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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 Water 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.

The March 2004 Conceptual Water and Recycled Water Study for Village 7 was prepared as a supporting document to the project's Environmental Impact Report dated October 12, 2004. More recently, a Subarea Master Plan (SAMP) dated November 2004 was prepared and approved by the Otay Water District (OWD). The purpose of this memorandum is to evaluate the impact of the proposed land use changes for Village 7 on the findings from these previous studies.

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 1 for reference.

Water Demand Projection – Approved Plan

Table 1 summarizes the projected average water demands for Village 7 based on the approved land use plan as presented in the March 2004 Conceptual Water and Recycled Water Study. Table 2 summarizes the projected average day water demands from the November 2004 SAMP for Village 7. The difference in demand is based on preliminary lotting studies completed after the March 2004 Study.

TABLE 1 OTAY RANCH VILLAGE 7 PROJECTED WATER DEMAND (MARCH 2004 STUDY)			
Land Use	Proposed Units	Demand Factor	Average Demand, gallons per day (gpd)
SF Residential	1,053 units	500 gpd/unit	526,500
MF Residential	448 units	300 gpd/unit	134,400
Elementary School	11.1 acres	1,785 gpd/acre	19,814
Middle School	26.3 acres	1,785 gpd/acre	46,946
High School	55.8 acres	1,785 gpd/acre	99,603
Commercial	3.7 acres	1,785 gpd/acre	6,604
Town Square	1.9 acres	2,155 gpd/acre	4,094
Park	7.6 acres	2,155 gpd/acre	16,378
Community Purpose Facility	4.1 acres	893 gpd/acre	3,661
TOTAL			858,000

TABLE 2 OTAY RANCH VILLAGE 7 PROJECTED WATER DEMAND (NOVEMBER 2004 SAMP)			
Land Use	Proposed Units	Demand Factor	Average Demand, gallons per day (gpd)
SF Residential	1,011 units	500 gpd/unit	505,500
MF Residential	444 units	300 gpd/unit	133,200
Elementary School	11.1 acres	1,785 gpd/acre	19,814
Middle School	26.3 acres	1,785 gpd/acre	46,946
High School	55.8 acres	1,785 gpd/acre	99,603
Commercial	3.7 acres	1,785 gpd/acre	6,604
Town Square	1.9 acres	1,785 gpd/acre	3,391
Community Purpose Facility	2.3 acres	893 gpd/ace	2,054
TOTAL			817,112

Water Demand Projection – Proposed Plan (SPA Amendment)

Table 3 summarizes the projected average water demands for Village 7 based on the proposed SPA Amendment. This projection uses current water demand factors from the 2015 OWD Water Master Plan. The decrease in water demand factors compared to the 2004 studies is due to water conservation efforts in recent years.

TABLE 3 OTAY RANCH VILLAGE 7 PROJECTED WATER DEMAND (SPA AMENDMENT)			
Land Use¹	Proposed Units	Demand Factor	Average Demand, gallons per day (gpd)
SF Residential	721 units	435 gpd/unit	313,635
MF Residential	735 units	170 gpd/unit	124,950
Elementary School	11.5 acres	1,428 gpd/acre	16,422
High School	53.9 acres	1,428 gpd/acre	76,969
Commercial	3.7 acres	1,607 gpd/acre	5,946
Town Square	1.9 acres	1,607 gpd/acre	3,053
Park ²	7.6 acres	0 gpd/acre	2,160
Community Purpose Facility	4.1 acres	714 gpd/acre	2,927
TOTAL			546,062

1. The Middle School and CPF-4 sites that were included in the original SPA for Village 7 are excluded from Table 3 (SPA Amendment), as they are now part of Village 8 West.
2. Parks are irrigated with recycled water, but a nominal amount of potable use has been estimated.

In comparing the projections from Tables 1 and 2 to Table 3, the proposed SPA Amendment will reduce previous water demand projections by approximately 36.4 percent compared to the March 2004 Study and by approximately 33.2 percent compared to the November 2004 SAMP. This decrease in water demand for Village 7 is a result of OWD’s reduced water demand factors, the decrease in total units from the March 2004 Study, and the increase in multi-family dwelling units (and corresponding decrease in single family dwelling units) from the 2004 Studies. This decrease in local demands will not change backbone water line sizing for the project. A SAMP Amendment that reflects the land use changes proposed in this SPA Amendment for Village 7 will need to be prepared for review and approval by the OWD prior to final engineering plan approvals.

Water Supply Assessment

From a water supply planning standpoint, the proposed SPA Amendment results in a water supply projection of 611 acre-feet per year for Village 7. In comparison to the 2004 Water Supply Assessment and Verification report for Village 7 that was approved by the OWD Board of Directors on March 4, 2004, that estimated a total water demand of 936 acre-feet per year, this represents a reduction of approximately 34.7 percent. Thus, current water demand projections for the project are well below the water supply planning numbers that were estimated during previous project approvals. The decrease in water supply projection is due to water conservation efforts in recent years.

Conclusion

The proposed SPA Amendment for Village 7 will reduce water demands from the projections in the March 2004 Study by approximately 36.4 percent for Village 7 and by approximately 33.2 percent from the projections in the November 2004 SAMP. These changes in local demand will not impact the backbone water line sizing for the project. From a water supply planning standpoint, the decrease in demand represents a 325 acre-feet per year reduction to the prior estimate which is approximately 34.7 percent lower than the projections in the Water Supply Assessment and Verification Report approved by OWD on March 4, 2004. Therefore, there will be no impact on either the proposed water line sizing for the project or water supply for the area as a result of the proposed SPA Amendment for Village 7.

FF:ah

ATTACHMENT 1

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

Village 7 Site Utilization Plan

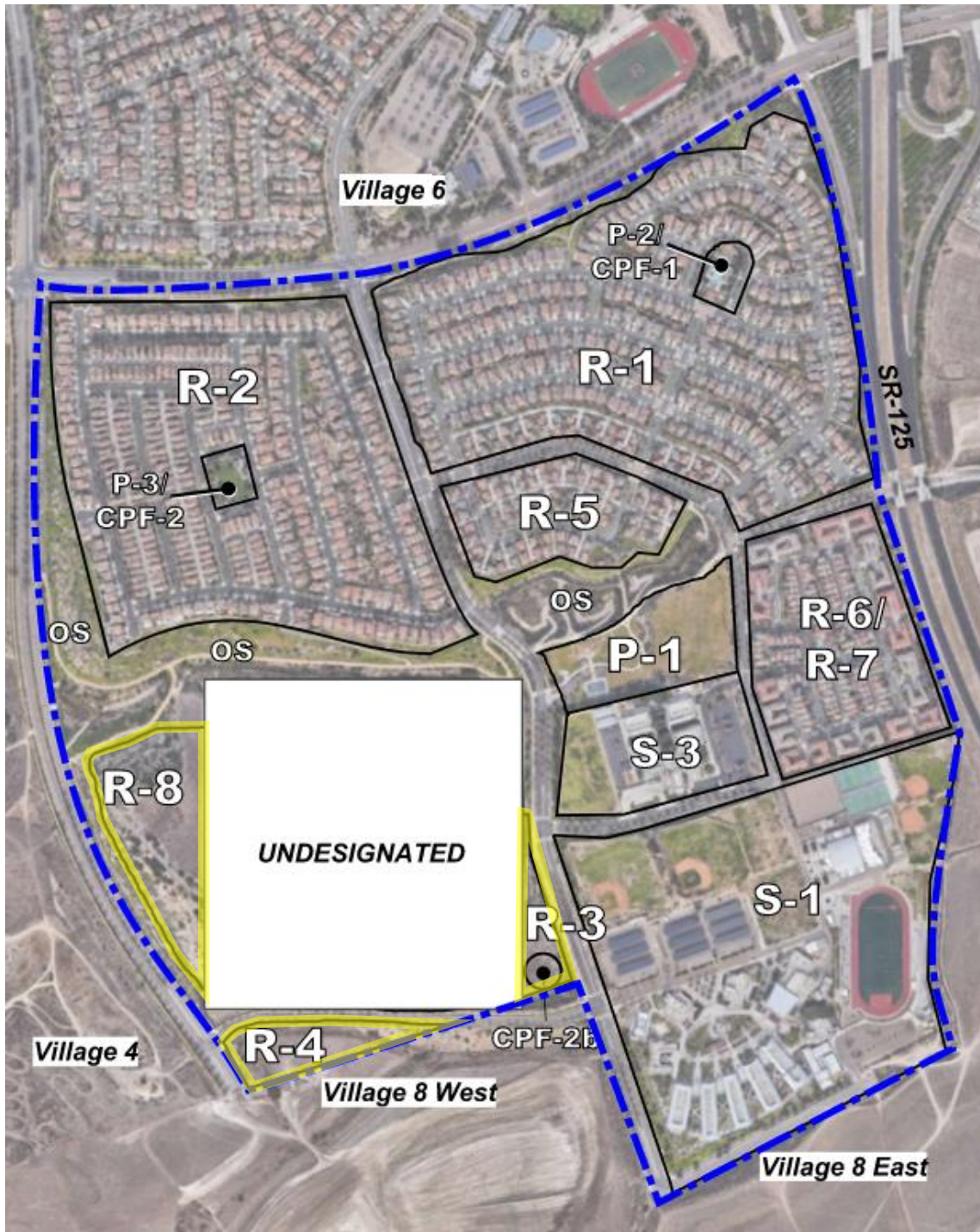


Exhibit 1.6

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

RESIDENTIAL USE					
<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>	
Total Residential			152.6 ac.	1,456	9.5

NON-RESIDENTIAL USE			
<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
Total Non-Residential			118.6 ac.

**Area included in R-3*

FUTURE DEVELOPMENT AREA - CONCEPTUAL USES (REQUIRES A SPA AMENDMENT TO OBTAIN DEVELOPMENT APPROVAL)			
<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
Total Future Development			51.7 ac.

VILLAGE TOTAL **321.9 ac.**