to meet the water demands of the Proposed Project, in addition to the City’s existing and planned future uses. As discussed above, the City’s use of groundwater over the last few years has significantly declined, primarily due to the availability of new high-quality surface water supplies from the SCWSP. In the future, although the City can sustainably extract up to 9,000 af/yr of groundwater, the City’s use of groundwater is anticipated to decrease even further, as additional high-quality surface water supplies become available. As shown in Table 12, in the future, assuming normal year hydrologic conditions, annual groundwater use is anticipated to be as low as 2,500 af/yr by 2015. This anticipated future groundwater pumpage is significantly below the City’s historical groundwater pumpage (see Table 11) and the average annual operational yield of 9,000 af/yr.

By reducing groundwater extraction on an average annual basis, the City will: (1) recharge the underlying aquifer, effectively increasing the availability of groundwater during a drought or emergency condition (*i.e.*, the City will effectively be “banking” its groundwater); and (2) increase the overall quality of its drinking water, thus increasing customer satisfaction and reducing system maintenance and repair caused by the lower-quality groundwater.

¹² Chapter 4, City of Tracy 2010 Urban Water Management Plan, May 2011.



6.1.4 Out-of-Basin Water Banking

The Semitropic Groundwater Storage District Groundwater Storage Bank (Semitropic) is a water storage system that began operation in the early 1990s. Located in Kern County between the California Aqueduct and the Delta-Mendota Canal, Semitropic is one of eight California groundwater banking agencies. Semitropic works by having its banking partners deliver their surplus water to Semitropic for groundwater storage. Then, when requested by the banking partner, Semitropic returns the stored water to the California Aqueduct for use by its partners either by exchanging its entitlement or by reversing the intake facility (known as “pumpback”). Through “pumpback”, Semitropic can deliver a maximum of 90,000 af/yr of water into the California Aqueduct. The State would then deliver the water to the banking partners.

The total storage capacity at Semitropic is 2.15 million acre-feet and, as listed below, there is still a significant amount of storage capacity which is uncommitted and available. The current Semitropic banking partners and their reserved/available storage capacities are listed below¹³:

- Original Water Bank (1.0 million acre-feet)
 - Metropolitan Water District of Southern California: 350,000 acre-feet
 - Santa Clara Valley Water District: 350,000 acre-feet
 - Alameda County Water District: 150,000 acre-feet
 - Zone 7 Water Agency: 65,000 acre-feet
 - Newhall Land and Farming Company: 55,000 acre-feet
 - San Diego County Water Authority: 30,000 acre-feet
- Stored Water Recovery Unit (650,000 acre-feet)
 - Semitropic’s Contribution to Semitropic-Rosamond Water Banking Authority (SRWBA): 300,000 acre-feet (see below)
 - Semitropic Portion of Stored Water Recovery Unit (350,000 acre-feet)
 - Poso Creek Water Company: 60,000 acre-feet
 - Rampage Vineyard: 18,000 acre-feet
 - Uncommitted: 122,000 acre-feet
 - Not Available Until SRWBA is Committed: 150,000 acre-feet
- SRWBA (800,000 acre-feet)
 - Portion Contributed by Semitropic (300,000 acre-feet)
 - San Diego County Water Authority: 15,000 acre-feet
 - Available Storage: 285,000 acre-feet
 - Antelope Valley Water Bank (500,000 acre-feet)
 - San Diego County Water Authority: 25,000 acre-feet
 - Rosamond Community Services District: 30,000 acre-feet
 - Available Storage: 445,000 acre-feet

¹³ Based on information provided on Semitropic Water Storage District website: www.semitropic.com, as of September 2010.



6.1.4.1 Pilot Agreement

In June 2006, the City entered into a pilot agreement with Semitropic Water Storage District for 1,000 acre-feet of water storage at Semitropic, which allows for an annual withdrawal of up to 333 af/yr (e.g., 1,000 acre-feet divided by 3). A Negative Declaration was prepared for the pilot agreement pursuant to the provisions of CEQA (SCH No. 2006052049) and a FONSI was issued by USBR (FONSI-05-111). The pilot agreement was intended to establish the procedures for water deposits and withdrawals by the City of Tracy.

A copy of the City's pilot agreement with Semitropic is included in Appendix A. Now that the permanent agreement with Semitropic has been implemented, this pilot agreement has been terminated.

6.1.4.2 Permanent Agreement

On June 5, 2012 the Tracy City Council approved a long-term agreement with Semitropic for 3,500 units of water storage. One unit of water storage allows for a withdrawal of up to 1 af/yr for three years; hence, the agreement would allow for withdrawal of 3,500 af/yr for three years (10,500 af total). To store water in Semitropic, the City would not withdraw its share of CVP water from the DMC, but instead allow this water to continue to move through the DMC and California Aqueduct systems for delivery to and use by Semitropic. This is called "in lieu storage." Upon request by the City, in accordance with the contract, Semitropic would pump the stored water into the California Aqueduct and a like amount of water would be made available to the City directly from the DMC. Though the City could utilize this supply in any year, it would be most valuable during drought years when the City's CVP surface water supplies are reduced. If the City uses water from the Semitropic water bank in any given year, it would work to manage its supplies during subsequent years such that it could "refill" its water bank for future water use. By banking surplus CVP water at Semitropic, the City will increase the quantity of supplies available during drought and/or other emergency conditions, thereby increasing the reliability of its water supply.

The purchase price for capacity in Semitropic was \$5,206,961. A Negative Declaration was prepared for the permanent agreement pursuant to the provisions of CEQA (SCH No. 2010092012) and a FONSI (FONSI-09-164) was issued by USBR. A copy of the City's permanent agreement with Semitropic is included in Appendix A.

To date, the City has deposited 7,000 acre-feet of supplies in Semitropic and has withdrawn 200 acre-feet (100 acre-feet in November 2007 and 100 acre-feet in December 2008)¹⁴. The City's current balance is 6,100 acre-feet¹⁵; these supplies are available to the City for withdrawal

¹⁴ The City's most recent deposit to Semitropic was made in September 2012.

¹⁵ Semitropic's distribution system, evaporative and aquifer losses are collectively assumed to be 10 percent of the amount of water furnished by banking partners for storage. The City's current balance is calculated as follows per Article 4 of the agreement between Semitropic and the City (see Appendix A): Total deposited (7,000 af) – 10% Losses (700 af) – Withdrawals (200 acre-feet) = Available (6,100 af).



in dry years, if needed. Based on this current balance, it is assumed that 2,033 af will be available for withdrawal in 2015 (6,100 af over three years).

6.2 Additional Planned Future Potable Water Supplies

The City is currently anticipating the following additional planned future potable water supplies in the future:

- Additional surface water from the Delta-Mendota Canal (CVP);
- Surface water from BBID pre-1914 water rights;
- Additional supplies from the SCWSP; and
- Aquifer Storage and Recovery.

Each of these additional planned future water supplies is described below. Summary tables listing the City's existing and additional planned future water supplies, and historical and anticipated future quantities are provided at the end of this section.

6.2.1 Additional Central Valley Project Water via the Delta-Mendota Canal

6.2.1.1 *Additional CVP Supplies from WSID*

As previously mentioned, the City has an option for an additional assignment of 2,500 af/yr of Ag-reliability CVP contract entitlement water from the WSID. Per the agreement with WSID, the City can execute this assignment at any time before midnight on February 27, 2014. Environmental review and all other required reviews and approvals for this assignment have been completed (as described in Section 6.1.1.2), such that this assignment can be executed with the transfer of the required funds.

A copy of the City's agreement for assignment of this water supply from WSID is included in Appendix A. An amount of \$2.5 million has been included in the City's CIP future appropriations for FY13-14 (CIP 75061) for this water supply assignment from WSID.¹⁶ The City plans to exercise this option in late 2013 or early 2014, prior to the February 27, 2014 deadline with the additional supply of 2,500 af/yr being available thereafter.

6.2.1.2 *Additional CVP Supplies from BBID*

The area served by the former PVWD is now part of BBID. Due to on-going urbanization in portions of BBID's service area (including the Proposed Project), BBID anticipates that it may have CVP contract entitlement water (with Ag-reliability) available for municipal uses in the future. The City and BBID are negotiating a phased option agreement to assign portions of BBID's CVP/DMC contract right to the City. The estimated quantity of contract entitlement water potentially subject to such an agreement is approximately 11,000 af/yr. The exact quantity of BBID CVP water entitlement is the subject of the future agreement between the City and

¹⁶ City of Tracy Capital Improvement Program for FY12-13 through FY16-17, June 2012.



BBID. However, previous discussions have indicated that a contract entitlement quantity of water equal to 3.4 acre-feet per year per acre (af/ac/yr) of converted agricultural land may be available for M&I use.

It is estimated that an agreement between the City and BBID can be achieved within the next few years to allow for the transition of additional CVP supplies to be available to the City starting in 2015 (at 3,000 af/yr) and increasing to 11,000 af/yr by 2030. An approval will be required from the USBR and compliance with CEQA and National Environmental Policy Act (NEPA) will be required. Because the exact quantity of water available and terms of a future agreement are yet to be negotiated, the total cost and financing mechanisms for acquiring this supply have not yet been determined.

The northern and eastern portions of the Proposed Project (approximately 1,080 acres) are located within the former PVWD (now BBID) service area. Conversion of this area of agricultural land in conjunction with the development of the Proposed Project would provide approximately 3,700 af/yr (1,080 acres x 3.4 af/ac/yr) of supply to the City from BBID's CVP water entitlement.

6.2.2 Surface Water from BBID Pre-1914 Water Rights

Part of the proposed Tracy Hills Specific Plan area was annexed into the BBID and is entitled to water service from BBID, using BBID's pre-1914 appropriative water rights. The City anticipates that up to 4,500 af/yr of pre-1914 water rights water could be provided by BBID on a year-round basis (via the DMC with a proposed Exchange Agreement with the USBR) to serve the proposed Tracy Hills Project in the BBID service area.. This supply quantity has been increased from that presented in the City's 2010 UWMP as a result of recent agreements related to the proposed Tracy Hills Project. Because the water supply is based on pre-1914 appropriative rights, the supply is considered to be firm and well-established.

Current and future work to secure this water supply includes: finalizing agreements between the City and BBID; completion of a Water Supply Assessment and required environmental documentation; and execution of an Exchange Agreement with the USBR to provide for a year-round supply to be conveyed to the City's JJWTP via the DMC. The proposed supply will need to meet the City's reliability criteria.

Costs for obtaining the water supply from BBID and delivering the water supply to the City's JJWTP for treatment and use at the Tracy Hills Project will be paid in a manner consistent with the City's applicable fee program requiring fair share participation by the project developer. Required reviews and approvals will likely include the following entities: the City, Tracy Hills Project developer, BBID, and USBR. The City anticipates that the BBID pre-1914 water supply will be available by 2014.

6.2.3 Additional Supplies from the SCWSP

The City is anticipating that an additional 2 mgd of treatment and conveyance capacity, and 3,000 af/yr of treated water supplies will be available from the SCWSP in the future. This additional supply would have the same high reliability as the supply that the City is currently receiving from the SCWSP. Delivery of these additional supplies to the City would be through



the same, existing facilities currently delivering the City's existing SCWSP supplies. Delivery of these additional supplies will be subject to approval and environmental review. An amount of \$5.7 million has been included in the City's CIP future appropriations for FY13-14 (Project 75PP-104) for these additional water supplies from the SCWSP.¹⁷ The City anticipates that these additional supplies will be available starting in 2015.

6.2.4 Aquifer Storage and Recovery

The City's proposed ASR Program would allow the City to optimize conjunctive use of its water supplies through injection of surplus treated (potable) drinking water into selected aquifer zones within the groundwater Sub-basin for storage when surplus supplies are available, and recovery of that potable water from the aquifer to optimize water quality and meet seasonal peak demands during drought periods, or when emergency or disaster scenarios preclude the use of imported water supplies.

As discussed above, the City constructed a new well in January 2004 (Well 8) that was designed to allow for both injection and extraction of water supplies in conjunction with the City's proposed ASR Program. In early 2009, the City contracted to construct the above-ground well facilities (including the pump house, pump, motor, SCADA, electrical, telemetry, chemical feed systems, *etc.*) to have Well 8 operational in September 2010, initially as an extraction well, and in the future as part of the City's proposed ASR Program. In addition, the City has already installed two monitoring wells for use in the demonstration project monitoring and testing for the proposed ASR Program.

The City obtained regulatory approval from the Central Valley Regional Water Quality Control Board (RWQCB) to conduct an ASR Demonstration Testing Program. A Negative Declaration was prepared for the project in November 2010 pursuant to the provisions of CEQA (SCH No. 2010112049). The Phase 1 ASR Demonstration Testing was conducted between January 2011 and September 2011 and involved the injection of 233 acre-feet (76 million gallons) of treated SSJID potable water, storage in the confined aquifer and subsequent extraction of 340 acre-feet (111 million gallons) of water¹⁸. The Phase 2 ASR Testing was initiated in late December 2011 and was completed in September 2012 with injection of 700 acre-feet. The Tracy City Council approved and adopted a CEQA Negative Declaration (SCH No. 2012102013) for the permanent ASR Program on December 4, 2012.

The next step is to obtain approval to operate a permanent ASR Program from the RWQCB. It is estimated that as much as 685 to 915 af/yr of potable water could be injected into the aquifer, assuming a 5-month continuous injection rate of 1.5 to 2.0 mgd. Implementation of the City's ASR Program will occur incrementally (as new ASR wells are constructed) with up to 3,000 acre-feet of high-quality water ultimately (by 2025) being available in drought years to increase the reliability of the City's water supply. Approximately 1,000 af/yr of ASR supply is anticipated to be available starting in 2015 and increasing to 3,000 af/yr by 2025.

¹⁷ City of Tracy Capital Improvement Program for FY12-13 through FY16-17, June 2012.

¹⁸ Interim (Final) Status Report for Well 8 ASR Demonstration Program, Memorandum prepared for City of Tracy by Pueblo Water Resources, dated December 7, 2011.



6.3 Existing Non-Potable Water Supplies

6.3.1 Diversion of Non-Potable Surface Water from Sugar Cut

As described in the Water Supply Assessment for the Holly Sugar Sports Park¹⁹, the City's Holly Sugar property has historically (since at least 1912) been irrigated using untreated surface water diverted from Sugar Cut. Over the years, the Holly Sugar property has been farmed and planted with a variety of crops, including winter wheat, corn, tomatoes, alfalfa and, when the property was owned by Holly Sugar, sugar beets. The Holly Sugar property is currently being farmed and irrigated with untreated surface water diverted from Sugar Cut. The water rights to the untreated surface water from Sugar Cut are considered to be pre-1914 appropriative rights, and may also be classified as riparian rights. Use of the water from Sugar Cut has been continuous on the Holly Sugar property for irrigation purposes since at least 1912.

The continued use of this non-potable water supply from Sugar Cut is proposed for the irrigation of the proposed Holly Sugar Sports Park²⁰. This use is considered a continued beneficial use of the supply for essentially the same purpose of irrigation. The use of untreated surface water from Sugar Cut for non-potable water uses for the proposed Holly Sugar Sports Park would be for the interim only, until recycled water supplies become available. Therefore, future use of this non-potable supply, beyond the interim irrigation of the proposed Holly Sugar Sports Park, is not anticipated.

6.4 Additional Planned Future Non-Potable Water Supplies

6.4.1 Recycled Water

In 2002, the City adopted a Recycled and Non-Potable Water Ordinance requiring all new subdivisions, to the extent practicable, to install the required infrastructure (such as dual-distribution pipelines) to provide recycled water to meet non-potable water demands at parks, golf courses, athletic fields, schools, median island landscapes, and industrial sites. As described in Chapter 2 of the Citywide Water System Master Plan, one of the principles developed for sustainable infrastructure in the City is to promote and encourage the use of recycled water for non-potable uses in existing and future publicly landscaped areas in the City, where feasible.

At buildout of the City's General Plan, it is estimated that the recycled water demand for landscape irrigation will be approximately 7,500 af/yr²¹. Based on the City's Citywide Wastewater System Master Plan, the quantity of recycled water supply available is up to 22.4 mgd (25,000 af/yr) at buildout, based on anticipated wastewater flows and the capacity of the City's WWTP²². Recycled water will be treated to a tertiary level in accordance with Title 22

¹⁹ Water Supply Assessment for the Holly Sugar Sports Park, prepared by West Yost Associates, June 2009.

²⁰ Water Supply Assessment for the Holly Sugar Sports Park, prepared by West Yost Associates, June 2009.

²¹ City of Tracy Citywide Water System Master Plan, Final Report, prepared by West Yost Associates, December 2012.

²² Table C-1, Tracy Wastewater Master Plan, Draft Report, prepared by CH2MHill, May 2012.



requirements at the City's WWTP and will be distributed to recycled water use areas within the City's SOI. It is anticipated that adequate recycled water supplies will be available to meet the projected recycled water demands at buildout of the City's General Plan, including those associated with the Proposed Project. Approvals and permits for the production, distribution and use of recycled water will be required from the RWQCB and the California Department of Public Health (DPH).

6.4.2 Shallow Non-Potable Groundwater

As discussed above, the Tracy Sub-basin underlying the City has two aquifers: semi-confined and confined. The uppermost semi-confined aquifer is primarily comprised of alluvial and flood basin formations. The underlying confined aquifer is primarily comprised of the Tulare Formation and it is overlain by the Corcoran Clay, which separates the upper unconfined aquifer from the underlying confined aquifer. The City's production wells draw from the confined aquifer only and the average annual operational groundwater yield of 9,000 af/yr described in previous sections applies only to the confined aquifer. The City does not currently pump any groundwater from the semi-confined aquifer.

The hydraulic characteristics of the semi-confined aquifer are highly variable, based on site-specific conditions. Wells in the semi-confined aquifer produce 6 gpm to 5,300 gpm; however, pump test data are limited. The transmissivity of the semi-confined aquifer, including the recent alluvium and upper portions of the Tulare Formation, ranges between 600 to greater than 2,300 gallons per day per foot (gpd/ft). The storativity is about 0.05. Where thicker sequences of sand are present, the transmissivity may be higher.

Relatively speaking, groundwater levels in the semi-confined aquifer are significantly deeper at the southern end of the City typically measuring about 48 feet below ground surface, whereas groundwater levels at the northern end of the City are as shallow as 5 feet below ground surface. There appears to be a natural groundwater cycle where water levels rise and then lower every few years (in response to pumpage), and there is also a seasonal fluctuation due to seasonal groundwater use and in response to tidal influences. Currently groundwater levels in the semi-confined aquifer appear on the rise at the northern end of the City; however, there are insufficient data in the southern portion of the City to make any conclusions in this regard. Groundwater flow in the semi-confined aquifer is generally from the southeast towards the Old River north of the City.

Groundwater recharge in the semi-confined aquifer occurs from rainfall, applied water that percolates to the water table, and seasonal infiltration by the creeks. The recharge for the shallow semi-confined aquifer is generally from the south, from the Coast Ranges, and moves to the north and west.

The semi-confined aquifer is monitored by other entities at four locations within the City. Static water levels are measured on a quarterly basis and reported to the RWQCB. Groundwater quality is typically monitored just for specific contaminants of concern and does not coincide with the general parameters monitored by the City and others in the confined aquifer.



Current pumping from the semi-confined aquifer is thought to be widespread, via private wells, and used primarily for irrigation of agricultural areas. Current pumpage quantities are unknown; however, the stable groundwater level trends in the semi-confined aquifer indicate that existing pumpage is within the operational yield of the semi-confined aquifer.

Groundwater quality information is limited for the semi-confined aquifer. Most of the available water quality data for the semi-confined aquifer is from data from a 1968 basin-wide study. Groundwater extracted from the semi-confined aquifer is generally classified as being high in salts and not suitable for potable uses, but may be considered suitable for non-potable uses such as agricultural irrigation. The following provides an overview of key water quality constituents in the semi-confined aquifer:

- TDS varies greatly (ranging from 567 mg/L to 2,310 mg/L), but overall is poorer quality than the confined aquifer and exceeds recommended drinking water Maximum Contaminant Levels (MCLs)²³. The TDS concentrations increase toward the north and to the west.
- Sulfate concentrations in the semi-confined aquifer ranged from less than 100 to over 600 mg/L²⁴.
- Chloride concentrations in the semi-confined aquifer range from 50 to 850 mg/L, with the lowest concentrations near the Coast Ranges, south of Tracy near the airport²⁵.
- Boron concentrations in the semi-confined aquifer range from 0.7 to 6.3 mg/L²⁶. The lowest concentrations follow a similar pattern as the TDS, with low concentrations near the Coastal Range foothills (to the south).

The shallow groundwater is considered to be suitable for most agricultural irrigation purposes. However, given the relatively poor permeability of the soils in the City, there is concern for the potential accumulation of salts in the soil, leading to soil binding. This could partially be mitigated by planting salt-tolerant turf and plant materials and providing good subsurface drainage; however, this may not be a feasible long-term solution for the City.

²³ The recommended MCL for TDS is 500 mg/L, with an upper limit of 1,000 mg/L if it is not reasonable or feasible to supply water with lower concentrations. Short-term use is allowed for water between 1,000 and 1,500 mg/L.

²⁴ The recommended MCL for sulfate is 250 mg/L, with an upper limit of 500 mg/L if it is not reasonable or feasible to supply water with lower concentrations. Short-term use is allowed for water up to 600 mg/L.

²⁵ The recommended MCL for chloride is 250 mg/L, with an upper limit of 500 mg/L if it is not reasonable or feasible to supply water with lower concentrations. Short-term use is allowed for water up to 600 mg/L.

²⁶ There is no established MCL for boron. However, California DPH has established an Action Level of 1 mg/L for boron.



6.5 Summary of Existing and Additional Planned Future Water Supplies

Table 13 provides a summary of the City’s existing and additional planned future water supply entitlements. Table 14 provides a summary of historical water supply deliveries and anticipated existing and additional planned future water supplies during normal years from each of the City’s water supplies. A discussion of the future anticipated availability of these existing and additional planned future water supplies during dry years is provided in the next section.

Table 13. Summary of Existing and Additional Planned Future Water Supplies		
Supply	Water Right or Available Supply Quantity, af/yr	Supply Ever Used by City
Existing Water Supplies		
USBR CVP Contract (City Contract) (M&I Reliability)	10,000	Yes
USBR CVP (BCID assignment) (Ag Reliability)	5,000	Yes
USBR CVP (WSID assignment) (Ag Reliability)	2,500	Yes
South County Water Supply Project (pre-1914 rights)	10,000	Yes
Groundwater ^(a)	9,000	Yes
Semitropic Water Storage Bank (Permanent Agreement) ^(b,c)	3,500	Yes
Additional Planned Future Water Supplies		
USBR CVP (WSID Option) (Ag Reliability)	2,500	No
USBR CVP (BBID contract) (Ag Reliability)	11,000	No
BBID (pre-1914) ^(c)	4,500	No
Additional SCWSP (pre-1914 rights)	3,000	No
Aquifer Storage and Recovery ^(d)	3,000	No
Recycled Water ^(e)	25,000	No
<p>^(a) The City is planning to decrease groundwater use to 2,500 af/yr by the year 2015. However, studies described in this WSA have indicated that up to 9,000 af/yr of groundwater is available to the City to make up for shortfalls in the event of a severe drought or other water shortage.</p> <p>^(b) As of June 2012, the Semitropic Permanent Agreement replaced the previous Pilot Agreement.</p> <p>^(c) The future water supply anticipated from BBID (pre-1914) has been increased from 3,000 af/yr (as presented in the City’s 2010 UWMP) to 4,500 af/yr based on recent agreements related to the proposed Tracy Hills project.</p> <p>^(d) Supplies from Semitropic and ASR are assumed to be dry year supplies. As such, during normal years, supplies from these sources are assumed to be 0 af/yr.</p> <p>^(e) Based on the total projected recycled water production at buildout (22.4 mgd) (reference: Table C-1, Tracy Wastewater Master Plan, Draft Report, prepared by CH2MHill, May 2012).</p>		

Table 14. Quantity of Historical Water Deliveries and Existing and Additional Planned Future Water Supplies in Normal Years

Supply	Historical Water Deliveries, af/yr							Projected Future Available Supplies, af/yr				
	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025	2030	2035
Existing Water Supplies^(a,b)												
USBR CVP Contract (City Contract)	5,676	5,734	4,968	8,387	7,785	8,920	5,304	7,500	7,500	7,500	7,500	7,500
USBR CVP (BCID assignment)	0	0	0	0	0	0	0	2,500	2,500	2,500	2,500	2,500
USBR CVP (WSID assignment)	0	0	0	0	0	0	0	1,250	1,250	1,250	1,250	1,250
Total CVP Supplies	5,676	5,734	4,968	8,387	7,785	8,920	5,304	11,250	11,250	11,250	11,250	11,250
South County Water Supply Project (pre-1914 rights)	0	0	0	0	0	3,146	10,850	10,000	10,000	10,000	10,000	10,000
Groundwater ^(c)	1,980	2,856	5,838	4,310	6,548	5,826	498	2,500	2,500	2,500	2,500	2,500
Semitropic Water Storage Bank (Permanent Agreement) ^(d)	0	0	0	0	0	0	0	0	0	0	0	0
Total Existing Potable Supplies	7,656	8,590	10,806	12,697	14,333	17,892	16,652	23,750	23,750	23,750	23,750	23,750
Additional Planned Future Water Supplies^(b)												
Additional USBR CVP (WSID Option)								1,250	1,250	1,250	1,250	1,250
Additional USBR CVP (BBID contract)								1,500	3,000	4,500	5,500	5,500
BBID (pre-1914) ^(e)								4,500	4,500	4,500	4,500	4,500
Additional SCWSP Supplies (pre-1914)								3,000	3,000	3,000	3,000	3,000
Aquifer Storage and Recovery ^(f)								0	0	0	0	0
Recycled Water (non-potable) ^(g)								12,400	14,900	17,500	19,900	22,500
Total Additional Planned Future Potable Supplies								10,250	11,750	13,250	14,250	12,750
Total Potable Supplies	7,656	8,590	10,806	12,697	14,333	17,892	16,652	34,000	35,500	37,000	38,000	38,000
Total Additional Planned Future Non-Potable Supplies								12,400	14,900	17,500	19,900	22,500

(a) Historical supply data based on production data.
 (b) Projected additional supplies based on Table 18 Current and Projected Water Supply Allocations – Normal Year, City of Tracy 2010 Urban Water Management Plan, May 2011.
 (c) Although the City can sustainably extract up to 9,000 af/yr of groundwater, the City is planning to scale back its groundwater extraction in future years to increase the overall quality of its water supply. The City will continue to rely on groundwater for peaking and drought and emergency supplies, up to 9,000 af/yr, on an as-needed basis.
 (d) In normal years, supply from the Semitropic Water Storage Bank is assumed to be 0 af/yr, as this is considered a dry year supply.
 (e) The future water supply anticipated from BBID (pre-1914) has been increased from 3,000 af/yr (as presented in the City's 2010 UWMP) to 4,500 af/yr based on recent agreements related to the proposed Tracy Hills project.
 (f) In normal years, supply from the ASR Project is assumed to be 0 af/yr, as this is considered a dry year supply.
 (g) Table 15, City of Tracy 2010 Urban Water Management Plan, prepared by Erler & Kalinowski, Inc., May 2011.



6.6 Dry Year Water Supply Availability and Reliability

Water Code section 10910 (c)(4) requires that a WSA include a discussion with regard to “whether total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.” Accordingly, this WSA addresses these three hydrologic conditions through the year 2035.

The reliability of each of the City’s existing and additional planned water supplies and their projected availability during normal, single dry, and multiple dry years as described in Section 5 of the City’s 2010 UWMP, is described below and summarized in Table 15.

Supply Source	Anticipated Reliability (% of Entitlement)		
	Normal Years	Single Dry Years	Multiple Dry Years
Existing Water Supplies			
USBR CVP Contract (City Contract) (M&I Reliability)	75%	65%	40%
USBR CVP (BCID assignment) (Ag Reliability)	50%	15%	10%
USBR CVP (WSID assignment) (Ag Reliability)	50%	15%	10%
South County Water Supply Project (pre-1914 rights)	100%	95%	95%
Groundwater ^(a)	100%	100%	100%
Semitropic Water Storage Bank (Permanent Agreement) ^(b)	--	100%	100%
Additional Planned Future Water Supplies			
USBR CVP (WSID Option) (Ag Reliability)	50%	15%	10%
USBR CVP (BBID contract) (Ag Reliability)	50%	15%	10%
BBID (pre-1914 rights)	100%	90%	90%
Additional SCWSP (pre-1914 rights)	100%	95%	95%
Aquifer Storage and Recovery ^(b)	--	100%	100%
Recycled Water	100%	100%	100%
^(a) The City is planning to decrease groundwater use to 2,500 af/yr by the year 2015. However, studies described in this WSA have indicated that up to 9,000 af/yr of groundwater is available to the City to make up for shortfalls in the event of a severe drought or other water shortage. ^(b) Supplies from Semitropic and ASR are assumed to be dry year supplies. As such, during normal years, supplies from these sources are assumed to be 0 af/yr.			



6.6.1 Normal Years

Normal or wet water years are those water years that match or exceed median rainfall and runoff levels. The following describes the availability and reliability of the City's existing and additional planned future water supplies under normal year conditions:

- Due to recent environmental concerns in the Delta and potential future impacts due to climate change, it has been assumed that the long-term reliability of USBR's CVP supplies in normal years will be 75 percent for M&I-reliability supplies and 50 percent for Ag-reliability supplies. These reliability assumptions are reduced from those previously assumed in the City's 2005 UWMP, but are consistent with reliability reductions estimated by DWR for the State Water Project, which is subject to the same Delta environmental and climate change issues.
- During a normal water year, the City expects to receive 100 percent of its SCWSP water supply allocation, or 10,000 af/yr.
- Pursuant to the Groundwater Management Policy, the City can extract up to 9,000 af/yr of local groundwater. Because of the high TDS and hardness of the City's groundwater, the City hopes to reduce its dependency on groundwater in the future. As additional higher quality water supplies come on line, the City estimates that it may be possible to reduce the quantity of groundwater used during a typical normal or wet year. This reduction, however, is highly dependent on future water supplies and demands and should be viewed as a goal, and not a firm projection. In the event that additional supplies are needed, the City may utilize up 9,000 af of groundwater per year.
- In the future, up to 4,500 af/yr of pre-1914 appropriative water rights water is expected to be available directly or via exchange from BBID. By 2015, the City anticipates being able to receive 100 percent of this supply during normal and wet years.
- In the future, up to approximately 11,000 af/yr of Ag-reliability water from BBID DMC/CVP contract is expected to be available to the City. Therefore, in future normal water years, 5,500 af/yr (50% of 11,000 af) will be available.
- In the future, the City expects to receive 100 percent of a future SCWSP water supply allocation in normal years, or 3,000 af/yr.
- By 2015, 1,000 af/yr of banked water is assumed to be available through the City's ASR program and approximately 1,750 af/yr of banked water is assumed to be available through the City's participation in the Semitropic Water Storage Bank. However, these supplies are considered dry year supplies, and are assumed to be zero in normal years.

The reliability of each of the City's existing and additional planned future water supplies and their projected availability during normal and wet years is shown in Table 16. Figure 8 shows the City's projected future supply versus demand in normal years.

Table 16. Projected Existing and Additional Planned Future Water Supplies Available in Normal Years

Supply	Anticipated Reliability (% of Entitlement)	Projected Future Available Supply, af/yr				
	Normal Years	2015	2020	2025	2030	2035
Existing Water Supplies						
USBR CVP Contract (City Contract)	75%	7,500	7,500	7,500	7,500	7,500
USBR CVP (BCID assignment)	50%	2,500	2,500	2,500	2,500	2,500
USBR CVP (WSID assignment)	50%	1,250	1,250	1,250	1,250	1,250
Total CVP Supplies		11,250	11,250	11,250	11,250	11,250
South County Water Supply Project (pre-1914 rights)	100%	10,000	10,000	10,000	10,000	10,000
Groundwater ^(a)	100%	2,500	2,500	2,500	2,500	2,500
Semitropic Water Storage Bank (Permanent Agreement) ^(b)	--	0	0	0	0	0
Additional Planned Future Water Supplies						
USBR CVP (WSID Option)	50%	1,250	1,250	1,250	1,250	1,250
USBR CVP (BBID contract)	50%	1,500	3,000	4,500	5,500	5,500
BBID (pre-1914 rights) ^(c)	100%	4,500	4,500	4,500	4,500	4,500
Additional SCWSP (pre-1914 rights)	100%	3,000	3,000	3,000	3,000	3,000
Aquifer Storage and Recovery ^(b)	--	0	0	0	0	0
Recycled Water (non-potable) ^(d)	100%	12,400	14,900	17,500	19,900	22,500
Total Projected Potable Water Supply		34,000	35,500	37,000	38,000	38,000
% Cutback from Normal Year^(e)		--	--	--	--	--
Total Projected Recycled Water Supply^(d)		12,400	14,900	17,500	19,900	22,500
% Cutback from Normal Year^(e)		--	--	--	--	--
<p>^(a) The City is planning to decrease groundwater use to 2,500 af/yr by the year 2015. However, studies described in this WSA have indicated that up to 9,000 af/yr of groundwater is available to the City to make up for shortfalls in the event of a severe drought or other water shortage.</p> <p>^(b) Assumed to be zero in normal years, as Semitropic and ASR are considered to be dry year supplies.</p> <p>^(c) The future water supply anticipated from BBID (pre-1914) has been increased from 3,000 af/yr (as presented in the City's 2010 UWMP) to 4,500 af/yr based on recent agreements related to the proposed Tracy Hills project.</p> <p>^(d) Table 15, City of Tracy 2010 Urban Water Management Plan, prepared by Erler & Kalinowski, Inc., May 2011.</p> <p>^(e) Not applicable as Normal Year supplies are being shown.</p>						



6.6.2 Single Dry Years

During a single dry year, or when the DMC/CVP flows must be reduced due to hydrologic and/or environmental impacts, all of the City's existing surface water allotments are subject to some level of reduction. The actual reductions will vary with the severity of the regional water supply shortage and climatic conditions, and the consideration of water and contract rights. The following describes the availability and reliability of the City's existing and additional planned future water supplies under single dry year conditions:

- The City Contract for an annual entitlement of 10,000 ac-ft of USBR water from the DMC/CVP is subject to M&I Reliability. Based on the historical record, it is assumed that during a single-dry year, the City's annual allocation will be 65 percent of its entitlement, or 6,500 af/yr.
- The City currently holds the assignment contracts (BCID and WSID) for an annual entitlement of up to 7,500 af/yr, and plans to purchase an additional 2,500 af/yr of entitlement from WSID, for a total of 10,000 af/yr of entitlements. These contracts pertain to USBR water from the DMC/CVP and are subject to Ag-reliability. Based on the historical record and PROSIM modeling, it is assumed that during a single-dry year, the City's allocation will be 15 percent of its entitlement, 1,125 af/yr (based on the existing 7,500 af/yr of entitlements) and 1,500 af/yr (based on the total 10,000 af/yr of existing and future entitlements).
- During a single-dry year, it is assumed that the City will receive 95 percent of its SCWSP water supply allocation, or 9,500 af/yr.
- Pursuant to the Groundwater Management Policy, the City can extract up to 9,000 af/yr of local groundwater resources. However, as described above, the City may reduce its future groundwater use to 2,500 af/yr by 2015 (based on normal year supply conditions). In the event that groundwater is needed to supplement surface water supplies during a single-dry year, however, the City does intend to call on these supplies up to the maximum sustainable yield of 9,000 af/yr.
- In the future, up to 4,500 af/yr of pre-1914 appropriative water rights water is expected to be available either directly or via exchange from BBID. In single-dry water years by 2015, it is assumed that 4,050 af/yr of BBID Pre-1914 water right water, or 90 percent of the contractual allocation, will be available.
- In the future, up to 11,000 af/yr of Ag-reliability water from the BBID DMC/CVP contract is expected to be available to the City. In future single-dry water years, it is assumed that 1,650 af/yr, or 15 percent of the contractual entitlement, of BBID water will be available.
- In the future, the City expects to receive 95 percent of a future SCWSP water supply allocation in single dry years, or 2,850 af/yr.
- By 2015, 1,000 af/yr of banked water is assumed to be available through the City's ASR program and approximately 2,033 af/yr of banked water is assumed to be available through the City's participation in the Semitropic Water Storage Bank.



The reliability of each of the City's existing and additional planned future water supplies and their projected availability during a single dry year is shown in Table 17. Figure 9 shows the City's projected future supply versus demand in single dry years.

Table 17. Projected Existing and Additional Planned Future Water Supplies Available in Single Dry Years

Supply	Anticipated Reliability (% of Entitlement)	Projected Future Available Supply, af/yr				
	Single Dry Years	2015	2020	2025	2030	2035
Existing Water Supplies						
USBR CVP Contract (City Contract)	65%	6,500	6,500	6,500	6,500	6,500
USBR CVP (BCID assignment)	15%	750	750	750	750	750
USBR CVP (WSID assignment)	15%	375	375	375	375	375
Total CVP Supplies		7,625	7,625	7,625	7,625	7,625
South County Water Supply Project (pre-1914 rights)	95%	9,500	9,500	9,500	9,500	9,500
Groundwater ^(a)	100%	9,000	9,000	9,000	9,000	9,000
Semitropic Water Storage Bank (Permanent Agreement)	100%	2,033	3,500	3,500	3,500	3,500
Additional Planned Future Water Supplies						
USBR CVP (WSID Option)	15%	375	375	375	375	375
USBR CVP (BBID contract)	15%	450	900	1,350	1,650	1,650
BBID (pre-1914 rights) ^(b)	90%	4,050	4,050	4,050	4,050	4,050
Additional SCWSP (pre-1914 rights)	95%	2,850	2,850	2,850	2,850	2,850
Aquifer Storage and Recovery	100%	1,000	2,000	3,000	3,000	3,000
Recycled Water (non-potable) ^(c)	100%	12,400	14,900	17,500	19,900	22,500
Total Projected Potable Water Supply		36,833	39,800	41,250	41,550	41,550
% Cutback from Normal Year ^(d)		0%	0%	0%	0%	0%
Total Projected Recycled Water Supply^(c)		12,400	14,900	17,500	19,900	22,500
% Cutback from Normal Year ^(d)		0%	0%	0%	0%	0%
<p>^(a) The City is planning to decrease groundwater use to 2,500 af/yr by the year 2015. However, studies described in this WSA have indicated that up to 9,000 af/yr of groundwater is available to the City to make up for shortfalls in the event of a severe drought or other water shortage.</p> <p>^(b) The future water supply anticipated from BBID (pre-1914) has been increased from 3,000 af/yr (as presented in the City's 2010 UWMP) to 4,500 af/yr based on recent agreements related to the proposed Tracy Hills project.</p> <p>^(c) Table 15, City of Tracy 2010 Urban Water Management Plan, prepared by Erler & Kalinowski, Inc., May 2011.</p> <p>^(d) Percent cutback from normal year for potable water supplies is zero due to availability of Semitropic in single dry years. No cutback is anticipated for recycled water supplies.</p>						



6.6.3 Multiple Dry Years

If there are multiple dry years, the City's surface water allotments, especially from the DMC/CVP, may be significantly reduced. Thus, in the event of drought, the City will have to depend more heavily on conservation efforts, groundwater, SCWSP supplies and other drought contingency supplies (previously banked water). As an example, in 1991, due to prolonged drought, the USBR reduced the City's DMC/CVP surface water allotment by 50 percent, such that the City's 1991 allocation was reduced to 5,000 acre-feet. As a result, the City implemented a water conservation program consistent with its Water Shortage Contingency Plan and relied on its groundwater supply to satisfy a larger portion of the City's water demand. The City now has a broader portfolio of water supplies. However, as described above, CVP supply reliabilities may be reduced even further due to on-going Delta environmental issues and future climate change. The following describes the availability and reliability of the City's existing and additional planned future water supplies under multiple dry year conditions:

- The City Contract for an annual entitlement of 10,000 af/yr of USBR water from the DMC/CVP is subject to M&I Reliability. Based on the historical record, it is assumed that during a multiple dry year period, the City's annual allocation will be 40 percent of its entitlement, or 4,000 af/yr.
- The City currently holds the assignment contracts (BCID and WSID) for an annual entitlement of up to 7,500 af/yr, and plans to purchase an additional 2,500 af/yr of entitlement from WSID, for a total of 10,000 af/yr of entitlements. These contracts pertain to USBR water from the DMC/CVP and are subject to Ag-reliability. Based on the historical record and PROSIM modeling, it is assumed that during multiple dry years, the City's allocation will be 10 percent of its entitlement, 750 af/yr (based on the existing 7,500 af/yr of entitlements) and 1,000 af/yr (based on the total 10,000 af/yr of existing and future entitlements).
- During a multiple dry year period, the City expects to receive 95 percent of its SCWSP water supply allocation, or 9,500 af/yr.
- Pursuant to the Groundwater Management Policy, the City can extract up to 9,000 af/yr of local groundwater resources. However, as described above, the City may reduce its future groundwater use to 2,500 af/yr by 2015 (based on normal year supply conditions). In the event that groundwater is needed to supplement surface water supplies during a multiple dry year period, however, the City does intend to call on these supplies up to the maximum sustainable yield of 9,000 af/yr.
- In the future, up to 4,500 af/yr of pre-1914 appropriative water rights water is expected to be available either directly or via exchange from BBID. In multiple dry water years by 2015, it is assumed that 4,050 af/yr of BBID Pre-1914 water right water, or 90 percent of the contractual allocation, will be available.
- In the future, up to 11,000 af/yr of Ag-reliability water from BBID DMC/CVP contract is expected to be available to the City. In future multiple dry water years, it is assumed that 1,100 af/yr of BBID water, or 10 percent of the contractual entitlement, will be available.



- In the future, the City expects to receive 95 percent of a future SCWSP water supply allocation in single dry years, or 2,850 af/yr.
- By 2015, 1,000 af/yr of banked water is assumed to be available through the City's ASR program and approximately 2,033 af/yr of banked water is assumed to be available through the City's participation in the Semitropic Water Storage Bank.

The reliability of each of the City's existing and additional planned future water supplies and their projected availability during a multiple dry year period is shown in Table 18. Figure 10 shows the City's projected future supply versus demand in multiple dry years.

Table 18. Projected Existing and Additional Planned Future Water Supplies Available in Multiple Dry Years

Supply	Anticipated Reliability (% of Entitlement)	Projected Future Available Supply, af/yr				
	Multiple Dry Years	2015	2020	2025	2030	2035
Existing Water Supplies						
USBR CVP Contract (City Contract)	40%	4,000	4,000	4,000	4,000	4,000
USBR CVP (BCID assignment)	10%	500	500	500	500	500
USBR CVP (WSID assignment)	10%	250	250	250	250	250
Total CVP Supplies		4,750	4,750	4,750	4,750	4,750
South County Water Supply Project (pre-1914 rights)	95%	9,500	9,500	9,500	9,500	9,500
Groundwater ^(a)	100%	9,000	9,000	9,000	9,000	9,000
Semitropic Water Storage Bank (Permanent Agreement)	100%	2,033	3,500	3,500	3,500	3,500
Additional Planned Future Water Supplies						
USBR CVP (WSID Option)	10%	250	250	250	250	250
USBR CVP (BBID contract)	10%	300	600	900	1,100	1,100
BBID (pre-1914 rights) ^(b)	90%	4,050	4,050	4,050	4,050	4,050
Additional SCWSP (pre-1914 rights)	95%	2,850	2,850	2,850	2,850	2,850
Aquifer Storage and Recovery	100%	1,000	2,000	3,000	3,000	3,000
Recycled Water (non-potable) ^(c)	100%	12,400	14,900	17,500	19,900	22,500
Total Projected Potable Water Supply		33,733	36,500	37,800	38,000	38,000
% Cutback from Normal Year^(d)		8.5%	0%	0%	0%	0%
Total Projected Recycled Water Supply^(c)		12,400	14,900	17,500	19,900	22,500
% Cutback from Normal Year^(d)		0%	0%	0%	0%	0%
<p>^(a) The City is planning to decrease groundwater use to 2,500 af/yr by the year 2015. However, studies described in this WSA have indicated that up to 9,000 af/yr of groundwater is available to the City to make up for shortfalls in the event of a severe drought or other water shortage.</p> <p>^(b) The future water supply anticipated from BBID (pre-1914) has been increased from 3,000 af/yr (as presented in the City's 2010 UWMP) to 4,500 af/yr based on recent agreements related to the proposed Tracy Hills project.</p> <p>^(c) Table 15, City of Tracy 2010 Urban Water Management Plan, prepared by Erler & Kalinowski, Inc., May 2011.</p> <p>^(d) Percent cutback from normal year for potable water supplies is essentially zero due to availability of Semitropic in multiple dry years. No cutback is anticipated for recycled water supplies.</p>						



7.0 DETERMINATION OF WATER SUPPLY SUFFICIENCY

10910(c)(4) If the city or county is required to comply with this part pursuant to subdivision (b), the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.

7.1 Findings

Pursuant to Water Code section 10910(c)(4), and based on the technical analyses described in this Water Supply Assessment, the City finds that the total projected water supplies determined to be available for the Proposed Project during Normal, Single Dry, and Multiple Dry water years during a 20-year projection will meet the projected water demand associated with the Proposed Project, in addition to existing and planned future uses, including agricultural and manufacturing uses.

7.1.1 Existing Conditions with Development Projects with Approved Water Supply and the Proposed Project

Table 19 summarizes the projected availability of the City's existing water supplies, planned additional water supplies and the City's projected water demands in normal, single dry and multiple dry years based on existing demands plus the Proposed Project and Other Development Projects with Approved Water Supply described in Table 8 (see also Figure 11).

Table 19. Water Supply vs. Demand (Under Existing Conditions + Proposed Project + Other Development Projects with Approved Water Supply)			
Supply	Current Dry Year Water Supply Availability, af/yr		
	Normal Years	Single Dry Year	Multiple Dry Years
Potable Water Supplies			
Existing Water Supplies			
USBR CVP Contract (City Contract)	7,500	6,500	4,000
USBR CVP (BCID assignment)	2,500	750	500
USBR CVP (WSID assignment)	1,250	375	250
<i>Total CVP Supplies</i>	<i>11,250</i>	<i>7,625</i>	<i>4,750</i>
South County Water Supply Project (pre-1914 rights) Groundwater ^(e)	10,000	9,500	9,500
Semitropic Water Storage Bank (Permanent Agreement) ^(b)	2,500	9,000	9,000
	--	2,033	2,033
<i>Subtotal Existing Potable Water Supplies</i>	<i>23,750</i>	<i>28,158</i>	<i>25,283</i>
Additional Planned Future Water Supplies			
USBR CVP (WSID Option) ^(c)	1,250	375	250
USBR CVP (BBID contract) ^(d)	1,850	555	370
BBID (pre-1914 rights) ^(e)	0	0	0
Additional SCWSP (pre-1914 rights) Aquifer Storage and Recovery ^(b)	3,000	2,850	2,850
	--	0	0
<i>Subtotal Additional Planned Future Potable Water Supplies</i>	<i>6,100</i>	<i>3,780</i>	<i>3,470</i>
<i>Total Potable Water Supply</i>	<i>29,850</i>	<i>31,938</i>	<i>28,753</i>
Existing Potable Water Demand (2007)	19,176	19,176	19,176
Additional Potable Water Demand for Development Projects with Approved Water Supply including the Proposed Project (see Table 8)	6,564	6,564	6,564
<i>Total Potable Water Demand</i>	<i>25,740</i>	<i>25,740</i>	<i>25,740</i>
Potable Water Supply Shortfall	0	0	0
Non-Potable Water Supplies			
Additional Planned Future Water Supplies			
Recycled Water ^(d)	9,900	9,900	9,900
<i>Subtotal Additional Planned Future Non-Potable Water Supplies</i>	<i>9,900</i>	<i>9,900</i>	<i>9,900</i>
<i>Total Recycled Water Supply^(f)</i>	<i>9,900</i>	<i>9,900</i>	<i>9,900</i>
<i>Total Recycled Water Demand^(f)</i>	<i>1,960</i>	<i>1,960</i>	<i>1,960</i>
Recycled Water Supply Shortfall	0	0	0

^(e) The City is planning to decrease groundwater use to 2,500 af/yr by the year 2015. However, studies described in this WSA have indicated that up to 9,000 af/yr of groundwater is available to the City to make up for shortfalls in the event of a severe drought or other water shortage. Therefore, groundwater pumpage during a dry year conditions assumed to be up to 9,000 af/yr per average annual operational yield of 9,000 af/yr.

^(b) The Semitropic Water Storage Bank and Aquifer Storage and Recovery are considered to be dry year supplies and are therefore considered to be zero in normal years. Current available dry year supply of 2,033 af is based on the City's current available storage (6,100 af) as of January 2013.

^(c) This option will be exercised by the City by early 2014.

^(d) Additional CVP Surface Water (BBID USBR assignment) assumes annexation of 1,080 acres in conjunction with Cordes Ranch Specific Plan (Proposed Project); 1,080 acres x 3.4 af/ac/yr = 3,700 af/yr.

^(e) The future water supply anticipated from BBID (pre-1914) has been increased from 3,000 af/yr (as presented in the City's 2010 UWWMP) to 4,500 af/yr based on recent agreements related to the proposed Tracy Hills project.

^(f) Recycled water supply based on 2010 wastewater flows. Recycled water demand = Gateway Phase 1 (84 af/yr) + Holly Sugar Sports Park (485 af/yr) + Ellis Specific Plan (116 af/yr) + Cordes Ranch Specific Plan (1,127 af/yr) = 1,812 af/yr + 7.5% UAFW = 1,960 af/yr.



As shown, the following additional planned future water supplies will be required to serve the water demands associated with the Proposed Project:

- USBR CVP (WSID Option): 2,500 af/yr
- USBR CVP (BBID contract in conjunction with annexation of 1,080 acres of agricultural land for the Proposed Project): 3,700 af/yr
- Additional SCWSP supplies: 3,000 af/yr

Assuming these additional water supplies are available to the City, the following summarizes the supply availability in Normal, Single Dry and Multiple Dry Years:

- In Normal Years, the City's 23,750 af/yr of existing potable water supplies plus the planned future additional supply of 1,250 af/yr from the WSID Option agreement, 1,850 af/yr from the BBID CVP contract, and 3,000 af/yr of additional supply from the SCWSP would leave a surplus of 4,110 af/yr after meeting the projected total potable demand of 25,740 af/yr.
- In Single Dry Years, the City's 28,158 af/yr of existing potable water supplies plus the planned future additional supply of 375 af/yr from the WSID Option agreement, 555 af/yr from the BBID CVP contract, and 2,850 af/yr of additional supply from the SCWSP would leave a surplus of 6,198 af/yr after meeting the projected total demand of 25,740 af/yr.
- In Multiple Dry Years, the City's 25,283 af/yr of existing potable water supplies plus the planned future additional supply of 250 af/yr from the WSID Option agreement, 370 af/yr from the BBID CVP contract and 2,850 af/yr of additional supply from the SCWSP would leave a surplus of 3,013 af/yr after meeting the projected total demand of 25,740 af/yr.

Furthermore, the surplus potable water supplies available under Normal Year, Single Dry Year and Multiple Dry Year conditions are sufficient to meet the projected recycled water demand of 1,960 af/yr in the event that recycled water infrastructure has not yet been constructed to allow for delivery of recycled water supplies to the Proposed Project and other recycled water use areas located throughout the City. However, the use of potable water supplies to meet projected recycled water demands for the Proposed Project will only be allowed in the interim period before recycled water infrastructure is constructed to provide for distribution of recycled water supplies.



7.1.2 2035 Conditions

Table 20 summarizes the projected availability of the City's existing and planned future additional water supplies and the City's projected water demands in normal, single dry and multiple dry years based on existing demands plus the Proposed Project, Other Development Projects with Approved Water Supply and potential future development described in Table 8 (see also Figure 12).

As shown, the City's existing and planned future additional sources of water supply are sufficient to meet existing demand plus the projected year 2035 demand from build-out of the Proposed Project, Other Development Projects with Approved Water Supply and additional potential future development (identified by Table 8 as "Future Service Areas").

The following summarizes the supply availability in Normal, Single Dry and Multiple Dry Years:

- In Normal Years, the City's 38,000 af/yr of existing potable water supplies and planned future additional supplies would leave a surplus of 4,400 af/yr after meeting the projected total potable demand of 33,600 af/yr.
- In Single Dry Years, the City's 41,550 af/yr of existing potable water supplies and planned future additional supplies would leave a surplus of 7,950 af/yr after meeting the projected total potable demand of 33,600 af/yr.
- In Multiple Dry Years, the City's 38,000 af/yr of existing potable water supplies would leave a surplus of 4,400 af/yr after meeting the projected total potable demand of 33,600 af/yr.

Table 20 also indicates that the future recycled water supply is sufficient to meet the projected 2035 recycled water demand.

Table 20. Water Supply vs. Demand (2035 Conditions)

Supply	Year 2035 Dry Year Water Supply Availability, af/yr		
	Normal Years	Single Dry Years	Multiple Dry Years
Potable Water Supplies			
Existing Water Supplies			
USBR CVP Contract (City Contract)	7,500	6,500	4,000
USBR CVP (BCID assignment)	2,500	750	500
USBR CVP (WSID assignment)	1,250	375	250
<i>Total CVP Supplies</i>	<i>11,250</i>	<i>7,625</i>	<i>4,750</i>
South County Water Supply Project (pre-1914 rights)	10,000	9,500	9,500
Groundwater ^(e)	2,500	9,000	9,000
Semitropic Water Storage Bank (Permanent Agreement) ^(b)	--	3,500	3,500
<i>Subtotal Existing Potable Water Supplies</i>	<i>23,750</i>	<i>29,625</i>	<i>26,750</i>
Additional Planned Future Water Supplies			
USBR CVP (WSID Option)	1,250	375	250
USBR CVP (BBID contract)	5,500	1,650	1,100
BBID (pre-1914 rights) ^(c)	4,500	4,050	4,050
Additional SCWSP (pre-1914)	3,000	2,850	2,850
Aquifer Storage and Recovery ^(b)	--	3,000	3,000
<i>Subtotal Additional Planned Future Potable Water Supplies</i>	<i>14,250</i>	<i>11,925</i>	<i>11,250</i>
Total Potable Water Supply	38,000	41,550	38,000
Projected 2035 Potable Water Demand^(e)	33,600	33,600	33,600
Potable Water Supply Shortfall	0	0	0
Non-Potable Water Supplies			
Additional Planned Future Water Supplies			
Recycled Water ^(c)	22,500	22,500	22,500
<i>Subtotal Additional Planned Future Non-Potable Water Supplies</i>	<i>22,500</i>	<i>22,500</i>	<i>22,500</i>
Total Recycled Water Supply^(d)	22,500	22,500	22,500
Projected 2035 Recycled Water Demand^(d)	6,165	6,165	6,165
Recycled Water Supply Shortfall	0	0	0

^(e) The City is planning to decrease groundwater use to 2,500 af/yr by the year 2015 (based on normal year supply conditions). However, studies described in this WSA have indicated that up to 9,000 af/yr of groundwater is available to the City to make up for shortfalls in the event of a severe drought or other water shortage.

^(b) Supply from Semitropic Water Storage Bank and Aquifer Storage and Recovery (ASR) assumed to be zero during normal years.

^(c) The future water supply anticipated from BBID (pre-1914) has been increased from 3,000 af/yr (as presented in the City's 2010 UWMMP) to 4,500 af/yr based on recent agreements related to the proposed Tracy Hills project.

^(d) Tables 15 and 17, City of Tracy 2010 Urban Water Management Plan, May 2011. Actual recycled water demands may be higher based on actual recycled water use within future projects. Recycled water demand shown is 6,040 af/yr (per Table 17 of 2010 UWMMP) + additional demand for Ellis (116 af/yr) + 7.5% UAFW = 6,165 af/yr.

^(e) Projected 2035 water demand includes projected water demand for the Proposed Project.



8.0 WATER SUPPLY ASSESSMENT APPROVAL PROCESS

10910 (g)(1) Subject to paragraph (2), the governing body of each public water system shall submit the assessment to the city or county not later than 90 days from the date on which the request was received. The governing body of each public water system, or the city or county if either is required to comply with this act pursuant to subdivision (b), shall approve the assessment prepared pursuant to this section at a regular or special meeting.

10911 (b) The city or county shall include the water supply assessment provided pursuant to Section 10910, and any information provided pursuant to subdivision (a), in any environmental document prepared for the project pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code.

The Tracy City Council must approve this WSA at a regular or special meeting. Furthermore, the City must include this WSA in the Draft Environmental Impact Report (EIR) being prepared for the Proposed Project.



9.0 REFERENCES

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City of Tracy: Cordes Ranch Specific Plan

SB 610 Water Supply Assessment



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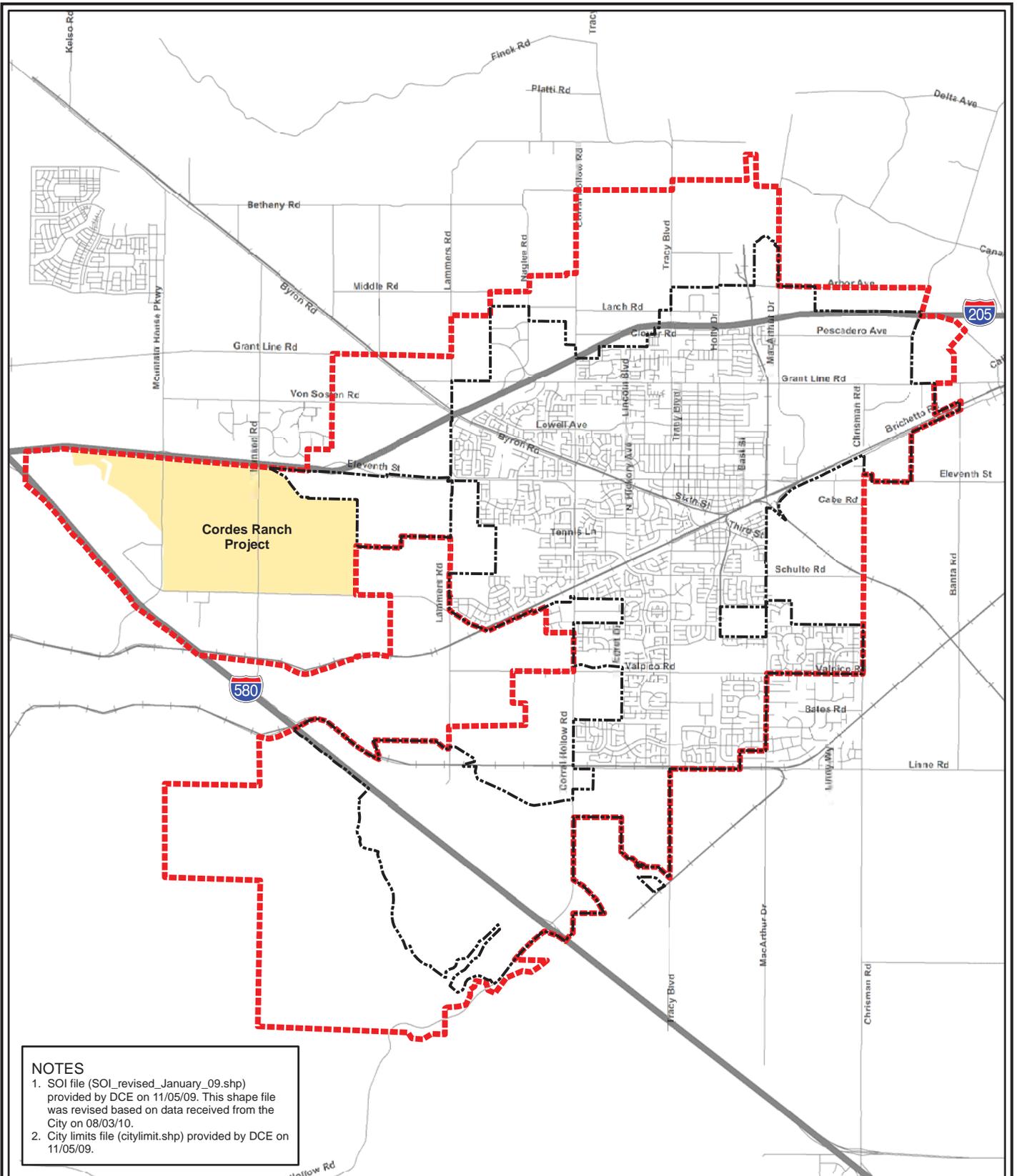


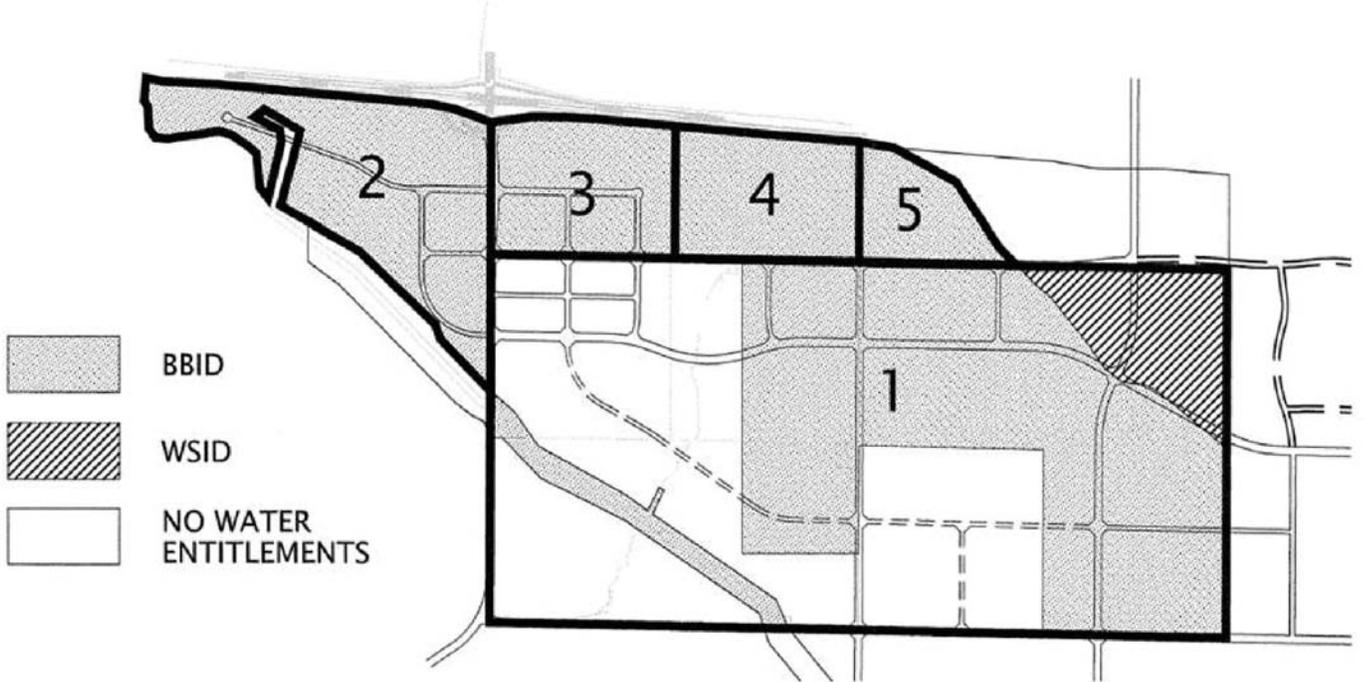
FIGURE 1

**City of Tracy
Water Supply Assessment
for the Cordes Ranch Project**

**PROPOSED PROJECT
LOCATION**



- | | | | |
|---|---|---|--|
| 1 | CROSSROADS BUSINESS CENTER
AT CORDES RANCH | 4 | TWL INVESTORS LLC |
| 2 | GBC GLOBAL INVESTMENT | 5 | LOPEZ / ADAMS / GILLON
GOUVAIA / VIERRA |
| 3 | DELTA PROPERTIES | | |



NOTES
 1. Source: DRAFT Proposed Water Supply for the Cordes Ranch Project, June 2011, WJM Consulting Engineering.

FIGURE 2

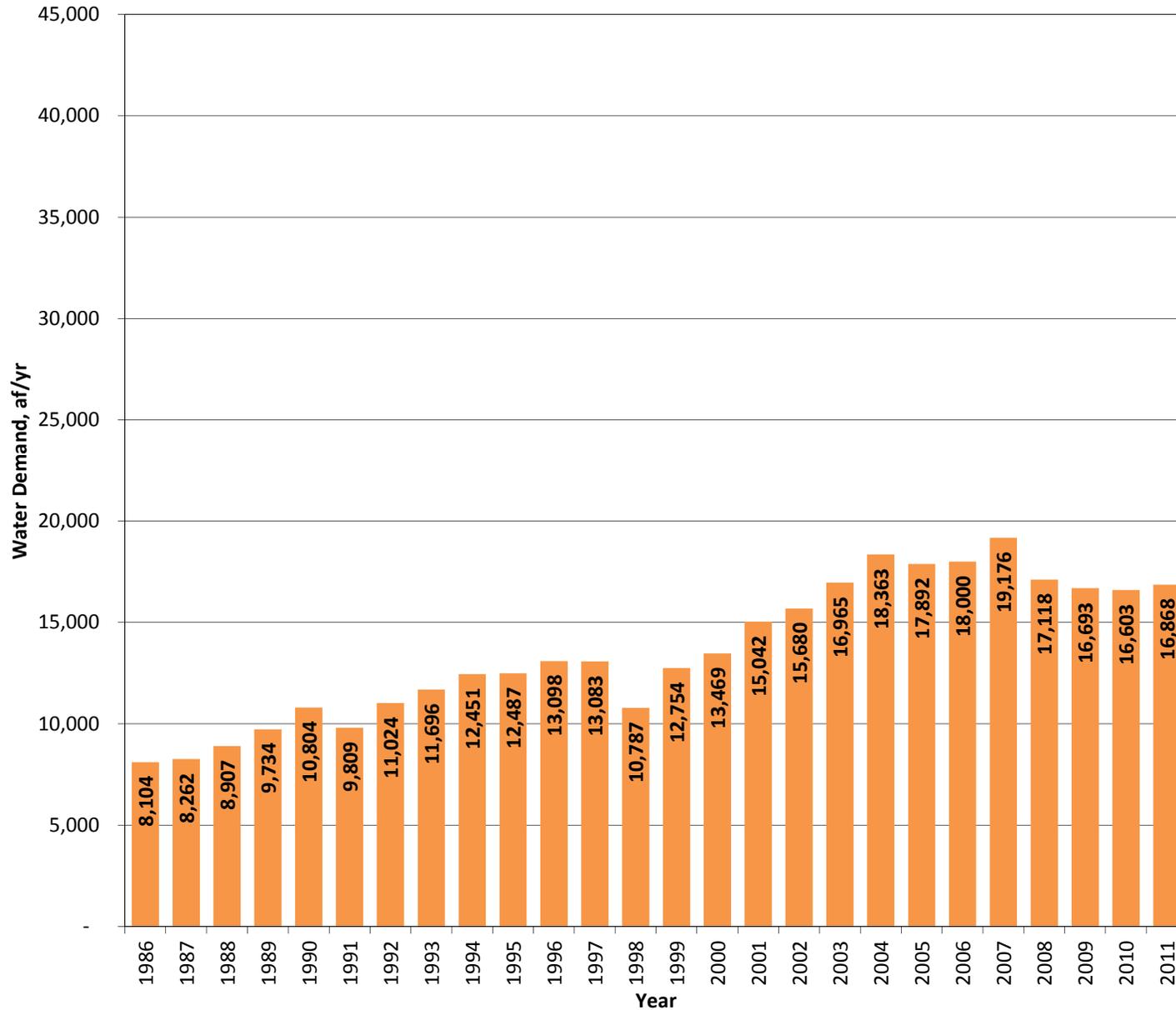
**City of Tracy
 Water Supply Assessment
 for the Cordes Ranch Project**



**PROPOSED LAND OWNERSHIP
 AND IRRIGATION DISTRICT SERVICE AREAS**

O:\Clients\404 City of Tracy\02-11-90 Cordes Ranch Specific Plan Support-Tier 2\GIS\Figures\Water Supply Assessment\Fig 2_Districts.mxd 6/11/2012

Figure 3. City of Tracy Historical Potable Water Demand



Legend:

■ Historical Potable Water Demand

Notes:

(1) Source: City of Tracy Water Inventory Reports, Annual Production Reports, and Table 6 Current and Historical Potable Water Demand by Water Demand Sector of the City of Tracy 2010 UWMP, May 2011.

Figure 4. City of Tracy Historical and Projected Future Water Demand

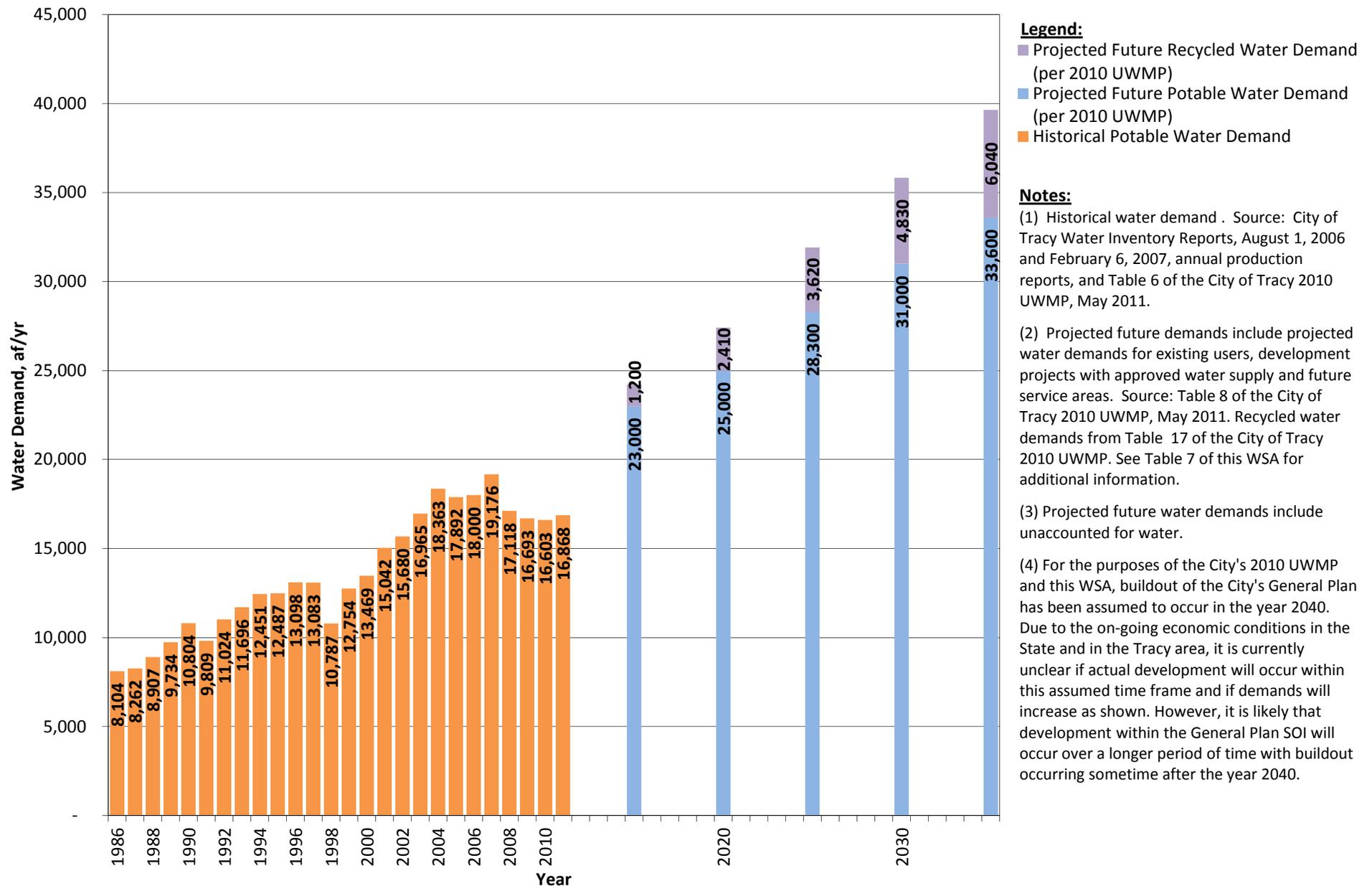
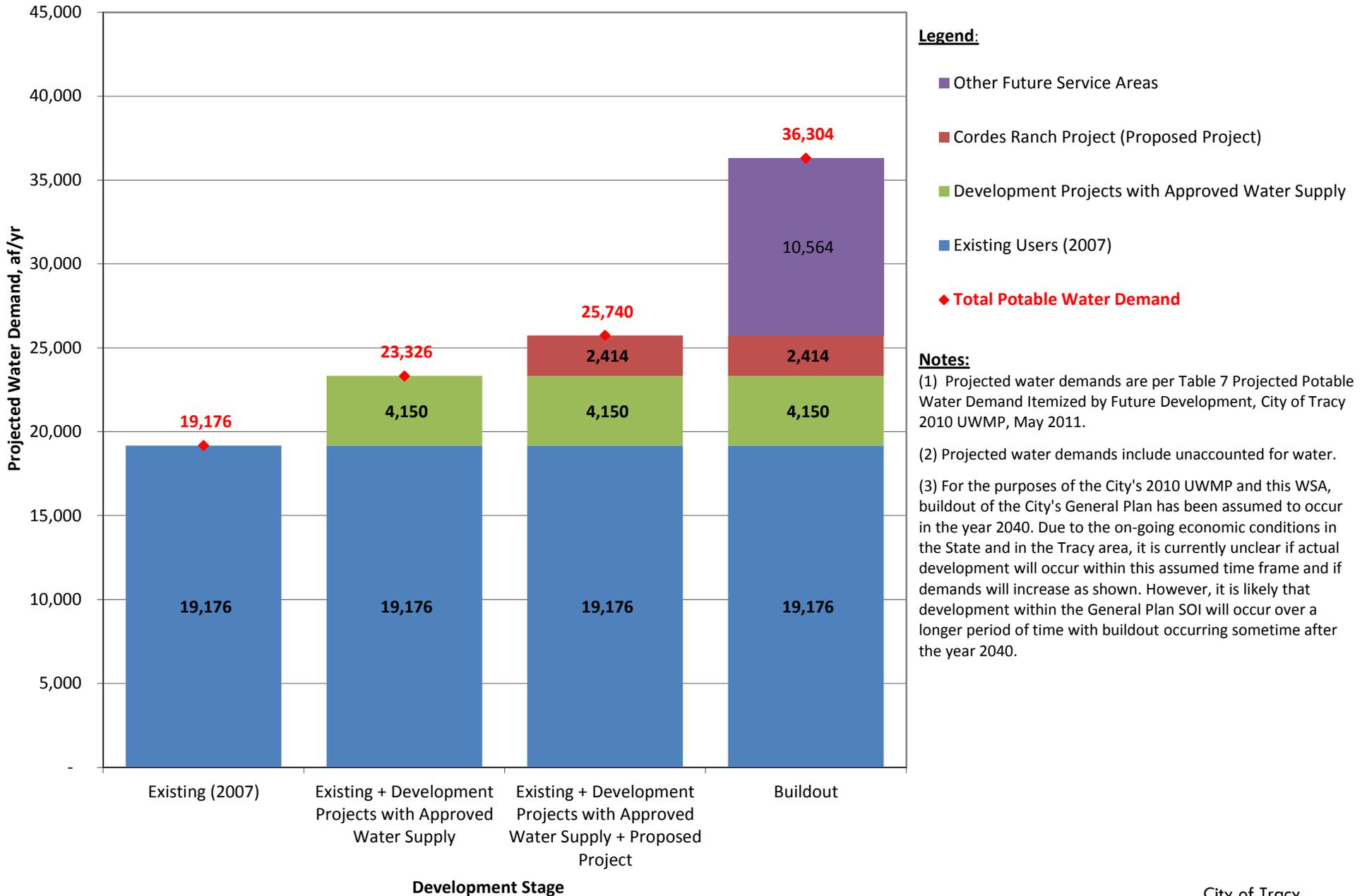


Figure 5. City of Tracy Projected Future Potable Water Demand by Development Stage



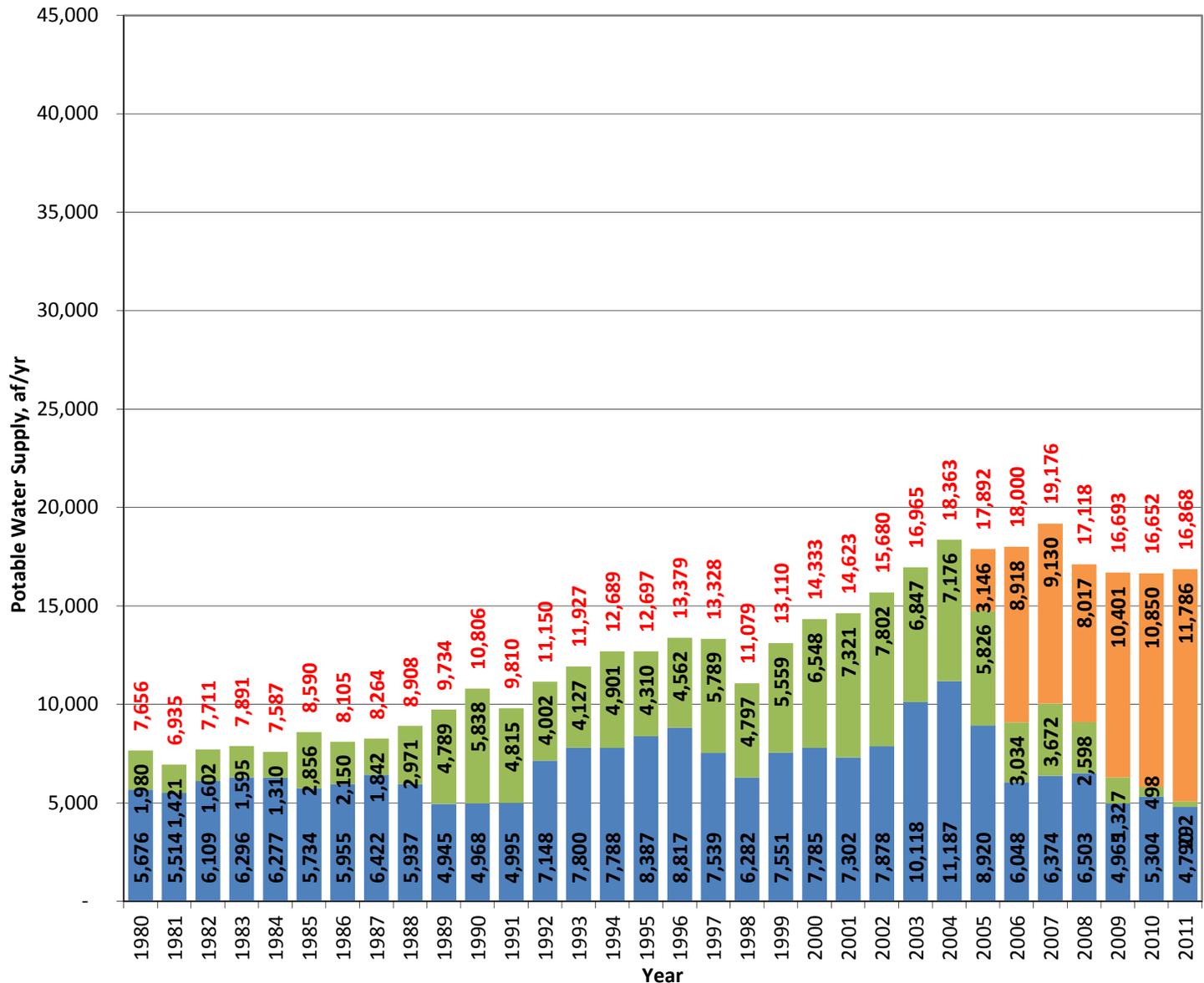
Legend:

- Other Future Service Areas
- Cordes Ranch Project (Proposed Project)
- Development Projects with Approved Water Supply
- Existing Users (2007)
- ◆ Total Potable Water Demand

Notes:

- (1) Projected water demands are per Table 7 Projected Potable Water Demand Itemized by Future Development, City of Tracy 2010 UWMP, May 2011.
- (2) Projected water demands include unaccounted for water.
- (3) For the purposes of the City's 2010 UWMP and this WSA, buildout of the City's General Plan has been assumed to occur in the year 2040. Due to the on-going economic conditions in the State and in the Tracy area, it is currently unclear if actual development will occur within this assumed time frame and if demands will increase as shown. However, it is likely that development within the General Plan SOI will occur over a longer period of time with buildout occurring sometime after the year 2040.

Figure 6. City of Tracy Historical Potable Water Supplies



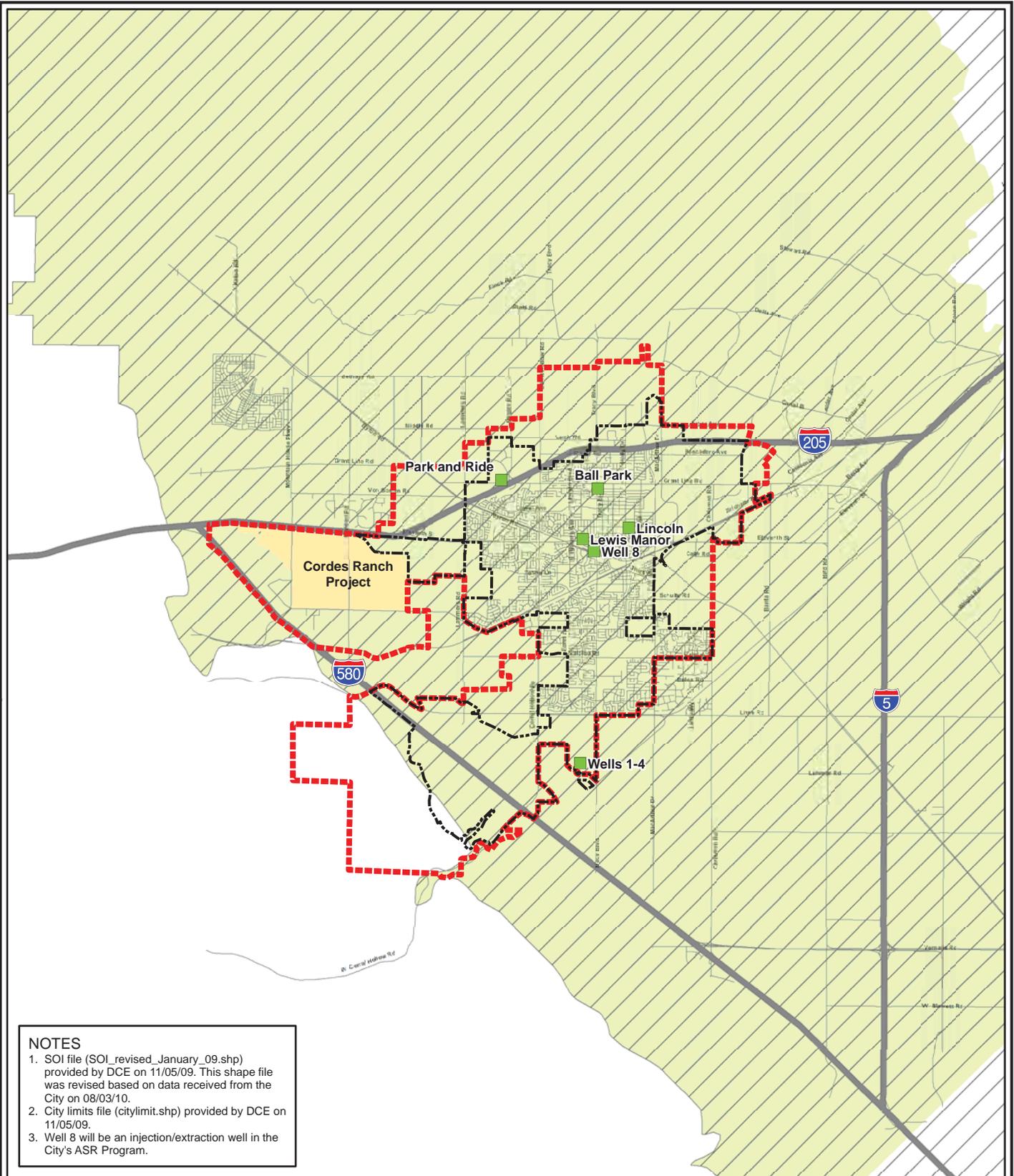
Legend:

- SSJID (SCWSP)
- Groundwater
- CVP Deliveries
- Total Supply**

Notes:

(1) Source: City of Tracy Annual Water Delivery Schedule (1998-2004). 2005-2010 data based on Table 11 of City of Tracy 2010 UWMP, May 2011. 2011 data based on City production data.

(2) Data for 1980 to 1997 based on historical City groundwater pumpage and CVP deliveries.



NOTES

1. SOI file (SOI_revised_January_09.shp) provided by DCE on 11/05/09. This shape file was revised based on data received from the City on 08/03/10.
2. City limits file (citylimit.shp) provided by DCE on 11/05/09.
3. Well 8 will be an injection/extraction well in the City's ASR Program.

- LEGEND:**
- Cordes Ranch Project
 - Groundwater Well
 - San Joaquin Valley Basin
 - Tracy Sub-basin
 - City Limits
 - SOI
 - Highway

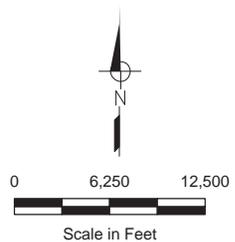


FIGURE 7

**City of Tracy
Water Supply Assessment
for the Cordes Ranch Project**

**GROUNDWATER BASIN
AND WELL LOCATIONS**



Figure 8. City of Tracy Future Potable Water Supply vs. Demand in Normal Years



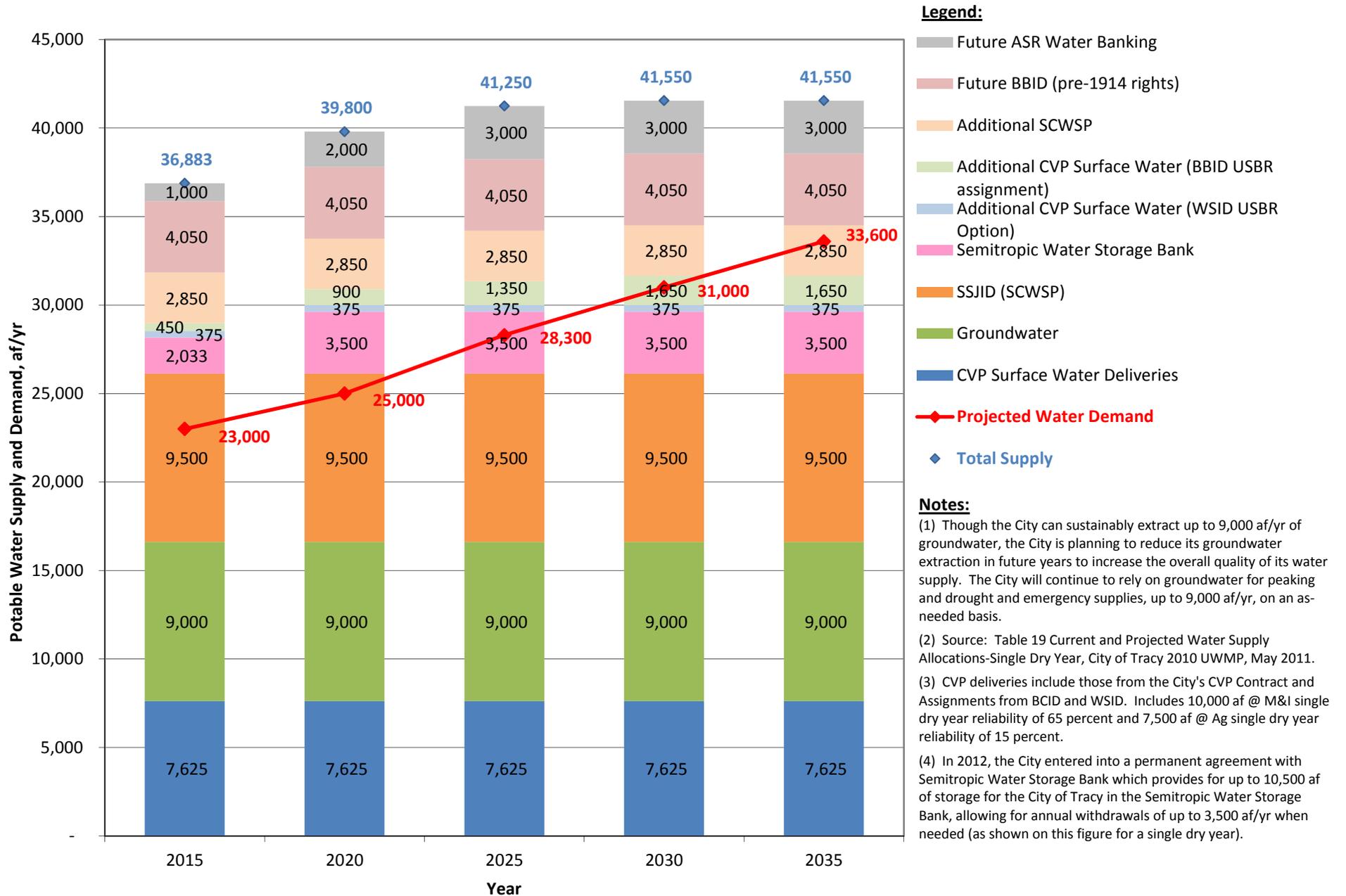
Legend:

- Future BBID (pre-1914 rights)
- Additional SCWSP
- Additional CVP Surface Water (BBID USBR assignment)
- Additional CVP Surface Water (WSID USBR Option)
- SSJID (SCWSP)
- Groundwater
- CVP Surface Water Deliveries
- Projected Water Demand
- Total Supply

Notes:

- (1) Water demand projection includes water demands for the Proposed Project.
- (2) Though the City can sustainably extract up to 9,000 af/yr of groundwater, the City is planning to reduce its groundwater extraction in future years to increase the overall quality of its water supply. The City will continue to rely on groundwater for peaking and drought and emergency supplies, up to 9,000 af/yr, on an as-needed basis.
- (3) Source: Table 18 Current and Projected Water Supply Allocations-Normal Year, City of Tracy 2010 UWMP, May 2011.
- (4) CVP deliveries include those from the City's CVP Contract and Assignments from BCID and WSID. Includes 10,000 af @ M&I normal year reliability of 75 percent and 7,500 af @ Ag normal year reliability of 50 percent.
- (5) Supplies from Semitropic Water Storage Bank and ASR are considered to be dry year supplies and are assumed to be zero in normal years.

Figure 9. City of Tracy Future Potable Water Supply vs. Demand in a Single Dry Year



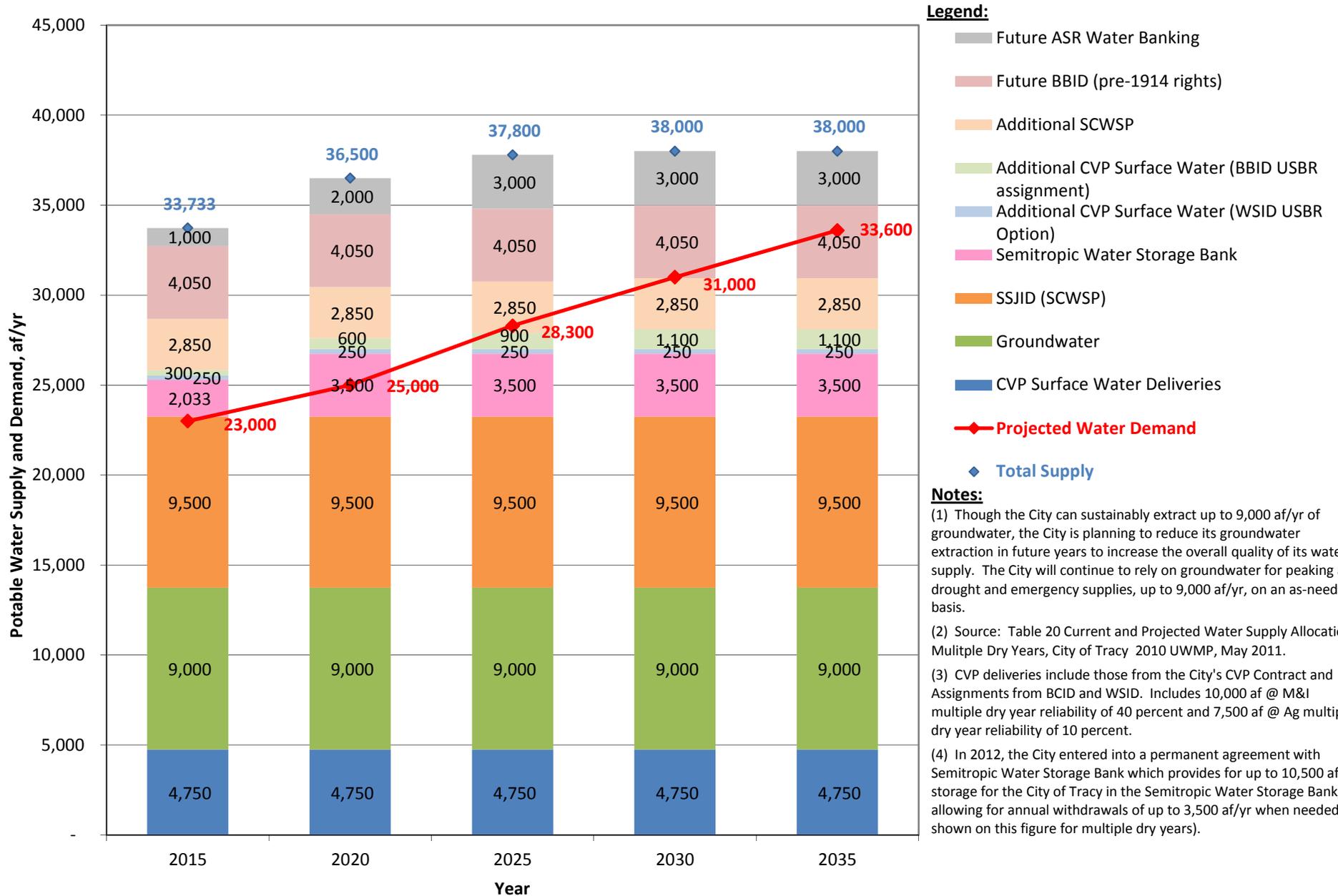
Legend:

- Future ASR Water Banking
- Future BBID (pre-1914 rights)
- Additional SCWSP
- Additional CVP Surface Water (BBID USBR assignment)
- Additional CVP Surface Water (WSID USBR Option)
- Semitropic Water Storage Bank
- SSJID (SCWSP)
- Groundwater
- CVP Surface Water Deliveries
- Projected Water Demand
- Total Supply

Notes:

- (1) Though the City can sustainably extract up to 9,000 af/yr of groundwater, the City is planning to reduce its groundwater extraction in future years to increase the overall quality of its water supply. The City will continue to rely on groundwater for peaking and drought and emergency supplies, up to 9,000 af/yr, on an as-needed basis.
- (2) Source: Table 19 Current and Projected Water Supply Allocations-Single Dry Year, City of Tracy 2010 UWMP, May 2011.
- (3) CVP deliveries include those from the City's CVP Contract and Assignments from BCID and WSID. Includes 10,000 af @ M&I single dry year reliability of 65 percent and 7,500 af @ Ag single dry year reliability of 15 percent.
- (4) In 2012, the City entered into a permanent agreement with Semitropic Water Storage Bank which provides for up to 10,500 af of storage for the City of Tracy in the Semitropic Water Storage Bank, allowing for annual withdrawals of up to 3,500 af/yr when needed (as shown on this figure for a single dry year).

Figure 10. City of Tracy Future Potable Water Supply vs. Demand in Multiple Dry Years



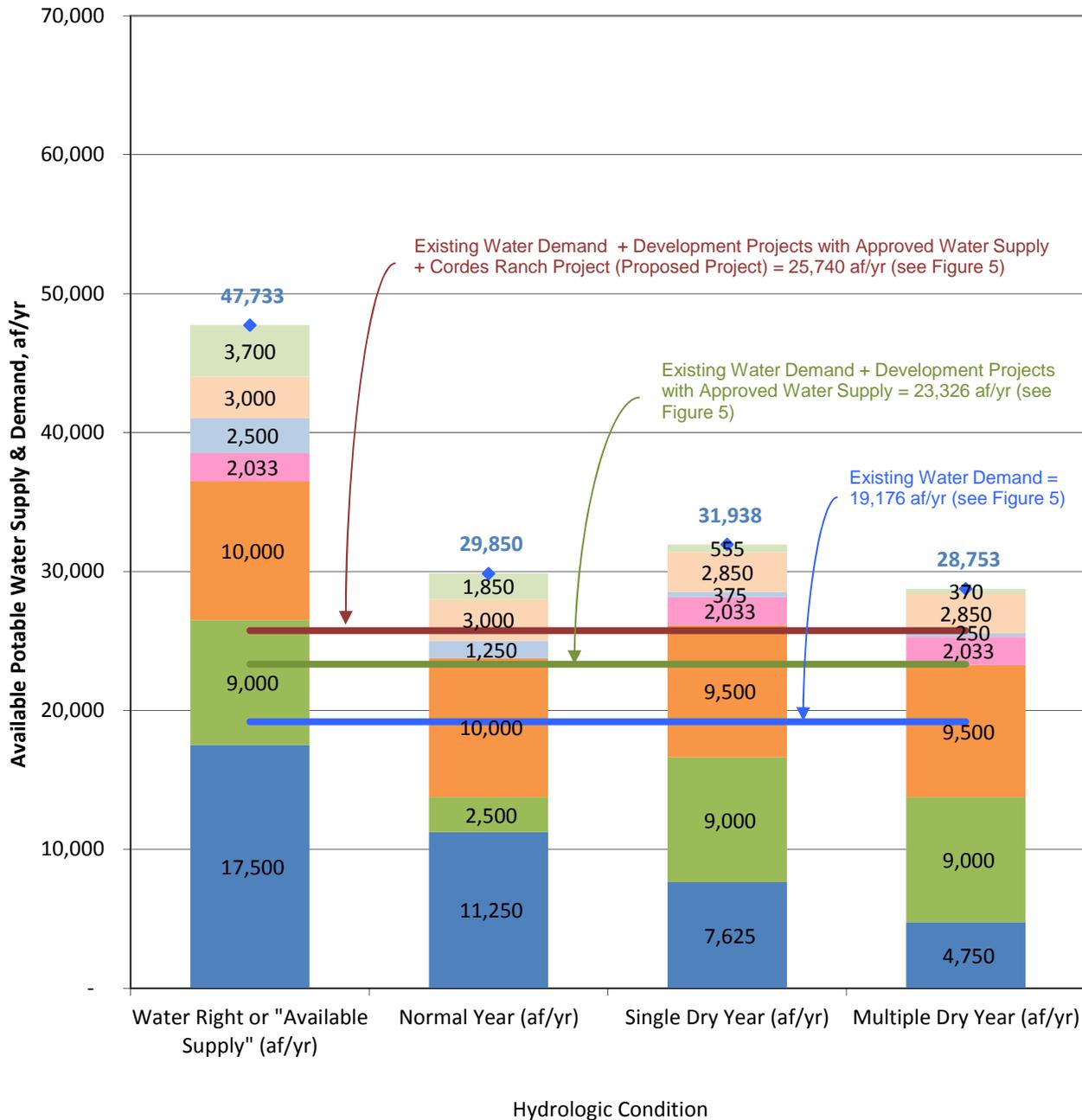
Legend:

- Future ASR Water Banking
- Future BBID (pre-1914 rights)
- Additional SCWSP
- Additional CVP Surface Water (BBID USBR assignment)
- Additional CVP Surface Water (WSID USBR Option)
- Semitropic Water Storage Bank
- SSJID (SCWSP)
- Groundwater
- CVP Surface Water Deliveries
- Projected Water Demand
- Total Supply

Notes:

- (1) Though the City can sustainably extract up to 9,000 af/yr of groundwater, the City is planning to reduce its groundwater extraction in future years to increase the overall quality of its water supply. The City will continue to rely on groundwater for peaking and drought and emergency supplies, up to 9,000 af/yr, on an as-needed basis.
- (2) Source: Table 20 Current and Projected Water Supply Allocations- Multiple Dry Years, City of Tracy 2010 UWMP, May 2011.
- (3) CVP deliveries include those from the City's CVP Contract and Assignments from BCID and WSID. Includes 10,000 af @ M&I multiple dry year reliability of 40 percent and 7,500 af @ Ag multiple dry year reliability of 10 percent.
- (4) In 2012, the City entered into a permanent agreement with Semitropic Water Storage Bank which provides for up to 10,500 af of storage for the City of Tracy in the Semitropic Water Storage Bank, allowing for annual withdrawals of up to 3,500 af/yr when needed (as shown on this figure for multiple dry years).

Figure 11. City of Tracy Existing Potable Water Supplies vs. Demand with Proposed Project



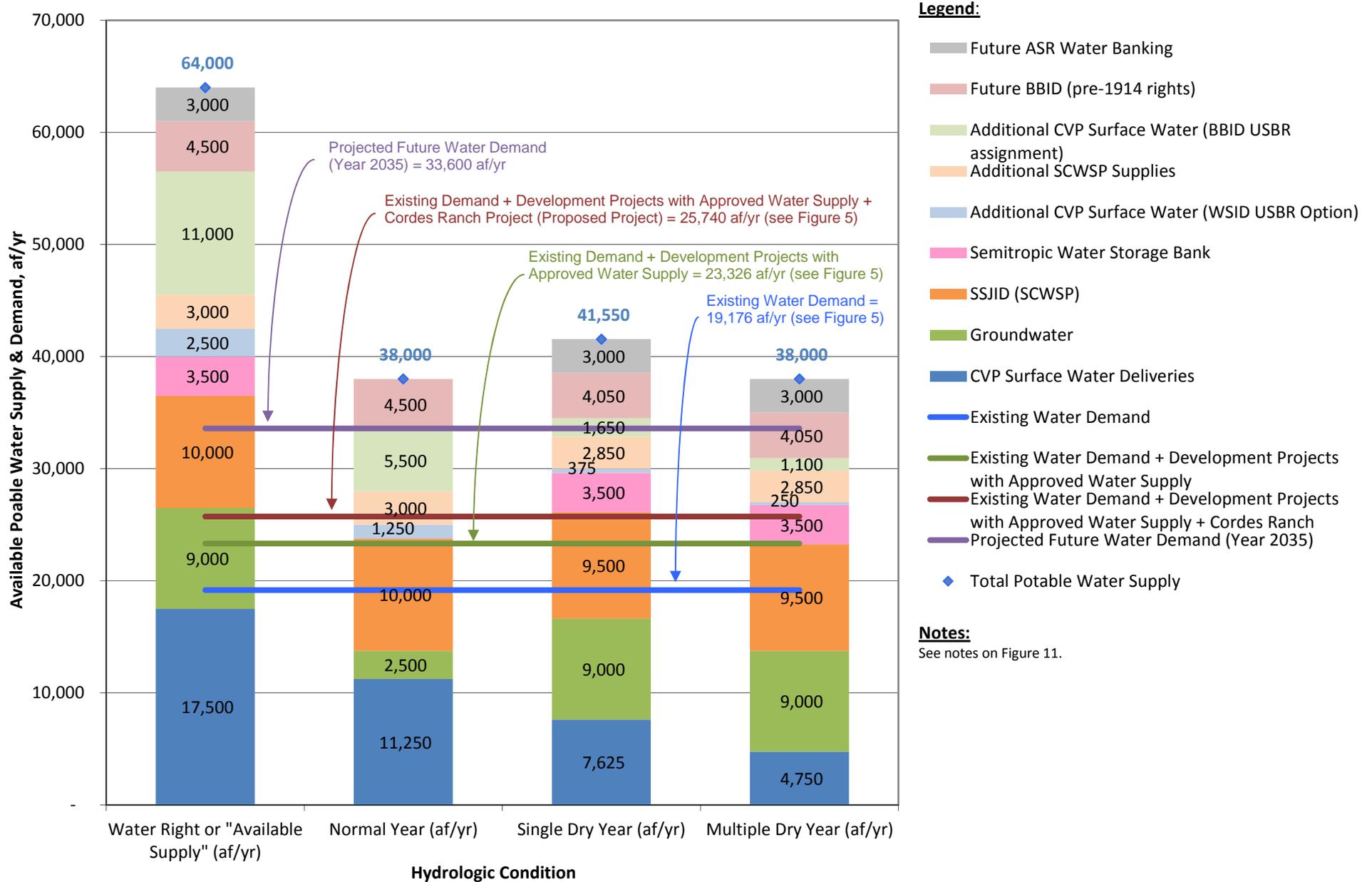
Legend:

- Additional CVP Surface Water (BBID USBR assignment)
- Additional SCWSP Supplies
- Additional CVP Surface Water (WSID USBR Option)
- Semitropic Water Storage Bank
- SSJID (SCWSP)
- Groundwater
- CVP Surface Water Deliveries
- Existing Water Demand
- Existing Water Demand + Development Projects with Approved Water Supply
- Existing Water Demand + Development Projects with Approved Water Supply + Cordes Ranch
- ◆ Total Potable Water Supply

Notes:

- (1) Source: Tables 18, 19, and 20, City of Tracy 2010 UWMP, May 2011.
- (2) CVP deliveries include those from the City's CVP Contract and Assignments from BCID and WSID.
- (3) Supplies from Semitropic Water Storage Bank are considered to be dry year supplies and are assumed to be zero in normal years.
- (4) In 2012, the City entered into a permanent agreement with Semitropic Water Storage Bank which provides for up to 10,500 af of storage for the City of Tracy in the Semitropic Water Storage Bank, allowing for annual withdrawals of up to 3,500 af/yr when needed. 2,033 af/yr is assumed to be currently available from Semitropic based on the City's deposits to date.
- (5) Though the City can sustainably extract up to 9,000 af/yr of groundwater, the City is planning to reduce its groundwater extraction in future years to increase the overall quality of its water supply. The City will continue to rely on groundwater for peaking and drought and emergency supplies, up to 9,000 af/yr, on an as-needed basis.
- (6) Additional CVP Surface Water (BBID USBR assignment) assumes annexation of 1,080 acres in conjunction with Cordes Ranch Specific Plan.

Figure 12. City of Tracy Existing and Additional Potable Water Supplies at Year 2035 vs. Demand



APPENDIX M
UTILITIES

M.3: Wastewater Master Plan Technical Memorandum

CORDES RANCH SPECIFIC PLAN EIR
APPENDIX M: UTILITIES

Final Draft Report

Wastewater Master Plan Tier 2 – Cordes Ranch Specific Plan Application Review

Prepared for
City of Tracy, California

January 2013

CH2MHILL

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Appendices

- A Onsite Wastewater Conveyance Facilities
- B Estimated Sewer Demand Calculations

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3-1	Major Wastewater Conveyance Facilities (Offsite).....	3-3
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Acronyms and Abbreviations

ADWF	average dry weather flow
BOD	biochemical oxygen demand
BPI	Business Park Industrial
City	City of Tracy
EDU	equivalent dwelling unit
FAR	floor area ratios
gpd	gallon(s) per day
mgd	million gallons per day
TSS	total suspended solids
WWMP	Tracy Wastewater Master Plan
WWTP	wastewater treatment plant

SECTION 1

Introduction

In January 2013, the City of Tracy (City) completed a Citywide Wastewater Master Plan (WWMP) to evaluate the major wastewater collection system and treatment needs to serve buildout of the City's General Plan. The Cordes Ranch (hereinafter referred to as Project Applicant) Specific Plan area was included in the Citywide WWMP as one of the City's future service areas within the City's sphere of influence.

The purpose of this report is to document the Project Applicant Specific Plan application.

SECTION 2

Specific Plan Land Use Analysis

Wastewater flow generations factors were developed as part of the Citywide WWMP, and equivalent dwelling units (EDU) were assigned to each category of anticipated growth (see Table 2-1). Because the expected concentrations of biochemical oxygen demand (BOD) and total suspended solids (TSS) are identical for each user group, the number of EDUs is proportional to flow.

TABLE 2-1
Wastewater Flow Generation Factors
Wastewater Master Plan Tier 2 – Cordes Ranch Specific Plan Application Review

Flow Parameter	Adopted Flow Generation Values	Number of EDUs per Unit (based on gross acres)
Per Capita Flow	80 gpcd	
Residential – VLD	264 gpd/unit	1.0 per dwelling unit
Residential – LD	264 gpd/unit	1.0 per dwelling unit
Residential – MD	216 gpd/unit	0.82 per dwelling unit
Residential – HD	176 gpd/unit	0.667 per dwelling unit
Industrial	1,056 gal/gross acre/day	4.0 per gross acre
Office, Retail, and Commercial	1,140 gal/gross acre/day	4.32 per gross acre

Notes:

- gal = gallons
- gpcd = gallon(s) per capita per day
- gpd = gallon(s) per day
- HD = high density (2.2 residents per unit)
- LD = low density (3.3 residents per unit)
- MD = medium density (2.7 residents per unit)
- VLD = very low density (3.3 residents per unit)

The assumed floor area ratios (FAR) used to establish wastewater flow and loading generation factors for non-residential users are as follows:

- Commercial – assumed FAR of 0.3
- Office – assumed FAR of 0.45
- Industrial – assumed FAR of 0.5

Proposed buildout conditions, including land use designations and acreage, were provided to the City by the Project Applicant during the development of the Citywide WWMP. The Project Applicant has provided land use designations and acreage, generally consistent with the WWMP, as part of the Specific Plan application as shown in Table 2-2.

TABLE 2-2
 Cordes Ranch Specific Plan Overview
 Wastewater Master Plan Tier 2 – Cordes Ranch Specific Plan Application Review

Flow Parameter	Buildout	Phase 1
Industrial Areas (gross acres)	1,328.5	606.8
I-205 Overlay Zone (gross acres)	79.1	11.2
Office Areas (gross acres)	150.0	0.0
Commercial Areas (gross acres)	53.9	31.2
Total Gross Area (gross acres)	1,611.5	649.2
ADWF (mgd) ^a	1.72	0.69
PDWF (mgd) ^b	5.15	2.05
Groundwater Infiltration (mgd) ^c	0.05	0.04
Rainfall-induced Inflow (mgd) ^d	0.64	0.24
PWWF (mgd) ^e	5.84	2.33
PWWF:ADWF	3.41	3.39

^aThe ADWF is based on the wastewater generation factors shown in Table 2-1, with the exception of the I-205 Overlay Zone. The Project Applicant determined the wastewater flow rate for the I-205 Overlay Zone by using the Citywide WWMP generation rate for the office land use designation (1,140 gallons per gross acre per day) and modifying the corresponding FAR from 0.45 to 0.40 (that is, an 11 percent reduction).

^bBased on a PDWF peaking factor of 3.

^cBased on 3 percent of ADWF.

^dBased on 400 gpd per gross acre

^eSummation of PDWF, groundwater infiltration, and rainfall-induced inflow.

Abbreviations:

ADWF = average dry weather flow

mgd = million gallons per day

PDWF = peak dry weather flow

PWWF = peak wet weather flow

As noted in Table 2-2, a portion of the proposed properties within the Specific Plan area is categorized as the I-205 Overlay Zone. A general description of the I-205 Overlay Zone, provided by the Project Applicant, is as follows:

The purpose of the I-205/Business Park Industrial (BPI) Overlay Zone is to accommodate a broad range of uses to provide flexible development opportunities by allowing a blend of office with light assembly, manufacturing, and ancillary distribution uses.

Differences with regular BPI zoning are as follows:

- Higher amount of office space than typical BPI zoning
- High-visibility location from adjacent roadways and regional freeways to allow easy access for employees and visitors

- A professional work environment that will attract and retain skilled workers in high-paying positions
- A range of small to mid-sized buildings with enhanced building features and architectural details

Possible Attraction Targets: Service-related office industries including renewable energy, advanced manufacturing, assembly, and regional service centers with a larger percentage of office.

Properties within the I-205 Overlay Zone (see Appendix A) will also produce wastewater at a rate that differs from other land uses established in the Citywide WWMP. The Project Applicant has proposed that the I-205 Overlay Zone will have a reduced FAR but higher wastewater generation rate than that assumed in the Citywide WWMP for the commercial land use. The FAR and wastewater generation rate for properties within the I-205 Overlay Zone are proposed to be 0.40 and 1,013 gallons per gross acre per day, respectively. The Project Applicant determined the wastewater flow rate for the I-205 Overlay Zone by using the Citywide WWMP generation rate for the office land use designation (1,140 gallons per gross acre per day) and modifying the corresponding FAR from 0.45 to 0.40 (that is, an 11 percent reduction). These changes are consistent with direction to the Project Applicant from the City.

Appendix B includes land-use designations and distribution estimates of wastewater flow rates for the Specific Plan area, which have been prepared by the Project Applicant.

SECTION 3

Wastewater Collection System Plan for Buildout Condition

The Project Applicant has developed a conceptual layout of the wastewater collection system within the Specific Plan area for buildout (see Appendix A, prepared by Project Applicant). As illustrated, all wastewater associated with the Specific Plan area at buildout will be conveyed to Node 6W (this is the point of beginning of the Citywide WWMP offsite improvements for the wastewater collection system in the vicinity of the Cordes Ranch Specific Plan area).

The Project Applicant is proposing to utilize the existing 21-inch-diameter pipeline (referred to as the Hansen Trunk Sewer) for a portion of the flows generated within the Cordes Ranch Specific Plan area. The segment of the Hansen Trunk Sewer that traverses the Specific Plan area has a relatively steep gradient (pipe slope is generally about 0.01 foot per foot), resulting in hydraulic capacity that is not otherwise available in the downstream reaches of the Hansen Trunk Sewer. Available hydraulic capacity within the Specific Plan area can be used as long as all Specific Plan flows are transferred from the Hansen Trunk Sewer to Node 6W. Use of the Hansen Trunk Sewer within the Specific Plan area at buildout is summarized in Table 3-1 and reference is made to “Block Number” as referred to in the Specific Plan application. Use of the Hansen Trunk Sewer beyond that identified in Table 3-1 will require approval by the City Engineer. Long-term use of the Hansen Trunk Sewer should be subject to an impact fee that is not part of this report, because the use of this existing pipeline will obviate the need for other onsite pipelines. It is assumed that payment provisions for such use will be included as part of the Development Agreement.

TABLE 3-1
Use of Hansen Trunk Sewer within Specific Plan Area
Wastewater Master Plan Tier 2 – Cordes Ranch Specific Plan Application Review

Block Number	ADWF (mgd)
40 and 41	0.12

Note:

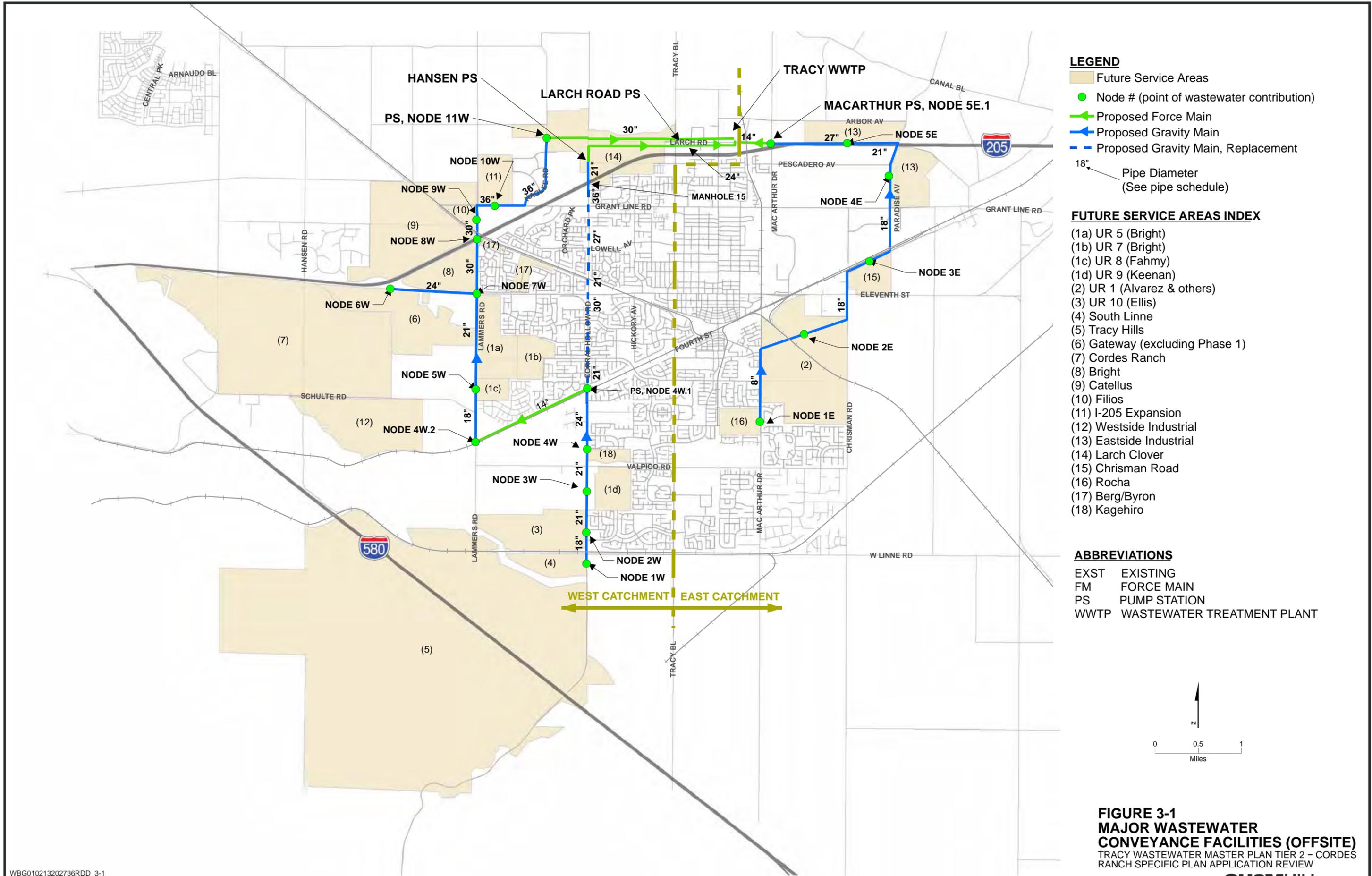
Block number and ADWF are based on the Specific Plan application.

Buildout collection system capacity will consist of the collection system construction that is required within the Cordes Ranch Specific Plan area (see Appendix A for onsite conveyance layouts) plus other offsite collection system improvements required to convey the wastewater to the existing wastewater treatment plant (WWTP) located at Holly Drive. Those offsite improvements were developed in the Citywide WWMP; for the Cordes Ranch Specific Plan area, those improvements will start at Node 6W (see Figure 3-1, located at the end of this section) and proceed all the way to the WWTP. Although the offsite improvements shown on Figure 3-1 will be used by Cordes Ranch and others as described

in the Citywide WWMP, all of the illustrated improvements (specifically downstream of Node 6W) will be required to be in place before flows from the Cordes Ranch Specific Plan area exceed the interim capacity limitations discussed later in this report.

The Specific Plan area collection system was sized by the Project Applicant and reviewed for compliance with City standards, including consideration for the acceptable range of flow velocities (that is, 2 to 10 feet per second) in gravity pipelines, depth of flow to pipe diameter ratio of 0.7 or less, and the minimum pipe diameter (8 inches). The conceptual layout and sizing of the Specific Plan area collection system conform to City standards.

The Project Applicant should not make any direct connections of sewer laterals to the existing Hansen Trunk Sewer. In the event that connections for more than Block Numbers 40 and 41 are proposed in the future, those connections shall be made at existing manholes or new manholes constructed to accommodate the onsite improvement, as required by the City. The use of drop manholes for onsite improvements shall be avoided unless approved by the City Engineer. The new sewer collection system shall be designed and constructed to avoid multiple drop manholes to the Hansen Trunk Sewer at the Project Applicant's expense. Onsite improvements that cross or parallel the Hansen Trunk Sewer should include special considerations, such as pipe support and appropriate backfill.



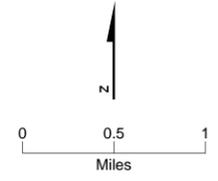
LEGEND

- Future Service Areas
- Node # (point of wastewater contribution)
- Proposed Force Main
- Proposed Gravity Main
- Proposed Gravity Main, Replacement
- 18" Pipe Diameter (See pipe schedule)

- FUTURE SERVICE AREAS INDEX**
- (1a) UR 5 (Bright)
 - (1b) UR 7 (Bright)
 - (1c) UR 8 (Fahmy)
 - (1d) UR 9 (Keenan)
 - (2) UR 1 (Alvarez & others)
 - (3) UR 10 (Ellis)
 - (4) South Linne
 - (5) Tracy Hills
 - (6) Gateway (excluding Phase 1)
 - (7) Cordes Ranch
 - (8) Bright
 - (9) Catellus
 - (10) Filios
 - (11) I-205 Expansion
 - (12) Westside Industrial
 - (13) Eastside Industrial
 - (14) Larch Clover
 - (15) Chrisman Road
 - (16) Rocha
 - (17) Berg/Byron
 - (18) Kagehiro

ABBREVIATIONS

EXST	EXISTING
FM	FORCE MAIN
PS	PUMP STATION
WWTP	WASTEWATER TREATMENT PLANT



**FIGURE 3-1
MAJOR WASTEWATER
CONVEYANCE FACILITIES (OFFSITE)**
TRACY WASTEWATER MASTER PLAN TIER 2 - CORDES
RANCH SPECIFIC PLAN APPLICATION REVIEW

SECTION 4

Wastewater Collection System Phasing Plan

The Hansen Trunk Sewer traverses the Cordes Ranch Specific Plan area. The pipeline extends from the northeast property boundary to Hansen Road and continues to the southern boundary at Old Schulte Road, and continues to the west to the intersection of Old Schulte Road and Mountain House Parkway.

The Project Applicant has developed a conceptual layout of major wastewater conveyance facilities within the Specific Plan area for Phase 1 (see Appendix A). As illustrated, the Phase 1 Specific Plan area wastewater collection system relies heavily on use of the Hansen Trunk Sewer within the Specific Plan area.

The City’s existing wastewater collection system is sufficiently sized (both in terms of capacity and areal extent) to serve those lands currently within the existing City limits, but completely new and additional collection system capacity will be required to serve buildout of Phase 1 and the ultimate buildout capacity requirements of the Cordes Ranch Specific Plan. The Hansen Trunk Sewer is currently underutilized, although the pipeline capacity is formally allocated to other users. Table 4-1 includes a summary of a 2006 capacity evaluation of the Hansen Trunk Sewer by Ruark and Associates. Many of the committed users of this pipeline have not yet fully developed, and interim capacity is available. The City may allow some of this interim capacity to be accessed for a portion of the Phase 1 demands created by the Cordes Ranch Specific Plan area.

TABLE 4-1
Hansen Trunk Sewer Users
Wastewater Master Plan Tier 2 – Cordes Ranch Specific Plan Application Review

Ruark and Associates Designation	Current City Designation	Committed Peak (mgd)
Patterson Pass Business Park	-	1.05
Tracy Lammers School (originally Tracy Learning Center)	Westside Residential	0.20
I-205	-	2.00
Huntington Park	-	0.29
Westgate	-	0.33
Berg Avenue	Berg/Byron	0.35
Presidio	-	0.41
Tracy Gateway (Phase 1)	-	0.78
Eastgate and the "Gap" Area	-	0.11
Corral Hollow (between Grant Line and I-205)	-	0.05
Ellis	Ellis	1.00
Subtotal, Current Commitments		6.57
Total Available Capacity		6.58

Note:

Based on *Capacity Analysis of the Hansen Sewer Collection System for Tracy Gateway*, Ruark and Associates (December 2006).

Upon verification of existing Hansen Sewer Capacity, the City will allow 0.145 mgd (145,000 gallons per day) of dry weather flow into the Hansen Trunk Sewer on an interim basis. It is recommended that the Project Applicant dedicate three flow measuring devices to monitor the actual flows delivered into the existing collection system from all sources in order to verify available capacity, and to monitor the impacts of added flow from the Cordes Ranch Specific Plan area prior to the completion of the Lammers Trunk Sewer. Flow measuring devices are recommended at the following general locations:

- 10-inch-diameter pipe near the eastern edge of Block Number 41 (see Appendix A for all flow measuring device locations)
- Existing 21-inch-diameter pipe (Hansen Trunk Sewer) immediately north of the intersection of Old Schulte Road and Hansen Road
- Existing 21-inch-diameter pipe (Hansen Trunk Sewer) near the northern edge of Block Number 9A

The current recommendation is that the 0.145-mgd interim flow rate noted above will constitute a “trigger point,” and that flows above this amount will require construction of other elements of conveyance system infrastructure as described in the Citywide WWMP. However, the dedicated flow measuring devices can be used to evaluate the then-current flow rates in the system from both the Phase 1 Cordes Ranch users and other service areas, and a decision can be made in the future as to whether an addition to the 0.145-mgd trigger flow rate can be made.

The proposed offsite conveyance improvements, including connection of the Specific Plan area collection system to Node 6W, shall be available to receive wastewater flow at, or before, the time that discharges from the Cordes Ranch Specific Plan area reach 0.145 mgd of dry weather flow. Once the offsite improvements are in place, all interim connections to the Hansen Trunk Sewer shall be terminated by the Project Applicant (with the exception of those connections identified in Table 3-1 that are diverted to the offsite improvements through the previously mentioned transfer manhole).

SECTION 5

Wastewater Treatment Plant Requirements

As part of the Citywide WWMP, the City has developed plans for the incremental expansion of the WWTP to meet the demands to be imposed by the buildout of the City's General Plan. The current schedule constraint for additional WWTP capacity is related to the construction of new outfall capacity, but the City has already commenced the design and permitting of the outfall, and other plant improvements are not seen as impediments to the orderly buildout of the Cordes Ranch Specific Plan area.

Although treatment plant capacity is not a current constraint to the development of the Cordes Ranch Specific Plan area (specifically, Phase 1), the capacity of the existing outfall to the Old River is a constraint. The existing outfall has a capacity of 9 mgd (for dry weather flow), and a proportionate wet weather flow capacity that is required to convey the higher flow rates that occur during storm events. The outfall capacity can be extended by the use of "flow equalization" for the incremental Cordes Ranch Specific Plan area Phase 1 flow rates. Because storm events are relatively short in duration (measured in days or sometimes weeks), the additional flow generated during those storm events can be sent to basins, reservoirs, or tanks that store those flows until the storm passes. Once flow rates decrease, the stored volume is then discharged into the outfall. Either primary effluent (the partially treated waste stream after primary clarification) or fully treated effluent (because treatment plant capacity is available) can be stored during periods of higher flow rates. The treatment plant's existing 2-million-gallon storage reservoir (for primary effluent) or the existing emergency storage basins (for fully treated effluent) can be used for this purpose. The interim capacity of Phase 1 average dry weather flow discussed for the collection system flow rate trigger is also appropriate for the outfall, and any increase in interim capacity greater than 0.145 mgd (ADWF) should be evaluated in the future before any increase is allowed.

SECTION 6

Determination of Wastewater Impact Fee

Both treatment and conveyance capacity are proposed to be allocated in units associated with individual housing, or dwelling units. One EDU represents the flow, BOD, and TSS loading that one would associate with a single-family home (all constituents are considered for treatment capacity impacts, and only flow is considered for conveyance capacity). As noted in the Citywide WWMP, an EDU consists of a typical low-density, single-family home, with 3.3 people, a flow rate of 264 gallons per day, a BOD loading of 0.594 pound per day, and a TSS loading of 0.693 pound per day. Flow and loading from residential, commercial, industrial, and retail users can be correlated to EDUs, and appropriate development impact fees calculated (for both conveyance and treatment facilities).

Development impact fees for wastewater conveyance and treatment are described in the *Tracy Wastewater Conveyance and Treatment Development Impact Fee Study* (CH2M HILL, January 2013) and summarized as follows:

- Wastewater Conveyance Development Impact Fee – \$1,610 per EDU
- Wastewater Treatment Development Impact Fee – \$6,727 per EDU

These fees are applicable to the conveyance costs for trunk sewers (pipelines that are “offsite” of individual development projects, and generally, but not always, greater than 18 inches in diameter), and treatment and disposal costs associated with the main WWTP located at Holly Drive. As such, “onsite” wastewater collection system improvements that are required to serve the Specific Plan area are assumed to be paid for and constructed by the Project Applicant.

Changes to the assumed FAR will require adjustments to the recommended development impact fees presented in Table 6-1. Table 6-1 presents the development impact fees for the entire Cordes Ranch Specific Plan area, and uses flow as the common wastewater constituent for the allocation of costs, because the other wastewater constituents of concern are assumed to be proportional to flow.

Table 6-2, using the same assumptions noted for Table 6-1, represents the wastewater development impact fees for the proposed Phase 1 development of the Cordes Ranch Specific Plan area.

As noted in the *Tracy Wastewater Conveyance and Treatment Development Impact Fee Study* (January 2013), the cost per EDU for the next plant expansion is considerably greater than the average cost per EDU for all phases of planned construction. The use of this average cost per EDU, as requested by the City, will result in cash flow shortcomings in the initial phases of expansion unless some method of supplemental funding for this shortfall is found. No similar evaluation of wastewater conveyance costing by phase was performed, but it is assumed that a shortfall in funding is possible for that element as well.

The development impact fees are based on March 2012 estimates and will be updated on a regular basis to reflect current cost estimates. In addition, the fees will need to be updated to

reflect incremental costs associated with the phasing of projects or increased costs due to new regulatory requirements.

As noted in Section 3, long-term use of the Hansen Trunk Sewer by the Project Applicant should be subject to an impact fee that is not part of this report, because the use of this existing pipeline will both reduce other onsite conveyance requirements that are the obligation of the Project Applicant and consume capacity in the Hansen Trunk Sewer. It is assumed that payment provisions for such use will be included as part of the mapping and project approval process for the various phases of the Cordes Ranch Specific Plan area; this supplemental fee shall be a fair share contribution of that portion of the Hansen Trunk Sewer used by Cordes Ranch.

TABLE 6-1
Wastewater Conveyance and Treatment Facilities Development Impact Fee Recommendations (Buildout)
Wastewater Master Plan Tier 2 – Cordes Ranch Specific Plan Application Review

Land Use	Adopted Flow Generation Values	Number of EDUs per Gross Acre	Gross Acres	Number of EDUs per Gross Acre	Total Conveyance Development Impact Fee ^b (\$)	Total Treatment Development Impact Fee (\$)	Total Wastewater Development Impact Fee (\$)
Industrial	1,056 gal/gross acre/day	4.0	1,328.5	5,314.0	8,555,540	35,747,278	44,302,818
I-205 Overlay Zone ^a	1,013 gal/gross acre/day	3.84	79.1	303.6	488,822	2,042,426	2,531,248
Office	1,140 gal/gross acre/day	4.32	150.0	647.7	1,042,841	4,357,261	5,400,102
Commercial	1,140 gal/gross acre/day	4.32	53.9	232.8	374,728	1,565,709	1,940,437
Total	-	-	1,611.5	6,498.1	10,461,930	43,712,675	54,174,605

^aFAR and wastewater generation rates differ from the Citywide WWMP as noted in Section 2.

^b Does not include fair share cost for use of the Hansen Trunk Sewer

TABLE 6-2
Wastewater Conveyance and Treatment Facilities Development Impact Fee Recommendations (Phase 1)
Wastewater Master Plan Tier 2 – Cordes Ranch Specific Plan Application Review

Land Use	Adopted Flow Generation Values	Number of EDUs per Gross Acre	Gross Acres	Number of EDUs per Gross Acre	Total Conveyance Development Impact Fee ^b (\$)	Total Treatment Development Impact Fee (\$)	Total Wastewater Development Impact Fee (\$)
Industrial	1,056 gal/gross acre/day	4.0	606.8	2,427.2	3,907,792	16,327,774	20,235,566
I-205 Overlay Zone ^a	1,013 gal/gross acre/day	3.84	11.2	43.0	69,214	289,193	358,407
Commercial	1,140 gal/gross acre/day	4.32	31.2	134.7	216,911	906,310	1,123,221
Total	-	-	649.2	2,604.9	4,193,917	17,523,278	21,717,194

^aFAR and wastewater generation rates differ from the Citywide WWMP as noted in Section 2.

^b Does not include fair share cost for use of the Hansen Trunk Sewer

Appendix A
Onsite Wastewater Conveyance Facilities



LAND USE LEGEND

- GC
GENERAL COMMERCIAL
- GO
GENERAL OFFICE
- BPI
BUSINESS PARK INDUSTRIAL
- OP
OPEN SPACE / PARKS
- I-205 OVERLAY ZONE

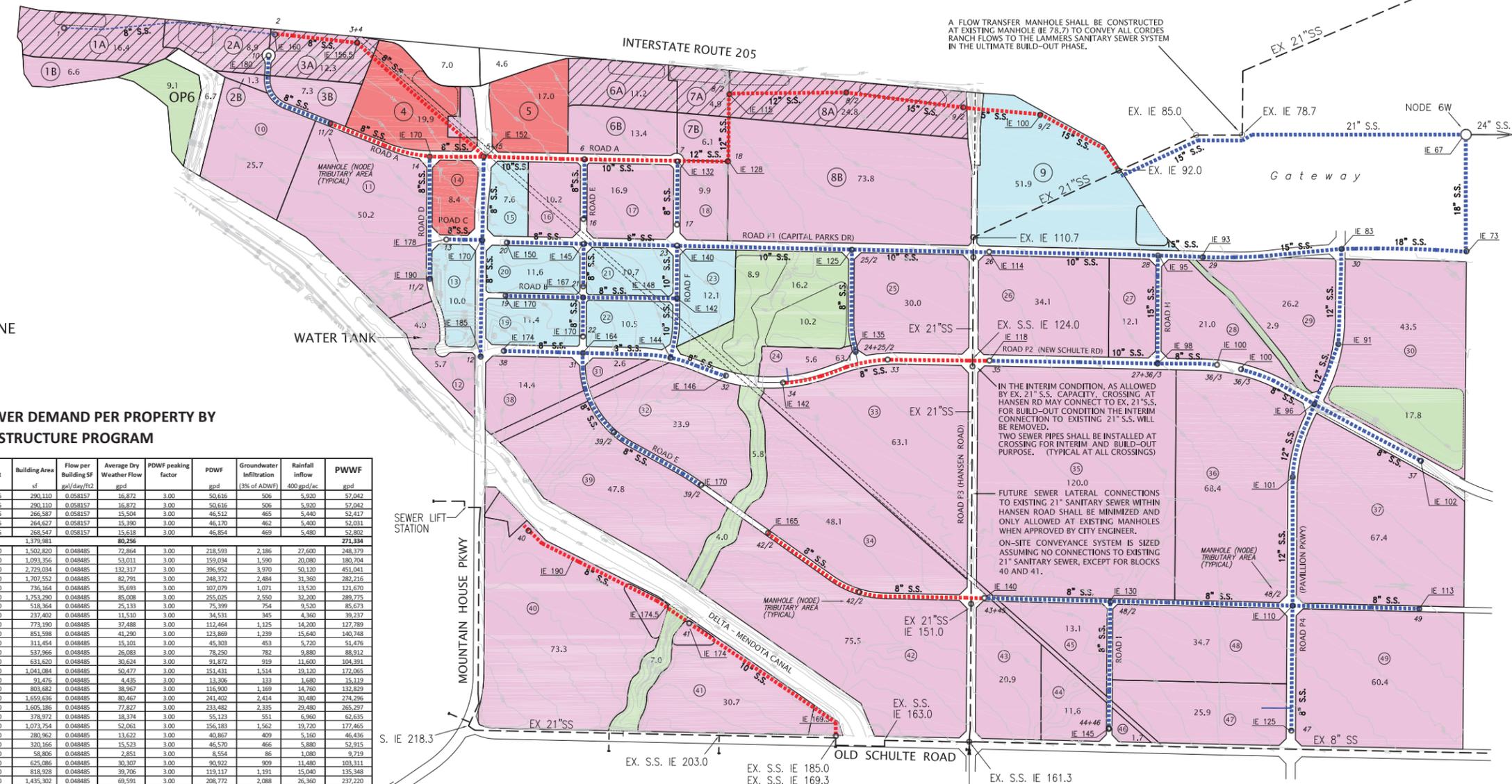
ESTIMATED SEWER DEMAND PER PROPERTY BY INFRASTRUCTURE PROGRAM

Property Owner	Land Use	Block Number	Phase	Block Total Net Area	Roads Area	Block Total Gross Area	FAR	Building Area	Flow per Building SF	Average Dry Weather Flow	PDW/F peaking factor	PDW/F	Groundwater Infiltration	Rainfall Inflow	PWWF		
				acres	acres	acres		sf	gal/day/ft2	gpd		gpd	(3% of ADWF)	400 gpd/ac	gpd		
CROSSROADS BUSINESS CENTER AT CORDES RANCH	GO	19	BO	11.4	3.4	14.8	0.45	290,110	0.058157	16,872	3.00	50,616	506	5,920	57,042		
		20	BO	11.6	3.2	14.8	0.45	290,110	0.058157	16,872	3.00	50,616	506	5,920	57,042		
		21	BO	10.7	2.9	13.6	0.45	265,987	0.058157	15,504	3.00	46,512	465	5,440	52,417		
		22	BO	10.5	3.0	13.5	0.45	264,427	0.058157	15,390	3.00	46,170	462	5,420	52,051		
		23	BO	12.1	1.6	13.7	0.45	268,547	0.058157	15,618	3.00	46,854	469	5,480	52,802		
		Total		56.3	14.1	70.4		1,379,981		80,256		218,593	2,186	27,600		271,334	
		GBC GLOBAL INVESTMENTS	BPI	33	1	63.1	5.9	69.0	0.50	1,502,820	0.048485	72,864	3.00	218,593	2,186	27,600	248,379
				34	1	48.1	2.1	50.2	0.50	1,093,356	0.048485	53,011	3.00	159,034	1,590	20,080	180,704
				35	1	120.0	5.3	125.3	0.50	2,729,084	0.048485	132,319	3.00	396,952	3,970	50,120	451,041
				40	1	73.3	5.1	78.4	0.50	1,707,552	0.048485	82,791	3.00	248,372	2,484	31,260	282,215
41	1			30.7	3.1	33.8	0.50	736,164	0.048485	35,693	3.00	107,079	1,071	13,520	121,670		
42	1			75.5	5.0	80.5	0.50	1,753,290	0.048485	85,008	3.00	255,025	2,550	32,200	289,775		
43	1			20.9	2.9	23.8	0.50	518,354	0.048485	25,133	3.00	75,399	754	9,520	85,673		
24	BO			5.6	5.3	10.9	0.50	237,402	0.048485	11,510	3.00	34,531	345	4,360	39,237		
25	BO			30.0	5.5	35.5	0.50	773,180	0.048485	37,488	3.00	112,464	1,125	14,200	127,789		
26	BO			34.1	5.0	39.1	0.50	851,598	0.048485	41,290	3.00	123,869	1,239	15,640	140,748		
27	BO	12.1	2.2	14.3	0.50	311,454	0.048485	15,101	3.00	45,303	453	5,720	51,476				
28	BO	21.0	3.7	24.7	0.50	537,966	0.048485	26,083	3.00	78,250	782	9,880	88,912				
29	BO	26.2	2.8	29.0	0.50	631,620	0.048485	30,624	3.00	91,872	919	11,600	104,391				
30	BO	43.5	4.3	47.8	0.50	1,041,084	0.048485	50,477	3.00	151,431	1,514	19,120	172,065				
31	BO	2.6	1.6	4.2	0.50	91,476	0.048485	4,435	3.00	13,306	133	1,680	15,119				
32	BO	33.9	3.0	36.9	0.50	803,682	0.048485	38,967	3.00	116,900	1,169	14,760	132,829				
36	BO	68.4	7.8	76.2	0.50	1,659,636	0.048485	80,467	3.00	241,402	2,414	30,480	274,296				
37	BO	67.4	6.3	73.7	0.50	1,605,186	0.048485	77,827	3.00	233,482	2,335	29,480	265,297				
38	BO	14.4	3.0	17.4	0.50	378,972	0.048485	18,374	3.00	55,123	551	6,960	62,635				
39	BO	47.8	1.5	49.3	0.50	1,073,754	0.048485	52,061	3.00	156,189	1,562	19,720	177,465				
44	BO	11.6	1.3	12.9	0.50	280,962	0.048485	13,622	3.00	40,867	409	5,160	46,416				
45	BO	13.1	1.6	14.7	0.50	320,166	0.048485	15,523	3.00	46,570	466	5,880	52,915				
46	BO	1.7	1.0	2.7	0.50	58,806	0.048485	2,851	3.00	8,554	86	1,080	9,719				
47	BO	25.9	2.8	28.7	0.50	625,086	0.048485	30,307	3.00	90,922	909	11,480	103,311				
48	BO	34.7	2.9	37.6	0.50	818,938	0.048485	39,706	3.00	119,117	1,191	15,040	135,348				
49	BO	60.4	5.5	65.9	0.50	1,435,302	0.048485	69,501	3.00	208,772	2,088	26,360	237,220				
Total		498.0	86.5	584.5		23,576,860		1,143,124		3,296,664		32,866		3,419,550			
TOTAL		104.3	130.6	1152.9		1,233,379		61,677		1,827,999		18,279		2,010,698			
DELTA PROPERTIES	GC	14	1	8.4	3.4	11.8	0.30	154,202	0.087236	13,452	3.00	40,356	404	4,720	45,480		
		4	BO	19.9	2.8	22.7	0.30	296,644	0.087236	25,878	3.00	77,634	776	9,080	87,490		
		Total		28.3	6.2	34.5		450,846		39,330		118,000		13,800		132,970	
		BPI	13	BO	10.0	3.3	13.3	0.45	260,707	0.058157	15,162	3.00	45,486	455	5,320	51,261	
			Total		10.0	3.3	13.3		260,707		15,162		45,486		5,320		51,261
			11	1	50.2	2.1	52.3	0.50	1,139,084	0.048485	55,229	3.00	165,687	1,657	20,920	188,264	
			1A	BO	16.4	0.0	16.4	0.40	285,754	0.058157	16,619	3.00	49,856	499	6,560	56,914	
			1B	BO	6.6	0.0	6.6	0.50	143,748	0.048485	6,970	3.00	20,909	209	2,640	23,758	
			2A	BO	8.9	0.3	9.2	0.40	160,301	0.058157	9,323	3.00	27,968	280	3,680	31,928	
			2B	BO	1.3	0.1	1.4	0.50	30,492	0.048485	1,478	3.00	4,435	44	560	5,040	
3A	BO		12.9	0.3	13.2	0.40	219,542	0.058157	12,768	3.00	38,304	383	5,040	43,727			
3B	BO		7.3	0.7	8.0	0.50	174,240	0.048485	8,448	3.00	25,344	253	3,200	28,798			
10	BO		25.6	0.8	26.4	0.50	574,992	0.048485	27,878	3.00	83,635	836	10,560	95,032			
12	BO	5.7	1.8	7.5	0.50	163,350	0.048485	7,920	3.00	23,760	238	3,000	26,998				
Total		134.3	6.1	140.4		2,891,513		146,633		436,664		50,457		500,457			
TOTAL		172.6	15.6	188.2		201,125		68,467		201,125		68,467		201,125			
TWIN INVESTORS LLC	GC	5	1	17.0	2.4	19.4	0.30	253,519	0.087236	22,116	3.00	66,348	663	7,760	74,771		
		Total		17.0	2.4	19.4		253,519		22,116		66,348		7,760		74,771	
		BPI	15	BO	7.6	2.5	10.1	0.45	197,980	0.058157	11,514	3.00	34,542	345	4,040	38,927	
			Total		7.6	2.5	10.1		197,980		11,514		34,542		4,040		38,927
			6A	1	11.2	0.0	11.2	0.40	195,169	0.058157	11,349	3.00	34,048	340	4,480	38,868	
			6B	1	13.4	1.3	14.7	0.50	320,166	0.048485	15,523	3.00	46,570	466	5,880	52,915	
			7A	BO	4.9	0.0	4.9	0.40	85,378	0.058157	4,965	3.00	14,896	149	1,960	17,005	
			7B	BO	6.1	0.0	6.1	0.50	132,858	0.048485	6,442	3.00	19,325	193	2,440	21,958	
			16	BO	10.2	2.0	12.2	0.50	265,716	0.048485	12,883	3.00	38,650	386	4,880	43,916	
			17	BO	16.9	3.9	20.8	0.50	453,024	0.048485	21,965	3.00	65,895	659	8,320	74,874	
18	BO		9.9	1.4	11.3	0.50	246,114	0.048485	11,935	3.00	35,799	358	4,520	40,676			
Total			72.6	8.6	81.2		1,698,404		85,060		253,799		32,800		290,213		
TOTAL		97.2	13.5	110.7		118,690		403,912		1,189,999		118,690		1,311,601			
LOREZ ADAMS GILSON	BPI	8A	BO	24.8	0.0	24.8	0.40	432,115	0.058157	25,311	3.00	75,392	754	9,920	86,065		
		8B	1	73.8	4.9	78.7	0.50	1,714,086	0.048485	83,107	3.00	249,322	2,493	31,480	283,296		
		Total		98.6	4.9	103.5		2,146,201		108,418		324,714		41,400		369,361	
		GO	9	BO	51.9	4.3	56.2	0.45	1,101,632	0.058157	64,068	3.00	192,203	1,922	22,480	216,605	
			Total		51.9	4.3	56.2		1,101,632		64,068		192,203		22,480		216,605
			TOTAL		146.2	148.9	1611.5		1,715,500		5,842,564		17,155		216,605		2,034,170

I-205 Overlay Zone over BPI zoning:
 FAR reduced from 0.50 to 0.40 and Generation Rate has been adjusted per Overall Sewer Demand Calculation table below

SEWER PHASES

- PHASE 1
- BO (BUILD-OUT)



IN THE INTERIM CONDITION, AS ALLOWED BY EX. 21" S.S. CAPACITY, CROSSING AT HANSEN RD MAY CONNECT TO EX. 21" S.S. FOR BUILD-OUT CONDITION THE INTERIM CONNECTION TO EXISTING 21" S.S. WILL BE REMOVED.
 TWO SEWER PIPES SHALL BE INSTALLED AT CROSSING FOR INTERIM AND BUILD-OUT PURPOSE. (TYPICAL AT ALL CROSSINGS)

FUTURE SEWER LATERAL CONNECTIONS TO EXISTING 21" SANITARY SEWER WITHIN HANSEN ROAD SHALL BE MINIMIZED AND ONLY ALLOWED AT EXISTING MANHOLES WHEN APPROVED BY CITY ENGINEER.
 ON-SITE CONVEYANCE SYSTEM IS SIZED ASSUMING NO CONNECTIONS TO EXISTING 21" SANITARY SEWER, EXCEPT FOR BLOCKS 40 AND 41.

Patterson Pass Business Park (584 ac)
 ADWF = 319,000 gpd
 PDW/F = 319,000 x 3.0 = 957,000
 GROUNDWATER INFILTRATION = 19,140
 RAINFALL INFLOW = 233,600
 PWWF = 1,209,740

Appendix B
Estimated Sewer Demand Calculations

ESTIMATED SEWER DEMAND PER PROPERTY BY INFRASTRUCTURE PROGRAM

Property Owner	Land Use	Block Number	Phase	Block Total Net Area acres	Roads Area acres	Block Total Gross Area acres	FAR	Building Area sf	Flow per Building SF gal/day/ft2	Average Dry Weather Flow gpd	PDWF peaking factor	PDWF gpd	Groundwater Infiltration (3% of ADWF)	Rainfall inflow 400 gpd/ac	PWWF gpd	
CROSSROADS BUSINESS CENTER AT CORDES RANCH	GO	19	BO	11.4	3.4	14.8	0.45	290,110	0.058157	16,872	3.00	50,616	506	5,920	57,042	
		20	BO	11.6	3.2	14.8	0.45	290,110	0.058157	16,872	3.00	50,616	506	5,920	57,042	
		21	BO	10.7	2.9	13.6	0.45	266,587	0.058157	15,504	3.00	46,512	465	5,440	52,417	
		22	BO	10.5	3.0	13.5	0.45	264,627	0.058157	15,390	3.00	46,170	462	5,400	52,031	
		23	BO	12.1	1.6	13.7	0.45	268,547	0.058157	15,618	3.00	46,854	469	5,480	52,802	
	Total				56.3	14.1	70.4		1,379,981		80,256					271,334
	BPI	33	1	63.1	5.9	69.0	0.50	1,502,820	0.048485	72,864	3.00	218,593	2,186	27,600	248,379	
		34	1	48.1	2.1	50.2	0.50	1,093,356	0.048485	53,011	3.00	159,034	1,590	20,080	180,704	
		35	1	120.0	5.3	125.3	0.50	2,729,034	0.048485	132,317	3.00	396,952	3,970	50,120	451,041	
		40	1	73.3	5.1	78.4	0.50	1,707,552	0.048485	82,791	3.00	248,372	2,484	31,360	282,216	
		41	1	30.7	3.1	33.8	0.50	736,164	0.048485	35,693	3.00	107,079	1,071	13,520	121,670	
		42	1	75.5	5.0	80.5	0.50	1,753,290	0.048485	85,008	3.00	255,025	2,550	32,200	289,775	
		43	1	20.9	2.9	23.8	0.50	518,364	0.048485	25,133	3.00	75,399	754	9,520	85,673	
		24	BO	5.6	5.3	10.9	0.50	237,402	0.048485	11,510	3.00	34,531	345	4,360	39,237	
		25	BO	30.0	5.5	35.5	0.50	773,190	0.048485	37,488	3.00	112,464	1,125	14,200	127,789	
		26	BO	34.1	5.0	39.1	0.50	851,598	0.048485	41,290	3.00	123,869	1,239	15,640	140,748	
		27	BO	12.1	2.2	14.3	0.50	311,454	0.048485	15,101	3.00	45,303	453	5,720	51,476	
		28	BO	21.0	3.7	24.7	0.50	537,966	0.048485	26,083	3.00	78,250	782	9,880	88,912	
		29	BO	26.2	2.8	29.0	0.50	631,620	0.048485	30,624	3.00	91,872	919	11,600	104,391	
		30	BO	43.5	4.3	47.8	0.50	1,041,084	0.048485	50,477	3.00	151,431	1,514	19,120	172,065	
		31	BO	2.6	1.6	4.2	0.50	91,476	0.048485	4,435	3.00	13,306	133	1,680	15,119	
		32	BO	33.9	3.0	36.9	0.50	803,682	0.048485	38,967	3.00	116,900	1,169	14,760	132,829	
		36	BO	68.4	7.8	76.2	0.50	1,659,636	0.048485	80,467	3.00	241,402	2,414	30,480	274,296	
		37	BO	67.4	6.3	73.7	0.50	1,605,186	0.048485	77,827	3.00	233,482	2,335	29,480	265,297	
		38	BO	14.4	3.0	17.4	0.50	378,972	0.048485	18,374	3.00	55,123	551	6,960	62,635	
		39	BO	47.8	1.5	49.3	0.50	1,073,754	0.048485	52,061	3.00	156,183	1,562	19,720	177,465	
		44	BO	11.6	1.3	12.9	0.50	280,962	0.048485	13,622	3.00	40,867	409	5,160	46,436	
45		BO	13.1	1.6	14.7	0.50	320,166	0.048485	15,523	3.00	46,570	466	5,880	52,915		
46	BO	1.7	1.0	2.7	0.50	58,806	0.048485	2,851	3.00	8,554	86	1,080	9,719			
47	BO	25.9	2.8	28.7	0.50	625,086	0.048485	30,307	3.00	90,922	909	11,480	103,311			
48	BO	34.7	2.9	37.6	0.50	818,928	0.048485	39,706	3.00	119,117	1,191	15,040	135,348			
49	BO	60.4	5.5	65.9	0.50	1,435,302	0.048485	69,591	3.00	208,772	2,088	26,360	237,220			
Total				986.0	96.5	1082.5		23,576,850		1,143,124					3,896,664	
TOTAL				1042.3	110.6	1152.9				1,223,379						4,167,999
GBC GLOBAL INVESTMENTS	GC	14	1	8.4	3.4	11.8	0.30	154,202	0.087236	13,452	3.00	40,356	404	4,720	45,480	
		4	BO	19.9	2.8	22.7	0.30	296,644	0.087236	25,878	3.00	77,634	776	9,080	87,490	
	Total				28.3	6.2	34.5		450,846		39,330				132,970	
	GO	13	BO	10.0	3.3	13.3	0.45	260,707	0.058157	15,162	3.00	45,486	455	5,320	51,261	
		Total				10.0	3.3	13.3		260,707		15,162				51,261
	BPI	11	1	50.2	2.1	52.3	0.50	1,139,094	0.048485	55,229	3.00	165,687	1,657	20,920	188,264	
		1A	BO	16.4	0.0	16.4	0.40	285,754	0.058157	16,619	3.00	49,856	499	6,560	56,914	
		1B	BO	6.6	0.0	6.6	0.50	143,748	0.048485	6,970	3.00	20,909	209	2,640	23,758	
		2A	BO	8.9	0.3	9.2	0.40	160,301	0.058157	9,323	3.00	27,968	280	3,680	31,928	
		2B	BO	1.3	0.1	1.4	0.50	30,492	0.048485	1,478	3.00	4,435	44	560	5,040	
		3A	BO	12.3	0.3	12.6	0.40	219,542	0.058157	12,768	3.00	38,304	383	5,040	43,727	
		3B	BO	7.3	0.7	8.0	0.50	174,240	0.048485	8,448	3.00	25,344	253	3,200	28,798	
10		BO	25.6	0.8	26.4	0.50	574,992	0.048485	27,878	3.00	83,635	836	10,560	95,032		
12		BO	5.7	1.8	7.5	0.50	163,350	0.048485	7,920	3.00	23,760	238	3,000	26,998		
Total				134.3	6.1	140.4		2,891,513		146,633					500,457	
TOTAL				172.6	15.6	188.2				201,125					684,687	
DELTA PROPERTIES	GC	5	1	17.0	2.4	19.4	0.30	253,519	0.087236	22,116	3.00	66,348	663	7,760	74,771	
		Total				17.0	2.4	19.4		253,519		22,116				74,771
	GO	15	BO	7.6	2.5	10.1	0.45	197,980	0.058157	11,514	3.00	34,542	345	4,040	38,927	
		Total				7.6	2.5	10.1		197,980		11,514				38,927
	BPI	6A	1	11.2	0.0	11.2	0.40	195,149	0.058157	11,349	3.00	34,048	340	4,480	38,868	
		6B	1	13.4	1.3	14.7	0.50	320,166	0.048485	15,523	3.00	46,570	466	5,880	52,915	
		7A	BO	4.9	0.0	4.9	0.40	85,378	0.058157	4,965	3.00	14,896	149	1,960	17,005	
		7B	BO	6.1	0.0	6.1	0.50	132,858	0.048485	6,442	3.00	19,325	193	2,440	21,958	
		16	BO	10.2	2.0	12.2	0.50	265,716	0.048485	12,883	3.00	38,650	386	4,880	43,916	
		17	BO	16.9	3.9	20.8	0.50	453,024	0.048485	21,965	3.00	65,895	659	8,320	74,874	
18		BO	9.9	1.4	11.3	0.50	246,114	0.048485	11,933	3.00	35,799	358	4,520	40,676		
Total				72.6	8.6	81.2		1,698,404		85,060					290,213	
TOTAL				92.2	13.5	110.7				118,690					403,912	
TWL INVESTORS LLC	BPI	8A	BO	24.8	0.0	24.8	0.40	432,115	0.058157	25,131	3.00	75,392	754	9,920	86,065	
		8B	1	73.8	4.9	78.7	0.50	1,714,086	0.048485	83,107	3.00	249,322	2,493	31,480	283,296	
Total				98.6	4.9	103.5				108,238					369,361	
LOPEZ / ADAMS / GILLON	GO	9	BO	51.9	4.3	56.2	0.45	1,101,632	0.058157	64,068	3.00	192,203	1,922	22,480	216,605	
		Total				51.9	4.3	56.2				64,068				216,605
GRAND TOTAL				1462.6	148.9	1611.5				1,715,500					5,842,564	

Attachment 6

**Tracy Gas Yard Land Sale Gain and Loss Calculation
with Tax Impact**

Table Showing Estimated Sales Price, Expenses, and Tax Effects
PACIFIC GAS AND ELECTRIC COMPANY
Tracy Gas Yard Property
Net book values as of November 30, 2020
(DOLLARS)

1 SALES PROCEEDS

Sales Price	82,312
Less: Transaction Costs	-
Net Sale Proceeds ^{Notes}	<u>82,312</u>

2 ALLOCATION OF SALES PROCEEDS BASED ON THE HISTORICAL COST OF PROPERTY

	Historical Cost	Proportional %
Non-Depreciable Property (Land)	2,018	100.00%
Depreciable Property	-	0.00%
	<u>2,018</u>	<u>100.00%</u>

3 GROSS GAIN/(LOSS) ON SALE

	Historical Cost	Net Book Value	Sales Proceeds	Pre-Tax Gain/(Loss)
Non-Depreciable Property (Land)	2,018	2,018	82,312	80,294
Depreciable Property	-	-	-	-
	<u>2,018</u>	<u>2,018</u>	<u>82,312</u>	<u>80,294</u>

4 TAX GAIN/(LOSS) ON SALE

	Historical Cost	Net Tax Value	Sales Proceeds	Pre-Tax Gain/(Loss)
Non-Depreciable Property (Land) - Tax Basis	2,018	2,018	82,312	80,294
Depreciable Property - Tax Basis	-	-	-	-
	<u>2,018</u>	<u>2,018</u>	<u>82,312</u>	<u>80,294</u>

5 GAIN/(LOSS) ALLOCATION

	Operating System	Other Depreciable Assets	CPUC Land (Pre-Tax)	Sharing Allocation	Taxes 27.98%	After Tax Gain / (Loss)
Ratepayers	0%	0%	59%	47,682	-	47,682
Shareholder	100%	100%	41%	32,611	(9,126)	23,485
	<u>100%</u>	<u>100%</u>	<u>100%</u>	<u>80,294</u>	<u>(9,126)</u>	<u>71,168</u>

*No tax impact as the ratepayer contribution / distribution will net the tax impact to zero

6 TAXES ON PROPERTY

	Net Tax Value	Sales Proceeds	Before Tax Gain/ (Loss)
Non-Depreciable Property (Land)	2,018	82,312	80,294
Depreciable Property	-	-	-
CWIP	-	-	-
Totals	<u>2,018</u>	<u>82,312</u>	<u>80,294</u>

	Non-Utility Property Land *	CPUC Land - Shareholder (33%)	CPUC Land - Ratepayer (67%)	
Taxable Gain/(Loss)	-	32,611	47,682	a
Distribution to Ratepayer (Tax Deduction to PG&E)	-	-	(47,682)	b
Net Taxable Gain/(Loss)	-	32,611	-	c=a-b
Tax Rate	27.98%	27.98%	27.98%	d
Net Federal and State Income Tax	-	9,126	-	e=c*d
Net After Tax Gain/(Loss)	-	23,485	47,682	f=a-e
Ratepayers Allocation	-	-	47,682	
Shareholder Allocation	-	23,485	-	
Taxing Jurisdiction Allocation	-	9,126	-	
Total Gain/(Loss) Allocation	<u>-</u>	<u>32,611</u>	<u>47,682</u>	

7 RATE BASE CHANGES

Beginning NBV of Assets Sold	2,018
Deferred Taxes for Assets Sold	-
Beginning Rate Base	2,018
Reduction to Gross Plant	(2,018)
Reduction to Depreciation Reserve (depreciation reserve is reduced by the historical cost of depreciable property)	2,018
Deferred Taxes reversed upon Sale	-
Property Sale Proceeds credited to Depreciation Reserve	-
Total Rate Base Change due to Asset Sale	<u>-</u>

Note 1: Sales price and transaction costs estimated based on known information and will be updated with actual costs upon closing of the sale.

8 GAIN ON SALE ALLOCATION

Ending Rate Base after Asset Sale	-
Gain / (Loss) allocated to Shareholders	32,611
Gain/ (Loss) allocated to Ratepayers	<u>47,682</u>

**PG&E Gas and Electric
Advice Submittal List
General Order 96-B, Section IV**

AT&T
Albion Power Company

Alta Power Group, LLC
Anderson & Poole

Atlas ReFuel
BART

Barkovich & Yap, Inc.
California Cotton Ginners & Growers Assn
California Energy Commission

California Hub for Energy Efficiency
Financing

California Alternative Energy and
Advanced Transportation Financing
Authority
California Public Utilities Commission
Calpine

Cameron-Daniel, P.C.
Casner, Steve
Cenergy Power
Center for Biological Diversity

Chevron Pipeline and Power
City of Palo Alto

City of San Jose
Clean Power Research
Coast Economic Consulting
Commercial Energy
Crossborder Energy
Crown Road Energy, LLC
Davis Wright Tremaine LLP
Day Carter Murphy

Dept of General Services
Don Pickett & Associates, Inc.
Douglass & Liddell

East Bay Community Energy Ellison
Schneider & Harris LLP Energy
Management Service
Engineers and Scientists of California

GenOn Energy, Inc.
Goodin, MacBride, Squeri, Schlotz &
Ritchie

Green Power Institute
Hanna & Morton
ICF

IGS Energy
International Power Technology
Intestate Gas Services, Inc.
Kelly Group
Ken Bohn Consulting
Keyes & Fox LLP
Leviton Manufacturing Co., Inc.

Los Angeles County Integrated
Waste Management Task Force
MRW & Associates
Manatt Phelps Phillips
Marin Energy Authority
McKenzie & Associates

Modesto Irrigation District
NLine Energy, Inc.
NRG Solar

Office of Ratepayer Advocates
OnGrid Solar
Pacific Gas and Electric Company
Peninsula Clean Energy

Pioneer Community Energy

Redwood Coast Energy Authority
Regulatory & Cogeneration Service, Inc.
SCD Energy Solutions
San Diego Gas & Electric Company

SPURR
San Francisco Water Power and Sewer
Sempra Utilities

Sierra Telephone Company, Inc.
Southern California Edison Company
Southern California Gas Company
Spark Energy
Sun Light & Power
Sunshine Design
Tecogen, Inc.
TerraVerde Renewable Partners
Tiger Natural Gas, Inc.

TransCanada
Utility Cost Management
Utility Power Solutions
Water and Energy Consulting Wellhead
Electric Company
Western Manufactured Housing
Communities Association (WMA)
Yep Energy