Otay Ranch Village 14 & Planning Areas 16/19

Specific Plan, Appendix 4

OTAY RANCH VILLAGE 14 & PLANNING AREAS 16/19;

GPA 16-008, SP 16-002, REZ 16-006, TM 5616 ER # 16-19-006

FEBRUARY 2018

Errata
Summary of Text Changes
Public Facilities Finance Plan, EIR, Appendix 3.1.6-1

Section (Page)	Change	Reason for Change
Page 120	Add current CVESD existing and future school description	Correction
Page 124	Correct GUHSD High School reference and 2017/2018 school enrollment	Correction

TABLE OF CONTENTS

LIST OF EXHIBITS

LIST OF TABLES

Executive Summary

A. Overview

The Growth Management Chapter of the *Otay Ranch General Development Plan/Otay Subregional Plan Volume 2* ("Otay Ranch GDP/SRP") contains goals, policies, objectives, and implementation measures governing the development of Otay Ranch to assure the efficient and timely provision of public facilities concurrent with demand and in compliance with facility-specific policies and thresholds. Processing and approval of this Public Facilities Financing Plan ("PFFP") is required in conjunction with preparation of the Otay Ranch Village 14 & Planning Areas 16/19 Specific Plan ("Specific Plan") to ensure the Proposed Project (defined below) is consistent with the overall goals and policies of the Otay Ranch GDP/SRP. This PFFP is consistent with the overall Village Phasing Plan adopted by the County of San Diego ("County") Board of Supervisors in October 1993, which includes the Proposed Project.

As a developer receives each succeeding development approval, the Otay Ranch GDP/SRP requires the applicant perform specific steps leading to the timely provision of the required facilities. The concept is illustrated below (Otay Ranch GDP/SRP, p. 348):

Performance of Facility Thresholds:

Otay Ranch GDP/SRP

- *Goals, objectives and policies established.*
- *Facility thresholds established.*
- *Processing requirements established.*

SPECIFIC PLAN

- *Facility financing refined and funding source identified consistent with Otay Ranch GDP/SRP goals, objectives, and policies.*
- *Facility demand and costs calculated consistent with adopted land uses and Otay SRP-defined methodologies.*
- *Specific facility financing and phasing analysis performed to assure compliance with Growth Management Thresholds.*
- *Facilities sited and zoning identified.*

TENTATIVE MAP

- *Subdivision approval conditioned upon assurance of facility funding.*
- *Subdivision approval conditioned upon payment of fees, or the dedication, reservation, or zoning of land for identified facilities.*
- *Subdivision approval conditioned upon construction of certain facility improvements.*

FINAL MAP

- *Tentative Map conditions performed.*
- *Lots created.*

BUILDING PERMIT

- *Impact fees paid as required.*

The PFFP analysis begins by assessing the demand for facilities based upon the demand from existing development and those projects with approved final and tentative maps. Public facility demands of the Otay Ranch Village 14 & Planning Areas 16/19 ("Proposed Project"), pursuant to a phasing projection of the future development of the Proposed Project, is then analyzed to estimate how much, and when additional or upgraded facilities will be needed to ensure a particular facility does not fall beneath the adopted facility performance threshold. When specific thresholds are projected to be reached or exceeded, the PFFP provides recommended corrective action that could be necessary for continued compliance with the Otay Ranch GDP/SRP.

B. Information Provided in this PFFP

The PFFP requires the preparation and approval of phasing schedules showing how and when facilities and improvements necessary to serve proposed development will be installed or financed to meet the thresholds, as described in the Otay Ranch GDP/SRP, pp. 348-349:

- *An inventory of present and future requirements for each facility.*
- *A summary of facilities cost.*
- *A facility phasing schedule establishing the timing for installation or provisions of facilities.*
- *A financing plan identifying the method of funding for each facility required.*
- *A fiscal impact report analyzing Specific Plan consistency with the requirements and conclusions of the Otay Ranch Service Revenue Plan.*

C. General Conditions of this PFFP

1. All development within the Proposed Project shall conform to the provisions and conditions of this PFFP.
2. All development within the Proposed Project shall be required to pay applicable development impact fees for public facilities and other applicable fees pursuant to the most recently adopted programs by the County Board of Supervisors and applicable service agencies or districts, and as amended from time-to-time.
3. This PFFP shall be implemented in accordance with the Otay Ranch GDP/SRP.
4. Approval of this PFFP does not constitute prior discretionary review or approval for projects within the boundaries of the Specific Plan. All future projects within the

boundaries of the Proposed Project shall undergo development review and approval in accordance with County regulations.

5. The facilities and phasing requirements identified in this PFFP are based on an assumed projection of development. If a less intense development or fewer residential units are actually constructed, facility and phasing requirements shall be adjusted accordingly.
6. This PFFP includes a phasing plan. This forecast is not to be considered absolute. Alternative and/or concurrent phasing may occur. The actual number of dwelling units and other uses to be constructed in any particular phase will vary depending upon economic and other external conditions.

D. Proposed Public Facility Improvements

This PFFP analysis concludes that a number of public facility improvements will be required of the developer of the Proposed Project in order to achieve compliance with the adopted thresholds. These improvements are listed in Table 1, Summary of Project Public Facility Improvements. Please refer to Table 2, Construction and Responsibilities for Facilities and Infrastructure, for a list of construction responsibilities for the public improvements necessary to serve the Proposed Project.

Table 1: Summary of Project Public Facility Improvements

Improvement
DRAINAGE FACILITIES
· Storm Drains in internal streets. Fourteen (14) Biofiltration Basins · Roadside Proprietary Biofiltration Facilities (Modular Wetland Units, Fiterra, etc.)
SEWERAGE FACILITIES
· Onsite Public Lift Stations · Onsite Public Force mains · Offsite Public Life Stations · Offsite Public Force Mains · Offsite Public Gravity Sewer · Sewer Lines in internal streets
TRANSPORTATION SYSTEM FACILITIES
· Proctor Valley Road from Project Southern Boundary to Northern Boundary · Offsite circulation roadways to access Planning Area 16 · Onsite circulation roadways within Proposed Project
URBAN RUNOFF FACILITIES
· Fourteen (14) Water Quality Basins · Five (5) Roadside Proprietary Biofiltration Facilities
WATER FACILITIES
· 980 Reservoir (2.0 million gallon capacity) (TBD) · 980 and 1296 Transmission Lines (TBD) · 1296 Zone Pump Station · 1460 Zone Hydropneumatic Pump Station · Off-site Transmission Line to Jamul · Off-site Transmission Line to Chula Vista · Water lines in internal streets
FIRE PROTECTION AND EMERGENCY FACILITIES
· Reserve Public Safety Site Enter into a "Fire Service Agreement"
LAW ENFORCEMENT FACILITIES
· Reserve Public Safety Site or location with Mixed Use Commercial Site
PARKS AND RECREATION FACILITIES
· Dedicate parkland and provide improvements consistent with San Diego County Park Land Dedication Ordinance
SCHOOL FACILITIES
· Reserve Elementary School site · Pay state mandated school fee or enter into mitigation agreement(s) with District(s)

Table 2: Construction and Responsibilities for Facilities and Infrastructure

	Acquisition	Construction	Maintenance	Ownership	Access
Public Roads	Developer(s)	Developer(s)	County/ District	County	Public
Private Roads	Developer(s)	Developer(s)	HOA	HOA	HOA/ Private
Proctor Valley Rd Off Site Improvements in the County	Developer(s)	Developer(s)	County	County	Public
Proctor Valley Rd Off Site Improvements in Chula Vista	Developer(s) and Fair Share Contribution	Developer(s) and Fair Share Contribution	City of Chula Vista	City of Chula Vista	Public
Trails	Developer(s)	Developer(s)	HOA or County/District or Special District	County and City of Chula Vista(1)	Public
Landscaped Parkways	Developer(s)	Developer(s)	HOA or County/District or Special District	County and City of Chula Vista(1)	Public
Public Road Lighting	Developer(s)	Developer(s)	County or County/District	County and City of Chula Vista (1)	N/A
Specialty Village Lighting	Developer(s)	Developer(s)	HOA	HOA	N/A
MU Parking Lot	Developer(s)	Developer(s)	HOA	HOA	Public
MSCP/Otay Ranch RMP Preserve	Preserve Conveyance	NA	POM Assessment	POM	Public
Internal Open Space (HOA)	Developer(s)	Developer(s)	HOA	HOA	Public
Internal Open Space (Public)	Developer(s)	Developer(s)	HOA or County/District	HOA or County/District	Public
Public Parks	Developer(s)	Developer(s)	County/District or HOA	County	Public
Private Parks	Developer(s)	Developer(s)	HOA	HOA	HOA
Water System	Developer(s)	Developer(s)	OWD	OWD	NA
Sewer System	Developer(s)	Developer(s)	County/District	County/District	NA
Storm Drain	Developer(s)	Developer(s)	County	County	NA
Drainage Basins	Developer(s)	Developer(s)	HOA or County/District	HOA or County/District County	NA
Fire Station	Developer(s)/County	Developer(s)/County	County	County	NA
School	Developer(s)/District	Developer(s)/District	School District	School District	Public

Definitions	
Developer and Fair Share Contribution	Obligation will be satisfied through a combination of developer(s) performance and payment of impact fees.
Preserve Dedication	Obligation will be satisfied through compliance with the RMP 2 dedication requirements.
POM Assessment	Obligation will be satisfied through compliance with the RMP 2 requirement to establish an assessment mechanism.
Developer/ District	Acquisition and Construction may be performed by the Developer(s) but funded through an assessment mechanism.
County/District	Performance or title may be held by the County but funded through an assessment mechanism.
HOA	Obligation will be satisfied through a Homeowners Association

Footnotes:

(1) Portion of Proctor Valley Road including trails and public road lighting located within the City of Chula Vista Boundaries, shall be owned and maintained by the City of Chula Vista.

1.0 Introduction

1.1 Overview

The purpose of this PFFP is to address the demand and adequacy of planned public facilities associated with the anticipated development of the Proposed Project. This PFFP has been prepared in compliance with the requirements of the Otay Ranch GDP/SRP. Part II of the Otay Ranch GDP/SRP identifies thirteen (13) areas of public facility analysis required for implementation of the Proposed Project. The list of facilities and services evaluated in this PFFP are as follows.[1]

- Drainage Facilities
- Sewerage Facilities
- Transportation System Facilities
- Urban Runoff Facilities
- Water Facilities
- Water Reclamation Facilities
- Civic Facilities
- Fire Protection / Emergency Facilities
- Law Enforcement Facilities
- Library Facilities
- Parks and Recreation Facilities
- School Facilities
- Animal Control Facilities

In addition to analyzing these 13 facilities, the Otay Ranch GDP/SRP requires the Specific Plan to include Regional Facility Report for the following regional facilities.

- Arts and Cultural Facilities
- Cemetery Facilities
- Health and Medical Facilities
- Community and Regional Purpose Facilities
- Social and Senior Services Facilities
- Correctional Facilities
- Justice Facilities

Other facilities required to be addressed at the Specific Plan level are Solid Waste and Childcare facilities. This PFFP includes analysis of these facilities in Chapter 15.

On October 28, 1993, the County Board of Supervisors adopted the Otay Ranch GDP/SRP and Otay Ranch General Plan Amendment, GPA 92-04. The Board of Supervisors also adopted Policy I-109 which states:

> *It is the policy of the Board of Supervisors that Otay Ranch Associated Documents listed below, all on file with the Clerk of the Board of Supervisors and identified by the Document Numbers indicated below, shall be used in the preparation of plans, reports and other documents for the Otay Ranch project; County decision-makers and staff shall assure that*

[1] Listed in Otay Ranch GDP/SRP Part II, p. 351.

applications submitted for the development portions of the Otay Ranch project are consistent with these Associated Documents:

Mitigation Monitory Program (Doc. No. 759220)
Resource Management Plan (Doc. No. 759221)
Village Phasing Plan (Doc. No. 759222)
Facility Implementation Plan (Doc. No. 759223)
Service/Revenue Plan (Doc. No. 759224)

1.2 Otay Ranch GDP/SRP Thresholds

The Otay Ranch GDP/SRP identifies public facilities and services with related thresholds and implementation measures. These public facilities and services are described in the Otay Ranch GDP/SRP and the Otay Ranch Facility Implementation Plan. The thresholds contained in Part II, Chapter Five, are used to evaluate demand generated by the Proposed Project and compliance with the adopted threshold.

This PFFP identifies new or upgraded facilities or services needed to comply with or the applicable threshold.

1.3 Facility Analysis

This PFFP analyzes facility adequacy for each of the applicable facilities and services based upon the Proposed Project's processing requirements for that facility. These establish the requirements for evaluating the Proposed Project's progress at various stages of entitlement action (General Plan, Specific Plan/Public Facilities Finance Plan, Tentative Map, Final Map and Building Permit) in the development review process.

A service analysis section is also included in this PFFP which identifies and provides background information on the service provided by each specific facility. An existing conditions inventory is then integrated into the analysis of each facility. The demand created by the Proposed Project is then assessed for each facility. This PFFP is based upon the assumptions of a phased, non-sequential development scenario of the Proposed Project (See Section 2.4). Based upon this development projection, an adequacy analysis of proposed facility improvements is conducted.

The adequacy analysis provides a determination of whether or not compliance with the threshold will occur and be maintained, and the finance section provides a determination of whether funds are available to ensure construction and/or delivery of the improvement.

The analysis includes corrective actions that could be necessary to bring the facility into conformance with the threshold.

In addition, this PFFP addresses Regional Facility Plans to ensure compliance as required by the Otay Ranch GDP/SRP.

Exhibit A - Regional Location Map

2.0 Land Use Assumptions

2.1 Purpose

The purpose of this section is to quantify the manner in which the Proposed Project will be developed, and to analyze the proposed development pattern in relationship to existing urban development and infrastructure in the area, as well as all other projects at some stage of the development process in the County and the City of Chula Vista, see Exhibit A, Regional Location Map. Public facility demand associated with the Proposed Project is added to this existing demand in order to assess facility adequacy through buildout of the Proposed Project.

2.2 Existing Development

This PFFP considers existing and approved development up to December 2017 as the base condition. This information is based upon input from the County of San Diego Department of Planning and Development Services and the City of Chula Vista Planning Department.

The Proposed Project is within the boundaries of the Jamul/Dulzura Subregional Plan and the Otay Ranch General Development Plan Subregional Plan (Otay Ranch GDP/SRP (Volume II). The policies contained in the Jamul/ Dulzura Subregional Plan text apply to the areas of Otay Ranch within the Jamul/Dulzura Subregion. In case of conflict, the Otay Ranch GDP/SRP policies shall take precedent. The unincorporated area of Otay Ranch, is underdeveloped at the time of preparation of this PFFP.

2.3 Otay Ranch Village 14 & Planning Areas 16/19 Development Summary

The anticipated land uses for the Proposed Project are shown in Table 3. The total maximum number of homes planned is 1,119 [2], if the school is not developed within the 9.7 acre school site in Village 14. Village 14 also includes approximately 2.3 acres for a public safety site, and 24.7 acres of public and private park and recreational uses. The Proposed Project also includes roughly 27.9 acres of open space and approximately 13.6 acres of circulation facilities. Approximately 426.7acres within the Proposed Project are designated MSCP/Otay Ranch RMP Preserve. See Exhibit B, Site Utilization Plan.

[2] This total includes 97 units allocated to the school site at 10 DU/Acre per the Otay Ranch GDP/SRP Policies.

Table 3: Village 14 and Planning Areas 16/19 Land Use Summary Table

Village 14:

Description		Gross Acres (1,2)	Target Units	Density
Single Family Residential				
R-1	50*85	18.0	81	4.5
R-2	60*100	38.5	82	2.1
R-3	71*100	41.1	73	1.8
R-4	Courtyard	13.8	116	8.4
R-5	50*100	35.0	103	2.9
R-6	60*100	25.7	71	2.8
R-7	60*85	40.7	108	2.7
R-8	60*100	28.7	75	2.6
R-9	75*100	30.0	74	2.5
R-10	70*85	25.1	49	1.9
R-11	80*100	28.6	61	2.1
R-12	4 ac min	18.9	4	0.2
Single Family Residential Subtotal		**344.2**	**897**	**2.6**
Residential Use on School Site (9.7 acres) *(3)*			97	
Non-Residential Uses				
Mixed Use *(4)*	MU - C	1.7		
Public Parks				
P-1	South Park	2.9		
P-2	Village Green Park	7.2		
P-3	Scenic Park	3.7		
Public Parks Subtotal		13.8		
Private Parks & Recreation				
PP-1	South	1.0		
PP-2	Central	1.2		
PP-3	Private Park	0.7		
PP-4	North	1.5		
PPP *(4)*	Various	0.0		
Private Parks/Recreation Subtotal		4.5		
Public Safety Site		2.3		
Elementary School Site *(3)*		9.7		
Open Space		27.6		
Conserved Open Space		36.9		
Otay Ranch RMP Preserve		270.2		
Circulation - Arterial		12.7		
Non-Residential Uses Subtotal		**379.5**		
Village 14 Subtotal		**723.7**	**994**	**1.4**

Notes

(1) Residential gross acres includes 96.0 acres of related internal slopes, fuel modification and/or preserve edge open space lots.

(2) Village 14 has 5.0 acres of private pocket parks included in the residential acreage; therefore the subtotal including PPP is 9.5 acres.

(3) Units allocated to school site at 10 DU/ac per the Otay Ranch GDP/SRP policies. Should school site not be needed, 97 units may be built.

Should the school site be needed, the Total Target

Units is 897. (4) Village 14 Mixed Use acreage includes

10,000 sf of commercial use.

(5) Off-site impacts are in excluded from the acreage above. See Table 5 for details.

Planning Area 16 / 19

Description		Gross Acres (1,2)	Target Units	Density
Residential Uses				
R-13	Estates 1 acre avg	13.4	13	1.0
R-14	Ranchettes 2 acre min	192.0	71	0.4
R-15	Ranchettes 2 acre min	41.9	11	0.3
R-16	Ranchettes 2 acre min	116.3	30	0.3
Residential Subtotal		**363.55**	**125**	**0.3**
Non-Residential Uses				
Public Park P-4	Northern Park	1.4		
Open Space		2.1		
Conserved Open Space		35.5		
Otay Ranch RMP Preserve		156.5		
Circulation Arterial		0.8		
Non-Residential Uses Subtotal		**196.3**		
Planning Area 16/19 Subtotal		**559.8**	**125.0**	**0.2**

Notes

(1) Gross acres includes 127.1 acres of limited development area (LDA). See Table 4 for details.

(2) Residential gross acres includes 14.1 acres of related private lift and pump stations open space lots. (3) Off-site impacts are in excluded from the acreage above. See Table 5 for details.

Description	Component Acres LDA	Component Acres Other	Acres Total
Residential Uses			
R-13 Estates 1 acre avg	0.0	13.4	13.4
R-14 Ranchettes 3 acre avg R-15	17.3	174.7	192.0
Ranchettes 3 acre avg R-16 Ranchettes	27.1	14.8	41.9
3 acre avg	50.9	65.4	116.3
Residential Subtotal *(5)*	**95.3**	**268.3**	**363.6**
Non-Residential Uses			
Public Park P-Northern Park		1.4	1.4
Open Space		2.1	2.1
Conserved Open Space MSCP	31.9	3.6	35.5
Preserve Circulation Arterial		156.5	156.5
		0.8	0.8
Non-Residential Uses Subtotal	**31.9**	**164.4**	**196.3**
Planning Area 16/19 Subtotal	**127.1**	**432.7**	**559.8**

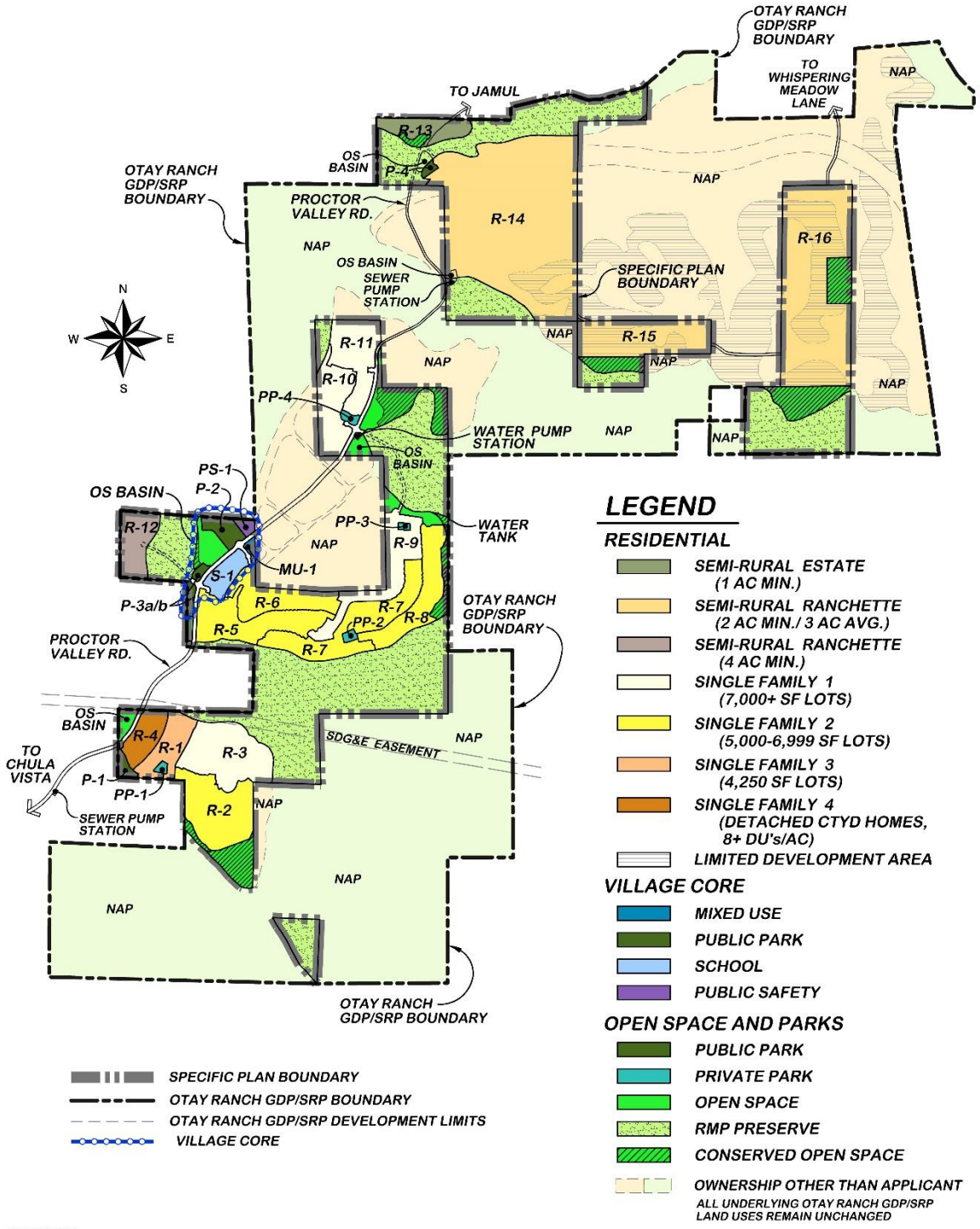

Exhibit B - Site Utilization Plan

2.4 Conceptual Project Phasing

This PFFP analysis assumes that the Proposed Project will be constructed in five non-sequential phases. The Conceptual Phasing Plan ("Phasing Plan"), Exhibit C, divides the Specific Plan into five geographic phases. Necessary infrastructure and amenities for each phase will be provided as the development progresses.

The Phasing Plan is non-sequential to respond to regulatory constraints or economic and market fluctuations. Therefore, the Specific Plan identifies facilities and infrastructure improvements for each phase as if that phase developed without relying on other phases. Table 1 identifies the infrastructure that must be constructed with each phase.

This Phasing Plan also identifies project wide thresholds for improvements to Proctor Valley Road, off-site water and sewer transmission lines, provision of the water reservoir, delivery of the school site, improvement of the neighborhood parks and delivery of the Public Safety Site.

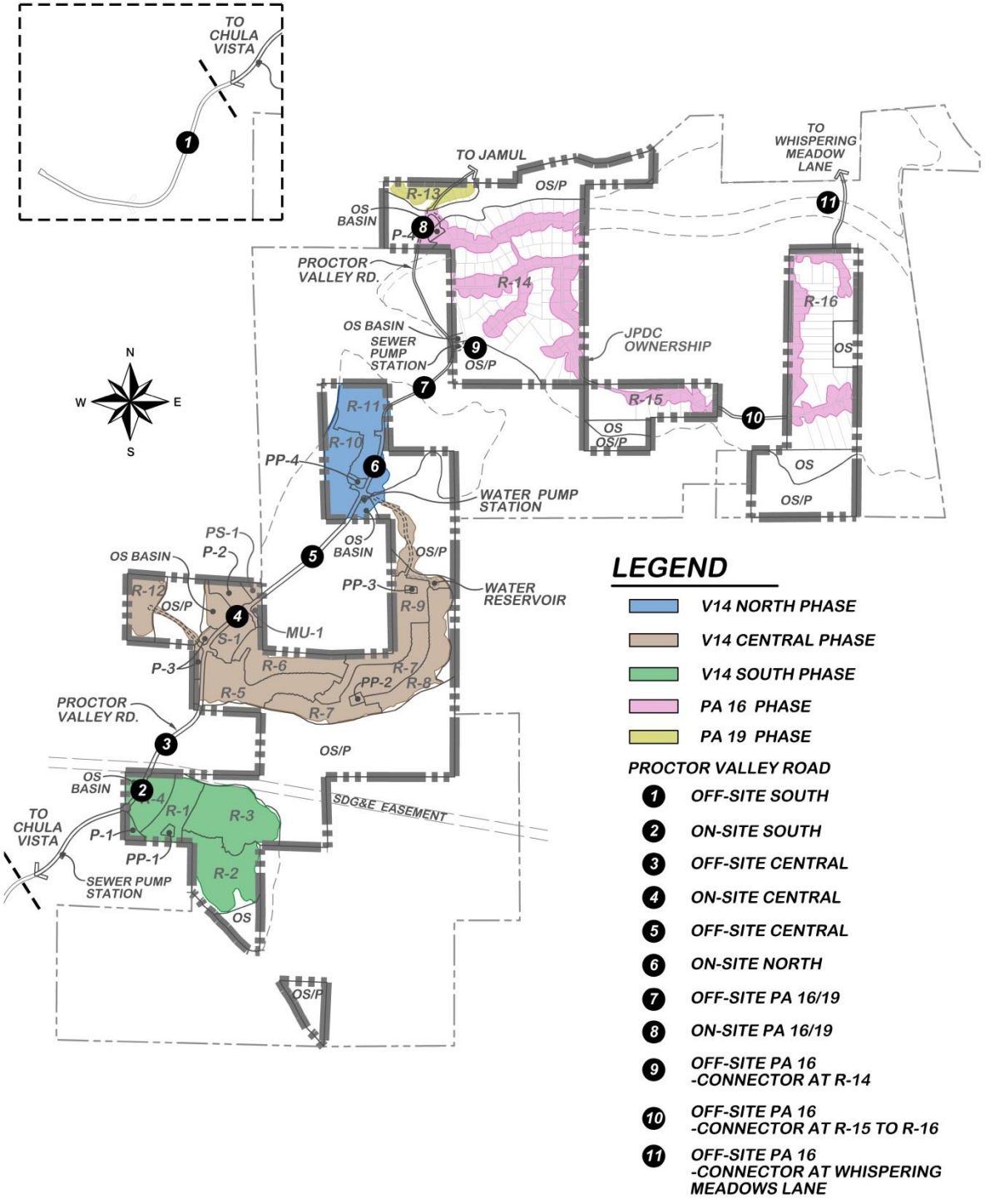

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Exhibit C – Conceptual Phasing Plan

2.5 Population-based Analysis

Several of the public facilities thresholds are based on providing a quantity of facilities per sum of population. As a result, it is necessary to determine a population projection for each assumed phase. For the 91914 zip code, SANDAG estimates the average persons per home to be 3.6. For the 91935 zip code, SANDAG estimated the average persons per home to be 2.9.

The population of the Proposed Project is projected to be approximately 3,941 persons. This projection is calculated by applying SANDAG population for the 91914 zip code (3.6 persons per home) and multiplying by 994 homes (includes non-residential uses in Village 14) plus the 91935 zip code (2.9 persons per home) and multiplying by 125 homes.

3.0 Drainage Facilities

3.1 Otay Ranch GDP/SRP Threshold

Drainage facility will be designed to meet the County Standards and will mitigate any increase in runoff volume or velocity Storm water flows and volumes shall not exceed Engineering Standards of the governing land use jurisdiction (County).

3.2 Service Analysis

The San Diego County Flood Control District (SDFCD) is responsible for ensuring safe and efficient storm water drainage control systems are provided concurrent with development in the unincorporated portions of the County. The County Board of Supervisors acts as the Board of Directors for the SDFCD. District staff reviews individual projects to ensure that improvements are provided consistent with any applicable approved drainage master plan(s) and that development projects comply with all County engineering drainage standards.

The CEQA Drainage Study for *Otay Ranch Village 14 & Planning Areas 16/19 Drainage Study*, prepared by Hunsaker & Associates, Inc., dated February 2018, assesses the existing (Pre-Development) and developed (Post-Development) drainage conditions of the Project Area. The purpose of this Drainage Study to assess the onsite peak flow runoff rates from the Project Area as well as any associated offsite runoff which will be conveyed through the Project Area. Additionally, this report analyzes the proposed major storm water facilities needed to route these flows downstream without adversely impacting the downstream natural drainage ways. The total Proctor Valley drainage watershed area encompassed in the Drainage Study is approximately 6,880 acres and includes areas between the southern portion of the community of Jamul and the Upper Otay Reservoir.

Public infrastructure drainage trunk facilities and services are also addressed in the *Otay Ranch Facility Implementation Plan* dated October 28, 1993.

3.3 Project Processing Requirements

1. Identify drainage demand.
2. Identify locations of facilities for on-site and off-site improvements.
3. Provide cost estimates.
4. Identify financing methods.

3.4 Existing Conditions

The Project Area is currently undeveloped. The site is diverse in topography and contains a flat valley along Proctor Valley Road and rolling hills within the remainder of the site. Vegetation consists mainly of chaparral and coastal sage scrub. No development exists in adjacent lands which drain through the Project Area. The elevation range for the watershed which drains through the site is between 520 feet above mean sea level ("AMSL") at the upstream end of the Upper Otay Reservoir to 2,045 feet AMSL at the high ridge line east of Proctor Valley. Proctor Valley Road traverses the Project Area connecting the community of Jamul to the City of Chula Vista.

In general, Proctor Valley Road follows the existing contours of Proctor Valley and shows evidence of runoff overtopping and sheet flowing particularly at the locations of the major existing drainage paths. Proctor Valley Road and Proctor Valley generally parallel each other. Canyon runoff east and west of Proctor Valley confluence at Proctor Valley and flow in a southwesterly direction to discharge into Upper Otay Reservoir.

In its current state, Proctor Valley Road is in various stages of improvement (i.e. paved or dirt). Proctor Valley Road from the northern project boundary at Melody Road to approximately 1.3 miles south within the project site is paved and improved. At that point, there is two tenths of a mile segment that is dirt/unimproved. The pavement continues for approximately eight tenths of a mile into the northern portion of Otay Ranch Village 14. From that point the road surface is deteriorated pavement for approximately 2.5 miles to the intersection of Proctor Valley Road and Northwoods Drive in the City of Chula Vista.

The onsite drainage watersheds and a summary of the existing condition drainage flows are as identified in Table 4, and shown graphically in the CEQA Drainage Study for *Otay Ranch Village 14 and Planning Areas 16/19 Drainage Study*. The existing junctions are not sufficient to satisfy drainage demand and will require upgrades to prevent roadway overtopping during the design flow event.

3.5 Project Demand and Proposed Facilities

3.5.1 Post Development Watersheds

Development of the Proposed Project will include the construction of single-family residential homes, multi-family homes, parks, an elementary school site, a public safety site, commercial and the accompanying roads and infrastructure improvements within. roughly 755.8 acres of the 1,283.6-acre property will be developed. The balance will remain in Otay Ranch RMP Preserve (426.5 acres), Conserved Open Space (73.4 acres) and open space (27.9 acres of basins and open space slope areas). *(Please note that technical report acreages may vary slightly between reports based on anticipated areas of impact.)*

The location of the Proposed Project along Proctor Valley Road is such that it intersects the surrounding MSCP Preserve's natural drainage path towards Proctor Valley. Therefore, a storm drain system will be required to collect and convey this offsite runoff through the developed portion of the Proposed Project. The proposed onsite storm drain system will collect development runoff and discharge a portion of those flows as described below into the proposed BMP basins intended for water quality and hydro modification treatment. For clarity in the remaining portion of this chapter, the general term of 'water quality basin' is used to define the proposed structural BMP basins rather than the more specific basin classifications such as retention, partial retention, or biofiltration. Routing the adjacent MSCP Preserve flows through the proposed basins would significantly increase basin sizes. Therefore, dual storm drain configurations are proposed throughout the Project Area wherever feasible to avoid comingling of onsite and offsite flows.

The runoff from the 85th percentile storm, as defined by the San Diego County Hydrology Manual (SDCHM), as well as flow control (HMP) flows and drier weather runoff from developed areas of the Proposed Project will be routed to the water quality basins. The riser outlet structure for each basin will be designed to address water quality and hydro modification for its respective drainage management area ("DMA").

For the larger water quality basins, it may be most feasible to bypass peak flowrates rather than to discharge them into the respective basin. In those instances, runoff in excess of the upper HMP flowrate threshold (Q10) will bypass the basin via a diversion structure placed upstream of the basin. The performance of the water quality basins is described in depth in the *Priority Development Project SWQMP for Otay Ranch Village 14 and Planning Areas 16/19* by Hunsaker & Associates dated February 2018. Fourteen bio filtration basins and five proprietary biofiltration units are proposed to receive runoff from the majority of areas with proposed development.

The total Post-Development water discharge is greater than the total Pre-Development discharge; however, the capacity of Upper Otay Reservoir is sufficient to convey the proposed peak flow increases.

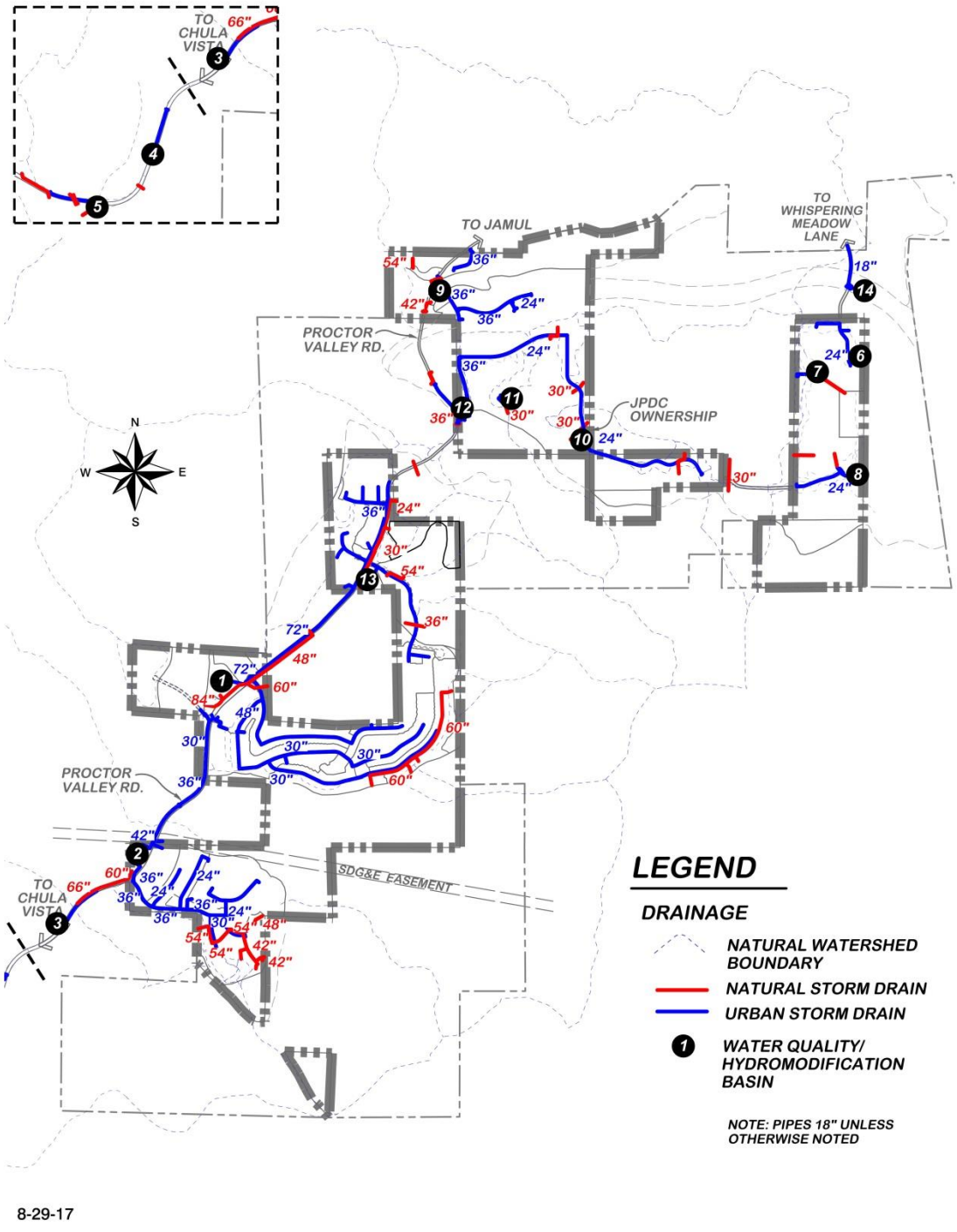

Exhibit D – Drainage Facilities Plan

At the downstream end of the storm drain systems, the culvert crossings under Proctor Valley Road will be constructed to prevent roadway overtopping. The following, Table 4 Post-Development Watershed Area, summarizes the 100-year developed condition peak flows to each of the discharge locations at Proctor Valley Road. Flows for Proposed Project junctions were generated using the Natural Resources Conservation Service ("NRCS") Unit Hydrograph Method as explained in Chapter 4 of the SDCHM.

Table 4: Post-Development Watershed Area

Junction Name	Proposed Drainage Area to Junction (acres)	100-Year Proposed Developed Peak Flow (acres)
J001	953.8	1,529
J003	2,764.0	5,021
J004	4,068.1	7,617
J005	5,328.1	10,170
J007	6,109.8	11,570
J008	6,190.6	11,597
J009	6,880.7	12,736

3.5.2 Rational Method – 100 Year Storm

As mentioned, all methodology used in this analysis is consistent with standards set forth by the SDCHM. Since the total contributing watershed area to each water quality basin is less than one square mile in the proposed developed portions of the Proposed Project, the Rational Method was used to determine peak flow rates. The NRCS Unit Hydrograph Method was used to determine peak flow for junctions listed in Table 4. Per County of San Diego methodology, all hydrologic results correspond to the 100-year design storm.

In accordance with County drainage criteria for the Post-Development condition, and following the recommendations of the County's comments during the pre-application process, the Rational Method has also been used to determine peak design flow rates for all the contributing drainage areas less than 1.0-square mile. The AES-2015 computer software was used to model the runoff response per the Modified Rational Method. Methodology used for this computation of design rainfall events, runoff coefficients, and rainfall intensity values are consistent with criteria set forth in the most current SDCHM. The areas draining to Junctions J001, J003, J004, J006, J007, J008 and J009 are greater than 1.0- square mile for proposed conditions. The NRCS Unit Hydrograph was developed using the HEC-HMS software program. All input for this program is consistent with Chapter 4 of the SDCHM. A more detailed explanation of methodology and model

development used for this analysis is provided in the *Drainage Study*. Details addressing the storm water requirements are discussed in the *PDP SWQMP*.

As mentioned, the 100-Year peak flow event analysis concludes that multiple culverts under Proctor Valley Road, which would transport the developed area drainage through the Project Area to Upper Otay Reservoir, will need to be constructed to service the post-development discharge.

Table 5: Post-Development 100-Year Peak Flows and Conveyance

Crossing ID #	*Discharge Location*	*Onsite/ Offsite*	*100- Year Developed Peak Flow (cfs)*	*(Est.) Proposed Stormwater Conveyance Size*
J001	Along PVR in Planning Area 16	Onsite	1,529 cfs	3- 4′ x 10′ RCBC
J002	Along PVR between Village 14 and Planning Area 16	Onsite	1,505 cfs	8.25′ x 22′ arch culvert
J004	Along Proctor Valley southwest of North WQ Basin	Onsite	7,617 cfs	15′ x 84′ arch culverts
J006	Along PVR, Proctor Valley tributary between North and South WQ Basin	Onsite	1,726 cfs	12′ x 34′ arch culvert
J008	Along PVR south of (residential portions of) Village 14	Onsite	11,597 cfs	Bridge- 12′ height, 160′ width
PRV6a	East of Central WQ Basin (offsite flow bypass)	Onsite	302 cfs	48″ RCP
PRV6b	Southeast of Central WQ Basin (offsite flow bypass)	Onsite	101 cfs	36″ RCP
PVR3	Southern end of PVR		1,426 cfs	3- 6′x 6′ RCBC

Table 5 provides details of the proposed major storm drain improvements along Proctor Valley Road and other circulation roads requiring culvert crossings. From an analysis of Table 5, six (6) arch culverts would be constructed at Junctions J004, J006 and J008, and a 96″ reinforced concrete pipe (“RCP”) and three (3) reinforced concrete box culverts (“RCBC”) would be constructed.

Regarding the peak flow comparison from Pre- and Post-Development conditions, the Proposed Project will increase the Post-Development 100-year peak flow by about 700 cfs from 12,036 cfs to 12,736 cfs. However, Post-Development storm drain facilities would accommodate the proposed peak flows. Additional details regarding the conveyance of drainage Pre- and Post-Development can be found in the *Drainage Study*.

The hydrologic analysis concludes that it will be necessary to construct storm drain systems throughout the Proposed Project to adequately convey runoff to the locations of the proposed water quality basins and the downstream culverts. The basins are designed of an adequate size to handle the necessary volumes identified for each DMA. Installation of the fourteen biofiltration basins and five proprietary biofiltration facilities will ensure that the Proposed Project will comply with San Diego County BMP Design Manual requirements.

3.5.3 Hydromodification

It was determined that the proposed bio filtration basin footprints for the Proposed Project are sufficient to meet the current hydro modification management plan ("HMP") criteria if the bio filtration cross-section area and volume recommended are incorporated within the Proposed Project site. The overall tributary areas to the Project's junctions increased with development but were treated to address hydro modification via the proposed onsite basins. Findings regarding the hydro modification requirements can be found in the *HMP Flow Control Facility Design for Otay Ranch Village 14 and Planning Areas 16/19 (February 2018)*.

3.6 Adequacy Analysis

The hydrologic analysis concludes that construction of the Post-Development storm drain systems throughout the Proposed Project site to the proposed water quality basins, and the downstream culverts, will result in storm drain infrastructure that is in compliance with County and stormwater requirements. This proposed drainage control infrastructure program also minimizes the opportunity for downstream pollution. The analysis concludes that the basins and culverts will be designed of an adequate size to handle the necessary volumes, consistent with stormwater requirements. Subject to installation of the storm drain system, the Proposed Project will consist of an adequate program of storm drain collection.

In addition, the following conditions shall be required of the developer of the Proposed Project:

1. The Proposed Project will be designed to avoid violation of any water quality standards or waste discharge requirements. Storm water treatment design is further discussed in the *Priority Development Project SWQMP for Otay Ranch Village 14 and Planning Areas 16/19*.
2. Development of the Proposed Project site will not degrade potential beneficial uses of downstream water bodies as designated by the Regional Water Quality Control Board, including water bodies listed on the Clean Water Section 303d list.
3. Minor alterations of the existing drainage pattern, required as part of the Proposed Project, will be mitigated in a manner that would prevent substantial erosion or siltation onsite or offsite. Energy dissipater systems will be designed at proposed culvert outfalls.
4. Development of the Project Area does not encroach on any 100-year flood hazard areas as defined by FEMA. Proposed structures will be elevated above the anticipated 100-year water surface elevation. As such no CLOMR is required.
5. Prior to recordation of the final map, 100-year flood lines will be established for any lot encumbered by drainage channel conveying a watershed area in excess of 100 acres. Any such floodplain boundary shall be clearly delineated on the non-title information sheet of the final map.
6. Onsite and offsite drainage easements shall be provided to the satisfaction of the Director of Public Works.
7. A flowage easement shall be granted to the San Diego County Flood Control District for all portions of lots subject to inundation by a 100-year flood from a drainage area in excess of one square mile.
8. The Drainage Study, Hydromodification Management Plan (HMP) and Stormwater Quality Management Plan (SQWMP) for this project will be submitted to the City of San Diego and County of San Diego for review.

3.7 Inventory of Future Required Drainage Facilities

The following table lists the major drainage trunk facilities that will be required as a condition of the Proposed Project.

Table 6: Inventory of Major Drainage Trunk Facilities to be Constructed

Drainage Facility	Onsite/ Offsite	Location	Number	Responsibility
Storm Drains in internal streets	Onsite	All Phases	As required by S.D. County Engineering Standards	Developer
Water Quality Basins	Onsite	South Village 14 Central Village 14 Planning Area 16	14	Developer
Proprietary Roadside Biofiltration Units	Onsite	Proctor Valley Road and Planning Area 16	5	Developer

3.8 Threshold Compliance

Subject to phased installation of the above-referenced drainage facilities by the Developer, the planned development of the Proposed Project will not adversely impact the existing natural drainage condition of the project site.

The Proposed Project shall comply with the following:

1. The increased runoff resulting from the Proposed Project will be mitigated through installation of the required drainage infrastructure, including 14 biofiltration basins, and the installation of outflow drainage culverts under Proctor Valley Road.
2. The Proposed Project shall be responsible for the conveyance of ultimate storm water flows in accordance with County standards.

3. The Developer shall submit drainage plans to the County Department of Public Works and the County Flood Control District for review to ensure compliance with County of San Diego Public Works and Flood Control Standards.
4. Satisfaction of drainage conditions of approval associated with subdivision of the site will constitute compliance with the adopted threshold.

3.9 Drainage Facilities Phasing

Table 7 Drainage Facilities Improvements, describes the phasing for drainage facility improvements in Otay Ranch Village 14 & Planning Areas 16/19. In addition to the facilities described in the Table 7, storm drains will be required to be installed in internal streets prior to the issuance of building permits. Phasing of the culverts under Proctor Valley Road will be implemented concurrent with improvements Proctor Valley Road.

For the phasing of the required water quality basins, refer to Section 6.9, Table 22.

Table 7: Drainage Facilities Improvements

Phase	Drainage Facilities
Village 14 South	• Secure and enter an agreement to construct onsite storm drain prior to issuance of first grading permit in each phase. "(Phase Requirement #1)" • Secure and enter into an agreement to construct Basin #2 (OS-1)" prior to issuance of grading permit. "(Phase Requirement #2)" • Secure and enter into an agreement to construct Proctor Valley Road basins #3, 4, &5 prior to issuance of Proctor Valley Road grading permit in each phase. "(Phase Requirement #3)"
Village 14 Central	• Satisfy Phase Requirements #1, 2, • Secure and enter into an agreement to construct Basins #1(OS-29a)" prior to issuance of grading permit. "(Phase Requirement #4)" • Secure and enter into an agreement to construct Basins #13(OS-43)" prior to issuance of grading permit. "(Phase Requirement #5)"
Village 14 North	• Satisfy Phase Requirement #1, 2, 3, 4, 5
PA 19	• Satisfy Phase Requirement #1 • Secure and enter into an agreement to construct Basins #9(OS-54)" prior to issuance of grading permit. "(Phase Requirement #6)"
PA 16	• Satisfy Phase Requirement #1 • Satisfy Phase Requirement #6 • Secure and enter into an agreement to construct internal road basins #6, 7, 8, 10, & 11 prior to issuance of grading permit. "(Phase Requirement #7)" • Secure/enter agreement to construct basin #12 • Secure/enter agreement to construct basin #14. • Secure/enter agreement to construct proprietary biofiltration facilities (Modular Wetland Units, Filterra, etc.)modular wetland units 1-5. Note - if the realignment of Proctor Valley Road and connection to Jamul is required prior to PA 16 and 19, all required BMP's to account for impervious area of the road need to be constructed during that phase

3.10 Drainage Facilities Financing

3.10.1 On-Site Facilities

County of San Diego policy requires that all development provide for the conveyance of storm waters throughout a project to comply with County engineering standards. At the Proposed Project, this will be accomplished by installing drainage infrastructure, by phase,

and thus ensuring that needed facilities are in place prior to or concurrent with development of the area which is affecting the natural drainage.

Installation of necessary drainage facilities in general accordance with this PFFP will be a condition of approval for any future development within the Proposed Project, such that conformance with the adopted threshold performance standard will be maintained. As such, the Developer will be required to enter into an agreement to secure and construct those facilities identified in this section prior to the issuance of grading permits in accordance with County Ordinance.

3.10.2 Off-Site Facilities

The Proposed Project is not located within a County Special Drainage Area and therefore will not be responsible for payment of drainage fees to fund off-site facilities. Off-site improvements which are part of the construction of Proctor Valley Road will be funded by the Developer. No other off-site drainage facilities are required.

4.0 Sewerage Facilities

4.1 Otay Ranch GDP/SRP Threshold

Provide a healthful and sanitary sewerage collection and disposal system for the residents of Otay Ranch, including a system designed and constructed to ensure that sewer collections do not exceed capacity.

4.2 Service Analysis

The Proposed Project is located in the unincorporated area of the County of San Diego and is not currently within the boundaries of a sewer service district. Service is proposed to be provided by the San Diego County Sanitation District ("SDCSD"). The County of San Diego and City of Chula Vista entered into a sewage Transportation Agreement (June 2016) which allows flows from the County of San Diego, including the Proposed Project, the be conveyed through the Salt Creek Interceptor. The existing agreement with the City and use of the Salt Creek Interception is limited to Otay Ranch Villages in the unincorporated area only. No other parcels outside of the Otay Ranch boundaries within the unincorporated area of the County can connect to the Salt Creek Interceptor.

Salt Creek Interceptor - The closest existing sewer facility is the 15-inch trunk sewer located southwest of the Project Area in Proctor Valley Road, just east of Hunte Parkway. This trunk sewer is the closest existing line to the Project Area and conveys flows to the Salt Creek Interceptor. From there, flows are conveyed to the City of San Diego Metropolitan sewer system.

The *Otay Ranch Facility Implementation Plan (County 1993)* assumed the Proposed Project would utilize the Salt Creek Interceptor and sewer lines downstream from the project site. A more recent sewer service analysis, the *Overview of Sewer Service for the Otay Ranch Village 14 and Planning Areas 16/19*, dated February 2018, by Dexter Wilson Engineering, Inc. confirmed that the preferred alignment is for sewer service to be provided by the Salt Creek Interceptor.

4.3 Project Processing Requirements

1. Identify location of facilities for on-site and off-site improvements in conformance with the *Otay Ranch Village 14 and Planning Areas 16/19 Overview of Sewer Service* dated February 2018 by Dexter Wilson Engineering, Inc.
2. Provide cost estimates for all facilities and proposed financing responsibilities.
3. Identify financing methods for required improvements.

4.4 Existing Conditions

4.4.1 Existing Onsite Sewer Conditions

The Project Area is presently in an undeveloped state. No sewer facilities presently exist within the Project Area.

4.4.2 Existing Offsite Sewer Conditions

As depicted on Exhibit E, Proposed Sewer Facilities, Salt Creek Interceptor, located immediately west of the Project Area, has been identified to provide sewer service to the Proposed Project. This Interceptor line is owned and operated by the City of Chula Vista. This interceptor begins in Hunte Parkway, near the southern boundary of the Rolling Hills Ranch project, and follows Salt Creek and the Otay River Valley to the City of San Diego's Metropolitan Interceptor. The Salt Creek Interceptor ranges from a 15-inch to 48-inch line. The Salt Creek Interceptor has been sized to accommodate ultimate development in the service area, including the Project. The City of Chula Vista and SDCSD entered into a Sewage Transportation Agreement in June 2016. This agreement establishes a maximum flow from County properties of 870,000 gpd without triggering the need for improvements to the Salt Creek Interceptor. The flow limitation of 870,000 gpd included a projection of 372,873 gpd from Village 14 and Planning Areas 16/19. The current projection is 276,186 gpd which is well below the flows projected in the agreement.

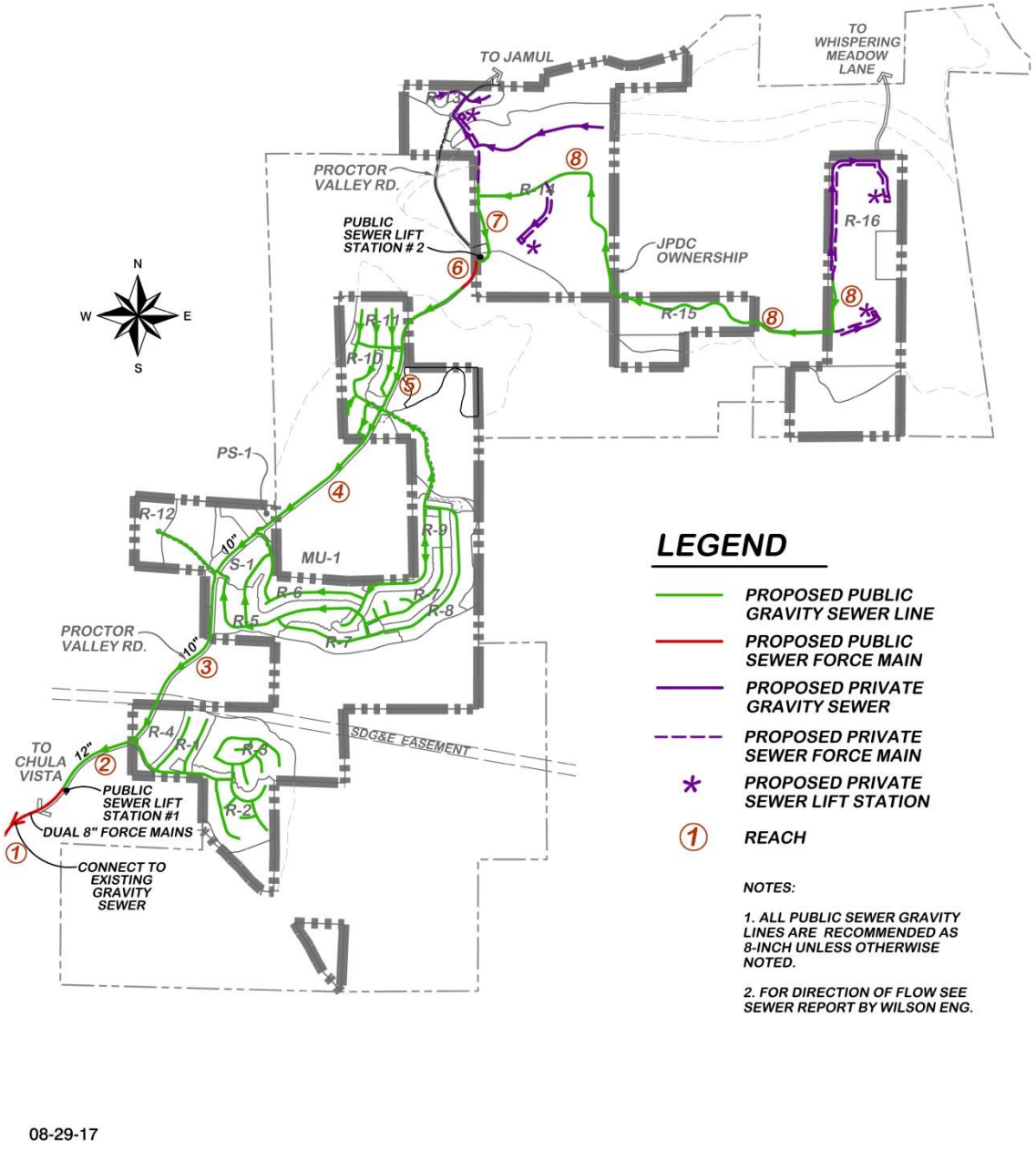

Exhibit E – Proposed Sewer Facilities

4.5 Project Demand and Proposed Facilities

4.5.1 Projected Project Demand

The Proposed Project's projected sewage demand is 1,151 EDU's (equivalent dwelling units). The land use breakdown for this projection is shown in Table 8 below.

Table 8: Projected Sewage Flows

Land Use Designation	Quantity	Sewage Generation Factor	Total Average Sewage Flow, (GDP)
SF Residential	906 units	240 gpd/unit	217,440
Res. (>8 DU/Ac)	116 units	192 gpd/unit	22,272
Park	24.6 ac	500 gpd/ac.	12,300
Public Safety	2.3 ac	1,500 gpd/ac.	3,000
School[1]	9.7ac/97 units	192 gpd/unit	18,624
MU-Commercial	1.7 ac.	1,500 gpd/ac.	2,550
Total			**276,186**

[1] Units allocated to school site at 10 DU/ac per Otay Ranch GPD/SRP policies. Sewer flows were projected based on the residential unit allocation to be conservative (77.6 EDUs as residential versus 800 student x 4.8 gpd/student = 3,840 gpd = 16 EDUs as school).

4.5.2 Proposed On-site Sewage Facilities

The Proposed Project will construct necessary onsite sewer system to serve development in the Village 14 and Planning Areas 16/19 only. This system will include onsite gravity sewer lines, an onsite lift station, an offsite lift station and associated force mains. The lift stations are necessary to convey sewerage to the existing offsite sewer trunk lines. The lift station sites and necessary easements will be conveyed to the County.

The County of San Diego does not have established detailed design standards for lift stations. However, the County has recently utilized City of San Diego Guidelines for lift stations design as a reference. Some of the pertinent criteria from the City of San Diego 2015 Sewer Design Guide are as follows:

- Dual force mains are required.
- Redundant pumping units are required.

- Pumping units shall be sized for peak wet weather gravity flow plus pumped flow of upstream lift stations, if any.
- Redundant power source such as diesel generator is required.
- Stations to include SCADA system to remotely notify County of station status and alarms.
- Overflow storage equivalent to 6 hours of peak influent gravity flow is required. Two hours is standard, but the City of San Diego requires six hours where maximum protection from spillage is required.
- Odor control system, Bioxide or equal, is required.
- Station to include adequate access and turn around space for large vehicles.

The offsite lift station would be designed with capacity to serve the entire Proposed Project. The required capacity of the lift station is 600 gpm to accommodate peak gravity flows. The onsite lift station has a required capacity of 140 gpm to provide service to Planning Areas 16/19. The lift stations would be designed to include redundant pumping units, standby power, odor control, overflow storage, and telemetry. The lift station site would also be designed with adequate access to all equipment items and include fencing for security. The lift stations and force mains will be operated and maintained by the SDCSD to the point of connection with the City of Chula Vista gravity sewer system.

4.5.3 Proposed Offsite Sewage Facilities

A short section of offsite gravity sewer is required to convey flows to the offsite lift station and ultimately to the existing Salt Creek Interceptor along Proctor Valley Road. 8-inch sewer force mains would be installed within Proctor Valley Road right-of-way and connected to the existing 15-inch gravity main located in Proctor Valley Road, approximately 1,600 feet to the east of Hunte Parkway.

Per SDCSD's agreement with the City of Chula Vista, the Proposed Project was anticipated to generate and planned to use up to 372,873 gpd of the City's 870,000 gpd sewage capacity allocated to the County. The current projection is 276,186 gpd which is well below the flows projected in the agreement.

4.5.3 Wastewater Treatment

The SDCSD has sufficient capacity rights in the Metro sewer system to serve the Proposed Project.

4.5.4 Trunk Sewers

The design capacity is based on the allowable depth of flow in the sewer line during peak flows. The design capacity flow rate is lower than actual sewer pipe capacities. Sizing facilities for design capacity as opposed to the actual flow capacity establishes a conservative approach in the planning and design of the system.

4.6 Adequacy Analysis

Sewerage facilities necessary to accommodate projected sewer flows have been identified in conjunction with the *Otay Ranch Village 14 and Planning Areas 16/19 Overview of Sewer Service*. County policy does not allow the design capacity of trunk sewer to be exceeded by flow volumes.

The construction of new sewer trunk lines within the Proposed Project will be phased along with the construction of streets. As such, the facilities identified in this PFFP shall be required of the Developer either as constructed facilities, or through the payment of fees, which in turn will obligate the County to construct the necessary facilities.

In addition, the following conditions shall be satisfied by the Developer of the Proposed Project.

1. Annexation into the SDCSD and Sphere of Influence by LAFCO (Government Code, 56000 et seq). Hereafter, the term "District" shall mean the SDCSD.

2. SDCSD approval of a project sewer study that specifies the estimated project sewage generation; proposed on-site and off-site sewerage infrastructure locations, alignments, and sizes; hydraulic analysis of the proposed sewerage facilities.

3. Satisfaction of all conditions of map approval and improvement agreements, including construction by the Developer and acceptance by the SDCSD of on-site and off-site sewerage facilities, property, and easements.

4. Payment for all costs associated with easement acquisition, SDCSD annexation and sewer studies.

5. Payment for all SDCSD and City of Chula Vista sanitation fees and charges, as applicable.

4.7 Inventory of Future Required Facilities

Main sewer facilities necessary to accommodate the Proposed Project are listed on the following table.

Table 9: Inventory of Major Sewerage Facilities

Sewerage Facility	Size	Funding
SALT CREEK		
Onsite Sewer Lift Station	140 GPM	Developer
Onsite Force Main	Dual 4″	Developer
Offsite Gravity Sewer to Offsite Lift Station	12″	Developer
Offsite Sewer Lift Station	600 GPM	Developer
Offsite Force Main	Dual 8″	Developer
ON-SITE SEWER LINES		
Sewer Lines in internal streets	Various	Developer

4.8 Threshold Compliance

Construction of the listed facilities and the payment of sewerage connection fees in accordance with the County ordinances will ensure compliance of the Proposed Project with the adopted threshold. The construction of new sewer trunk lines must be phased with construction.

4.9 Sewerage Facilities Improvement Phasing

Table 10 describes the phasing for sewerage facilities improvements in the Proposed Project. In addition to the facilities described in the table, sewer lines will be required to be installed in streets and connection made to Salt Creek Interceptor prior to the issuance of building permits

Table 10: Phasing of Sewerage Facility Improvements

Phase	Sewer Facilities
Village 14 South	• Secure and enter into an agreement to construct Offsite Lift Station #1 prior to the approval of the first final map project wide."(Phasing Requirement #1)" • Secure and enter into an agreement to construct offsite gravity sewer (Reach 2) and force mains (Reach 1) to the South phases boundary prior to the approval of first final map project wide."(Phasing Requirement #2)" • Secure and enter into an agreement to construct onsite sewer prior to the approval of the first final map in the phase.
Village 14 Central	• Satisfy Phase Requirements #1 and 2 • Secure and enter into an agreement to construct offsite gravity sewer (Reach 3) to Central phase boundary prior to the approval of first final map in the Phase "(Phase Requirement #3)" • Secure and enter into an agreement to construct onsite sewer the approval of the first final map in the phase.
Village 14 North	• Satisfy Phase Requirements #1, 2, and 3 • Secure and enter into an agreement to construct North offsite gravity sewer phase boundary (Reach 4 prior to the approval of First Final Map in the phase. "(Phase Requirement #4)" • Secure and enter into an agreement to construct onsite sewer (Reach 5) prior to the approval of the first final map in the phase. "(Phase Requirement #5)"
PA 19	• Satisfy Phase Requirements #1, 2, 3, 4, and 5. • Secure and enter into an agreement to construct onsite sewer lift station #2, gravity sewer and force mains within the PA 19 phase boundary prior to approval of the first final map in the phase. "(Phase Requirement #6)" • Secure and enter into an agreement to construct onsite sewer (Reaches 6 and 7) and private gravity sewer, lift stations, and force main prior to the approval of the first final map in the phase.
PA 16	• Satisfy Phase Requirements #1, 2, 3, 4, 5, and 6. • Secure and enter into an agreement to construct onsite sewer (Reach 6, Reach 7, and Reach 8) prior to the approval of the first final map in the phase.

4.10 Financing Sewerage Facilities

Onsite improvements will be funded by the Developer of the Proposed Project in accordance with the procedures and conditions applicable to the approved Specific Plan, tentative subdivision maps, final maps, and/or plot plans. The Developer will enter into an agreement with the County to secure and construct these necessary improvements.

Agencies providing sewer services have limited funding sources to expand and/or upgrade their facilities to meet the increasing needs being placed on them. Among the funding options are sewer capacity charges, development fees, bonds, annexation fees, developer infrastructure financing including Community Facility Districts and other similar assessment mechanisms, and grants. Other sources of revenues for sewer facilities include establishment of a benefit assessment fee, redevelopment funds, special taxes, private donations and lease revenues.

4.10.1 San Diego County Sanitation District

Proposed Project would pay appropriate annexation sewer fees for the SDCSD as shown in Table 11, if applicable.

Table 11: SDCSD Annexation Fee

Jurisdiction	Fee Amount	Units	Estimated Fees
San Diego County Sanitation District	$1,000/Ac	399 Ac.	$399,000
San Diego County Sanitation District	$2000/EDU	1,151 EDUs	$ 2,302,000
TOTAL	**-**	**-**	**$2,701,000**

4.10.2 Salt Creek Interceptor

The Salt Creek Basin impact fees that would be paid by the Proposed Project are shown in Table 12. Salt Creek Basin Impact Fees (subject to change or updating by the City of Chula Vista) paid by future developments within the Salt Creek Drainage Basin, fund improvements required to serve ultimate development within the basin. The SDCSD will need to pay the fees for capacity in the Salt Creek Interceptor as part of the Sewage Transportation Agreement with the City of Chula Vista.

Table 12: Salt Creek Basin Impact Fees

Land Use	Fee Amount	Units/ Ac.	Estimated Total Fee
Single Family Residential	$1,330/unit	1,022 units	$ 1,359,260
Schools[1] (>8 DU/AC)	$997.50/unit	97 units	$ 96,758
Commercial (Multiple Use)	$12,541.90/ac	1.7 acres	$ 21,321
Public Safety Site	$12,541.90/ac	2.3 acres	$ 28,846
Park	$2,513.70/acre	23.3 acres	$ 58,569
Salt Creek Basin Total			**$ 1,564,754**

[1] Units allocated to school site at 10 DU/ac per Otay Ranch GPD/SRP policies. Costs were projected based on the residential unit allocation to be conservative.

In addition, projects flowing through the City of Chula Vista are required to pay a Wastewater Capacity Fee. This fee includes the costs for treatment capacity and Pipeline Expansion. Because the Proposed Project is receiving treatment capacity through the SDCSD, the Proposed Project is only subject to the Pipeline Expansion portion of the Wastewater Capacity Fee as shown in Table 13.

Table 13: City of Chula Vista Wastewater Capacity Fees

Fee Amount (Pipeline Expansion)	EDU	Estimated Fee
$174.80/EDU	1,151	$ 201,194.8

5.0 Transportation Systems Facilities

5.1 Otay Ranch GDP/SRP Threshold

Maintain Level of Service (LOS) "D" or better, as measured by observed average travel speed on all signalized arterial segments.

5.2 Service Analysis

5.2.1 Levels of Service Standards

The County, through the Department of Public Works, is responsible for ensuring that traffic improvements are provided to maintain a safe and efficient street system within the County. Through project review, County staff ensures the timely provision of adequate local circulation system improvements in response to planned development while maintaining acceptable levels of service. Planned new roadway segments and signalized intersections will maintain acceptable standards at the build-out of the *San Diego County General Plan Mobility Element*. General coordination on traffic assignments, improvements and volumes with adjacent jurisdictions is necessary in order to properly assess compliance with the threshold.

The traffic threshold will be analyzed by the following:

1. Level of Service (LOS) measures shall be for the average weekday peak hour, excluding seasonal and special circumstance variations.
2. The measurement of LOS shall be by the 2010 *Highway Capacity Manual* (HCM) method of calculation, using the County's published Mobility Element design standards.
4. Circulation improvements shall be implemented prior to the anticipated deterioration of LOS below established standards.

5.2.2 Background Traffic Studies

The *San Diego County General Plan Mobility Element* serves as the overall facility master plan. County transportation planning has been, and continues to be, coordinated with the City of Chula Vista and other cities in the region to ensure regional-serving roadways common

to multiple agencies are planned to meet the anticipated demand in all areas, and that widths and alignments are compatible.

The *Otay Ranch Village 14 and Planning Areas 16/19 Traffic Impact Analysis* (February 2018), prepared by Chen Ryan Associates, addresses both existing and planned circulation system conditions. The study details necessary improvements and outlines the incremental circulation improvements based upon planned Project phasing. The study also includes an evaluation of impacts that are considered significant as a result of the Project development.

5.2.3 Freeway Segments

The California State Department of Transportation (Caltrans) recommends LOS C or better as acceptable for freeways. Caltrans is currently planning and implementing ramp meters at freeway on-ramps to assist in maintaining acceptable traffic flow on the freeway network.

5.2.4 Arterial Roadway Segments

The County recommends that arterial segments maintain LOS D or better. The City of Chula Vista requires LOS C for most roadways within the City boundaries.

5.2.5 Peak Hour Intersections

While roadway LOS is useful as a general indication of traffic operating conditions, the peak hour operations at intersections provide a more definitive measure of the actual functional capacity of the circulation network. It is for this reason that intersection performance, which relates to the ability of signalized intersections to operate at acceptable LOS during peak hours, is considered the primary determinant of adequate operations. For peak hour intersection operations, LOS D or better is considered acceptable.

5.3 Project Processing Requirements

1. Identify phased traffic demand and demonstrate compliance with the *San Diego County General Plan Mobility Element.*
2. Identify on-site and off-site impacts and improvements by phase of development.
3. Provide cost estimates for all improvements.

5.4 Existing Conditions

The Proposed Project site is located along Proctor Valley Road north of the City of Chula Vista city limits, in Jamul/Dulzura Subregional Plan area of the unincorporated area of the County. Existing Proctor Valley Road is a 2-lane undivided roadway that extends from the City of Chula Vista's eastern boundary to the community boundary of Jamul, in the County. In its current state, Proctor Valley Road is in various stages of improvement (i.e. paved or dirt). Proctor Valley Road from the northern project boundary at Melody Road to approximately 1.3 miles south within the project site is paved and improved. At that point, there is two tenths of a mile stretch that is unimproved/dirt. The pavement continues for approximately eight tenths of a mile into the northern portion of Village 14. From that point the road is deteriorated pavement for approximately 2.5 miles to the intersection of Proctor Valley Road and Northwoods Drive in the City of Chula Vista. The roadway will be upgraded in conjunction with the development of the Project site.

Regional access to the Project site is provided by State Route 125 (SR 125), located approximately three miles to the west. Interstate 805 (I-805), approximately eight miles to the west, provided secondary north/south access. SR-54, located approximately six miles to the northwest, connects to SR-125 and I-805, and provides regional east/west access. SR-94, located approximately 3 miles to the northeast, provides access from the east through the Jamul Community.

The *San Diego County General Plan Mobility Element - 2011* classifieds Proctor Valley Road (or a future parallel street of sufficient design to handle projected build-out traffic levels) as an ultimate 2-Lane Light Connector (2.2E) Roadway between the City/County boundary and the Jamul Community boundary. The Otay Ranch GDP/SRP mobility element currently classifies Proctor Valley Road as a 4-Lane Major Road way between the City of Chula Vista boundary to SR-94 in Jamul. Currently, most study area intersections operate at LOS D or better, with the exception of the SR-94 / Lyons Valley Road intersection, which operates at LOS F during both the AM and PM peak hours.

5.5 Project Demand and Proposed Facilities

5.5.1 Trip Generation and Assignment

The Proposed Project includes residential development, parks, and residential support uses. Access points along Proctor Valley Road would provide vehicle access to and from the residential areas. The planned project roadway network will provide for internal circulation within the project area.

Table 14 demonstrates the estimated daily weekday vehicle trips projected from the land uses proposed on the site.

Table 14: Project Model Land Use Assumptions & Trip Generation

Land Use	Units/ Ac's	Note	Weekday Vehicle Trips
Single Family	994 DU	10 ADT/DU	9,940
Estate and Ranchettes	125 DU	12 ADT/DU	1,500
Mixed Use: Comm/Res	10,000 SF	110 ADT/1,000 SF	1,100
Neighborhood Park	15.2 Acres	5 ADT/Ac.	76
Community Facilities	4.5 Acres	30 ADT/Ac.	135
Fire Station	3 Staff	229 ADT/Ac.	16
Total Trips Generated for the Project			**12,767**

As demonstrated in the table above, it is anticipated that the Proposed Project will result in a total vehicular trip generation of 12,767 ADT.

5.5.2 Future Volumes and Planned Roadway Classifications

Pursuant to the *San Diego County General Plan Mobility Element*, Proctor Valley Road is classified as a 2-Lane Light Collector (2.2E), and will be modified to either a 2.2A or 2.2E classification within the Proposed Project as noted below. The Otay Ranch GDP/SRP alignment will be amended accordingly.

In order to minimize the potential environmental impacts to the County of San Diego, the Proposed Project will construct Proctor Valley Road as a Light Collector with a Raised Median (2.2A) between its current eastern terminus point within the City of Chula Vista across the County boundary to Project Driveway 5, as a Light Collector (2.2E) between

Project Driveway 5 and the Otay Ranch Village 14 boundary, and as a two-lane interim roadway (28 feet paved on a 40-foot right-of-way) between the Otay Ranch Village 14 boundary and its current western terminus point located in the community of Jamul. The proposed improvements to Proctor Valley Road between its current eastern terminus point within the City of Chula Vista to Project Driveway 5 will exceed the current requirements set forth in the San Diego County General Plan Mobility Element.

5.6 Cumulative Conditions Plus Hypothetical Development of State Preserve Property

The adequacy of the traffic system is based upon the Otay Ranch Village 14 and Planning Areas 16/19 Traffic Impact Analysis, prepared by Chen Ryan Associates. This study provides a cumulative analysis of the existing and anticipated traffic volumes in the region in order to provide for increased traffic levels that will result from development of the Proposed Project in combination with other planned land uses. These analyses were based upon a computer generated "Select Zone" study utilizing the adopted SANDAG Series 11, 2025, and 2030 Transportation Forecast. It should be noted that this scenario does not include the remaining undeveloped dwelling units, outside of the Proposed Project, within the Otay Ranch Village 14 and Planning Areas 16/19 allowed by Otay Ranch GDP/SRP.

5.6.1 Street Segments Influenced by the Projected Project Traffic

The Select Zone assignment generated by the SANDAG Year 2030 model results in a distribution of the total number of Projected Project vehicular trips anticipated to utilize freeway and arterial roadway segments within the area of influence of the Proposed Project.

The Select Zone model output from SANDAG provides the distribution of project related trips under future year 2030 conditions on all facilities in the vicinity of the Proposed Project. The project study area was developed based on the County's requirement that all key segments which carry project trips of 50 or more peak hour trips (in either direction) on roadways and carry 150 or more peak hour trips (in either direction) on freeway links.

5.6.2 Year 2030 Cumulative Analysis (Intersections Over Volume Threshold)

All study area intersections would operate at acceptable LOS D or better during the AM and PM peak hours, with the exception of the following intersections:

- SR-94 & Lyons Valley Road (Caltrans), which would operate at an unacceptable LOS F during both the AM and PM peak hours. This intersection would be considered to be a direct impact by the Proposed Project traffic.

- Northwoods Drive/Agua Vista Dr. & Proctor Valley Road (City of Chula Vista), which would operate at an unacceptable LOS F during the PM peak hour. This intersection would be considered to have a project specific impact.

5.6.3 Future Year 2030 Analysis (Street Segments Over Volume Threshold)

Six existing roadway segments within the City of Chula Vista would operate at LOS D, as follows: (From p. 190 of the TIS)

- East H Street, between Terra Nova Drive and Del Rey Boulevard (LOS D)
- East H Street, between Del Rey Boulevard and Paseo Del Rey (LOS D)
- East H Street, between Paseo Del Rey and Paseo Ranchero (LOS D)
- East H Street, between Otay Lakes Road and SR-125 SB Ramps (LOS D)
- Proctor Valley Road, between Northwoods Drive to the City of Chula Vista Boundary (LOS E at PM peak hours/LOS F at AM peak hours)
- Otay Lakes Road, between the SR-125 NB Ramps and Eastlake Parkway (LOS D)

Because the existing roadways are not anticipated to be impacted by the Proposed Project, no mitigation is needed.

Four roadway segments within the County of San Diego would operate at LOS E, as follows: (From p. 190 of the TIS)

- Proctor Valley Road, between the City of Chula Vista Boundary and Project Driveway #1;
- Proctor Valley Road, between Project Driveway #1 and Project Driveway #2;
- Proctor Valley Road, between Project Driveway #2 and Project Driveway #3; and
- Proctor Valley Road, between Project Driveway #3 and Project Driveway #4.

No mitigation is proposed for these segments; therefore, the Proposed Project's impact is considered significant and unavoidable.

5.6.4 Future Year 2030 Analysis (Two-Lane Highways Over LOS Threshold)

All two-lane highway segments analyzed under this scenario are projected to operate at LOS D or better with the addition of Proposed Project traffic, with the exception of SR-94 between Vista Sage Lane and Lyons Valley Road and SR-94 between Lyons Valley Road and Jefferson Road, which are projected to operate at LOS F. However, these segments are not anticipated to be impacted by the Proposed Project; therefore, no mitigation is needed.

5.6.5 Future Year 2030 (Freeway and State Highway Segments Operating Over Capacity Threshold)

All study freeway and state highway segments would continue to operate at LOS D or better under with the exception of the following segments:

- I-805, between Home Avenue and SR-94 (LOS F)
- I-805, between SR-94 and Market Street (LOS F)
- I-805, between Market Street and Imperial Avenue (LOS F)
- I-805, between Imperial Avenue and E Division Street (LOS F)
- I-805, between E Division Street and Plaza Boulevard (LOS F)
- I-805, between Plaza Boulevard to SR-54 (LOS F)
- I-805, between SR-54 and Bonita Road (LOS F)
- I-805, between Bonita Road and East H Street (LOS F)
- I-805, between East H Street and Telegraph Canyon Road (LOS F)
- SR-125, between SR-94 Junction and Jamacha Road (LOS F)
- SR-125, between Jamacha Road and Paradise Valley Road (LOS E)
- SR-54, between I-805 and Reo Drive/Plaza Bonita Center Way (LOS F)

Based on the freeway mainline significance criteria outlined in Section 2.8 of the transportation impact Study, the traffic associated with the Proposed Project would not cause any significant changes in roadway segment operations under Year 2030 Cumulative conditions. Therefore, no significant Proposed Project related impacts were identified and no mitigation is required.

5.6.6 Future Year 2030 (Freeway Ramp Intersections Operating Over Capacity Threshold)

Most studied area freeway ramp interchange intersections are projected to operate at or under capacity under Year 2030 Cumulative conditions, with the exception of I-805 SB / H Street, which would be over capacity during both the AM and PM peak hour.

5.7 Inventory of Required Traffic Improvements

As a result of the build-out traffic impacts analysis above, Table 15 demonstrates the traffic improvements required for intersections impacted by project-related traffic under Future Year Cumulative 2030 "worst case" assumptions. Subject to installation of these improvements, the Proposed Project will comply with the thresholds for transportation service facilities.

Based upon the results of the above analysis, improvements to the SR-94 & Lyons Valley Road and Northwood Drive/Agua Vista Driver & Proctor Valley Road intersections would be a requirement of the Project.

Table 15: Required Build-out Intersection Improvements – Future Year 2030 Cumulative Conditions

Intersection	LOS Before Mitigation (AM/PM)	Mitigation	LOS After Mitigation (AM/PM)
SR-94 & Lyons Valley Road	F/F	Signalization by the 741st building permit	D/D
Northwoods Drive/Agua Vista Dr. & Proctor Valley Road	F/F	Construction of signalized intersection by the 327th building permit	B/B

It should be noted that all of these intersections are either controlled by Caltrans or located within the City of Chula Vista, as noted in Section 5.6.2, and the County does not have the jurisdiction to permit or implement improvements. Therefore, for purposes of this analysis, these improvements are considered infeasible and the associated impacts would remain significant and unavoidable.

The Proposed Project would impact one (1) roadway segment located in the City of Chula Vista, and four (4) segments within the County of San Diego under Future Year 2030 Cumulative conditions. Additional information regarding traffic impacts and potential

mitigation measures can be found in the *Otay Ranch Village 14 and Planning Areas 16/19 Traffic Impact Analysis* (February 2018), prepared by Chen Ryan Associates.

5.8 Adequacy Analysis Future Year 2030 Cumulative Conditions with Full GDP/SRP Buildout

The adequacy of the traffic system is based upon the *Otay Ranch Village 14 and Planning Areas 16/19 Traffic Impact Analysis*, prepared by Chen Ryan Associates. This study provides a cumulative analysis of the existing and anticipated traffic volumes in the region in order to provide for increased traffic levels that will result from development of the Proposed Project in combination with other planned land uses. These analyses were based upon a computer generated "Select Zone" study utilizing the adopted SANDAG Series 11, 2025, and 2030 Transportation Forecast. This Scenario assumes that all of the additional dwelling units allowed under the approved Otay Ranch GDP/SRP, in the areas not included within the site of the Proposed Project, would be developed. This is a theoretical, highly unlikely scenario as the site of a majority of the additional dwelling units that would be developed under this scenario is located in Otay Ranch Village 14 and Planning Area 16 on either State (Rancho Jamul Preserve) property. Accordingly, it is highly unlikely that these additional units would ever be developed. Nevertheless, the analysis of impacts associated with this scenario is presented in Section 5.6.

5.8.1 Street Segments Influenced by the Project Projected Traffic

The Select Zone assignment generated by the SANDAG Year 2030 model results in a distribution of the total number of projected Project vehicular trips anticipated to utilize freeway and arterial roadway segments within the area of influence of the Proposed Project.

The Select Zone model output from SANDAG provides the distribution of project related trips under future year 2030 conditions on all facilities in the vicinity of the Proposed Project. The project study area was developed based on the County's requirement that all key segments which carry project trips of 50 or more peak hour trips (in either direction) on roadways and carry 150 or more peak hour trips (in either direction) on freeway links.

5.8.2 Future Year 2030 Cumulative Conditions With Full GDP/SRP Buildout Analysis (Intersections Over Volume Threshold)

All study area intersections would operate at acceptable LOS D or better during the AM and PM peak hours, with the exception of the following intersections:

- SR-94 & Lyons Valley Road (Caltrans), which would operate at an unacceptable LOS F during both the AM and PM peak hours. This intersection would be considered to be a direct impact by the Proposed Project traffic.
- Paseo Ranchero & East H Street (City of Chula Vista), which would operate at an unacceptable LOS E during both the AM and PM peak hours. This intersection would be considered to have a project specific impact.
- Mt Miguel Road & East H Street (City of Chula Vista), which would operate at an unacceptable LOS F during the AM peak hour and unacceptable LOS E during the PM peak hour. This intersection would be considered to have a project specific impact.
- Lane Avenue & East H Street (City of Chula Vista), which would operate at an unacceptable LOS F during the AM peak hour and unacceptable LOS E during the PM peak hour. This intersection would be considered to have a project specific impact.
- Northwoods Drive/Agua Vista Dr. & Proctor Valley Road (City of Chula Vista), which would operate at an unacceptable LOS F during both the AM and PM peak hours. This intersection would be considered to have a cumulative impact.
- Proctor Valley Road & Project Driveway #1 (County of San Diego), which would operate at LOS F during both the AM and PM peak hours. This intersection would be considered to have a cumulative project impact.
- Proctor Valley Road & Project Driveway #2 (County of San Diego), which would operate at LOS E during the PM peak hour. This intersection would be considered to have a cumulative project impact.
- Proctor Valley Road & Project Driveway #3 (County of San Diego), which would operate at LOS F during both the AM and PM peak hours. This intersection would be considered to have a cumulative project impact.
- Proctor Valley Road & Project Driveway #4 (County of San Diego), which would operate at LOS F during both the AM and PM peak hours. This intersection would be considered to have a cumulative project impact.
- Proctor Valley Road & Project Driveway #5 (County of San Diego), which would operate at LOS E during the AM peak hour. This intersection would be considered to have a cumulative project impact.

5.8.3 Future Year 2030 Cumulative Conditions With Full GDP/SRP Buildout Analysis (Street Segments Over Volume Threshold)

Seven roadway segments within the City of Chula Vista would operate at LOS D, as follows:

- East H Street, between Terra Nova Drive and Del Rey Boulevard (LOS D)
- East H Street, between Del Rey Boulevard and Paseo Del Rey (LOS D)
- East H Street, between Paseo Del Rey and Paseo Ranchero (LOS D)
- East H Street, between Otay Lakes Road and SR-125 SB Ramps (LOS E)
- Proctor Valley Road, between Hunte Parkway between Northwoods Drive (LOS E)
- Proctor Valley Road, between Northwoods Drive to the City of Chula Vista Boundary (LOS F)
- Otay Lakes Road, between the SR-125 NB Ramps and Eastlake Parkway (LOS D)

Four roadway segments within the County of San Diego would operate at LOS E, as follows:

- Proctor Valley Road, between the City of Chula Vista Boundary and Project Driveway #1;
- Proctor Valley Road, between Project Driveway #1 and Project Driveway #2;
- Proctor Valley Road, between Project Driveway #2 and Project Driveway #3; and
- Proctor Valley Road, between Project Driveway #3 and Project Driveway #4.

5.8.4 Future Year 2030 Cumulative Conditions With Full GDP/SRP Buildout Analysis (Two-Lane Highways Over LOS Threshold)

All two-lane highway segments analyzed under this scenario are projected to operate at LOS D or better with the addition of Proposed Project traffic, with the exception of SR-94 between Vista Sage Lane and Lyons Valley Road, which is projected to operate at LOS F. However, this segment is not anticipated to be impacted by the Proposed Project; therefore, no mitigation is needed.

5.8.5 Future Year 2030 Cumulative Conditions With Full GDP/SRP Buildout (Freeway and State Highway Segments Operating Over Capacity Threshold)

All study freeway and state highway segments would continue to operate at LOS D or better under with the exception of the following segments:

- I-805, between Home Avenue and SR-94 (LOS F)
- I-805, between SR-94 and Market Street (LOS F)
- I-805, between Market Street and Imperial Avenue (LOS F)
- I-805, between Imperial Avenue and E Division Street (LOS F)
- I-805, between E Division Street and Plaza Boulevard (LOS F)
- I-805, between Plaza Boulevard to SR-54 (LOS F)
- I-805, between SR-54 and Bonita Road (LOS F)
- I-805, between Bonita Road and East H Street (LOS F)
- I-805, between East H Street and Telegraph Canyon Road (LOS F)
- SR-125, between SR-94 Junction and Jamacha Road (LOS F)
- SR-125, between Jamacha Road and Paradise Valley Road (LOS E)
- SR-54, between I-805 and Reo Drive/Plaza Bonita Center Way (LOS F)

Based on the freeway mainline significance criteria outlined in Section 2.8 of the transportation impact Study, the traffic associated with the Proposed Project would not cause any significant changes in roadway segment operations under Year 2030 Cumulative Conditions with Full GDP/SRP Buildout conditions. Therefore, no significant Proposed Project related impacts were identified and no mitigation is required.

5.8.6 Future Year 2030 Cumulative Conditions With Full GDP/SRP Buildout (Freeway Ramp Intersections Operating Over Capacity Threshold)

Study area freeway ramp interchange intersections are projected to operate at or under capacity under Year 2030 Cumulative Conditions With Full GDP/SRP Buildout, with the exception of I-805 SB / H Street, which would be over capacity during both the AM and PM peak hour.

5.9 Inventory of Required Traffic Improvements

As a result of the build-out traffic impacts analysis above, the following table demonstrates the traffic improvements required for intersections impacted by project-related traffic under Future Year 2030 Cumulative Conditions With Full GDP/SRP Buildout "worst case" assumptions. Subject to installation of these improvements, the Proposed Project will comply with the thresholds for transportation service facilities.

Based upon the results of the above analysis, one (1) intersection controlled by Caltrans and four (4) intersections within the City of Chula Vista would be a requirement of the Proposed Project.

Table 16: Required Build-out Intersection Improvements - Future Year 2030 Cumulative Conditions With Full GDP/SRP Buildout

Intersection	LOS Before Mitigation (AM/PM)	Mitigation	LOS After Mitigation (AM/PM)
SR-94 & Lyons Valley Road	F/F	Signalization by the 741st building permit[1]	D/D
Paseo Ranchero & East H Street	E/E	Restriping the eastbound approach to include an exclusive right-turn lane once the Rancho Jamul Preserve is developed[1]	D/D
Mt Miguel Road & East H Street	F/E	Restriping the westbound approach to include an exclusive right-turn lane by the 638th building permit[1]	D/D
Lane Avenue & East H Street	F/E	Adjust Median and restripe the westbound approach to include a second left-turn lane the once the Rancho Jamul Preserve is developed[1]	D/C
Northwoods/Agua Vista Dr. & PVR	F/F	Construction of signalized intersection by the 287th building permit[1]	B/B
PVR & Project Driveway #1	F/F	Signalization once the Rancho Jamul Preserve is developed	A/A
PVR & Project Driveway #2	C/E	Widen Proctor Valley Road to Four Lanes once the Rancho Jamul Preserve is developed	B/C
PVR & Project Driveway #3	F/F	Signalization once the Rancho Jamul Preserve is developed	B/A
PVR & Project Driveway #4	F/F	Signalization once the Rancho Jamul Preserve is developed	A/B
PVR & Project Driveway #5	E/D	Signalization once the Rancho Jamul Preserve is developed	A/A

Note:
[1] It should be noted that the intersections not associated with a project driveway are either controlled by Caltrans or located within the City of Chula Vista, as noted in Section 5.8.2, and the County does not have the jurisdiction to permit or implement improvements. Therefore, for purposes of this analysis, these improvements are considered infeasible and the associated impacts would remain significant and unavoidable.

The proposed project would impact two (2) roadway segments located in the City of Chula Vista and four (4) roadway segments within the County of San Diego under Year 2030 Cumulative Conditions with Full GDP/SRP Buildout conditions. Additional information regarding traffic impacts and potential mitigation measures can be found in the *Traffic Impact Analysis.*

5.10 Threshold Compliance

Based upon the traffic analysis prepared for the Proposed Project, threshold compliance is projected to be maintained with implementation of the improvements identified in this PFFP.

5.11 Phasing Transportation Facilities

Improvements to existing roads and construction of new roadways are required for implementation of the Proposed Project. The following phasing tables describe the phasing of improvements for each transportation facility required by the Project.

Table 17: Required Build-out Street Segment Improvements Phasing

Phase	Roadway Facilities
Village 14 South	• Secure and enter into an agreement to construct Proctor Valley Road ("PVR") offsite from the existing terminus in the City of Chula Vista at North woods Drive/Agua Vista Drive to the southerly edge of the South Phase (reach 1) prior to approval of first final map project wide. "(Phasing Requirement #1)" • Secure and enter into an agreement to construct PVR onsite from the terminus of reach 1 to Street M (reach 2) prior to approval of first final map project wide. "(Phasing Requirement #2)"
Village 14 Central	• Secure and enter into an agreement to construct PVR offsite from the terminus of reach 2 to the southerly edge of the Central phase (reach 3) prior to approval of first final map in the phase. "(Phasing Requirement #3)" • Secure and enter into an agreement to construct PVR onsite from the terminus of reach 3 to street Y (reach 4 and reach 5) prior to approval of first final map in the phase."(Phasing Requirement #4)" • Satisfy Phase Requirements #1 and #2
Village 14 North	• Secure and enter into an agreement to construct PVR onsite from the terminus of reach 5 to the northerly boundary of the North phase (reach 6) prior to approval of first final map in the phase. "(Phasing Requirement #5)" • Satisfy Phase Requirements #1-#4
PA 19	• Satisfy Requirements #1- #4 • Secure and enter into an agreement to construct PVR offsite (reach 7) and onsite (reach 8) from the terminus of reach 6 to Jamul prior to approval of first final map in the phase. "(Phasing Requirement #5)"
PA 16	• Satisfy Requirements #1-5 • Secure and enter into an agreement to construct offsite connector reach 9 at R-14, offsite connector reach 10 from R-14 to R-15 and the extension of Whispering Meadows Lane reach 11 prior to the first final map in the phase.

On-site Backbone Road Improvements

Implementation of the Proposed Project will require the construction of on-site roads. The following table describes the phasing for the onsite road improvements.

Table 18: On-Site Transportation Facilities Improvements Phasing

Phase	On-site Backbone Road Improvements
Village 14 South	• Secure and enter into an agreement to construct Streets A and M from PVR to Street N prior to approval of final map in each phase.
Village 14 Central	• Secure and enter into an agreement to construct Street P from PVR to Street T, Street R from PVR to Street Q, Street Y from PVR to Street T prior to approval of first final map in each phase.
Village 14 North	• Secure and enter into an agreement to construct Street Z from PVR to Street BB, Street AA from PVR to Street GG prior to approval of the first final map in the phase.
PA 19	•TBD
PA 16	•Secure and enter into an agreement to construct the onsite internal public street IIfrom the connection in R-14 to Whispering Meadows Lane.

5.12 Financing Transportation Facilities

Construction of the above listed improvements will constitute the necessary financing of transportation facilities. These improvements will be funded through the developer(s) entering into agreements to secure and construct the improvements prior to recordation of the applicable Final Map. Onsite transportation facilities will be funded and constructed by the project developers.

Off-site improvements in the County are funded through the County TIF program. Proctor Valley Road, however, is not a County TIF facility. Proctor Valley Road off-site within the City of Chula Vista is a TDIF program funded by the City of Chula Vista. The entirety of the Proctor Valley Road will be constructed by the Developer.

6.0 Urban Runoff Facilities

6.1 Otay Ranch GDP/SRP Threshold

An urban runoff diversion system shall be designed to ensure the protection of water quality within Otay Reservoir System.

6.2 Service Analysis

The County is responsible for ensuring all runoff water conveyed in the proposed storm drain systems will be treated in compliance with Regional Water Quality Control Board (RWQCB) regulations and National Pollution Discharge Elimination System (NPDES) minimum criteria prior to discharging into natural watercourses.

In accordance with RWQCB Order No. R9-2013-0001, as amended by R902015-001 and R9-2015-0100, dated January 24, 2015, waste discharge requirements for discharges of urban runoff from municipal storm drainage systems shall not contain pollutant loads which cause or contribute to a violation of receiving water quality objectives or which have not been reduced to the maximum extent practicable. Post-construction Best Management Practices (BMPs), which refer to specific storm water management techniques, are required for each project within the jurisdiction of the County. BMPs are necessary in order to manage construction and post-construction site runoff and minimize soil erosion and other pollutants from being transported downstream once they have been loosened by storm water. Post-construction pollutants are a result of the urban development of property and the effects of automobile use. Runoff from paved surfaces can contain soil sediment and a variety of pollutants transported by the water and sediment. Landscape activities and chemicals used by homeowners and commercial enterprises are an additional source of sediment and pollutants.

Detailed analysis of projected urban runoff impacts for the Proposed Project has been conducted by Hunsaker and Associates, *Priority Development Project SWQMP for Otay Ranch Village 14 and Planning Areas 16/19*, dated February 2018, and the CEQA Drainage Study for *Otay Ranch Village 14 and Planning Areas 16/19*, also by Hunsaker and Associates, dated February 2018. The observations, analysis and conclusion of these studies are incorporated into this PFFP.

6.3 Project Processing Requirements

1. Identify urban runoff facility demand (by phase).
2. Identify locations of facilities for on-site and off-site improvements.
3. Provide cost estimates.
4. Identify financing methods.

6.4 Existing Conditions

The project site consists of steep canyons which drain westerly towards Proctor Valley, the major natural drainage-way which flows southwesterly and empties into the Upper Otay Reservoir. Overflow from the Upper Otay Reservoir empties into the Lower Otay Reservoir which is created by the Savage Dam. The Proposed Project covers approximately 1,283.5 acres directly above Upper Otay Reservoir.

Runoff from the Project site currently flows to Proctor Valley which acts as a natural drainage way directing flows in a southwesterly direction towards the Upper Otay Reservoir. Proctor Valley Road runs parallel to this natural drainage way and currently has minimal, if any, drainage facilities. Runoff from the undisturbed canyons east of Proctor Valley sheet flow over Proctor Valley Road enroute to Proctor Valley. In some instances, runoff is conveyed within a storm drain culvert underneath Proctor Valley Road. Surface runoff from the proposed project will enter the Upper Otay Reservoir, then subsequently the Lower Otay Reservoir.

The proposed development is not expected to cause adverse effects to the Upper Otay Reservoir due to the anticipated lower total dissolved solids ("TDS") concentration in the project irrigation compared with the TDS at the reservoirs outfall, the use of source control best management practices ("BMPs"), and the decrease in overall erosion potential due to reduced natural areas.

6.5 Project Demand and Proposed Facilities (Developed Condition)

6.5.1 Post-Development Runoff

Development of the Proposed Project will result in an increase in runoff from the site. The increase in runoff is due to the increased impervious area within the development. The acreages of Post-Development runoff characteristics are estimated in Table 19:

Table 19: Proposed Project Runoff Characteristics

Description of Area	Acres
Designated Open Space and Preserve	528,514,528.0
Developed Area (including off-site Proctor Valley Road)	755.6
Total	**1,283.6**

Natural runoff from most areas north of the Proposed Project will be separated from the developed site runoff via separate storm drain systems. Runoff from the Otay Ranch Village 14 and Planning Areas 16/19 Site will discharge into Proctor Valley or a tributary of Jamul Creek. The runoff from the 85th percentile storm as defined by the San Diego County BMP Design Manual and drier weather runoff from developed areas of the Proposed Project site will be diverted to the 14 biofiltration basins. Development of the site will not cause any diversion to or from the Upper and Lower Otay Reservoir watersheds from other watersheds.

Runoff from the developed portions of the site will be collected via the proposed drainage system consisting of curb inlets, catch basins, headwalls, cleanouts, and storm pipe. The runoff will be conveyed towards one of the proposed water quality basins. For clarity in the remaining portion of this chapter, the general term of 'water quality basin' is used to define the proposed structural BMP basins rather than the more specific basin classifications such as retention, partial retention, or biofiltration. The water quality basins will function as a structural treatment BMPs as well as to address flow control hydromodification. For the larger water quality basins, where it may not be feasible to discharge the peak flowrate, a diversion structure will be located upstream of the basin to bypass flowrates in excess of the Q10 rainfall event. This flowrate corresponds to the upper flow control (HMP threshold). Once routed through the basin or other respective treatment facilities, flows are discharged into the natural drainage courses such as Proctor Valley or Jamul Creek then ultimately empty into the Upper and Lower Otay Reservoirs. The performance of the basin is described in depth in the *Priority Development Project SWQMP for Otay Ranch Village 14*

and Planning Areas 16/19. Since the capacity of Upper and Lower Otay Reservoirs is sufficient to accommodate the proposed peak flow increases and since the City of San Diego Water Department which manages the reservoirs generally desires greater volumes and no reductions within the reservoirs, no onsite peak flow detention basins are proposed as part of this development. Culverts will be constructed as necessary to convey the projected 100-year peak flow from the developed areas under Proctor Valley Road.

The downstream ends of the internal storm drain systems will empty into their respective basin before ultimately discharging into the natural drainages such as Proctor Valley or a tributary of Jamul Creek. Table 19 summarizes the 100-year developed condition peak flows at each discharge location downstream of its respective basin.

Table 20: Post-Development Volume Based 85th Percentile Calculations

Discharge Location, downstream of …	Drainage Area (acres)
Basin 1/ 13	695.98
Basin 2	475.57
Basin 3	4.59
Basin 4	3.41
Basin 5	6.61
Basin 6	27.7
Basin 7	46.9
Basin 8	10.20
Basin 9	67.81
Basin 10	33.95
Basin 11	8.48
Basin 12	800.61
Basin 14	1.14

6.5.2 Post-Development Pollutant Impacts

Urban runoff from the developed portion of the Proposed Project site will increase the quantity of runoff from the site, and thus has the potential to contribute pollutants into Upper and Lower Otay Reservoirs. These pollutants could include sediment, oil, grease, suspended solids, metals, nutrients, pesticides, bacteria, viruses, other organic compounds, and other debris.

Runoff from the developed portions of the Proposed Project site will drain towards one of the proposed basins via internal storm drain systems. These basins will receive the runoff from the majority of the developed areas. Five roadside proprietary biofiltration facilities will be constructed to treat runoff from portions of Proctor Valley Road north of Village 14 and generally within Planning Area 16.

Runoff from the proposed development would be treated within each basin during the time it takes to drain completely. Treatment would include the settling of pollutants within the basins and filtering through the heavy vegetation at the bottom of each basin. A trash and debris rack would be fitted at the base of each basin outlet structure to prevent clogging of the low-flow orifices. In this way, stormwater pollutant, trash and debris removal would occur upstream of the Upper and Lower Otay Reservoirs. The flow rate routed through each basin will vary based on its ability to accommodate either the peak Q100 flowrate or the Q10 rain event associated with flow control hydromodification. For example, the larger basins will be limited to Q10 flows. An upstream diversion structure will direct Q10 flows towards the basin while allowing the higher Q100 peak flows to bypass the respective basin. The basin outlet structure will be sized on discharging the Q10 rain event. In instances where peak Q100 flows will be routed through the respective water quality basin, their outlet structure would be sized and designed to convey runoff from the 100-year storm event. This will typically occur within the smaller basins which can accommodate Q100 peak flowrates.

The basins, provide a high removal efficiency for course sediment, trash and debris, a high removal efficiency for pollutants that tend to associate with fine particles during treatment including fine sediment, undissolved nutrients, heavy metals, organic compounds, oxygen demanding substances, bacteria, oil and grease, and pesticides, while providing medium pollutant removal efficiency for dissolved nutrients. The proprietary bio filtration facilities provide a high removal efficiency for course sediment, trash and debris, a medium pollutant removal efficiency for pollutants that tend to associate with fine particles during treatment including fine sediment, un-dissolved nutrients, heavy metals, organic compounds, oxygen demanding substances, bacteria, oil and grease, and pesticides, and low pollutant removal efficiency for dissolved nutrients. Finally, the remainder of the developed/disturbed areas consisting of vegetated and irrigated slopes within the development footprint that will not receive runoff from the streets and roads will be self-treating natural landscaped slopes.

Table 21 provides an estimate of runoff quantities for the undeveloped and developed conditions of the project site. As the table demonstrates, the watershed post- and pre-development are very similar.

Table 21: Pre- and Post-Development 100 Year Peak Flows

Discharge Junction	Existing Drainage Area to Junction (acres)	Existing Drainage Flows (cfs)	Post-Development Area to Junction (acres)	Post-Development Drainage (cfs)
J001	953.77	1,528	953.79	1,529
J003	2,775.71	4,928	2,764.00	5,021
J004	4,001.52	7,076	4,068.10	7,617
J005/ J006	5,372.63	9,660	5,328.12	10,170
J007	6,111.18	10,955	6,109.83	11,570
J008	6,223.71	10,991	6,190.58	11,597
J009	6,880.65	12,036	6,880.65	12,736

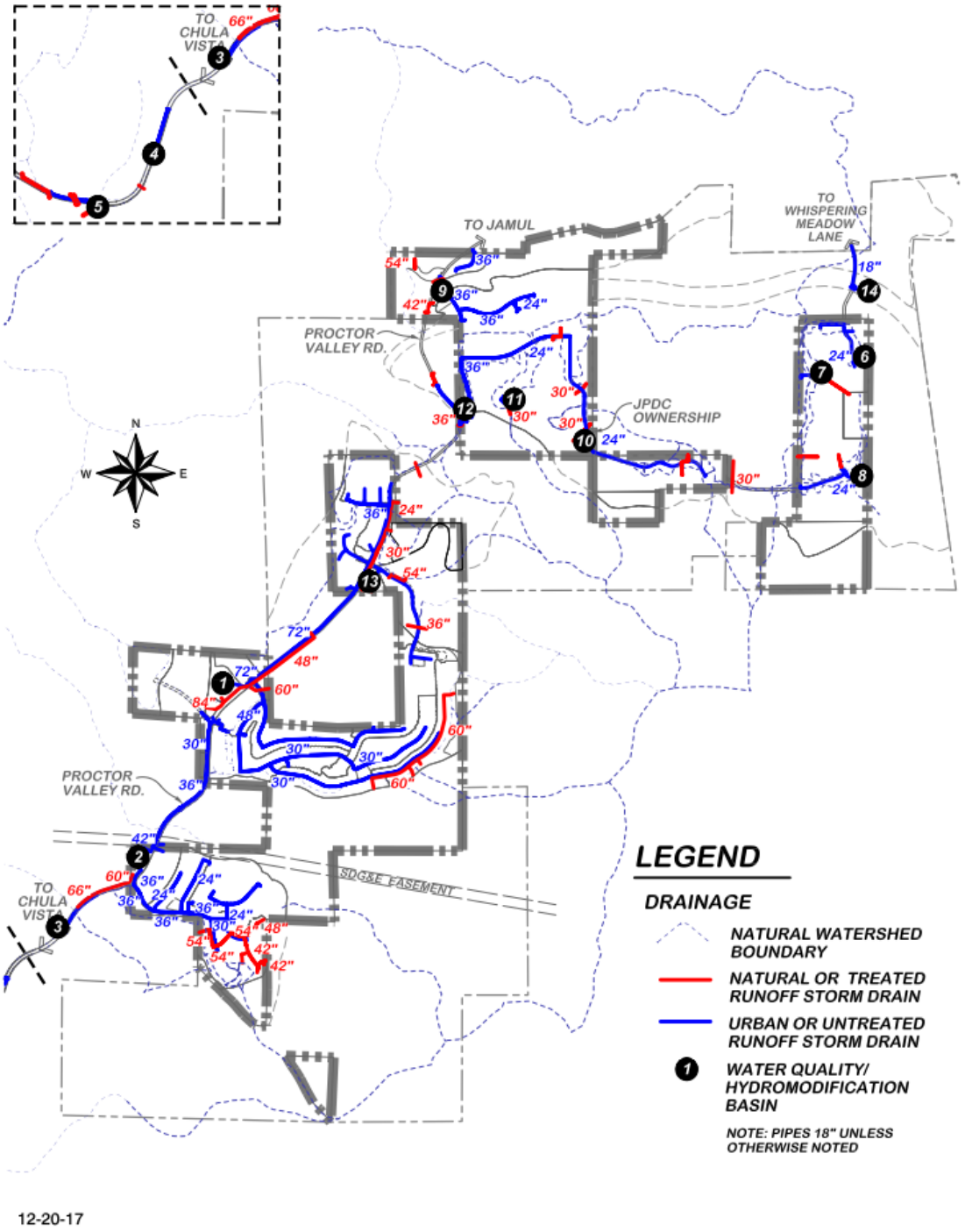

Exhibit F – Proposed Urban Runoff Facilities

6.5.3 Biofiltration Based Best Management Practices

The Proposed Project includes 14 water quality basin BMPs. BMPs shall be designed to mitigate the volume of runoff produced from a 24-hour 85th percentile storm event, as determined from the local historical rainfall record. Such facilities are usually designed to store the first flush runoff event below the principle spillway elevation (riser, weir, etc.) while providing a means for low flow dewatering.

The runoff contained below the overflow elevation of the basin riser will be slowly discharged from the treatment control basin via low flow orifice(s) in the basin riser. After passing through the riser, an outlet pipe will dewater the basin and discharge runoff to the receiving downstream storm drain.

Runoff will be collected and treated in the water quality basin within the area between the basin bottom elevation and the peak flow riser opening. Treatment will be addressed primarily through the settling of pollutants within in the basin and filtering through the heavy vegetation at the bottom of the basin.

Dewatering will occur via one or more low flow orifice built into the side of the riser structure within each basin. Such orifices, located subgrade and at an invert elevation coincident with the basin bottom elevation, will provide the runoff with a 24 to 96- hour residence time prior to full basin dewatering. Otherwise, a Vector Plan will be developed in accordance with the County of San Diego requirements. A trash and debris rack will be fitted to the base of the structure to prevent clogging of the low flow orifice.

Basin outlet structures will be designed to convey runoff diverted from the main storm water system to the basins. Storm water treatment will occur prior to discharge to any downstream receiving water body supporting beneficial uses.

The elevations for the orifices within the basins have been preliminary determined (via a stage-storage calculation) for attainment of the appropriate water quality volume for each basin.

Natural drainage courses downstream of the outlet will be protected from erosive velocities with appropriately designed velocity control structures such as rip rap aprons or energy dissipaters.

6.5.4 Urban Runoff Control Basins

The residential development portion of the Proposed Project includes approximately 719.5 acres. Approximately 564 acres will remain in a natural, undeveloped condition within the area. Fourteen water quality bio filtration basins are proposed to control runoff from the developed portion of the Proposed Project site, as shown on Exhibit F.

Additional detailed information regarding how the Proposed Project will comply with water quality requirements will be provided as part of the final engineering review process. The type, location, cost and maintenance obligation of the selected BMPs will be given consideration during the project planning and design. The County requires that prior to approval of any tentative map and/or site plan for the project, the applicant shall obtain the approval of a water quality technical report containing specific information and analysis on how the project will meet the requirements of the County of San Diego Storm Water requirements by the County Engineer. Ultimate development of the Proposed Project will incorporate a Post-Construction Storm Water Operation and Management Plan.

6.5.5 Construction

During the construction phase, the Proposed Project will be subject to the requirements of the General Construction Permit. Development of the Proposed Project will comply with the requirements of this permit through implementation of a site-specific Storm Water Pollution Prevention Plan (SWPPP) for each planning area and by incorporating temporary BMPs for the control of sediment and other pollutants.

6.6 Adequacy Analysis

Fourteen water quality basins and five roadside proprietary bio filtration units will be designed and sized to handle the treatment volumes of the Proposed Project and thus will adequately address pollutants generated within the project site. With installation of bio filtration facilities described above, the Proposed Project will show compliance with stormwater requirements.

Because the capacity of Upper and Lower Otay Reservoirs is sufficient to accept the proposed peak flow increases since the City of San Diego Water Department has indicated that they desire greater volumes towards the reservoirs, no onsite detention basins are proposed as part of this development. Culverts under Proctor Valley Road will be adequately sized to convey the projected 100-year peak flow from the developed areas.

As a result of the above factors, the following conditions shall be required of the developer of the Proposed Project:

1. The Proposed Project shall be responsible for the conveyance of required storm water flows into water quality basins in accordance with San Diego County BMP Manual The County of San Diego Department of Public Works and the County Flood Control District shall review plans to ensure compliance with County Engineering and Flood Control Standards. Satisfaction of drainage conditions of approval associated with subdivision of the site will ensure protection of water quality within Upper Otay Reservoir, and thus constitutes compliance with the adopted threshold. The City of San Diego will also review the reports to ensure the quality of water at the Upper Otay Reservoir are not degraded by the Proposed Project.
2. The Developer shall demonstrate compliance with the County of San Diego Storm Water and Discharge Ordinance and the National Pollutant Discharge Elimination System (NPDES) Municipal Permit. The Developer shall also obtain approval of the County Engineer of a report that includes the following elements:
    a. Description of project characteristics, site conditions, flow patterns, pollutants emanating from the project site, and conditions of concern.
    b. Description of site design and source control BMPs considered to be implemented.
    c. Description of applicable structural BMPs.
    d. Justification for selection of the proposed BMPs including; (a) targeted pollutants, justification and alternatives analysis, (b) design criteria (including calculations), (c) pollutants removal information, and (d) literature references.
    e. Site plan depicting locations of the proposed BMPs.
    f. Operation and maintenance plan for the proposed BMPs.
3. The Proposed Project shall be designed to avoid violation of any water quality standards or waste discharge requirements.
4. Development of the project site shall not degrade potential beneficial uses of downstream water bodies as designated by the Regional Water Quality Control Board, including water bodies listed on the Clean Water Act Section 303d List.
5. Development of the Proposed Project site shall not substantially deplete groundwater supplies or interfere with groundwater recharge such that there would be net deficit in aquifer volume or a lowering of the local groundwater table.

6.7 Inventory of Future Required Urban Runoff Facilities

The following list of major urban runoff protection facilities will be required as a condition of the Proposed Project.

Table 22: Inventory of Urban Runoff Protection Facilities

Drainage Facility	Onsite/ Offsite	Location	Number	Responsibility
Storm Drains in internal streets	Onsite	All Phases	As required by S.D. County Engineering Standards	Developer
Water Quality Basins	Onsite	South Village 14 Central Village 14 Planning Area 16	14	Developer
Proprietary Roadside Biofiltration Units	Onsite	Proctor Valley Road and Planning Area 16	5	Developer

6.8 Threshold Compliance

Subject to phased Developer installation of the above-referenced urban runoff facilities and fulfillment of the referenced conditions, including the condition to secure and construct the facilities prior to issuance of grading permits, the Proposed Project will be in compliance with the adopted threshold.

6.9 Urban Runoff Facilities Phasing

Table 23 describes the phasing for runoff facility improvements in the Proposed Project.

Table 23: Runoff Facilities Improvements Phasing

Phase	Drainage Facilities
Village 14 South	• Secure and enter into an agreement to construct Urban Runoff Facilities prior to issuance of first grading permit in each phase. "(Phase Requirement #1)" • Secure and enter into an agreement to construct Basin #2 (OS-1) prior to issuance of grading permit. "(Phase Requirement #2)" • Secure and enter into an agreement to construct Proctor Valley Road Basins #3, 4, and 5 prior to issuance of Proctor Valley Road grading permit in each phase. "(Phase Requirement #3)"
Village 14 Central	• Satisfy Phase Requirement #1 and #2 • Secure and enter into an agreement to construct Basin #1 (OS-29) prior to issuance of grading permit. "(Phase Requirement # 4)" • Secure and enter into an agreement to construct Basin #13 (OS-43) prior to issuance of grading permit. "(Phase Requirement #5)"
Village 14 North	• Satisfy Phase Requirement #1 • Satisfy Phase Requirement # 4 •Satisfy Phase Requirement # 5
PA 19	• Satisfy Phase Requirement #1 • Secure and enter into an agreement to construct Basin #9 (OS-54) (Phase Requirement #6)
PA 16	• Satisfy Phase Requirement #1 • Secure and enter into an agreement to construct Basins #6-12 and 14 prior to issuance of grading permit. "(Phase Requirement #7)"

6.10 Financing Urban Runoff Facilities

County policy requires that onsite drainage facilities necessary to support the Proposed Project be funded and constructed in conjunction with the development construction operation. As such, the Proposed Project will be required to enter into an agreement to secure and construct those facilities identified in this section prior to the issuance of grading permits in accordance with County Ordinance.

The financing and construction of urban or untreated runoff storm drain facilities as well as natural or treated runoff storm drain facilities required by the Proposed Project will be provided by either Developer funding or bond debt financing. Off-site improvements which are part of the construction of Proctor Valley Road will be funded by the Developer.

7.0 Water Facilities

7.1 Otay Ranch GDP/SRP Threshold

Ensure an adequate supply of water on a long-term basis, prior to development of each Otay Ranch SPA.

7.2 Service Analysis

Water service is anticipated to be provided to the Proposed Project site by the Otay Water District (OWD). OWD is a member of the San Diego County Water Authority (SDCWA) and Metropolitan Water District (MWD). It is the policy of these districts to ensure new growth will not reduce the availability of adequate water supplies or jeopardize water quality standards. Each district is responsible for providing the capital facilities necessary to accommodate existing development and future growth.

The Proposed Project site is located within the boundaries of the OWD. Retail water service for the Proposed Project is to be provided by the OWD. The Proposed Project will require annexation into an OWD Improvement District in order to obtain water service. This annexation is an internal action by the OWD and requires a written request and payment of processing fees.

OWD has prepared and utilizes the 2015 *Urban Water Management Plan*. The UWMP includes the project's water demands. Anticipated water service for the project site is analyzed in the *Overview of Water Service for Otay Ranch Village 14 and Planning Areas 16/19*, dated February 2018, prepared by Dexter Wilson Engineering, Inc.

Pursuant to OWD policy, the Developer(s) will be required to prepare a Subarea Master Plan (SAMP) for review and approval by OWD. The SAMP will provide detailed design, phasing, pump station and reservoir capacity requirements, and extensive computer modeling to justify recommended water pipe sizes.

7.3 Project Processing Requirements

1. Identify phased demands in conformance with street improvements and in coordination with the construction of sewer facilities.
2. Identify locations of facilities for on-site and off-site improvements in conformance with the master plan of the water district serving the proposed Project.
3. Provide cost estimates.
4. Identify financing methods.
5. Prepare a Water Conservation Plan.
6. Assure adequate water supply in accordance with the phasing plan.
7. Prepare a Subarea Master Plan in conformance with the water standards of the Otay Water District.

7.4 Existing Conditions

The majority of the water used in the San Diego County Water Authority (SDCWA) area is imported from the MWD. MWD receives its water supply through the State Water Project and the Colorado River Aqueduct. The SDCWA conveys water from the MWD to local purveyors within the County. The use of reclaimed water is prohibited by the City of San Diego on the Project site due to site runoff into the Otay Lakes Reservoir.

Potable water is provided to OWD's Central Service Area by SDCWA via the Second San Diego Aqueduct. Water is delivered at Aqueduct Connections No. 10 and No. 12 and is conveyed by gravity to OWD's terminal reservoirs at a grade of approximately 624 feet. One hundred percent of OWD's potable water demand is satisfied by purchases from the CWA.

OWD possesses several connections to SDCWA Pipeline No. 4 which delivers filtered water from MWD's filtration plant at Lake Skinner in Riverside County. OWD also has a connection to the La Mesa – Sweetwater Extension Pipeline, which delivers filtered water from the R.M. Levy Water Treatment Plant in the Helix Water District. This connection currently supplies water to the northern portion of the OWD only. Additionally, OWD has a connection to the City of San Diego's water system in Telegraph Canyon Road and has an agreement that allows it to receive water from the Lower Otay Filtration Plant.

No water service is currently provided to the project site. The Proposed Project will ultimately be served by the 980 Zone within the Central Service Area and the 1296 Zone within the Regulatory System of the OWD. A new 1460 Zone is also proposed in the Regulatory System. The 980 Zone is supplied water from Connection No. 10 and 12, to the SDCWA aqueduct which fills 624 Zone reservoirs. Water will then be distributed within the 624 Zone and pumped to the 711 and 980 Zone storage and distribution systems. The 1296 Zone located in Jamul is served by a pump station located north of Lyons Valley Road near the 944 Zone Reservoirs.

Two pump stations presently exist within the 980 Zone. One station is referred to as the 980-1 Eastlake Pump Station, which is located on the south side of Otay Lakes Road at Lane Avenue. This station pumps water from the 711 Zone system into the 980 Zone distribution system and into two existing 980 Zone reservoirs located in the OWD Use Area property. The 980 Zone Pump Station currently has three pumps (one standby), each rated for 4,000 gpm, which results in a firm station capacity of 8,000 gpm. The 980-2 Pump Station, located north of Olympic Parkway on the east side of Eastlake Parkway, pumps water from the 624 Zone to the 980 Zone and currently has three duty pumps, one standby pump, and two spare pump cans for future expansion. All pumps are rated for 5,000 gpm which results in a firm pumping capacity of 12,000 gpm.

In addition, there are currently two reservoirs within the 980 Zone. These reservoirs are located at the same site within the OWD Use Area property north of Rolling Hills Ranch. These reservoirs each have a capacity of 5.0 million gallons, which equals a total of 10.0 million gallons total storage capacity.

The major 980 Zone pipelines in the vicinity of the Proposed Project are all located south of the Project site and include transmission lines in Hunte Parkway and Proctor Valley Road. The 36-inch transmission line in Proctor Valley Road presently extends to the east of Hunte Parkway.

The 1296 Zone pump station has a firm capacity of 2,900 gpm and pumps water to three 1296 Zone Reservoirs located at the same site. These reservoirs have a total capacity of approximately 5.0 million gallons. Transmission and distribution lines in the area range from 8-inch to 16-inch and include a 10-inch line that is extended in Proctor Valley Road, just north of the project site.

7.5 Project Demand and Proposed Facilities

7.5.1 Potable Water Design Program

In order to receive potable water service, the Proposed Project will require expansion of the existing 980 Zone and 1296 Zone water systems. In general, the potable water distribution system is designed to maintain static pressures between 65 psi and 200 psi. This criterion is used to initially divide a project between water service zones. Potable water distribution systems are also typically designed to yield a minimum of 40 psi residual pressure at any location under peak hour demand flows, and a minimum residual pressure of 20 psi during maximum day demand plus fire flow conditions. Potable water mains are sized to maintain a maximum velocity of 10 feet per second under a maximum day plus fire flow scenario and a maximum velocity of 6 feet per second under peak hour flow conditions.

7.5.2 Duty Factors and Peaking Factors

Table 24 represents the water duty factors used in projecting the total average day water demand for the Project. The required fire flows and durations are also listed. To convert average day potable water demands to maximum day demands, the conversion policy of the OWD Water Resources Master Plan has been utilized. The same Master Plan has been utilized to convert average day potable water demands to peak hour demands.

Table 24: Water Duty Factors

Land Use Designation	Unit Domestic Demand	Required Fire Flow (gpm)	Required Fire Flow Duration (hours)
Rural Residential (<1DU/Ac)	1,000 gpd/unit	2,500	2
Single Family (Low Density 1-3 DU/Ac.)	700 gpd/unit	2,500	2
Single Family (Medium Density 3-10 DU/Ac.)	435 gpd/unit	2,500	2
Multi-Family (<10 DU/Ac.)	200 gpd/unit	2,500	2
MU / Commercial	1,785 gpd/ac.	3,500	3
Public Safety	1,785 gpd/ac.	3,500	4
School	1,785 gpd/ac.	5,000	4
Park	1,900 gpd/ac.	---	---

7.5.3 Projected Water Demands

Utilizing the water duty factors identified above, the projected potable water demands for the Project are as shown in Table 25 below:

Table 25: Proposed Project Projected Potable Water Demands

Land Use Designation	Quantity	Unit Demand	Total Average Demand (gpd)
Rural Residential (<3 DU/AC)	129 units	1,000 gpd/unit	129,000
Single Family (1-3 DU/AC)	696 units	700gpd/unit	487,200
Residential (4-10 DU/AC)	197 units	435 gpd/unit	85,695
MU Commercial	1.7 acres	1,785 gpd/acre	3,035
Parks	24.6 acres	1,900 gpd/acre	46,740
Public Safety	2.3 acres	1,785 gpd/acre	4,105
School	9.7 acres/97 units	435 gpd/unit	42,195
TOTAL			**797,970**

[1] Units allocated to school site at 10 DU/ac per Otay Ranch GDP/SRP policies. Water demands were projected based on the residential unit allocation to be conservative (97 units x 435 gpd/unit = 42,195 gpd as residential allocation versus 9.7 ac x 1,785 gpd/ac = 17,315 gpd as school).

7.5.4 Provision of Water Service

The Proposed Project is expected to receive water service by expanding the existing 980 Zone and 1296 Zone water systems and creating a new 1460 Zone. This expansion program will involve installation of several major water system improvements that are presently identified in the OWD Capital Improvement Program.

The lower portion of the project site can be served from the 980 Zone by connecting to the existing 36-inch line in Proctor Valley Road and extending a line into the project site. This line is anticipated to be a 20-inch line to supply the proposed 980 Zone Reservoir and proposed 1296 Zone Pump Station. The anticipated range of pad elevations for areas that will receive service form the 980 Zone will be 610 feet to 830 feet with maximum static pressures ranging from 65 psi to 160 psi.

The upper elevations of the Proposed Project will be served from the 1296 Zone and 1460 Zone. The 1296 Zone portion of the project site is all residential, but requires a 20-inch

transmission line per the OWD Water Resources Master Plan to provide an interconnection between the Central 980 Zone and Regulatory 1296 Zone. A connection to the existing offsite 10-inch line at Proctor Valley Road to the north of the project site is also proposed.

7.5.5 Water Conservation Plan

The Otay Ranch GDP/SRP requires the preparation of a Water Conservation Plan for proposed projects, which has been prepared by Dexter Wilson Engineering. The Water Conservation Plan provides an analysis of anticipated Project water usage requirements, as well as a detailed proposed water conservation measures and other strategies to reduce per capita water consumption from the Proposed Project.

In addition, the Otay Ranch Village 14 and Planning Areas 16/19 Specific Plan includes water conservation strategies for internal potable water usage. These strategies include:

1. Hot Water Pipe Insulation. This measure involves the insulation of hot water pipes with I-inch walled pipe insulation and separation of hot and cold water piping. This measure is estimated to result in annual savings of 2,400 gallons per residential unit.

2. Pressure Reducing Valves. Setting the maximum service pressure to 60 psi reduces any leakage present and prevents excessive flow of water from all appliances and fixtures. This measure is estimated to result in annual water savings of 1,800 gallons per residential unit.

3. Water Efficient Dishwashers. There are a number of water efficient dishwashers available that carry the Energy Star label. These units result in an estimated yearly water savings of 650 gallons per residential unit.

4. Residential Landscaping. By complying with the model water use ordinance, it is estimated that outdoor water use at single family residences will be reduced by approximately 10 percent. With an estimated total water use of 500 gpd per home and approximately 50 percent of this water used outdoors, the estimated annual water savings is 9,125 gallons per home.

The above listed indoor water conservation measures would result in a daily reduction of 38.29 gallon of potable water for single family residential (< 8 Du/Ac) unit. The 906 single family residential units would result in a total savings of approximately 33,610 gpd. Savings from the higher density residential units are projected to be 2,838 gpd for

a total estimated water savings of 44,613 gpd. More information regarding water saving measures can be found in the *Proctor Valley Village 14 and Planning Areas 16 and 19 Water Conservation Plan*, prepared by Dexter Wilson Engineering, Inc., dated February 2018.

7.5.6 Water Storage Capacity

As shown on Table 25, the projected total daily demand for the Proposed Project at build-out will be 797,970 gpd. Water conservation strategies identified in the Water Conservation Plan and Otay Ranch Village 14 and Planning Areas 16/19 Specific Plan, would reduce portable water demand by approximately 37,522 gpd. The OWD Water Resources Master Plan identifies the need for a 2.0 MG 980 Zone reservoir within the Proposed Project. Additionally, the Proposed Project will comply with the storage requirement by paying water meter capacity fees, which will ensure provision of the necessary storage capacity.

7.6 Adequacy Analysis

OWD has prepared the required Water Supply and Verification Report for the Proposed Project. This report evaluated and verified that sufficient water supplies are being planned (short and long term) to serve the Proposed Project as well as existing and other reasonably foreseeable planned projects within the Otay Water District in both normal and single and multiple dry year forecasts for a 20-year planning horizon.

7.7 Inventory of Future Required Water Facilities

The following list of major water distribution facilities (Table 26) will be required as a condition of proposed development of the Proposed Project.

Table 26: Inventory of Major Water Distribution Facilities

Water Distribution Facility	No.	Size	Phase/ Trigger	Responsibility
980 Reservoir and Transmission Line	1	2 mg	TBD	Developer
1296 Zone Pump Station	1	4,000 gpm	TBD	Developer
1460 Zone Pump Station	1	---	1st Lot in 1460 Zone	Developer
Off-site Transmission Line to Jamul	1	20″ line	TBD	Developer
Off-site Transmission Line to Chula Vista	1	20″ Line	1st Lot in 980 Zone	Developer
Water Lines in internal streets		Varies	All	Developer

7.8 Threshold Compliance

The *Otay Water District Water Facilities Master Plan (March 2016)* along with the *Overview of Water Service for Otay Ranch Village 14 and Planning Areas 16/19,* which was prepared by Dexter Wilson Engineering, Inc., dated February 2018, identify water facilities necessary to provide the appropriate level of water service consistent with OWD requirements. The facilities are required to be constructed in conjunction with development of the Proposed Project. Additionally, the Developer(s) shall request and deliver to the County a water service availability letter from the OWD prior to approval of each final map.

Water improvements shall be constructed in accordance with the report entitled *Overview of Water Service for Otay Ranch Village 14 and Planning Areas 16/19.*

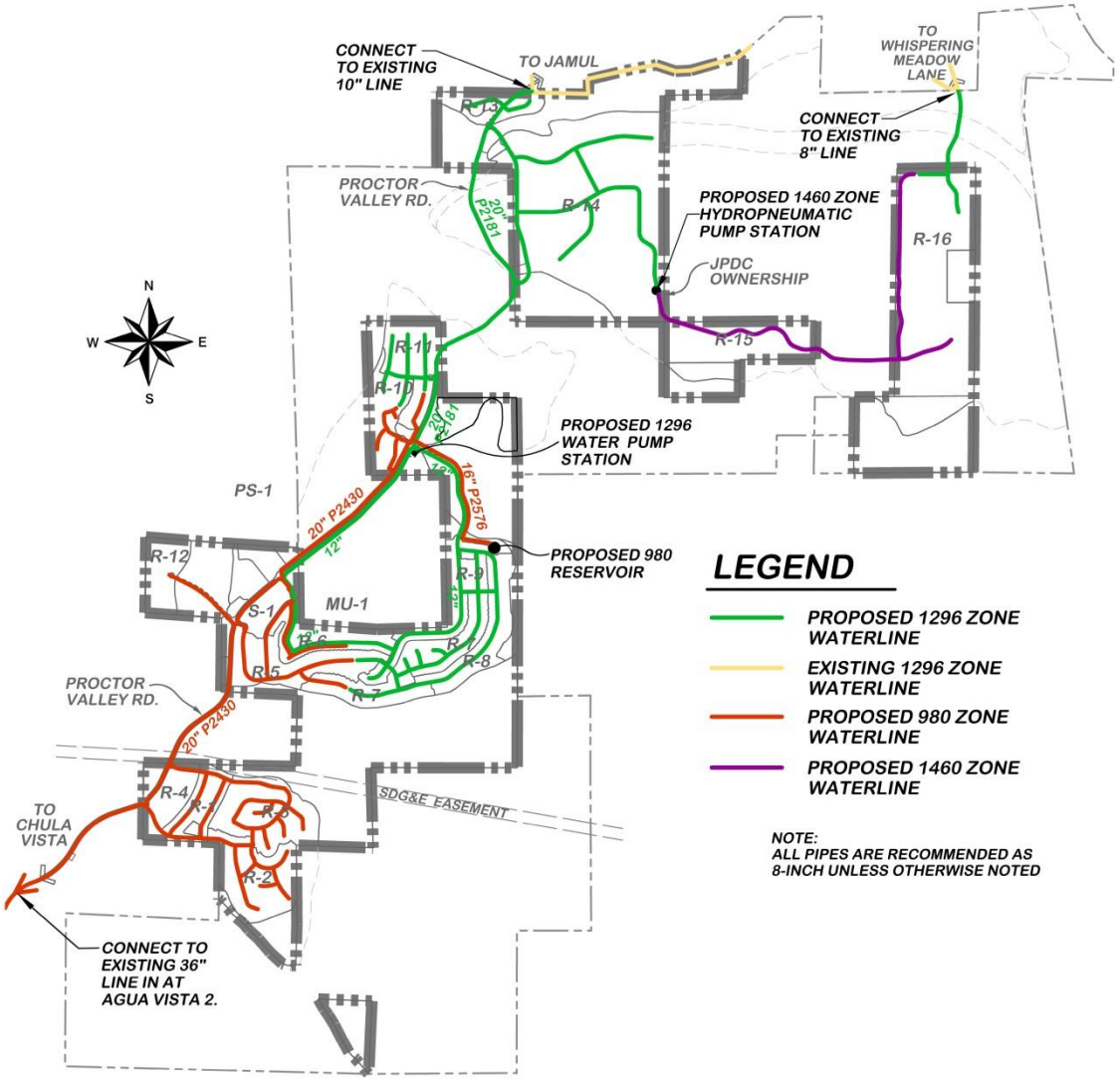

Exhibit G – Proposed Water Facilities

7.9 Phasing Water Facilities

The Proposed Project includes water facility improvements necessary to serve the Project. Certain facilities are required to be constructed concurrent or prior to construction of the Proposed Project before service to the project site may begin. Table 27 describes the phasing for water facilities improvements in Otay Ranch Village 14 and Planning Areas 16/19.

Table 27: Water Facilities Improvements Phasing

Phase	Water Facilities
Village 14 South	• Secure and enter into an agreement to construct Off-site Transmission Line - South from Chula Vista prior to approval of the First Final Map serviced by the 980 zone. "(Phase Requirement #1)" • Construct Water Tank (980) as determined by the OWD building permit in the 980 zone. "(Phase Requirement #2)" • Construct Transmission line to 980 Water Tank as determined by the OWD building permit in the 980 zone. "(Phase Requirement #3)"
Village 14 Central	• Secure and enter into an agreement to construct Off-site Transmission Line North of Jamul (1296) prior to approval of the First Final Map serviced by the 1296 zone and constructed as determined by the OWD in the 980 zone. "(Phase Requirement #4)" • Secure and enter into an agreement to construct Permanent 1296 Pump Station prior to approval of the Final Map as determined by the OWD lot service by the 1296 zone. "(Phase Requirement #5)" • Construct Permanent 1296 Pump Station prior to issuance as determined by the OWD building permit in the 1296 zone. "(Phase Requirement #6)" • Satisfy Phase Requirements #1, #2, and #3.
Village 14 North	• Satisfy Phase Requirements #1, #2, #3, #4, #5, and #6.
PA 19	• Secure and enter into an agreement to construct Off-site Transmission Line north of Jamul (1296) to PA 19 boundary prior to the first final map in the phase. Satisfy Phase Requirements #1, #2, #3, #4, #5, and #6 as determined by the OWD building permit in the 1296 Zone.
PA 16	• Secure and enter into an agreement to construct Off-site Transmission Line north of Jamul (1296) to PA 16 boundary prior to first final map in the phase. • Construct 1460 Zone Pump Station prior to the first final map unit in the 1460 Zone. Satisfy Phase Requirements #1, #2, #3, #4, #5, and #6 as determined by the OWD building permits in the 1296 or 1450 Zones.

7.10 Financing Water Facilities

The financing and construction of potable water facilities will be provided by either developer funding, capacity fees or bond debt financing.

7.10.1 Developer Funding

On-site water distribution improvements within individual planning areas will be funded and constructed by the Developer concurrent with the development improvement construction operation. The Developer will enter into an agreement to secure and construct the water facilities consistent with the Otay Ranch Village 14 and Planning Areas 16/19 Phasing Plan.

7.10.2 Capacity Fees

OWD's Capital Improvement Program (CIP) wherein OWD facilitates design and construction of facilities and collects an appropriate share of the cost from developers through collection of capacity fees from water meter purchases. Capital Improvement Program projects typically include supply sources, pumping facilities, storage, transmission mains and rerouting of existing mains.

CIP projects are paid for by capacity fees collected on the sale of water meters after building permit issuance.

7.10.3 Bond Debt Financing

OWD may use bond debt financing from Improvement District 27 to assist in the financing of the District's CIP program. The project site will be annexed into the boundaries of Improvement District (ID) 22 and 27.

8.0 Civic Facilities

8.1 Otay Ranch GDP/SRP Threshold

Make provisions for general governmental facilities, including regional and municipal administrative facilities and operation center(s).

8.2 Service Analysis

The Otay Ranch GPD/SRP identifies Village 14 as a "specialty village" (See Otay Ranch GDP/SRP, pp. 86), which serves as a transition from the more urban uses to the west and the more rural areas of Jamul. "The village has a low intensity character, with an emphasis on low density single family residential, local-serving commercial…The Proctor Valley [Village 14] village core will have commercial and recreation activities designed to serve the Proctor Valley area…Because it is relatively isolated, the village functions as a self-contained service area." (Otay Ranch GDP/SRP pp. 190). The Otay Ranch GDP/SRP defines Planning Areas 16/19 as "rural estate areas," (Otay Ranch GDP/SRP pp. 87) and further provides that "Because of the relatively few number of dwelling units, it is not anticipated that a village core is needed in this planning area." (Otay Ranch GDP/SRP pp. 201).

Consistent with the Otay Ranch GDP/SRP, the Proposed Project (Village 14) includes a village-serving Mixed-Use Site, elementary school site and a public safety site planned to accommodate a fire station and Sherriff's storefront facility. The Otay Ranch GDP/SRP provided that regional and local civic facilities would be provided within the Eastern Urban Center within the City of Chula Vista. For areas within the County of San Diego, the Otay Ranch GDP/SRP provided that the County, in conjunction with special districts, provides municipal services to unincorporated areas, including the project site.

8.3 Project Processing Requirements

Demonstrate conformance with the County General Plan Public Facility Element.

8.4 Existing Conditions

No civic administrative facilities are presently located in the County portions of Otay Ranch. The areas surrounding Otay Ranch are currently served by the County, the City of Chula Vista, and the City of San Diego.

The Proposed Project is located within the jurisdiction of the County. The County's central civic administrative offices are located in the County Administrative Center located at 1600 Pacific Highway, in downtown San Diego. The main County Operations Center, including the Planning and Development Services Department, is located on Overland Ave. in Kearney Mesa, in the City of San Diego. The County Courthouse and Hall of Justice are located on W. Broadway in the City of San Diego. The division headquarters for the County's field operations is located in the Spring Valley area. That facility is supplemented by two small adjacent operation centers, and three additional stations located in Alpine, Campo and Descanso.

Major county facilities near the Proposed Project are shown in Table 28.

Table 28: County Civic Facilities Inventory

Facility	Address
County Administration Center	1600 Pacific Highway, San Diego, CA 92101
Health Services Complex	3851 Rosecrans St., San Diego, CA 92110
Hall of Justice	330 W. Broadway, San Diego, CA 92101
County Courthouse	220 W. Broadway, San Diego, CA 92101
County Operations Center	5555 Overland Ave, San Diego, CA 92123
East County Regional Center	250 Main St., El Cajon, CA 92020
South County Regional Center	500 Third Ave., Chula Vista, CA 91910

8.5 Project Demand and Proposed Facilities

Build-out of the Proposed Project will result in a projected population of 3,941 residents. This increase in population from the Proposed Project, in conjunction with the proportional regional growth of the area, could result in the need for additional or expanded civic administrative facilities. The *Otay Ranch Facility Implementation Plan*, includes an objective that 420 sq. ft. of civic administrative facility per 1,000 projected residents should be utilized in assessing project demand.

The calculation of projected population times the adopted civic administrative facilities ratio results in a projected demand from the Project of 1,655 square feet of gross floor area of civic administrative facilities. This demand will be satisfied through the use of existing County civic facilities as identified in Figure H.

8.6 Adequacy Analysis

No specific civic facilities will be required of the Proposed Project. Civic facility improvements are made through the County CIP, funded by the County General Fund. Payment of general taxes which contribute to the County General Fund from which civic facilities improvements are funded to the County CIP satisfies the demand created by the Proposed Project.

8.7 Threshold Compliance

Based upon the analysis contained in this PFFP, it is projected that the civic facilities threshold will be maintained throughout the development of the Proposed Project.

8.8 Financing Civic Facilities

Civic facilities serving the unincorporated area have been funded from the County General Fund and service revenues. The Fiscal Impact Analysis portion of this PFFP forecasts that development of the Proposed Project would generate surplus tax revenues to the County, that is, more tax revenues than are necessary to serve demand generated by the Proposed Project. The fiscal analysis concluded that the Proposed Project will result in a net fiscal annual surplus, (after fire costs), at build-out of an estimated $814,115. Should the County elect, these revenues could be budgeted to fund additional facilities to meet the incremental increase in demand generated by the project. Additionally, the Otay Ranch GDP/SRP obligates the Proposed Project to contribute its proportionate fair share to any regional impact fee program, if one were to be established. Thus, the Proposed Project is projected to result in sufficient tax revenues to accommodate the demand for civic facilities.

County Administration Civic Facilities
Exhibit H

9.0 Fire and Emergency Protection Facilities

9.1 Otay Ranch GDP/SRP Threshold

County of San Diego: Provide sufficient fire and emergency service facilities to respond to calls within single family communities with residential lots of less than two acres, or more intensive uses such as multi-family residential and all commercial development except neighborhood commercial, in a five-minute travel time.

9.2 Service Analysis

Fire protection and emergency services are among the most vital and basic community services provided. Generally, firefighters are the first responders to fires, medical emergencies, hazardous materials incidents, floods, earthquakes and other emergencies and disasters. In addition, firefighters perform fire prevention and public education activities.

9.2.1 Regional Context

The Proposed Project is within the boundary of the San Diego County Fire Authority ("SDCFA"). The SDCFA has indicated that it can and will provide both fire protection services and emergency medical services to the Proposed Project. Fire equipment and paramedic ambulance are currently stationed in Jamul, a 2.5 to 10 minute travel time to the project site. Additionally, Chula Vista Fire Station #8 is approximately 2.9 miles southwest of the Proposed Project's southerly extent and could provide additional emergency services through a mutual agreement between the City of Chula Vista and the County, although Station 8 cannot respond to any of the Proposed Project within a 5 minute travel time. Station #8 is just over a 5 minute travel time to the southern portion of the Proposed Project and up to 14 minutes to the northern portion of the Proposed Project. Neither the Jamul nor Chula Vista station can service the majority of the Proposed project within the required travel times. Therefore, a new onsite SDCFA fire station will be needed to provide fire and emergency response services to the Proposed Project.

9.2.2 Project Context

The SDCFA responds to all calls for service within the boundaries of its service area, regardless of the nature of the call. However, Advanced Life Support (ALS) transportation services in this region are provided via a contract between the County of San Diego and Mercy Medical Transportation. Fire equipment and paramedic ambulance are currently stationed in Jamul at Fire Station 36, within a 2.5 to 10 minute travel time to the Proposed Project.

Although out of the direct protection area, the neighboring fire agency, City of Chula Vista Fire Department, includes resources that may be available to respond to emergency calls as second or third engine via the existing or an updated automatic or mutual aid agreement. Of the existing fire stations in the vicinity of the Proposed Project, Chula Vista's Fire Station #8 is the closest. Chula Vista Fire Station # 8 is located at the intersection of Otay Lakes Road and Woods Drive, approximately 2.9 miles from the southern-most entrance to the Proposed Project. CVFD Station #8 houses a staffed engine company, however, it is not within a 5-minute or less travel time to any portion of the Proposed Project.

Dudek & Associates has prepared an Otay Ranch Village 14 and Planning Areas 16/19 Fire Protection Plan (FPP); February 2018. The FFP includes an analysis of existing conditions and potential fire risks, details fire protection requirements, establishes Fuel Management Zones and makes recommendations for vegetation management and construction strategies to reduce the risk of wildland fires. The FPP also analyzes the demand for services generated by the Proposed Project and makes recommendations regarding fire resources and facilities required to meet the Proposed Project's projected demand for fire and emergency medical services.

The Specific Plan identifies a 2.3 acre public safety site within the Proposed Project at a location where, in combination with Fire Station 36 in Jamul, all portions of the Proposed Project can be reached within the applicable General Plan travel time standards. The permanent on-site fire station would be able to serve to 96% of the residential lots within the Proposed Project within the 5 –minute travel time standard for Village and Limited Semi-Rural Residential lots (County General Plan, Safety Element Table S-1), including 100% of the Village 14 residential lots and a portion of the Planning Areas 16/19 residential lots. Existing Station 36 can respond to the remaining 4% and to all of the Planning Areas 16/19 residential lots within a 4-7 minutes' travel time, well below the 10-minute travel time standard for Semi-Rural Residential lots (County General Plan, Safety Element, Table S-1).

9.3 Project Processing Requirements

Specific Plan

- Specify site facilities and identify equipment needs
- Identify alternative financing methods
- Timing of construction consistent with Otay Ranch GDP/SRP project requirements
- Determine travel times standards have been met
- Develop project-specific guidelines
- Review fuel modification plans by fire agency
- Assure appropriate water pressures and supply for fire suppression and protection

Tentative Map

- Conditioned to dedicate or reserve site, as appropriate
- Funding identified

9.4 Existing Conditions

An inventory of the SDCFA fire stations is shown in Table 29:

Table 29: Proposed Project vicinity SDCFA Fire Station Inventory

SDCFA Existing Facilities	Location
Station 36 - Jamul	14024 Peaceful Valley Ranch Rd. Jamul, CA 91935
Station 43 - Jacumba	1255 Jacumba St. Jacumba, CA 91934
Station 33 – Lawson Valley	3890 Montiel Truck Trail Jamul, CA 91935
Station 42 – Lake Morena	29690 Oak Drive Campo, CA 91906
Station 34 – Lee Valley	15781 Lyons Valley Rd. Jamul, CA 91935
Station 37 - Deerhorn	2383 Honey Springs Rd. Jamul, CA 91935
Station 8 – City of Chula Vista	1180 Woods Dr, Chula Vista, CA 91914
Station 6 – City of Chula Vista	605 Mt Miguel Rd, Chula Vista, CA 91914

An inventory of the Chula Vista fire stations in the vicinity of the Proposed Project is provided in Table 30:

Table 30: Proposed Project vicinity Chula Vista Fire Station Inventory

SDCFA Existing Facilities	Location
Station 8	1180 Woods Drive Chula Vista, CA 91914
Station 6	605 Mount Miguel Road Chula Vista, CA 91914
Station 7	1640 Santa Venetia Chula Vista, CA 91913
Station 4	8850 Paseo Ranchero Chula Vista, CA 91911

9.5 Project Demand and Proposed Facilities

Development of the Proposed Project site is projected to result in a build-out residential and employee population of approximately 4,122 persons. Using the SDCFA's estimate of 82 annual calls per 1,000 residents (which is similar to CVFD call data of 80 annual calls per 1,000 residents), the Proposed Project's estimated 4,028 residents and 94 on-site employees at the Mixed-Use Site and school, would generate approximately 338 calls per year (about 0.9 calls per day). Seventy percent of calls (236 calls/year, or 0.6 calls per day) are expected to be medical emergency calls. Based upon the current per capita fire call generation rate, the Proposed Project could generate as many as 57 fire calls per year (.16/day).

As previously described, the Proposed Project will be built in phases. Based on the response analysis conducted in the FPP, the initial phases of the Proposed Project will either receive emergency services from an existing SDCFA fire station or an on-site, temporary SDCFA fire station in either the Mixed-Use area or another location near Proctor Valley Road acceptable to the SDCFA. The temporary fire station or interagency service agreement must be in place prior to issuance of the first certificate of occupancy and will remain in place until a permanent fire station is funded and constructed on-site.

The permanent on-site first station shall be constructed on the 2.3 acre Public Safety site identified in the Otay Ranch Village 14 and Planning Areas 16/19 Specific Plan and Tentative Map. The fire station shall be sized to serve the Proposed Project. If the facility is expanded to serve other areas within the SDCFA, the Proposed Project shall contribute

its fair share of the cost to construct and equip the facility. In addition, the Proposed Project will contribute its fair share of ongoing maintenance and operation costs associated with the fire station.

9.6 Adequacy Analysis

The permanent on-site fire station would be able to serve to 96% of the residential lots within the Proposed Project within the 5 –minute travel time standard for Village and Limited Semi-Rural Residential lots (County General Plan, Safety Element Table S-1), including 100% of the Village 14 residential lots and a portion of the Planning Areas 16/19 residential lots. Existing Station 36 can respond to the remaining 4% and to all of the Planning Areas 16/19 residential lots within a 4-7-minute travel time, well below the 10-minute travel time standard for Semi-Rural Residential lots (County General Plan, Safety Element, Table S-1).

Response times for existing Chula Vista stations vary from just over 5 to 14 minutes for the entirety of the Proposed Project, which is also inconsistent with the Otay Ranch GDP/SRP and County of San Diego threshold. Accordingly, additional facilities, staffing and equipment are necessary to serve the Proposed Project.

To avoid potential degradation of existing services, meet the anticipated increased demand in accordance with County emergency travel times and respond to the on-site risks, the Proposed Project will be required to provide additional fire and emergency services. The additional resources required to serve the Proposed Project are outlined below, including the public safety site (land), fair share funding for facilities, staff and equipment and the staffing resources necessary to meet the demand for fire and emergency medical services generated by the Project.

9.7 Inventory of Future Required Facilities and Staffing

The discussion below outlines estimated facilities, equipment and staffing which would be necessary to serve the Proposed Project at build-out

- 2.3 acre Public Safety Site
- On-Site Fire Station
- 3 career firefighters (at least one firefighter being also a paramedic)
- 1 reserve firefighter
- Type I Structure Engine or Type II interface engine

Table 31 provides a summary of the capital costs needed to service the Proposed Project (including land).

Table 31: Capital Costs

Land – Graded with utility hookups (@ $400,000/acre (estimate))	$840,000
Facilities	
Temporary Fire Station (Pre-fab home w/ stick built)	$285,000
Permanent Fire Station (6,400 SF @ $350/SF)	$2,240,000
Equipment	
Type I Structure Engine	$550,000
Type III Interface Engine/Brush Rig	$450,000-500,000
Total Capital Costs	**$4,415,000**

*Current costs as of June 2017

The SDCFA projected full staffing costs at Proposed Project build out of approximately $1.5 million/year. These staff costs include 3 full-time Career Firefighters/Paramedics and 1 Reserve Firefighter) at Proposed Project complete build-out. In the interim condition, when the Proposed Project is served from a temporary on-site fire station. Staffing is anticipated to consist of 2 full-time, career fire fighters and 1 volunteer. Final staffing levels and annual costs will be determined and documented in the Fire Service Agreement between SDCFA and the Applicant. These figures are shown in Table 32 below.

Table 32: SDCFA Operational Costs

Temporary Fire Station (2 career, 1 reserve)	TBD
Estimated Permanent Fire Station (4 career, 1 reserve)	$1,512,257

9.8 Threshold Compliance

The permanent on-site fire station would be able to serve to 96% of the residential lots within the Proposed Project within the 5 –minute travel time standard for Village and Limited Semi-Rural Residential lots (County General Plan, Safety Element Table S-1), including 100% of the Village 14 residential lots and a portion of the Planning Areas 16/19 residential lots. Existing Station 36 can respond to the remaining 4% and to all of the Planning Areas 16/19 residential lots within a 4-7-minute travel time, well below the 10-

minute travel time standard for Semi-Rural Residential lots (County General Plan, Safety Element, Table S-1).

(Exhibit I and J). Based on this information, the Proposed Project meets the County's travel time standard and the SDCFA can provide significant resources to emergency calls within the Proposed Project.

Table 33: Emergency Travel Times from Proposed On-Site Public Safety Site and Existing Station 36

5 Minute Travel Time	Units Reached	Percentage of Residential Units Reached (%)
On-Site Public Safety Site	1,075	96%
SDCFA Station 36	45	4%

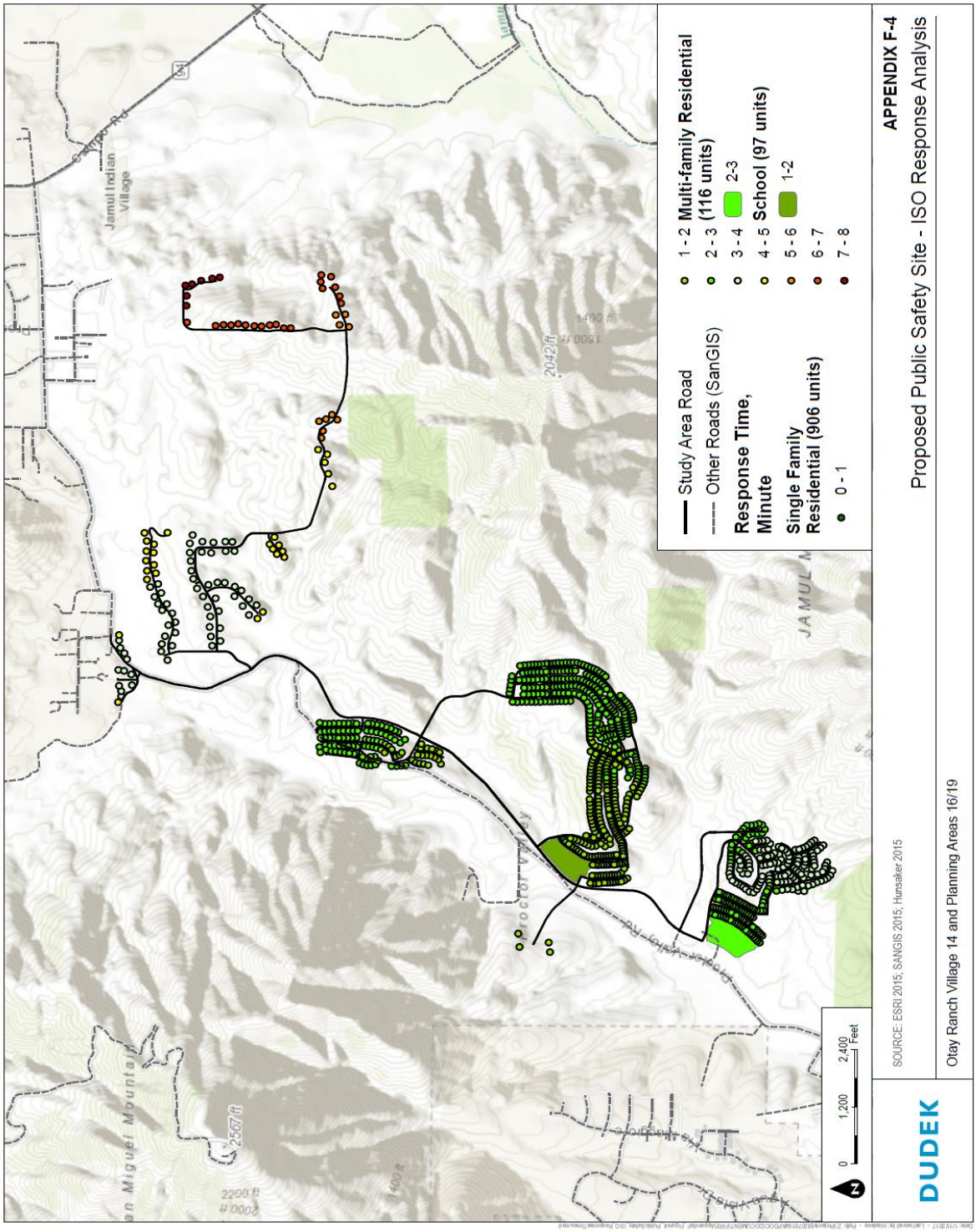

Exhibit I – Otay Ranch Village 14 and Planning Area 16/19 On-Site Station

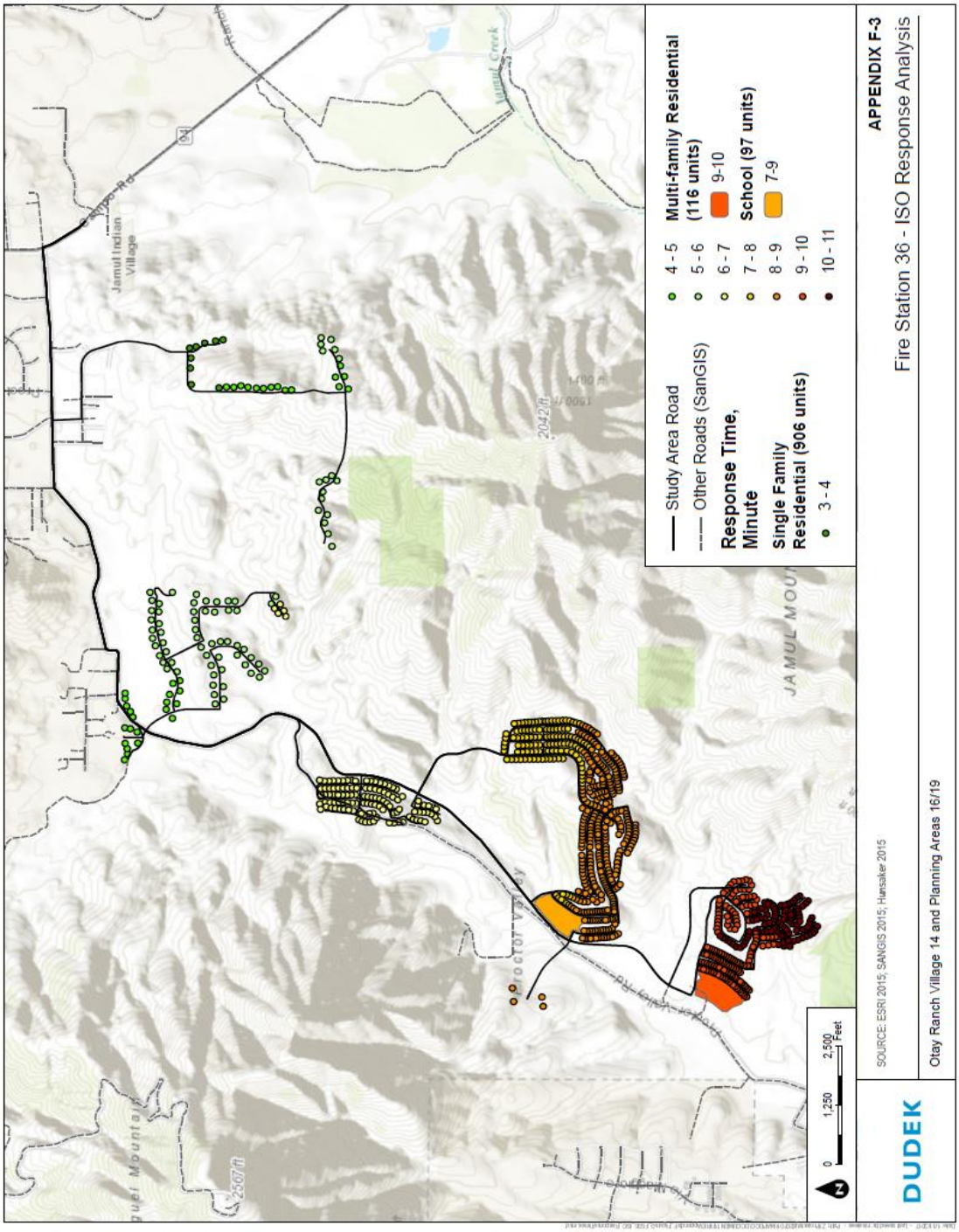

Exhibit J – Otay Ranch Village 14 and Planning Area 16/19 Station 36 Fire Response Modeling

9.9 Financing Fire Service Facilities

LAFCO recognized the difficulty of funding fire protection in its 2003 report, *Funding Fire Protection*. This report identifies a number of strategies, including, "Encourage[ing] fire protection providers to investigate increased cooperative arrangements…if doing so would produce efficiencies that could decrease dependence on property tax-supported operating budgets."

9.9.1 Capital Improvements

The County of San Diego and the SDCFA has enacted a Fire Mitigation Fee program which is applicable to the development projects within the County. The Fire Mitigation Fee is presently calculated at $0.56/sq. ft. The dedication of land and construction of facilities for the public safety site may be credited against the total Fire Mitigation Fee. Table 34 estimates the Fire Mitigation Fees to be paid by the Project.

Table 34: Estimated SDCFA Fire Mitigation Fee Credit

Land Use	Avg. sq. ft.	Homes	Subtotal SF	Fire Mitigation Fee
Residential	3,248	1,119	3,634,512	$ 2,035,327
Commercial	10,000		10,000	5,600
Total		**1,022**	**3,644,512**	**$ 2,040,927**

It should be noted that while the anticipated Fire Mitigation Fee is approximately $2 million, the actual costs to construct the fire facility is roughly $4.44 million. The Proposed Project will need to provide additional funding than provided by the Fire Mitigation Fee Program to develop the new proposed Fire station. The exact amount will be determined in a Fire Service Agreement between SDCFA and the Applicant when detailed fire station specifications are determined.

9.9.2 Operational Funding

In addition to the fee programs described above, the County will receive 1.8989% of the ad-valorem 1% of property taxes from the Proposed Project. The Fiscal Impact Analysis (August 2017) forecasts that development of the Proposed Project would generate a $814,115 net annual surplus, (after fire costs), to the County at build-out of the Proposed Project The surplus exists after the Fiscal Impact Analysis model assumes fire station operation and maintenance costs of $1.512 million per year. The Fire Service Agreement

between the SDCFA and the Applicant(s) will include the final funding strategy for the new fire station.

10.0 Law Enforcement Facilities

10.1 Otay Ranch GDP/SRP Threshold

1. Respond to 84 percent of "Priority One" emergency calls within seven minutes and maintain an average response time to all "Priority One" emergency calls of 4.5 minutes or less.

2. Properly equipped and staffed police units shall respond to 62 percent of "Priority Two Urgent" calls within seven minutes and maintain an average response time to all "Priority Two" calls of seven minutes or less measured annually.

10.2 Service Analysis

The County of San Diego provides law enforcement services for all unincorporated areas of the County, including the project site.

Law enforcement facilities and services are addressed as part of the Otay Ranch GDP/SRP in the *Facility Implementation Plan* (p.198) and in the Otay Ranch Village 14 & Planning Areas 16/19 Specific Plan. The San Diego County General Plan Public Facilities Element also addresses law enforcement facilities.

10.3 Project Processing Requirements

Demonstrate conformance with the County General Plan Public Facility Element and the *Otay Ranch Facility Implementation Plan*.

10.4 Existing Conditions

The County Sheriff's Department currently provides law enforcement services to the County's unincorporated area and by contract to the cities of Del Mar, Encinitas, Imperial Beach, Lemon Grove, Poway, San Marcos, Santee, Solana Beach and Vista. Services

include general patrol, traffic enforcement, criminal investigation, crime prevention, juvenile services, communications dispatch and various management support services.

As San Diego County's Chief Law Enforcement Officer, the Sheriff also provides regional law enforcement services for the entire County. These services include investigation, aerial support, emergency planning and response, law enforcement training and the operation of six County detention facilities.

Imperial Beach Sheriff's Station has been identified as a possible source for law enforcement services. This station also serves the City of Imperial Beach, the community of Bonita and portions of East Otay Mesa. Per the County General Plan Public Facility Element, the response time threshold for urban unincorporated areas is eight minutes for priority calls (life threatening situations or felonies in progress) and 15 minutes for non-priority calls. However, the Proposed Project is held to the stricter Otay Ranch GDP/SRP thresholds stated above.

the Imperial Beach Sheriff's Station presently has 45 sworn, 10 non-sworn, 7 clerical /front counter and 2 CSO's (63 total) employees. There were 20 patrol units each day, including general patrol, traffic enforcement and community service officers.

10.5 Project Demand and Proposed Facilities

The Proposed Project will increase the demand for law enforcement services through the addition of residential and other uses in an area that is presently vacant and demands relatively few law enforcement services.

The County Sheriff's Department analyzed the projected demand of the Proposed Project and determined that a 500 sq. ft. storefront facility would be needed to serve the Proposed Project. Based on the *Otay Ranch Facilities Implementation Plan* [page 202] standard of 1.74 support staff to every 1.67 officers, the projected demand for law enforcement support staff is 5.4 staff members.

10.6 Adequacy Analysis

Payment of general taxes contributes to the County General Fund through which law enforcement facilities improvements are constructed pursuant to the County CIP. Therefore, tax revenues collected from the Proposed Project will assure provision of future required facilities. The Specific Plan identifies a 2.3 acre public safety site within the Proposed Project. The site could accommodate a Sheriff's "storefront," along with a

fire station. A storefront could also be accommodated in the commercial space within the Mixed Use area of the Proposed Project. The Sheriff's department has indicated that a 500 sf storefront would give deputies responding to calls or patrolling in the area an adequate office space to perform administrative tasks such as accessing a computer or writing a report. The County Sherriff has indicated that 500 square feet would be sufficient space to meet this demand.

10.7 Inventory of Future Required Facilities

A 2.3 acre public safety site is reserved within the Proposed Project. A Sheriff's storefront may be located within the public safety site or within the commercial component of the Mixed Use Site in the Proposed Project. The Sherriff's department will have to be contacted regarding the required size and to satisfy deputy needs but the Sheriff's Department has requested a 500 s.f. storefront.

10.8 Threshold Compliance

Based upon the analysis contained in this PFFP, it is projected that the law enforcement threshold will be maintained throughout the development of the Proposed Project.

10.9 Financing Law Enforcement Facilities

County law enforcement facilities serving the unincorporated area have been funded through the County General Fund. Based upon the analysis contained in this PFFP, it is projected that the law enforcement facilities threshold will be maintained throughout the development of the Proposed Project.

The Fiscal Impact Analysis forecasts that development of the Proposed Project would generate a $287,353 annual surplus to the County, at build-out. This surplus exists after the Fiscal Impact Analysis model assumes a County cost of $4,424,344 per year for law enforcement protection to serve the Proposed Project's expected demand, as calculated by the Sheriff's office.

11.0 Library Facilities

11.1 Otay Ranch GDP/SRP Threshold

Provide 350 square feet (gross) of adequately equipped and staffed regional/area library facilities per 1,000 population.

11.2 Service Analysis

The County, City of Chula Vista and the City of San Diego provide library and media services for the general Otay Ranch area.

The San Diego County Library Department provides services to the unincorporated areas (including the Proposed Project) and 11 of the surrounding cities. The County Library Department presently operates 33 branch libraries throughout the County, plus a mobile library. The *Otay Ranch Facilities Implementation Plan* identifies the Eastern Urban Center in the City of Chula Vista as the future location of a library serving the needs of the entire Otay Ranch planning area.

11.3 Project Processing Requirements

- Identify phased demand in relation to supply.

11.4 Existing Conditions

The County has five library facilities serving the South County area. The facilities are located in Bonita, Imperial Beach, Lincoln Acres, Spring Valley and Rancho San Diego. Bookmobile service provides circulation and distribution in rural areas. The locations of the 33 County branch libraries are identified in Table 35 and Figure K. At the end of 2014, the San Diego County Library also unveiled the 24/7 Library to Go located within the City of San Diego. This new facility is accessible 24/7 to residents to access books and a variety of digital media.

Table 35: Existing San Diego County Library Facilities

Library Branch	Address
Mobile Library	North County: 760-643-5125 East County: 619-660-6329
24/7 Library To Go	550 Overland Avenue San Diego, CA 92123
4S Ranch	10433 Reserve Dr. San Diego, CA 92127
Alpine	2130 Arnold Way Alpine, CA 91901
Bonita	4375 Bonita Rd. Bonita, CA 91902
Borrego Springs	571-A Palm Canyon Drive Borrego Springs 92004
Campo	31356 Highway 94 Campo, CA 91906
Cardiff-by-the-Sea	2081 Newcastle Ave. Cardiff-by-the-Sea, CA 92007
Casa de Oro	9805 Campo Road #145 Spring Valley, CA 91977
Crest	105 Juanita Lane El Cajon, CA 92021
Del Mar	1309 Camino Del Mar Del Mar, CA 92014
Descanso	9545 River Drive Descanso, CA 91916
El Cajon	201 E. Douglas El Cajon, CA 92020
Encinitas	540 Cornish Drive Encinitas, CA 92024
Fallbrook	124 S. Mission Road Fallbrook, CA 92028
Fletcher Hills	576 Garfield Ave. El Cajon, CA 92020
Imperial Beach	810 Imperial Beach Blvd. Imperial Beach, CA 91932

Jacumba	44605 Old Hwy. 80 Jacumba, CA 91934
Julian	1850 Highway 78 Julian, CA 92036
Lakeside	9839 Vine Street Lakeside, CA 92040
La Mesa	8074 Allison Ave. La Mesa, CA 91941
Lincoln Acres	2725 Granger Ave. National City, CA 91950
Lemon Grove	8073 Broadway Lemon Grove, CA 91945
Pine Valley	28804 Old Hwy. 80 Pine Valley, CA 91962
Potrero	24883 Potrero Valley Road Potrero, CA 91963
Poway	13137 Poway Rd. Poway, CA 92064
Ramona	1406 Montecito Rd. Ramona, CA 92065
Rancho San Diego	11555 Via Rancho San Diego El Cajon, CA 92019
Rancho Santa Fe	17040 Avenida de Acacias Rancho Santa Fe, CA 92067
San Marcos	#2 Civic Center Drive San Marcos, CA 92069
Santee	9225 Carlton Hills Blvd. #17 Santee, CA 92071
Solana Beach	157 Stevens Ave. Solana Beach, CA 92075
Spring Valley	836 Kempton Street Spring Valley, CA 91977
Valley Center	29200 Cole Grade Road Valley Center, CA 92082
Vista	700 Eucalyptus Ave. Vista, CA 92084

County Library Facilities
Exhibit K

11.5 Project Demand

The *Otay Ranch Facility Implementation Plan* requires 350 square feet (gross) of adequately equipped and staffed regional/area library facilities per 1,000 population. The projected population for the Project is 3,941 people; therefore, the Proposed Project will have a total library demand of 1,379 square feet.

11.6 Adequacy Analysis

The demand for library facilities generated by the build-out of the Proposed Project will ultimately be satisfied by the existing libraries within the vicinity of the Proposed Project and any new libraries constructed in the future. The Otay Ranch GDP/SRP plans for the location of a 36,758 sq. ft. main library in the Eastern Urban Center (EUC). As reported in the Chula Vista Growth Management Commission 2016 Annual Report, May 2016, a 30,000 – 35,000 SF library is expected to be constructed by 2021 within the Eastern Urban Center (Millenia). In addition, the City of Chula Vista owns a site within the Rancho del Rey community planned for a full-service library facility; however, the City has not secured construction funding.

11.7 Inventory of Future Required Facilities

No specific library facilities will be required of the Proposed Project.

11.8 Threshold Compliance

The Proposed Project will have a total library demand of 1,379 square feet. The Otay Ranch GDP/SRP plans for the location of a 36,758 sq. ft. main library in the Eastern Urban Center (EUC). The demand for library facilities generated by the build-out of the Otay Proposed Project will ultimately be satisfied by this main library, along with existing libraries within the vicinity of the Proposed Project.

11.9 Financing Library Facilities

Funding for construction of new library facilities throughout the County comes from a variety of sources, general fund contributions from cities, private contributions and

federal Library Services and Construction Act (LSCA) Title II grants. Since the County Library has its own property tax share (approximately three percent (3%) of the one percent property tax), library facilities have not been funded from the County General Fund. Funding of City of Chula Vista library facilities in the eastern part of the City comes from the City Public Facilities Development Impact Fee Program. These facilities have been identified and are acquiring funding to service the Proposed Project.

The Proposed Project is not within the boundaries of any current public facilities DIF program. Based upon the analysis contained in this PFFP, it is projected that the library threshold will be maintained throughout the development of the Proposed Project. Mitigation for the Proposed Project is required through the payment of property taxes. The fiscal analysis concluded that the Proposed Project will result in an estimated net fiscal annual surplus, (after fire costs at build-out of $814,115. Additionally, the Otay Ranch GDP/SRP obligates the Proposed Project to contribute its proportionate fair share to any regional impact fee program, if one were to be established. Thus, the Proposed Project is projected to result in sufficient tax revenues to accommodate the demand for Library Facilities. As a result, no new facilities will be required of the Proposed Project.

12.0 Parks and Recreation Facilities

12.1 Otay Ranch GDP/SRP Threshold

The County Park Lands Dedication Ordinance (PLDO) and the Otay Ranch GDP/SRP standard requires that three (3) acres of local parkland be provided per 1,000 residents. In addition, the Otay Ranch GDP/SRP requires twelve (12) acres of other active and passive recreation and open space per 1,000 residents and fifteen (15) acres of regional park land per 1,000 residents.

12.2 Service Analysis

The Otay Ranch GDP/SRP identifies four levels of parks. Town square or pedestrian parks average one acre in size and may contain small play grounds or picnic areas. They can be publicly or privately owned and are eligible for park credit. Neighborhood parks are typically sized between 5 and 20 acres and located to meet the needs of an individual village or planning area. Community parks should be at least 20 acres in size and programmed with intense recreational facilities designed to serve the needs of multiple villages or planning areas. Regional parks are typically larger than 200 acres and contain regional recreational facilities such as camping and hiking amenities.

The County Park Lands Dedication Ordinance requires 390.73 square feet of local parkland be provided per lot or unit, whichever is greater, in the Jamul Local Park Planning Area. Town square/pedestrian parks, neighborhood parks, and community parks with active recreational uses can satisfy this requirement. The PLDO requirement can be satisfied through the dedication of land, the payment of fees, the provision of private or public recreation facilities or a combination of these methods.

The County Parks and Recreation Department is responsible for the planning and acquisition of County parkland and responsible for addressing compliance with the adopted thresholds.

12.3 Project Processing Requirements[3]

- Provide a Parks Master Plan.
- Specific facility site identified and reserved including consideration of areas adjacent to public schools and other public lands where co-location is feasible and desirable.
- Equipment needs identified.
- Alternative financing methods refined.
- Alternative maintenance entities and funding identified.
- Timing of construction consistent with Otay Ranch Park and Recreation Implementation Plan identified.
- Sites for special purpose parks reviewed.
- Design criteria for land adjacent to regional parks prepared.

12.4 Existing Conditions

The Proposed Project is located within the Jamul Local Park Planning Area. However, park plans have not been developed for this area. One County park currently exists within the boundaries of the Jamul Local Park Planning Area, Otay Lakes County Park. The Otay Lakes County Park is 78.0 acres and is located approximately seven miles south of the Proposed Project. Additionally, the Otay Valley Regional Park (OVRP) is a future planned park within the Jamul and Otay Local Park Planning Areas.

In addition to the two parks located within the Otay Park Planning Area, numerous County and City of Chula Vista parks exist within the vicinity of the Proposed Project. These parks are identified in the Tables 36, 37, 38, and 39.

Table 36: Existing Parks within Otay Local Park Planning Area

Park	Jurisdiction	Acres
Otay Lakes County Park (Existing)	County	78.0
Total		**78.0**

[3] From the Otay Ranch GDP/SRP.

Table 37: Existing Regional Park Inventory

Park	Jurisdiction	Acres
Otay Valley Regional Park – Open Space Preserve[4]	OVRP JEPA	3,000+
Sweetwater Park	County	571
Total Existing Regional Acres		**3,571+**

Table 38: Existing Chula Vista Community Park Inventory

Park	Jurisdiction	Acres
Mountain Hawk Park	Chula Vista	12.0
Chula Vista Community Park	Chula Vista	14.9
Greg Rogers Park	Chula Vista	43.4
Rohr Park	Chula Vista	59.5
Discovery Park	Chula Vista	20.4
Montevalle	Chula Vista	29.0
Salt Creek	Chula Vista	19.8
Veterans Park	Chula Vista	10.5
Total Existing Community Acres:		**209.5**

Table 39: Future Otay Ranch Community Parks

Park	Jurisdiction	Acres
Otay Ranch Community Park (Village 8)	Chula Vista	51.5
Otay Ranch Community Park (Village 2/4)	Chula Vista	70
Otay Ranch Community Park (Village 13)	**County**	**10.3**
Total		**131.8**

12.5 Project Demand and Proposed Facilities

12.5.1 Local Park Compliance

The amount of park lands required in association with the Proposed Project is based on the number of homes or lots (whichever is greater). For the Jamul Local Park Planning Area, the PLDO requires the dedication of 390.73 sq. ft. of improved park land for each new unit

[4] Only a portion of the OVRP is available for public use currently.

or lot, whichever is greater. The Proposed Project includes 1,119 units; therefore, the total requirement is 10.0 acres of improved park land (1,119 x 390.73 sf/unit) divided by 43,560 sf/acre = 10.0 acres.

To meet this requirement, the Specific Plan includes four public parks, three private swim clubs, a private park and a series of private pocket parks totaling 24.7 acres. The largest public park is a 7.2-acre Village Green park located within the Village 14 Core. Public and private local parks throughout Village 14 range in size from 7.2 to 0.7 acres. Sixteen private pocket parks, totaling 5.0 acres, are distributed throughout residential neighborhoods in Central and North Village 14, ranging in size from 0.16 to 0.9 acres and include passive and active recreation opportunities, depending on their size and location. In addition, a 1.4-acre public park is provided in Planning Area 16.

12.5.2 Open Space Compliance

The Otay Ranch GDP/SRP also requires 12 acres of "other passive or active recreation and open space areas," per 1,000 residents and 15 acres of "regional park and open space" land per 1,000 residents.

Based on an estimated project population of 3,941 residents, the 12-acre standard requires 48.3 acres of passive open space and the 15-acre standard requires 60.4 acres of regional open space. This combined open space requirement of 108.7 acres is satisfied two ways. First, the Proposed Project contains 188.8 acres of internal open space and approximately 426.7 acres of preserve open space land.

It should be noted that there is no relationship between the MSCP/RMP Preserve acres within the Proposed Project (426.7 acres), the RMP Preserve Conveyance Obligation (approximately 781.1 acres)) and the MSCP/RMP Preserve land within the Applicant's ownership. The RMP Preserve Conveyance Obligation is calculated by multiplying the Proposed Project Development Area (minus acreage associated with circulation element roads, public schools, lands designated for public uses areas and public parks) defined as "Common Use' land in the Otay Ranch Phase 2 RMP, Page 59) by 1.188. The precise Preserve Conveyance Obligation will be calculated based on final maps with the Proposed Project. Required Otay Ranch RMP Preserve land must be conveyed to the City of Chula Vista and County of San Diego, acting jointly in their compacity as the Otay Ranch Preserve Owner/Manager (POM) in conjunction with the approval of final maps within the Proposed Project. The Otay Ranch RMP Preserve land conveyed may or may not be within the Proposed Project boundary but must be within the Otay Ranch RMP Preserve.

Table 40: Projected Conveyance Requirement

	Acres		
	Village 14	**PA 16/19**	**Total**
Development Area	453.5	403.3	856.8
LDA (neutral)		-95.3	-95.3
Conserved Open Space	-36.9	-35.5	-72.4
Proctor Valley Road	-12.7	-0.8	-13.5
Public Parks	-13.8	-1.4	-15.2
School	-9.7		-9.7
Public Safety Site	-2.3		-2.3
Off-site Impacts within Otay Ranch		9.1	9.1
Development Areas Subject to Conveyance (1.188 Factor)	378.1	279.4	657.5
Estimated RMP Preserve Conveyance Obligation	**449.2**	**331.9**	**781.1**

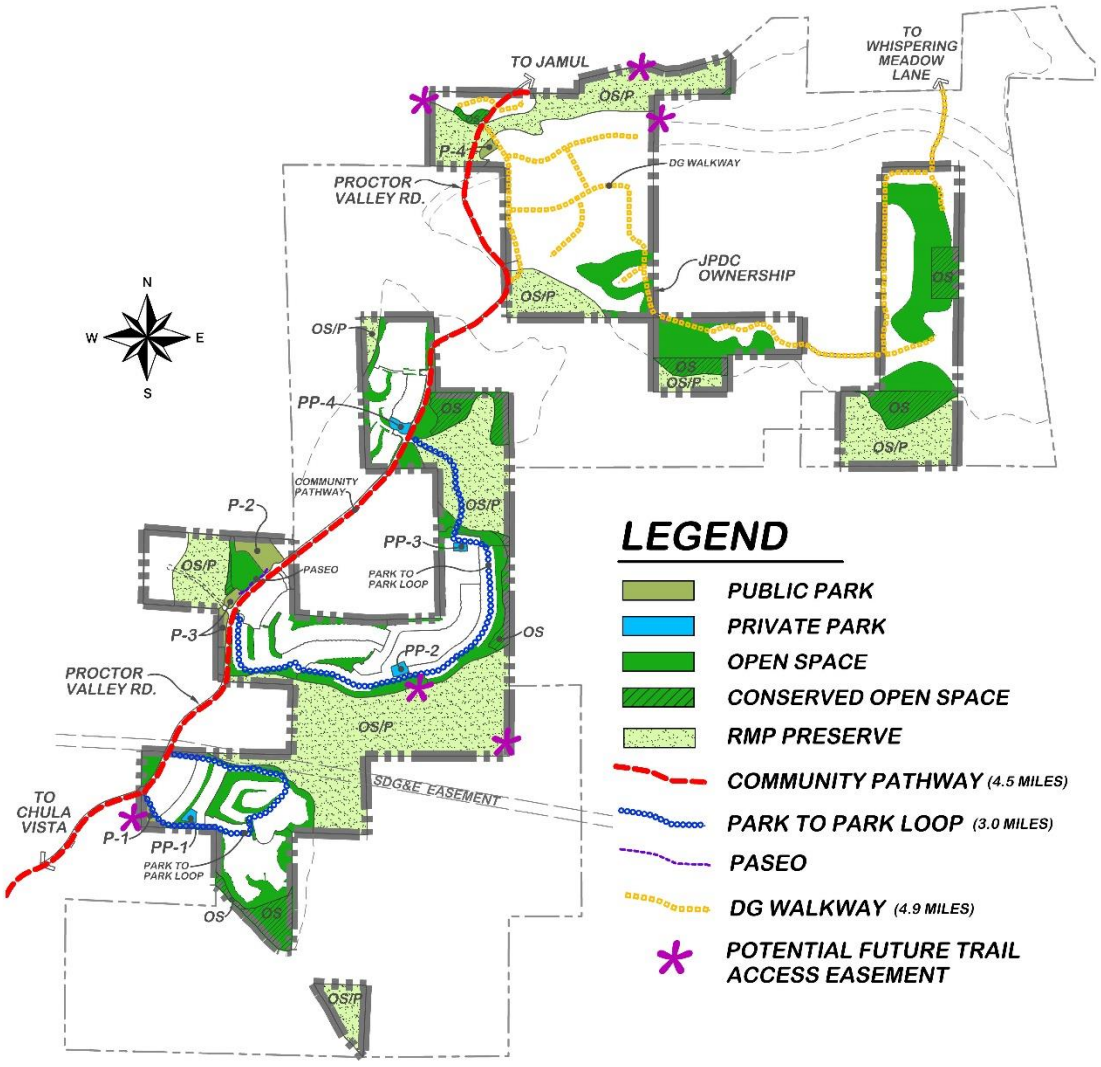

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Exhibit L- Parks, Recreation, Open Space, Preserve, and Trails Plan

The majority of the natural open space within Otay Ranch is governed by the *Otay Ranch Resource Management Plan* (RMP), which established the 11,375 acres Otay Ranch Preserve open space system (Preserve). The POM will be responsible for the maintenance, management and monitoring of the land within the Preserve. Ongoing maintenance and operation POM activities associated with the Proposed Project's Preserve Conveyance Obligation are to be funded through a CFD formed in the County upon the Proposed Project.

12.5.3 Trails

A 4.5 mile multi-use Community Pathway is proposed along Proctor Valley Road within the Proposed Project. The Community Pathway connects to the Chula Vista Regional Trail network to the west at East Lake and Rolling Hills Ranch, traverses the entire length of Proctor Valley and connects to the north in the community of Jamul. A 3.0-mile internal Park-to-Park Loop system connects the residential neighborhoods to the park system and the Community Pathway. Easements to access potential future trails are provided in six locations throughout the Proposed Project. The pathway and trail system is shown on Exhibit K and additional details can be found in the *Specific Plan*.

Pathways within road rights-of-way are public, non-motorized and multi-use. Trails on the private streets and on the private recreation lots will be maintained by an HOA or similar community serving entity. Maintenance of dedicated trails improvements along Proctor Valley Road will be funded through an assessment mechanism or Homeowners Association.

12.6 Adequacy Analysis

Based upon the analysis contained in this section of the PFFP, the Proposed Project is projected to meet the demand generated by the ultimate residential development. The inventory of proposed park facilities is provided in Table 41. Therefore, the park and open space demands are satisfied through implementation of the Proposed Project.

Additionally, the PLDO includes an in-lieu fee which calculates the cost of park land acquisition and improvements in each park planning area on a per home basis. In the Jamul Local Park Planning Area, the in-lieu fee is $4,284 per home. If the Proposed Project paid this fee for all 1,119 homes, the total amount collected would be $4,793,796. However, it is anticipated the Proposed Project will meet PLDO requirements through dedication of developed parkland by providing 24.7 acres of improved public and private park land, with approximately 12.0 acres of PLDO credits. The estimated cost for improvements to

the proposed parks is anticipated to be significantly greater than the in-lieu park fee and the proposed park facility's acreage meets the County PLDO requirement. The provision of park improvements by the Proposed Project meets the requirements of the County PLDO.

Demand for 48.3 acres of open space and 60.4 acres of regional open space is met through provision of approximately188.8 acres of internal open space plus designation of 42.1 acres of Preserve open space within the Proposed Project.

12.7 Inventory and Cost Estimate of Future Facilities

Conceptual park features for each park facility within the Proposed Project are provided below. However, further refinement of the programming for each park could result in other amenities being planned for each park.

12.8 Threshold Compliance

The parks and recreation facilities identified above (P-1 through P-4 and PP-1 through PP-4) satisfy the PLDO requirement for local parks. The combination of 188.8 acres of internal open space that includes preserve edge and/or fuel modifications within the residential gross acreage and 426.7 acres of Preserve open space will provide adequate open space to satisfy the open space requirement.

Table 41: Inventory of Park Facilities[5]

Park	Conceptual Features	Acres (Gross)	Acres (Net)	PLDO Credit [6]	Maint. Entity
Public Parks (100% Park Credit)					
P-1 South Park	• Basketball court • Pickleball court • Shaded Play Structures (2) • Open Lawn Area • 7 Shade Structures w/Farm Tables (22 Total) • Restroom/Maintenance Building • Parking Lot (12 spaces) • Parkour Stations (5 Total) • Perimeter concrete walk • Perimeter Fence • Easement for Potential Trail Access	2.88	1.93	1.93	CFD
P-2 Village Green Park	• Youth Soccer Field (2) • Basketball Court (1) • Raised Stage w/Seating • Maintenance Yard • Restroom/Maintenance Building • Parkour Stations (6) • Tot Lot w/Shade • Group Picnic Shelter w/9 Tables • Plaza Area for Community Events • 3 Shade Structure w/Farm Tables (12 Total) • Parking Lot (45 Spaces) • Trail Staging Area • Perimeter concrete walk • Connection to Paseo • Perimeter Fencing	7.23	5.71	5.71	CFD
P-3 Scenic Park	• Yoga Pavilion • Open Lawn Area (2) • Dog Park w/fencing (large and small dog) • Parkour Stations (8) • Shade Structure w/Farm Tables (4 total) • Shaded Area w/Benches • Boot Camp Lawn Area	3.72	1.84	1.84	CFD

[5] Table to be updated pending specific plan draft revisions.

[6] Park credit is estimated for planning purposes only. This analysis does not take into account the calculation of park credit based on active vs. passive uses and parking areas within individual public parks. Additional analysis will determine actual park credit.

Park	Conceptual Features	Acres (Gross)	Acres (Net)	PLDO Credit [6]	Maint. Entity
	• Perimeter Fencing • Perimeter concrete walk • Connection to Paseo • Parking Lot (16 spaces)				
P-4 North Park	• Open Lawn Play Area • 3 Shade Structure w/Farm Tables (12 Total) • Parking Lot (12 Spaces) • Connection to Community Pathway • Perimeter concrete walk • Perimeter Fencing	1.36	0.83	0.83	CFD
Subtotal 100% Public Park Credit		**15.19**	**10.31**	**10.31**	**CFD**
Private Recreation Facilities (Propose 50% Park Credit)					
PP-1 South Community Swim Club	• Swimming Pool • Children's Pool • Cabanas • Restroom/Pool Equipment Building • Shade structures • Fire Pit and Dining Area w/Festoon Lighting • BBQ Area w/Cover and Fireplace • Tot Lot w/Shade Element • Outdoor Gathering Area w/Fireplace • Water Feature • Perimeter Fencing	1.02	1.00	0.50	HOA
PP-2 Central Community Swim Club	• Entry Arbor • Jr. Olympic Pool • Children's Pool • Restroom/Pool Equipment Building • Shade structures • Dining Area w/Festoon Lighting • BBQ Area w/Cover and Fireplace • Tot Lot w/Shade Element • Game Area w/Shade Element	1.24	1.08	0.54	HOA
PP-3	• Open Lawn Area • Tree Grove w/Seating and Game Tables • Shade Structures w/Farm Tables (10 Total) • Tot Lot w/ 2 Play Structures and Shade Element • Bocce Court w/Shade Structures and Benches	0.73	0.52	0.26	HOA
PP-4	• Entry Building/HOA Office • Pool w/Beach Entry • Spa • Shade Structure @ Pool Deck • BBQ and Dining Area w/Double Sided Fireplace • Multi-Use Lawn/Game Area	1.54	0.76	0.38	HOA

Park	Conceptual Features	Acres (Gross)	Acres (Net)	PLDO Credit [6]	Maint. Entity
	• Dining Area w/Shade Structure • BBQ and Dining Area • Restroom/Pool Equipment Building • Perimeter Fencing				
Private Pocket Parks (16 located within Central & North Village 14 areas)	• Private Pocket Parks (16 located within Central & North Village 14)	5.0			HOA
Subtotal Private Park		**9.53**	**3.36**	**1.68**	**HOA**
Total Public, Private & Private Pocket Parks		**24.72**	**13.67**	**11.99**	
Total Park Requirement[7]				**10.00**	
(shortfall)/excess				**1.99**	

[7] The PLDO obligation for Village 14 is 8.9 acres. Planning Areas 16/19's PLDO obligation is 1.1 acres.

12.9 Parks and Recreation Facilities Improvements Phasing

Table 42 describes the parks and recreation facilities improvements phasing for the Project.

Table 42: Local Park Improvements Phasing

Phase	Park Facilities
Village 14 South	• Enter into an agreement to secure and construct Park P-1 as required by the County. • Enter into an agreement to secure and construct private park PP-1 pas required by the County.
Village 14 Central	• Enter into an agreement to secure and construct Park P-3 pas required by the County. • Enter into an agreement to secure and construct private park PP-2 as required by the County. • Enter into an agreement to secure and construct Park P-2 as required by the County. • Enter into an agreement to secure and construct private park PP-3 as required by the County.
Village 14 North	• Enter into an agreement to secure and construct private park PP-4 as required by the County
PA 19	• Pay park PLDO Fees if applicable
PA 16	• Enter into an agreement to secure and construct Park P-4 pas required by the County.

12.10 Financing Park Facilities

Local park sites and improvements will be satisfied through compliance with the County's Park Land Dedication Ordinance (PLDO) whereby the Applicant shall receive credit against PLDO Fees for the dedication and construction of eligible park improvements.

It is also anticipated that CFD will be formed in the County to offset any costs associate with the annual long term maintenance of park, trail, and open space facilities within the Proposed Project.

13.0 School Facilities

13.1 Otay Ranch GDP/SRP Threshold

Additional facilities to serve children generated by new development shall be provided concurrent with need, and shall be of the quality and quantity sufficient to meet, at a minimum, State Department of Education standards.

13.2 Service Analysis

The purpose of the Otay Ranch GDP/SRP Threshold Standard is to ensure that school districts have the necessary school sites and funds to meet the needs of students in newly developing areas in a timely manner, and to prevent the negative impacts of overcrowding on existing schools. Through the provision of development forecasts, school districts plan and implement school facility construction and program allocation in line with new development.

The Proposed Project is within the boundaries of four school districts.

- Chula Vista Elementary School District (CVESD): The CVESD would administer education for kindergarten through sixth grades for the Village 14 portion of the Proposed Project.

- Sweetwater Union High School District (SUHSD): The SUHSD would administer education for the Junior/Middle and Senior High Schools for the Village 14 portion of the Proposed Project.

- Jamul-Dulzura Union School District (JDUSD): The JDUSD would administer education for kindergarten through 8th grade for Planning Areas 16 and 19.

- Grossmont Union High School District (GUHSD): The GUHSD would administer education for high school students within the unincorporated portion of the County, including Planning Areas 16/19.

On November 3, 1998, California voters approved Proposition 1A, the Class Size Reduction Kindergarten-University Public Education Facilities Bond Act of 1998. Prior to the passage of Proposition 1A, school districts relied on statutory school fees established by Assembly Bill 2926 ("School Fee Legislation") which was adopted in 1986, as well as judicial authority

(i.e., Mira-Hart-Murrieta court decisions) to mitigate the impacts of new residential development. In a post Proposition 1A environment, the statutory fees provided for in the School Fee Legislation remains in effect and any mitigation requirements or conditions of approval not memorialized in a mitigation agreement, after January 1, 2000, will be replaced by Alternative Fees (sometimes referred to as Level II and Level III Fees). The statutory fee for residential development is referred to in these circumstances as the Level I Fee (i.e., (2016/2017) currently at $3.48 per square foot for new residential construction and $0.56 per square foot for new commercial and industrial construction).

CVESD utilizes their current *Fee Justification Report, March 2016, by SDFA*, to quantify the impacts of new residential development on the district's school facilities, and to calculate the permissible Alternative Fees to be collected from such new residential development. To ensure the timely construction of school facilities to house students from residential development, alternative fees or implementation of a Mello Roos Community Facilities District (CFD) will be necessary.

Both CVESD and SUHSD are justified per Gov't Code to collect the maximum fee of $3.48 per square foot for new residential construction. CVESD has an agreement with SUHSD specifying the amount of the development fee that each district collects from new residential development. Based on the agreement, CVESD collects $1.53 per square foot and SUHSD collects $1.95 per square foot for residential construction.

Sweetwater Union High School District utilizes their current "Sweetwater Union High School District Long Range Comprehensive Master Plan." Implementation of the SUHSD Plan is ongoing and has resulted in the upgrading of older schools and accommodating continuing growth. In November 2000, Proposition BB was approved by the voters. The district leveraged $187 million from Proposition BB into a $327 million effort utilizing state funding to modernize and upgrade twenty-two campuses. Additional work efforts associated with Proposition O have commenced and construction has begun.

In November 2006, the community supported Proposition O, a $644 million bond measure. This bond measure addresses the critical and urgent safety needs of the 32 campuses within the SUHSD. The types of repairs and improvements that Prop O addresses includes: improving handicap accessibility, removing asbestos and lead paint, and upgrading fire and life safety systems.

13.3 Project Processing Requirements

Specific Plan/Public Facilities Finance Plans

1. Identify student generation by phase of development.
2. Site proposed school facilities in conformance with each School District's standards and criteria.
3. Reserve school sites, if necessary, or coordinate with the School District(s) for additional school classrooms.
5. Identify facilities consistent with proposed phasing.
6. Demonstrate the ability to provide adequate facilities to access public schools in conjunction with the construction of water and sewer facilities.
7. Potentially enter into a School Mitigation Agreement, if applicable.

13.4 Existing Conditions

13.4.1 Chula Vista Elementary School District

The CVESD, established in 1892, is the largest kindergarten through sixth grade (grades K– 6) school district in California, and serves nearly 30,000 students in 47 elementary schools (including 7 Charter Schools) with approximately 2,500 employees (both certified and classified) district-wide. Table 43 lists existing schools together with the capacity and enrollment of each. Capacity using existing facilities is approximately 31,802. Enrollment is currently approximately 28,924. Ten of the 45 schools are over capacity and three schools are near capacity (see Table 45). A new K-6 school opened in Otay Ranch Village ~~12~~ 2 in July 2017. With the addition of this school, the CVESD expects to have adequate capacity to house all projected students ~~for the next 12 months~~until additional schools are built. However, additional facilities may be necessary within the next five years.

~~An a~~Additional elementary school~~s is~~ are planned within Otay Ranch Village 3 North, Village 8 West, Village 8 East, Village 9, Village 10, and the Eastern Urban Center. Currently, several schools in eastern Chula Vista are over capacity, including Arroyo Vista, Veterans, McMillin, and Salt Creek.

Table 43: Chula Vista Elementary School District Enrollments

Schools	Approximate Capacity	Estimated Enrollment 2016/2017	Remaining Capacity
Allen	438	393	45
Arroyo Vista Charter	850	1002	-152
Camarena	1000	1014	-14
Casillas, Joseph	577	505	72
Castle Park	489	381	108
Chula Vista Hills	588	555	33
Clear View Charter	888	495	393
Cook, Hazel Goes	586	322	264
Chula Vista Learning Comm. Charter	513	1,530	-1017
Discovery Charter	938	311	627
Eastlake	702	648	54
Feaster-Edison Charter	1,113	1,235	-122
Finney, Myrtle	586	363	223
Halecrest	577	503	74
Harborside Accelerated	864	700	164
Hedenkamp, Anne and William	1,150	1,074	76
Heritage	900	829	71
Hilltop Drive	564	563	1
Juarez-Lincoln Accelerated	727	552	175
Kellogg, Kar1 H.	427	328	99
Lauderbach, J. Calvin	1,052	800	252
Liberty	752	739	13
Lorna Verde Comer	650	477	173
Los Altos	489	356	133
Marshall, Thurgood	686	674	12
McMillin, Corky	813	845	-32
Montgomery Accelerated, John J.	513	344	169
Mueller Charter, Robert L	900	1,364	-464
Olympic View	825	807	18
Otay Accelerated	713	552	161
Palomar	436	363	73
Parkview	536	376	160
Rice Comer, Lilian J.	739	650	89
Rogers, Greg (East)	639	450	189
Rohr, Fred H	489	321	168
Rosebank	727	568	159
Saburo Muraoka	TBD	TBD	TBD

Salt Creek	975	968	7
Silver Wing	488	438	50
Sunnyside	489	456	33
Tiffany, Burton C.	586	520	66
Valle Lindo	677	474	203
Valley Vista	634	622	12
Veterans	901	892	9
Vista Square	689	648	41
Wolf Canyon	927	917	10
Totals	**31,802**	**28,924**	**2,878**

13.4.2 Sweetwater Union High School District

The SUHSD serves approximately 40,249 students in 11 middle (grades 7-8) and 14 high schools (grades 9–12) and more than 32,000 adult learners at 32 campuses. Several middle and high schools are planned or have been recently opened in the area. East Lake High School is the nearest high school to the proposed Project. The SUHSD owns a middle school site within Otay Ranch Village 11 and plans to construct a new middle school (grades 7-8). However, there is no construction schedule available. The SUHSD is coordinating with Otay Ranch property owners to identify an additional high school site in the southeastern portion of the Otay Valley Parcel.

Table 44: Sweetwater Union Middle School Enrollments

School Site	Program Capacity 100%	2016/2017 Estimated Enrollment	Capacity vs. Projected
Middle Schools			
Bonita Vista	1,610	1,137	473
Castle Park	1,324	877	447
Chula Vista	1,456	837	619
EastLake	1,995	1,625	370
Granger	1,350	958	392
Hilltop	1,596	977	619
Mar Vista Mid.	1,530	861	669
Montgomery Mid.	1,434	839	595
National City Mid.	1,038	807	231
Rancho del Rey	1,796	1,778	18
Southwest	1,034	631	403
Subtotal	**16,163**	**11,327**	**4,836**

Table 45: Sweetwater Union High School Enrollments

School Site	Program Capacity 100%	2016/2017 Estimated Enrollment	Capacity vs. Projected
High Schools			
Bonita Vista	2,603	2,326	277
Castle Park	2,099	1,607	492
Chula Vista	2,758	2,586	172
EastLake	2,964	3,063	-99
East Hills Academy*	212	78	134
Hilltop	2,760	2,143	617
Mar Vista	2,023	1,673	350
Montgomery	2,392	1,712	680
Olympian	2,537	2,610	-73
Otay Ranch	2,737	2,413	324
San Ysidro	2,676	2,447	229
Southwest	2,519	1,910	609
Sweetwater	2,875	2,675	200
Palomar	564	281	283
Subtotal	**31,719**	**27,524**	**4,195**

13.4.3 Jamul-Dulzura Union School District

The JDUSD was formed in 1949 and encompasses 163 square miles of semi-rural rolling hills in eastern San Diego County. JDUSD serves approximately 800 students in three schools operated by the district in addition to 375 students served by the Greater San Diego Academy Home School program.

Table 46: Jamul-Dulzura Union Elementary School Enrollments

School Site	Program Capacity 100%	2016/2017 Estimated Enrollment	Capacity vs. Projected
Elementary Schools			
Jamul Primary	369	255	114
Jamul Intermediate	150	120	30
Subtotal	**519**	**375**	**144**

Table 47: Jamul-Dulzura Union Middle School Enrollments

School Site	Program Capacity 100%	2016/2017 Estimated Enrollment	Capacity vs. Projected
Middle Schools			
Oak Grove Middle School	313	231	82
Subtotal	**313**	**231**	**82**

13.4.4 Grossmont Union High School District

The GUHSD serves approximately 21,257 students in 18 public and charter high schools (grades 9–12). There is currently one high school planned for development within the GUHSD located within the County unincorporated area of Alpine. ~~Steele Canyon~~Valhalla High School is the nearest high school to the Project Area. ~~Unless the attendance boundary is changed high school students within Planning Areas 16 and 19 will attend Steele Canyon High School, which was opened in 2000, and had a planned capacity of 2,600 students~~Valhalla High School has a planned capacity of 2,656 students and has a current enrollment of 2,125 students.

Table 48: Grossmont Union High School Enrollments

1. Per Grossmont Union High School District, the following represents the March 2017 total capacity per school.

School Site	Program Capacity 100%[1]	201~~6~~7/201~~7~~8 Estimated Enrollment	Capacity vs. Projected[1]
High Schools			
Grossmont	2,750	~~2,253~~2,219	~~497~~531
Helix ~~High School~~	2,758	~~2,511~~2,465	~~247~~293
El Cajon Valley	2,662	1,815	~~847~~824
Mountain Miguel	2,678	~~1,302~~2,678	1,~~376~~475
El Capitan	2,080	~~1,600~~1,675	~~480~~405
Granite Hills	2,624	2,~~337~~290	~~287~~334
Monte Vista	2,534	1,~~683~~640	~~851~~844
Santana	2,256	1,~~601~~584	~~655~~672
Chaparral / IDEA	900	~~65~~223	~~835~~667
Valhalla	2,656	2,~~101~~125	~~555~~531
West Hills	2,626	1,~~826~~723	~~800~~903
Steele Canyon	2,470	2,~~163~~195	~~307~~275

13.5 Project Demand and Proposed Facilities

13.5.1 Student Generation Factors:

For long-range facilities planning purposes, the CVESD and SUHSD school districts have recommended the following student generation projection factors:

Table 49: Village 14 Student Generation Factors

School Type	Grades	Students per SF	Students per MF
Elementary	K-6	0.4114	0.3481
Middle School	7-8	0.1216	0.0516
High School	9-12	0.2291	0.1057

For long-range facilities planning purposes, the JDUSD and GUHSD school districts have recommended the following student generation projection factors:

Table 50: Planning Areas 16/19 Student Generation Factors

School Type	Grades	Students per SF
Elementary	K-6	0.4114[1]
Middle School	7-8	0.1216[1]
High School	9-12	0.1460

1. Due to the unavailability of a school fee justification study, Developer has conservatively estimated student generation rates for JDUSD to be equal to that of CVESD and SUHSD.

By phase and school category, the proposed Project is expected to generate students as determined in Table 51.

Table 51: Student Generation by Development Phase

Phase	Homes	Elementary Students	Middle School	High School
Village 14	994	409	121	228
Planning Areas 16/19	125	51	15	18
TOTAL	**1,119**	**460**	**136**	**246**

14.5.2 School Size Standards

School size standards adopted by the respective districts are as shown on the following Table 52. These sizes are "core" facilities only, and do not reflect modular, temporary structures which are routinely placed on campus to facilitate temporary expansion of classrooms, as necessary.

Table 52: School Size Standards

School Type	Grades	School Size
Elementary	K-6	750-1,000
Middle School	7-8	1,500
High School	9-12	2,400

13.5.3 School Siting Criteria

As established in the Otay Ranch GDP/SRP and Facility Implementation Plan, school facilities should be sited according to the following criteria. The ideal site should be:

1. At least eight (8) usable acres for an elementary school site, twenty-five (25) net usable acres for a middle/junior high school, and at least fifty (50) net usable acres for a senior high school, to adequately accommodate the loading and unloading of students, future expansion of facilities and offer design flexibility.
2. Centrally located to residential development to reduce bussing requirements, reduce walking distances for young children, encourage after-hours use of facilities by the public and discourage vandalism.
3. Adjacent to a street or road that can safely accommodate bike, foot and vehicular traffic. Middle school and high school sites should have no less than two sides with street frontage. Urban high schools are best located adjacent to collectors that can handle the increased traffic volume of student drivers and the entrance to the school should be signaled.
4. Topographically and environmentally safe and suitable to reduce site preparation costs and permit maximum use of the site for physical activities.
5. Site should be of sufficient usable acreage on one level and configuration to not limit the design of buildings and provide field and parking space.
6. Surrounded by land uses that produce a minimum of noise and traffic often associated with commercial and heavy industrial areas.
7. Located adjacent to parks to enable joint field and recreation facility uses.
8. Vacant and undeveloped with utilities stubbed to the site in order to reduce financial and costs of site acquisition.

9. Located such that utilities and services (e.g. cable television, fire protection, and emergency medical services) are or will be readily available, to reduce site development costs.
10. Near imminent development of adjacent properties to insure road and other necessary off-site improvements are available in a timely manner.
11. School siting should be in a location acceptable to the State Division of Aeronautics with regard to distance from Brown Field.
12. A safe distance, i.e., as required by law, from contaminants or toxins in the soil or groundwater from landfills, fuel tanks, agricultural areas, power lines, utility easements, etc.
13. Outside of floodplains; on stable soils; away from fault lines.
14. Integrated into the system of alternative transportation corridors, i.e., bike lanes, riding and hiking trails, and mass transit, where appropriate.

Additionally, SUHSD policy dictates that while it is acceptable and desirable to locate junior high/middle schools in close proximity to a high school, it is not desirable that either be located near an elementary school site. The CVESD has also stated a preference for this separation to avoid the mixing of older students with younger students.

13.5.4 Elementary School Demand

There are six existing CVESD elementary schools that may serve Village 14 students, including Heritage Elementary, McMillin Elementary, Hedencamp Elementary, Veterans Elementary, Wolf Canyon Elementary and Camerena Elementary. The newest K–6 school in Otay Ranch Village 2 (Saburo Muraoka Elementary School) opened in July 2017. Based on 2015/2016 enrollment information, Heritage, Hedencamp, and Wolf Canyon elementary schools have capacity to serve Village 14 students on an interim basis. However, the CVESD will determine where Village 14 students will be served based on available school capacity.

The Otay Ranch GDP/SRP land plan identifies an elementary school site within Village 14. Consistent with the Otay Ranch GDP/SRP, the Specific Plan reserves an elementary school site (9.7 ac.) within the Village 14 Village Core adjacent to two public parks. This school site is identified as S-1 on the Site Utilization Plan, Exhibit A.

Utilizing the student generation factors identified by CVESD, it is projected that approximately 409 elementary school students will result from development of the Proposed Project in Village 14 and 51 elementary students will result from the development of Planning Areas 16/ 19, for a total of 460 elementary school students. These

figures are significantly less than the capacity of a single elementary (K-6) school (750-1000 students).

The Village 14 school site would be reserved for acquisition by the CVESD or dedication to the CVESD, pursuant to an agreement between the Developer and CVESD. It is anticipated a graded school site will be delivered to the CVESD, including utilities provided to the site and an all-weather road acceptable to the SDCFA and CVESD. The Otay Ranch GDP/SRP School Facilities Implementation Plan is based on the premise that schools will be constructed when no greater than half of the school's projected students reside in the community; however, facility phasing is solely determined by CVESD based on available school capacity in the vicinity of the Project Area.

It is anticipated that Planning Areas 16/ 19 elementary school students will be served by the JDUSD and the applicant will pay school fees. JDUSD currently has capacity in existing schools to serve the 51 elementary students generated by the development of the Proposed Project from Planning Areas 16/19.

If schools are overcapacity, the school districts typically utilize relocatable classrooms to temporarily house additional students until a new facility opens. In recognition of the impact on school facilities created by new development, the school districts and Developer(s) may enter into mitigation agreements to ensure the timely construction of school facilities to house students from new residential development ("Mitigation Agreement"). Historically, developers and school districts have entered into a School Mitigation Agreement and school districts have utilized a community facilities district ("CFD") pursuant to the Mello-Roos Community Facilities District Act of 1982 (CVESD) to finance school facilities. However, per SB2926, in absence of a mitigation agreement, the developer shall pay the statutory school fees under state law in effect at the time of building permit issuance.

13.5.5 Middle School Demand

Secondary schools serving Otay Ranch include Otay Ranch High School, Olympian High School, Rancho del Rey Middle School, and East Lake Middle School. Enrollment and capacity in these schools are shown in Table 43. Based on the student generation factors identified in Tables 49 and 50, it is projected that 121 middle school students will result from development of Village 14 and 15 students will result from the development of Planning Areas 16/19. Throughout the SUHSD and JDUSD additional middle school capacity is available. Students generated by the Proposed Project would be expected to attend an existing middle school.

Sweetwater Union High School District officials have indicated that students generated by the Proposed Project may attend East Lake Middle School. In addition, a new middle school site has been identified within Otay Ranch. This middle school is in Village 11 and has a projected student capacity of 1,500 students. Once constructed, this facility may be used by middle school students generated by the Proposed Project. A construction schedule is not currently available. The SUHSD will determine where middle school students will be served based on available capacity.

JDUSD has indicated that students generated by the development of Planning Areas 16 and 19 could attend Oak Grove Middle School which currently has capacity to house 82 additional students.

13.5.6 High School Demand

It is anticipated that 228 students would be generated by Village 14 within the SUHSD and 18 students would be generated from Planning Areas 16/19 located within the boundaries of GUHSD. Students generated by the Proposed Project would be expected to attend an existing high school.

SUHSD officials have indicated students generated by the Village 14 portion of the Proposed Project may attend Eastlake High School. In addition, SUHSD is working with Otay Ranch property owners to identify a high school site within the southeastern portion of the Otay Valley Parcel. This high school would have a projected capacity of 2,000 students. Once constructed, this facility may be used by high school students generated by the Project. A construction schedule is not available at this time. SUHSD will determine where students will be served based on available capacity.

It is anticipated that GUHSD students generated from Planning Areas 16/19 would attend Steele Canyon High School. Steel Canyon currently has capacity to house students generated by the development of Planning Areas 16/19.

13.6 Adequacy Analysis

The Proposed Project's student generation projections will necessitate construction of an elementary school. The Specific Plan reserves an elementary school site within the Village 14 Village Core. To the degree that it can be determined at this time, this site is in compliance with the school siting criteria adopted by the CVESD.

To mitigate its impact on school facilities, the Proposed Project is required to pay school mitigation fees pursuant to Gov. Code Section 65995. Alternatively, the Developer(s) may enter a "School Mitigation Agreement" with the appropriate school district(s).

13.7 Inventory of Future Required Facilities

A 9.7 acre elementary school site has been identified and reserved as a possible CVESD elementary school location.

13.8 Threshold Compliance

A. Reservation of the school site shall be a requirement of development of the Project.

B. Prior to the issuance of each building permit for any residential dwelling units, the applicant(s) shall provide evidence or certification by the CVESD, SUHSD, JDUSD, or GUHSD that any fee charge, dedication or other requirement levied by the School Districts under state law has been complied with or that the district has determined the fee, charge, dedication or other requirements do not apply to the construction or that the applicant has entered into a school mitigation agreement. School Facility Mitigation Fees shall be in accordance with the fees in effect at the time of building permit issuance.

C. The applicant shall provide evidence from that each school site has been determined by the district to be acceptable for school use.

13.9 Financing School Facilities

California Government Code section 65995 et. seq. and Education Code Section 17620 et. seq. authorizes school districts to impose facility mitigation exactions on new development as a way to address increasing enrollment caused by that development.

Although the collection of school fees is one method available to defray the cost of new development, it is not an acceptable solution since the maximum amount that could be collected by law represents less than one-fourth the cost to construct schools.

In recognition of this funding deficiency, it is the desire of each district to fully mitigate the facility impacts caused by a master planned community via the creation of a Mello Roos Community Facilities District). The following Mello-Roos Districts have been created by each district:

Existing Community Facilities Districts

SUHSD	**CVESD**
CFD No. 1 EastLake	CFD No. 1 EastLake
CFD No. 2 Bonita Long Canyon	CFD No. 2 Bonita Long Canyon
CFD No. 3 Rancho del Rey	CFD No. 3 Rancho del Rey
CFD No. 4 Sunbow	CFD No. 4 Sunbow
CFD No. 5 Annexable	CFD No. 5 Annexable
CFD No. 6 Otay Ranch	CFD No. 6 Otay Ranch
CFD No. 7 Rolling Hills Estate	CFD No. 10 Annexable for future annexations
CFD No. 8 Coral Gate (Otay Mesa)	CFD No. 11 Otay Ranch (Lomas Verde)
CFD No. 9 Ocean View Hills	CFD No. 12 Otay Ranch (Village 1, West)
CFD No. 10 Remington Hills/Annexable	CFD No. 13 San Miguel Ranch
CFD No. 11 Lomas Verdes	CFD No. 14 Otay Ranch Village 11
CFD No. 12 Otay Ranch (Village 1 West)	CFD No. 15 Otay Ranch Village 6 (ORC)
CFD No. 13 San Miguel Ranch	CFD No. 16 Otay Ranch Village 7
CFD No. 14 Otay Ranch Village 11	CFD No. 17 Otay Ranch Village 2
CFD No. 15 Otay Ranch Village 6 (ORC)	CFD No. 18 Otay Ranch Millennia
CFD No. 16 Otay Ranch Village 7	CFD No. 19 Otay Ranch Village 2/PA 12
CFD No. 17 Otay Ranch Village 2	CFD No. 20 Otay Ranch Village 3
CFD No. 18 Otay Ranch Millennia	

CFD No. 19 Otay Ranch Village 2/PA 12
CFD No. 20 Otay Ranch Village 3

Based on historical data available from each district an estimate of costs for the construction of school facilities on a per student basis is provided. Both districts follow state standards for determining the costs and size for school construction. The cost for a high school, including land acquisition, is approximately $79,841.55 per student (2016 dollars). The cost for a middle school, including land acquisition, is approximately $43,259.11 per student (2016 dollars). The cost for an elementary school, including land acquisition, is approximately $51,699 per student (2016 dollars). Because the Proposed Project is generating significantly fewer students than the required threshold, it is not anticipated that they will be required to allocate land towards or develop a middle or high school facility.

Table 53: Estimated School Costs

Elementary School Cost	
(800 students) ($51,699/student w/land cost)	$ 35,544,924
Middle School Cost	
(1,500 students) ($43,259/student w/ land cost)	$ 64,888,500
High School Cost	
(2,400 students) ($79,841/student w/ land cost)	$ 191,619,720

14.0 Animal Control Facilities

14.1 Otay Ranch GDP/SRP Threshold

Participate in programs to provide animal control facilities sufficient to provide adequate square feet of shelter space per Otay Ranch dwelling unit.

14.2 Service Analysis

Animal control facilities and services for the Proposed Project are provided by the County. County animal control facilities protect the health and welfare of both residents and domestic animals. Build-out of the proposed Project may generate the need for additional or expanded animal control facilities.

14.3 Project Processing Requirements

Demonstrate conformance with the *Otay Ranch Facility Implementation Plan*.

14.4 Existing Conditions

The County and the City of Chula Vista provide animal control services for the Otay Ranch planning area. The County provides the service for the unincorporated area including the project site. The Humane Society provides animal shelter and related services and adoption, humane disposal and investigation for the County.

The County provides services in all unincorporated portions of the county and in nine cities within the county by contract. Animal control staff is on premises 24 hours a day, seven days per week, and private veterinarians provide emergency services on a contract basis. The department provides the following services:

- Emergency care for injured animals
- Surveillance for rabies, rabies vaccination clinics and quarantine of biting animals
- Investigation/prosecution of anti-cruelty laws
- Control of vicious or stray animals
- Licensing of dogs
- Adoption and lost pet services
- Spay/neuter referral and information
- Public education and information
- Inspection and licensing of private kennels
- Humane disposal of injured and unwanted animals
- Shelter domestic animals, reptiles and livestock
- Senior adoption and foster care programs
- Animal rescue – provides animal rescue to all cities in case of disasters

The South Shelter is located at 5821 Sweetwater Road in Bonita and currently provides animal control services to the area in the vicinity of the Project site.

14.5 Project Demand and Proposed Facilities

Build-out development of the Proposed Project will result in a total of 1,119 homes. This increase in population, in conjunction with the proportional regional growth of the area, will result in the need for additional or expanded animal control facilities. *The Facility Implementation Plan* indicates that a ratio objective of 0.13 sq. ft. of animal control facilities per home should be utilized in assessing project demand. As a result, the Proposed Project will result in the demand for 146 sq. ft. of animal control facilities.

14.6 Adequacy Analysis

The Otay Ranch Facility Implementation Plan provides that animal control facility requirements be addressed through off-site expansion of County of San Diego and City of Chula Vista facilities, as appropriate, based on jurisdiction. No specific animal control facilities will be required of the Proposed Project. The County will continue to monitor development rates in the area to determine continued compliance with the law animal control threshold.

14.7 Inventory of Future Required Facilities

No specific facilities will be required of the Proposed Project.

14.8 Threshold Compliance

Based upon the analysis contained in this PFFP, it is projected that the animal control threshold will be maintained throughout the development of the Proposed Project.

14.9 Financing Animal Control Facilities

Animal Control facilities serving the unincorporated area have been funded from the General Fund and service fees. The fiscal analysis concluded that the Proposed Project will result in a net fiscal annual surplus at build-out of $814,115. Additionally, the Otay Ranch GDP/SRP obligates the Proposed Project to contribute its proportionate fair share to any regional impact fee program, if one were to be established. Thus, the Proposed Project is projected to result in sufficient tax revenues to accommodate the demand for Animal Control Facilities.

15.0 Regional Facilities Plans

15.1 Otay Ranch GDP/SRP Requirement

The Otay Ranch GDP/SRP requires the preparation of Regional Facilities Plans concurrent with the Specific Plan for the following regional facilities:

- Arts and Cultural Facilities
- Cemetery Facilities
- Health and Medical Facilities
- Community Purpose Facilities
- Childcare Facilities
- Social and Senior Service Facilities
- Correctional Facilities
- Justice Facilities
- Integrated Solid Waste Management

Other facilities required to be addressed at the Specific Plan level are Solid Waste and Childcare facilities.

15.2 Service Analysis

The following establishes the Regional Facilities Plans for each facility as required by the Otay Ranch GDP/SRP.

Arts and Cultural

The Otay Ranch GDP/SRP anticipates a multi-use cultural complex in the Eastern Urban Center. In addition, public art and artistic public improvements will be visible in the design of the Project. Elements such as landscaping, gateways, signage, street lights, paving materials, fencing, street and park furniture and other key focal points will compliment and add to the design character. These design are addressed in the Proctor Valley Village 14 Design Plan and the Planning Areas 16/19 Design Guidelines.

Additionally, the Village Core (PP-5) includes a raised band stand and paved plaza which can be used as a stage for artistic performances and other design related art events.

Cemetery Facilities

The Otay Ranch GDP/SRP requires that each Specific Plan confirm the Otay Ranch GDP/SRP conclusion that existing cemetery capacity is adequate to serve Otay Ranch

residents. The Proposed Project residents' demand for cemetery space can be met by the nine cemeteries, memorial parks or mausoleums within the South County area, including Cypress View, Glen Abbey, Greenwood, Holy Cross, La Vista, Mount Hope, Mount Olivet and San Ysidro.

Health and Medical

The Otay Ranch GDP/SRP requires opportunities be provided to health care providers to consolidate health care services as part of the Specific Plan review process. Based on existing and projected services provided in the South County, no additional acute hospital facility will be needed to serve the Proposed Project. Both Scripps Memorial Hospital and Sharp Chula Vista Medical Center have the capacity to meet the medical needs of the Proposed Project residents. The area will also be served by Paradise Valley Hospital and other local private facilities

In the area of mental health, recent service trends indicate an increase in day treatment and out-patient services as an alternative to traditional therapy in a hospital setting. This change in service delivery will compensate for increased service demand resulting from the Proposed Project population.

Build out of the Proposed Project will generate an incremental demand for additional nursing home beds. It is anticipated this demand can be met in existing nursing facilities within the South County. Build out will also generate the need for medical practitioners (doctors, dentists, chiropractors and allied health professionals). Space for purchase or lease, which is accessible to the public and suitable for siting medical practitioner services, will be available within other retail/office areas in the City of Chula Vista, the Mixed Use Site, and the Eastern Urban Center of Otay Ranch.

Social and Senior Service Facilities

The Otay Ranch GDP/SRP establishes goals for ensuring Otay Ranch residents have adequate access to sources of governmental and private social and senior services programs. Social service programs are mandated by State and Federal statutes and regulations and are largely funded from State and Federal sources. The public sector provides many basic support services to needy segments of the population. At the regional level, the County has the primary responsibility to provide social services to County residents. The Department of Social Services serves one out of every eleven County residents, or over 100,000 persons each month.

There are numerous non-profit health and social service organizations located in the South County area. The County Area Agency on Aging provides social and nutritional programs, legal services, ombudsman programs and services to prevent or postpone institutionalization.

Correctional and Justice Facilities

The Otay Ranch GDP/SRP Correctional and Justice Facilities plans do not apply to Proposed Project.

Childcare Facilities

This section implements the Otay Ranch GDP/SRP requirement to prepare a Childcare Plan. The Project Land Plan provides opportunities to locate facilities to meet the needs of the community. Childcare facilities may be located within commercial/mixed use centers and Small Family Day Cares for children (8 or fewer children) are permitted within single family resident districts.

Family Care Homes

Home-based child care includes small family day care homes (SFDCH) which serve 6 children and large family day care homes (LFDCH) which serve 7-12 children. Consistent with the Proposed Project Development Regulations, SFDCHs could potentially be located within residential zones in the Specific Plan area.

Child Care Center

Facility–based childcare may be non-profit or commercial facilities located in non-residential land use areas of the Proposed Project. The Mixed Use Site may accommodate childcare facilities. The State has adopted regulations related to licensing, application procedures, administrative actions, enforcement provisions, continuing requirements and the physical environment for child day care and day care centers. All child care facilities will comply with state, as well as local regulations.

Community Purpose Facilities

Community Purpose Facilities (CPF) and Regional Purpose Facilities (RPF) are not required in the County and, therefore, do not apply to the Proposed Project.

Integrated Solid Waste Management

The Proposed Project will comply with the Otay Ranch GDP/SRP requirements for a waste management system, including:

- Curbside recycling
- Green waste recycling
- Material recovery facility
- A household hazardous waste collection facility
- Landfill capacity

Curbside pickup and recycling will be accomplished through a contract with a local service provider. Recyclables will be sorted at curb-side.

It is that anticipated green waste collection will be offered every other week, which will be established by the local waste service provider. Trash and recycling service will occur on a regular basis depending on the local waste services provider's operations. To promote recycling, it is anticipated that a waste service provider will offer different monthly trash service rates depending on the size and type of each residences trash container.

16.0 Public Facility Financing

16.1 Overview

Public facilities are generally provided or financed in one of the following ways:

Subdivision Exaction – Dedications and/or developer-constructed improvements, reservations of land, and supplemental improvements (reimbursement agreements) are financed as a condition of project entitlements. Exactions must substantially further a legitimate governmental interest, a nexus between the impact and the exaction must exist, and the exaction cannot deny a property owner economically viable use of its land.

Development Impact Fee – Funded through the collection of a fee or other consideration as a condition to approval of a final subdivision map. Such fee assists to defray the cost of constructing planned regional public improvements for which a project contributes an impact. Impact fees must be fairly apportioned either on the basis of benefits conferred or on the need created by the subdivision.

Debt Financing – Financing through a defined district of landowners in order to fund the up-front provision of a public facility.

County General Fund – Payment of general taxes to the County General Fund serve to pay for many public services throughout the County. Those facilities and services identified as being funded by General Fund sources represent those that will benefit not only the residents of the Proposed Project, but also residents within the County in general.

16.2 Subdivision Exactions

In return for receiving a permit to allow development of land, and in response to the projected development's demand for public services, the County may impose exactions such as a dedication of land or money in order that public facility improvements can be made in a timely manner. On the Proposed Project, neighborhood-level public improvements will be developed simultaneously with related residential subdivisions and other resort developments. The use of subdivision conditions and exactions, where appropriate, will ensure that the construction of

necessary facilities (supply) is timed in concert with actual development (demand). Such exactions must articulate the specific project for which the exaction is being conditioned.

16.3 Development Impact Fee Programs

The County may impose development impact fees or charges for the construction of public improvements. This may occur for public facilities and utilities for which an account has been established and funds appropriated for the project(s). These fees will contribute to the financing of capital facilities improvements within the County. Such fees are adopted in accordance with an established formula as set by State Law.

16.4 Debt Financing Programs

The County has utilized assessment mechanisms to finance a number of public street improvements, as well as regional sewer and drainage facilities. School Districts within the County have also implemented Community Facilities Districts to finance school facilities.

Such districts may be imposed for the purpose of acquiring land, constructing improvements and even maintaining certain facilities for the benefit of the public. The general administration of the district is the responsibility of the public agency.

Such debt financing (special districts) may be appropriate when the value or benefit of the public facility can be assigned to each specific property within an adopted district, and assessments levied in accordance with this benefit distribution. Assessments are levied in specific amounts against each individual property on the basis of this relative benefit. It is anticipated that certain facilities and fees will be financed through the establishment of one or more Mello-Rous Community Facilities Districts. Preliminary estimates indicate that the Project can generate upwards of $12,000,000 in bond proceeds in Village 14 and $10,000,000 in bond proceeds in Planning Areas 16 and 19 through a CFD which can be allocated towards the construction and maintenance of public facilities.

16.5 County General Fund Impact

16.5.1 Introduction

As outlined in the Fiscal Impact Analysis, dated September, 2017, by Development Planning and Financing Group, two basic methodologies were utilized in estimating County revenues and expenditures; the case study and per capita/unit multiplier methods. The case study method was used to estimate secured property tax, sales tax, and real property transfer tax. The case study method is based on specific characteristics of the project from which revenues can be estimated. Appropriate County officials were contacted to identify actual tax rates, fees and costs. The per capita/unit multiplier method, which represents a more general approach were utilized to estimate licenses, permits and franchise fees, fines, forfeitures, other revenues and fees and all expenditures. The County of San Diego FY 2016-2018 Budget (the "Budget") was utilized to estimate per capita/unit multipliers.

16.5.2 Project Demographics and Land Uses

In developing per unit/acre multipliers, the PFFP analysis utilized demographic and land use information related to the County as a whole and, more specifically, the Project. Included in table below are population, housing and land-use characteristics.

Table 54: General Assumptions in Fiscal Analysis

County of San Diego		**Sources**
Population	3,288,612	County of San Diego FY 16-18 Budget (pg.; 12)
Employment	1,563,800	County of San Diego FY 16-18 Budget (pg. 16)
Persons per household	3.6	SANDAG Estimate – 91914 zip code
Otay Ranch – Village 14		
Estimated Population	3,941	
Estimated Employees	22	DPFG
Housing Units	1,119	Applicants
Commercial – Retail Mixed Use Acres	3.6	Applicants

16.5.3 Revenues

Annual revenues at build-out for the County resulting from the development of the Project are estimated in this section. The major revenue sources which are expected to be generated from the Proposed Project and detailed in this section include secured property tax, sales and use tax, transient occupancy tax, real property transfer tax, taxes in-lieu of motor vehicle license fee, license revenues, permit fees, franchise fees, revenues from fines, forfeitures and penalties, revenue from use of money and property, charges for various current services and other miscellaneous revenues. The following section details each of the revenue sources and the methodology employed to estimate revenues from the subject development. All dollar figures are presented at build- out and in 2017 dollars (no inflation rates were used).

16.5.3.1 Secured Property Tax

Secured property tax revenues generated from the proposed development were calculated on the basis of a one-percent ad valorem tax rate on the estimated current market value of the residential and commercial development. The subject property is in the tax rate areas 79006, 79007, 63076, and 63165. According to the County of San Diego Property Tax Services Department, the County share of the one-percent ad valorem tax within the subject property tax rate area is approximately 20.4083%.

Market values (assessed values) for the residential units were estimated by the developer based on current market conditions, market research and projected future demand per neighborhood as shown in Table 3 of Appendix A. Market values (assessed values) for commercial - retail mixed uses were estimated per Dollars & Cents of Shopping Centers by Urban Land Institute, dated 2008.

These identified market values also represent the assessed values. Although assessed values increase two percent per year and readjust after the property resells, this analysis assumes no inflation and all values remain in 2017 dollars. Included in the attached Table 3 of Appendix A is the assessed value at the build-out of the development. Total assessed value for the Project at build-out is estimated at $950,762,630.

At project build-out, the County's General Fund share of the annual property tax (post ERAF) is estimated at **$1,940,342** (refer to Table 5 of Appendix A). Of this amount, $99,873 goes to a flood control fund, $272,398 goes to the County Library, $180,541 goes to the SDCFA and the remaining $1,387,530 goes to the County General Fund.

16.5.3.2 Sales Tax

Under the California Sales and Use Tax Law, the sale of tangible personal property is subject to sales or use tax unless exempt or otherwise excluded. When the sales tax applies, the use tax does not apply and the opposite is also true. The sales tax is imposed on all retailers for the privilege of selling tangible personal property in the State and is measured by the retailer's gross receipts.

Sales taxes provide a major revenue source in the State of California (the "State"). All cities and counties in the State levy a basic one percent sales tax and have the option to levy additional sales taxes under certain circumstances. In general, sales taxes are imposed on the retail sale or the use of tangible personal property in the State.

Non-Residential Sales Tax

Commercial (retail-mixed use) taxable sales are projected at $2,584,629 at build-out as shown below and calculated in Table 8 of Appendix A:

Table 55: Estimated Non-Residential Sales Tax Revenues

Probable Tenant	Type Bldg. SF Estimated	Sales per SF (a)	Estimated % Taxable	Estimated Taxable Sales (per SF)	Total Estimated Taxable Sales
Mixed Use Areas					
Convenience Store	1,500	$ 429	75%	$322	$483,154
Coffee Shop	1,500	405	100%	405	606,840
Quick Serve Food	4,000	246	100%	246	985,280
Sandwich Shop	1,500	290	100%	290	434,355
Nail Salon	1,500	200	25%	50	75,000
Total	**10,000**				**$2,584,629**
Annual Sales Tax to County		**1.00%**			**$ 25,846**

Footnotes: (a) Per Dollars & Cents of Shopping Centers (2008) by Urban Land Institute.

One percent of the taxable sales in the amount of **$25,846** is generated by the sales tax.

Off-site Sales Tax

Retail taxable sales generated from total residential purchasing power are projected at $55,822,687 based on the assumption that residents will generate total retail purchases at 34.1% of household income. Household income is estimated at 35% percent of annual housing costs, which are estimated at $60,878 for Village 14 and $100,624 for Planning Areas 16 and 19 based on a 20% down payment, 5.5% interest rate and 30 year loan term on an average sales price of $779,551 for Village 14 and an average sales price of $1,376,794 for Planning Areas 16 and 19. Taxable off-site sales captured in the County from new residents of the project are estimated at a 5.8% percent capture rate of the taxable sales and total $7,086,450.

The County has a sales tax rate of one percent. The project's indirect sales tax to the County is estimated to be **$70.864** as shown in Table 9 of Appendix A.

Table 56: Estimated Off-site Sales Tax Revenue

Spending by Residents	Factor	
Aggregate Incomes (from Appendix A, Table 9)	$174Kfor Village 14 $288K for PA 16 and 19 per Unit	$ 208,956,000
Consumer Expenditures (a)	78.4%	$ 163,868,446
Taxable Spending (a)	34.1%	$ 55,822,687
Less: On-site Capture (b)	4.2%	$(2,342,785)
Less: Incorporated City Capture (b)	90.0% for Village 14 50.0% for PA 16 and 19	$ (46,393,452)
Net Taxable Spending in County		$ 7,086,450
Annual Sales Taxes to County		$70,864

Footnotes:

(a) Per Bureau of Labor Statistics Consumer Expenditure Survey, 2012.
(b) Capture percentage represents DPFG's estimate based on location relative to other retail establishments in the market area.

16.5.3.3 Real Property Transfer Tax

Sales of real property in the County are taxed at a rate of $1.10 per $1,000 of the sales price. Assuming that the average turnover rate for residential property is once every ten years and the average turnover rate for nonresidential property is once every 20 years. The following formulas, which take both the transfer tax formula and the average

turnover rate into account, were utilized to yield average annual per unit real property transfer tax.

Single/Multi Family Residential	$1.10/$1,000 x 1/10 = 0.00011
Commercial	$1.10/$1,000 x 1/20 = 0.000055

Using these formulas, an estimated annual average real property transfer tax can be calculated. The project would generate **$104,167** (refer to Table 7 of Appendix A) in average annual real property transfer tax at build-out.

Table 57: Estimated Property Transfer Tax Revenue

	Residential	Commercial	Total
Total Assessed Value (from Appendix A, Table 3)	$946,972,630	$3,790,000	$950,762,630
Turnover Rate (a)	10.00%	5.00%	
Annual Taxable Assessed Value	$94,697,263	$185,500	$94,886,763
Property Transfer Tax Rate (b)	0.110000%	0.110000%	0.110000%
Total Annual Property Transfer Taxes	**$104,167**	**$208**	**$104,375**

Footnotes:

(a) Based on assumption that residential property will change ownership once every 10 years and commercial property will change ownership once every 20 years.

(b) Represents property transfer tax rate of $1.10 per $1,000 of sale or resale value per Revenue and Taxation Code Section 11911-11929.

16.5.3.4 Taxes In-Lieu of Motor Vehicle License Fee

In May 2004, Governor Schwarzenegger proposed a swap of city and county VLF revenue for additional property tax share as part of a budget agreement between the State and local governments. The swap was included in the 2004 budget package. Under this legislation, property tax in-lieu of VLF is allocated to Cities and Counties pursuant to a complex formula involving each agencies relative share of assessed value. The property tax in-lieu of VLF revenue that will be generated by the Project can be estimated by determining the (i) percentage growth in the total assessed value of the unincorporated area of the County attributable to the Project, and multiplying by (ii) the property tax in-lieu of VLF revenue of $372,728,369 expected to be received by the County in FY 2016-18 per the County Budget. Based on these calculations, the Project is

anticipated to generate **$5,031,676** annually in property tax in-lieu of VLF revenue, as shown in the table below (reference Appendix A, Table 6).

Table 58: Estimate In Lieu MVLF Revenues

FY 2016/18 In Lieu MVLF Allocation to County	$ 372,728,369 (a)
FY 2016/18 Unincorporated County AV	$67,214,634,803 (b)
Total Project Assessed Value from Table 3	$950,762,630
Less: Existing Assessed Value	$(43,393,444)
Net (New) Assessed Value	$907,369,186
AV Growth from Project	1.350%
Annual County Property Taxes In Lieu of MVLF	**$5,031,676**

Footnotes:

(a) Per County of San Diego Fiscal Year 2016-2018 Adopted Budget.

(b) Per County of San Diego Assessor's Office.

16.5.3.5 Other Revenues

The County receives various other revenues analyzed under the FIA. These include (i) franchise, license, and permit revenues, (ii) fees, fines, and forfeitures, (iii) penalties & cost delinquency taxes, and (iv) miscellaneous revenues. These revenues have been estimated using a Per Capita & 50% Employee Multiplier against the County budgeted revenues for each respective revenue category. Based on the total Per Capita & 50% Employee Multiplier of $4.90, total annual "other" revenues are anticipated to be **$19,355** at buildout, as seen in Appendix A, Table 10.

Licenses, Permits and Franchises

The FI Analysis groups numerous revenues into the category of license and permit fees. These revenues include: animal licenses, kennel license, business licenses, marriage licenses, miscellaneous licenses and permits, food handling licenses, construction permits, biohazardous waste permits, recreation fees and other miscellaneous permits and fees. For these revenues, except for the business licenses, miscellaneous licenses and permits, and the food handling licenses, per capita multipliers were developed by dividing the Budget's respective revenue items by the County's total population. Similar methodology was used to determine the per capita and per employee multipliers for the business licenses, miscellaneous licenses and permits, and the food handling licenses, except that the per capita and per employee multipliers were developed by dividing the Budget's respective revenue by the County's total population and employment (refer to

Table 10 of Appendix A). Franchise fees are charged to various entities in exchange for the exclusive right to operate franchises within the County's jurisdiction. Franchise, license and permit fees for the project are estimated at $1.34 per capita and per employee based on these budgeted revenues. Based on the per capita and per employee amount calculated from the County budget, the project would generate **$5,310** in total licenses, permits and franchises at project's build-out (refer to Table 10 of Appendix A).

Fines, Forfeitures and Penalties

The County Budget for fines, fees and forfeitures totals $1,554,323 for FY 2016/18. This revenue is projected at $0.38 per capita based on this budgeted revenue. Based on the per capita amount calculated from the County budget, the project will generate **$1,509** in total fines, forfeitures and penalties at build-out (refer to Table 10 of Appendix A).

Penalties and Cost Delinquency Taxes

The County Budget for revenue from penalties and cost delinquency taxes total $11,911,952 for FY 2016/18. This revenue is projected at $2.93 per capita based on this budgeted revenue. Based on the per capita amount calculated from the County budget, the project would generate **$11,565** in total revenues from the use of money and property at build-out (refer to Table 10 of Appendix A).

Interfund Charges/Miscellaneous Revenues

The County Budget for revenue from interfund charges and miscellaneous revenues total $1,000,000 for FY 2016/18. This revenue is projected at $0.25 per capita based on this budgeted revenue. Based on the per capita amount calculated from the County budget, the project would generate **$971** (refer to Table 10 of Appendix A) in total charges for current revenues at build-out.

16.5.4 Costs

Annual costs at build-out resulting from development of the project are outlined in this section. The annual cost categories to be impacted by the subject development include the general function (legislative/administrative services, finance services, counsel services, personnel services, elections services, property management services, plant acquisition services, promotion services and other general services), public protection function (judicial services, police protection services, detention and correction services, protective inspection services, other protection services and family support services),

health and sanitation function (health services and sanitation services), education function (library services, agriculture education services), recreation and cultural function (recreation facilities) and contingency function. A summary of the County FY 2016-18 Budget is presented in the attached (Table 11, Appendix A). These annual costs are utilized in estimating the per capita expenditure or a percentage of the direct cost expenditures for the project. The methodologies used to estimate project expenses are discussed in more detail in the following sections. Similar to the revenue analysis, all figures shown are in current (2017) dollars.

16.5.4.1 Public Safety

Public Safety costs include expenses related to the District Attorney, Sheriff, Fire, Probation Department, trial courts, child support services and other services, many of which are provided on a County-wide basis to all County residents. However, certain services such as Fire and Sheriff are only provided to unincorporated areas, except for certain contractual arrangements. For example, as noted in Section 8.1.2 below, the Sheriff's Department provides contract law enforcement services for the cities of Del Mar, Encinitas, Imperial Beach, Lemon Grove, Poway, San Marcos, Santee, Solana Beach and Vista. Also, the County Fire Authority has contracts in place with various other agencies. Due to the abbreviated scope of this analysis and the unavailability of detailed breakdowns of certain County Budget data, this analysis does not dissect and stratify the County Public Safety budget and attempt to allocate specific costs to the Project based on each expense subcategory and associated service area or population except for fire services. Instead, the FIA uses a Per Capita & 50% Employee (Unincorporated) Multiplier against the entire Public Safety general purpose revenue allocation of $706,000,000 less $33,000,000 allocable to the County Fire Authority for fire services, resulting in a multiplier of $1,119.55 per person. This methodology is viewed as being conservative in that the service population utilized for spreading costs represents only the unincorporated area, despite the fact that many of the applicable services are provided on a county-wide basis. Based on this multiplier, total annual public safety costs (excluding fire services) are estimated at **$4,424,344** at buildout, as seen in Appendix A, Table 11.

16.5.4.1.1 Fire Protection

The County Fire Authority in conjunction with the Department of Forestry and Fire Protection ("CAL FIRE") are anticipated to be responsible for providing fire services to the Project. As previously noted, for purposes of this FIA we have assumed that the Project will include an onsite fire station and fully fund the station's annual operating

costs. It is assumed that the fire station will be staffed with a 4-person crew. The Country Fire Authority has provided DPFG with an annual estimate for staffing costs and monthly operating expenses. Reserve fund, operating and engineering estimates are based on conversations with the County Fire Authority on November 4, 2015. Based on these estimates, the total annual fire service costs are estimated at **$1,512,257** at buildout, as shown in the table below (reference Appendix A, Table 13).

16.5.4.1.2 Sheriff's Department

The County Sheriff's Department provides contract law enforcement services for the cities of Del Mar, Encinitas, Imperial Beach, Lemon Grove, Poway, San Marcos, Santee, Solana Beach and Vista. In these cities the Sheriff's Department serves as their police department, providing a full range of law enforcement services including patrol, traffic and investigative services. In the unincorporated (non-city) areas, such as where the Project is located, the Sheriff's Department provides generalized patrol and investigative services. The California Highway Patrol has the primary jurisdiction for traffic services in unincorporated areas. The Sheriff's Department service area covers approximately 4,200 square miles. Sheriff's Department facilities located in unincorporated areas provide general law enforcement patrol, crime investigation, and crime prevention services. To effectively serve this extensive geographic area, the Sheriff's Department Law Enforcement Services Bureau operations are organized under a system of Command stations, substations, offices and storefronts. A separate rural enforcement area addresses the special needs of outlying areas patrolled by resident deputies. The operational structure is flexible, and areas may be realigned in order to provide better response to citizen calls for service, to ensure a balance of resources, and to be more responsive to community needs.

The Sheriff's Department Law Enforcement Operations Command Areas have further been divided into beat districts which serve the unincorporated County. The Project is located in the Imperial Beach beat district which is serviced via the Imperial Beach Substation. The Sheriff department is currently planning to locate a storefront within the Project. The cost of sheriff services for the Project is included in the public safety costs described in Section 7.1.1 above.

16.5.4.2 Health and Human Services

The Health and Human services cost category includes regional operations, aging and independence services, behavioral health services and child welfare services. Using a

Per Capita & 50% Employee Multiplier of $17.20, total annual health and human services costs are anticipated to be **$67,960** at buildout, as seen in Appendix A, Table 11.

16.5.4.3 Land Use and Environmental

The Land Use and Environment Group cost category includes agriculture, weights and measures, environmental health, parks and recreation, planning and land use and public works costs. Using a Per Capita & 50% Employee Multiplier of $13.29, total annual land use and environmental costs are anticipated to be **$52,524** at buildout, as seen in Appendix A, Table 11.

16.5.4.4 Community Services

The Community Services Group cost category includes parks, library, roads, animal services, housing and community development, purchasing and contracting, the County Executive Office and Registrar of Voters. Using a Per Capita & 50% Employee Multiplier of $5.36, total annual community services costs are anticipated to be **$21,165** at buildout, as seen in Appendix A, Table 11.

16.5.4.5 Finance and General Government

The Finance and General Government services cost category includes executive office, assessor/recorder/county clerk, treasurer – tax collector, auditor and controller, county counsel and human resources costs. Using a Per Capita & 50% Employee Multiplier of $33.09, total finance and general government costs are anticipated to be **$130,775** at buildout, as seen in Appendix A, Table 11.

16.5.4.6 Finance - Other

Other finance costs include community projects, community enhancement, contingency reserve, and countywide general expense costs. Using a Per Capita & 50% Employee Multiplier of $42.84, total other finance costs are anticipated to be **$169,319** at buildout, as seen in Appendix A, Table 11.

16.5.4.6 Finance – San Diego Flood Control

For the purposes of this analysis, the San Diego Flood Control annual budget was included in Project related County expenditures. Using a Per Capita & 50% Employee

Multiplier of $1.33, total other finance costs are anticipated to be **$5,254** at buildout, as seen in Appendix A, Table 11.

16.5.5 Net Fiscal Impact

Utilizing the previously mentioned methodologies, estimated net fiscal impact at build-out is presented in Table 1 of the Appendix A. As previously mentioned, all values are in 2008 dollars. No annual adjustments to revenues or costs were utilized.

Fiscal annual revenues are estimated at $6,960,497 at the project's build-out and fiscal annual costs are estimated at $6,673,144 at the project's build-out, resulting in a net fiscal annual surplus at build-out of $287,353.

Table 59: Net Fiscal Impact

Revenues/(Expenditures)	Estimated Revenue	Estimated Expenditures
Recurring Revenues		
Property Tax	$1,940,342	
Sales Tax (onsite)	25,846	
Sales Tax (off-site)	70,864	
Real Property Transfer Tax	104,375	
Taxes In-Lieu of Motor Vehicle License Fee	5,031,676	
Other Revenues	19,355	
Recurring Expenditures		
Public Safety (excluding Fire)		$4,424,344
Fire Protection		1,512,257
Health and Human Services		67,960
Land Use and Environmental		52,524
Community Services		21,165
Finance and General Government		130,775
Finance Other		169,319
Total Revenues and Costs	**$7,192,458**	**$6,378,343**
Total Surplus	**$814,115**	

16.6 Other Methods Used to Finance Facilities

State and Federal Funding – Historically, federal and state financial and technical assistance programs have been available for County agencies to utilize, particularly for public school districts.

Developer Reimbursement Agreements – Certain facilities that are off-site of the project site, but are necessary to serve the project may provide regional benefits beyond the Project. Under such circumstances, developer reimbursement agreements for up-front funding of improvements can be executed to provide for a future payback to the developer from other properties benefiting from the improvement. Such benefiting developments are required to reimburse their fair share of costs for the shared facility at the time that their project is issued permits for development.

APPENDIX A

FISCAL IMPACT ANALYSIS