




DEXTER S. WILSON, P.E.  
ANDREW M. OVEN, P.E.  
NATALIE J. FRASCHETTI, P.E.  
STEVEN J. HENDERSON, P.E.  
FERNANDO FREGOSO, P.E.  
KATHLEEN L. HEITT, P.E.  
WILLIAM W. TODD, P.E.

**MEMORANDUM**

**605-844**

**TO:** Maria Miller, Baldwin & Sons

**FROM:** Fernando Fregoso, P.E.,  Dexter Wilson Engineering, Inc.

**DATE:** May 28, 2024

**SUBJECT:** Otay Ranch Village 7 SPA Amendment Sewer Evaluation

**Background**

Baldwin & Sons proposes revisions to the Village 7 land use plan. Village 7 comprises approximately 380 acres located east of Wolf Canyon and south of Birch Road in the City of Chula Vista, California. Village 7 is bound by State Route 125 to the east, Birch Road to the north, and La Media Road to the west. The Village 7 Sectional Planning Area (SPA), as approved in 2004, entitled the development of 1,501 residential dwelling units consisting of 1,053 single family dwelling units and 448 multi-family dwelling units; other land uses included an elementary school, a middle school, a high school, commercial mixed uses, a town square, a transit stop, and a neighborhood park. The current Otay Ranch General Development Plan (amended June 2021) shows a total of 1,456 residential dwelling units for Village 7 consisting of 1,008 single family dwelling units and 448 multi-family dwelling units. The current SPA Amendment for Village 7 proposes a total of 1,456 residential dwelling units consisting of 721 single family dwelling units and 735 multi-family dwelling units.

The majority of Village 7 has already undergone construction, except for Parcels R-3, R-4, and R-8. Parcels R-3, R-4, and R-8 are located in the southwest corner of Village 7.

The proposed land use changes will reduce the amount of single family dwelling units and increase the amount of multi-family dwelling units within Village 7; however, the proposed changes would result in no net change to the residential dwelling unit count of 1,456 presented in the Otay Ranch General Development Plan for Village 7. To implement the proposed land use changes, amendments to the Chula Vista General Plan, Otay Ranch General Development Plan, and the Village 7 SPA Plan are necessary.

Sewage from Village 7 flows to two sewer basins. Sewage from the northern portion of the project, which includes Parcels R-1, R-2, R-5 and P-1, is conveyed to the Poggi Canyon Sewer Basin under permanent sewer conditions. Wastewater collected within this basin is conveyed to sewer lines in Birch Road and La Media Road that ultimately discharge to the existing Poggi Canyon Interceptor in Olympic Parkway. Parcels R-6, R-7, S-1 and S-3 are currently served by an interim sewer line that flows north to the Poggi Canyon Interceptor until such time that the Wolf Canyon Trunk Sewer is available. In the future, these parcels will abandon the interim northern connection and use the permanent Wolf Canyon Trunk Sewer.

Parcels R-3, R-4, and R-8 will sewer by gravity to the south. The offsite sewer facilities necessary to convey flows from the site to the Salt Creek Interceptor have not been constructed. Thus, the development of Parcels R-3, R-4, and R-8 will require either construction of a temporary sewer line south to Village 8 West or the construction of the Wolf Canyon Trunk Sewer. Sewage within Village 8 West is conveyed south to the existing Salt Creek Interceptor.

### **Purpose**

The purpose of this memorandum is to provide an evaluation of the affect that the current proposed development plan will have on sewer facility planning for the area. Since the proposed SPA Amendment only affects parcels within the Wolf Canyon /Salt Creek Basin and does not propose interim service from Poggi Canyon facilities, this study focuses on the impact this SPA Amendment will have on facilities within the Wolf Canyon/Salt Creek Basin. Attachment 1 includes a sewer basin map of Village 7 for reference (Exhibit A).

### **Village 7 SPA Amendment Summary**

A summary of proposed changes to the Village 7 land use plan is provided as follows:

- Rename the western portion of Parcel R-3 into a separate Parcel R-8. Parcel R-8 will be located adjacent to La Media Road.
- Assign 43 units to Parcel R-3 and change the land use designation in Parcel R-3 from Single Family to Residential Multi-Family.
- Assign 121 units to Parcel R-4 and change the land use designation in Parcel R-4 from Single Family to Residential Multi-Family.
- Assign 123 units to Parcel R-8 and change the land use designation (based on Parcel R-3 land use designation) in Parcel R-8 from Single Family to Residential Multi-Family.

### **Proposed Land Use Plan**

The project does not propose changes to the backbone street alignments for Village 7 but does involve adjustments to the land use and residential unit count of Parcels R-3 and R-4, and the addition of Parcel R-8. A land use plan and site utilization table for the proposed changes are included in Attachment 2 for reference.

### **Projected Sewer Flows**

Parcels R-3 and R-4 have not been developed and were previously planned for single family residential development. Table 1 provides a comparison of projected sewer flows based on the previous and current land use plans for Parcels R-3, R-4, and the addition of Parcel R-8.

<b>TABLE 1 OTAY RANCH VILLAGE 7 PARCELS R-3, R-4, AND R-8 PROJECTED SEWER FLOWS</b>			
Land Use	Proposed Units	Generation Factor	Average Flow, gallons per day (gpd)
<b>Previous Land Use Plan</b>			
R-3: SF Residential	273 units <sup>1</sup>	265 gpd/unit	72,345
R-4: SF Residential	59 units <sup>1</sup>	265 gpd/unit	15,635
<b>Subtotal Previous Land Use Plan</b>			<b>87,980</b>
<b>Current Land Use Plan</b>			
R-3: MF Residential <sup>2</sup>	43 units	182 gpd/unit	7,826
R-4: MF Residential	121 units	182 gpd/unit	22,022
R-8: MF Residential <sup>2</sup>	123 units	182 gpd/unit	22,386
<b>Subtotal Current Land Use Plan</b>			<b>52,234</b>
<b>Decreased Sewer Flow</b>			<b>35,746</b>
<b>Decreased Sewer Equivalent Dwelling Units (EDUs) <sup>3</sup></b>			<b>155</b>

<sup>1</sup> Based on Site Utilization Plan presented in the Village 7 SPA Plan adopted October 12, 2004.

<sup>2</sup> Parcel R-3 split into two parcels: Parcels R-3 and R-8.

<sup>3</sup> Based on sewer generation factor of 230 gpd/EDU.

### Impact on Previous Planning Studies

The November 2010 Overview of Sewer Service for the Village 8 West (November 2010 Sewer Study) project planned for sewer flows from the Village 7 project. These flows were planned to flow south through Village 8 West to the Salt Creek Interceptor on a temporary basis and to the Wolf Canyon Trunk Sewer in Main Street in the ultimate condition. Attachment 3 includes a list of Village 7 parcels in the Wolf Canyon/Salt Creek Basin, and their corresponding sewer flow projections, that were planned to flow south through Village 8 West in the November 2010 Sewer Study; Village 7 parcels that had been accounted for are R-3, R-6, R-7, MU-1 (Mixed Use), TS-1 (Town Square), CPF-2b (Community Purpose Facility), CPF-3, CP-4, S-1, and S-3 (School). The previous site plan used to estimate sewer flows for Village 7 in the November 2010 Sewer Study is included at the end of Attachment 3 for reference.

The sewer analysis presented in the November 2010 Sewer Study was updated in May 2018 (May 2018 Sewer Study) to include minor land use changes to Village 8 West and to reflect pipeline slopes that had been established through final engineering plans. Additionally, as part of the May 2018 Sewer Study, through final engineering efforts for Village 8 West, the original onsite concept of constructing a temporary deep sewer to convey flows south through Village 8 West on an interim basis was revised to reflect a permanent gravity sewer to the south to collect offsite sewer flows from La Media Road/La Media Parkway to the north and from Main Street to the east. The sewer analysis presented in the May 2018 Sewer Study was updated in May 2019 (May 2019 Sewer Study) to include minor land use changes to Village 8 West.

In all three Village 8 West Sewer Studies (November 2010 Sewer Study, May 2018 Sewer Study, and May 2019 Sewer Study), the sewer generation for Village 7 was estimated using the City of Chula Vista's previous sewer generation factors. Table 2 provides a comparison of projected sewer flows for Village 7 using A) previous land use plan and sewer generation factors, and B) current land use plan and sewer generation factors.

As previously mentioned, the previous land use plan for Village 7 accounted for Parcels R-3, R-6, R-7, MU-1, TS-1, CPF-2b, CPF-3, CP-4, S-1, and S-3 within the Wolf Canyon/Salt Creek Basin per Attachment 3. This sewer evaluation for the proposed Village 7 SPA Amendment accounts for Parcels R-3, R-4, R-6, R-7, R-8, CPF-2b, S-1, S-3 within the Wolf Canyon/Salt Creek Basin per Attachment 2. The Site Utilization Table in Attachment 2 includes "Future Development Areas" that are not accounted for in this Village 7 sewer system evaluation, as these future areas have not been approved for development and will require a separate SPA Amendment.

As shown in Table 2, the flows from the proposed SPA Plan Amendment are more than offset by the reduction in flows as a result of the revised land use plan and current City sewer generation factors. Thus, the calculations to determine sewer line sizing through Village 8 West in the May 2019 Village 8 West Sewer Study (most recent sewer study) remain valid.

<b>TABLE 2 OTAY RANCH VILLAGE 7 PROJECTED SEWER FLOWS (SPA AMENDMENT)</b>			
<b>Land Use</b>	<b>Proposed Units</b>	<b>Generation Factor</b>	<b>Average Flow, gallons per day (gpd)</b>
<b>Previous Land Use Plan and Sewer Generation Factors<sup>1</sup></b>			
SF Residential	290 units	265 gpd/unit	76,850
MF Residential	306 units	199 gpd/unit	60,894
Elementary School	800 students	15 gpd/students	12,000
High School	2,400 students	20 gpd/student	48,000
Commercial/ Community Purpose Facility	7.9 ac	2,500 gpd/ac	19,750
<b>Subtotal</b>			<b>217,494</b>
<b>Current Land Use Plan and Sewer Generation Factors<sup>2</sup></b>			
MF Residential	603 units	182 gpd/unit	109,746
Elementary School	800 students	12 gpd/student	9,600
High School	2,400 students	13 gpd/student	31,200
Community Purpose Facility	1.0 ac	1,401 gpd/ac	1,401
<b>Subtotal</b>			<b>151,947</b>

1. Includes Parcels R-3, R-6, R-7, MU-1, TS-1, CPF-2b, CPF-3, CP-4, S-1, and S-3. See Attachment 3 for old land use plan.
2. Includes Parcels R-3, R-4, R-6, R-7, R-8, CPF-2b, S-1, S-3. See Attachment 2 for current land use plan. The "Future Development Areas" shown in the Site Utilization Table in Attachment 2 are not accounted for because these future areas have not been approved for development and will require a separate SPA Amendment.

Maria Miller  
May 28, 2024  
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**Salt Creek Interceptor Technical Sewer Study.** A sewer study for the Salt Creek Interceptor, dated October 2010, was prepared by PBS&J to address the capacity of the interceptor sewer due to increased intensity in development within Otay Ranch than what had previously been evaluated. The October 2010 Salt Creek Interceptor Technical Sewer Study (October 2010 PBS&J Study) included projected sewer flows from Village 7 and concluded that certain sections of the Salt Creek Interceptor may require upgrades at ultimate buildout, but these sections are located upstream of Village 8 West and thus, Village 7 as well. The flows for Village 7 in the October 2010 PBS&J Study were based on previous City sewer generation factors such that the flows from the proposed SPA Plan Amendment will be more than offset based on revised flows as a result of current, lower sewer generation factors. Thus, the findings of the October 2010 PBS&J Study remain valid, and the proposed Village 7 SPA Amendment will not trigger any upgrades to the Salt Creek Interceptor.

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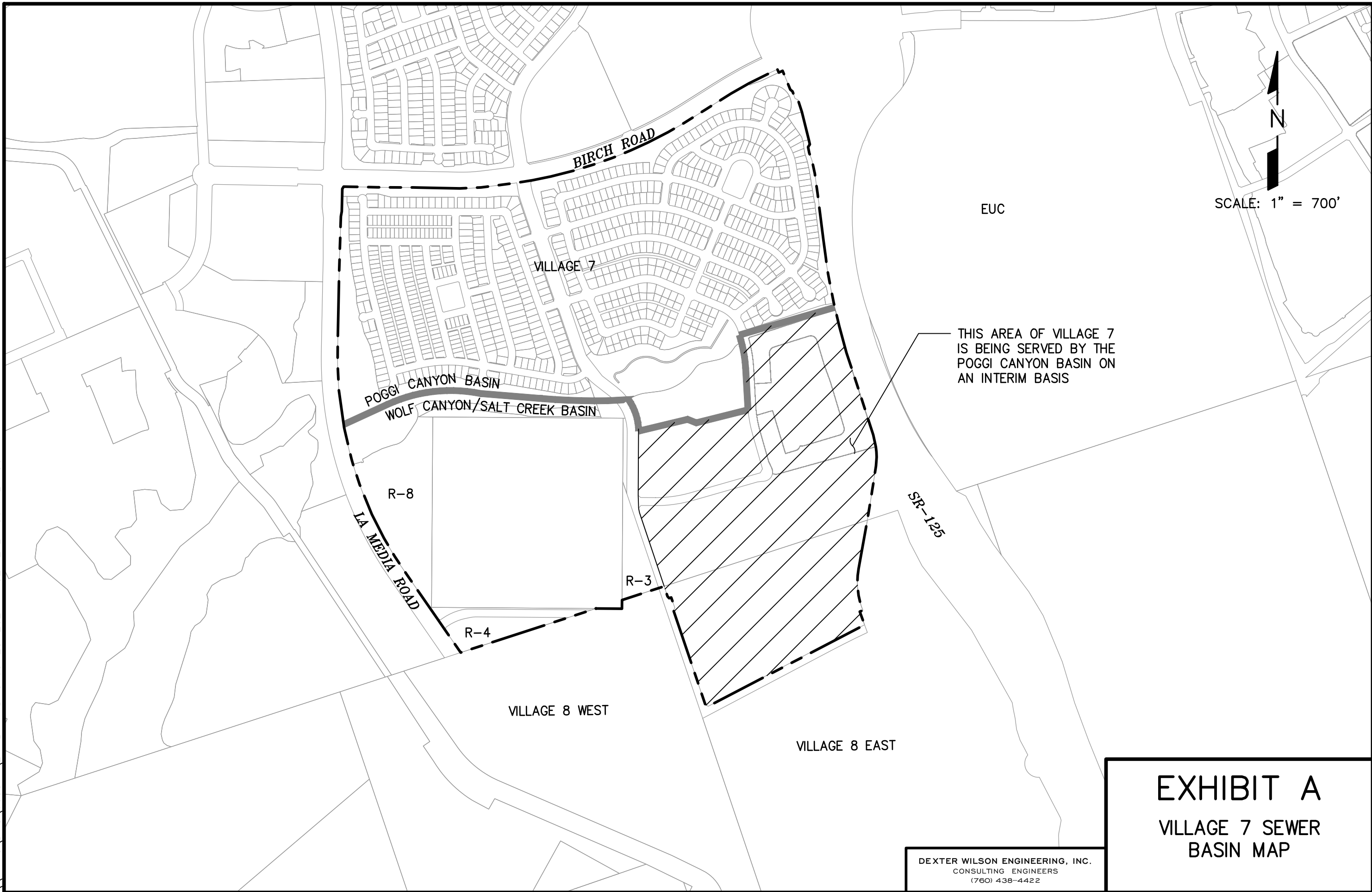
**ATTACHMENT 1**

**EXHIBIT A**

**VILLAGE 7 SEWER BASIN MAP**



\\ARTIC\DWG\605844\EXHIBIT A.DWG 05-28-2024 11:32:42 LAYOUT: LAYOUT



EUC

SCALE: 1" = 700'

VILLAGE 7

THIS AREA OF VILLAGE 7 IS BEING SERVED BY THE POGGI CANYON BASIN ON AN INTERIM BASIS

POGGI CANYON BASIN

WOLF CANYON/SALT CREEK BASIN

R-8

LA MEDIA ROAD

R-3

R-4

SR-125

VILLAGE 8 WEST

VILLAGE 8 EAST

# EXHIBIT A

## VILLAGE 7 SEWER BASIN MAP

DEXTER WILSON ENGINEERING, INC.  
CONSULTING ENGINEERS  
(760) 438-4422

**ATTACHMENT 2**

**CURRENT**  
**SITE UTILIZATION PLAN**  
**AND**  
**LAND USE SUMMARY TABLE**

# Village 7 Site Utilization Plan

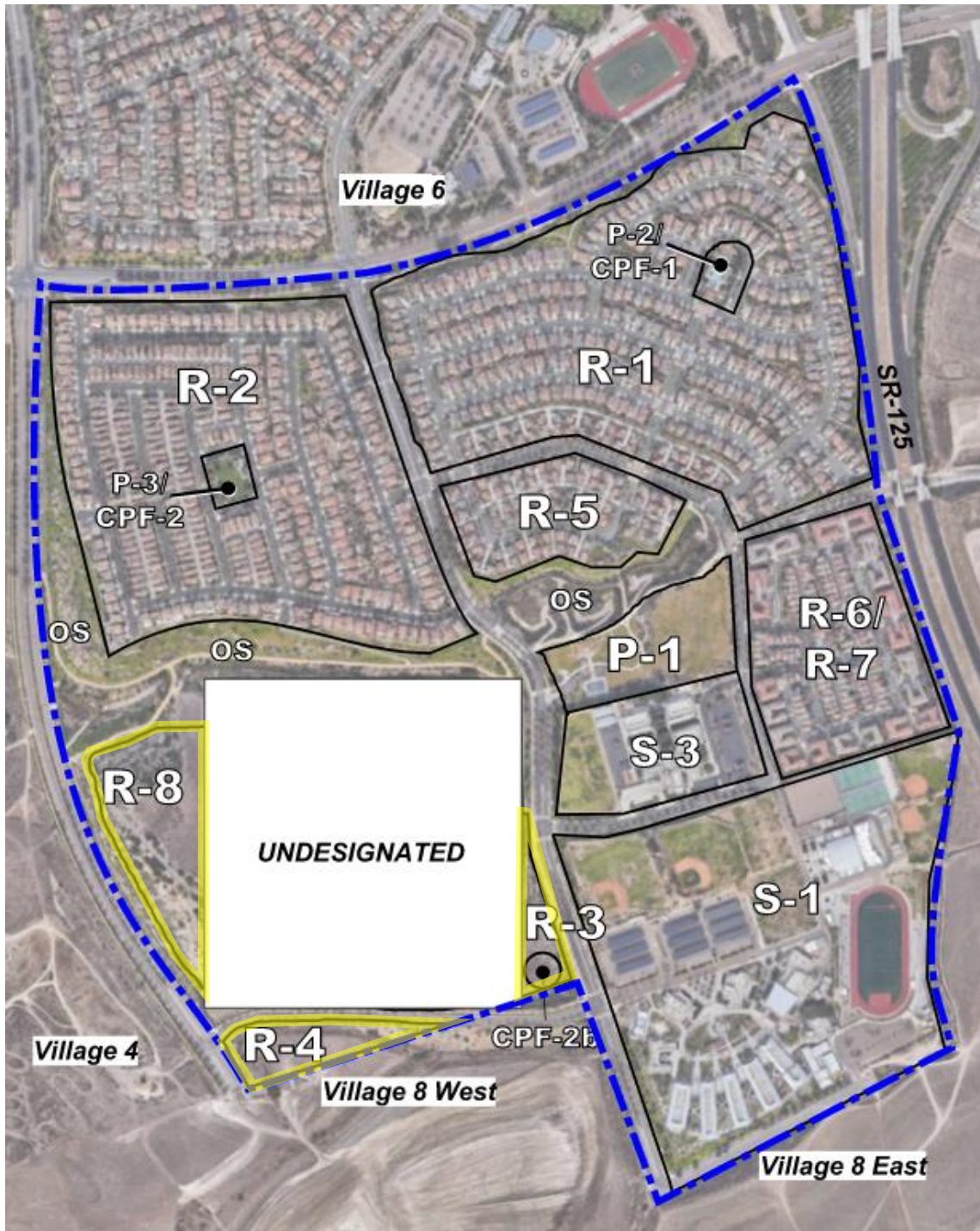


Exhibit 1.6

# Village 7 Land Use Districts



SF3	Single Family Three: District which permits single family housing located on lots >5,000 square feet
SF4	Single Family Four: District which permits single family housing located on lots <5,000 square feet
RM1	Residential Multi-Family One: District which permits housing ranging from 8 units/acre up to 14.9 units/acre including small lot single family, alley, duplex and stacked flats product types
RM2	Residential Multi-Family Two: District which permits housing at densities from 15+ units/acre
CPF	Community Purpose Family: District which permits uses established pursuant to the Community Purpose Facilities requirements of the P-C Planned Community Zone
OS/P1	Open Space/Park One: District which permits developed or usable open space and park uses, and may include naturalized open space

Exhibit PC-1



# Village Seven Site Utilization Table

<b>RESIDENTIAL USE</b>					
<i>Neighborhood</i>	<i>Land Use</i>	<i>LU District</i>	<i>Acres</i>	<i>DU</i>	<i>du/ac</i>
R-1	Single-Family Detached	SF4	53.1	346	6.5
R-2	Single-Family Detached	SF4, RM1	51	375	7.4
<i>Sub-total single-family:</i>				<u>721</u>	
R-3	Multi-Family	RM1	2.4	43	17.9
R-4	Multi-Family	RM2	3.1	121	39
R-5	Multi-Family	RM1	14.5	132	9.1
R-6	Multi-Family	RM2	12.3	193	15.7
R-7	Multi-Family	RM2	7.9	123	15.6
R-8	Multi-Family	RM1	8.3	123	14.8
<i>Sub-total multi-family:</i>				<u>735</u>	
<b>Total Residential</b>			<b>152.6 ac.</b>	<b>1,456</b>	<b>9.5</b>

<b>NON-RESIDENTIAL USE</b>			
<i>Neighborhood</i>	<i>Land Use</i>	<i>LU District</i>	<i>Acres</i>
P-1	Public Park	P	7.6
CPF-1	Private Park	CPF	1.1
CPF-2a	Private Park	CPF	0.9
CPF-2b	CPF	CPF	1.0
S-1	High School	S	53.9
S-3	Elem. School	S	11.5
OS	Open Space	OS	42.6
<b>Total Non-Residential</b>			<b>118.6 ac.</b>

*\*Area included in R-3*

<b>FUTURE DEVELOPMENT AREA - CONCEPTUAL USES (REQUIRES A SPA AMENDMENT TO OBTAIN DEVELOPMENT APPROVAL)</b>			
<i>Neighborhood</i>	<i>Land Use</i>	<i>LU District</i>	<i>Acres</i>
R-9	Residential	Undesignated	42
MU	Mixed-Use	Undesignated	3.7
OS	Open Space	Undesignated	3
TS-1	Town Square	Undesignated	1.9
CPF-3	CPF	Undesignated	1.1
<b>Total Future Development</b>			<b>51.7 ac.</b>

**VILLAGE TOTAL** **321.9 ac.**

**ATTACHMENT 3**

**PREVIOUS  
LAND USE SUMMARY TABLE  
AND  
SEWER GENERATION ESTIMATES  
(NOVEMBER 2010 SEWER STUDY)**

**FINAL  
OVERVIEW OF SEWER SERVICE  
FOR  
OTAY RANCH VILLAGE 8 WEST**

November 2010



Prepared By:

Dexter Wilson Engineering, Inc.  
2234 Faraday Avenue  
Carlsbad, CA 92008

Job Number 646-370

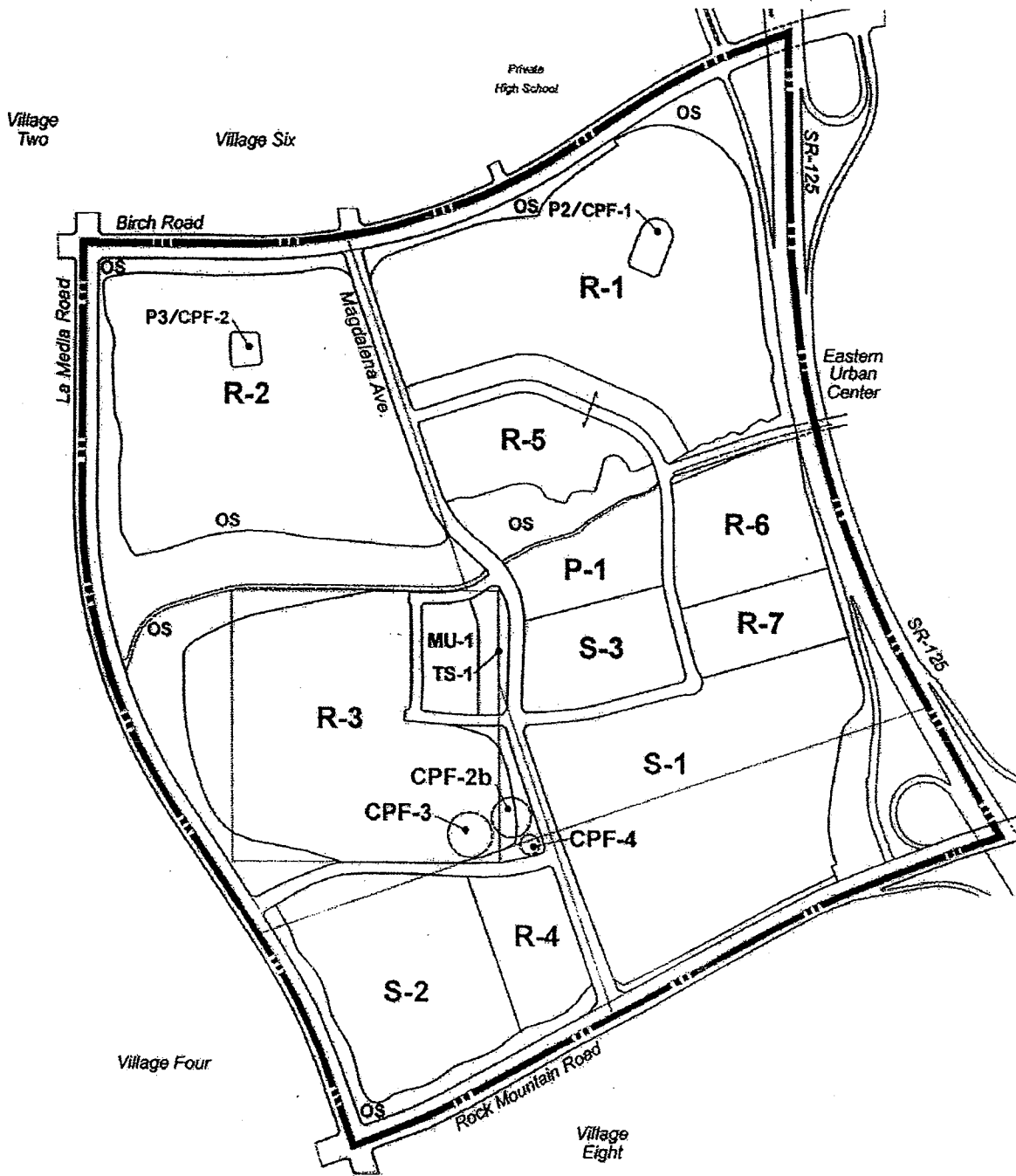
VILLAGE 8 WEST OFFSITE SEWER FLOW SUMMARY TABLE		
MH	DESCRIPTION	AVG. FLOW, GPD
80	Village 4 Park	22,100
	Village 7 - R3	76,850
	Village 7 - MU1	9,250
	Village 7 - TS1	4,750
	Village 7 - CPF2b	2,500
	Village 7 - CPF3	500
	Village 7 - CPF4	2,750
	<b>TOTAL</b>	<b>118,700</b>
59	EUC	660,297
	Village 7 - R6	37,213
	Village 7 - R7	23,681
	Village 7 - S1	48,000
	Village 7 - S3	12,000
	<b>TOTAL</b>	<b>781,191</b>

Village 7 from north = 96,600 gpd

Village 7 from east = 120,894 gpd

Village 7 TOTAL = 217,494 gpd





**LEGEND**

MU-1	MIXED USE/COMMERCIAL
TS-1	TOWN SQUARE
R-1 - R-4	SF RESIDENTIAL
R-5 - R-7	MF RESIDENTIAL
CPF-2b - CPF-4	COMMUNITY PURPOSE FACILITY
S-1	HIGH SCHOOL
S-2	MIDDLE SCHOOL
S-3	ELEMENTARY SCHOOL
OS	OPEN SPACE
P-1	PARK
P2/CPF-1	PARK
P3/CPF-2	PARK



NO SCALE

**PROPOSED LAND USE  
FIGURE 1-1**