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FIRE PROTECTION PLANNING TECHNICAL MEMORANDUM

Prepared for:	Mr. Greg Mattson, Project Manager, County of San Diego
Prepared by:	Michael Huff, Dudek Principal Fire Protection Planner
Subject:	Fire Protection Plan Technical Memorandum for the Otay Ranch Village 14 and Planning Areas 16/19 Proposed Project Amendment
Date:	December 2, 2019
Attachment(s):	Attachment A, Memorandums Addressing Otay Ranch Village 14 and Planning Areas 16/19 Response to Comments After Approved Project FPP Attachment B, Updated Fire Protection Plan Figures 4, 7a, 7b and Appendices G, J, and L.

Introduction

This Memorandum reflects proposed changes to the Otay Ranch Village 14 and Planning Areas 16/19 Project that was approved by the San Diego County Board of Supervisors on June 26, 2019 (Approved Project). The changes to the Approved Project would reconfigure the development footprint to consolidate development in Village 14; add 147 units, for a total of 1,266 residential units; and reduce impacts by approximately 230 acres, to 579 acres (the Proposed Project Amendment). Figure 1, Regional Location Map, shows the regional location of the Approved Project Area and the Proposed Project Amendment Project Area, in the County of San Diego (County).

An Environmental Impact Report (EIR) was prepared for the Approved Project and was certified by the Board on June 26, 2019. The Final EIR analyzed the potential impacts of the Approved Project. The Final EIR also analyzed potential impacts associated with the EIR Land Exchange Alternative, which was one of the alternatives to the Approved Project. The Final EIR is incorporated herein by reference and the results are summarized in Section 3 and project design features are described in Section 5.

Dudek prepared the following Fire Protection Plans for the Final EIR, which are incorporated herein by reference:

- Final EIR Appendix 3.1.1-2, Otay Ranch Village 14 and Planning Areas 16/19 Fire Protection Plan with Appendices, dated September 2018
- Final EIR Appendix 4.1-1C, Otay Ranch Village 14 and Planning Areas 16/19 Land Exchange EIR Alternative Fire Protection Plan, dated February 2018.

Additionally, public concerns regarding projects built in Very High Fire Hazard Severity Zones have been addressed on the record and are attached herein as they are applicable to the Proposed Project Addendum. These concerns follow common

themes of: ignition resistant structures, ember cast, elevated human-caused ignitions, and evacuation. Dudek prepared four memorandums as listed below and provided in Attachment A to address these concerns.

- Dudek, 2019. "Otay Ranch Village 14 Fire Services Operational Assessment – September 2017 Rohde & Associates." Memorandum from M. Huff (Dudek) to D. Hubbard (Gatzke Dillon & Ballance LLP). June 21, 2019.
- Dudek, 2019. "Otay Ranch Village 14 and Planning Areas 16 and 19 Public Comment– Evacuation Plan Purpose." Memorandum from M. Huff (Dudek) to D. Hubbard (Gatzke Dillon & Ballance LLP). June 21, 2019.
- Dudek, 2019. "Otay Ranch Village 14 and Planning Areas 16/19 - Ignition Resistant Construction." Memorandum from M. Huff (Dudek) to D. Hubbard (Gatzke Dillon & Ballance LLP). June 24, 2019.
- Dudek, 2019. "Otay Ranch Village 14 and Planning Areas 16/19 – Center for Biological Diversity, Chaparral Institute and Preserve Wild Santee." Memorandum from M. Huff (Dudek) to D. Hubbard (Gatzke Dillon & Ballance LLP). June 25, 2019.

The Final EIR analyzed the Approved Project's potential impacts to fire service and fire hazards in Sections 3.1, Hazards and Hazardous Materials, and Section 3.1.8, Public Services. This Fire Technical Memorandum was prepared for the Proposed Project Amendment. The purpose of this analysis is to evaluate whether, and to what extent, the potential impacts of the Proposed Project Amendment to fire service and fire hazards differ from those of the Approved Project. This technical memorandum includes the following sections: (1) background, (2) Proposed Project Amendment description, (3) summary of the Approved Project's impacts to fire service and fire hazards, (4) analysis of the Proposed Project Amendment's impacts to fire service and fire hazards, (5) project design features, and (6) conclusion.

For additional context, the following terminology is used in this Technical Memorandum.

Terminology

Approved Project: The project described in Otay Ranch Village 14 and Planning Areas 16/19 Tentative Map 5616, Specific Plan 16-002, and the certified EIR, which the County of San Diego (County) approved on June 26, 2019. The Approved Project permits 1,119 residential units within a Project Area of approximately 1,369 acres. The Development Footprint of the Approved Project is 809 acres.

Conserved Open Space: Conserved Open Space refers to 24.5 acres of land within the Project Area, which, while designated in the Otay Ranch General Development Plan/Otay Subregional Plan (Otay Ranch GDP/SRP) for residential uses within Village 14 and Planning Areas 16/19, will not be developed as part of the Proposed Project Amendment. Instead, the Conserved Open Space will be preserved on site and be (a) added to the Otay Ranch Resource Management Plan (RMP) Preserve (through a future RMP Amendment), (b) managed under a separate RMP, or (c) utilized to mitigate impacts to the City of San Diego Multiple Species Conservation Program Cornerstone Lands. The Conserved Open Space areas are located adjacent to Otay Ranch RMP Preserve and will be conserved by recording a biological open space easement over the land.

Development Footprint: The areas where a given project will cause permanent or temporary ground disturbance. The Development Footprint includes all on-site development, off-site improvements, and impacts resulting from infrastructure and other allowable uses within the Otay Ranch Resource Management Plan (RMP) Preserve.

EIR Land Exchange Alternative: The project alternative identified as the "Land Exchange Alternative" in Chapter 4 of the certified Final EIR. This Land Exchange Alternative contemplated a land exchange with the California Department of Fish and Wildlife (CDFW) and would develop 1,530 residential units within a Project Area of approximately 2,387.6 acres, with a Development Footprint of 658.3 acres.

Off-Site Improvements: Off-site improvements total approximately 40.1 acres and include Proctor Valley Road, wet and dry utilities, drainage facilities, trails, an off-site sewer pump station in the southern reach of Proctor Valley Road, and off-site sewer facilities to connect to the Salt Creek Interceptor as planned since 1994.

Project Area: The total land area for the Proposed Project Amendment as contemplated in the proposed land exchange between applicant and CDFW.[1] The Project Area consists of approximately 1,283.6 acres currently owned by GDCI Proctor Valley, L.P., the owner/applicant, 219.4 acres currently owned by CDFW, and approximately 40.1 acres of off-site improvements, for a total of 1,543 acres.

Proposed Project Amendment: The Proposed Project Amendment reflects proposed changes to the Approved Project, which would add 147 units for a total of 1,266 residential units and would reduce the Development Footprint by approximately 230 acres, to a total of 579 acres, within a Project Area of 1,543 acres, as shown on Figure 2, Site Utilization Plan, and more fully described below in Section 2. The Proposed Project Amendment includes a Revised Tentative Map and Specific Plan Amendment. As contemplated in the Dispute Resolution Agreement, the Proposed Project Amendment assumes and will require a County-initiated amendment to the MSCP County Subarea

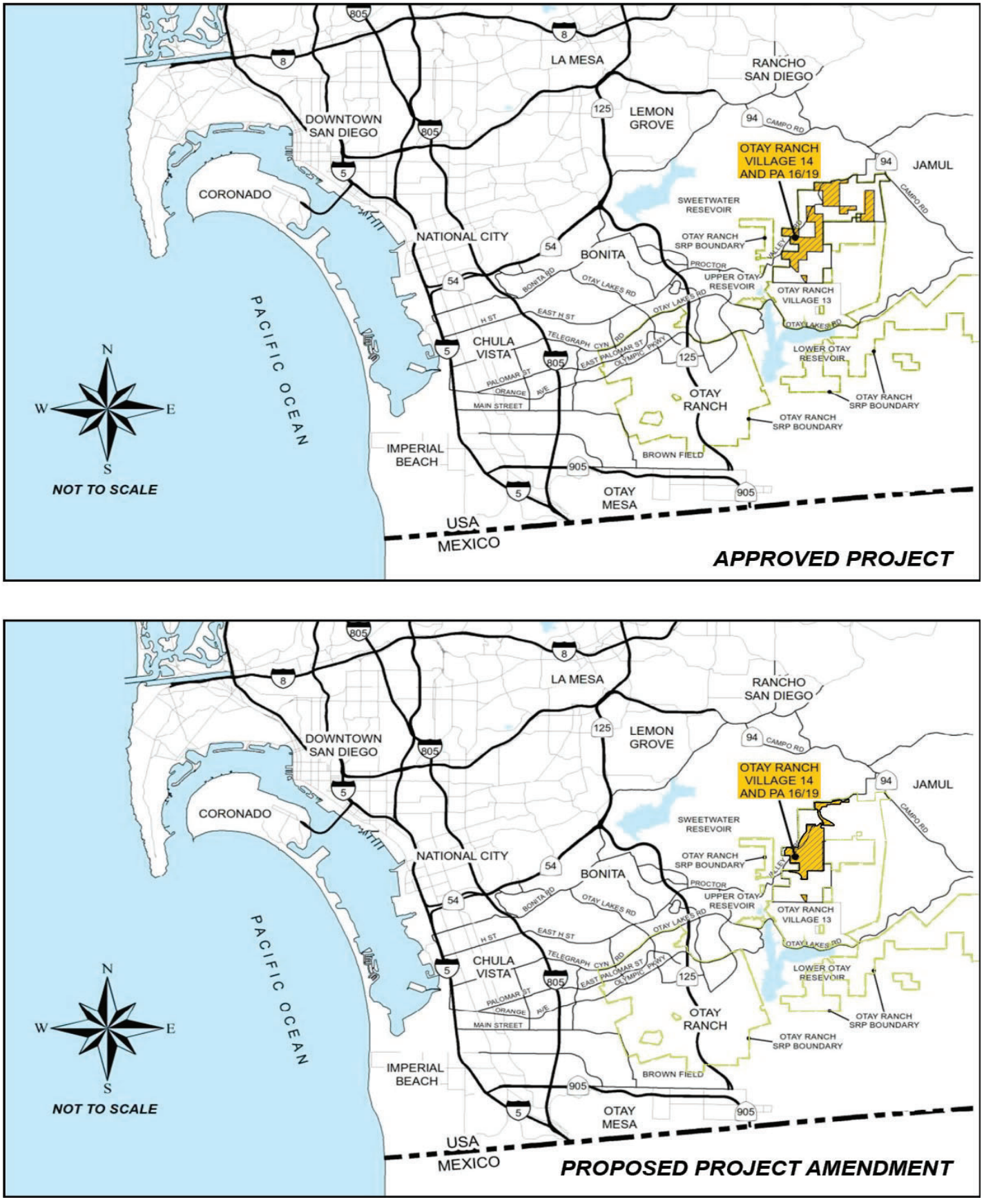
[1] As indicated above, the land exchange necessary to implement the Proposed Project Amendment must be approved by the California Wildlife Conservation Board.

Plan. Because the amendment to the MSCP County Subarea Plan will be initiated by the County, it is not part of the Proposed Project Amendment.

PV1 and PV3: PV1 and PV3 are areas of the Approved Project located in Village 14 as shown on Figure 3.

Revised Tentative Map: The Revised Tentative Map reflects revisions to the June 26, 2019, Approved Tentative Map #5616 that are necessary to process and implement the land exchange with CDFW and the Proposed Project Amendment in the County.

Specific Plan Amendment: The Specific Plan Amendment reflects revisions to the June 26, 2019, Approved Specific Plan #16-002 that are necessary to process and implement the land exchange with CDFW and the Proposed Project Amendment in the County.



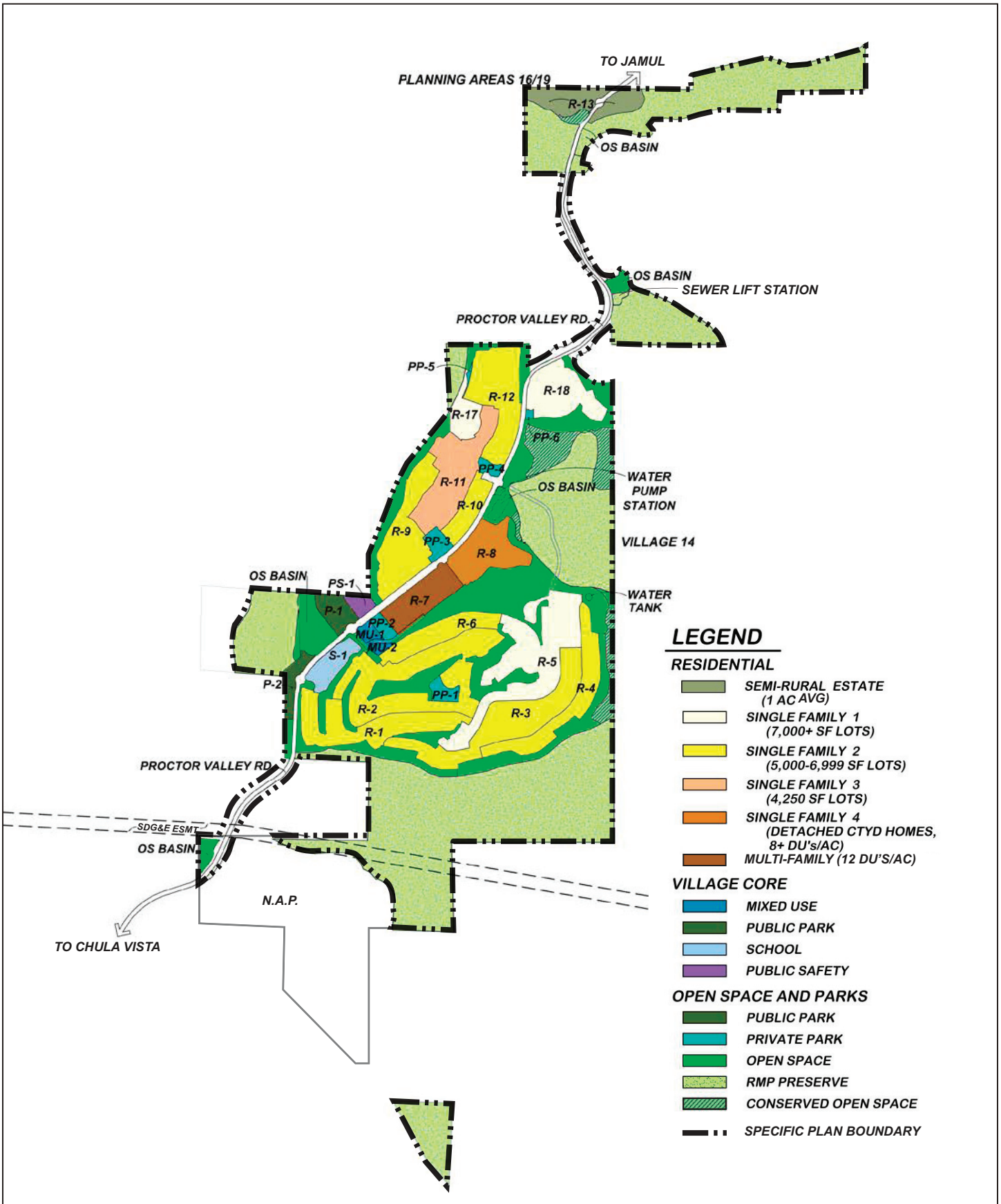
SOURCE: Hunsaker 2019

FIGURE 1

Regional Location

Otay Ranch Village 14 and Planning Areas 16/19 Proposed Project Amendment

DUDEK



SOURCE: Hunsaker 2019

FIGURE 2

Site Utilization Plan

Otay Ranch Village 14 and Planning Areas 16/19 Proposed Project Amendment

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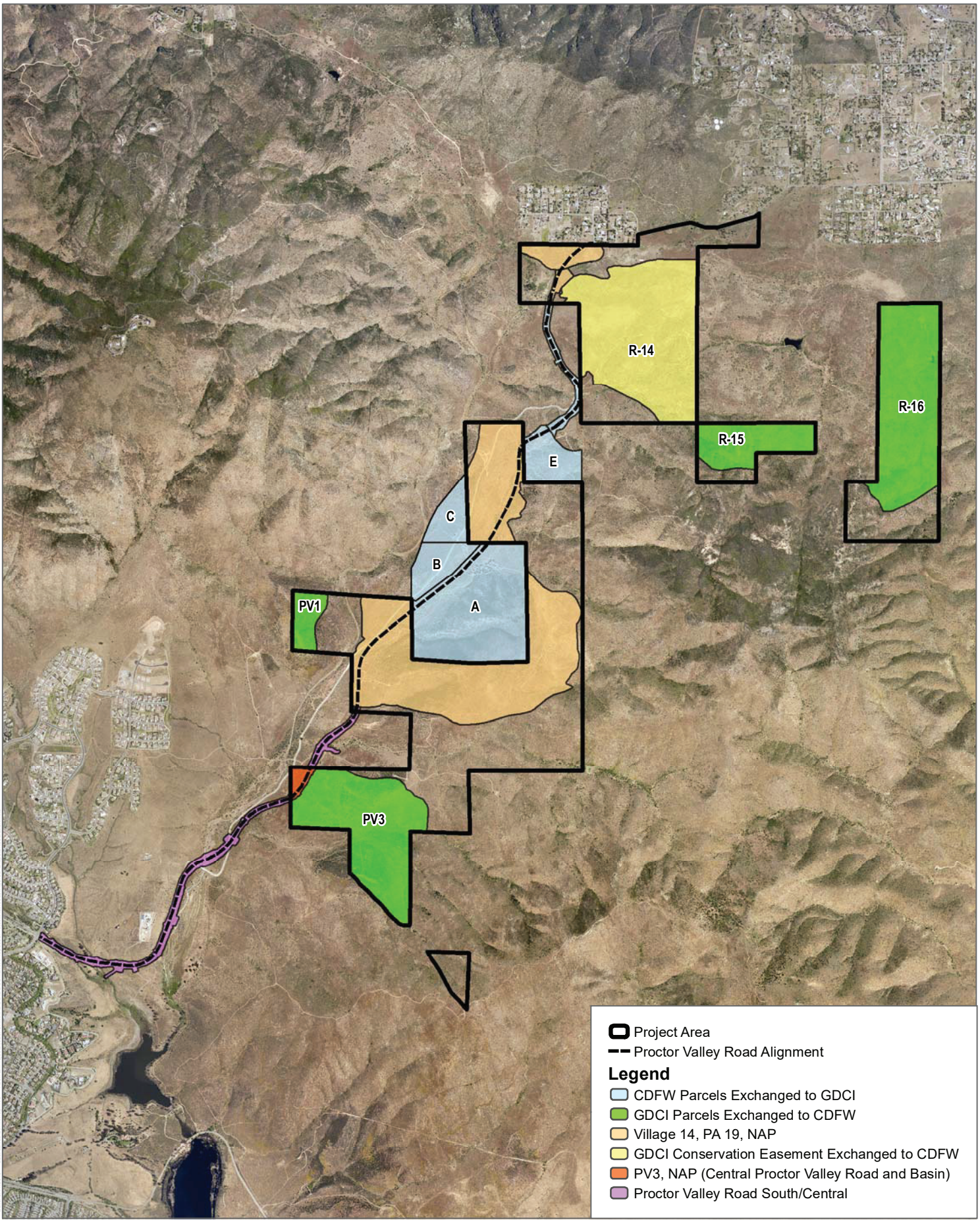


SOURCE: SANGIS 2017; Hunsaker 2019

DUDEK

0 1,400 2,800 Feet

FIGURE 3

Proposed Land Exchange

Otay Ranch Village 14 and Planning Areas 16/19 Proposed Project Amendment

Section 1. Background

The Proposed Project Amendment Project Area comprises approximately 1,543 acres of undeveloped land within the Proctor Valley area of the 23,000-acre Otay Ranch master planned community (see Figure 4, Proposed Project Amendment Project Area). The Proposed Project Amendment reflects proposed changes to the Approved Project, including a proposed land exchange with the California Department of Fish and Wildlife (CDFW).

On June 27, 2019, the owner/applicant of the Approved Project entered into a Dispute Resolution Agreement with CDFW, the U.S. Fish and Wildlife Service, and the County. Pursuant to this agreement, the owner/applicant would seek a land exchange with CDFW through a process overseen by the California Wildlife Conservation Board. The proposed land exchange, if approved by the Wildlife Conservation Board, would require the owner/applicant to (i) transfer 147.3 acres in Village 14 and 192.4 acres in Planning Area 16 to CDFW, and (ii) record a conservation easement over 191.5 acres in Planning Area 16. In exchange, CDFW would transfer 219.4 acres in Village 14 to the owner/applicant. The Proposed Project Amendment would then be implemented upon the lands within the applicant's ownership, including those received via the Wildlife Conservation Board land exchange. Because the Proposed Project Amendment assumes the above-described land exchange, it would result in a different development footprint than the Approved Project's development footprint. Therefore, a Specific Plan Amendment to the approved Village 14 and Planning Areas 16/19 Specific Plan and a Revised Tentative Map are required processes for the Proposed Project Amendment.

While the Proposed Project Amendment and EIR Land Exchange Alternative both contemplate exchanges of land with the CDFW, the Development Footprints and other aspects differ. It is important to note that the Development Footprint of the Proposed Project Amendment was assessed in the certified Final EIR as part of the Approved Project Development Footprint and as part of the EIR Land Exchange Alternative Development Footprint.

Section 2.Proposed Project Amendment Description and Summary of Amendment/Revisions

The Proposed Project Amendment proposes 1,266 residential units within a Project Area of 1,543 acres. The Proposed Project Amendment Development Footprint would be approximately 578.6 acres, which would consistent of approximately 513.1 acres within Otay Ranch Village 14, 25.2 acres within Otay Ranch Planning Area 19, and 40.1 acres of off-site improvements (i.e., Proctor Valley Road). Of the 1,266 residential units, 1,253 units would be located in Village 14 (consistent with the Otay Ranch GDP/SRP) and 13 units would be located in Planning Area 19 (consistent with the Otay Ranch GDP/SRP). The Proposed Project Amendment is depicted in Figure 2 and summarized in Tables 1 through 3.

As described above, the Proposed Project Amendment would also include a land exchange between the owner/applicant and CDFW, which would require the owner/applicant to transfer 339.7 acres to CDFW and record a conservation easement over 191.5 acres, and, in exchange, CDFW would transfer 219.4 acres in Village 14 to the owner/applicant to create a consolidated Development Footprint. The proposed land exchange between the applicant and CDFW is depicted in Figure 3. As defined above, the Proposed Project Amendment requires a Specific Plan Amendment and Revised Tentative Map, which must be approved by the County. The Revised Tentative Map would replace that certain approved Tentative Map TM #5616, approved by the County on June 26, 2019. The Specific Plan Amendment would amend the Specific Plan 16-002 to reflect the Proposed Project Amendment, including the Revised Tentative Map and the land exchange with CDFW.

Table 1. Village 14 and Planning Areas 16/19 Proposed Project Amendment Site Utilization Plan Summary

Description	Village 14		Planning Area 16/19		Total Proposed Project Amendment	
	Gross Acres	Units	Gross Acres	Units	Gross Acres	Units
Residential Subtotal (1)	**386.6**	**1,253**	**14.9**	**13**	**401.4**	**1,266**
Non-Residential Uses						
Mixed Use (2)	2.7				2.7	
Public Parks	10.2				10.2	
Private Parks/Recreation (3)	9.5				9.5	
Public Safety Site	2.3				2.3	
Elementary School Site	9.9				9.9	
Open Space	47.8		1.7		49.5	
Conserved Open Space	23.0		1.5		24.5	
Otay Ranch RMP Preserve	278.6		98.4		377.0	
Circulation	23.3		3.4		26.7	
Non-Residential Uses Subtotal	*407.2*		*105.0*		*512.1*	-
Total Proposed Project Amendment 4	**793.7**	**1,253**	**119.8**	**13**	**913.6**	**1,266**
Other Off-sites						
Off-site Improvements	40.1				40.1	
Off-site Preserve PA 16			58.2		58.2	
Parcels Exchanged to CDFW	147.3		192.4		339.7	
Conservation Easement PA 16			191.5		191.5	
Total Proposed Project Amendment Area					**1,543.1**	**1,266**

Notes: PA = Planning Area, CDFW = California Department of Fish and Wildlife.

1 Residential gross acres includes 96.7 acres of related internal slopes, fuel modification and/or preserve edge open space lots.

2 Village 14 Mixed Use acreage includes 10,000 sf of commercial use.

3 Village 14 has 2.1 acres of private pocket parks included in the residential acreage; therefore, the subtotal including PPP is 11.7 acres.

4 Totals may not sum due to rounding

Table 2. Proposed Project Amendment Site Utilization Plan Detail (Village 14)

Description		Gross Acres (1,2)	Units (3)	Density
Single Family Residential				
R-1	50*100	33.1	103	3.1
R-2	60*100	48.3	136	2.8
R-3	60*85	35.8	112	3.1
R-4	60*100	31.5	73	2.3
R-5	75*100	51.7	121	2.3
R-6	60*85	22.5	47	2.1
R-8	Courtyard	21.1	116	5.5
R-9	60*85	33.0	96	2.9
R-10	60*85	8.5	31	3.7
R-11	50*85	25.4	119	4.7
R-12	50*100	27.6	94	3.4
R-17	70*100	7.4	10	1.4
R-18	70*100	27.8	45	1.6
Single Family Residential Subtotal		*373.8*	*1,103*	*3.0*
Multi-Family				
R-7	MF	12.7	150	11.8
MF Subtotal		*12.7*	*150*	*11.8*
Residential Subtotal (3)(4)		**386.6**	**1,253**	**3.2**
Non-Residential Uses				
Mixed Use (2)	MU - C	2.7		
Public Parks				
P-1	Village Green Park	6.2		
P-2	Scenic Park	3.9		
Public Parks Subtotal		*10.2*		
Private Parks & Recreation				
PP-1	Central	2.8		
PP-2	Village Core	2.1		
PP-3	West	1.9		
PP-4	West	1.5		
PP-5	Northwest	0.8		
PP-6	Northeast	0.4		
PPP (3)	Various	0.0		
Private Parks/Recreation Subtotal		*9.5*		
Public Safety Site		2.3		
Elementary School Site		9.9		
Open Space		47.8		

Table 2. Proposed Project Amendment Site Utilization Plan Detail (Village 14)

Description		Gross Acres (1,2)	Units (3)	Density
Conserved Open Space		23.0		
Otay Ranch RMP Preserve		274.9		
Circulation - In Preserve		3.7		
Circulation – Arterial		23.3		
Non-Residential Uses Subtotal		*407.2*		
Village 14 Subtotal		**793.7**	**1,253**	**1.6**

Notes:
1 Residential gross acres includes 96.5 acres of related internal slopes, fuel modification and/or preserve edge open space lots.
2 Village 14 Mixed Use acreage includes 10,000 sf of commercial use.
3 Village 14 has 2.1 acres of private pocket parks included in the residential acreage; therefore, the subtotal including PPP is 11.6 acres.
4 Totals may not sum due to rounding

Table 3. Proposed Project Amendment Site Utilization Plan Detail (Planning Areas 16/19)

Description	Gross Acres	Units	Density
Residential Uses			
R-13 (PA 19 Estates)	14.9	13	0.9
Residential Subtotal (1)	*14.9*	*13*	*0.9*
Non-Residential Uses			
Circulation in Preserve	1.4		
Open Space	1.7		
Conserved Open Space	1.5		
Otay Ranch RMP Preserve	97.0		
Circulation Arterial	3.4		
Non-Residential Uses Subtotal	*105.0*		
Planning Area 19 Subtotal	*119.8*	*13*	*0.1*
Proposed Project Amendment Total (2)	**913.6**	**1,266**	**1.4**
OTHER			
Description	**Gross Acres (1)**	**Target Units**	**Density**
Other Applicant Owned NAP of TM			
PV1 exchanged to CDFW	18.9		
PV3 exchanged to CDFW	128.4		
R-15 Exchanged to CDFW	49.9		
R-16 Exchanged to CDFW	142.5		
R-14 Conservation Easement Area	191.5		
R-15 Preserve	10.5		
R-16 Preserve	47.8		
Subtotal	*589.5*		

Table 3. Proposed Project Amendment Site Utilization Plan Detail (Planning Areas 16/19)

Off-site Acres	40.1		
Proposed Project Amendment Project Area	1,543.1	1,266	

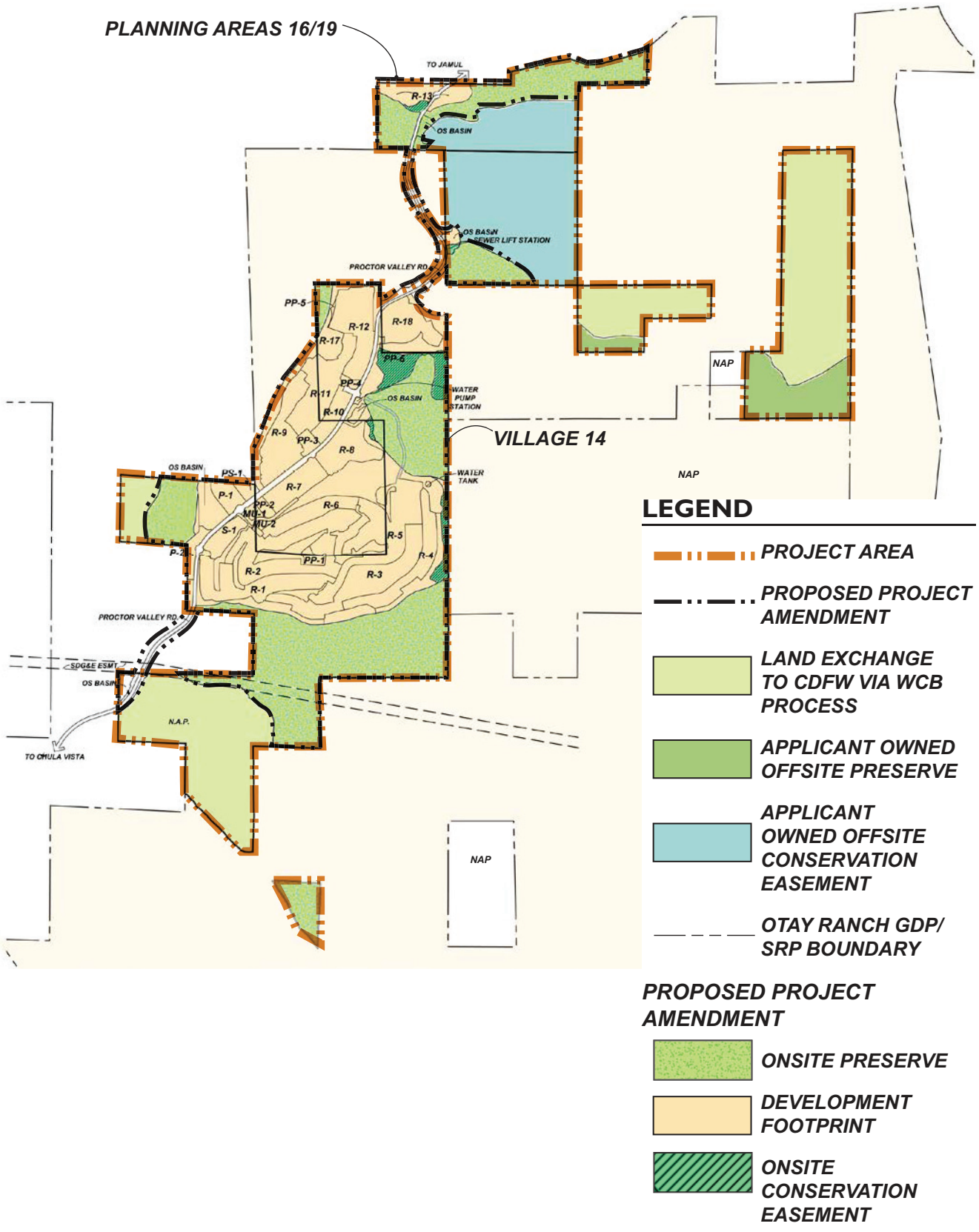
Notes: PA = Planning Area.
[1] Residential gross acres includes 2.1 acres of related internal slopes, fuel modification and/or preserve edge open space lots.
[2] Totals may not sum due to rounding

Proposed Project Amendment Relative to the Approved Project and the EIR Land Exchange Alternative.

The Final EIR evaluated both the Approved Project and the EIR Land Exchange Alternative at a project level of analysis. This Technical Memorandum examines whether the Final EIR, through its analysis of the Approved Project and the EIR Land Exchange Alternative, covered all anticipated impacts of the Proposed Project Amendment. Figure 5 depicts the limits of the development contemplated under the Approved Project, the EIR Land Exchange Alternative, and the Proposed Project Amendment. Table 4 provides a summary of the components for the Proposed Project Amendment, the Approved Project, and the EIR Land Exchange Alternative. Note that from a geographical perspective, each acre that comprises the Proposed Project Amendment's Development Footprint is located either within the Approved Project Development Footprint or within the EIR Land Exchange Alternative Development Footprint. In other words, no portion of the Proposed Project Amendment Development Footprint is outside the combined Approved Project and EIR Land Exchange Alternative Development Footprints.

Table 4. Proposed Project Amendment Comparison to Approved Project and EIR Land Exchange Alternative

Description	Proposed Project Amendment	Approved Project	EIR Land Exchange Alternative
Development Footprint (Acres)	579	809	658
Project Area (Acres)	1,543	1,369	2,388
Off-sites (Acres)	40	85	40
Units	1,266	1,119	1,530
Proctor Valley Rd.	Same	Same	Same



SOURCE: Hunsaker 2019

FIGURE 4

Project Area

Otay Ranch Village 14 and Planning Areas 16/19 Proposed Project Amendment

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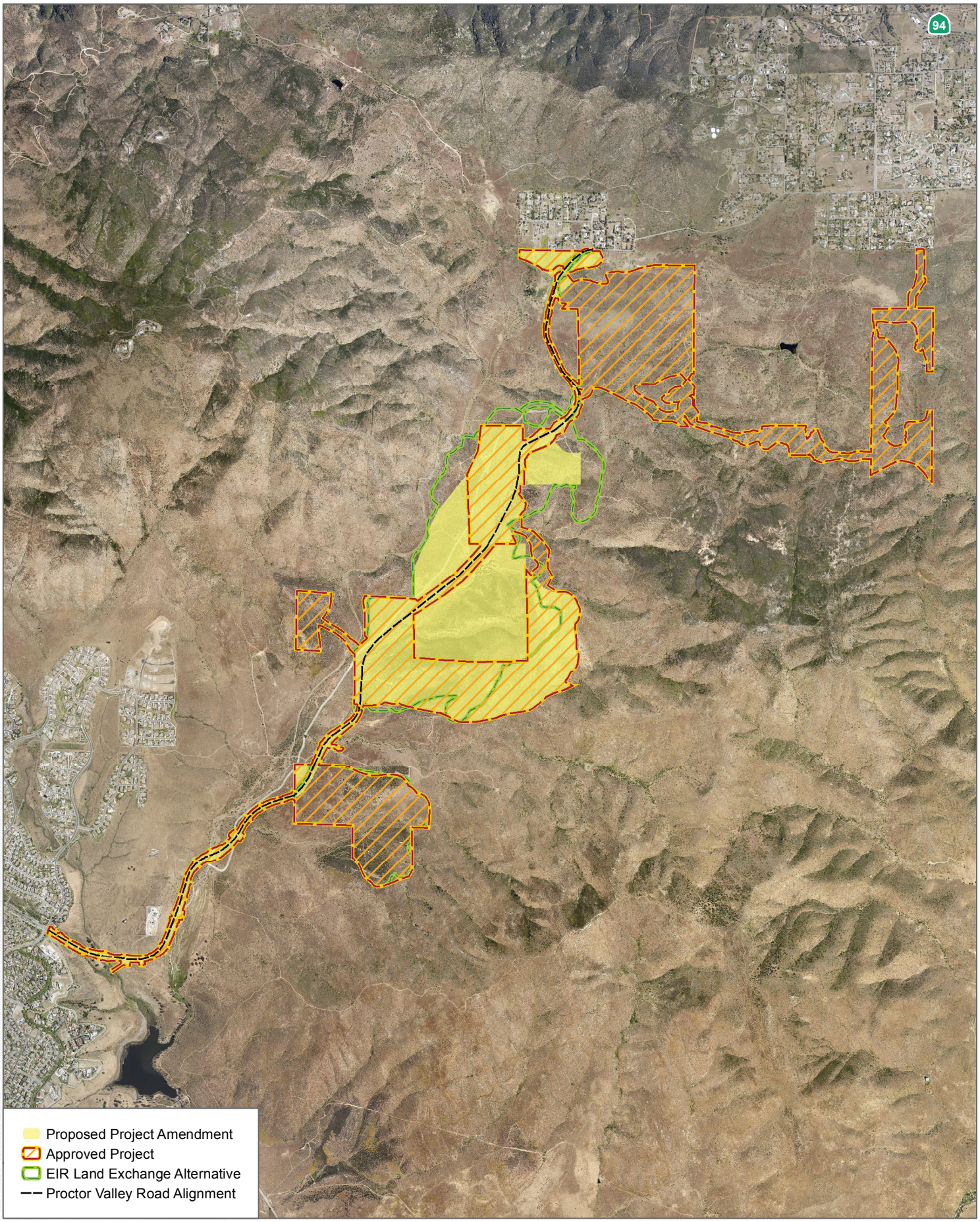

SOURCE: SANGIS 2017; Hunsaker 2019

DUDEK

0 1,450 2,900 Feet

FIGURE 5

Certified EIR Study Area

Otay Ranch Village 14 and Planning Areas 16/19 Proposed Project Amendment

Section 3. Approved Project Certified Environmental Impact Report Impacts

For the purpose of this Proposed Project Amendment, the County's Guidelines for Determining Significance: Wildland Fire and Fire Protection (County of San Diego 2010) applies to the direct and indirect impact analysis and the cumulative impact analysis.

An affirmative response to, or confirmation of, any one of the following guidelines would generally be considered a significant impact related to wildland fire and fire protection as a result of a project, in the absence of evidence to the contrary (County of San Diego 2010):

- A comprehensive Fire Protection Plan (FPP) has been accepted, and the project is inconsistent with its recommendations.
- The project does not meet the emergency response objectives identified in the Public Facilities Element of the County General Plan or offer feasible alternatives that achieve comparable emergency response objectives.
- The project cannot demonstrate compliance with all applicable fire codes.

With respect to the first threshold, the Final EIR determined that the Approved Project FPP complies with the requirements of the 2017 County Consolidated Fire Code and the 2016 California Fire and Building Codes. The recommendations in the Approved Project FPP meet fire safety, building design elements, infrastructure, fuel management/modification, and landscaping recommendations of the applicable codes. The recommendations provided in the FPP were made for the structures within a wildland/urban interface area. The recommendations included the following measures.

1. A Construction Fire Prevention Plan will be prepared, detailing the important construction-phase restrictions and fire safety requirements to be implemented to reduce risk of ignitions and plans for responding to any potential ignitions.
2. Proposed Project buildings will be constructed of ignition-resistant materials based on the latest building and fire codes.
3. Fuel modification zones (FMZs) will be provided throughout the perimeter of the Project Area and will be up to 120 feet wide in most locations, including the rear yard areas, as part of the modified zone. Maintenance will occur as needed, and the homeowner's association (HOA) will annually hire a third-party, San Diego County Fire Authority (SDCFA) approved FMZ inspector to provide annual certification that fuel modification meets the FPP requirements.
4. One-acre and larger lots (lots designated as 1, 2, or 3 acres) will include fuel modification equal to 100 feet in width from all combustible buildings of more than 250 square feet in size. The FMZ will begin at the structure and extend outward in all directions (i.e., front, sides, and rear of house). Homeowners will be responsible for maintaining the FMZs and they will be included in the annual HOA or Approved Management Entity funded third-party inspections.
5. Large lots in Planning Areas 16/19 would include limited building zones (LBZs) where the properties are adjacent to open space areas. The LBZs would designate buffer areas where no building would be allowed. If a structure is built adjacent to the LBZ, then the LBZ can be maintained as an FMZ.

6. Fire apparatus access roads would be provided throughout the community, varying in width and configuration, but would all provide at least the minimum required unobstructed travel lanes, lengths, turnouts, turnarounds, and clearances required by the applicable code.
7. Firefighting staging areas and temporary refuge areas would be available throughout the development and along roadways and Project Area green spaces so that firefighters will be able to stage operations and seek temporary refuge from wildfire, if necessary.
8. Water capacity and delivery will provide for a reliable water source for operations and during emergencies requiring extended fire flow.
9. A site-specific evacuation plan has been prepared and includes input and review from SDCFA, law enforcement, and San Diego County Office of Emergency Services.

Further, the FPP analyzed the Approved Project's impacts related to the following thresholds from CEQA Appendix G:

- Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildland are adjacent to urbanized areas or where residences are intermixed with wildland?
- Would the project result in inadequate emergency access?
- Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance service ratios, response times or other performance objectives for fire protection?
- Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

When properly implemented on an ongoing basis, the Final EIR determined that fire protection strategies provided in the Approved Project FPP would significantly reduce the potential fire threat to vegetation from the Approved Project and from vegetation on the structures, and should assist the fire authority in responding to emergencies in the Approved Project Area. The Approved Project's fire protection system includes a redundant layering of protection methods that have been shown through post-fire-damage assessments to reduce risk of structural ignition. Modern infrastructure and the latest ignition-resistant construction methods and materials would be used. Further, all structures are required to include interior, automatic fire sprinklers, consistent with the fire codes. Fuel modification would occur within designated FMZs and developed landscapes throughout the interior of the Approved Project. In addition, a public safety site within the Village Core would house a fire station equipped with a fire engine suited to respond to structural and vegetation fires.

With respect to the second threshold, the Final EIR determined that the fire station within the Approved Project Village Core area would ensure that the General Plan's travel time standards can be met for the Project Area. Specifically, the Final EIR analyzed the Approved Project's conformance with the Safety Element of the San Diego County General Plan, which establishes travel time standards for new development. Table S-1 of the General Plan sets a 5-minute travel time for Village (VR-2 to VR-30) and limited Semi-Rural Residential Areas (SR-0.5 and SR-1) and Development located within a Village Boundary. A 10-minute travel time applies to Semi-Rural Residential Areas (> SR-1, SR-2, and SR-4) and Development located within a Rural Village Boundary. The Final EIR determined that the Village 14 component of the Approved Project was subject to the 5-minute travel time, and the Planning Area 16/19 portions of the Approved Project were subject to the 10-minute travel time.

The Final EIR concluded that fire service will be provided by SDCFA from a centrally located, on-site station capable of responding to 96% of the Approved Project's lots, including all of Village 14, within the County General Plan's 5-minute travel time standard. Further, the Final EIR found that the existing SDCFA Station No. 36 can respond to about 1% of the Proposed Project's lots (located in Planning Areas 16/19) within 5 minutes, and the remaining lots within Planning Areas 16/19 within 6 minutes travel time, which is under the rural residential General Plan 10-minute travel time for this land use.

Lastly, with respect to code compliance, the Final EIR determined the Approved Project included additional project design features, which are listed in Table 3.1.1-2. Coupled with the project design features required by the Approved Project FPP, the inclusion of an on-site fire station, and the provision of defensible space, the overall intensity of a wildland fire would be low. Provisions for modified fuel areas separating wildland fuels from structures were found to reduce the number of fuel-related structure losses. These project design features, also included in the Approved Project FPP, are required by the latest building and fire codes, are required for new development in wildland/urban interface areas, and would form the basis of the system to provide adequate access by emergency responders and provide the protection necessary to minimize structural ignitions. Features required by 2016 California Building Code include the following:

1. Application of the latest adopted ignition-resistant building codes
2. Exterior wall coverings are to be non-combustible or ignition resistant
3. Multi-pane glazing with a minimum of one tempered pane
4. Ember-resistant vents (recommend BrandGuard, O'Hagin, or similar vents)
5. Interior, automatic fire sprinklers to code for occupancy type
6. Modern infrastructure, access roads, and water delivery system
7. Maintained FMZs
8. Fire apparatus access roads throughout the Project Area's developed areas

In addition to the code-required fire safety features, the Final EIR found that the Approved Project would provide additional features, including heat-deflecting landscape walls at strategic perimeter locations, to augment the FMZs and to provide additional perimeter protection for homes with a downslope at the edge of a rear yard (Final EIR, Appendix 3.1.1-2) (refer to Appendix L, Fire Walls exhibit [Updated]in Attachment B of this report).

Therefore, the Final EIR determined that impacts from the Approved Project related to wildfires would be less than significant.

Section 4. Proposed Project Amendment Impacts to Wildfire

Section 4.1 Code Compliance

The Proposed Project Amendment would include the application of the current 2016 California Fire Code and Chapter 7A of the 2016 California Building Code for the entire Village 14 and Planning Area 19 sites, similar to the Approved Project. Figures 4, 7a, 7b and appendices G- to G5, J, and L of the FPP (Attachment B) have been updated to display the new project design for the Proposed Project Amendment.

Section 4.2 Defensible Space

Under the Proposed Project Amendment, perimeter FMZs will primarily remain the same as the Approved Project throughout the Village 14 and Planning Area 19 neighborhoods. Similar to the Approved Project, three lots in Planning Area 19 (R-15: Lots 5, 6, and 7) and a section of the property line north of the fire station (Lot PS-1) and public park (Lot P-1) in Village 14 will be provided heat deflecting walls as part of a system of protection enhancements to compensate for potentially reduced FMZs. The Fuel Modification Zone Map (see Attachment B, FPP Appendices G1 to G5 [updated] for the Proposed Project Amendment) presents the locations of the perimeter FMZs and Attachment B, FPP Appendix L (updated) provides the locations of non-combustible walls that augment the reduced FMZs. Additionally, Street I, which connects R-5 to Proctor Valley Road, would receive 50 feet of FMZ measured on a horizontal plane from the edge of each side of the road into adjacent open space as shown on Attachment B, FPP Appendix G (updated).

Internal open space lots, including 10, 13, 14, 15, 16, 17, 19, 20, 21, 39a, 41a, 42, 43, 44, and 48 (and any other applicable open space lot) would be irrigated, planted with drought-tolerant and fire-resistant plants, and maintained annually, or as needed, by the HOA or other funded entity.

The Proposed Project Amendment designates Lot OS-22 as a FMZ Special Management Area. A FMZ Special Management Area includes those areas where native fuels will be managed such that the highly flammable prohibited species and the dead and dying plants are removed while other native plants that are less prone to ignition and fire spread are allowed to remain. This area is illustrated in Attachment B, FPP Appendix G (updated) and is a larger block of native habitat that is outside the Zone 1 and Zone 2 areas. This FMZ Special Management Area is managed consistently with the fuel modification requirements of Zone 2, because it is considered important for fire behavior reduction, occurs within otherwise developed areas, eliminates fuel island conditions, and is strategically located in terrain that would facilitate fire spread if left unmanaged. This area will be maintained on a regular basis along with Zones 1 and 2, but will focus on removal of prohibited plant species and dead and dying plant material.

Lots 14 through 26, 62 through 64, and 76 through 79 would not require 100-foot wide FMZs since Lot OS-21 would be irrigated, planted with drought-tolerant, fire-resistant plants, and routinely maintained per FPP FMZ Zone 1 criteria. Lot OS-22 would be maintained as previously described.

Section 4.3 Enhanced Defensible Space/Structure Setbacks

The Proposed Project Amendment would provide enhanced defensible space by strategically locating non-combustible walls for up to 27 perimeter lots, compared to 38 lots for the Approved Project, where structures are located at the top of a slope and abut open space. Top-of-slope setbacks of 30 feet are desirable for two-story homes. These lots provide 20 feet of setback, and the walls are provided to mitigate the reduced setback by providing a barrier in the line of fire at the top of slope. The purpose of these walls is to enhance the protection provided by the FMZs and to provide a measure consistent with meeting the intent of top-of-slope structure setbacks. This wall requirement is not required by SDCFA. Consistent with the Approved Project and the EIR Land Exchange Alternative, the Proposed Project Amendment provides this code-exceeding project feature. Attachment B, FPP Appendix L (updated) illustrates the locations of the fire walls.

Section 4.4 Emergency Response and Service

SDCFA will serve the Proposed Project Amendment, because the Project Area is in County Service Area 135, and the County has indicated that it can and would provide fire and emergency medical response. Fire service will be provided by SDCFA from a proposed, centrally located on-site station that will be capable of responding to 100% of the Proposed Project Amendment's lots (1,266 units) within the County General Plan's 5-minute travel time standard.

As indicated in Table 5, using SDCFA's estimate of 82 annual calls per 1,000 population, the Proposed Project Amendment's conservatively estimated 4,549 permanent residents (Village 14 - 1,253 units × 3.6 persons per dwelling unit = 4,511 and PA 13 – 13 units x 2.9 persons per dwelling unit = 38) and 94 staff associated with the mixed-use areas would generate approximately 381 calls per year (1.0 call per day). Of these calls, at least 70% are expected to be medical emergencies and 2.3% are expected to be fire-related calls, based on typical call volumes (Huff, pers. obs. 2017). The calculated emergency response call volume load (1.0 call per day) is consistent with the Approved Project's projected call volume.

Table 5. Calculated Call Volume Associated with Otay Ranch Village 14 and Planning Area 19

Emergency Calls per 1,000	Number of Residents, Guests, and Staff[a]	Average No. Calls per Year (4,643/1,000)x82	Avg. No. Calls per Day (381/365)
82	4,643 (estimate)	381	1.0

[a] Population estimates based on 3.6 persons per residential dwelling unit for all occupancy types.

The Village 14 component of the Proposed Project Amendment's Project Area is subject to the 5-minute travel time, and the Planning Area 19 portions of the Proposed Project Amendment are subject to the 10-minute travel time.

Table 6. Emergency Travel Times from Proposed Public Safety Site and SDCFA Station 36

5-Minute Travel Time	Quantity of Units Reached within 5 Minutes	Percentage of Residential Units Reached within 5 Minutes	Quantity of Units Reached within 10 Minutes	Percentage of Residential Units Reached within 10 Minutes
Public Safety Site	1,266	100%	N/A	N/A
SDCFA Station 36	13	1%	1,266	100%

Note: The travel time analysis considered proposed traffic-calming measures for the Proposed Project Amendment. The types of traffic calming proposed would maintain the emergency travel speeds modeled for this analysis.

As indicated in Table 6, all of the proposed development lots within Village 14 (1,253 residential units) and Planning Area 19 (13 residential units) can be reached within the most restrictive 5-minute travel time standard from the proposed on-site fire station. Providing additional coverage, the existing SDCFA Fire Station 36 can respond to approximately 1% of the Proposed Project Amendment's lots (located in Planning Area 19) within 5 minutes and the remaining Village 14 lots within the 10-minute travel time standard for semi-rural residential, Therefore, the proposed on-site fire station would ensure that the General Plan's travel time standards can be met for the Project Area.

The Proposed Project Amendment includes a significant number of new homes, a school site, and commercial structures. Service level requirements could, in the absence of fire facilities and resources improvements, cause a decline in the SDCFA

response times and capabilities. However, similar to the Approved Project, additional firefighting capabilities and resources provided by the Proposed Project Amendment, including an on-site fire station, would meet the anticipated demands.

Section 5.Final EIR Project Design Features

Based on implementation of the FPP requirements, compliance with applicable fire codes, and inclusion of a fire station in the Project Area, along with the elimination of larger lots in PA 16 and the clustering of lots within PA 14, which results in a more defensible product, the Proposed Project Amendment would not have significant impacts relating to wildfire hazards. The FPP update and its requirements for project fire safety features would be incorporated by reference into the Proposed Project's final Conditions of Approval to ensure compliance with County codes/regulations and significance standards. Additionally, the County's emergency response and multijurisdictional fire efforts will be able to provide adequate emergency response.

Based on the results of the Proposed Project Amendment analysis and findings, the fire safety features presented in Table 7 and Table 8 would be implemented in conjunction with the development of the Proposed Project. These fire safety features, which are similar to the Approved Project fire safety features, would minimize the potential exposure of the Project Area to wildfire hazards.

Table 7. Otay Ranch Village 14 and Planning Area 19 Code-Required Fire Safety Features

Approved Project			Land Exchange Alternative	Proposed Project Amendment
Feature No.	Feature Description	Conclusion	Impact(s) and Mitigation from Technical Reports	
1	**Ignition-Resistant Construction.** Proposed Project buildings would be constructed of ignition-resistant construction materials based on the latest Building and Fire Codes.	Impacts would be less than significant.	**M-BI-19** Fire Protection. To minimize the potential exposure of the Project Area to fire hazards, all features of the Project Fire Protection Plan for Otay Ranch Village 14 and Planning Areas 16/19 shall be implemented in conjunction with development of the Proposed Project.	**M-BI-19** Fire Protection – No Change
2	**Interior Fire Sprinklers.** All structures over 500 square feet would include interior fire sprinklers.	Impacts would be less than significant	**M-BI-19** Fire Protection	**M-BI-19** Fire Protection – No Change
3	**Fuel Modification Zones – Village 14.** Provided throughout the perimeter of the Development Footprint and would be up to 120 feet wide in most locations, including the rear yard areas as part of the modified zone. Maintenance would occur as needed, and the HOA would annually hire a third party, SDCFA-approved, FMZ inspector to provide annual certification that it meets the requirements of this FPP.	Impacts would be less than significant	**M-BI-19** Fire Protection	In addition to 120 feet wide FMZs, Lot OS-22 will be designated as a FMZ Special Management Area where native fuels will be managed such that the highly flammable prohibited species and the dead and dying plants are removed while other native plants that are less prone to ignition and fire spread are allowed to remain.
4	**Fuel Modification Zones – Large Lots.** One-acre and larger lots (lots designated as 1, 2, or 3 acres) would include fuel modification equal to 100 feet from all combustible buildings more than 250 square feet. The FMZs would begin at the structure and extend outward in all directions (front, sides, and rear of house). Homeowner's would be responsible for maintaining the FMZs, and they would be included in the annual HOA or approved management entity funded third-party inspections.	Impacts would be less than significant	**M-BI-19** Fire Protection	**M-BI-19** Fire Protection – No Change

Table 7. Otay Ranch Village 14 and Planning Area 19 Code-Required Fire Safety Features

Approved Project			Land Exchange Alternative	Proposed Project Amendment
Feature No.	Feature Description	Conclusion	Impact(s) and Mitigation from Technical Reports	
5	Roadside Fuel Modification Zones. Roadside FMZs would be consistent with the code for Village 14. FMZ width would be 20 feet on either side of all Proposed Project roads and 10 feet on either side along existing Proctor Valley Road. Planning Areas 16/19 would include 20-foot-wide FMZ except for connecting roads between neighborhoods, which would be 50 feet wide.	Impacts would be less than significant	**M-BI-19** Fire Protection	**M-BI-19** Fire Protection – No Change
6	**LBZ.** Large lots in Planning Areas 16/19 would include LBZs where the properties are adjacent to open space areas. The LBZs would designate buffer areas where no building would be allowed. If a structure was built adjacent to the LBZ, then the LBZ can be maintained as an FMZ.	Impacts would be less than significant	**M-BI-19** Fire Protection	**M-BI-19** Fire Protection – No Change
7	**Fire Apparatus Access.** Provided throughout the community and would vary in width and configuration, but would all provide at least the minimum required unobstructed travel lanes, lengths, turnouts, turnarounds, and clearances required by the applicable code.	Impacts would be less than significant	**M-BI-19** Fire Protection	**M-BI-19** Fire Protection – No Change
8	**Firefighting Improvements.** Firefighting staging areas and temporary refuge areas are available throughout the Proposed Project's developed areas and along roadways and HOA open space.	Impacts would be less than significant	**M-BI-19** Fire Protection	**M-BI-19** Fire Protection – No Change
9	**Water Availability**. Water capacity and delivery would provide for a reliable water source for operations and during emergencies requiring extended fire flow.	Impacts would be less than significant	**M-BI-19** Fire Protection	**M-BI-19** Fire Protection – No Change
10	**Project Area Fire Station.** Emergency response travel time consistent with the San Diego County General Plan requirement for the Proposed Project would be provided by a	Impacts would be less than significant	**M-BI-19** Fire Protection	**M-BI-19** Fire Protection – No Change

Table 7. Otay Ranch Village 14 and Planning Area 19 Code-Required Fire Safety Features

Approved Project			Land Exchange Alternative	Proposed Project Amendment
Feature No.	Feature Description	Conclusion	Impact(s) and Mitigation from Technical Reports	
	Project Area fire station. Travel times to all portions of the Project Area would be within General Plan standards, less than 5 minutes for most of the Proposed Project's developable lots and within 10 minutes for the rural residential lots in Planning Areas 16/19.			

Table 8. Otay Ranch Village 14 and Planning Area 19 Code Exceeding or Alternative Materials and Methods Fire Safety Features

Approved Project			Land Exchange Alternative	Proposed Project Amendment
Feature No.	Feature Description	Conclusion	Impact(s) and Mitigation from Technical Reports	
1	**Construction Fire Prevention Plan.** Details the important construction phase restrictions and fire safety requirements that would be implemented to reduce risk of ignitions and pre-plans for responding to an unlikely ignition.	Impacts would be less than significant.	Code Exceeding – No Change	Code Exceeding – No Change
2	**Community Evacuation Plan.** A Proposed Project-specific evacuation plan would be prepared for the Proposed Project and would include input and review with SDCFA.	Impacts would be less than significant	Code Exceeding – No Change	Code Exceeding – No Change
3	**HOA Wildfire Education and Outreach.** The Community HOA would include an outreach and educational role to coordinate with SDCFA, oversee landscape committee enforcement of fire safe landscaping, ensure fire safety measures detailed in this FPP have been implemented, and educate residents on and prepare facility-wide "Ready, Set, Go!" plans.	Impacts would be less than significant	Code Exceeding – No Change	Code Exceeding – No Change
4	Heat Deflecting Landscape Walls. Walls would be provided for 38 lots to provide additional fire protection and to enhance structure setback from top of slope. At a few locations, where FMZ is constrained to approximately 70 feet, walls would be provided as mitigation to provide same practical effect. (Alternative materials and methods for FMZ reductions in some locations. Also, a code exceeding measure as it is not required for structure setback.)	Impacts would be less than significant	Walls would be provided for 38 lots to provide additional fire protection and to enhance structure setback from top of slope. Non-combustible fire walls would be provided for 7 lots with reduced FMZ widths.	Walls would be provided for 27 lots to provide additional fire protection and to enhance structure setback from top of slope. Non-combustible fire walls would be provided for 5 lots with reduced FMZ widths.

Table 8. Otay Ranch Village 14 and Planning Area 19 Code Exceeding or Alternative Materials and Methods Fire Safety Features

Approved Project			Land Exchange Alternative	Proposed Project Amendment
Feature No.	Feature Description	Conclusion	Impact(s) and Mitigation from Technical Reports	
5	Fuel Modification Zone Third-Party Inspections. Annual FMZ and LBZ/LDA inspections would be funded by the HOA and conducted by a qualified third-party consultant to certify that the Proposed Project's FMZs are maintained and LBZ/LDA have no authorized structures.	Impacts would be less than significant	Code Exceeding – No Change	Code Exceeding – No Change
6	**Planning Areas 16/19 Roadside Fuel Modification Zones.** Roadside FMZs would be 50 feet wide on either side of the road, 30 feet wider than required, where roads traverse open areas with adjacent native fuels.	Impacts would be less than significant	Code Exceeding – No Change	Code Exceeding – No Change
7	**Planning Areas 16/19 Fuel Modification Zone Maintenance Enforcement.** The HOA would be responsible for enforcing private property maintenance of large lot FMZs in Planning Areas 16/19. These FMZ areas would also be inspected by the third-party inspector.	Impacts would be less than significant	Code Exceeding – No Change	Code Exceeding – No Change
8	**Trail Maintenance.** Provided trails would include ongoing maintenance of flammable vegetation, not including alongside trails.	Impacts would be less than significant	Code Exceeding – No Change	Code Exceeding – No Change
9	**Wider Roads and Driveway Exclusion.** In Southern Procter Valley Village, Streets "A" and "M" include wider roads and do not have driveways, enabling free traffic flow and enhanced evacuation capability.	Impacts would be less than significant	Code Exceeding – No Change	Code Exceeding – No Change

Section 6.Conclusion

The Otay Ranch Village 14 and Planning Area 16/19 Final EIR determined that impacts related to wildfire would be less than significant and would not require mitigation measures for the Approved Project. Based upon the changes proposed under the Proposed Project Amendment, no new wildfire impacts would occur and no mitigation would be required.

Section 7.References

County of San Diego. 2010. "County of San Diego Report Format and Content Requirements – Wildland Fire and Fire Protection." August 31, 2010. http://www.sdcounty.ca.gov/dplu/docs/ Fire-Report-Format.pdf.

Huff, M. 2017. Experience working in San Diego County fire jurisdictions. Personal observation by M. Huff (Dudek).

Attachment A

Memorandums Addressing Otay Ranch Village 14 and Planning Areas 16/19 Response to Comments After Approved Project FPP

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MEMORANDUM

To:	David Hubbard, Gatzke Dillon & Ballance, LLP
From:	Dudek
Subject:	Otay Ranch Village 14 and Planning Areas 16/19 Center for Biological Diversity, Chaparral Institute and Preserve Wild Santee
Date:	June 25, 2019
cc:	Liz Jackson, Jackson Pendo Development
Attachment(s):	None

Comment: The EIR's Analysis of the Project's Wildfire Risks and Impacts Is Inadequate.

Response: The comment restates those previously submitted on the DEIR and responses were provided as O-6, O-6.4, and O-6.5.

Comment: The FEIR Fails to Adequately Assess Wildfire Risk and the Potential Impacts of More Fire Ignitions from Placing Homes and People in High Fire-Prone Areas.

Response: The comment restates those previously submitted and responses were provided as O-6, O-6.4 and O-6.5. The comment references research that does not distinguish wildfire damaged homes from older, vulnerable homes and new construction with ignition resistant materials and methods and ember resistant vents. Refer also to response memorandum: Ignition Resistant Construction for information pertaining to comments regarding structure losses and ember cast.

Comment: The FEIR's Mitigation for Wildfire Impacts Is Inadequate.

Response: The comment restates those previously submitted and responses were provided as O-6, O-6.4 and O-6.5. Please refer to response memorandum: Evacuation Plan Purpose for responses to all evacuation related comments. Public outreach and education as well as ongoing maintenance are addressed in the Project's Fire Protection Plan and the Wildland Fire Evacuation Plan.

Comment: The FEIR Fails to Adequately Assess and Mitigate the Impacts to Special-status Species Due to Increased Human-caused Ignitions.

Response: The comment is speculative regarding plant community type conversion caused by Project-caused wildfires. The Project's Fire Protection Plan analyzes potential ignition sources and the Project's measures to minimize ignitions and the potential that accidental ignitions spread off the site. Due to the existing ignition sources to the north and east of the Proctor Valley and the large expanses of open space, there are considerable opportunities for wildfire that would not be significantly increased with the Project.

Comment: The FEIR Fails to Adequately Account for the Impact of Climate Change to Wildfire Risk.

Response: The comment regarding climate change effects on wildfire are speculative. Some have argued that climate change will greatly increase the potential for wildfires, but new research has shown that there will not be as significant of an impact on southern California shrublands than is anticipated in the coniferous forests of the Sierra Nevada and northern California[1]. Indeed, the researchers demonstrated that drier conditions in California's forests will certainly increase potential for large, severe fires there; in southern California shrublands, however, the impact will be significantly less, owing to the fact that region already experiences a severe annual drought. Instead, southern California's increasing population will make it more likely that ignitions will occur, which could potentially cause large areas of chaparral to type-convert into grasslands.

Comment: The FEIR Fails to Adequately Assess and Mitigate the Potential Health and Air Quality Impacts from Increased Smoke from Human-caused Ignitions.

Response: The comment is speculative regarding toxic smoke produced from burning homes. The Project's Fire Protection Plan provides details including the restrictive requirements necessary to build in wildland urban interface locations in San Diego County along with measures provided above and beyond the requirements that combine to provide a fire hardened community that will not be vulnerable to wildfires like older communities that do not have organized and funded HOAs to ensure fire safety remains at levels specified in the Fire Protection Plan. The post-development condition of the Project Area would diminish the ability of a wildfire to spread as it has historically in Proctor Valley. The Proposed Project's landscaped and irrigated areas and FMZs, as well as the paved roadways and ignition-resistant structures, would result in reduced fire intensity and spread rates around the Project Area, creating defensible space for firefighters. Additionally, provisions for a fire station in the area would reduce the response time to wildfire ignitions and increase the likelihood of successful initial attacks that limit the spread of wildfires. This fire station would also become part of the regional fire service delivery plan for the SDCFA for this portion of the county and would support fire and emergency service provision in the communities of Jamul, Dulzura, and Otay Mesa. Modern infrastructure and the latest ignition-resistant construction methods and materials would be used. Further, all structures are required to include interior, automatic fire sprinklers, consistent with the fire codes." (Final EIR, pages 3.1.1-25 to -26.)

Because the project would not result in increased significant wildfire hazards, the project would not result in increased significant project-related health impacts from exposure to wildfire smoke.

Comment: The FEIR Fails to Adequately Assess and Mitigate the Impact of Increased Wildfires on Fire Protection Services and Utilities.

Response: The Project's Fire Protection Plan acceptance, which includes details for on-site fire response resources, demonstrates that the Project provides its fair share for fire agency enhancements proportional to the demands generated by the Project. Developments like the Project provide temporary refuge locations for firefighters, break up fuel beds, and provide opportunities for fire attack that would not be possible, or would be greatly diminished otherwise.

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1 Keeley, J., and A. Syphard. 2016. Climate change and future fire regimes: examples from California. Geosciences 6:37. 14pp

Comment: The FEIR Fails to Adequately Assess and Mitigate Cumulative Wildfire Impacts.

Response: The FEIR adequately assesses and mitigates cumulative wildfire impacts. Each referenced project is required to provide a fire protection plan documenting that it meets or exceeds the strict requirements of San Diego County and where potential demands or fire response time require, each project provides for additional fire response resources. Additionally, the projects generate additional revenues for firefighting capabilities through tax allocations. The cumulative impact is mitigated through these measures to a level below significance.

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MEMORANDUM

To:	David Hubbard, Gatzke Dillon & Ballance, LLP
From:	Michael Huff
Subject:	Otay Ranch Village 14 and Planning Area 16 and 19 Public Comment – Evacuation Plan Purpose
Date:	June 21, 2019
cc:	Liz Jackson, Jackson Pendo Development
Attachment(s):	None

This memorandum responds to public comments on the purpose of the Village 14 and Planning Area 16/19 Wildland Fire Evacuation Plan (WFEP - Dudek, September 2017). In summary, evacuation plans are not required by the California Environmental Quality Act or any other regulation or policy for development projects like Village 14 and Planning Area 16/19. Despite this, the WFEP was prepared as part of the Project's cautious, fire safety planning approach. The WFEP was reviewed by SDCFA and provided comments were incorporated into the final plan.

The purpose of the Project's WFEP is focused on the following:

Resident awareness – the first several pages of the WFEP are focused on raising the awareness and readiness of the Project's residents so they are familiar with their options and the actions they may be directed to take during a wildfire emergency. This portion of the WFEP serves as the residents' quick reference guide.

San Diego County Evacuation Process – the middle portion of the WFEP focuses on providing a background and history of how San Diego County conducts evacuations, the agencies involved, and the resources they employ. San Diego County has learned from past wildfires and has responded by investing hundreds of millions of dollars to improve capabilities. These investments have resulted in arguably the most capable wildfire response system in the world.

Baseline Evacuation Calculations – The latter portion of the WFEP provides baseline calculations of the number of vehicles that may be anticipated evacuating the Project along with application of the County's Emergency Operations Plan formula for estimating the Project's evacuation travel time. This portion of the WFEP is intended for emergency managers to provide "ballpark" timeframes, should they choose to incorporate this into their pre-fire plans,

Evacuation plans are not requirements for projects and are not utilized by Emergency Management Agencies because every wildfire is unique and fluid. The WFEP prepared for the Project was not intended to model regional evacuations, and to Dudek's knowledge, there are no such plans in existence in San Diego County or California. People are evacuated based on situational awareness and measured threat. San Diego County utilizes a sophisticated system of detection, communication, monitoring, forecasting, and notification to phase evacuations based on the movement and predicted wildfire path.

The WFEP provides baseline information based on two potential evacuation scenarios and focuses on resident awareness. Evacuation plans for communities and regions at large are the function and purview of the Office of Emergency Services, law enforcement agencies, fire agencies, and the unified command established during emergencies.

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MEMORANDUM

To:	David Hubbard, Gatzke Dillon & Ballance, LLP
From:	Michael Huff
Subject:	Otay Ranch Village 14 Fire Services Operational Assessment – September 2017 Rohde & Associates
Date:	June 21, 2019
cc:	Liz Jackson, Jackson Pendo Development
Attachment(s):	None

Dudek received a copy of the September 2017 Draft Rohde & Associates Fire Services Operational Assessment for Otay Ranch Village 14 (Rohde Report) in June 2019. The Rohde Report was commissioned by San Diego County Fire Authority (SDCFA), and was completed and submitted to the SDCFA approximately five months prior to Dudek's Village 14 and Planning Areas 16/19 Fire Protection Plan (FPP) completion and the same month Dudek completed the Wildland Fire Evacuation Plan. The San Diego County Fire Authority (SDCFA) has reviewed the Proposed Project's Fire Protection Plan and Wildland Fire Evacuation Plan and accepted these Plans on February 5, 2018.

The Rohde Report provides an operational fire safety and response perspective whereas the Dudek reports provide a summary of the Project's compliance with regulatory requirements. Both are valuable documents, but their purposes are unique. The operational assessment is appropriate for use by emergency managers and responders while the regulatory document is appropriate for determining whether a project deviates from fire safety requirements or is not consistent with CEQA thresholds.

The Rohde Report indicates concurrence with the Dudek FPP and Evacuation Plan on all technical aspects including: site characterization, fuel condition mapping, fire behavior modeling, evacuation timeframes, fire department response times, the list of planned fire mitigating features and the majority of the fuel modification zone (FMZ) requirements.

The Rohde Report suggests that trigger points be considered for determining when to halt evacuations and consider contingency options. The Dudek Wildland Fire Evacuation Plan does not include this operational feature as it is not appropriate for a regulatory planning document, but is appropriate for an operational planning document. The trigger points are valid and are recommended for consideration by the emergency management agencies in their pre-fire planning process.

The Rohde Report suggests that 38 lots are planned for heat deflecting landscape walls, including two lots in Planning Area 16 along with certain lots in Planning Area 19 due to reduced FMZ. This is inaccurate as the Dudek FPP indicates that there are two lots in PA 16 and depending on the final positioning of the fire station, there may be a reduction to no less than 70 feet of the FMZ adjacent to that property. The 38 additional lots that receive a heat deflecting landscape wall are provided this additional protection due to their positioning on their respective pads as a conservative fire safety measure, but they also receive a full 100 feet of managed FMZ.

Regarding the two lots in PA 16 and the potential fire station site FMZ reductions, Dudek provides substantial justification and proposed mitigations for the reduced FMZ areas.

Finally, the Rohde report suggests that for portions of the north and east flanks of PA 16 and 19, it would recommend wider FMZs of 150 to 200 feet based on their exposures at the outer edges of the Project. However, the FPP evaluated the fuels, terrain, and wind alignments and determined that under extreme conditions, the 100 feet minimum FMZs, combined with the other FPP and fire code requirements for building in the fire hazard severity zone would be acceptable protection. SDCFA reviewed and agreed with this conclusion.

Regarding fire protection for the Project, including FMZ, access, road details, water, and related fire protection Project attributes, Dudek and County staff met with SDCFA on numerous occasions, both before and after the draft Rohde Report to review the project and address any revisions. For example the following features resulted from the ongoing discussions:

- Limited Building Zones were added to the Tentative Map in Planning Area 16.
- FMZ's in Planning Area 16/19 in the FPP are "interim" at the back of the graded lots and may be modified by SDCFA (such as requiring wider FMZ) at building permit issuance with specific requirements (See FPP Sections 6.1.1 Fuel Modification Zones in Planning Areas 16/19). This is because the homes are on estate lots and will not be sited on the lots until building permits and a site plan are submitted to the County.
- Wider roadway FMZs were added to Planning Area 16.
- Fuel modification was provided in Limited Development Areas (See Bio Conditions).

Dudek engaged the SDCFA several times to discuss the limited areas of reduced FMZ, including one meeting in late January/early February 2018 at the SDCFA and including County planners and the Fire Marshal and Deputy Fire Marshal. These meetings/communications included discussion of the fuels, fire behavior modeling results, and appropriate mitigations. Among the important topics discussed were: where fuel modification reductions are proposed, the irrigated zone has been extended and a non-combustible wall separating structures from off-site fuels added.

Dudek identified eight code-exceeding or Alternative Material or Method Measures for the Proposed Project, i.e. measures that are above what is required by code (See Table 8 FPP). SDCFA agreed that the proposed mitigations would provide equivalent structure protection. In sum, SDCFA and Dudek worked together through the screencheck review process to address SDCFA concerns, resulting in acceptance of the Plans in February 2018.

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MEMORANDUM

To:	David Hubbard, Gatzke Dillon & Ballance, LLP
From:	Dudek
Subject:	Otay Ranch Village 14 and Planning Areas 16/19 Ignition Resistant Construction
Date:	June 24, 2019
cc:	Liz Jackson, Jackson Pendo Development
Attachment(s):	None

Comment: New Structures Vulnerable to Fire

The comment references several articles regarding ignition resistant building codes and their ineffectiveness at preventing structures from igniting. This cursory analysis suggests that many homes built after adoption of the 2008 wildfire standards were lost during these fires (particularly the Camp Fire). However, without knowing the specific details of each home (e.g., maintenance practices, proximity to other building, position on the landscape, fuel modification provisions, etc.), these statistics can be misleading[1]. The statistics cited are likely valid regarding the percentages of newer homes (built after 2008) that were damaged during the various wildfires, however, the referenced articles and all of the submitted comments related to structure loss are ignoring the most significant wildfire related structure loss factor - embers. Embers are referenced within some of the articles (eg. "Here's How Paradise Became a Deathtrap" and "New Houses Built to Fire Code, burned down anyway in Southern California's 2017 Thomas Fire") but are largely ignored in the provided comments. Embers have been and continue to be the most important factor for loss of structures in wildland fires[2].

Despite the latest ignition resistant provisions in the County Building and Fire Codes, the issue of ember penetration is not fully addressed. The code has partially addressed the issue by requiring vent mesh with smaller openings, but this has not proven effective. To that end, Village 14 and Planning Area 16 and 19's structures are required by the Project's Fire Protection Plan (Dudek 2018) to include ember resistant vents, such as Brandguard and/or O'Hagin vents that are designed and tested to prevent ember penetration through a series of internal baffles that capture embers.

Fire protection is a system of features that work together to address wildfire threats. The system includes hardened structures, but also the ignition resistant landscapes, available water, fire department access and fast response, as well as ongoing maintenance. The system requires careful planning and design, implementation, and ongoing maintenance. Homeowner's Associations (HOAs) are very good conduits for ensuring that the required fire protection features are maintained as intended. Many homes that were lost in recent wildfires to direct flame

[1] Y. Valachovic, University of California Cooperative Extension. What can we learn from the 14,000 homes lost during the Camp Fire? https://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=29026

[2] National Fire Protection Association. Preparing Homes for Wildfire. https://www.nfpa.org/Public-Education/By-topic/Wildfire/Preparing-homes-for-wildfire

impingement likely did not include the rigorous fuel modification areas that are planned for Village 14 and Planning Areas 16 and 19. These zones will be maintained by the HOA and inspected by a 3rd party every year to ensure that they meet the strict FPP requirements that would not facilitate fire spread into the community's neighborhoods.

An important factor for structure protection is defensible space. Although Paradise and other California cities affected by wildfire had similar defensible space regulations as Village 14 and Planning Areas 16 and 19 (minus extended zones, ongoing funded maintenance, and 3rd party inspections), local authorities there did not seem to regularly enforce these regulations (Figure 1), which is unfortunately common in areas that do not have a funded HOA and in areas where the fire agency does not have the capacity to enforce defensible space regulations. The high degree of near-structure vegetation in Paradise, which was prevalent throughout the community before the 2018 Camp Fire, would have readily ignited the adjacent structures once they started burning.

All that said, the most granular level of fuels to consider (the homes themselves) served as the most important fuel that led to the mass devastation in Paradise, Coffee Park, and elsewhere. Indeed, throughout those communities, home after home was destroyed, but the adjacent vegetation was left largely untouched (Figure 2). This phenomenon has been observed in virtually every large, destructive wildfire, including the 2007 Witch Creek Fire in San Diego County, the 2009 Black Saturday Fires in Victoria, Australia, the 2017 Tubbs Fire in Santa Rosa, and the 2018 Woolsey Fire in Los Angeles County. In all cases, mass destruction in many parts of the fire boundary was largely related to homes igniting via an ember storm, which burned many homes from the inside out following embers entering the structure via vents, roof crevices, windows, under doors, etc.

Structures in Village 14 and Planning Areas 16 and 19 have been designed to prevent ember intrusion through application of the latest building codes and an important vent requirement that exceeds the code. In the most simplistic perspective possible, if a home does not ignite, it will not burn. To combat structural ignition, the State and County of San Diego have enacted stringent building codes to resist ignition during a wildfire, including County Building Code (Title 9, Division 2, Chapter 1 of the San Diego County Code of Regulatory Ordinances) and the Consolidated County Fire Code, and Chapter 7A of the California Building Code. These standards address structural features susceptible to ignition, including:

1. Roofs
2. Exterior walls
3. Vents
4. Eaves
5. Projections such as decks, exterior balconies, etc.
6. Windows and other transparent openings such as a sun roof
7. Fences within 5-ft of the structure
8. Rain gutters
9. Exterior doors
10. Window screening
11. Setbacks of structures from slopes

Figure 1. Fuels in Paradise that facilitated wildfire movement toward non-ignition resistant homes.

Figure 2. Paradise Fire, similar to many other fires where structures burn from the inside out due to ember penetration while surrounding vegetation is left largely intact.

All homes in the Project will adhere to the stringent County Building Codes, thus restricting structural features that are susceptible to ignition and installing ember resistant vents, addressing the most vulnerable structural feature. The vast majority of homes in Paradise, however, were built before 1970, almost 40 years before California enacted building codes to resist ignition during a wildfire. A non-technical observation from one UC researcher indicated that the very few homes left standing in Paradise were of newer construction, built to the new ignition- resistant building standards that resist both radiant heat and (perhaps more importantly) exposure to embers[3].

Specific to San Diego County, one study[4] found that the three greatest factors determining home survival in Ramona and Rancho Santa Fe during the 2007 Witch Creek Fire were age of construction (which influences the potential for ignition-resistant building materials), presence of vegetation within 5' of a given building (which influences potential for flame impingement on the structure), and distance from native vegetation (which influences the potential amount of ember exposure). Pertinent to the Project, the study demonstrated that development of ignition-resistant homes with proper defensible space can actually reduce the potential loss of older homes that are moved away from the wildlands because they begin to shelter the older, ignition-prone homes from exposure to flames, heat, and embers.

San Diego County learned valuable lessons during the destructive 2003 fire season, which burned over 5,000 structures. In those fires, homes that were built under 2001 building codes survived at a rate three times greater than homes built before the codes were strengthened[5]. Following the 2003 fires, the County has enacted a series of even more restrictive building codes meant to protect a home during a wildfire.

The County is at the cutting edge of fire protection, a position that it was forced to pursue following devastating wildfires in 2003 (Cedar Fire) and 2007 (Witch Creek Fire), along with other smaller, yet important wildfires. Following the Cedar Fire, the County began a multi-pronged approach to fire protection that included significant investments in firefighting resources (air attack, apparatus, staffing, facilities, emergency alert system, and pre-planning), but equally as important, the County conducted post-fire save and loss assessments. These assessments were vital to understanding the factors leading to home survivability.

Additionally, the County created a comprehensive fire protection planning approach that requires each project to be evaluated by a qualified fire protection planner/firm, to document the project's fire risk, code compliance, and to disclose if any condition is not code compliant, and provide appropriate mitigations and features that provide appropriate, site based risk mitigation. The County has spent in excess of $500 million toward fire suppression, fuel reduction, planning, communications, and emergency response, and has had multiple, successfully managed wildfire events to engage the pre-fire plans, learn from the process, and adjust practices. Although the wildfire threat remains, particularly where old homes abut natural vegetation, the County is far safer today than it was 20 years ago because newer structures and planned communities (built to the latest codes) are designed to resist ignition, even during significant wildfire threats.

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3 Y. Valachovic, University of California Cooperative Extension. What can we learn from the 14,000 homes lost during the Camp Fire? https://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=29026

4 Morais, N.C., C.A. Dicus, and D. Sapsis. In review. Changing fire risk over time across three communities in southern California.

5 County of San Diego, Planning & Development Services, Wildland -Urban Interface Building Division <https:// www.sandiegocounty.gov/pds/docs/pds664.pdf>

Other developments in southern California that have been designed to resist wildfires have shown similar rates of significantly lowered loss when exposed to wildfire, including the 4S Ranch in San Diego County, Stevenson's Ranch in Santa Clarita, Serrano Heights in Orange County, and others. All of these communities were built with heightened requirements for fire safety, including hardened buildings, protected roofs, vent protections, maintained fuel modification zones, and others, all of which will be employed by the Project.

In contrast to San Diego County, wildfires have also occurred in an around Paradise and Santa Rosa (sometimes returning to the exact same areas), but little was done to reduce risk of structural loss there. Indeed, the 2017 Tubbs Fire followed in almost exact same footprint as the 1964 Hanley Fire; what differed from 1964 and 2017 was the amount of fire-prone homes that were built in the area. Had these homes been built with fire-resistant materials such as required by Chapter 7A of the California Building Code and with code-exceeding vents, it is highly unlikely that the level of devastation would have been the same. Similarly, 13 significant wildfires occurred in the last 20 years around the community of Paradise, yet there seemed to be little mitigation to reduce the risk there; when the 2018 Camp fire ignited under extreme weather conditions, a massive ember storm easily ignited older homes, which then caused a chain reaction of structure-to-structure ignitions.

While San Diego County has been incredibly progressive in their attempts to reduce wildfire losses (especially following the 2003 fire siege), the sites recently impacted in northern California did not seem to take their fire risk as seriously. For example, CAL FIRE reportedly warned Paradise as early as 2005 that the community was at risk of a devastating conflagration similar to that experienced in the 1991 Oakland Hills Fire, which killed 25 and destroyed 2,900 structures[6].

Ignition Reductions

Wildfires in areas near Village 14 and Planning Areas 16 and 19, and throughout San Diego County and California, are almost always human-induced. Efforts to reduce risk of ignition within the Project include undergrounding powerlines, which would effectively eliminate a potential ignition source. Further, roadside clearance is planned within the community and along Proctor Valley Road, which will reduce the risk of wildfire ignition from vehicles (via glowing catalytic converter debris, sparks from dragging chains, etc.).

Many of the destructive fires in the region (and also the recent devastating fires in Santa Rosa and Paradise) were ignited by powerlines. Of note, however, San Diego Gas & Electric has recently taken a very aggressive approach at restricting ignitions via their powerlines, becoming one of the most progressive utilities in the world at closely monitoring conditions that might facilitate ignitions and rapid fire spread, and then taking appropriate steps to minimize fire starts, including shutting down the electrical grid during extreme fire weather conditions in areas deemed to be potentially vulnerable to ignition. Further, the California Public Utilities Commission, as of February 6, 2019, now requires all energy companies in California to prepare comprehensive Wildfire Mitigation Plans. These plans are detailed assessments and accountings of the risk drivers and the risk reduction measures that are being employed for each facility, including electrical transmission and distribution lines.

[6] St. John, P., J. Serna, and L. Rong-Gong II. 2018. Here's how Paradise ignored warnings and became a deathtrap. Los Angeles Times, 30-Dec.

Comment: Evacuation Plan Intent and Proctor Valley Road as Evacuation Route

Comments submitted generally question the Wildland Fire Evacuation Plan prepared for the Village 14 and Planning Area 16 and 19 Project (Project), the breadth of its scope and lack of regional view, the project-specific approach, and the resulting travel time estimates. Please refer to the Dudek response memorandum titled Otay Ranch Village 14 and Planning Area 16 and 19 Public Comment – Evacuation Plan Purpose for details regarding the evacuation plan, its purpose, relevancy, and intended use.

Regarding the Project's ability to evacuate on Proctor Valley Road, it is important to note that the Project meets all applicable fire code requirements for access including dead end road lengths and secondary access within each neighborhood and for the Project cumulatively. In addition, road improvements will be provided to Proctor Valley Road and include providing for a Code-consistent 24-foot wide, two lane, paved road (currently extensive gravel sections) meeting County requirements for the entirely of PVR, both north and south of the Project. Roadside fuel modification will also be provided.

The Project would also construct two planned roundabouts along Proctor Valley Road. The roundabouts are designed to include uninterrupted travel ways. Various studies indicate that there may be some slowing of fire engines (1.7 to 10 seconds) when compared to a traditional intersection, but even if this delay occurred, it is not considered significant in terms of fire response. The roundabouts are designed to facilitate movement of larger vehicles including fire engines, delivery vehicles, and large pick-ups with livestock trailers without causing traffic congestion. Per Federal Highway Administration Publication No. FHWA-14-098:

- Roundabouts are designed for safety and efficiency of all users and can actually improve emergency response times by eliminating/minimizing stops and delays.
- Roundabouts are safer than intersections, even when signals are fitted with preemption devices.
- Emergency vehicles slow down to pass through intersections similarly to slowing down to proceed through a roundabout.
- Roundabouts accommodate larger vehicles and often include rolled curbs and truck aprons for rear wheels

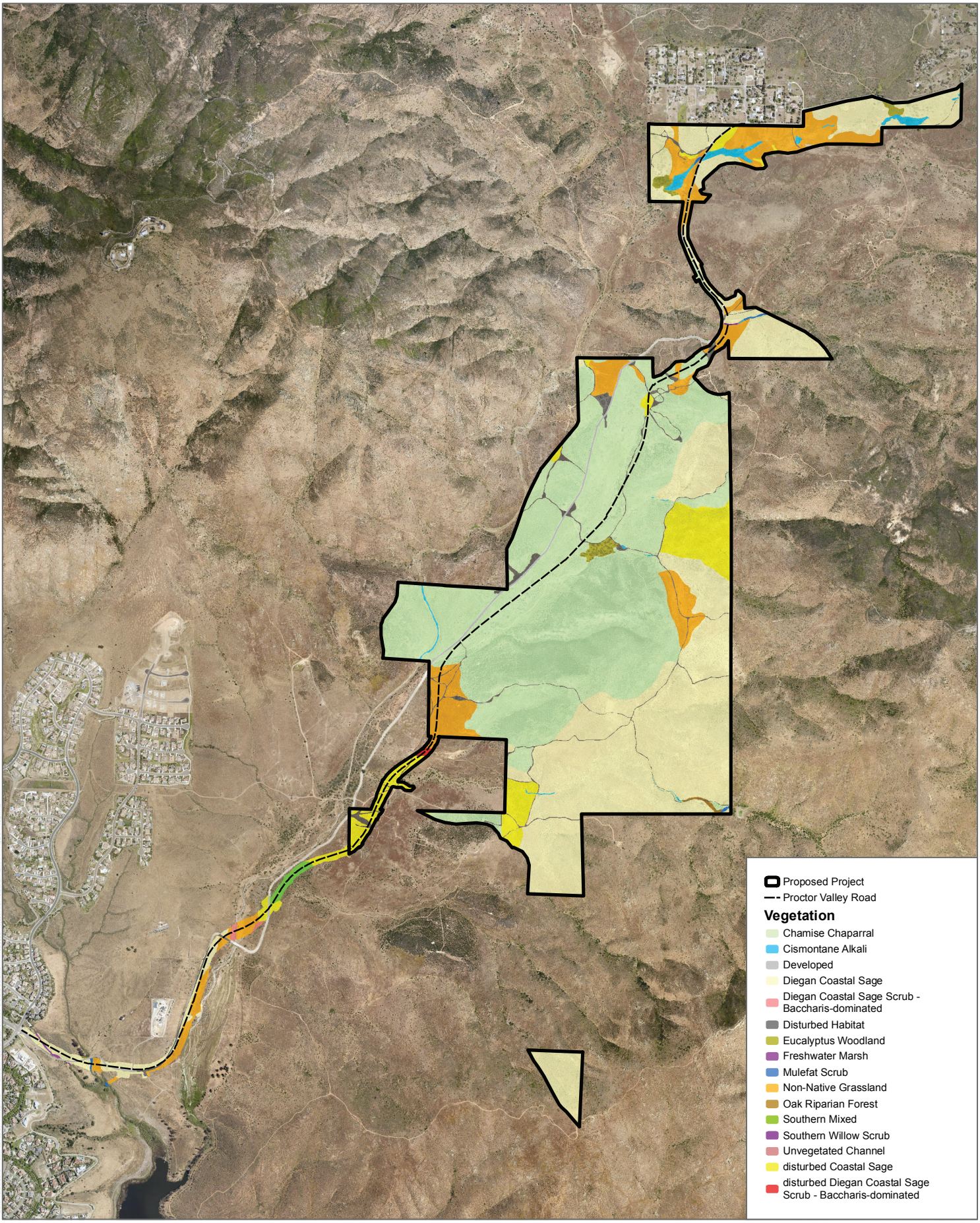
A focused Evacuation Route Study was prepared by Fehr & Peers traffic consultants (2012) for Jamul/Dulzura. The study evaluated existing conditions and potential enhancements and new routes, ranking them based on a variety of attributes. The study contemplated only one potential evacuation enhancement related to Proctor Valley Road. The potential route that would connect Campo Road with Proctor Valley Road was not ranked high enough for inclusion in the final routes for recommended implementation. This analysis suggests that Proctor Valley Road is not considered a high priority evacuation route for Jamul/Dulzura, according to Fehr & Peers' analysis. Based on its existing condition, washboard gravel road with short paved sections, it would not be consistent with a key evacuation route. Following the Project related improvements, Proctor Valley Road would meet the requirements for an evacuation route as well as have a large, ignition resistant temporary refuge (Village 14) along the evacuation route, providing an improved evacuation condition versus the existing condition.

Regional Evacuations

Evacuation of the Project's residents and the existing community would follow procedures identified by the San Diego County Emergency Operations Plan, Evacuation Annex. Evacuations are fluid and evacuation decisions are made based on situational awareness. It is virtually impossible to pre-plan an wildfire evacuation because wildfire movement is unpredictable. Instead, San Diego County emergency managers rely on a proven process that includes a sophisticated system of on-the ground resources, high tech sensors, real-time fire progression modeling, powerful communications capabilities, significant personnel resources, and a robust alert system. This system has evolved since 2003 and has become a very effective and efficient evacuation protocol, as evidenced by the most recent 2017 Lilac Fire, where evacuations occurred on a phased basis to minimize road congestion and move people at highest risk. San Diego County Sheriff's Department confidently states that they can move large numbers of people during wildfire emergencies. This is accomplished through downstream intersection control, which SDCSD has stated would be implemented in evacuation events. For additional understanding of SDCSD's stated management capabilities of large scale, mass evacuations in North San Diego County, see SDCSD Captain Brown's testimony during the Harmony Village Grove South Planning Commission Hearing on May 24, 2018 (Minute 4'37" at the following link, https://media.avcaptureall.com/session.html?sessionid=aa0c1020-3c05-41aa-8df8-35402343f4ce&prefilter=240,2901.

Attachment B

Updated Fire Protection Plan Figures 4, 7a, 7b and Appendices G, J, and L



SOURCE: SANGIS 2017; Hunsaker 2019

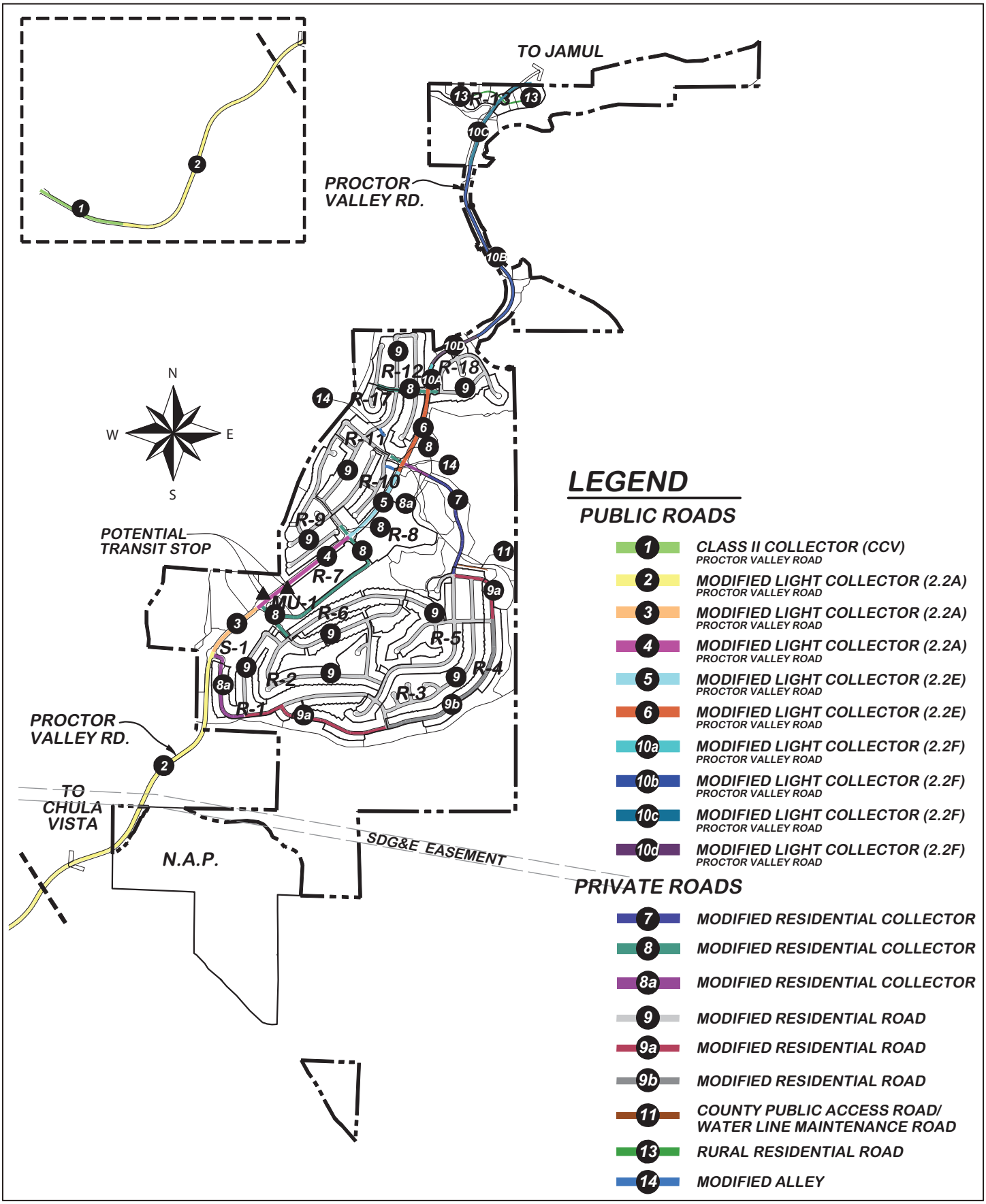
DUDEK

0 1,100 2,200 Feet

FIGURE 4

Vegetation Communities

Otay Ranch Village 14 and Planning Areas 16/19 Proposed Project Amendment



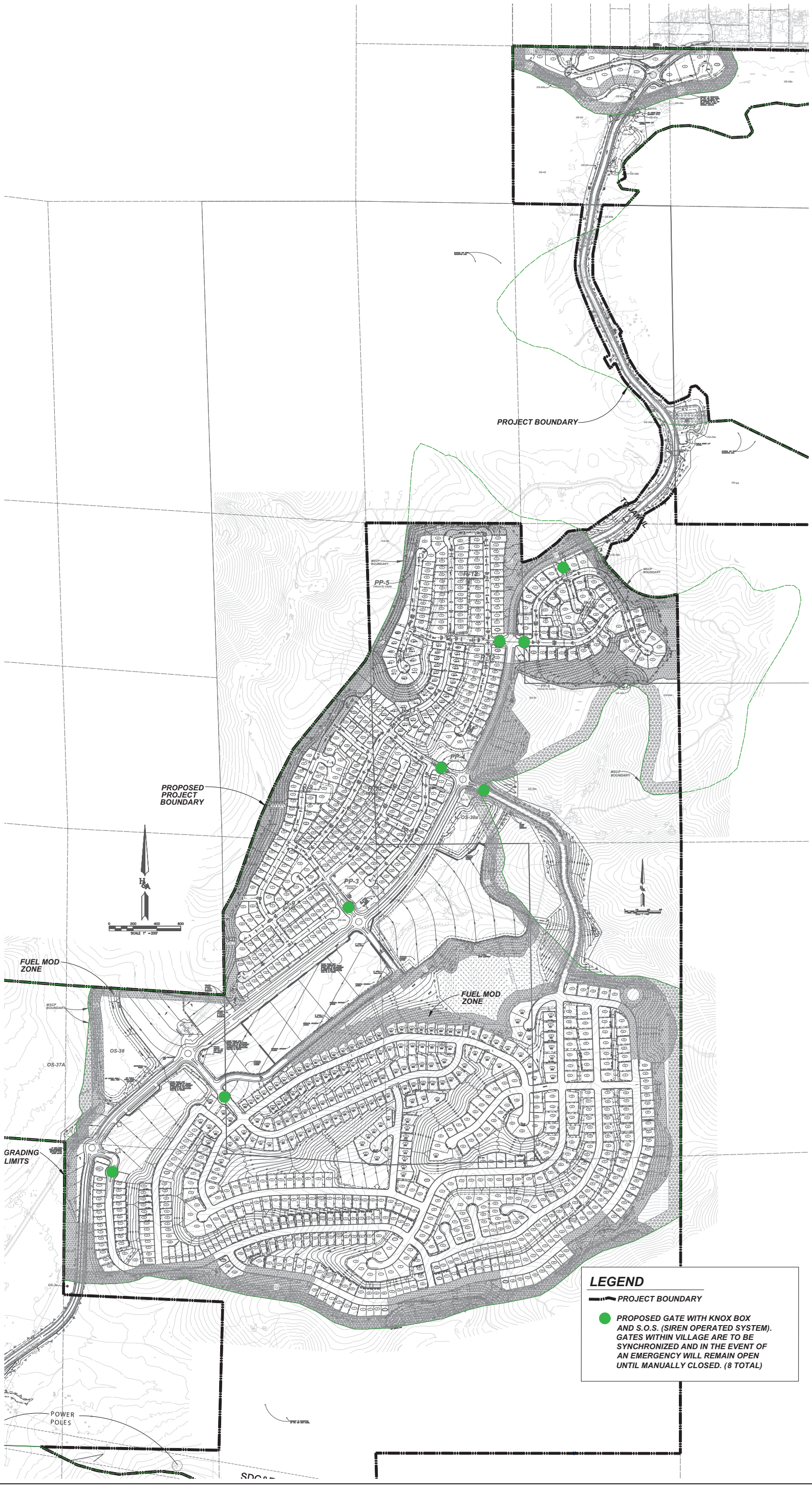
SOURCE: Hunsaker 2019

UPDATED FIGURE 7a

Circulation Plan

DUDEK

Otay Ranch Village 14 and Planning Areas 16/19 Proposed Project Amendment



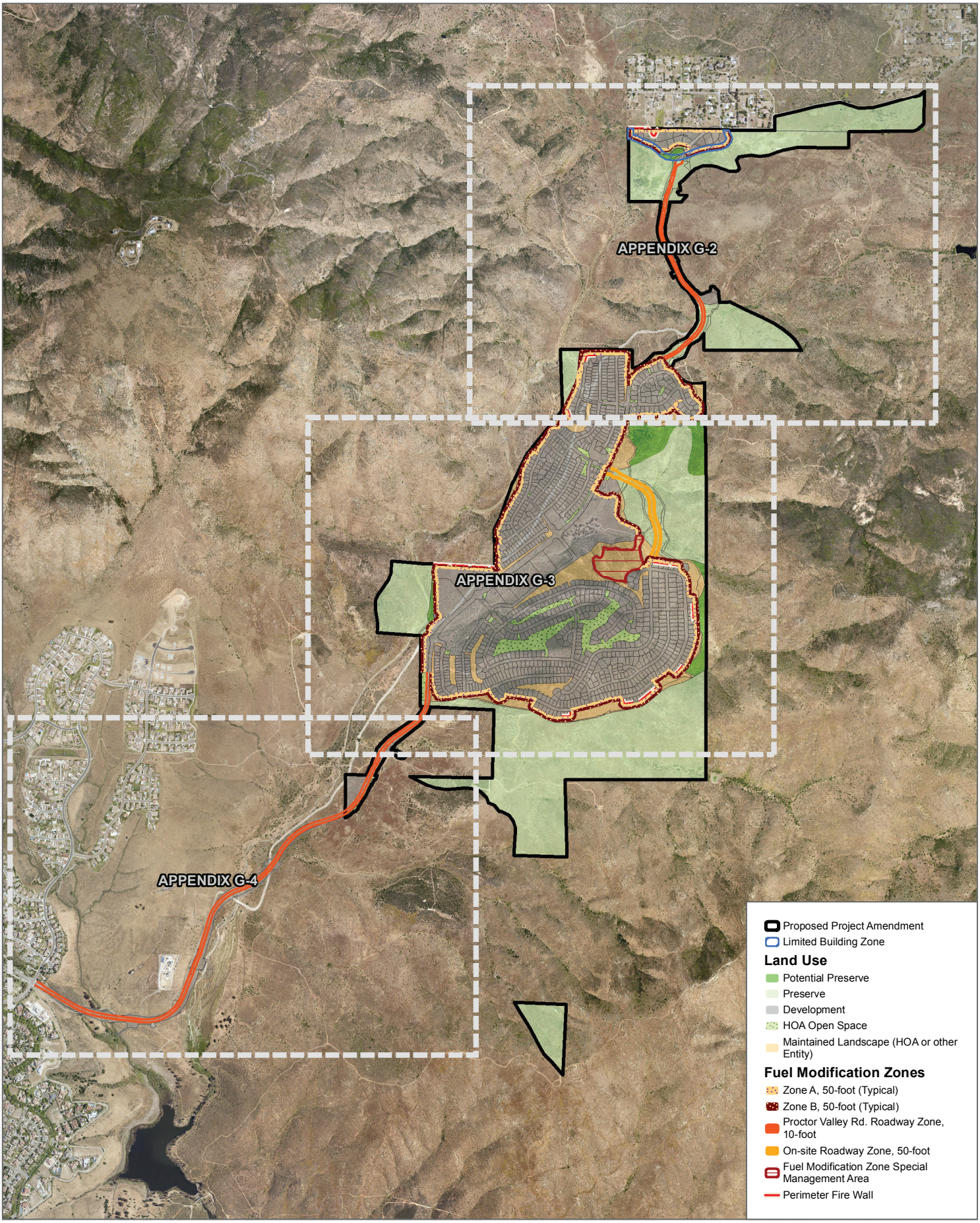
SOURCE: Hunsaker 2019

UPDATED FIGURE 7b

Gates and Emergency Access

Otay Ranch Village 14 and Planning Areas 16/19 Proposed Project Amendment

DUDEK



SOURCE: SANGIS 2017; Hunsaker 2019

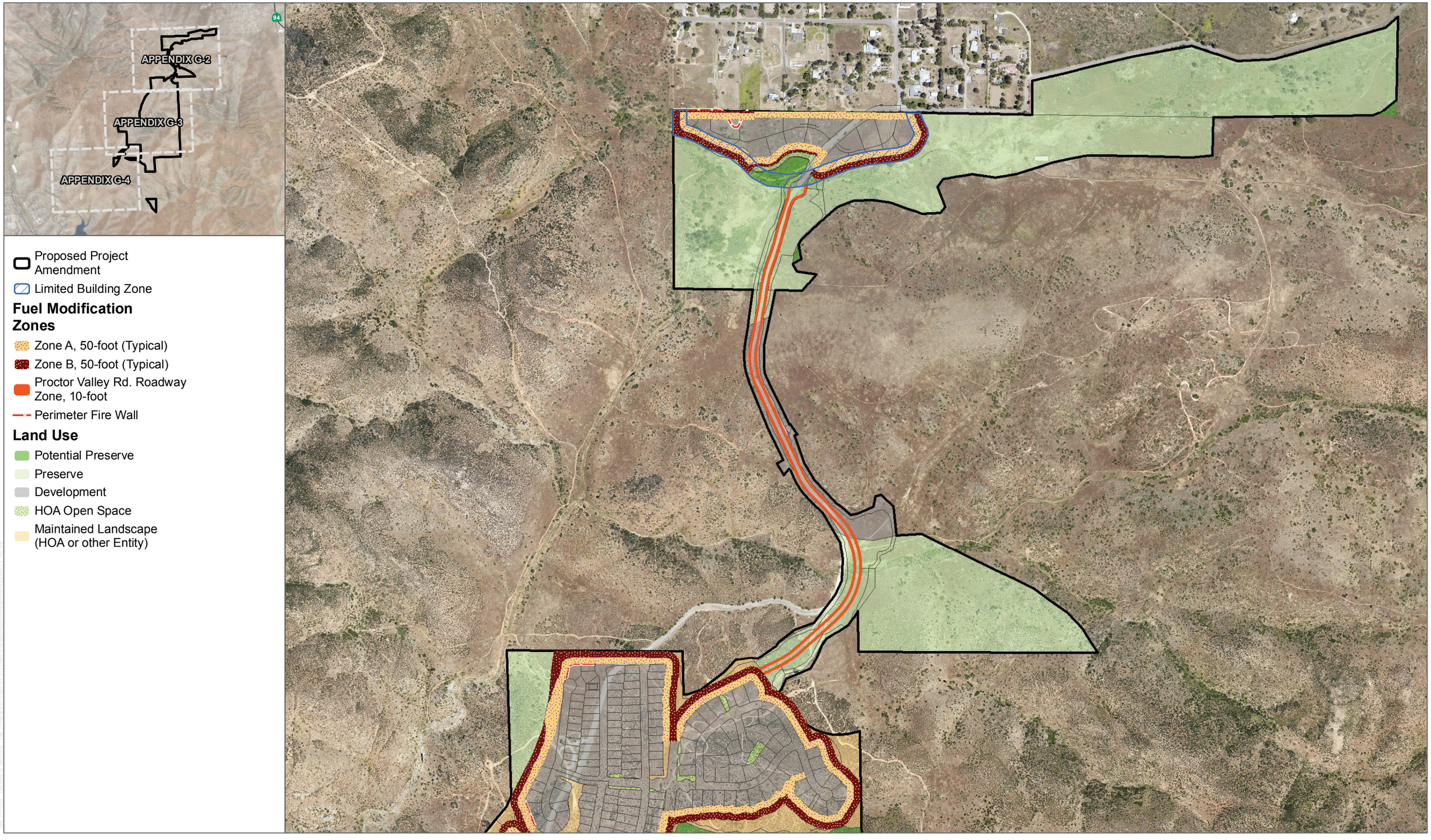
DUDEK

0 1,150 2,300 Feet

FIGURE G-1

Fuel Modification Zones - Index Map

Otay Ranch Village 14 and Planning Areas 16/19 Proposed Project Amendment



SOURCE: SANGIS 2017; Hunsaker 2019

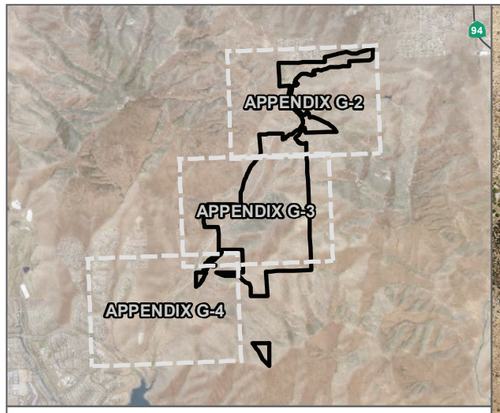
DUDEK

0 330 660 Feet

FIGURE G-1

Fuel Modification Zones

Otay Ranch Village 14 and Planning Areas 16/19 Proposed Project Amendment



Proposed Project Amendment

Fuel Modification Zones

- Zone A, 50-foot (Typical)
- Zone B, 50-foot (Typical)
- Proctor Valley Rd. Roadway Zone, 10-foot
- On-site Roadway Zone, 50-foot
- Fuel Modification Zone Special Management Area
- Perimeter Fire Wall

Land Use

- Potential Preserve
- Preserve
- Development
- HOA Open Space
- Maintained Landscape (HOA or other Entity)

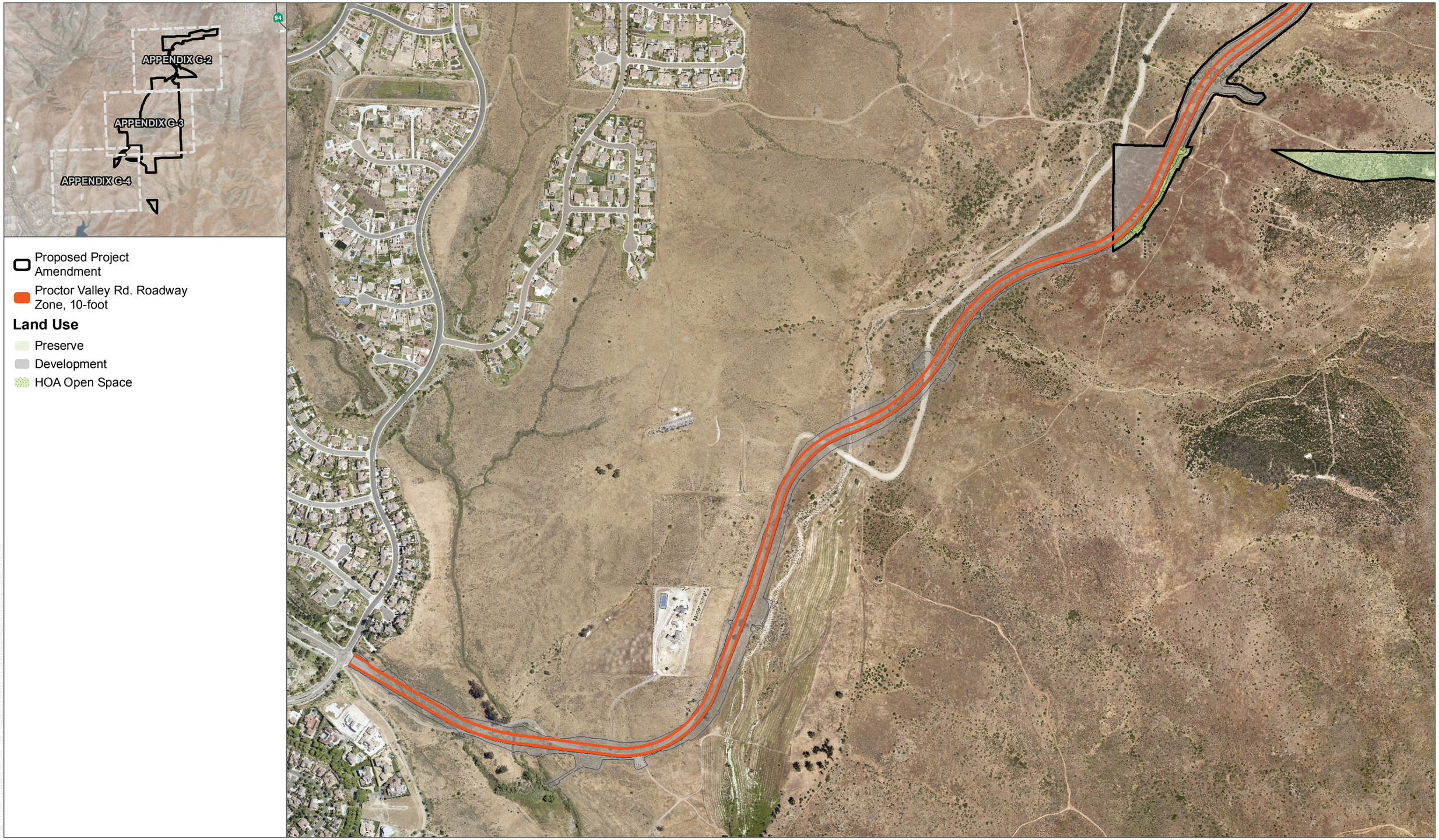
SOURCE: SANGIS 2017; Hunsaker 2019

DUDEK 0 330 660 Feet

FIGURE G-2

Fuel Modification Zones

Otay Ranch Village 14 and Planning Areas 16/19 Proposed Project Amendment



SOURCE: SANGIS 2017; Hunsaker 2019

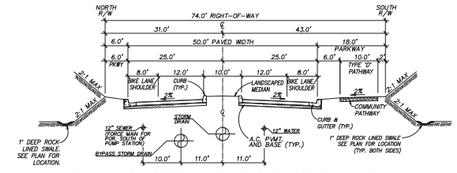
DUDEK

0 330 660 Feet

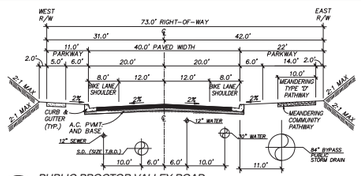
FIGURE G-3

Fuel Modification Zones

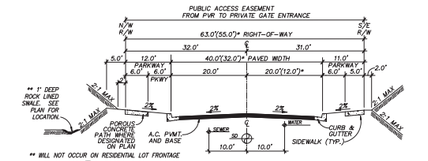
Otay Ranch Village 14 and Planning Areas 16/19 Proposed Project Amendment



1 PUBLIC PROCTOR VALLEY ROAD / CITY OF CHULA VISTA
CLASS II COLLECTOR (CCV)
NO PARKING PERMITTED WITHIN BIKE LANE / SHOULDER
40 MPH DESIGN SPEED
NTS

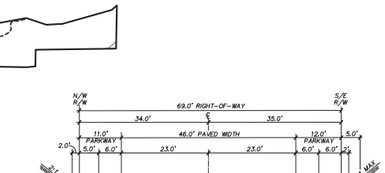


6 PUBLIC PROCTOR VALLEY ROAD
MODIFIED LIGHT COLLECTOR (2.2E)
NO PARKING PERMITTED
30 MPH DESIGN SPEED / 20 MPH AT ROUNDABOUT)
NTS
WAIVERS:
- MODIFICATIONS TO PARKWAYS AS SHOWN
- REDUCE DESIGN SPEED FROM 40 MPH TO 30 MPH (30 MPH)



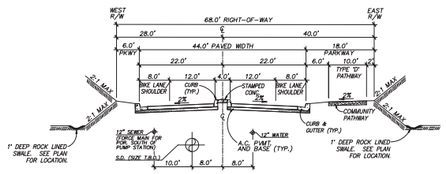
8a PRIVATE MODIFIED RESIDENTIAL COLLECTOR
PARKING PERMITTED ON BOTH SIDES OF STREET
25 MPH DESIGN SPEED
NTS
WAIVERS:
- REDUCE DESIGN SPEED FROM 30 MPH TO 25 MPH
- DUE TO STEEP TERRAIN AND AN EFFORT TO MINIMIZE IMPACTS TO THE SURROUNDING MSCP PRESERVE, A MINIMUM INTERSECTION SPACING OF 150' IS REQUESTED IN LIEU OF 200'.
- REDUCE MINIMUM HORIZONTAL CURVE RADIUS FROM 300' TO 200'
- MODIFICATIONS TO PARKWAY AS SHOWN
* PARKING CAN BE ELIMINATED ON ONE SIDE IF STREET IS NON-LOADED. SEE PLAN FOR LOCATIONS.

ST 'A' (FROM PVR TO ST 'B')
ST 'I' (FROM PVR TO ST 'I')

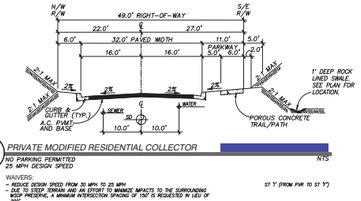


9b PRIVATE MODIFIED RESIDENTIAL ROAD
PARKING PERMITTED ON BOTH SIDES OF STREET
25 MPH DESIGN SPEED
NTS
WAIVERS:
- REDUCE DESIGN SPEED FROM 30 MPH TO 25 MPH
- MODIFICATIONS TO PARKWAY AS SHOWN

ST 'I' (FROM ST 'A' TO ST 'A')

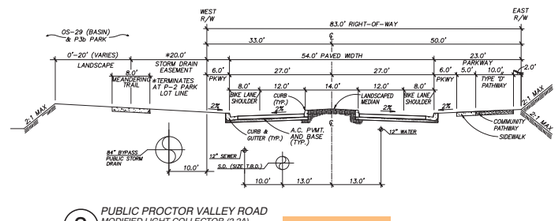


2 PUBLIC PROCTOR VALLEY ROAD
MODIFIED LIGHT COLLECTOR (2.2A)
NO PARKING PERMITTED
40 MPH DESIGN SPEED
NTS
WAIVERS:
- MODIFICATIONS TO PARKWAYS AS SHOWN
- MEDIAN REDUCED TO 4'
- RIGHT OF WAY REDUCED FROM 76' TO 68'

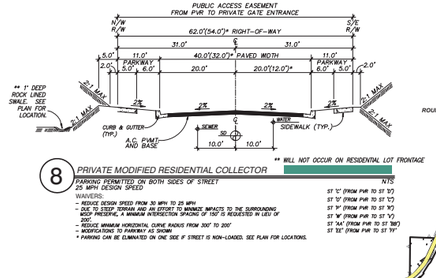


7 PRIVATE MODIFIED RESIDENTIAL COLLECTOR
NO PARKING PERMITTED
25 MPH DESIGN SPEED
NTS
WAIVERS:
- REDUCE DESIGN SPEED FROM 30 MPH TO 25 MPH
- DUE TO STEEP TERRAIN AND AN EFFORT TO MINIMIZE IMPACTS TO THE SURROUNDING MSCP PRESERVE, A MINIMUM INTERSECTION SPACING OF 150' IS REQUESTED IN LIEU OF 200'.
- REDUCE MINIMUM HORIZONTAL CURVE RADIUS FROM 300' TO 200'
- MODIFICATIONS TO PARKWAY AS SHOWN

ST 'I' (FROM PVR TO ST 'I')

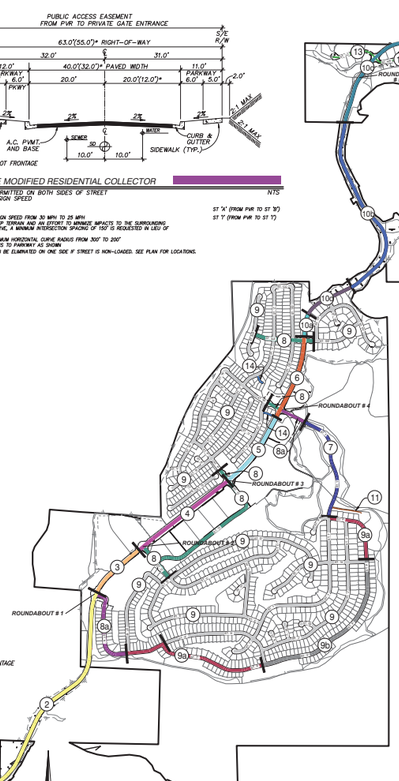


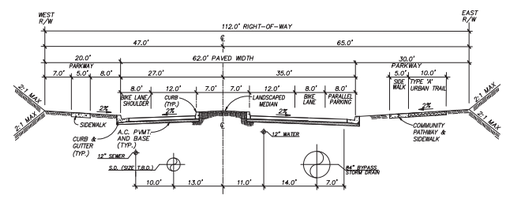
3 PUBLIC PROCTOR VALLEY ROAD
MODIFIED LIGHT COLLECTOR (2.2A)
NO PARKING PERMITTED
30 MPH DESIGN SPEED / 20 MPH AT ROUNDABOUT
NTS
WAIVERS:
- MODIFICATIONS TO PARKWAYS AS SHOWN
- REDUCE DESIGN SPEED FROM 40 MPH TO 30 MPH (30 MPH)



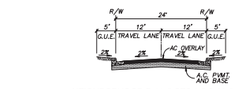
8 PRIVATE MODIFIED RESIDENTIAL COLLECTOR
PARKING PERMITTED ON BOTH SIDES OF STREET
25 MPH DESIGN SPEED
NTS
WAIVERS:
- REDUCE DESIGN SPEED FROM 30 MPH TO 25 MPH
- DUE TO STEEP TERRAIN AND AN EFFORT TO MINIMIZE IMPACTS TO THE SURROUNDING MSCP PRESERVE, A MINIMUM INTERSECTION SPACING OF 150' IS REQUESTED IN LIEU OF 200'.
- REDUCE MINIMUM HORIZONTAL CURVE RADIUS FROM 300' TO 200'
- MODIFICATIONS TO PARKWAY AS SHOWN
* PARKING CAN BE ELIMINATED ON ONE SIDE IF STREET IS NON-LOADED. SEE PLAN FOR LOCATIONS.

ST 'C' (FROM PVR TO ST 'D')
ST 'D' (FROM PVR TO ST 'C')
ST 'F' (FROM PVR TO ST 'G')
ST 'G' (FROM ST 'F' TO GUI. DE SAC)
ST 'I' (FROM ST 'F' TO GUI. DE SAC)
ST 'C', ST 'F', ST 'G', ST 'K', ST 'J', ST 'J', ST 'L', ST 'M', ST 'K', ST 'K', ST 'L', ST 'M', ST 'N', ST 'N', ST 'O', ST 'P', ST 'Q', ST 'R', ST 'S', ST 'T', ST 'BB', ST 'CC', ST 'DD', ST 'EE', ST 'FF', ST 'GG'



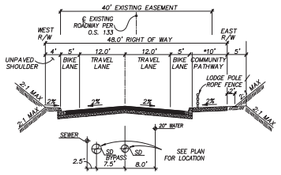


4 PUBLIC PROCTOR VALLEY ROAD
MODIFIED LIGHT COLLECTOR (2.2A)
30 MPH DESIGN SPEED / 20 MPH AT ROUNDABOUT
NTS
WAIVERS:
- MODIFICATIONS TO PARKWAYS AS SHOWN
- REDUCE DESIGN SPEED FROM 40 MPH TO 30 MPH (30 MPH)
- RIGHT OF WAY INCREASED FROM 76' TO 112'

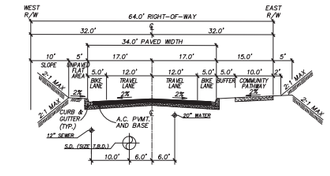


STREET KEY MAP
NOT TO SCALE

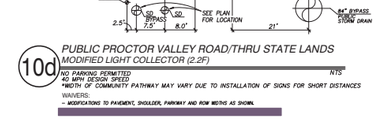
14 NEIGHBORHOOD R-11 (LOTS 1-5 & 29-32)
PRIVATE MODIFIED ALLEY
NO PARKING PERMITTED
25 MPH DESIGN SPEED
NTS



10b PUBLIC PROCTOR VALLEY ROAD/THRU STATE LANDS
MODIFIED LIGHT COLLECTOR (2.2F)
NO PARKING PERMITTED
40 MPH DESIGN SPEED
*WIDTH OF COMMUNITY PATHWAY MAY VARY DUE TO INSTALLATION OF SIGNS FOR SHORT DISTANCES
WAIVERS:
- MODIFICATIONS TO PAVEMENT, SHOULDER, PARKWAY AND ROW WIDTHS AS SHOWN.
NTS

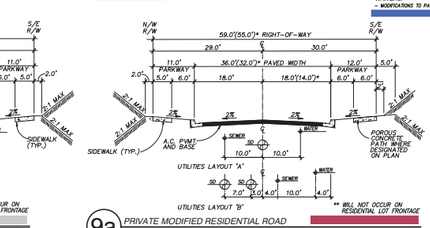


PUBLIC PROCTOR VALLEY ROAD
-FROM STATE PROPERTY LINE THRU PA19 TO NORTH BOUNDARY
10c MODIFIED LIGHT COLLECTOR (2.2F)
NO PARKING PERMITTED
40 MPH DESIGN SPEED / (20 MPH AT ROUNDABOUT)
NTS
WAIVERS:
- MODIFICATIONS TO PAVEMENT, SHOULDER, PARKWAY AND ROW WIDTHS AS SHOWN.



10a PUBLIC PROCTOR VALLEY ROAD TRANSITION FROM 6 TO 10d
MODIFIED LIGHT COLLECTOR (2.2F)
NO PARKING PERMITTED
30 MPH DESIGN SPEED
NTS
WAIVERS:
- MODIFICATIONS TO PARKWAYS AS SHOWN
- REDUCE DESIGN SPEED FROM 40 MPH TO 30 MPH

10d PUBLIC PROCTOR VALLEY ROAD/THRU STATE LANDS
MODIFIED LIGHT COLLECTOR (2.2F)
NO PARKING PERMITTED
NO MPH DESIGN SPEED
*WIDTH OF COMMUNITY PATHWAY MAY VARY DUE TO INSTALLATION OF SIGNS FOR SHORT DISTANCES
WAIVERS:
- MODIFICATIONS TO PAVEMENT, SHOULDER, PARKWAY AND ROW WIDTHS AS SHOWN.
NTS

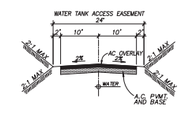


9 PRIVATE MODIFIED RESIDENTIAL ROAD
PARKING PERMITTED ON BOTH SIDES OF STREET
25 MPH DESIGN SPEED
NTS
WAIVERS:
- REDUCE DESIGN SPEED FROM 30 MPH TO 25 MPH
- DUE TO STEEP TERRAIN AND AN EFFORT TO MINIMIZE IMPACTS TO THE SURROUNDING MSCP PRESERVE, A MINIMUM INTERSECTION SPACING OF 150' IS REQUESTED IN LIEU OF 200'.
- REDUCE MINIMUM HORIZONTAL CURVE RADIUS FROM 300' TO 150'
* PARKING CAN BE ELIMINATED ON ONE SIDE IF STREET IS NON-LOADED. SEE PLAN FOR LOCATIONS.

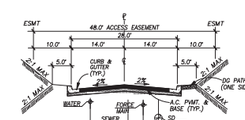
ST 'A' (FROM ST 'F' TO ST 'I')
ST 'B' (FROM ST 'A' TO ST 'B')
ST 'D' (FROM ST 'B' TO GUI. DE SAC)
ST 'F' (FROM ST 'I' TO GUI. DE SAC)
ST 'I' (FROM ST 'F' TO GUI. DE SAC)
ST 'C', ST 'E', ST 'H', ST 'K', ST 'J', ST 'L', ST 'J', ST 'M', ST 'K', ST 'N', ST 'L', ST 'M', ST 'O', ST 'N', ST 'P', ST 'O', ST 'Q', ST 'R', ST 'S', ST 'T', ST 'BB', ST 'CC', ST 'DD', ST 'EE', ST 'FF', ST 'GG'

9a PRIVATE MODIFIED RESIDENTIAL ROAD
PARKING PERMITTED ON BOTH SIDES OF STREET
25 MPH DESIGN SPEED
NTS
WAIVERS:
- REDUCE DESIGN SPEED FROM 30 MPH TO 25 MPH
- DUE TO STEEP TERRAIN AND AN EFFORT TO MINIMIZE IMPACTS TO THE SURROUNDING MSCP PRESERVE, A MINIMUM INTERSECTION SPACING OF 150' IS REQUESTED IN LIEU OF 200'.
- REDUCE MINIMUM HORIZONTAL CURVE RADIUS FROM 300' TO 150'
* PARKING CAN BE ELIMINATED ON ONE SIDE IF STREET IS NON-LOADED. SEE PLAN FOR LOCATIONS.

ST 'A' (FROM ST 'F' TO ST 'I')
ST 'F' (FROM ST 'A' TO ST 'A')
ST 'I' (FROM ST 'A' TO ST 'A')



11 COUNTY PUBLIC ACCESS ROAD/
WATER LINE MAINTENANCE ROAD
NO PARKING PERMITTED
25 MPH DESIGN SPEED
NTS



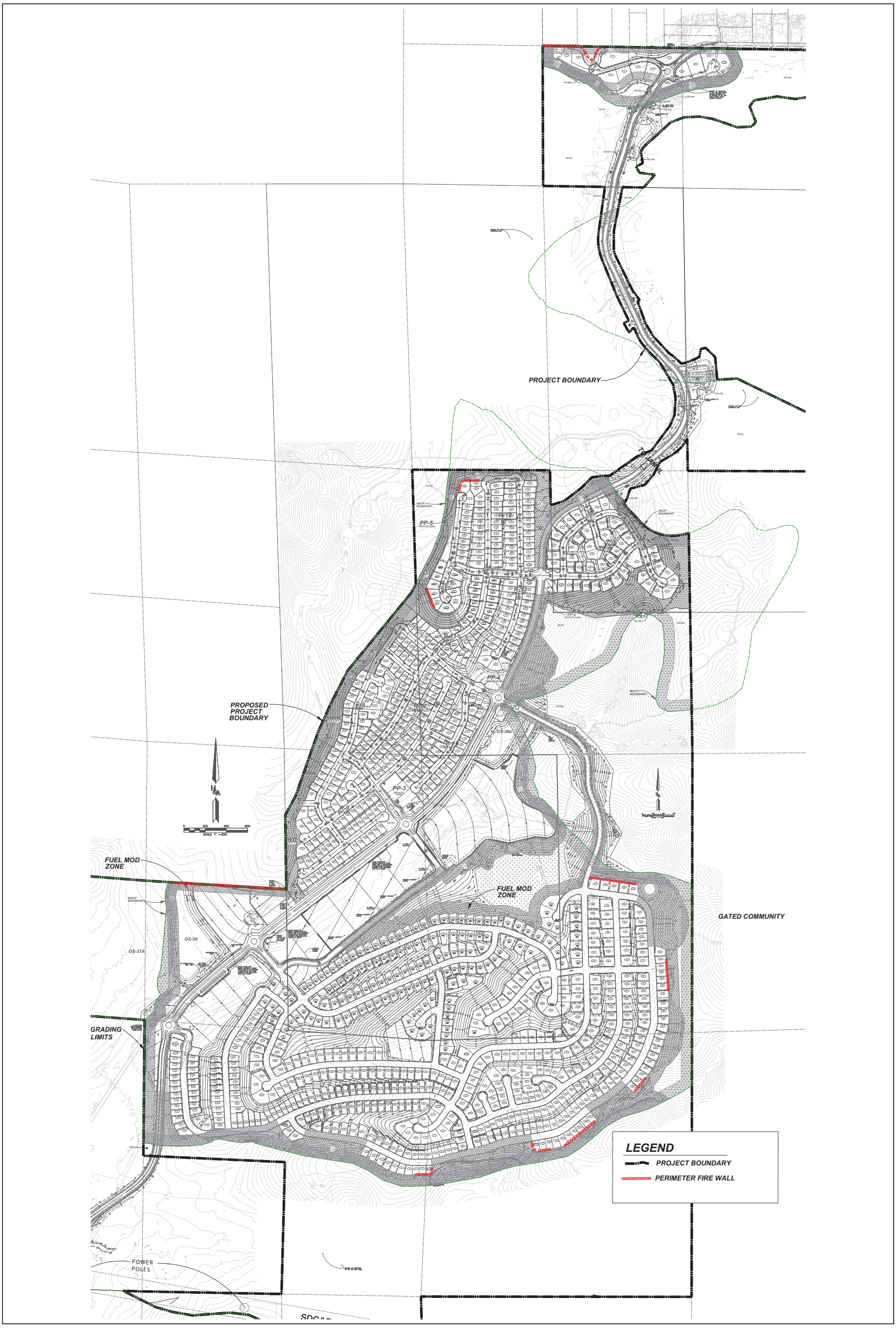
13 PRIVATE RURAL RESIDENTIAL ROAD
NO PARKING PERMITTED
25 MPH DESIGN SPEED
NTS

ST 'AJ', ST 'XX'

SOURCE: HUNSAKER 2019

DUDEK

UPDATED APPENDIX J
Road Classification and Street Cross Sections
Otay Ranch Village 14 and Planning Areas 16/19 Proposed Project Amendment



SOURCE: Hunsaker 2019

UPDATED APPENDIX L

Perimeter Fire Wall Exhibit

Otay Ranch Village 14 and Planning Areas 16/19 Proposed Project Amendment

DUDEK