

VISUAL IMPACT ASSESSMENT

for

STATE ROUTE 11 AND THE OTAY MESA EAST PORT OF ENTRY

SAN DIEGO COUNTY, CALIFORNIA
DISTRICT 11-SD-ROUTE 11
PM 0.0/2.8 EA 056310
DISTRICT 11-SD-ROUTE 905
PM R8.4/10.1

TIER II ENVIRONMENTAL IMPACT REPORT/ ENVIRONMENTAL IMPACT STATEMENT



November 2010



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VISUAL IMPACT ASSESSMENT

San Diego County, California

11- SD- 11 Post Mile 0.0-2.8

EA 056310

11 - SD - 905 Post Mile R8.4/10.1

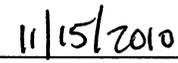
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Prepared By:



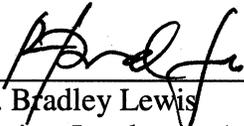
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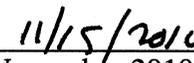
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List of Acronyms and Abbreviations

Δ	change
ADT	average daily traffic
AMSL	above mean sea level
BLM	Bureau of Land Management
Caltrans	California Department of Transportation
CBP	Customs and Border Protection
CEQA	California Environmental Quality Act
CHP	California Highway Patrol
City	City of San Diego
CL	Center Line
County	County of San Diego
CVEF	Commercial Vehicle Enforcement Facility
DoD	U.S. Department of Defense
EOMSP	East Otay Mesa Specific Plan
ES	Edge of Shoulder
ETW	Edge of Travel Way
FHWA	Federal Highway Administration
GSA	General Services Administration
I-	Interstate
MSE	Mechanically Stabilized Earth
OSP	Otay Subregional Plan
POE	Port of Entry
RCA	Resource Conservation Area
R/W	right of way
SANDAG	San Diego Association of Governments
SR-	State Route
TSM/TDM	Transportation Systems Management/Transportation Demand Management
U.S.	United States

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I. PURPOSE OF STUDY

The purpose of this study is to assess the visual impacts of the proposed project and to propose measures to mitigate any adverse visual impacts on the surrounding visual environment associated with the construction of 2.1 miles of proposed State Route (SR-) 11, associated modifications to SR-905, the proposed Otay Mesa East Port of Entry (POE) and a new Commercial Vehicle Enforcement Facility (CVEF).

II. PROJECT DESCRIPTION

A. PROJECT LOCATION

Proposed SR-11 extends generally east and south for approximately 2.1 miles from the east side of the approved SR-905/SR-125 Interchange (near Harvest Road), terminating at the proposed Otay Mesa East POE/CVEF sites (refer to Figures 1, Regional Location Map, and 2, Vicinity Map). Extending west of Harvest Road, the project would also include approximately 2.1 miles of connectors and auxiliary lanes linking SR-11 to SR-905. Approximately the eastern half of SR-11 and its connectors would be located within Subareas 1 and 2 of the County of San Diego East Otay Mesa Specific Plan (EOMSP), which is a part of the County Otay Subregional Plan (OSP), while the western portion of proposed SR-11 and its connectors would be within the Otay Mesa Community Plan area of the City of San Diego. Existing development within the SR-11 limits of disturbance includes portions of an industrial park (in the area just east of Sanyo Avenue), a vehicle auction yard near the southwestern corner of the Otay Mesa Road/Alta Road intersection, and an adjoining parcel to the west of this, which has been graded and is currently being used for truck parking. The remaining portions of the proposed limits of disturbance encompass areas of native and non-native vegetation, previously graded (but undeveloped) sites, state-owned right-of-way (R/W), and a number of unpaved roads and trails (refer to Figure 2).

The combined POE/CVEF footprint would extend from the eastern/southern terminus of proposed SR-11 to the United States (U.S.)-Mexico international border; it would be entirely within the EOMSP area and outside the boundary of the Coastal Zone. The proposed POE and CVEF sites are currently undeveloped, and encompass primarily non-native vegetation, with several unpaved roads and trails.

B. PROJECT ALTERNATIVES

Three build alternatives (referred to as the Two Interchange, One Interchange, and No Interchange alternatives), with several design/operational variations, as well as a No Build Alternative, are under evaluation in this report.

SR-11 would be constructed and operated as a toll facility under all of the build alternatives, with the San Diego Association of Governments (SANDAG) as the toll authority under State legislation (SB 1486). The proposed toll system is currently anticipated to include toll collection in both directions and the use of “smart technology” such as FasTrak, although additional toll-related options are still under evaluation.

Transportation Systems Management/Transportation Demand Management (TSM/TDM) measures being evaluated for the project include: (1) possible use of ramp metering at SR-11 interchange(s); (2) implementation of intelligent transportation systems strategies such as closed-circuit television cameras, traffic loop monitoring stations and transportation management center connections; (3) provision of multi-modal facilities and services for POE uses such as bicycle, pedestrian and bus facilities (e.g., dedicated lanes and staging areas), connectivity potential for Bus Rapid Transit service, and inclusion of space for a potential future transit center site; (4) implementation of variable congestion pricing; (5) provision of dedicated commercial and passenger traffic lanes; and (6) use of extended POE operation hours.

The project alternatives are described below, along with several variations of the build alternatives related to interchange/median design and operation of SR-11 as a freeway rather than a toll highway.

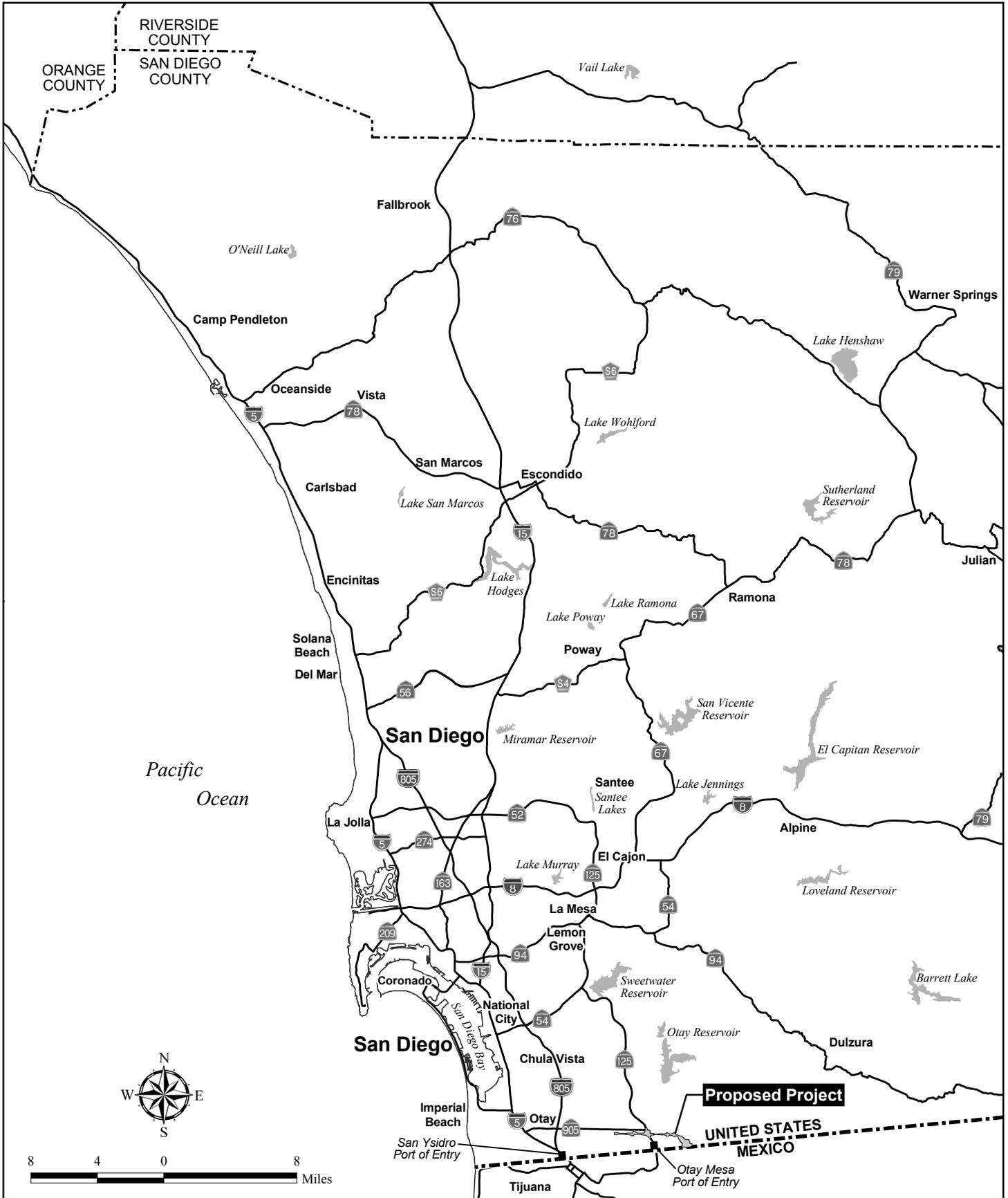
1. Two Interchange Alternative

a. State Route 11 Overview

Under the Two Interchange Alternative, SR-11 would be constructed as a four-lane toll highway. Refer to Figure 3 for an overview of the Two Interchange Alternative in comparison to the One and No Interchange Alternatives described later in this document, in Sections II.B.2 and II.B.3. Detailed maps of the Two Interchange Alternative are provided in Figures 4a-d. The proposed design would include two standard-width main lanes (12 feet wide) and shoulders (10 feet wide) in each direction, and standard sight distances. Auxiliary lanes would also be included near the interchanges.

The proposed median widths for all alternatives would vary within the proposed R/W from west to east as follows: the median would narrow from 26 feet wide west of Sanyo Avenue to a width of 22 feet for a distance of approximately 1,600 feet to minimize impacts to nearby buildings, before widening over a distance of approximately 630 feet to a 62-foot median width for the remaining eastern portion of SR-11. Within the Sanyo Avenue area, the Two Interchange alternative would include the 22-foot median, two standard-width through lanes in each direction, an auxiliary lane in each direction associated with the Enrico Fermi Drive Interchange, shoulders, and related grading. In this area, SR-11 would be elevated above the surrounding area. Cross-Section A-a, Figure 5, is a section taken looking eastward through proposed SR-11, and shows the placement of the highway in relation to the abutting properties east of Sanyo Avenue. As it extends between lots east of Sanyo Avenue, SR-11 would be supported on each side by a retaining wall. Based on preliminary designs, the retaining wall on the north side is anticipated to range in height from approximately 19 to 26 feet. The retaining wall on the south side is estimated to range from approximately 16 to 22 feet in height. Three-foot-high concrete barriers would be placed at the top of the retaining walls and respective outer edges of the shoulders. The median also would support a three-foot-high concrete barrier.

Proposed SR-11 would be located midway between Otay Mesa Road and Airway Road for most of its length, and would cross four local surface streets: Sanyo Avenue, Enrico Fermi Drive, Alta Road, and Siempre Viva Road. It would extend east from the vicinity of Harvest Road (at the



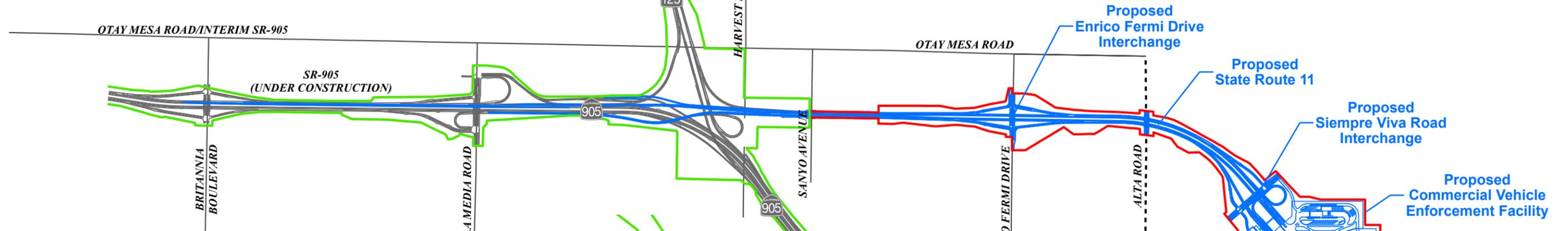
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Regional Location Map

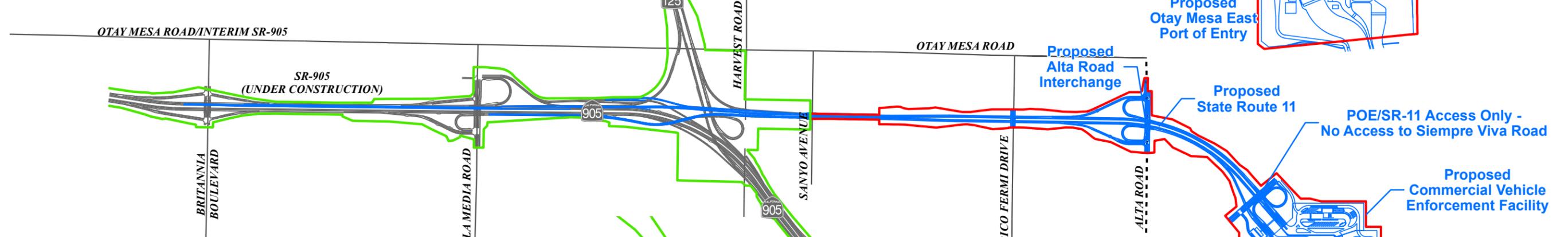
STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT

Figure 1

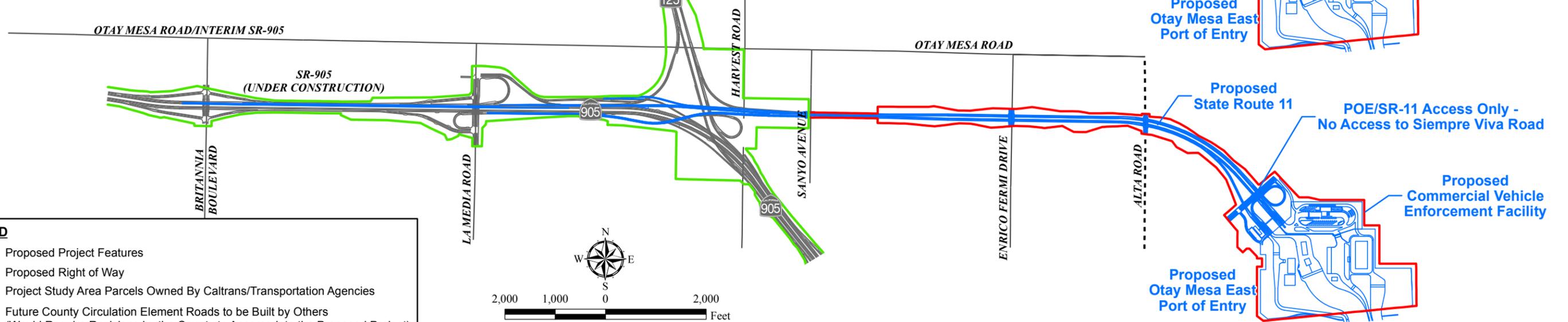
Two Interchange Alternative



One Interchange Alternative



No Interchange Alternative



LEGEND

- Proposed Project Features
- Proposed Right of Way
- Project Study Area Parcels Owned By Caltrans/Transportation Agencies
- Future County Circulation Element Roads to be Built by Others (Would Require Revisions by the County to Accomodate the Proposed Project)

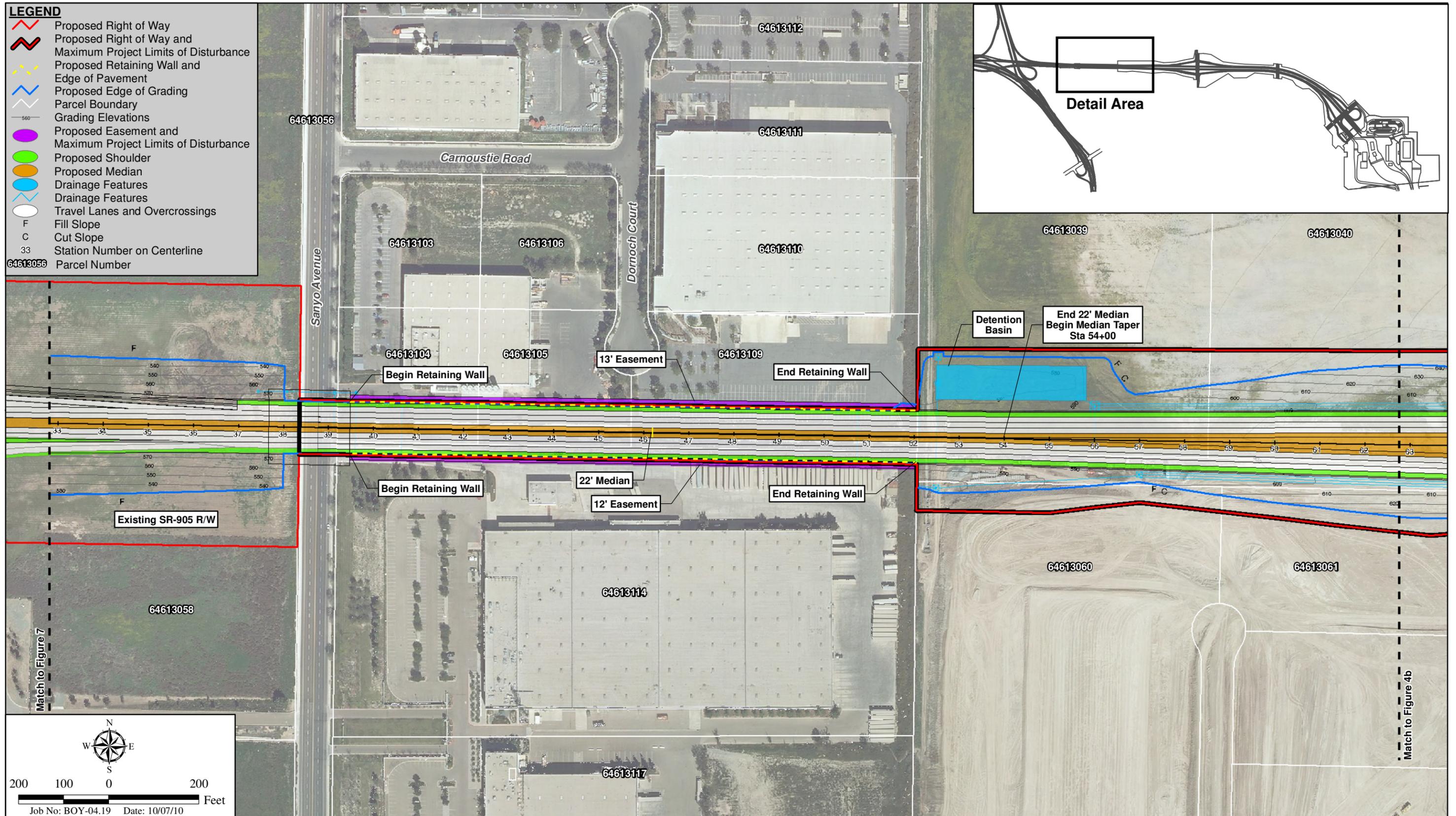
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Comparative Overview of the Project Build Alternatives

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT

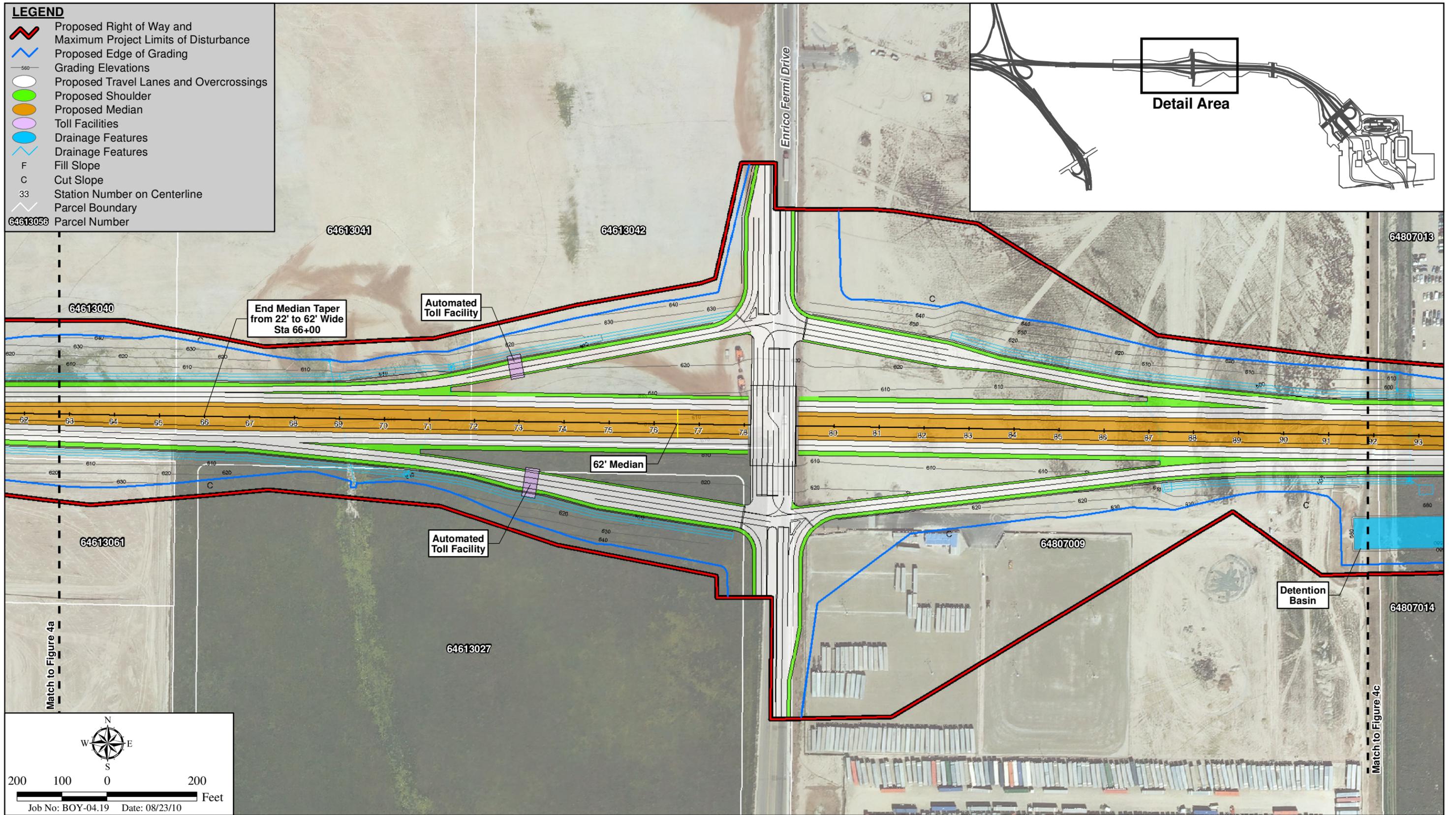
Figure 3



Two Interchange Alternative - Major Project Features Sheet A

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT

Figure 4a



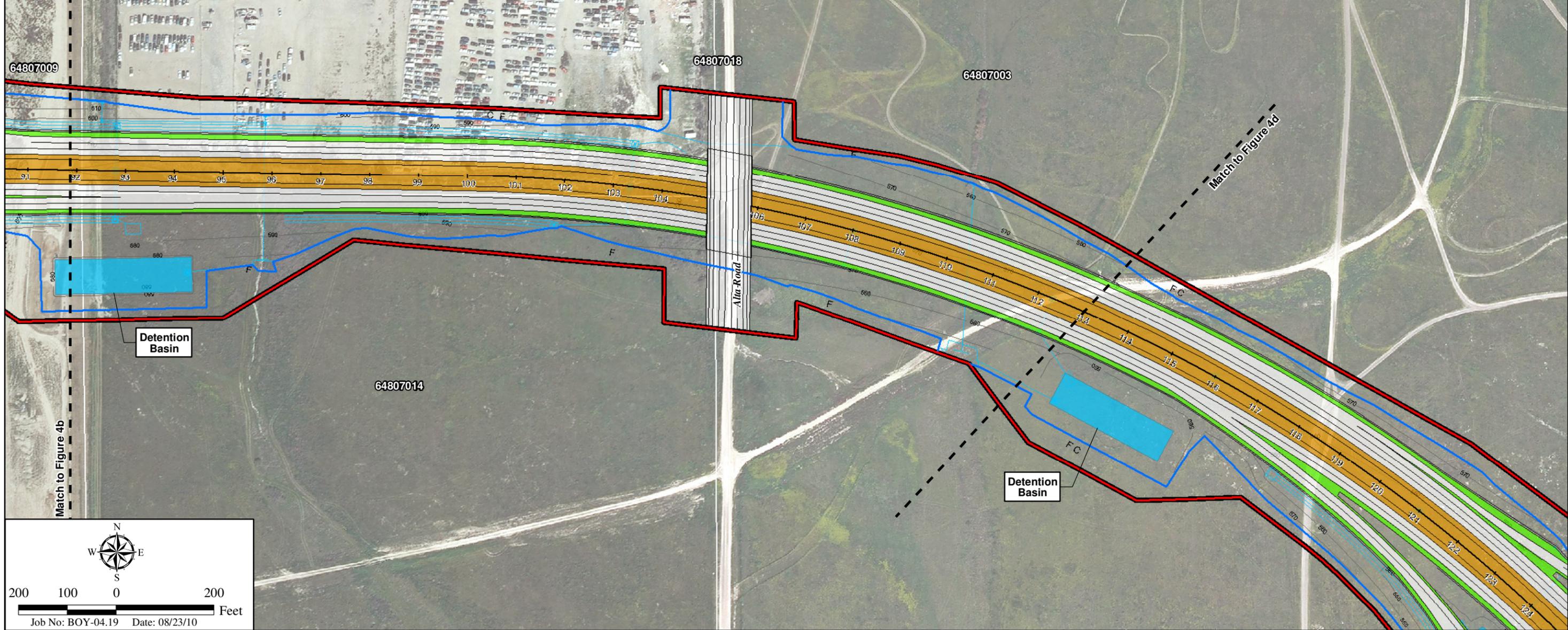
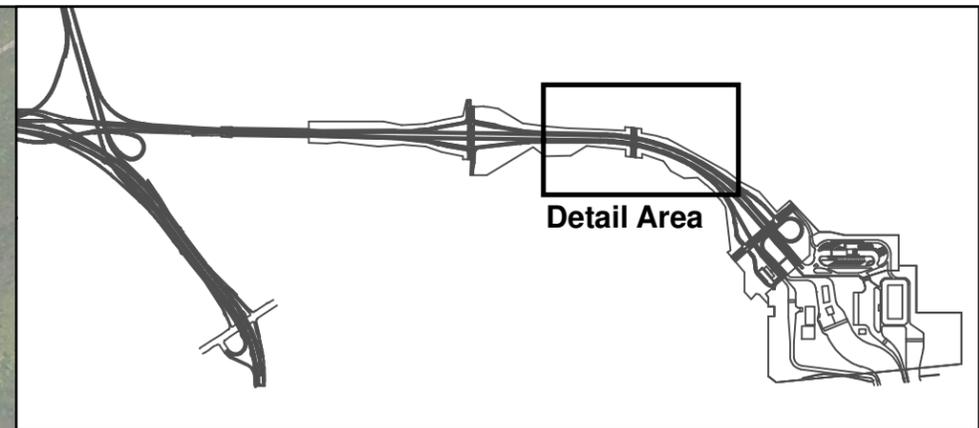
Two Interchange Alternative - Major Project Features Sheet B

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT

Figure 4b

LEGEND

-  Proposed Right of Way and Maximum Project Limits of Disturbance
-  Proposed Edge of Grading
-  Grading Elevations
-  Proposed Travel Lanes and Overcrossings
-  Proposed Shoulder
-  Proposed Median
-  Drainage Features
-  Drainage Features
-  Fill Slope
-  Cut Slope
-  Station Number on Centerline
-  Parcel Boundary
-  Parcel Number



Match to Figure 4b

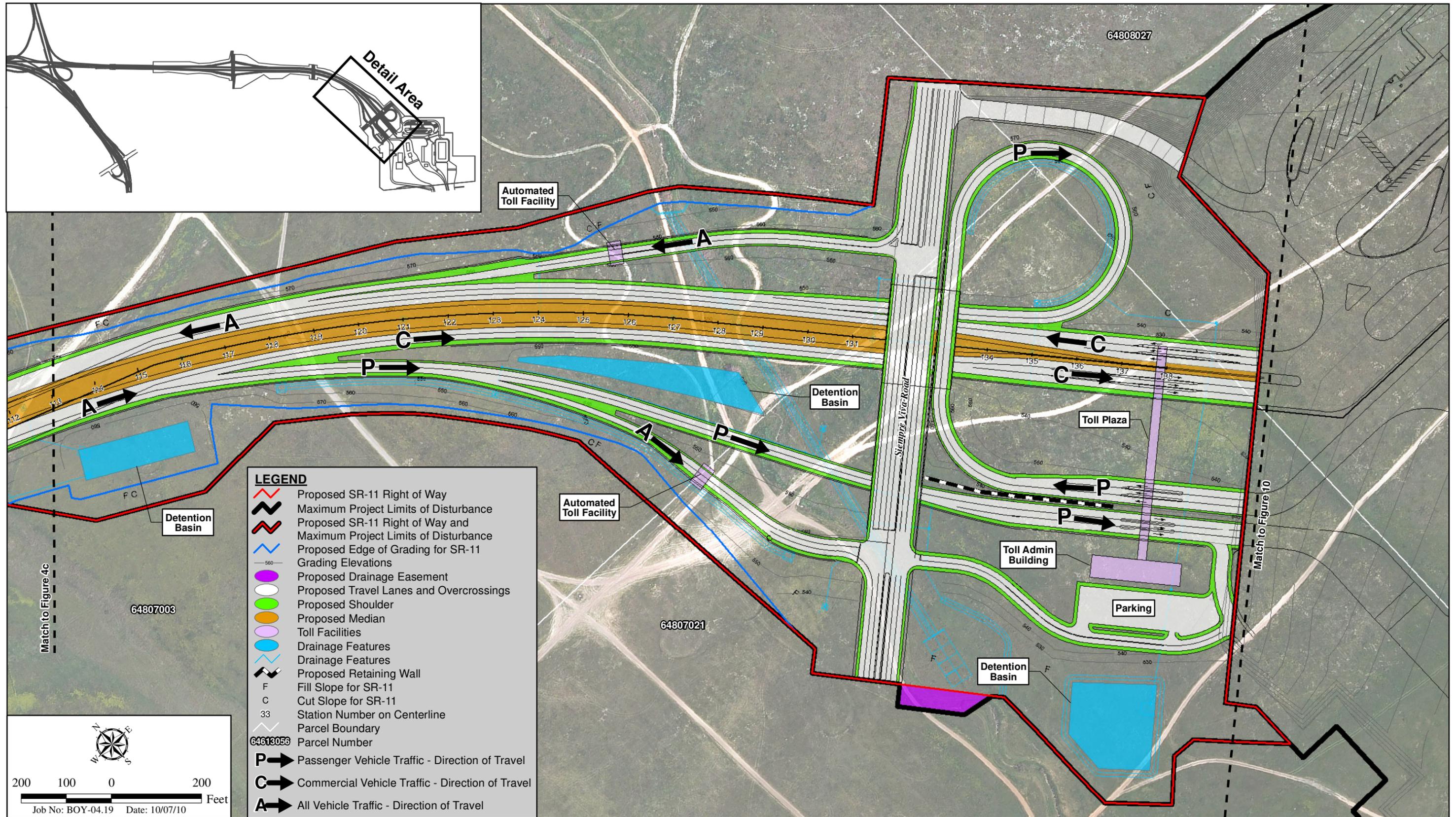
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Two Interchange Alternative - Major Project Features Sheet C

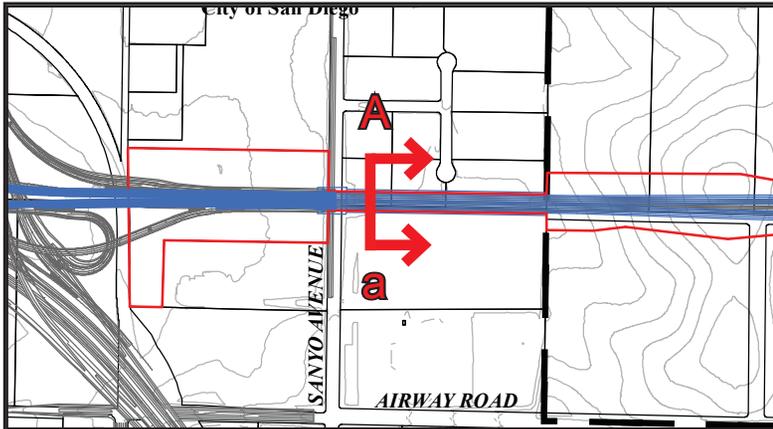
STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT

Figure 4c

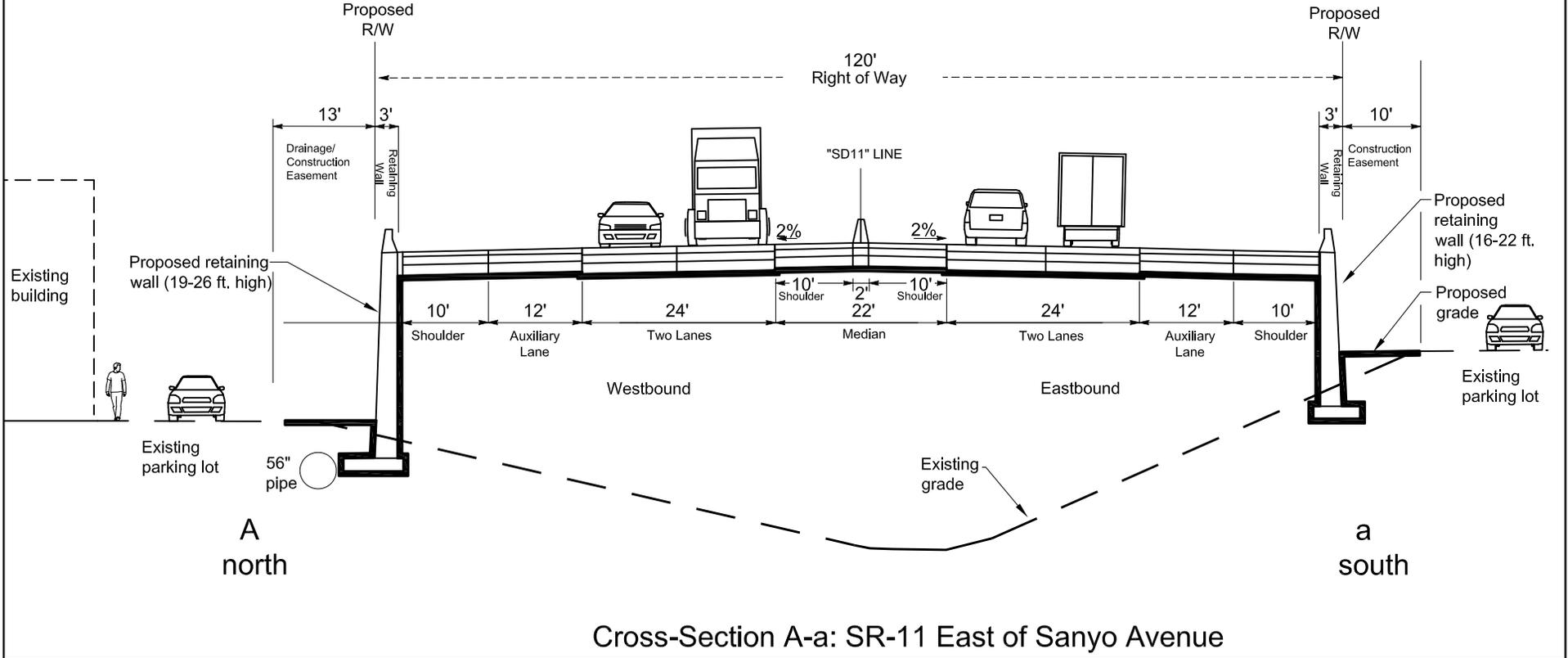


Two Interchange Alternative - Major Project Features Sheet D

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT



Cross-section A-a, location: "SR-11" station 41+00



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Cross-Section A-a

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT

Figure 5

SR-905/SR-905/SR-11 Interchange) for approximately 1.3 miles, before curving to the southeast near Alta Road and continuing for approximately 0.8 mile to connect with the proposed POE/CVEF site. This alternative would include an undercrossing structure at Sanyo Avenue; an overcrossing structure at Alta Road; and interchanges with local roadways at Siempre Viva Road (half interchange) and Enrico Fermi Drive¹. In addition, connectors and auxiliary lanes would link SR-11 to SR-905.

Proposed limits of grading and R/W are expected to be up to 500 feet wide, with the exception of the interchange locations, which would require additional space. These limits would include all required cut/fill slopes and project-related drainage facilities, lighting, fencing, utilities and landscaping, and would be sufficient to accommodate all required construction staging and storage for the project except that in the Sanyo Avenue area, there would be easements totaling 0.7 acre, north and south of the proposed R/W, and a 0.2-acre easement in the vicinity of Siempre Viva Road. These easements would accommodate additional project-related construction, drainage and maintenance requirements that would fall outside of the proposed R/W.

Additional information regarding SR-11 interchanges and overcrossings are provided below under 1.c.

b. SR-905 Modifications to Accommodate SR-11 Connections

To link SR-11 to SR-905 (under construction), connectors would be provided and certain modifications to the approved SR-905 design would be required. The modifications are described for the Two Interchange Alternative, but would be the same under the One and No Interchange Alternatives. SR-905 was originally approved as a six-lane highway (three lanes in each direction), with a median wide enough to accommodate four additional lanes, two of which could function as HOV lanes should future demand justify their construction. The portion of SR-905 between SR-125 and Britannia Boulevard is currently under construction. The eastern portion of SR-905 (not yet constructed) is planned to include local access ramps (one to two lanes in each direction) from SR-905, just east of the SR-905/SR-125 interchange, to Enrico Fermi Drive, along similar alignments to those that are now proposed as connectors between SR-11 and SR-905. With implementation of SR-11, certain modifications to the approved SR-905 design would be required, and are included as part of the proposed project. Refer to Figure 3 for an overview of the project features west of the SR-905/SR-125/SR-11 Interchange. Figures 6a, 6b and 7 illustrate these features in more detail.

- The previously approved ramps between SR-905 and Enrico Fermi Drive would be replaced by the western portion of SR-11 (east of Harvest Road), as well as two-lane connectors for the entire length in each direction (west of Harvest Road) between SR-905 and SR-11. The northern (westbound) connector would be constructed along approximately the same alignment as the previously approved SR-905 on-ramp from

¹ The Caltrans Highway Design Manual defines an undercrossing as a structure designed to allow a local roadway to pass under a highway, while an overcrossing is defined as a structure designed to allow a local roadway to pass over a highway. An interchange is defined as a system of interconnecting roadways in conjunction with one or more grade separations providing for the interchange of traffic between two or more roadways on different levels.

Enrico Fermi Drive, while the southern (eastbound) connector would follow the approved off-ramp alignment for some of its length, but would curve approximately 110 feet further south between SR-905 stations 627+00 and 641+00, to reduce the length of the bridge span over SR-905. Refer to Figure 7 for a map detailing the connectors within the interchange that would be modified. (Figure 7 also depicts additional connectors that could be added to the SR-905/SR-125/SR-11 Interchange under the design variations described later in this document in Section II.C.3.)

- On the eastbound side of SR-905, an additional auxiliary lane would be extended between La Media Road and the SR-11 connector, requiring the widening of this area by up to 12 feet.
- To accommodate weaving movements on westbound SR-905, the SR-11 merge with the SR-905 travel lanes would taper to match SR-905 in the vicinity of the Britannia Boulevard Interchange. This merge occurred at the La Media Road Interchange in the previously-approved design for SR-905.

The SR-905 modifications to accommodate the proposed SR-11 connections would be entirely within existing state R/W.

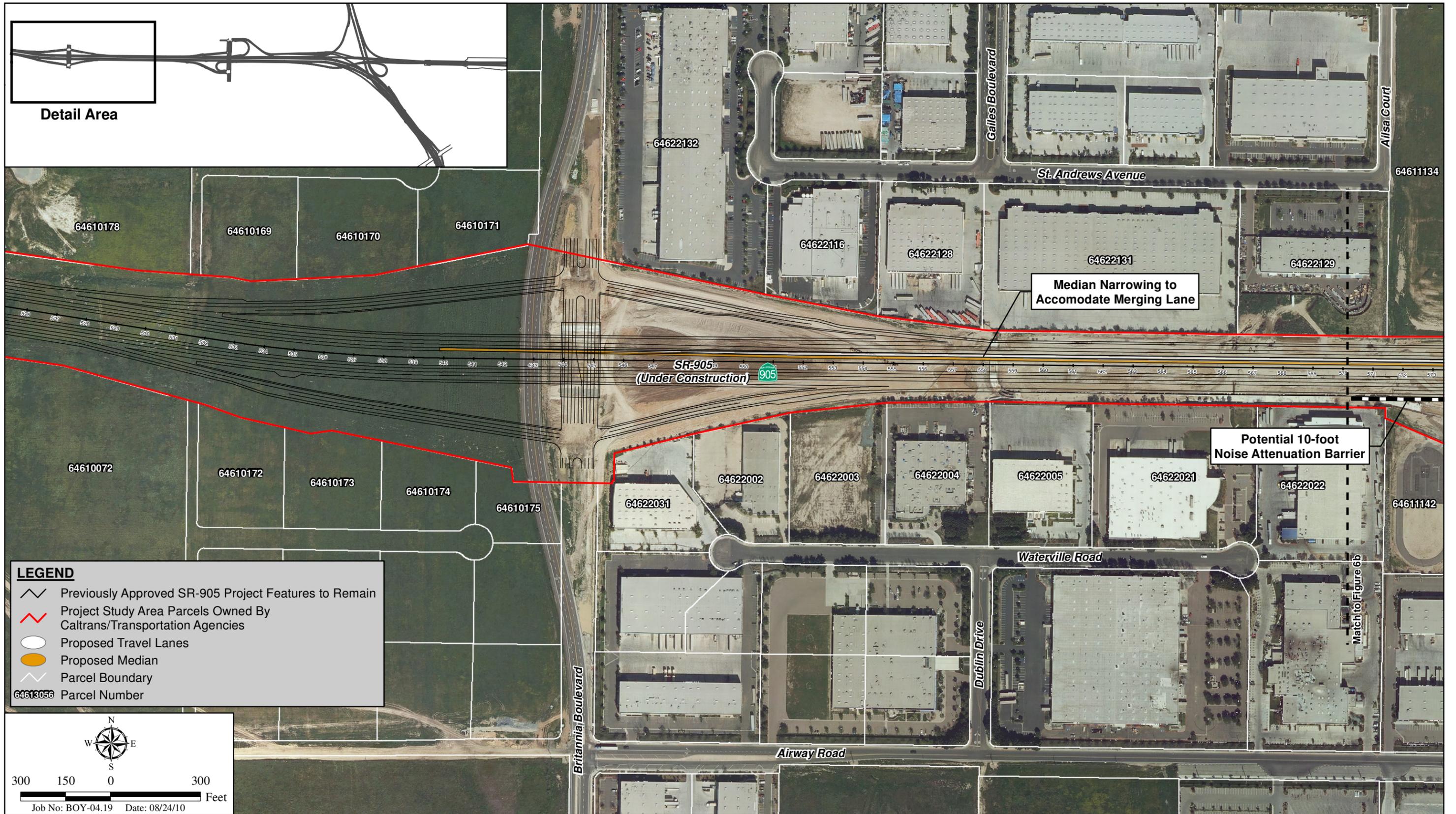
A noise attenuation barrier may be required along the southern edge of SR-905 in the vicinity of the outdoor track at Southwestern College, if found feasible and reasonable by the applicable Noise Study Report (NSR) and Noise Abatement Decision Report (NADR). If constructed as part of the proposed project, the noise attenuation barrier would be approximately 591 feet long and 10 feet high, and would be placed along the edge of the southern SR-905 shoulder where Southwestern College abuts the SR-905 R/W. Refer to Figures 6a and 6b for the location of this potential noise attenuation barrier.

c. State Route 11 Interchanges and Overcrossings

Under the Two Interchange Alternative, two interchanges would be constructed along SR-11 at Enrico Fermi Drive and Siempre Viva Road (refer to Figures 3, 4b and 4d).

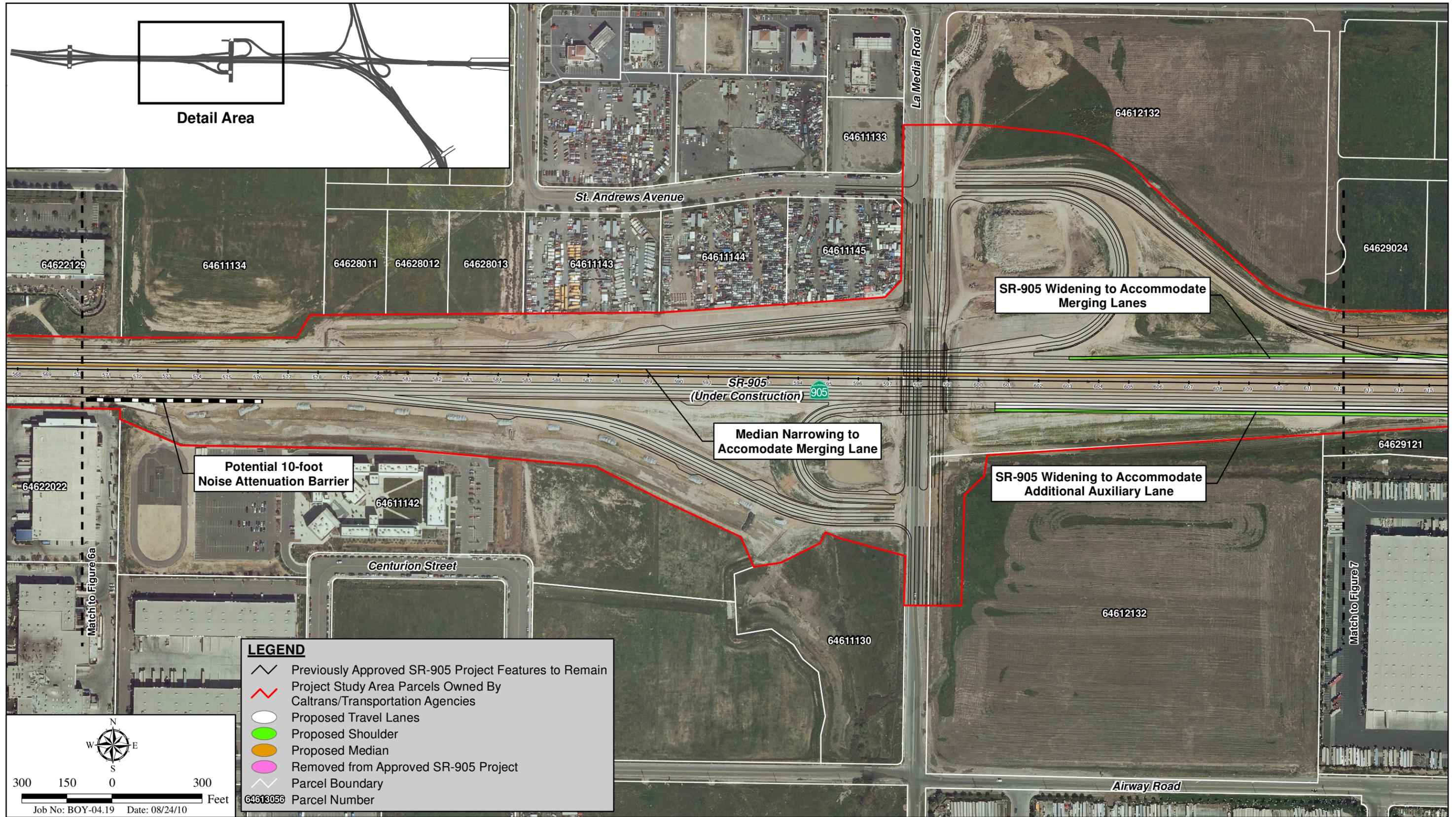
The proposed interchange at Enrico Fermi Drive would have on- and off-ramps to/from both east- and westbound SR-11 (and automated toll facilities along the westbound on-ramp and eastbound off-ramp). This interchange would be located approximately one mile east of the SR-905/SR-125/SR-11 Interchange, and approximately one mile west of the proposed interchange at Siempre Viva Road.

The proposed Siempre Viva Road Interchange under this alternative would be a half interchange with separate ramps for passenger-only and commercial traffic into and out of the new POE/CVEF. This half interchange would also provide an on-ramp from Siempre Viva Road to westbound SR-11; and an off-ramp to Siempre Viva Road from eastbound SR-11 (refer to Figure 4d). The interchange would not provide access from Siempre Viva Road to the POE via eastbound SR-11, nor would it provide public access to Siempre Viva Road for travelers exiting the POE via westbound SR-11. (A controlled-access road just east of the interchange would permit entry for POE/CVEF employees only.) A retaining wall of approximately 415 feet in length would run between the eastbound and westbound passenger lanes, gradually rising in



Major Project Features West of SR-905/SR-125/SR-11 Interchange (All Alternatives)

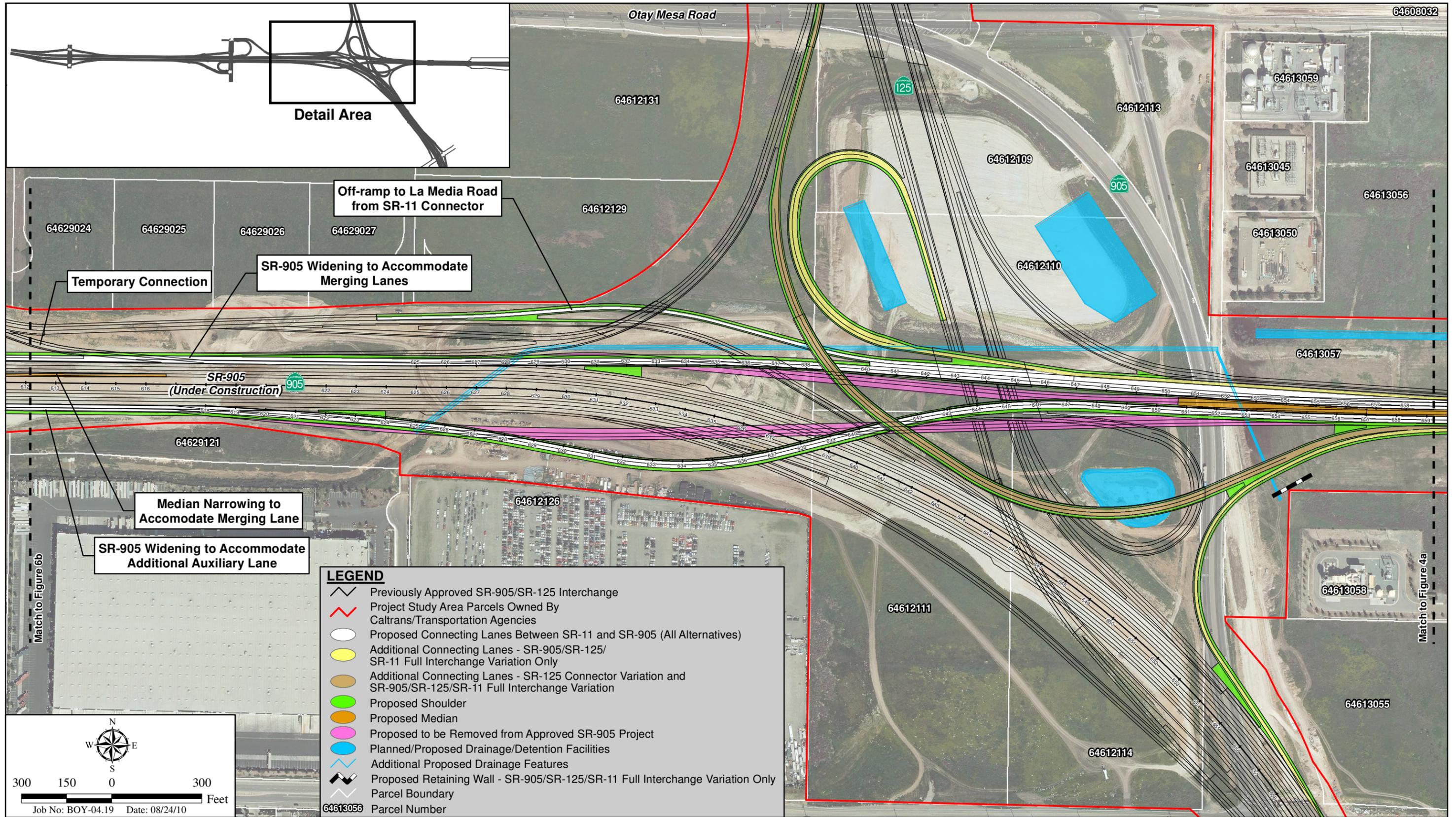
STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT



Major Project Features West of SR-905/SR-125/SR-11 Interchange (All Alternatives)

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT

Figure 6b



SR-905/SR-125/SR-11 Interchange and Variations

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT

Figure 7

height from about 3 feet just north of the toll plaza to approximately 20 feet at the Siempre Viva Road overcrossing bridge. This concrete retaining wall would help elevate the westbound passenger lane as it enters the loop-style westbound SR-11 on-ramp.

Proposed limits of grading and R/W are expected to be up to 500 feet wide, with the exception of the interchange locations, which would require additional space. These limits would include all required cut/fill slopes and project-related drainage facilities, lighting, fencing, utilities and landscaping, and would be sufficient to accommodate all required construction staging and storage for the project except that in the Sanyo Avenue area, there would be easements totaling 0.7 acre, north and south of the proposed R/W, and a 0.2-acre easement in the vicinity of Siempre Viva Road. These easements would accommodate additional project-related construction, drainage and maintenance requirements that would fall outside of the proposed R/W.

Cross-Section B-b, Figure 8, looks eastward, and illustrates the SR-11/Enrico Fermi Drive Interchange. SR-11 at this point would be lower than the surrounding area, and Enrico Fermi Drive would cross over the highway. The approximate alignment is illustrated in the cross-section.

Alta Road, when extended southward, also would cross over SR-11. As illustrated in Cross-section C-c, Figure 9, the final grade of SR-11 would be relatively close to the existing grade surrounding Alta Road. Where Cross-Section B-b cuts lengthwise through Enrico Fermi Drive, Cross-Section C-c cuts perpendicularly through the Alta Road overcrossing structure, and lengthwise through SR-11.

d. Otay Mesa East POE

The proposed POE would accommodate northbound and southbound commercial and passenger traffic, as well as pedestrians and bicycles. The POE site would be accessed from the north by SR-11. From the south, entry would be through the proposed Otay II POE on the Mexican side of the border. Southbound traffic leaving the proposed Otay II POE in Mexico would enter the non-tolled segment of the Tijuana-Tecate Toll Road.

The proposed POE site includes an irregularly shaped polygon of approximately 106.3 acres north of the international border across from the associated Otay II POE site in Mexico. Between the two POEs is a 150-foot wide strip of federal land patrolled by the U.S. Border Patrol. Approximately 7.4 acres within this strip of land would be impacted by the proposed project to provide northbound and southbound connections between the two POEs, as well as drainage outlet structures from the Otay Mesa East POE. In addition, an existing 24-inch natural gas main within the POE site (and the CVEF site described below) is currently planned to be relocated to the east adjacent to the POE and CVEF sites. Refer to Figure 10 for the conceptual layout of the POE.

The proposed Otay Mesa East POE would accommodate all of the federal agency and security functions currently anticipated to be necessary for the long-term effective operation of an international POE. Due to concerns regarding potential acts of terrorism, the POE would be

designed to conform with the following directives: (1) The October 19, 1995 Executive Order 12977 and addenda, which address the quality and effectiveness of security and protection measures for non-military federal facilities; (2) the Land Port of Entry Design Guide (Customs and Border Protection [CBP] et al. 2006) and the Security and Information Technology Supplemental Guide (CBP et al. 2007), both developed by CBP, General Services Administration (GSA) and the Interagency Security Committee; and (3) the Department of Defense (DoD) Unified Facilities Criteria Manual (4-010-01), entitled *DoD Minimum Antiterrorism Standards for Buildings* (DoD 2003). Sufficient space has been provided within the proposed POE site to accommodate future southbound inspections, and conceptual facilities are identified. Detailed design for such facilities are underway as part of a Program Development Study (PDS) pursuant to GSA and CBP protocol.

Following implementation of the proposed project, it is anticipated that the existing Otay Mesa POE would remain open to all commercial, passenger, bus, bicycle and pedestrian traffic, while the existing POE at San Ysidro would continue to accommodate only passenger, bus, bicycle and pedestrian traffic.

e. Transit Center Site

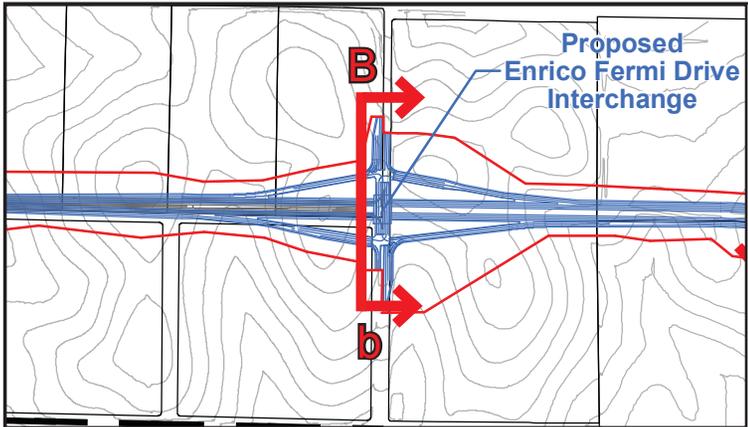
The overall POE footprint includes space to accommodate a potential future transit center adjacent to the POE. This potential transit facility is not part of the proposed project and would be designed and constructed by others. The intent of reserving space for a potential future transit center is to ensure that opportunities to implement transit service to the POE, such as Bus Rapid Transit, would not be precluded by future development in the project site vicinity. It is currently anticipated that a future transit center would encompass an approximately two-acre rectangular site in the vicinity of the western POE boundary. Refer to the Other Non-Commercial Facilities referenced in Figure 10.

f. Commercial Vehicle Enforcement Facility

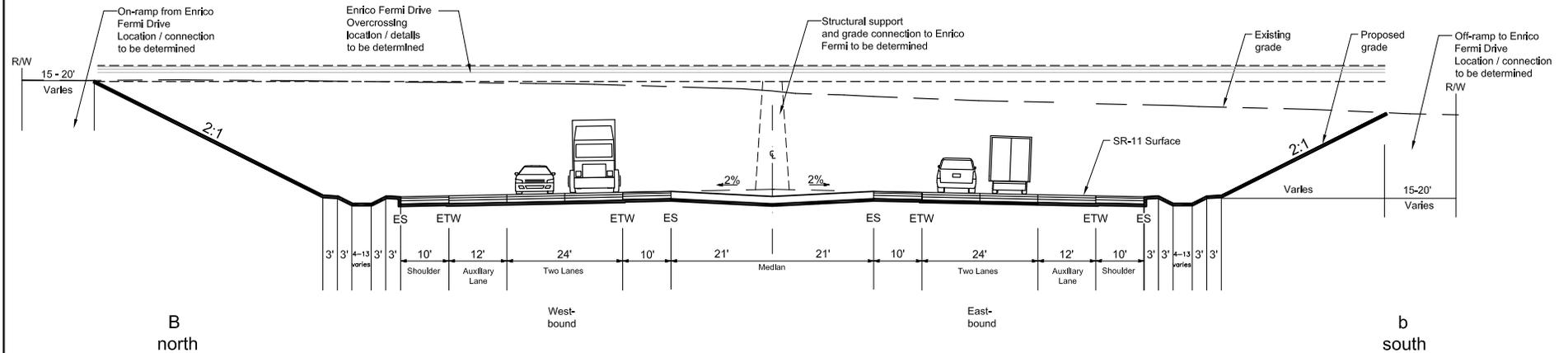
The proposed site for the new CVEF would include approximately 23.3 acres and would be located east of SR-11 along the northern POE boundary. After receiving clearance to enter the U.S. at the POE, northbound commercial vehicles would be routed into the CVEF facility for a safety/weight inspection by the California Highway Patrol (CHP) prior to being released onto the regional roadway system. The CVEF design would be similar to the CVEF at the existing Otay Mesa POE, with anticipated facilities to include an approximately 8,000-square foot main building, two commercial scales, inspection bays and other facilities. Refer to Figure 10, which includes the conceptual CVEF layout.

g. Landscape Treatments/Lighting

Landscaping would incorporate non-invasive, drought tolerant species, per Caltrans standard practices, which specify planting or seeding graded slopes with native species where feasible. The landscape palette and aesthetic treatment of structures (overcrossings, undercrossings, etc.) would be compatible with that developed for SR-905 and SR-125 (south portion). The project would include a variety of ground covers and plantings for permanent erosion control, such as native and drought tolerant species, as well as a variety of rock mulch. All areas adjacent to

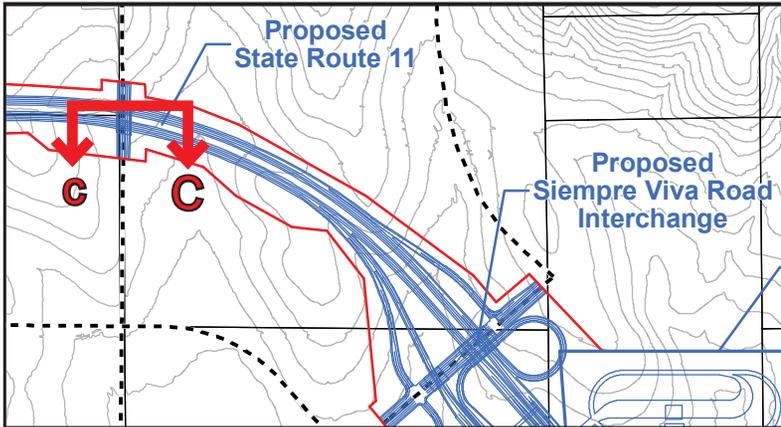


Cross-section B-b, location: SR-11 station 77+50

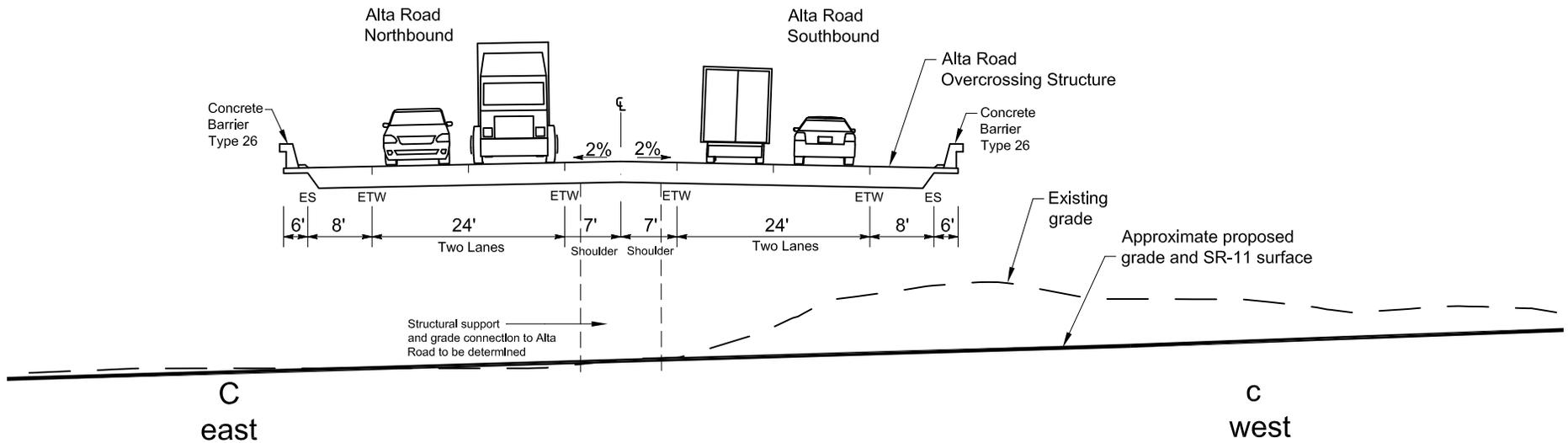


Cross-Section B-b: SR-11 at Enrico Fermi Drive Overcrossing

Cross-Section B-b



Cross-section C-c, location: "Alta" station 36+50



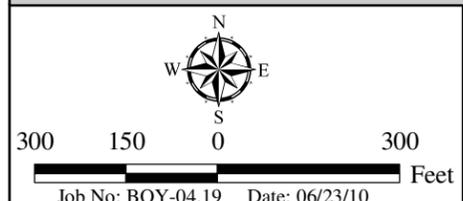
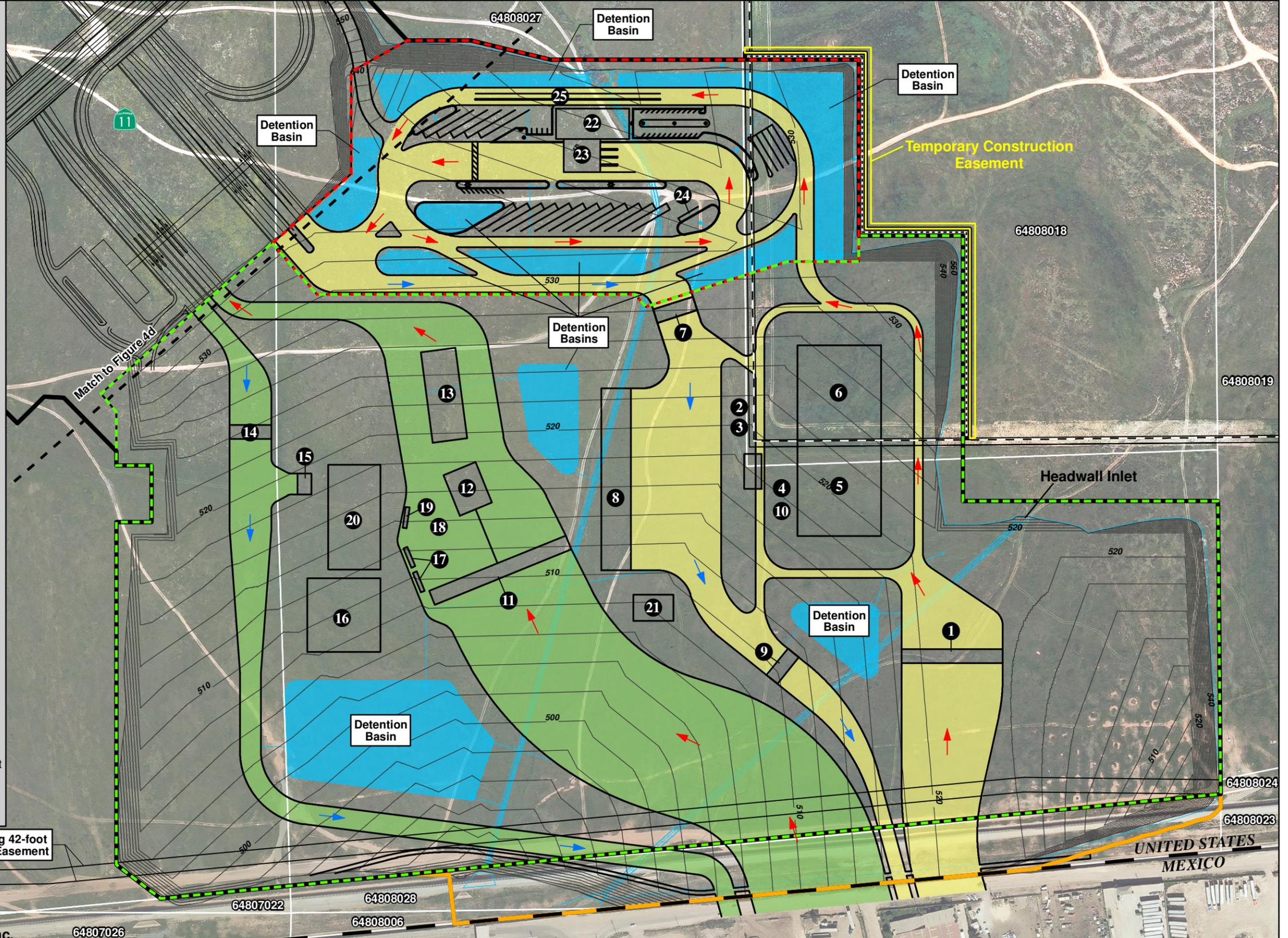
Cross-Section C-c: Alta Road at Alta Road Overcrossing

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Cross-Section C-c

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT

Facility Number	Description
Northbound (Inbound/Import) Commercial Facilities	
1	Commercial Primary Inspection Booth/Canopies
2	Commercial VACIS Lanes (Building)
3	Commercial Bulk Storage Inspection Bins
4	Bird Quarantine Building
5	Commercial Inspection Building
6	Commercial Inspection Docks
Southbound (Outbound/Export) Commercial Facilities	
7	Commercial Primary Inspection Booth/Canopies
8	Commercial Inspection Building/Docks
9	Commercial Exit Lanes/Booth/Canopies
10	Seizure Vault
Northbound (Inbound) Non-commercial Facilities	
11	Non-commercial Primary Inspection Booth/Canopies
12	Non-commercial Primary Headhouse
13	Non-commercial Secondary Inspection Lanes/Booths/Canopy
Southbound (Outbound) Non-commercial Facilities	
14	Non-commercial Primary Inspection Canopy
15	Non-commercial and Commercial Inspection Building
Other Non-commercial Facilities	
16	Main Building
17	Bus Offload Spaces (10 by 60 feet each, Non-building)
18	Bus Plaza Canopy
19	Bus Inspection Space (12 by 60 feet, Non-building)
Parking Facilities	
20	General Parking Lot (Non-building)
21	Commercial Truck Impound Lot (1,750 sf/space, Non-building)
CVEF Facilities	
22	Administration Building
23	Inspection Bays
24	Smog Inspection
25	Weight Scales
	Northbound Travel
	Southbound Travel
	Passenger Vehicle Traffic
	Commercial Vehicle Traffic
	Existing 24-inch Fuel Line
	Proposed 24-inch Fuel Line Relocation within 20-foot Easement
	Grading Elevations
	Drainage Features
	Drainage Features
	Storm Drain With Inlets (■) and Outlets (□)
	Proposed SR-11 Right of Way
	Additional Disturbance Limits within U.S. Border Patrol Easement
	Parcel Boundary
	CVEF Boundary
	POE Boundary



Source: AECOM, Inc.

Job No: BOY-04.19 Date: 06/23/10

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Conceptual Otay Mesa East POE and CVEF Layout

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT

Figure 10

native plant communities would be planted with native species. All areas would be irrigated; areas planted with native species would be irrigated temporarily until the plants are established. All signage would conform with Caltrans/FHWA standards. Night lighting would be installed along SR-11, including enhanced safety lighting for under- and overpasses and pedestrian scale lighting where appropriate, as needed for safety. Outdoor lighting would be less than 4,050 lumens and fully shielded, in conformance with Caltrans specifications. All fixtures would use low-sodium, amber bulbs to minimize light and glare and to ensure consistency with County standards in the EOMSP area as well as visual compatibility with surrounding local street lighting. Approximately six-foot high chain link fencing would be required along the SR-11 R/W for access control and security purposes.

2. One Interchange Alternative

The designs of the SR-905/SR-125/SR-11 Interchange, the SR-11/SR-905 connectors, the Otay Mesa East POE (including the potential future transit center site), and the CVEF would be the same under this alternative as described above for the Two Interchange Alternative. The unique features of the One Interchange Alternative would involve SR-11.

Under the One Interchange Alternative, proposed SR-11 would be constructed with a single interchange at Alta Road, approximately 1.4 miles east of the SR-905/SR-125/SR-11 Interchange (refer to Figure 3). This would be a full interchange. SR-11 would have an undercrossing at Sanyo Avenue (the highway would cross over Sanyo Avenue) and overcrossings at Enrico Fermi Drive and Siempre Viva Road (the highway would cross under Enrico Fermi Drive and Siempre Viva Road).

In contrast to the Two Interchange Alternative, SR-11 at Siempre Viva Road would be constructed as an overcrossing, with no access between SR-11 and Siempre Viva Road under this alternative. Despite this difference, several design elements at the SR-11/Siempre Viva Road overcrossing would be similar to the design of SR-11/Siempre Viva Road Interchange under the Two Interchange Alternative (refer to Figure 4d). Separate ramps for passenger-only and commercial traffic into and out of the new POE/CVEF would still be provided in this location to connect the POE and SR-11.

The One Interchange Alternative would have a slightly smaller footprint between Sanyo Avenue and Enrico Fermi Drive than would the Two Interchange Alternative, due to the elimination of the Enrico Fermi Drive Interchange and its associated auxiliary lanes.

3. No Interchange Alternative

The designs of the SR-905/SR-125/SR-11 Interchange, the SR-11/SR-905 connectors, the Otay Mesa East POE (including the potential future transit center site), and the CVEF would be the same under this alternative as described above for the previous two build alternatives. The unique features of the No Interchange Alternative would involve SR-11.

Under the No Interchange Alternative, no interchanges would be constructed along proposed SR-11. An undercrossing structure would be provided at Sanyo Avenue (the highway would cross over Sanyo Avenue), and overcrossings would be built at Enrico Fermi Drive and Alta Road (the highway would cross under Enrico Fermi Drive and Alta Road). Refer to Figure 3. In

addition, SR-11 at Siempre Viva Road would be constructed as an undercrossing, with the same design as described above for the One Interchange Alternative. As in the case of the One Interchange Alternative, the No Interchange Alternative would have a slightly smaller footprint between Sanyo Avenue and Enrico Fermi Drive than would the Two Interchange Alternative, due to the elimination of the Enrico Fermi Drive Interchange and its associated auxiliary lanes.

C. VARIATIONS ON THE BUILD ALTERNATIVES

A number of design or operational variations are being evaluated for one or more of the described build alternatives, as outlined below.

1. No Toll Variation

The No Toll Variation could apply to any of the three build alternatives, and would involve SR-11 operating as a freeway instead of a toll highway. The principal design difference under this variation would be the lack of toll-related structures such as toll administration and FasTrak facilities.

2. 46-foot Median Variation

Under this variation, the SR-11 median in the vicinity of Sanyo Avenue would be 46 feet instead of 22 feet, but would, widening from a 26-foot width just west of Sanyo Avenue to a 46-foot width through this area. This variation could apply to any of the three build alternatives. Refer to Figure 11 for a map showing the proposed SR-11 Two Interchange Alternative with a 46-foot median in this area. Figure 12 is a map showing the One Interchange and the No Interchange Alternatives with a 46-foot median in this area.

3. SR-905/SR-125/SR-11 Interchange Design Variations

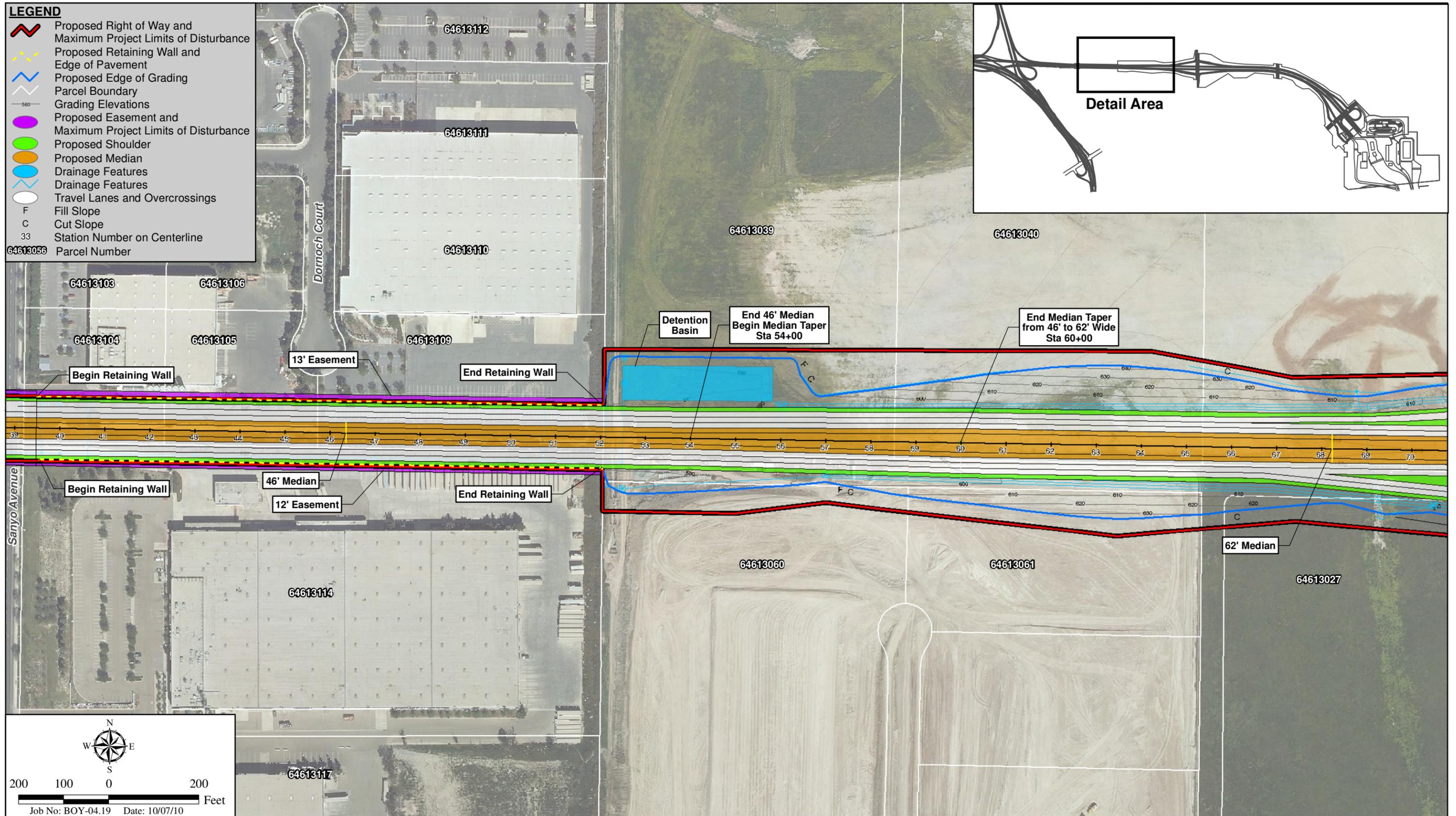
Two variations are being considered for the SR-905/SR-125/SR-11 Interchange, referred to as the SR-125 Connector Variation and the SR-905/SR-125/SR-11 Full Interchange Variation. These variations could apply to any of the three build alternatives.

a. SR-125 Connector Variation

Under the SR-125 Connector Variation, the southbound SR-125 to eastbound SR-11 connector would be added to the interchange. A local connector from Enrico Fermi Drive to northbound SR-125 was approved under the SR-905 project; all of the proposed build alternatives assume a similar direct connector from westbound SR-11 to northbound SR-125. The addition of the complementary southbound SR-125 to eastbound SR-11 connector under this variation would complete the direct link between these two highways. Refer to Figure 7.

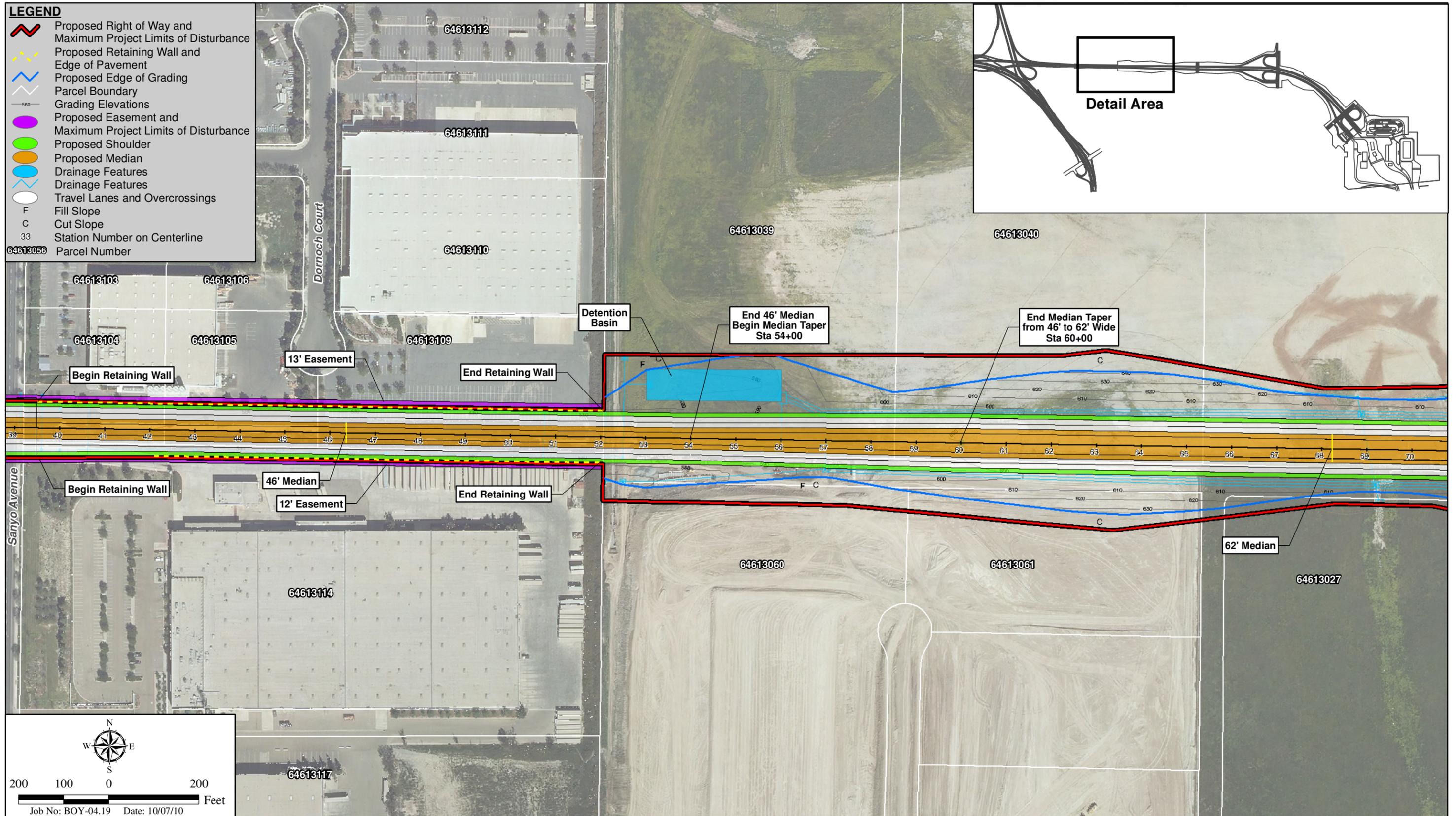
b. SR-905/SR-125/SR-11 Full Interchange Variation

Under the SR-905/SR-125/SR-11 Full Interchange Variation, in addition to the SR-125 connector to be included under the SR-125 Connector Variation described above, the following



Two Interchange Alternative Variation with 46-Foot Median

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT



One and No Interchange Alternative Variation with 46-Foot Median

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT

connectors would also be added to the interchange to complete the connections between SR-11 and SR-905, providing for full movement in all directions:

- Westbound SR-11 to eastbound SR-905, and
- Westbound SR-905 to eastbound SR-11.

The addition of these connectors would complete the planned SR-905/SR-125/SR-11 Interchange, to provide full connectivity among the three highways. To construct this variation completely within existing Caltrans R/W, a retaining wall of approximately 15 to 26 feet in height and 150 feet in length would be required on the southeast side of the interchange (refer to Figure 7).

4. Siempre Viva Road Full Interchange Variation

This variation would only apply to the Two Interchange Alternative, and would involve constructing a full interchange at SR-11/Siempre Viva Road. This full interchange would include a number of elements that would be the same as (or similar to) those described in Section II.B.1.a for the Two Interchange Alternative half interchange at this location, as well as additional facilities to accommodate the full range of vehicle movements. As shown in Figure 13, in addition to the features of the half interchange, this variation would include the elements described below.

- Two separate loop-style ramps (one for commercial-only traffic and one for passenger-only traffic) would be constructed to provide access from Siempre Viva Road to the southbound lanes in the POE.
- A loop-style ramp would be constructed for northbound passenger-only traffic from the POE to access Siempre Viva Road.
- Direct access would be provided for commercial-only traffic to Siempre Viva Road from the CVEF.

Because of the extended footprint associated with this variation, all proposed drainage facilities near Siempre Viva Road would be located within the project R/W and no off-site drainage easement would be required.

D. NO BUILD ALTERNATIVE

Under the No Build Alternative, none of the project components described above for the build alternatives would be constructed, including SR-11 (and associated interchanges, under/overcrossings, connectors, SR-905 modifications, and related facilities), and the Otay Mesa East POE and CVEF (including the potential future transit center site). Ramps approved under the SR-905 project would be constructed between SR-905 and Enrico Fermi Drive. The existing Otay Mesa POE and associated CVEF, as well as the existing San Ysidro POE, would remain open and operational.

III. ASSESSMENT METHOD

The process used in this visual impact study generally follows the guidelines outlined in the publication “Visual Impact Assessment for Highway Projects,” Federal Highway Administration (FHWA), March 1981.

Six principal steps required to assess visual impacts were carried out. They are as follows:

- A. Define the project setting and viewshed.
- B. Identify key views for visual assessment.
- C. Analyze existing visual resources and viewer response.
- D. Depict the visual appearance of project alternatives.
- E. Assess the visual impacts of project alternatives.
- F. Propose methods to mitigate adverse visual impacts.

IV. VISUAL ENVIRONMENT OF THE PROJECT

The regional landscape described under project setting and landscape units establishes the general visual environment of the project. The specific visual environment upon which this assessment will focus is determined by defining the project viewshed.

A. PROJECT SETTING

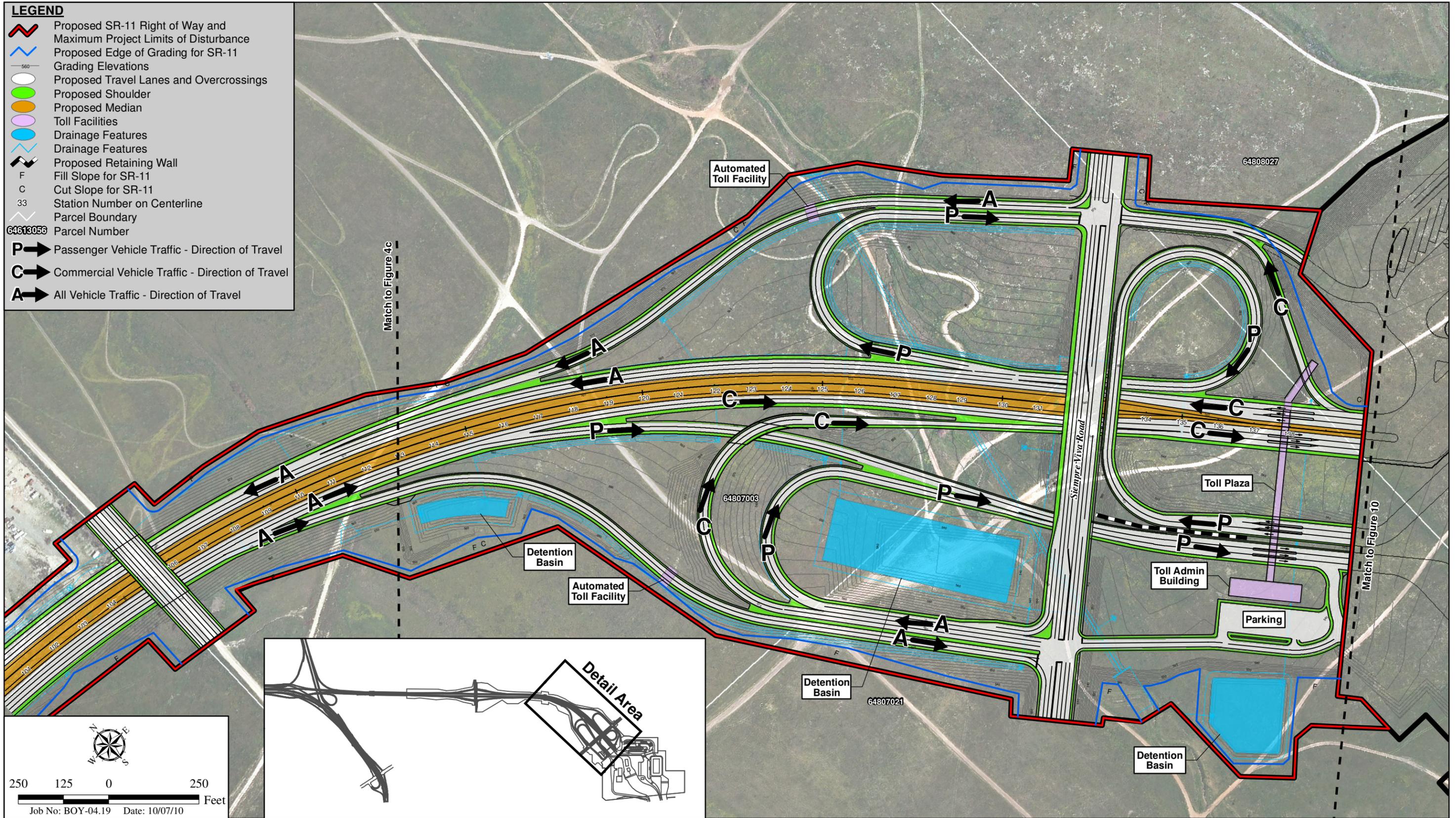
Figure 14 is an aerial map of the project site and surrounding area, and illustrates where each of the following photographs was taken.

Proposed SR-11 would extend generally east and south for approximately 2.1 miles from the east side of the approved SR-905/SR-125 interchange (near Harvest Road), terminating at the proposed Otay Mesa East POE/CVEF site at the U.S.-Mexico international border. Extending west of Harvest Road, the project would include approximately 2.1 miles of connectors and auxiliary lanes linking SR-11 to SR-905. The proposed Otay Mesa East POE, CVEF and transit center site would be located in the unincorporated community of East Otay Mesa, within the OSP Area, in the southernmost portion of San Diego County. Similarly, approximately the eastern half of SR-11 (except its connectors and associated modifications to SR-905) would be located within the EOMSP area of San Diego County, while the westernmost portion of SR-11, including the business park fronting on Sanyo Avenue, its connectors, and associated modifications to SR-905, would be located within the Otay Mesa community of the City of San Diego.

The proposed project alternatives would traverse the southeastern edge of the City of San Diego and the southern sections of Subareas 1 and 2 of the EOMSP area of the County of San Diego. (Refer to Figures 1 and 2 for a Regional Location Map and Vicinity Map, respectively.) The proposed alignment and project sites would traverse currently undeveloped land, with the exception of an existing industrial park at the western terminus of the proposed SR-11 alignment, an existing vehicle auction yard at the southwest corner of Otay Mesa Road and Alta Road, and

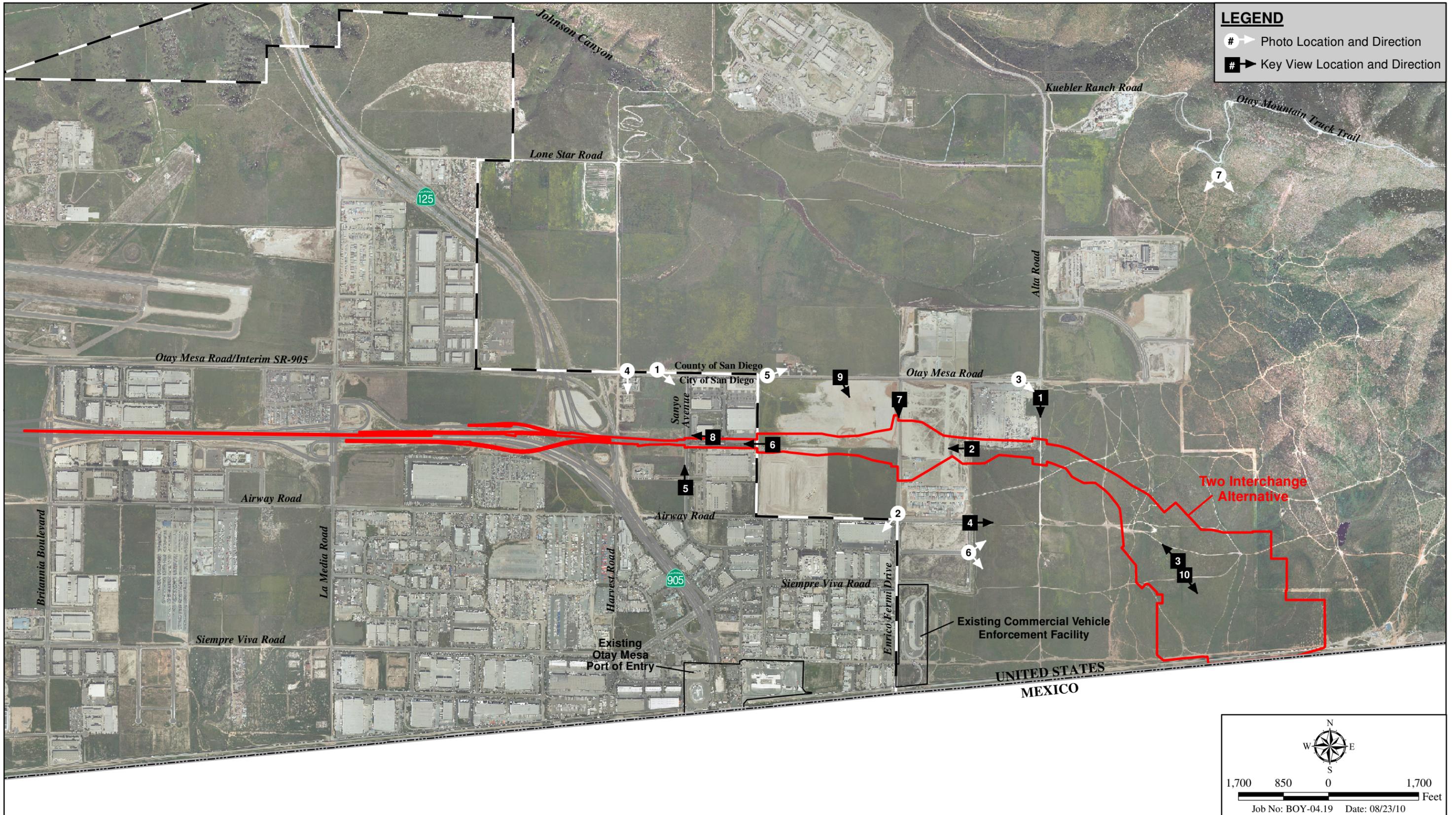
LEGEND

- Proposed SR-11 Right of Way and Maximum Project Limits of Disturbance
- Proposed Edge of Grading for SR-11
- Grading Elevations
- Proposed Travel Lanes and Overcrossings
- Proposed Shoulder
- Proposed Median
- Toll Facilities
- Drainage Features
- Drainage Features
- Proposed Retaining Wall
- Fill Slope for SR-11
- Cut Slope for SR-11
- Station Number on Centerline
- Parcel Boundary
- Parcel Number
- Passenger Vehicle Traffic - Direction of Travel
- Commercial Vehicle Traffic - Direction of Travel
- All Vehicle Traffic - Direction of Travel



Siempre Viva Road Full Interchange Variation

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT



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Photo Locations

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT

Figure 14

an adjoining parcel to the west of this, which has been graded and is currently being used for truck parking.

The proposed project is located on the relatively flat mesa area west of the San Ysidro Mountains. The topography in the eastern portion of the project site includes small hills and valleys varying by approximately 50 feet elevation, and portions of two ephemeral streambeds and one intermittent streambed. The western portion of the project site includes relatively flat and previously graded areas. The average elevation within the project site is 520 feet above mean sea level (AMSL). The highest point on the site is approximately 760 feet AMSL, at the northeastern corner of the site, where the site boundary overlays a portion of an abutting hill.

The SR-11 limits of disturbance and corresponding POE/CVEF site currently are mostly undeveloped; the undeveloped areas are almost entirely vegetated with non-native grasses and transected by multiple dirt roads and paths. Small patches of native grasses occur within the site, but are visibly similar to the vegetation in the majority of the site. Vegetation generally is low growing, and brown most of the year except in the spring time or following rain events, when the vegetation turns green, and blooms with yellow or white flowers. These generally uniform undeveloped areas have visual continuity with the surrounding undeveloped gentle hills and valleys on the mesa, which also are mainly vegetated with low-growing grasses. Some scattered, dark green trees near the topographic low spots accent the brown expanse of vegetation.

The western portion of the proposed SR-11 would extend between existing buildings just east of Sanyo Avenue. These industrial complexes are typical of the development within Otay Mesa; they are large, low (generally two-story or smaller) structures generally made of tilt-up concrete walls. As with most buildings in the area, they are white or light gray with subtle details and variations, and are surrounded by parking lots. Few trees or landscaped areas exist within the parking lot or near the buildings, although a landscaped buffer consisting of a lawn-covered berm and evenly spaced trees borders Sanyo Avenue and the access roads. Photographs 1 and 2, Figure 15 illustrate typical buildings near the project site. The building in Photograph 1 is located on Sanyo Avenue abutting the northern project study area boundary. The building illustrated in Photograph 2 is located on Enrico Fermi Place and Enrico Fermi Drive, just south of the project site. Both of these buildings are within the City of San Diego limits; the undeveloped lot in the foreground of Photograph 2 is within the County of San Diego.

This type of development is characteristic of Otay Mesa; the industrial lots extend westward and southward from the project site, with a few small developments to the north. Additional land uses in the area include automobile and/or equipment yards and a municipal small-airplane airport (Brown Field). The project site overlays a portion of a temporary vehicle auction yard on the north; this business is located south of Otay Mesa Road and the southern terminus of Alta Road. Photograph 3, Figure 16 illustrates the entrance to this facility as seen from Otay Mesa Road. A power generating station at Otay Mesa Road and Harvest Road abuts the northwestern project boundary (see Photograph 4, Figure 16), and a larger power plant is operating east of Alta Road, and two prison facilities are located approximately three miles north of the proposed alignments.

Five private residential properties also are located within five miles of the program alternatives. Generally, these properties include homes, facilities for animals (such as horses and sheep), multiple usable and derelict vehicles, as well as some trees and scattered outbuildings. Three private residential farms/ranches are located on the north side of Old Otay Mesa Road, approximately midway between SR-905 and Alta Road. Photograph 5, Figure 17, illustrates a typical view of this cluster of residential buildings as seen from Otay Mesa Road; the buildings and dense ornamental trees abut the roadway and are surrounded by currently undeveloped lots. Another residential lot is located off of Alta Road, accessed via Kuebler Ranch Road (the former Kuebler residential ranch itself is currently a commercial establishment, R & F Metal, Inc.). The fifth is located between the two correctional facilities, accessed via a dirt road off of Alta Road before Alta Road reaches the Bailey Detention facility.

The POE project site is located at the international border between the U.S. and Mexico. The border is visibly delineated by a large fence. Houses, industrial buildings, and other development within Mexico, east of Tijuana, abut the border in this area. Structures within Mexico are visible both from the mesa on the U.S. side, and higher points in the surrounding area, such as from the foothills east of the project site. On the U.S. side of the border, the POE site is undeveloped, and consists of grasslands typical of the area; the vividness and expansive scale of the grasslands is emphasized by their contrast with the visible development in Mexico. Photographs 6a and 6b, Figure 18, are panoramic photographs illustrating the POE site and a portion of the eastern SR-11 alignment. These portions, as with most of the study area, are mostly undeveloped, and consist of small hills covered mostly with grasses and low-growing vegetation. Dirt roads transect the area. The vehicle auction yard is visible at the north boundary of the project site (in the center of Photograph 6a). The power plant north of the study area also is visible. The San Ysidro Mountains make up the background of the eastern portion of the panoramic. More distant mountains in Mexico are visible further south (to the right side of Photograph 6b). The border is discernable due to the change in land use to the south; multiple buildings are aligned next to the border fence, and development in eastern Tijuana stretches southward. The dashed, yellow line on the photograph is an estimated outline of the project R/W.

Photograph 7, Figure 19, is a panoramic picture taken from Otay Mountain Truck Trail, north of the project study area. This photograph illustrates an overview of the entire project study area. As can be seen in this photograph, most of the project study area is undeveloped, covered in low-growing grassy vegetation, and overlaid with multiple dirt roads. The western portion of the site (to the right of the photograph) extends into the more developed portion of Otay Mesa. The U.S./Mexico border abuts the southern edge of the POE site, and is discernable from this viewpoint mostly by the change in land use; development in eastern Tijuana is aligned on the southern side of the fence and extends southward and eastward. The vehicle auction yard, the power plant, one of the prison facilities in the area, and other nearby development also are visible in this overview. The dashed, yellow line on the photograph is an estimated outline of the project limits.



Photograph 1*: View northeast to business park/light industrial development along Sanyo Avenue, north of project site



Photograph 2*: View southwest to business park/light industrial building and undeveloped lot at Enrico Fermi Place and Airway Road, south of project site

*Refer to Figure 14 for photo location and direction.

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Site Photographs 1 and 2

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT



Photograph 3*: View southwest to auto auction yard at Otay Mesa Road and Alta Road, at the northeastern edge of the project study area



Photograph 4*: View southeast to power-generating station at Otay Mesa Road and Harvest Road, abutting the northwestern edge of the project study area

*Refer to Figure 14 for photo location and direction.

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Site Photographs 3 and 4

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT

Figure 16



Photograph 5*: View northeast to residential lot north of Otay Mesa Road,
between Sanyo Avenue and Enrico Fermi Drive

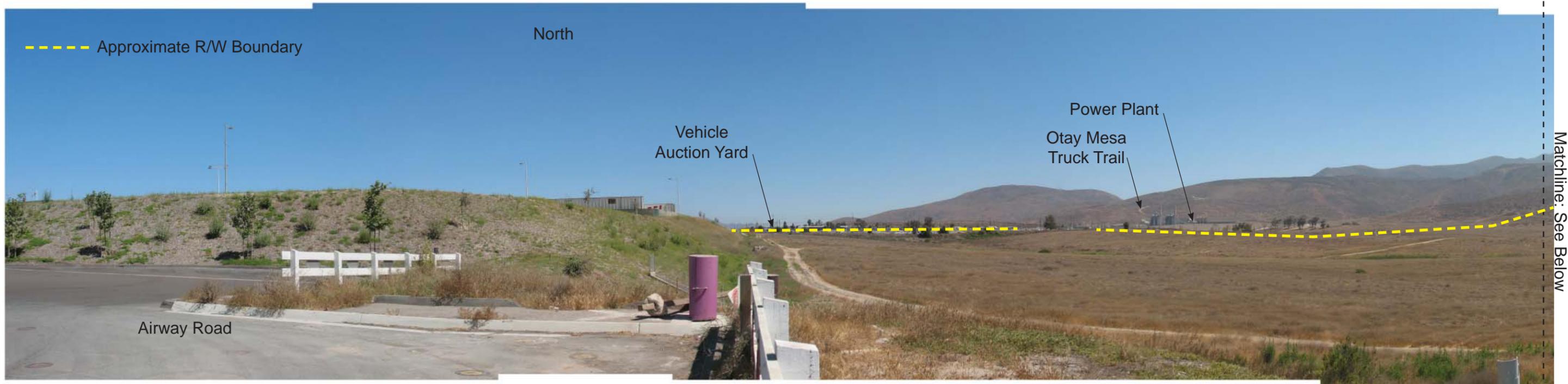
*Refer to Figure 14 for photo location and direction.

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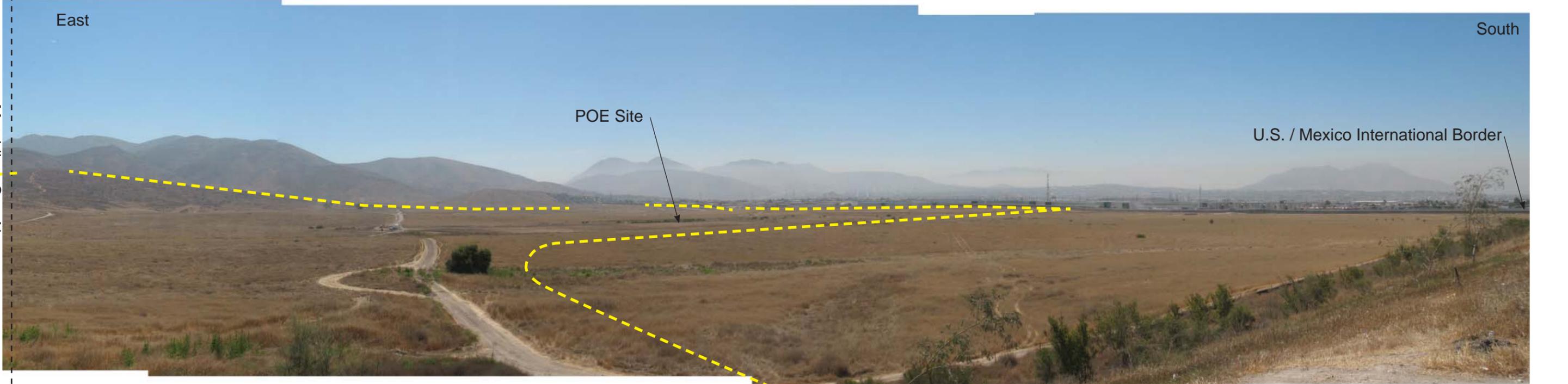
Site Photograph 5

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT

Figure 17



Photograph 6a*: Panoramic view north from east end of Airway Road



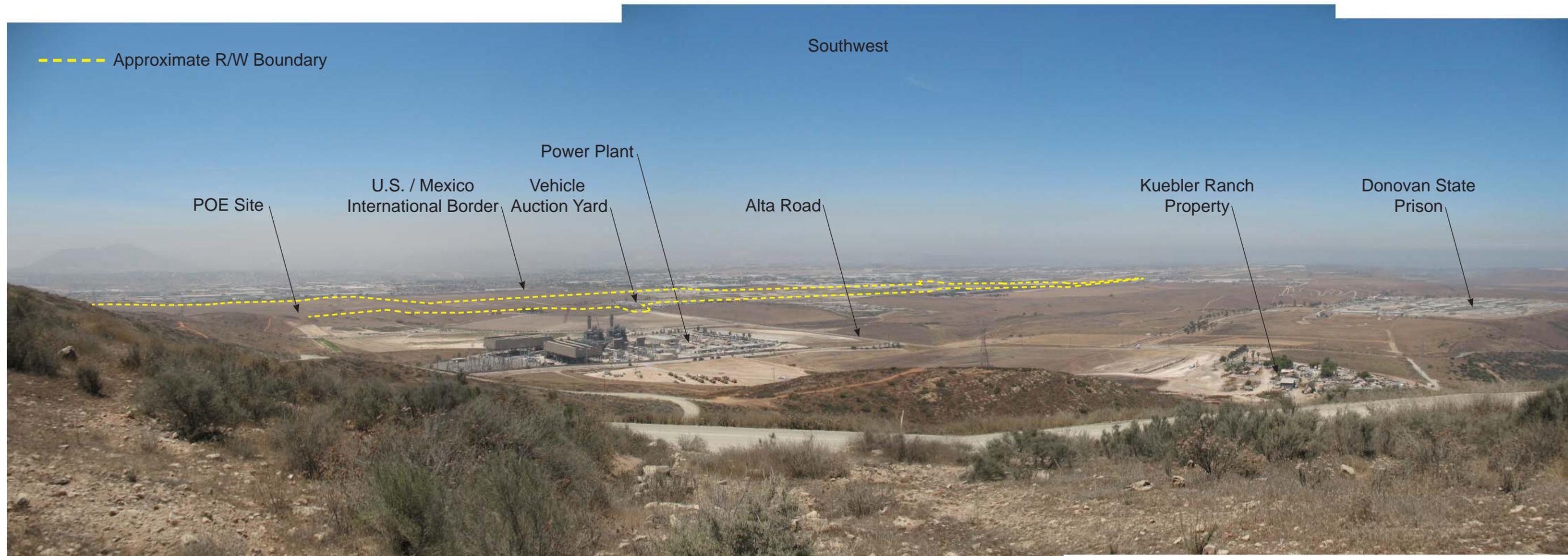
Photograph 6b*: Panoramic view east and south from east end of Airway Road

*Refer to Figure 14 for photo location and direction.

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Site Photographs 6a and 6b

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT



Photograph 7*: Panoramic view from Otay Mountain Truck Trail

*Refer to Figure 14 for photo location and direction.

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Site Photograph 7

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT

B. LANDSCAPE UNITS

A landscape unit is a portion of the regional landscape and can be thought of as an outdoor room that exhibits a distinct visual character. A landscape unit will often correspond to a place or district that is commonly known among local viewers.

The project extends through developed areas in the western portion of Otay Mesa and undeveloped areas at the eastern edge of the mesa. Both the developed and undeveloped areas are located within a single landscape unit. The landscape unit is generally defined by the San Ysidro Mountain foothills on the east, Tijuana River Valley and I-5 on the west, and Otay River Valley on the north. The landscape unit extends southward to hills and mountains in Mexico and includes development in Tijuana. Jurisdictionally, however, the landscape unit ends at the border. Additionally, the localized experience of the visual environment changes when crossing the border, and the border line therefore becomes the edge of the “outdoor room” that is Otay Mesa for most local viewers.

C. PROJECT VIEWSHED

A viewshed is a subset of a landscape unit and is comprised of everything visible from an observer’s viewpoint. The limits of a viewshed for a project or specific location are defined as the visual limits of the views located from the project location. The viewshed identifies the locations of viewers with the potential to be affected by visual changes brought about by project features. The viewshed, shown in Figure 20, was delineated through computer-aided and field-verified analysis. Team members field-verified the viewshed during a site visit on July 9, 2009. This viewshed generally is based on topography and does not consider physical obstructions that can limit the viewshed in local areas, such as buildings, small variations in topography, and vegetation. Additionally, beyond one mile, atmospheric conditions limit clarity and visually mute the details of topographic variation, highway facilities, and structures such as overcrossings or bridges and ramps. The analyzed footprint is more than four miles long. Views from any one area toward the project can be assumed to be of the portion of the project closest to that point. For example, views from the areas near Britannia Boulevard and La Media Road would be of the westernmost portion of the project, rather than of project features east of SR-125, and vice versa. Within the U.S., a one-mile radius centered on the project site is marked on Figure 20 for reference purposes. The project applicant cannot control development south of the international border, and therefore the focus of this document is on areas within the U.S. and under Caltrans/local agency planning jurisdiction. The intense development on the Mexican side of the border in this area, however, is a visually dominant element in views to the south from the project study area.

The viewshed shown in Figure 20 is analysis of the largest potential footprint of proposed alternatives (worst case scenario). East of the SR-905/SR-125/SR-11 Interchange, the viewshed was analyzed based on the Two Interchange Alternative. From the interchange westward, the viewshed was analyzed using the combined footprint of all the potential variations. The variations would occur within the previously approved SR-905/SR-125/SR-11 Interchange R/W and/or the SR-11 R/W. If a different alternative or one or more variations with a smaller footprint were selected, the project may be visible from fewer areas than depicted in this graphic.

As indicated in Figure 20, the analyzed project study area would be visible from most of the areas within the one-mile radius centered on the project site. Some of the developed portions of the mesa that are farther from the study area, such as the power plant on the east side of Alta Road and the Donovan State Prison, may have views of the project as well. The viewshed also indicates that the study area may be visible from portions of the major roads in the area, such as Otay Mesa Road and Alta Road. Small hills and berms bordering Otay Mesa Road block views to the south along portions west of Alta Road. Similarly, the north-south trending Alta Road varies in elevation enough to block southward views from the road north of Otay Mesa Road.

Most of SR-905 and Otay Mesa north and south of SR-905 are highlighted as being within the viewshed due to the generally flat and gently varying topography of the area. Physical obstructions, such as buildings and landscaping, and an increasing distance, however, would in reality restrict views from this area eastward to the project study area to east-west oriented streets. Traffic, atmospheric conditions, and local topographic variations also would restrict views from this area, and from east-west streets.

North and east of the project study area, the viewshed generally is limited by the south- and west-facing slopes of the San Ysidro Mountain foothills. The varied topography of the mountains limits visibility to the project study area from the undeveloped areas of these hills beyond the westernmost foothills. The Otay Mountain Truck Trail, a gravel road used for recreational purposes, transects the San Ysidro Mountains in a generally east-west direction, and is located north of the project site; portions of the road provide views of the study area, as illustrated in Photograph 7, Figure 19 discussed above. It also may be possible to view the project study area from some peaks and slopes further to the north and east; however, these undeveloped areas have few access roads and generally are not heavily used for recreation.

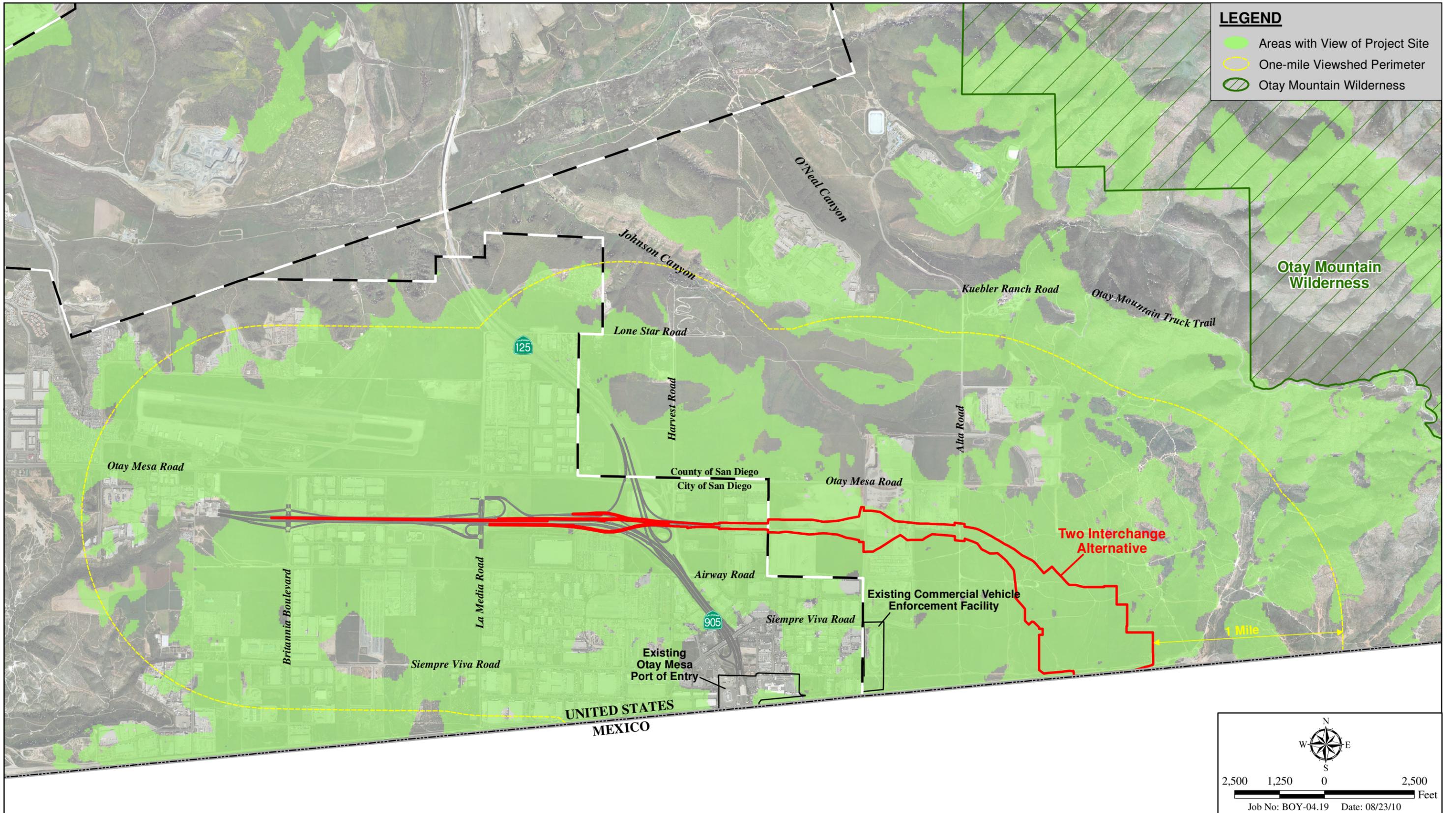
The project site is not visible from the southern edge of the Otay River Valley, or from the slopes of Johnson and O'Neal canyons. Intervening topography prohibits any views of the site from the County recreational facilities within the Otay River Valley.

V. EXISTING VISUAL RESOURCES AND VIEWER RESPONSE

A. METHOD OF VISUAL RESOURCE ANALYSIS

Identify Visual Character – Visual character is descriptive and non-evaluative, which means it is based on defined attributes that objectively are neither good nor bad in themselves. This objective character includes both pattern elements such as form (e.g., mass), line, color and texture; as well as pattern character, including the dominance, scale, diversity or continuity between these elements. A change in visual character cannot be described as having good or bad attributes until it is compared with the viewer response to that change. If there is public preference for the established visual character of a regional landscape and a resistance to a project that would contrast that character, then changes in the visual character can be evaluated.

Assess Visual Quality – Visual quality is evaluated by identifying the vividness, intactness and unity present in the viewshed. This method should correlate with public judgments of visual quality well enough to predict those judgments. This approach to evaluating visual quality can



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Viewshed Map

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT

also help identify specific methods for mitigating specific adverse impacts that may occur as a result of a project. The three criteria for evaluating visual quality can be defined as follows:

- **Vividness** is the visual power or memorability of landscape components as they combine in distinctive visual patterns.
- **Intactness** is the visual integrity of the natural and man-made landscape and its freedom from encroaching elements. It can be present in well-kept urban and rural landscapes, as well as in natural settings.
- **Unity** is the visual coherence and compositional harmony of the landscape considered as a whole. It frequently attests to the careful design of individual components in the landscape.

B. EXISTING VISUAL RESOURCES

1. Existing Visual Character

The visual environment of the eastern portion of the project site, the POE and CVEF sites, and the immediate surrounding area not currently subject to development is characterized by the flat topography and low-growing and generally uniform vegetation, which provide little variation in terms of color or texture. The topography and vegetation become more varied to the east of the project site where the San Ysidro Mountains are visually dominant. The low hills stretching between the mountains and the mesa top are increasingly larger and more visually prominent from west to east. The canyons and Otay River Valley north and west of the project site are dominant landmarks in the area, although they descend below the mesa, and are therefore not visible from the project site.

The western portion of the project site extends through primarily developed areas of Otay Mesa that are visually characterized by dominant buildings, large trucks, automobiles and other vehicles, and parking lots. To a lesser extent, some currently undeveloped lots also abut the R/W. The trees and landscaped areas that surround each developed lot provide some visual variety but generally are not dominant features. While notably different in scale and mass from undeveloped portions of the mesa, these uses are fairly visually consistent among themselves. Where developed lots lie adjacent to undeveloped lots, or where undeveloped lots are surrounded by developed areas in the outlying areas, the visual diversity is high.

As mentioned previously, extensive development in Mexico is visible from many portions of the project site and within Otay Mesa. These areas appear to be much more densely developed than the industrial areas north of the border, and where they abut the POE site and undeveloped portions of the mesa, there is high visual contrast between the neighboring land uses.

The residential lots in the area surrounding the project site are small in scale relative to the industrial development, and are separated by large areas of open space. These lots are not visually dominant elements within the landscape, but do contribute some variation of pattern elements (line and color) through such features as rows of trees edging a roadway or a small

copse of trees associated with the dwelling. These can be notable in this otherwise very horizontal and xeric landscape (refer to Photograph 5, Figure 17, discussed above).

2. Existing Visual Quality

The eastern portion of project site and the POE site, comprised largely of undeveloped grasslands, are situated between the developed mesa and San Ysidro Mountains. The western portion of SR-11 alignment extends through developed areas; this development is beginning to expand eastward, creating some patchwork areas where one developed lot is surrounded by undeveloped grasslands, or where one parcel of undeveloped grasslands is surrounded by development. Taken one parcel at a time, the grasslands are neither visually powerful nor memorable; put together over a large area, however, as at the base of the San Ysidro Mountains, the expanse of relatively flat areas is visually impressive and memorable as an open space area. The San Ysidro Mountains and foothills also are visually dominant and memorable. In contrast, the developed areas have low visual vividness; the buildings are neither unique nor memorable, and taken together they do not comprise a distinctive space. Generally, the openness of the landscape allows a viewer in many portions of the viewshed to observe these disparate elements at the same time, and the visual combination of the low vividness of the developed areas, the moderate vividness of the grasslands, and the high vividness of the abutting mountain range results in a moderate level of vividness for the project site and the immediately surrounding area.

The undeveloped flat grasslands also demonstrate high visual intactness. These areas generally have high visual continuity, exhibiting little topographic diversity and low levels of change in scale, as well as very little variation in line, form, color, or texture. Dirt roads and trails crossing the area are not highly visible and do not distract from the visual character of the area. Few trees and shrubs are present, and any in the area tend to highlight the flat, horizontal, usually dry nature of the grassy areas. The mountains also have high visual intactness; they are free from buildings or other developed aspects that would otherwise distract from their visual dominance. (The power lines and supporting structures, though tall when in the foreground of a view, are visually dwarfed by the dominant hills from most vantage points within the viewshed, and become a small element that does not distract from the open space surrounding them.) The border on the south, beyond which developed areas east of Tijuana are visible, and the industrial areas of Otay Mesa on the west create visual boundaries to the grasslands. These industrial areas, though visually composed of diverse elements, are also highly intact; Otay Mesa has design guidelines that regulate the look and character of the buildings and landscape treatments.

Though directly bordering each other, the distinct change from undeveloped to developed visual environments does not distract from the intactness of either, and the contrast tends to heighten the visually intact character of each. Combining the visually intact grassland, mountain, and industrial area elements within the viewshed results in results in moderately high visual intactness overall.

Similarly, the undeveloped areas within and surrounding the project site have high visual unity, due to the visual coherence of the limited visual components (e.g., the low-growing vegetation). The visual unity of the industrial areas in the western portion of the site is moderately high; although the buildings and lot layouts generally adhere to the local design guidelines and

therefore are visually similar to each other, the trees and landscaped areas, where present, contrast with the buildings, parking lots, and vehicles. Additionally, these developed areas are not designed to integrate with the grassland areas, nor the mountains, and where the developed and undeveloped areas converge, just west and south of the project site, the components visually contrast with each other, and diversity is higher. The coherence of these components, and therefore the visual unity, of the area is moderate. The project site includes some industrial lots, but also encompasses undeveloped areas with high unity. As a result, the project site has moderately high unity.

Taken together, the moderate level of vividness, moderately high intactness, and moderately high unity combine to suggest that the project site has moderately high visual quality.

3. Scenic Resources

As mentioned above, the San Ysidro Mountains lie north and east of the project site. The mountains and foothills are largely undeveloped and include many steep slopes, canyons, and peaks. A few roads, such as the Otay Mountain Truck Trail and some dirt trails, transect these mountains. A San Diego County Resource Conservation Area (RCA) for Biologically Sensitive Lands Overlay is designated over most of these mountains. The Otay Mountain Cooperative Land and Wildlife Management Area and the Bureau of Land Management (BLM) Otay Mountain Wilderness Area, National Wilderness Preservation System land also overlay areas to the east within the mountains. Otay Mountain Truck Trail is a graded, gravel-paved roadway mainly used by border patrol agents; some mountain bikers and off-road vehicle motorists desiring a scenic view also use this road. It provides access to and across the BLM land and wildlife conservation area at Otay Mountain. The foothills are visually dominant from the mesa, providing topographic variation at a much greater scale than otherwise visually experienced from most of the mesa top. The hills appear to be generally uniform in color and texture when viewed from the mesa below, with topographic form and line taking precedence over changes in color or texture related to vegetation. They also block views of mountains or canyons further to the east; the peak of Otay Mountain and the RCA and BLM areas are not visible from the vicinity of the project alternatives.

The Otay River Valley, which comprises the northern edge of the mesa, is approximately 2.5 miles north and northwest of the project alternatives. Johnson Canyon and O'Neal Canyon, located approximately 1 to 1.5 miles (and more) to the north, trend northwest to intersect with Otay River Valley. These two canyons are designated conservation/limited use areas in the San Diego County subregional plan. While notable topographic features, these canyons are down slope at some distance from the project site. As a result, they are not visually accessible to an on-site viewer or from the immediately surrounding area. They also are not highlighted on the project viewshed map (Figure 20, discussed above) as having the potential to view the project study area.

Area maps were reviewed to identify any additional public recreation areas located within the immediate vicinity of the project. The closest mapped facilities include the Lower Otay County Park and the Otay County Open Space Preserve approximately six miles to the north of the program alternatives. These two San Diego County facilities are located within the Otay River

Valley. Due to their distance from the project site and their lower elevation, these sites are not visible from the project site or the immediately surrounding area.

No officially designated State scenic highways are located within the Otay Mesa area (Caltrans 2009). There are no County priority scenic routes in the area. The proposed project, therefore, does not have the potential to affect any current scenic routes.

C. METHODS OF PREDICTING VIEWER RESPONSE

Viewer response is composed of two elements: viewer sensitivity and viewer exposure. These elements combine to form a method of predicting how the public might react to visual changes brought about by a project.

Viewer sensitivity is defined both as the viewers' concern for scenic quality and the viewers' response to change in the visual resources that make up the view. Local values and goals may confer visual significance on landscape components and areas that would otherwise appear unexceptional in a visual resource analysis. Even when the existing appearance of a project site is uninspiring, a community may still object to projects that fall short of its visual goals. Analysts can learn about these special resources and community aspirations for visual quality through citizen participation procedures, as well as from local publications and planning documents.

Viewer exposure is typically assessed by measuring the number of viewers exposed to the resource change, type of viewer activity, the duration of their view, the speed at which the viewer moves, and the position of the viewer.² High viewer exposure heightens the importance of early consideration of design, art, and architecture and their roles in managing the visual resource effects of a project.

1. Existing Viewer Groups Exposure, Awareness, and Sensitivity

a. Motorists

Existing viewers of the proposed alternatives mainly are motorists on local streets and workers and visitors to local businesses. A very few recreational motorists may be able to see the existing project site from the Otay Mountain Truck Trail, which provides access to the BLM preserved areas of the San Ysidro Mountains.

Most motorists on existing local roadways presumably are workers at the local businesses, power plant, and correctional facilities, or visitors to the correctional facilities and patrons of the businesses. As they are not actively seeking recreation or scenic views, their sensitivity can be considered low.

The existing and projected numbers of motorists on each roadway in Otay Mesa near the project study area are detailed in the project's Traffic Report (VRPA Technologies/AECOM 2009). The most traveled roadways within the viewshed include the east-west trending Otay Mesa Road and

² While the duration of a view can indicate a higher exposure, this indicator is not a linear scale; the difference between viewing a scene for more than four hours versus for approximately three minutes is less than the difference between viewing a scene for three minutes versus for a few seconds.

Siempre Viva Road, and the north-south trending La Media Road. Generally, the traffic volumes lessen to the east, as the roadways extend closer toward the undeveloped areas of the mesa and the bulk of the project site. Existing roadways such as Sanyo Avenue and Enrico Fermi Drive which transect the project study area, and Alta Road, which extends north from the project study area, are lesser traveled roads.

The exposure of existing motorists on local roadways depends on the roadway on which they are traveling, and in which direction. For example, motorists on SR-905 also have direct views of the project study area, particularly near the SR-905/SR-125 Interchange and proposed connectors, and potentially have high exposure when in the viewshed or traveling on segments of the interchange that may be affected by the proposed project; these areas are few, however, and the length of time motorists on this roadway view the project site is brief. Their exposure is moderately low.

Existing local roadways near the western extent of the proposed project mostly extend between buildings and developed lots, and provide few views of the undeveloped areas within and near the project study area; motorists on these roads have low exposure to the project site. Near the eastern extents of the project study area (e.g., on Otay Mesa Road near its terminus, on Alta Road, Enrico Fermi Place, or the eastern extents of Airway Road), views to the extensive grassy, flat areas within the project study area are available.

Motorists' sensitivity similarly is mixed. Their attention likely is focused on their respective destinations, and while they may be appreciative of the views available from these roadways—particularly to the east of the developed areas where views of the mountains are more pronounced—generally motorists and passengers in the area are not seeking a recreational experience in the area surrounding the project site. The sensitivity of existing viewers in the area is low. Viewer sensitivity can be affected by the viewer's perception of the highway's appropriateness within a landscape. As most motorists who would view the project after completion would be using the new and improved roadways to access their business location or the proposed border crossing, it is expected that they would see the road as an appropriate and necessary element in the mesa landscape. As a result, it is expected that future motorists would have low sensitivity.

Panoramic views of Otay Mesa are available from parts of Otay Mountain Truck Trail. Recreational users of this road (motorists, bicyclists, and hikers) have high sensitivity, as they generally are seeking a scenic recreational experience. Border patrol agents, while focused on the view from this roadway, cannot be considered as having the same sensitivity as recreational motorists. While their speed of travel often is slow, necessitated by the unpaved and winding condition of the road, motorists', bicyclists', and hikers' exposure from this roadway is low, due to the low number of users (excluding the border patrol, less than 1,000 recreational drivers use the road per year) and the few overlook areas available on the roadway. A motorist's awareness of and sensitivity to views that include the project alternatives is moderate; while they may be aware of the available views, unless stopped at a overlook point they presumably are focused on the rugged roadway.

b. Pedestrians and Bicyclists

Besides the recreational hikers and bicyclists on Otay Mountain Truck Trail, there are few pedestrians and bicyclists in the area surrounding the project site. The roadways in the area have sidewalks, but generally are out of scale for a comfortable walking environment. The roads in the area also often support truck traffic traveling to the local industrial complexes, which is incompatible with bicycle traffic. Additionally, destinations such as eateries are spaced far apart and far from businesses, which discourages walking in the area. This viewer group, therefore, is small and has a low exposure to the project site. Pedestrians and bicyclists have more opportunity to view the project site and surrounding area due to their slow travel speeds, and have a moderately high sensitivity to changes the surrounding area and potential loss of views toward the nearby mountains. The proposed project may attract pedestrians, particularly those using public transit or long-term parking near the border, but these viewers generally would be contained within the project site after development. As with motorists, the pedestrians and bicyclists using the new POE would see the proposed project elements as an appropriate and necessary element in the mesa landscape, and as a result, it is expected that they would have low sensitivity.

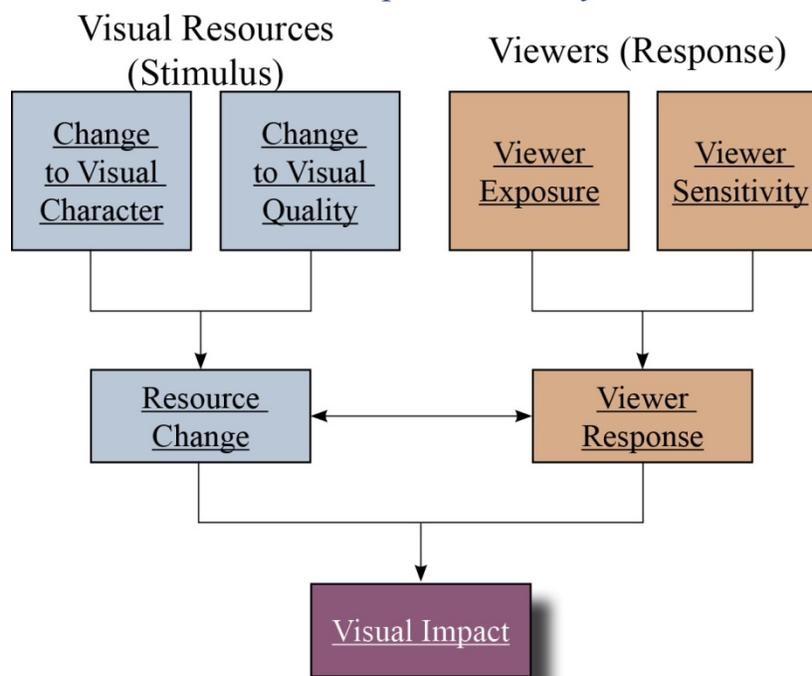
c. Residents

The northernmost existing residences in the study area (in East Otay Mesa) are not within the project viewshed. Only the three residences located along Otay Mesa Road are located within one mile of the project site, and portions of these properties are within the project viewshed. This viewer group is small, but these viewers have a long exposure to views of the surrounding area due to their stationary viewing angle. They also can be expected to have moderately high sensitivity, due to their familiarity with the area and their concern for the composition of the view from their homes. Some portions of the project study area potentially are visible from some portions of the residences just north of Otay Mesa Road, as highlighted by the project viewshed; a small segment of the project study area is visible to the south of these buildings, between office/industrial buildings east of Sanyo Avenue and the varied topography bordering Otay Mesa Road between Sanyo Avenue and Enrico Fermi Drive.

VI. METHOD OF ASSESSING PROJECT IMPACTS

Visual impacts are determined by assessing the visual resource change due to the project and predicting viewer response to that change. The diagram below illustrates a broad overview of the assessment process.

Visual Impact Summary



A. STEP ONE: DETERMINE CHANGE TO VISUAL RESOURCES

Assess Change to Visual Character – Since visual character is descriptive and non-evaluative, change alone is assessed when considering aspects of visual character. The change likely to be caused by the project is evaluated according to comparison of the visual attributes of the project (i.e. pattern elements including form, line, color, texture) and the relationships between those objects (i.e. pattern character including scale, diversity, continuity, dominance) in the visual environment before and after the project is constructed.

A two-sided “pendulum” scale (3 to 0 to 3, with 5 units of change possible) is used to measure contrasting visual aspects within each category. For example, the existing and proposed viewshed would each be assessed and assigned a number value corresponding to the attributes “curvilinear” and “rectilinear” under the category “line” in the pattern elements analysis. The amount of change between the existing and the proposed viewshed for each category (pattern elements and pattern character) would then be revealed, and can be averaged to express the combined degree of change (Δ) to visual character. The degree of change can then be expressed as a percentage of maximum change possible by dividing Δ by 5 (the maximum amount of change possible). This percentage, representing the overall level of change to visual character, corresponds to the level of change ranging from low to high.

CHANGE TO VISUAL CHARACTER		
Amount of Change = Δ $\Delta = \text{Ex.} \pm \text{Prop.}$	Degree of Change (% = $\Delta / 5$)	Level of Change
≥ 3	$\geq 60\%$	High
2.5	50%	Moderately High
2	40%	Moderate
1.5	30%	Moderately Low
1	20%	Low

Assess Change to Visual Quality – The second step of the process is to compare the visual quality of the existing resources with projected visual quality after the project is constructed. Assumed positive and negative values regarding desired levels of intactness, unity, and vividness must be considered. Existing and proposed intactness, unity, and vividness are scored from one to five (five being highest, and assumed to be the most desirable). The amount of change in quality (Δ) between the existing and proposed viewshed for each category is determined (with four units of change possible). Similar to the assessed change in visual character, the average degree of change can then be expressed as a percentage of maximum change possible (Δ divided by 4). The overall level of change to visual quality is then assigned a value that ranges from low to high. A level of change can be positive or negative, depending on the positive or negative average value of change; e.g. if all the attributes would have lower values due to the proposed project, the project could cause high negative change, whereas if the attributes of the proposed project had higher values than the existing conditions, the project could cause high positive change. If the proposed project creates mixed positive and negative changes, the positive and negative values would be averaged to determine the level of change in either direction.

CHANGE TO VISUAL QUALITY		
Amount of Change = Δ $\Delta = \text{Ex.} \pm \text{Prop.}$	Degree of Change (% = $\Delta / 4$)	Level of Change
≥ 2.4	$\geq 60\%$	High
2.0	50%	Moderately High
1.6	40%	Moderate
1.2	30%	Moderately Low
0.8	20%	Low

B. STEP TWO: PREDICT VIEWER RESPONSE

Viewer response is composed of two elements: viewer exposure and viewer sensitivity, as defined under “C. Methods of Predicting Viewer Response,” above. These elements combine to form a method of predicting how the public might react to visual changes brought about by a highway project.

Viewer response to changes in the visual environment is predicted by using existing viewer exposure and viewer sensitivity values, which are assumed to remain constant before and after the project is implemented. These values can also be expressed numerically, on a scale of 1 to 5, with 5 representing conditions conducive to generating the greatest viewer response (closer locations, higher number of viewers, longer duration of views, and activities generating more attention, awareness, and expectations). The predicted viewer response to project changes—expressed again in terms of low to high—is the average of the assigned values of viewer exposure and viewer sensitivity to the project.

VIEWER RESPONSE	
Average Response Score	Level of Response
4.5 – 5.0	High
3.5 – 4.4	Moderately High
2.5 – 3.4	Moderate
1.5 – 2.4	Moderately Low
0 – 1.4	Low

C. DEFINITION OF VISUAL IMPACT LEVELS

The resulting level of visual impact is determined by averaging the degree of resource change with the extent to which people are likely to be affected by the change (viewer response). Negative change can be characterized as low to high in intensity, as defined below. A positive change requires little or no mitigation, although additional design features and mitigation measures could serve to enhance the level of positive change.

- **Low** – Low negative change to the existing visual resource, and low viewer response to change in the visual environment. May or may not require mitigation.
- **Moderately Low** – Low negative change to the visual resource with a moderate viewer response, or moderate negative change with a low viewer response. Impact can be mitigated using conventional practices.
- **Moderate** - Moderate negative change to the visual resource with moderate viewer response. Impact can be mitigated within five years using conventional practices.

- **Moderately High** - Moderate negative visual resource change with high viewer response or high negative visual resource change with moderate viewer response. Extraordinary mitigation practices may be required. Landscape treatment required will generally take longer than five years to mitigate.
- **High** - A high level of negative change to the resource or a high level of viewer response to visual change such that architectural design and landscape treatment may not mitigate the impacts. An alternative project design may be required to avoid highly adverse impacts.

D. ANALYSIS TOOLS AND TECHNIQUES

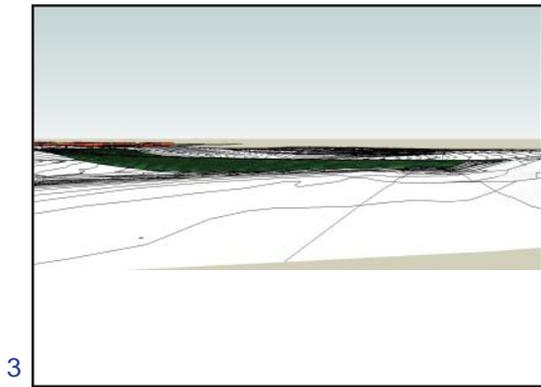
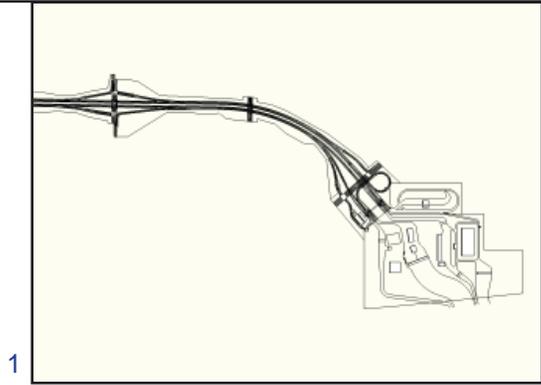
1. Visual Simulations

Photo simulations are a tool used to represent the relative scale and extent of change to the existing visual environment from select or key views. It is not possible to simulate the change to every view point that would be affected by the proposed project, but key views represent typical views seen by the most viewers and the primary viewer groups that would potentially be affected by the project.

The key views represent conditions from which the project could actually be viewed (i.e. not aerial or oblique “bird’s eye” views) by the public. The selected key view photographs are not panoramic, but have been taken with a standard camera lens to represent a natural “cone of vision,” or how much is seen directly and peripherally by the human eye. Key View locations are shown in Figure 14. Selected views include

1. South of the termini of Alta Road and Otay Mesa Road, looking south
2. On project site east of Alta Road, looking west at proposed Enrico Fermi Drive Interchange
3. On project site near future northwest edge of POE, looking northwest at proposed Siempre Viva Road Interchange
4. End of Airway Road, looking east
5. Sanyo Avenue north of Airway Road and SR-905, looking north
6. Within the proposed project R/W, east of Sanyo Avenue, west of Enrico Fermi Drive, north of Airway Road, and south of Otay Mesa Road looking west

Additional changes to the visual environment as well as the overall visual effect and aesthetics of the proposed project are discussed following the analysis of the specific key views and simulations. The simulations illustrate the engineering elements of the project so the reader can track the discussion of the proposed change to the visual elements (scale, dominance, etc.) without having those elements obscured by screening vegetation. Photo simulations of structures do not reflect their final design, and are for visual example only. A brief depiction of the photo simulation development process is illustrated on Figure 21.



1) The engineer's grading plan represents the proposed project in a two dimensional plan view.

2) The engineer's grading plan was modeled in three dimensions.

3) The model represents the proposed conditions. The view, or camera angle, of the model was set to correspond to the location and angle of the Key View photograph.

4) The Key View represents the existing conditions.

5) The model was then overlaid onto the Key View photograph to form an accurate template on which to combine elements that would be introduced by the proposed project into the existing photograph of the Key View.

6) The proposed elements, placed according to the model, combined with the existing Key View, result in a verifiable accurate representation of the proposed project from an actual physical location.

Visual Simulation Process

VII. VISUAL IMPACT ASSESSMENT: TWO INTERCHANGE ALTERNATIVE

As discussed in Section II of this report, several alternatives and design options are being evaluated for the proposed project. The impact analysis below focuses on the Two Interchange Alternative, which is the largest alternative being proposed and potentially has the greatest impact. Other alternatives are addressed in Section VIII.

A. KEY VIEW 1

1. Orientation

Key View 1 (Figure 22) was taken from Alta Road south of Otay Mesa Road. Alta Road ends at Otay Mesa Road, and continues southward as an unpaved road; the picture was taken looking southeast toward the U.S.-Mexico border from this unpaved portion of Alta Road, which is visible on the right side of the photograph.

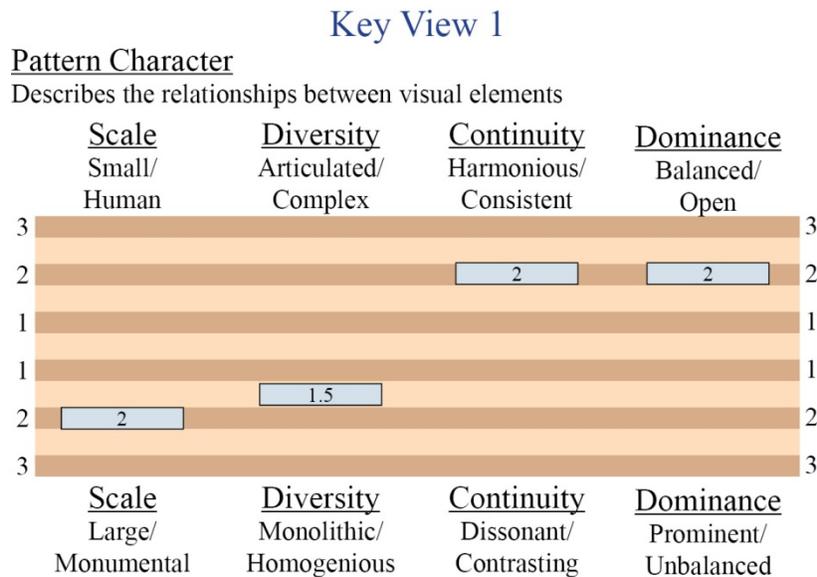
2. Existing Visual Character/Quality

The visual character of Key View 1 predominantly is that of an undeveloped, mostly flat area. Buildings are visible in the distance, and unpaved Alta Road extends along the right edge of the view. Although the area in front of the viewer appears mostly flat, topographic variations are discernable, and the gentle undulations are punctuated by the occasional dark green tree or shrub that stands in contrast to the widespread, low-growing, mostly brown vegetation that comprises most of this view. Some hills in Mexico are visible along the horizon line in the background of the picture; the potential dominance of these hills is lessened by the haze that often is visible when looking south.

The pattern elements that compose this view include forms more simple than complex, although the area generally is not very geometric. The view contains curvilinear and fluid lines of the hills in the background and subtle fluid lines within the generally flat, undeveloped area; however, rigid and rectilinear lines—such as the unpaved road at the right side of the photograph, and the straight, strong horizontal line of the border fence in the distance—are stronger elements within the view. The view generally is comprised of earth-toned colors, predominantly the brown of the vegetation, along with blue sky and a darker blue/purple of the hill in the background. Some grays and whites are visible in the distance, and the unpaved road is gray. There are no hard surfaces dominant within the view. The brown vegetation that comprises most of the view has a complex texture when viewed closely, and appears softer and smoother when viewed en masse, as in this photograph. The pattern elements of Key View 1 are summarized in the following chart.

The scale of this view is expansive; Key View 1 represents the long views of large expanses of undeveloped, relatively flat areas available at the eastern edge of the developed areas of Otay Mesa. Relatively few view elements comprise this view, with few dominant elements beyond the expanse of low-growing, brown vegetation. The view is not highly complex or articulated, but also is not monolithic; the occasional larger shrub or tree and the distant buildings are elements

that provide some variety within the view. Similarly, the view elements are consistent and harmonious; the unpaved road, though dominant and potentially contrasting, is not paved and has a generally natural, rather than rigid, appearance. The view generally is open and expansive, with dominant but not encroaching elements. The pattern character of the view is summarized in the following chart.



Although the vast expanse of open space and large extent of similar vegetation contrasts with the nearby development, and may therefore be memorable, the vividness of Key View 1 is moderate because the combination of the elements within the view does not create distinct visual patterns that have distinct visual power.

The intactness of the view is moderately high; the unpaved road contrasts somewhat with the vegetated open space, yet it does not visibly encroach into the visible open space, or detract from the visual integrity of the expanse of vegetation. Some development is evident in the distance, but similarly does not encroach into the generally flat, undeveloped areas.

The unity of the view also is moderately high; the few elements composing the view generally are harmonious and have high visual coherence.

The combined unity, intactness, and vividness of the key view indicate that the view has moderately high visual quality, as summarized in the following chart.



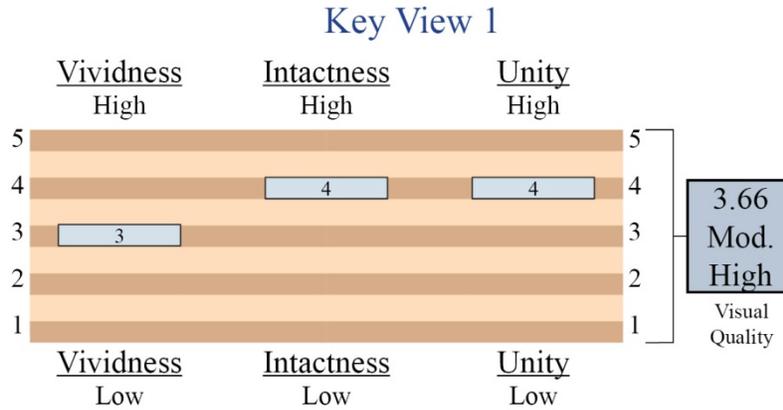
Key View 1
Existing Conditions



Simulation 1: Southward view to SR-11 from extension of Alta Road

Key View 1/Simulation 1

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3. Proposed Project Features Visible in Key View 1

Proposed project features visible in Key View 1 are illustrated in Simulation 1, Figure 22. Proposed SR-11 would extend west to east (right to left) across the center of Key View 1. The most visible portion of SR-11 would be the manufactured slopes (up to 20 feet tall) and associated planting on either side of the roadway. Although the area appears flat in the photograph, it is topographically varied enough that the slopes required to create a flat roadway would be visible. The surface of the roadway itself, however, would not be highly visible from Key View 1. The slopes would be visible mainly due to their landscaping, which generally would be green most of the year, and would contrast with the existing vegetation in the area and in the foreground of Key View 1. Automated toll facilities such as overhead meters would be positioned along the ramps of the Siempre Viva Road Interchange, but would be indiscernible from this distance. While these elements may be taller than most features of the proposed highway, they generally would be narrow elements that would be similar in appearance to the signs and fixtures that are usual parts of a highway visual environment, and as such would visually blend in with the larger proposed project, particularly as the interchange structures and buildings within the POE generally would be aligned behind the overhead elements.

The proposed POE would be located southeast of the locations from which the picture was taken, and some portions of some of the buildings in the northeastern portion of the POE would be visible from Key View 1. The POE area generally would slope to the south, which would block most views of the buildings from the location of Key View 1; the top of any two-story building (up to 24 feet high), however, would be visible above the manufactured slopes of the roadway.

One detention basin would be located south of SR-11, west of the crossing of Alta Road over SR-11, and another would be south of SR-11 approximately midway between Alta Road and the Siempre Viva Road Interchange. Both basins would be graded lower than SR-11, and would be rectilinear in shape, with maximum 2:1 slopes. The basins would not be visible from Key View 1, because they would be on the opposite side of SR-11, and the highway would block them from view.

4. Change to Visual Quality/Character

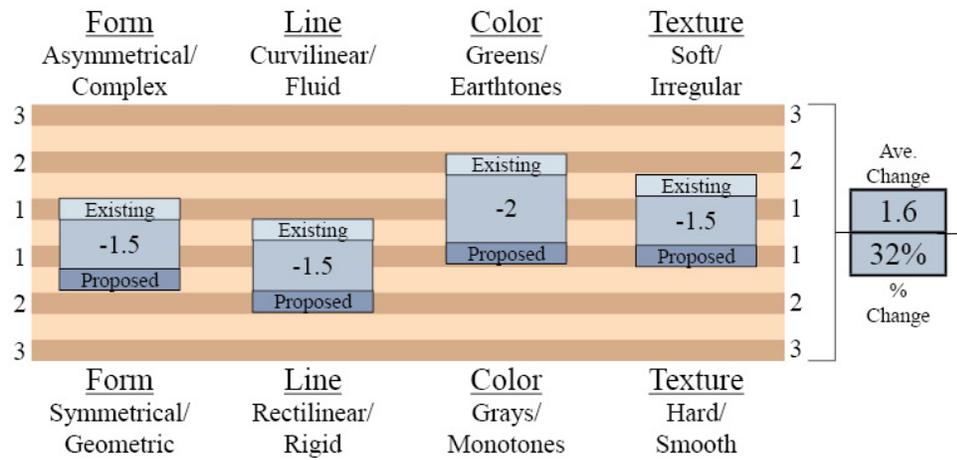
The visible elements proposed project would create a change in the visual environment of Key View 1. The proposed project would construct manufactured slopes facing the viewer and the proposed buildings in the POE be more symmetrically and geometric forms. The lines associated with these elements would be more rectilinear. Although the surface of the roadway would not be visible, the top and bottom of the slopes supporting the roadway would comprise a rigid line across the center of the view. The slopes and the buildings within the POE also would create a more monotonous visual environment in terms of color; although the existing vegetation within the view predominantly is brown, the new elements would have more monotonous colors associated with development, and some green vegetation, whereas the existing colors generally are more natural (greens and browns). The surfaces of the new slopes and buildings also would have more smooth textures than are present in the existing view.

The overall scale of the view would be similar to that of the existing view. Although the new elements within the view would be large in extent and scale, the view would still be expansive, and the new view elements would not block views of the landforms in the background. Although the slopes and buildings elements would not be complex, the new elements would increase the diversity of elements within the view. The slopes supporting the proposed roadway extending through the center of the view would contrast with the existing expansive undeveloped area: as mentioned, would be more strongly linear and horizontal with smoother textures. It therefore would strongly contrast with the surrounding area visible in Key View 1, and the continuity of the view would be much less. Similarly, the new elements would be prominent, changing the balance of the view.

Although the elements would be different, the change in pattern elements that comprise the key view and the change to the character of the visual patterns within the view would be moderately low. These potential changes are represented in the following charts.

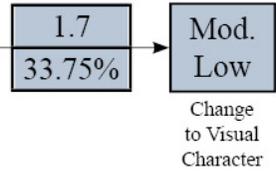
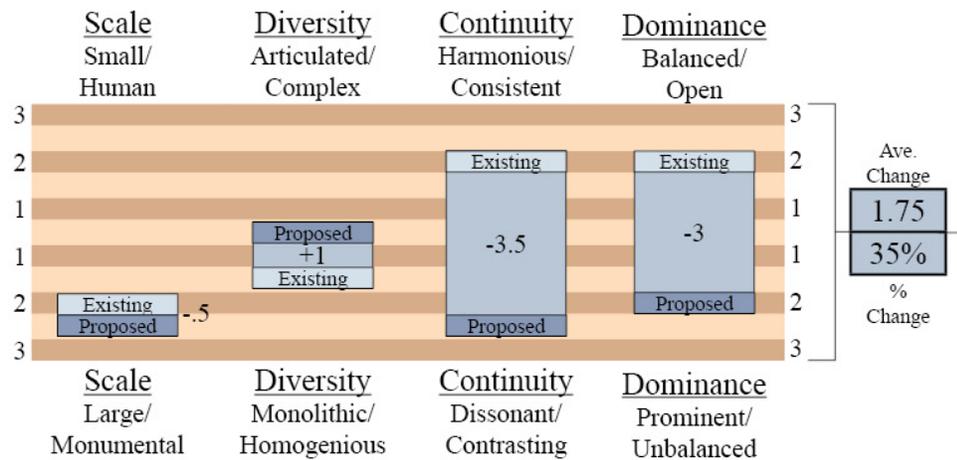
Pattern Elements

Describes the visual attributes of objects

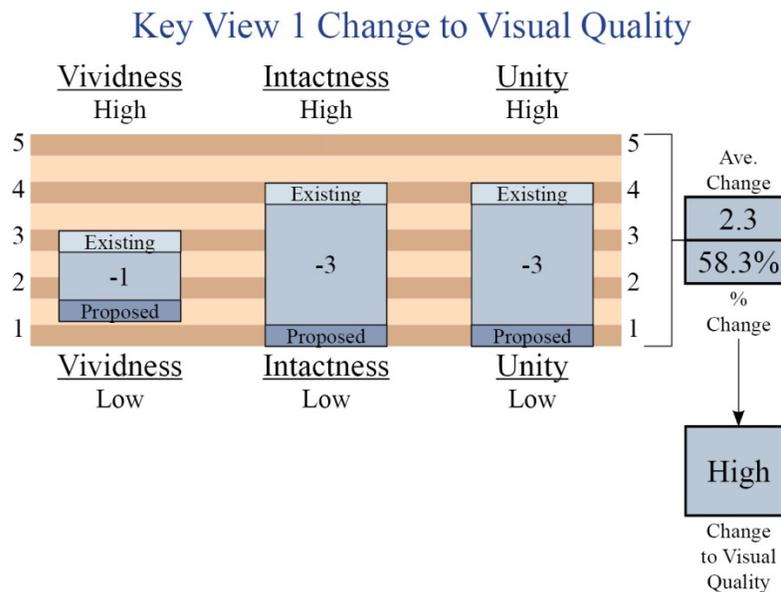


Pattern Character

Describes the relationships between visual elements



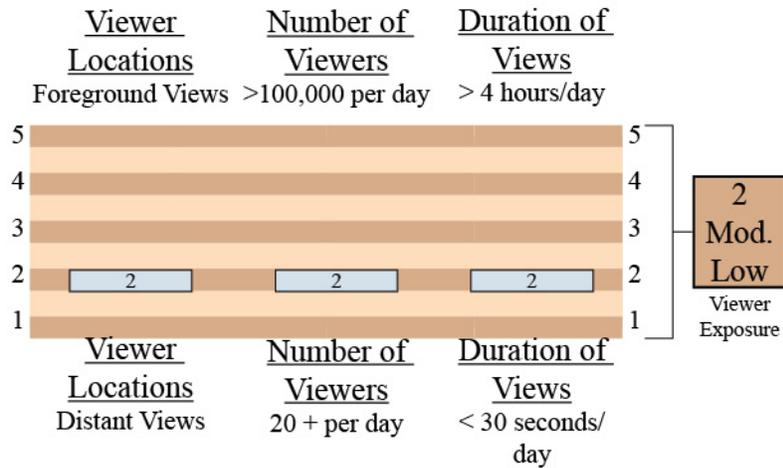
The new, contrasting proposed project elements would lessen the expanse of open space visible in Key View 1, thereby reducing the vividness of the view; although the hills in the background would remain visible. The elements also would visibly encroach on the visual environment of the area, reducing the visual integrity of the existing expanse of undeveloped grasslands, and reducing the intactness of the view. The unity similarly would be reduced because the new elements would not have visual coherence with the existing view, and the overall compositional harmony would be less. The level of change to the visual quality of the key view would be high, as shown in the following chart.



5. Anticipated Viewer Response

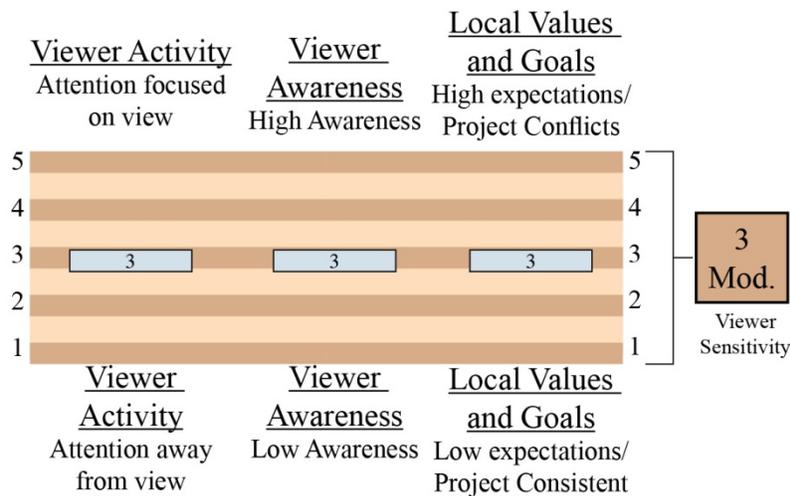
Key View 1 represents the view available to motorists on Alta Road and, to a lesser extent, on Otay Mesa Road near its eastern terminus; this view is directly in front of viewers southbound on Alta Road, and to the right for viewers on Otay Mesa Road. When looking south from the intersection of these roads, the project site is in the middle ground, although currently is not highly discernable from the surrounding area. The number of motorists on these roads is relatively low; Otay Mesa Road east between Enrico Fermi Drive and Alta Road currently supports approximately average daily traffic (ADT) volumes of 7,000, with an anticipated volume in 2035 of 12,200 ADT. These motorists are likely to have come from or are going to Alta Road, since Otay Mesa Road ends at Alta Road. Motorists on these roads must stop at a stop sign, and therefore have slightly longer view durations than if driving by without stopping. Their exposure, therefore, is moderately low, as illustrated in the following chart.

Viewer Exposure



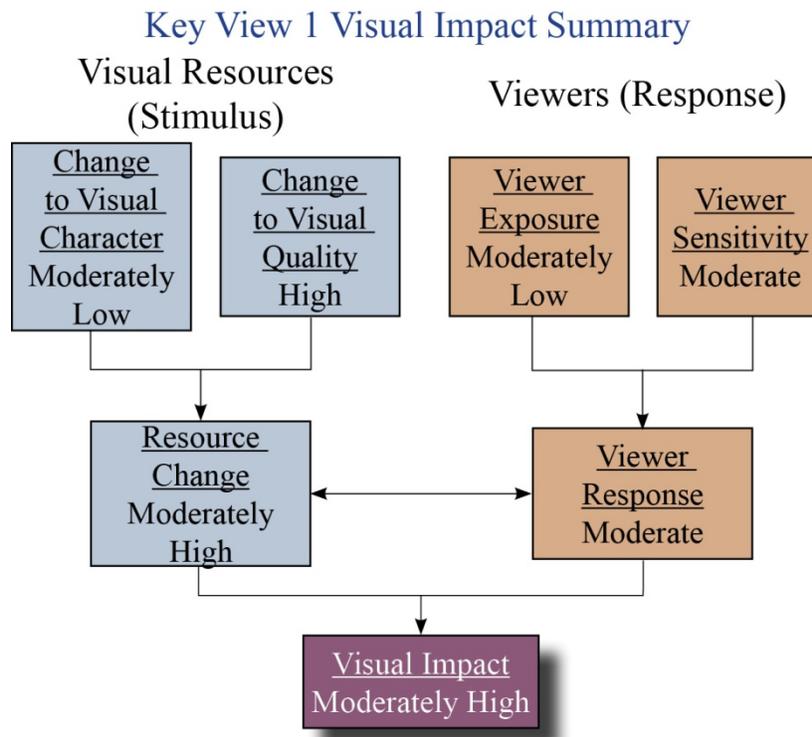
The viewers in this location generally are assumed to be patrons of the few businesses in the area (the auto auction yard and the restaurant at the Keubler Ranch site) and employees at those businesses, the power plant, and the correctional facilities. These viewers generally would be focused on their destination, although the vividness of the views of the local mountains and undeveloped areas at this eastern edge of the developed mesa may draw their attention and awareness to the surrounding views, including that represented by Key View 1. Their knowledge of the area may vary, depending on how often they travel the route; some of the viewers may have strong expectations about the types of views available, and some may have no knowledge of the area. Generally, the sensitivity of the viewers of Key View 1 is moderate, as shown in the following chart.

Viewer Sensitivity



6. Resulting Visual Impact

The proposed project would introduce highly contrasting elements into a view that currently is undeveloped land and open space; the level of change to the visual resources of the area would be moderately high. The viewers of the area, though few in number, would have a moderate level of response. The resulting visual impact to Key View 1 would be moderately high.



B. KEY VIEW 2

1. Orientation

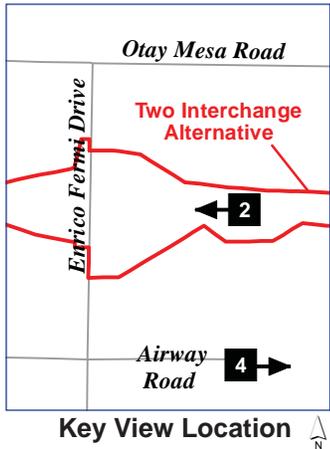
Key View 2, Figure 23, was taken from within the proposed SR-11 R/W, between Alta Road and Enrico Fermi Drive, and represents a westward-facing view of the area where the proposed roadway would be, near the eastern extent of the proposed Enrico Fermi Drive Interchange ramps. The existing view is almost entirely composed of an existing manufactured embankment slope, on top of which is a fence and shipping containers.

2. Existing Visual Character/Quality

Key View 2 is comprised of geometric forms and lines, particularly due to the face of the embankment, the rectilinear containers at the top, and the strong horizontal line of the fence. The embankment is covered low-growing, green and brown, sparse vegetation; the blue and white shipping containers provide some contrasting colors, but the view primarily contains earth-toned



Key View 2:
Existing Conditions



Simulation 2: Westward view along proposed alignment, east of Enrico Fermi Drive

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Photo simulations of the structures do not reflect their final design and are for visual example only

Key View 2/Simulation 2

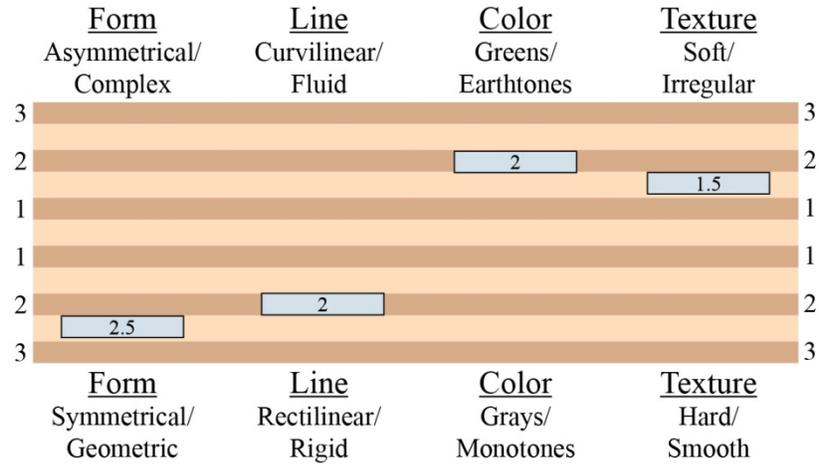
STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT

colors. The texture of the view is somewhat irregular due to the plants on the hillside, although the surface of the embankment generally is smooth and manufactured, as are the containers at the top of the view. The number and location of the shipping containers change over time as they are moved on and off site. The elements within the view are summarized in the following chart.

Key View 2

Pattern Elements

Describes the visual attributes of objects

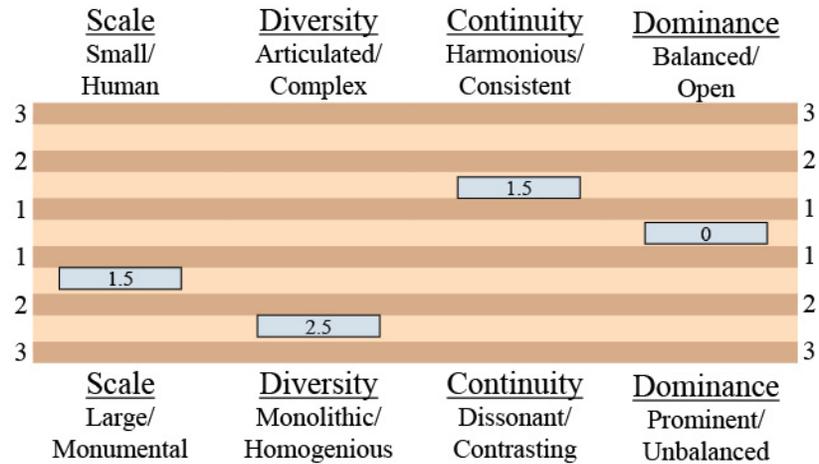


The scale of the view generally is large, although smaller vegetation is visible. The diversity is low, because the view primarily is comprised of the embankment, with some small variation due to the vegetation, the fence and the shipping containers; the containers are geometric and contrast with the more natural slope, but are few in number and not fully visible. Generally, the few elements within the view are consistent, and the continuity is relatively high, mainly because of the low diversity within the view. The view is not open and extensive because it is so close to the embankment; on the other hand, the relatively few elements are visually balanced. The character of the view is summarized in the following chart.

Key View 2

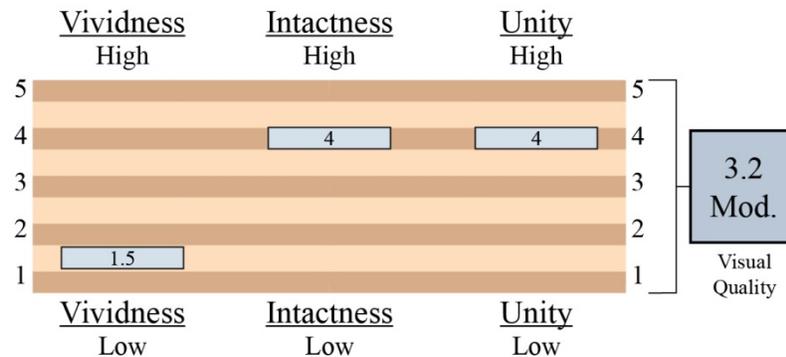
Pattern Character

Describes the relationships between visual elements



The view has moderate visual quality. The vividness of Key View 2 is low; there are no memorable elements or distinct visual patterns present. The intactness and unity of the view are moderately high. There are few elements, and although the shipping containers contrast with the slope, the slope and its strongly horizontal horizon line appear manufactured, and the geometric containers therefore do not visually encroach into the visual environment of the area. The composition of the few elements generally is symmetrical and coherent. The quality of the key view is summarized in the following chart.

Key View 2



3. Proposed Project Features Visible in Key View 2

The proposed project would change the view from this point and similar points along the R/W in this area. The proposed project as seen from this viewpoint is simulated in Simulation 2, Figure 23. The view would consist of the proposed SR-11 roadway in the foreground and extending into the distance, and the existing hillside, fence, and containers would be completely removed from the roadway path. The roadway would be bordered on each side by 2:1 manufactured slopes approximately 18 to 25 feet high. The proposed Enrico Fermi Drive overcrossing would cross the highway in the center of the view, connecting the banks on either side of the roadway. The roadway would consist of two lanes in each direction, separated by a 42-foot-wide median. Entrance and exit ramps would be visible on each side of the roadway.

4. Change to Visual Character/Quality

The key view after installation of the proposed project would have a visual quality similar the existing key view. The proposed configuration would be geometric, with a flat roadway, strong perspective lines, and smooth manufactured slopes. The slope that currently stops westerly views, however, would be removed, and the road would be sited between and below north and south facing manufactured slopes, resulting in a linear element that does not currently exist. The overcrossing structure would re-introduce a strong geometric form and horizontal line in the view. Where the existing view primarily has earth-toned elements, the new roadway would be gray, and basic, functional erosion control measures and highway planting would add green and gray/green tones. The smooth roadway and manufactured slopes with a regular, smooth surface would contribute to the generally smooth textures visible in the view. The proposed vegetation would provide some variety of texture; the plants would be viewed at a distance, however, and would visually blend together to create a more smooth texture than within the close-up view of the existing slope.

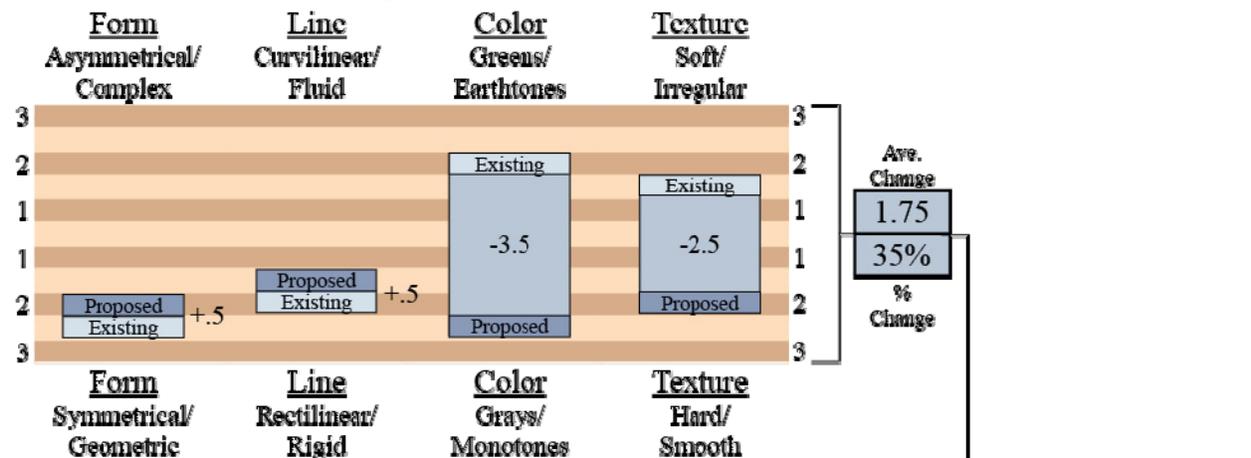
The scale of the view would be large, although in contrast with the existing view, the new elements would include high slopes to the viewer's right and left rather than in the foreground, and a wide road surface that would extend into the distance. The diversity of the view would not be high, as it would consist mainly of the road and the slopes. Similarly, the continuity of the view would be high because each of the components within the view would relate to roadway. The road and its slopes would be the dominant elements within the view, which would be more open for long-distance viewing and balanced with slopes on each side.

Although the new elements would be different from the existing elements, views in the area would have similar visual character. The change of character from the existing to the proposed view would be moderately low, as summarized in the following charts.

Key View 2 Change to Visual Character

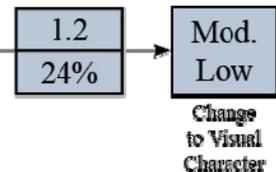
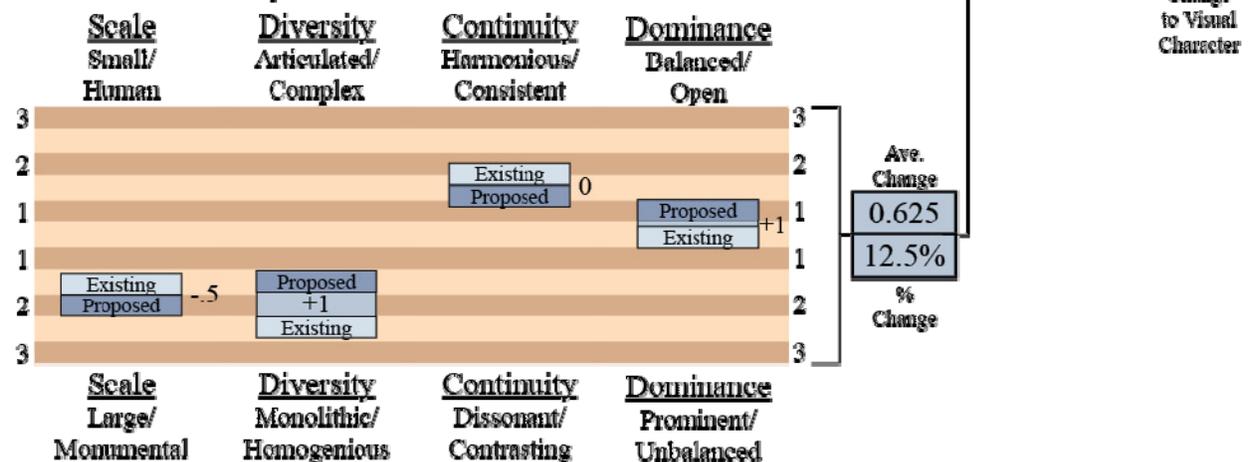
Pattern Elements

Describes the visual attributes of objects



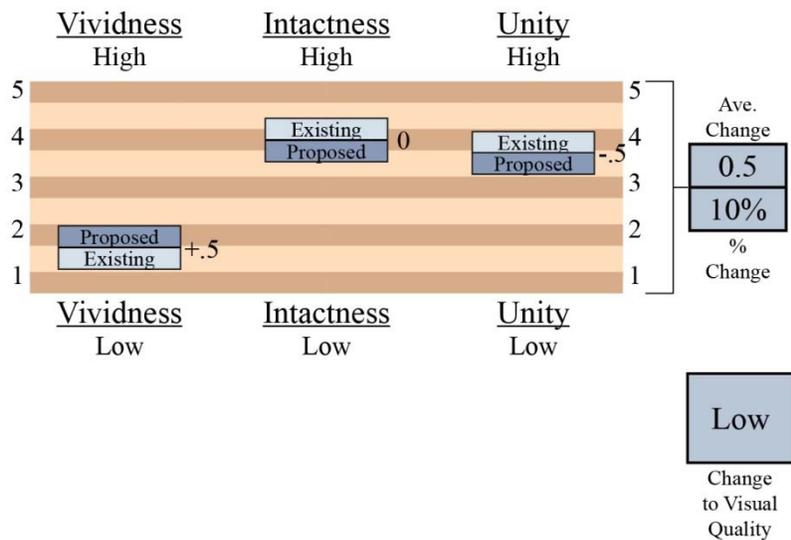
Pattern Character

Describes the relationships between visual elements



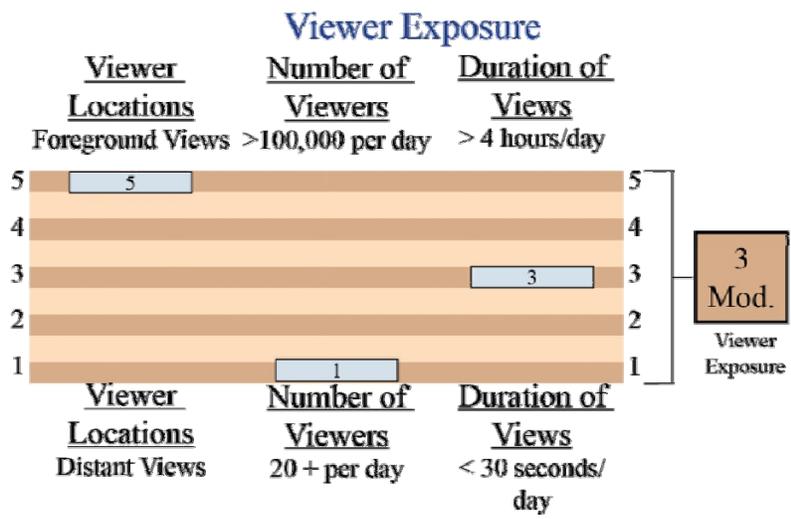
The visual quality of the view also would be similar to the existing view, though it would be comprised of different elements. The vividness would be low; the proposed roadway would not have highly memorable elements, and could represent a road in almost any location; there are no landmarks or visible features to provide a sense of place. The intactness and unity would be high; there would be no elements encroaching into the view, and all of the elements would have visual coherence with the roadway itself. The change to the visual quality would therefore be low, as summarized in the following chart.

Key View 2 Change to Visual Quality

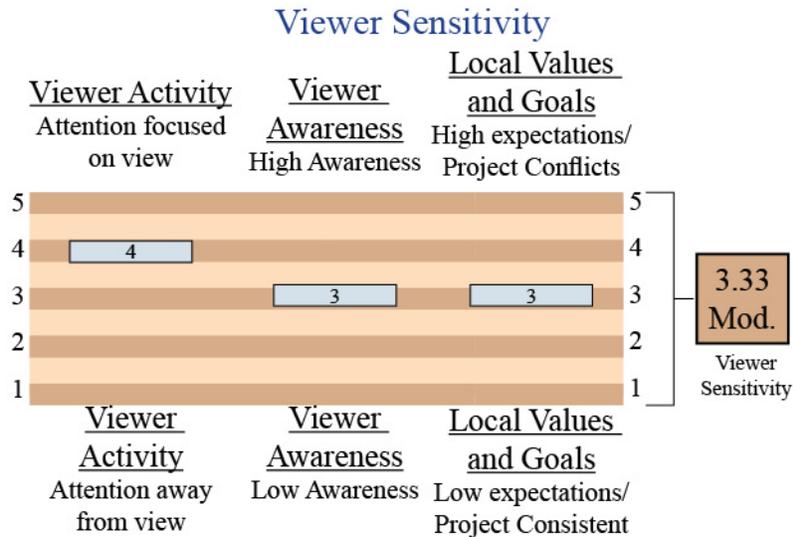


5. Anticipated Viewer Response

Key View 2 represents views available to viewers within the proposed project R/W. The proposed project features would be in the foreground for viewers in this location. The current number of viewers is low. This view, taken from an unpaved portion of Alta Road, is not easily accessible to the public. It does represent the view that travelers on the new roadway would experience; however the great majority of those viewers would not be expected to know the pre-construction visual environment. The duration of views from this area may vary depending on how long a viewer lingers; current viewers are pedestrians, and do not move very fast, yet they would have little reason to linger and study the existing view. Their exposure is moderate, as summarized in the following chart.



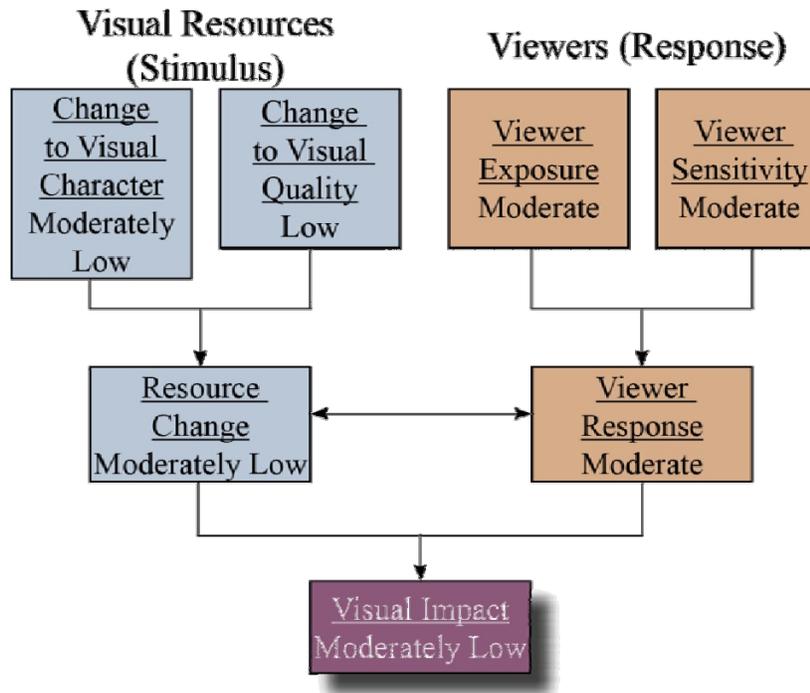
A viewer's attention at the location of Key View 2 is moderate; there is little else besides the view to pay attention to, although the hillside does not provide open or extensive views. Their awareness also is moderate because although there is little to focus on, those elements don't have high visual quality to attract prolonged viewer attention. Their expectations may be somewhat lower. The surrounding area is a mix of developed and undeveloped areas, and they may not have a high expectation for extensive views of undeveloped or highly vivid areas. Overall their sensitivity is moderately high, as summarized in the following chart.



6. Resulting Visual Impact

The proposed project would completely change the visual environment of the area represented by Key View 2. The features visible in Key View 2 due to the proposed project, though different in composition, would have similar character and quality, and the change between the existing and proposed view would be moderately low. The viewers of this area would have a moderate response to change in the visual environment. The resulting visual impact would be moderately low.

Key View 2 Visual Impact Summary



C. KEY VIEW 3

1. Orientation

Key View 3, Figure 24, was taken from the northwest edge of the proposed POE site and the southeastern extent of the proposed SR-11 alignment. The view looks northwest across the undeveloped project site, which consists of gently-varied flat areas covered with low-growing vegetation that was brown at the time the picture was taken. A slight upward slope comprises most of the photograph, and vehicle tracks are visible in the vegetation in front of the viewer. Some unpaved roads are visible as lighter-brown areas to the left of the view. White structures or vehicles and the tops of some trees are visible in the background, associated with nearby development at the auto auction yard south of Otay Mesa Road and the end of Alta Road (approximately ½ mile northeast of the viewer).

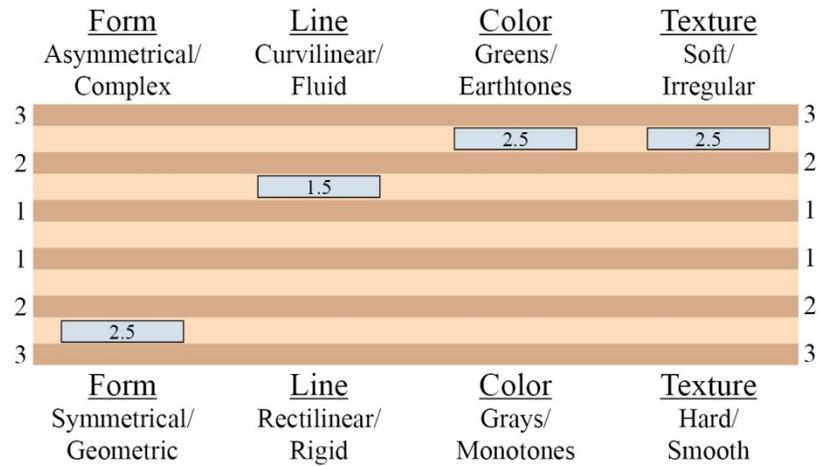
2. Existing Visual Character/Quality

The grassy vegetated, gentle slope in front of the viewer dominates the visual character of Key View 3. The view does not encompass complete visual forms, but what is visible generally is geometric, with curvilinear lines, earth-tone colors, and irregular textures. The scale of the view is large; the undeveloped areas comprise almost the entire view, and appear extensive on all sides. The diversity is low, and the continuity is high. The undeveloped area in Key View 3 is expansive and the dominant characteristic is open. The character of the key view is summarized in the following charts.

Key View 3

Pattern Elements

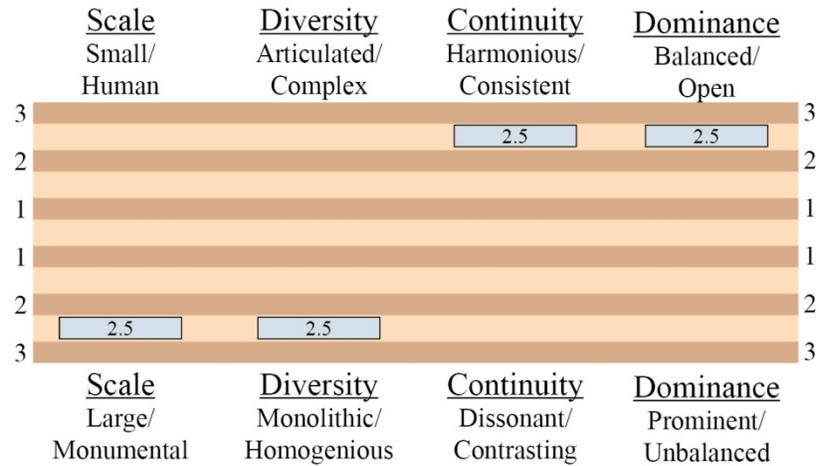
Describes the visual attributes of objects



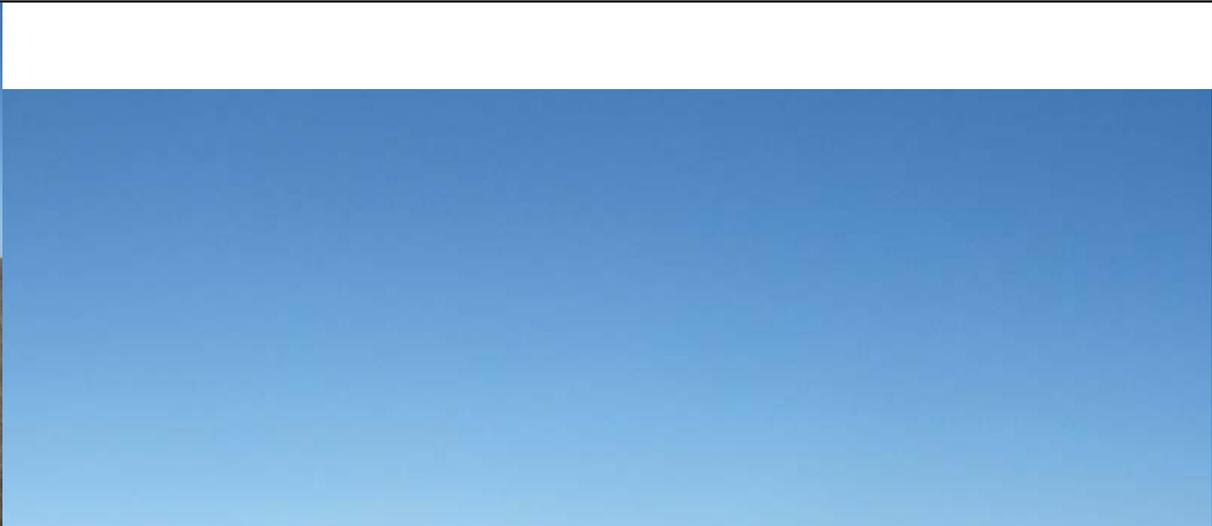
Key View 3

Pattern Character

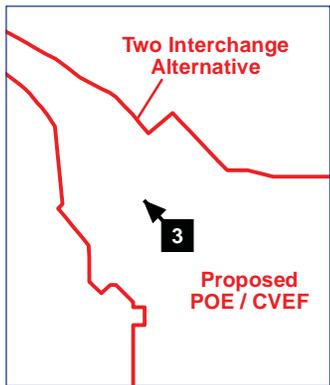
Describes the relationships between visual elements



Although the visual character of Key View 3 is not highly vivid or memorable, the view has high visual quality, in part because, unlike most areas in the viewshed, no development is visible, and it therefore is a scene unique to the area. The expanse of open space represented by this view is vivid, with distinct visual power, especially when contrasted to local development. The intactness of the area is high; the vehicle tracks visible in the vegetation in front of the viewer and unpaved roads do not encroach into the area, but serve to highlight the undeveloped characteristics of the area. Similarly, the view and the open space areas have high unity, with high visual coherence.



Key View 3:
Existing Conditions



Key View Location 



Simulation 3: Northwest view toward Siempre Viva Road overcrossing from SR-11/POE transition

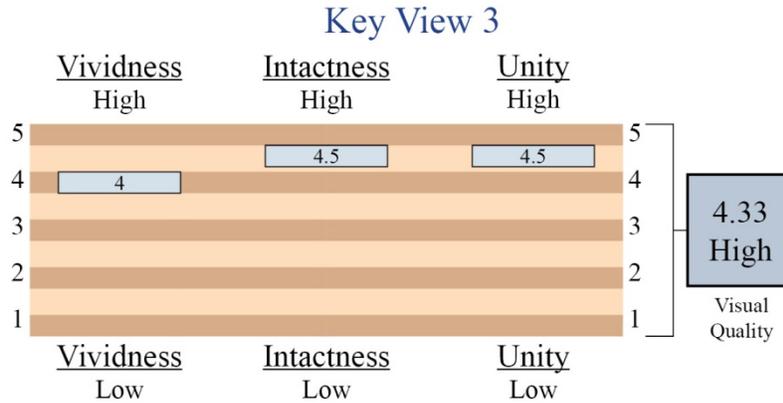
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Photo simulations of the structures do not reflect their final design and are for visual example only

Key View 3/Simulation 3

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Figure 24



3. Proposed Project Features Visible in Key View 3

The proposed project would replace the open space visible in Key View 3 with highway and interchange features. These features are illustrated in Simulation 3, Figure 24. The location of Key View 3 corresponds to a northbound commercial vehicle lane in the proposed SR-11 alignment. The highway lanes would be visible in the foreground and to the viewer’s left, and the roadway would extend away from the viewer into the distance. The proposed Siempre Viva Road Interchange would be in front of the viewer as well; the overcrossing would extend across the center of the view. The fence at the top of this overcrossing may be a solid screen. A loop ramp would be visible on the right side of the view.

A detention basin would be located northwest and another would be located southwest of the Siempre Viva Road Interchange. A third potentially would be located between commercial and passenger vehicle lanes on the north side of the interchange. The basins would be graded lower than the nearby roadway, and would not be visible from Key View 3 because the interchange and roadway features would block them from view.

4. Change to Visual Quality/Character

The new features that would compose the visual environment of Key View 3 after development of the proposed project would be geometric, and would be diverse and more complex than the unvaried expanse of low-growing vegetation currently visible. The lines comprising the visual environment would be rigid and rectilinear, and the surfaces would have smooth textures. Some landscape slopes in the center of the loop ramp may be visible and may be vegetated; however, the gray surfaces of the roadway would be the most dominant color in the view.

The built elements within the view would be large, and the overall view would appear monumental due to the large expanse of highway lanes—on each side and reaching into the distance—with the overcrossing in the center of the view. There would be more and different kinds of individual elements within the view after development of the proposed project than within the existing view, increasing the visual diversity; the new elements, however, would all be visually related to the new highway, and overall diversity would not be high. Similarly, the new elements would have visual continuity with the highway and continuity would be moderate. project elements would contrast with the surrounding area; however, the surrounding area would

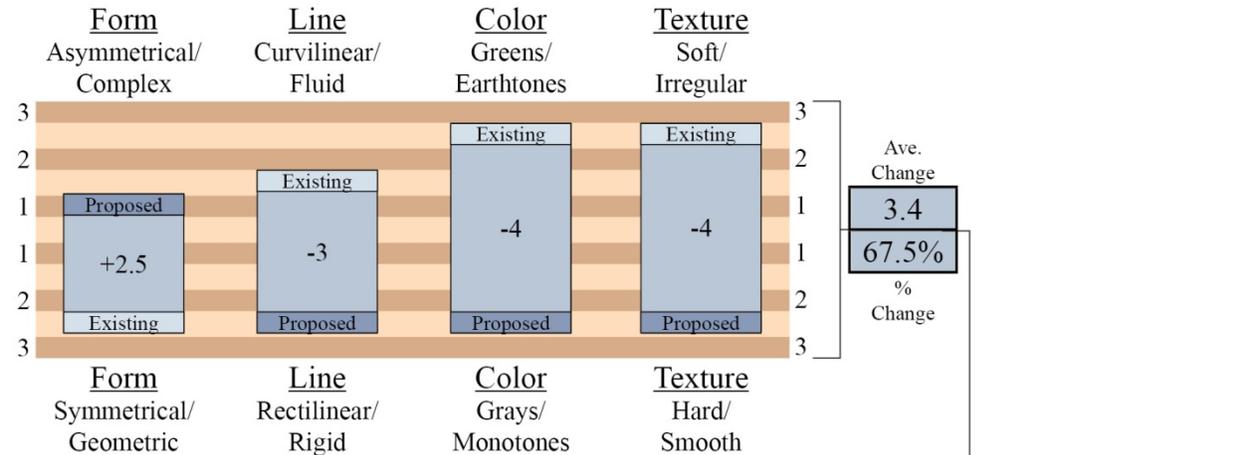
no longer be visible, and the highway and interchange would comprise the entire view. That view would be much less open, and the new view elements would be large and dominant.

The features of the proposed project would be drastically different from the existing elements, and the change to the character of the visual patterns within the view would be moderately high, as summarized in the following charts.

Key View 3 Change to Visual Character

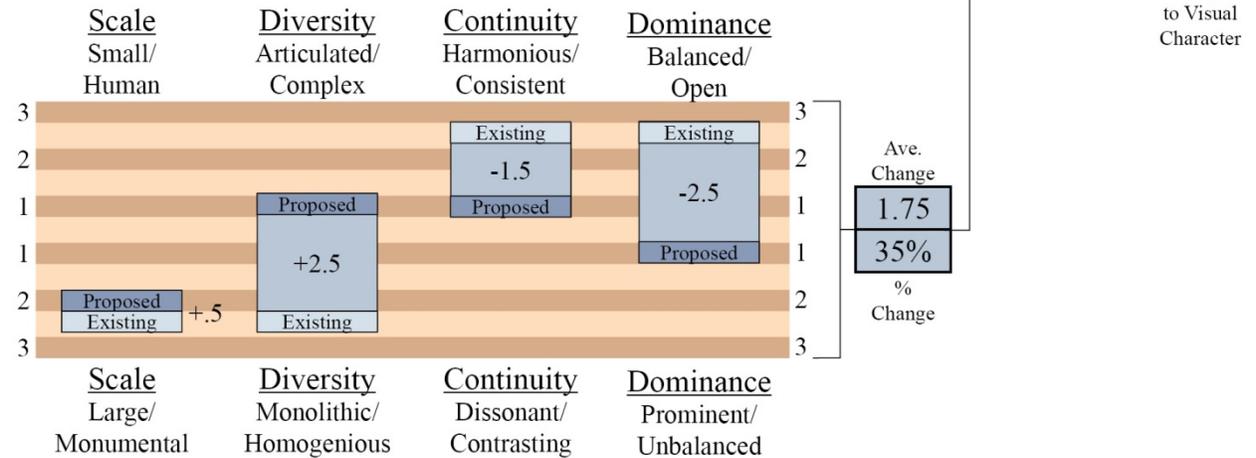
Pattern Elements

Describes the visual attributes of objects



Pattern Character

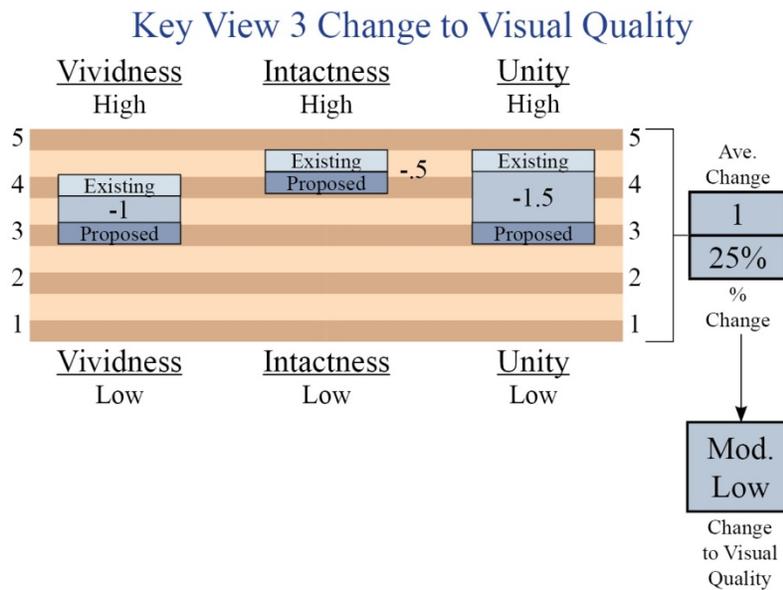
Describes the relationships between visual elements



The new elements also would change the visual quality of Key View 3, but to a lesser extent because the resulting quality of the view would be comprised entirely of the new highway and interchange elements which, though visually different, would have similar visual quality to the existing view.

The vividness of the proposed roadway and interchange would be less than the vividness of the existing view. There would be few elements with distinct visual power or memorability, and although this location has the potential to support an entrance feature that would create a vivid entry to the U.S., the vividness within Key View 3 after project development would be moderate. The visible features within Key View 3 after project development would have visual integrity in that they would visually relate to the highway and interchange that would dominate the key view. There would be little visual contrast, and no elements would visually encroach into the view; the resulting intactness would be moderately high, similar to the existing visual intactness. Unity within the view would be less than existing as well because although each of the elements would visually relate to the roadway and interchange, the overall composition would not have high harmony.

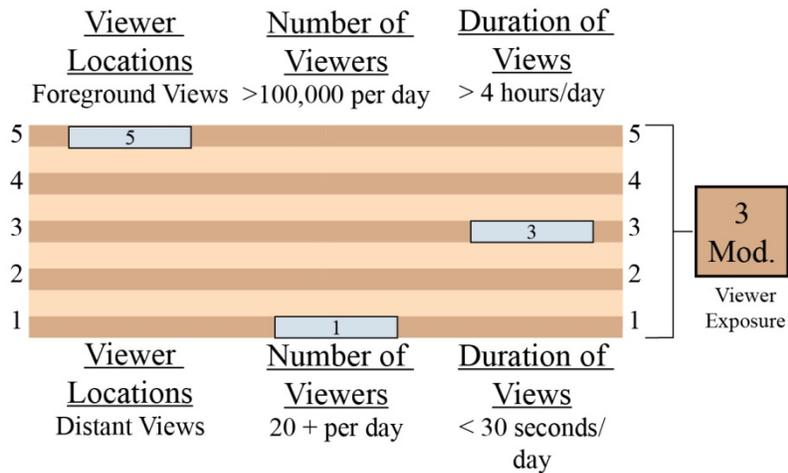
Although composed of new elements that would have less vividness and unity than within the existing view, the resulting visual quality would be similar to the existing visually quality, and the change would be moderately low. This is summarized in the following chart.



5. Anticipated Viewer Response

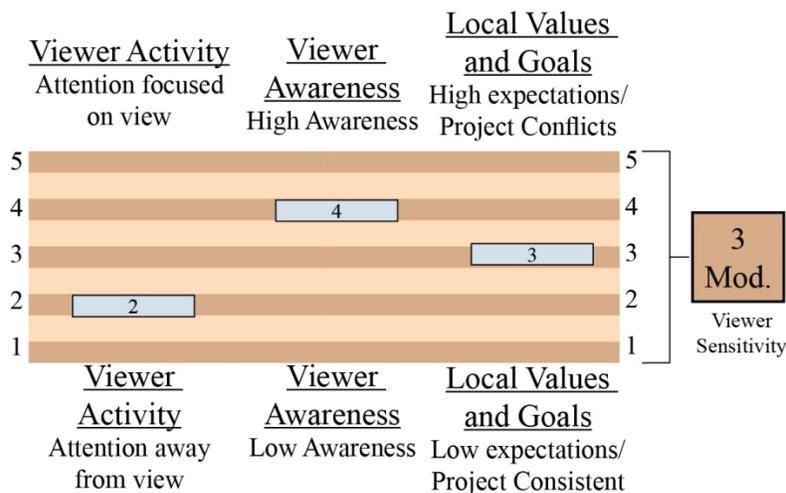
There currently are very few viewers in the area represented by Key View 3. The general public has little reason to explore the unpaved roads east of the developed areas of Otay Mesa, although they may be discouraged by the U.S. Border Patrol, the unpaved roads nearby Key View 3 (although not visible in the view) could be used by mountain bikers and hikers. As a result, U.S. Border Patrol agents are the most common viewers present at this time. Viewers in the area have foreground views of the project site and proposed project elements. The duration of their view is mixed, depending on activity. A hiker or mountain bike rider views the area longer than a border patrol agent in a vehicle, although that agent may park for a longer period of time in the area during his or her patrol. A viewer's exposure is moderate, as summarized in the following chart.

Viewer Exposure



Viewers in the area generally have little reason to focus their attention in the area; there are no view elements that would draw a recreational user’s attention, and border patrol agents generally can be assumed to be looking south. Viewers in the area are assumed to have high awareness of the surroundings, either while looking at the scenery or the border. A recreational user’s expectations for a view of open space are high, and a border patrol agent also may value extensive views for other reasons. Viewer sensitivity is moderate, as summarized in the following chart.

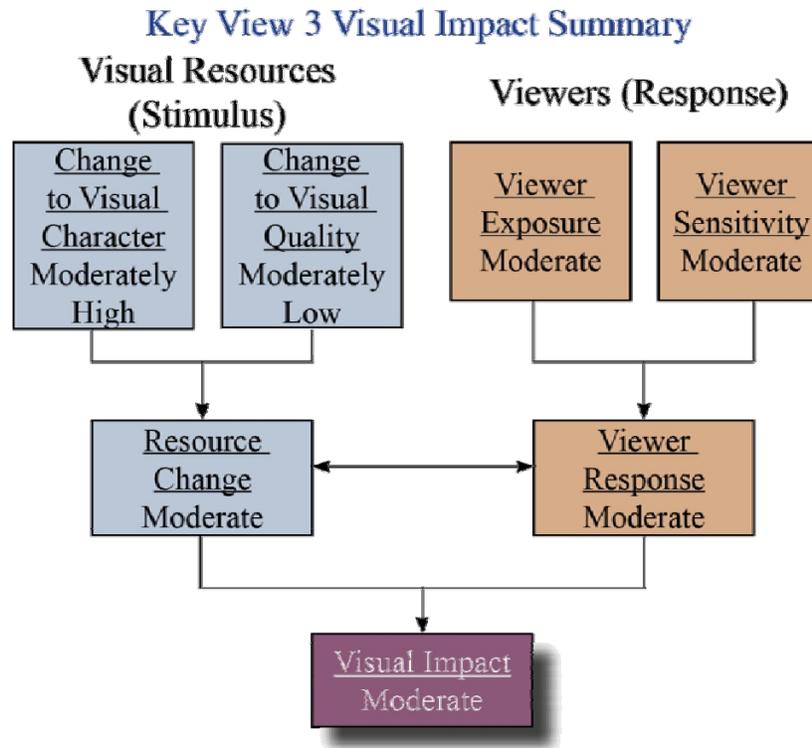
Viewer Sensitivity



6. Resulting Visual Impact

The proposed project features would change all the view elements within Key View 3, shifting the view from open space to developed highway and interchange features. The features of the proposed project that would be visible in Key View 3 would create a moderately high change to

the visual character of the area, but the resulting visual quality of the new features that would comprise the view would be similar to the existing visual quality. The change to visual resources, therefore, as a combination of the change to the visual character and the change to the visual quality, would be moderate. In combination with the moderate viewer response, this moderate change to visual resources would result in a moderate visual impact to Key View 3.



D. KEY VIEW 4

1. Orientation

Key View 4 (Figure 25) was taken from the east end of Airway Road, east of Enrico Fermi Drive, and looks east. It encompasses an expansive view of the undeveloped areas of East Otay Mesa.

2. Existing Visual Character/Quality

The undeveloped varied topography of the eastern edge of the Otay Mesa area makes up the visual environment of Key View 4. The foothills of the San Ysidro Mountains, which extend southward into Mexico, comprise the visually dominant background. A relatively flat area covered with low-growing vegetation extends away from the viewers, becoming more topographically varied as it meets the base of the mountains approximately ½ to one mile east of the viewer. The flat areas are covered with mostly low-growing, brown vegetation and a small

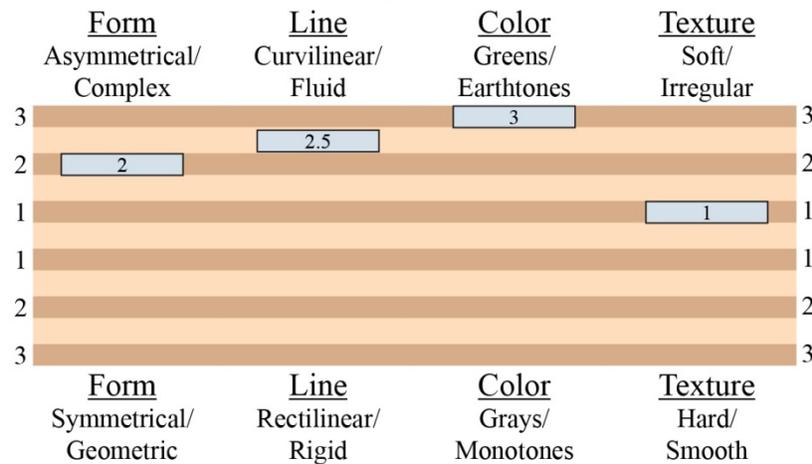
group of dark-green trees. The brown of the vegetation in the foreground becomes more muted farther from the viewer, and blends with the color of the hills, which become more purple-ish in the distance due to atmospheric conditions. Some unpaved roads transect this area, and a few are visible in Key View 4, particularly the extension of Airway Road just right of center in the view, which draws the viewer’s eye into the distance, and emphasizes the topographic variations of the seemingly flat areas in the middle-distance of the view. Besides the unpaved roads, little development is visible in this view. A small portion of the developed areas south of the U.S.-Mexico border is visible on the right edge of the view. This is discernable mainly because it is a darker color and because the border fence constitutes an unnatural straight line, separating the buildings and vegetation east of Tijuana from the undeveloped areas east of Otay Mesa.

The pattern elements that compose Key View 4 include the complex forms of the dominant mountains in the background. The relatively flat areas in the foreground have less variation of form than the mountains that comprise the background, yet the curves of the unpaved roads in the view reveal more variety of form than is apparent at first glance. The mountains in the background also have dominant curvilinear and fluid lines. The colors within the view predominantly are natural greens, browns, blues, and purples; the development in Mexico, the only other man-made element besides the unpaved roads, appears blue and purple in the haze of distance. The textures within the view generally are smooth due to the distance of the viewer from the main elements; the surfaces within the view, however, are more natural than hard, and textural variety is visible. The pattern elements are summarized in the following chart.

Key View 4

Pattern Elements

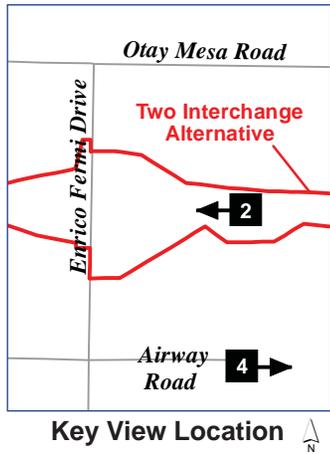
Describes the visual attributes of objects



The scale of the visual environment of Key View 4 is large and monumental due to the mountains and expanse of open space, although the unpaved roads indicate human-scale elements within the area and the view. Although the view is comprised of relatively few elements and is not highly complex, it also is not monolithic due to the curvilinear lines and complexity of the mountains and the variety of the flatter areas indicated by the unpaved roads. The pattern elements within the view are highly consistent and harmonious, with only the unpaved roads contrasting with the natural landforms. The view is expansive and open, and



Key View 4:
Existing Conditions



Simulation 4: Eastward view toward proposed POE from end of Airway Road

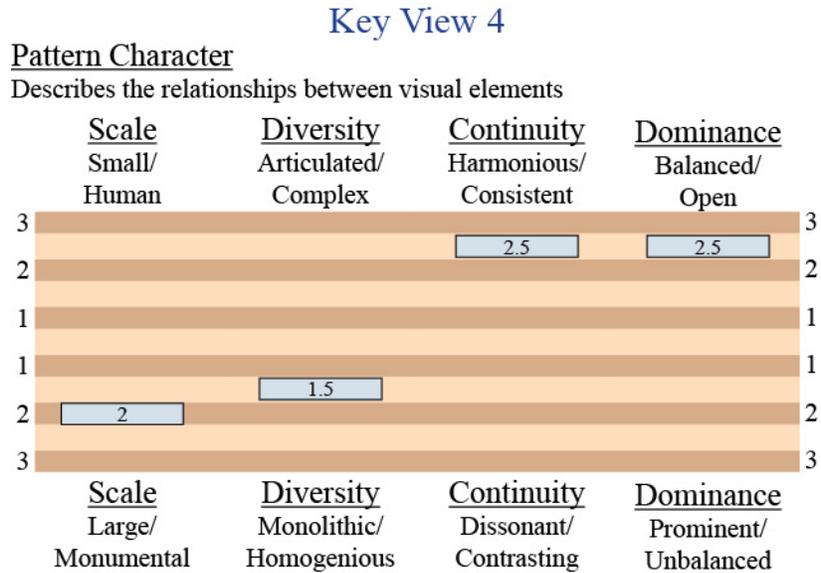
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Photo simulations of the structures do not reflect their final design and are for visual example only

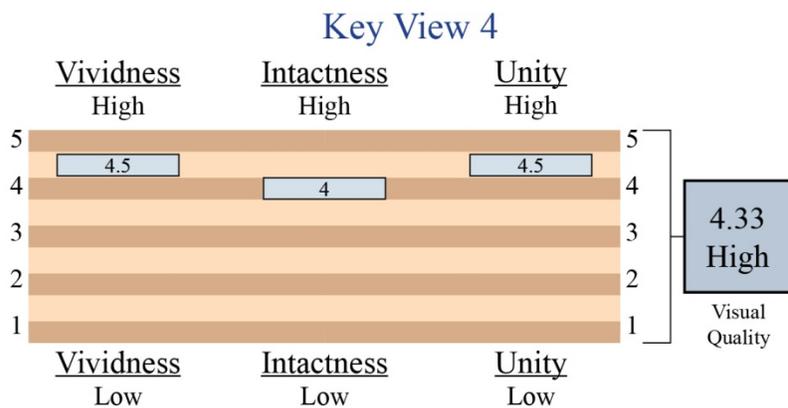
Key View 4/Simulation 4

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although the mountains are dominant elements, the view generally is balanced between the background and foreground elements. The open, natural character of the area is reinforced by the contrast with the extensive development on the Mexican side of the border. The character of the key view is summarized in the following chart.



These visual attributes combine to create high visual quality in the areas represented by Key View 4. The expansive flat areas and dominant mountains that are the main elements in this view are distinct components with visual power and memorability. The view has few encroaching elements; the unpaved roads in the view, though contrasting with the vegetation through which they extend, generally follow the topography and emphasize it, rather than detract from it. In the same way, the elements in the view generally are visually coherent and the view is compositionally harmonious as a whole, although the contrasting road detracts slightly from the unity of the view as a whole. The visual quality of Key View 4 is summarized in the following chart.



3. Proposed Project Features Visible in Key View 4

The elements of the proposed project that would be visible in Key View 4 would be in the middle-ground of the view, rather than the immediate foreground. A portion of the SR-11 roadway where it would curve from an east-west alignment to extend southeastward toward the proposed POE would be visible in Key View 4, extending from the left side of the view to the middle of the view. The Siempre Viva Road Interchange would be visible in the center of the view, in front of the viewer, and a portion of the POE would be visible on the right side of the view. Toll facilities such as monitoring booths and overhead meters would be positioned along the ramps of the Siempre Viva Road Interchange, but would be indiscernible from this distance. While these elements may be taller than most features of the proposed highway, they generally would be narrow elements that would be similar in appearance to the signs and fixtures that are usual parts of a highway visual environment, and as such would visually blend in with the larger proposed project. Proposed project elements are depicted in Simulation 4, Figure 25.

The proposed SR-11 generally would be located at a lower elevation than the immediately surrounding areas and intervening topography would block direct views of most of the new roadway from Key View 4. The most visible change created by the proposed roadway would be the strong horizontal line created as the roadway is placed across this undeveloped area. Some parts of the slopes on either side of the roadway created by proposed project grading would be visible. The upper portions of the interchange also would be visible, between the viewer and the mountains in the background. Buildings within the POE also would be seen from Key View 4. Located approximately ½ mile east of the viewer, they would be rectangular structures on a graded, flat area that previously was undeveloped.

The immediate foreground of the view would not change due to the proposed project. Background features such as the mountains and the developed areas south of the border, also would remain visible.

4. Change to Visual Quality/Character

The proposed project would introduce new pattern elements that would change the visual character of the view. The proposed POE buildings, Siempre Viva Road Interchange structures, and the roadway and the visible portions of its grading would introduce new geometric forms and rectilinear and rigid lines into this area that currently have flowing lines and varying forms. The mountains would remain dominant elements in the view after the proposed project is completed; however, the new elements would be highly visible because they would contrast with the surrounding area. The colors and textures of the proposed project also would contrast with the surrounding area; the structures would have less tonal variation and more hard surfaces and smooth textures than the surrounding area. The distance of the proposed project from the viewer may lessen the visual effect of the rigid forms and monotonous colors and smooth textures with atmospheric haze; however the contrast between these elements and the surrounding area would still be strong.

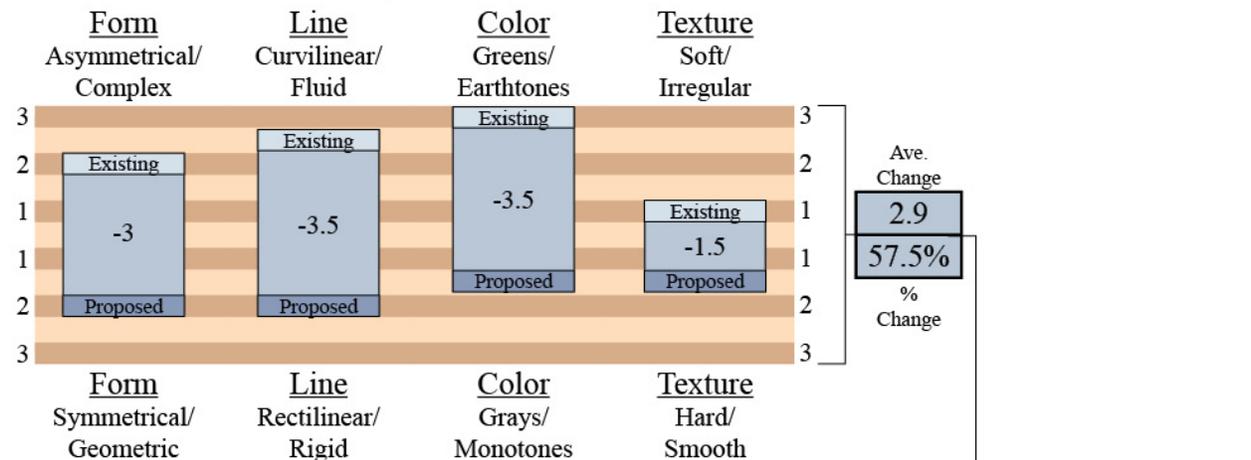
The visual scale of the overall view represented by Key View 4 would be similar after installation of the proposed project. The new features would extend across the open space, interrupting the extent of the flat areas visible from this view point. While the proposed project

elements would be different from the existing elements, the geometric forms, rigid lines, and plain colors would be less complex and articulated than the surrounding natural elements. While the mountains would remain as dominant background features and most of the expansive open space would remain undisturbed, the new project elements would slightly reduce the scale of the view, and slightly increase the diversity. The new elements would contrast sharply with the surrounding natural element, lessening the continuity of the view. The contrasting elements, though at a distance from the viewer, would be visually dominant in that their placement would draw the viewer's eye to the contrast between the new structural elements with the surrounding natural areas. Although the mountains would remain dominant, the contrast would lessen the visual balance within the view. The level of change to the pattern elements and character is summarized in the following charts; the change to the visual character of the key view would be moderately high due to the introduction of the proposed project features.

Key View 4 Change to Visual Character

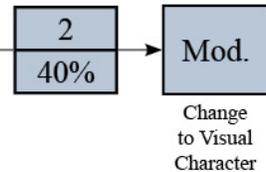
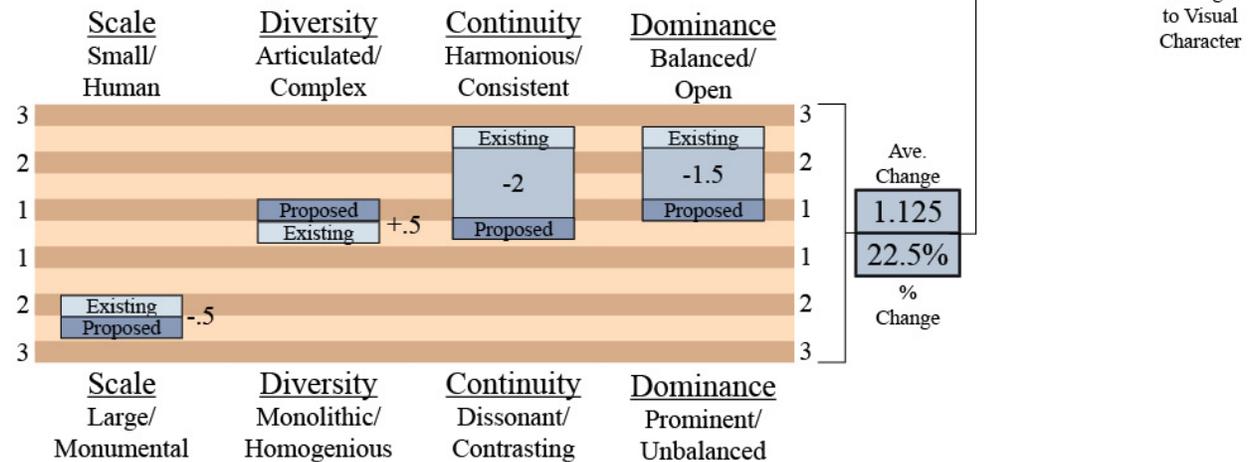
Pattern Elements

Describes the visual attributes of objects

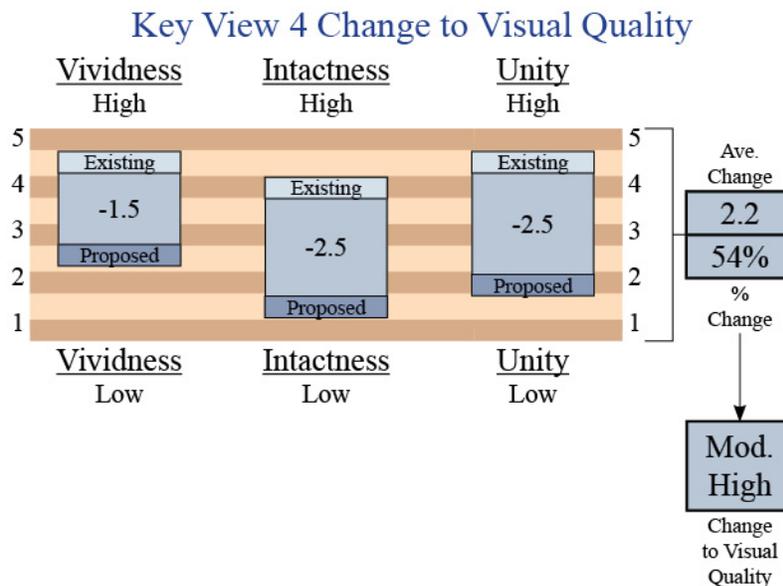


Pattern Character

Describes the relationships between visual elements



The proposed project features also would change the visual quality of the key view. The contrast between the new structures and the surrounding natural area would decrease the vividness of the expansive undeveloped area between the viewer and the mountains that dominant the background of the view. While the memorability of the mountains would not be changed, the visual power of the combination of the uninterrupted open space and the mountains would be lessened. Similarly, the new features would encroach into the view, reducing the visual integrity and intactness of the area. The visual unity also would be reduced; the visible proposed structures and the strong lines of the grading would not be visually coherent within the existing undeveloped area, and the compositional harmony of the view would be reduced. These features would create a high level of change in the visual quality of the key view, as summarized in the following chart.

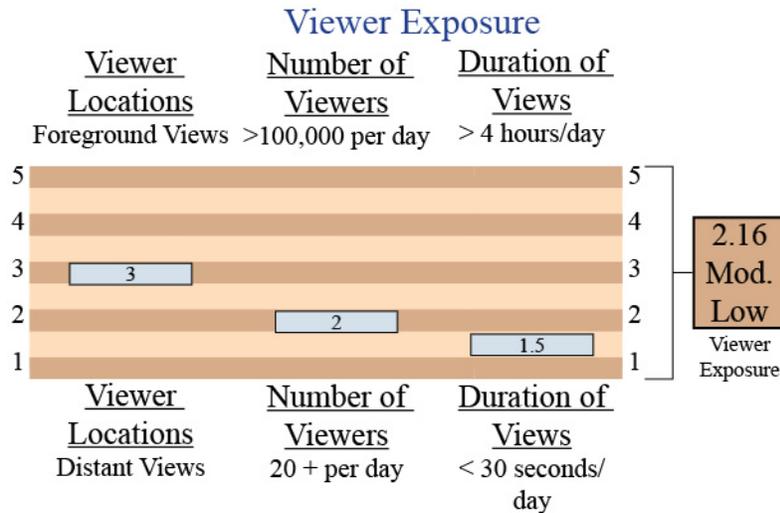


5. Anticipated Viewer Response

Key View 4 represents the view available to motorists on Airway Road at its eastern extent, and the north-south trending segment of Airway Road east of Enrico Fermi Drive. Most of these motorists are likely to be truck drivers accessing the existing commercial vehicle inspection station to the south. Views similar to Key View 4 are available from the other east-west roads in the area, especially those extending eastward from Enrico Fermi Drive, including Siempre Viva Road and Enrico Fermi Place. Each of the east-west trending roads terminates at this eastern extent. The proposed project right-of-way is approximately ½ mile north and east of the point from which Key View 4 was taken; placing the project site in the middle-ground for these viewers.

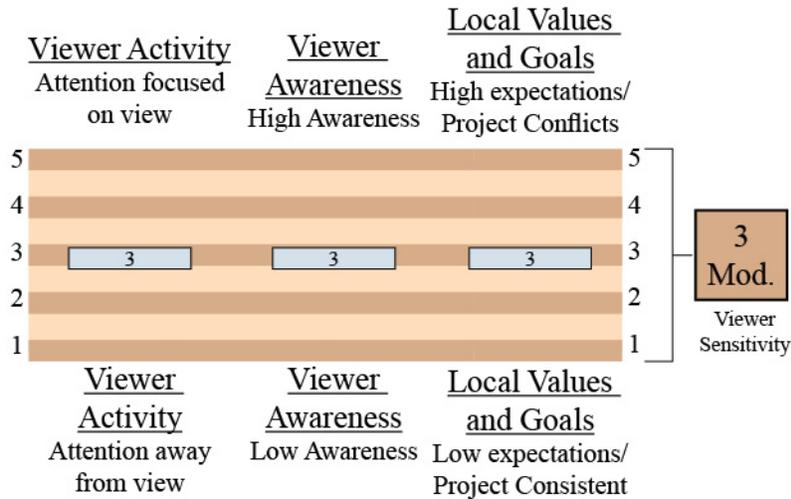
The number of viewers on Airway Road at its eastern extent is low; traffic on Airway Road between SR-905 and Enrico Fermi Drive currently is 1,600 ADT, and the parcels abutting

Airway Road east of Enrico Fermi Drive are not yet developed, therefore there is little traffic on this road. The road is expected to be extending (per the EOMSP) in the future, and when it and the parcels it abuts are developed, the number of viewers in the area will rise. Traffic on Airway Road in 2015 is expected to be 2,000 ADT, and in 2035 is expected to be 12,200 ADT. The length of time a viewer sees this view would vary; currently, there is a stop sign at the intersection, yet little traffic to wait for. Generally, a viewer would not linger, but would not pass at high speeds either. The future viewer exposure, as a combination of location, number of viewers, and view duration, is moderately low, as summarized in the following chart.



The viewers in this location generally are and would be patrons of the businesses in the area and truck drivers accessing the commercial vehicle inspection station. These viewers generally are focused on their destination, although there is little traffic in the area and the vividness of the views of the local mountains and undeveloped areas at this eastern edge of the developed mesa may draw their attention and awareness to the surrounding views such as that represented by Key View 4. Their knowledge of the area may vary, depending on how often they travel the route; some of the viewers may have strong expectations about the types of views available, and some may have no knowledge of the area. Generally, the sensitivity of the viewers of Key View 4 is assumed to be moderate, as shown in the following chart.

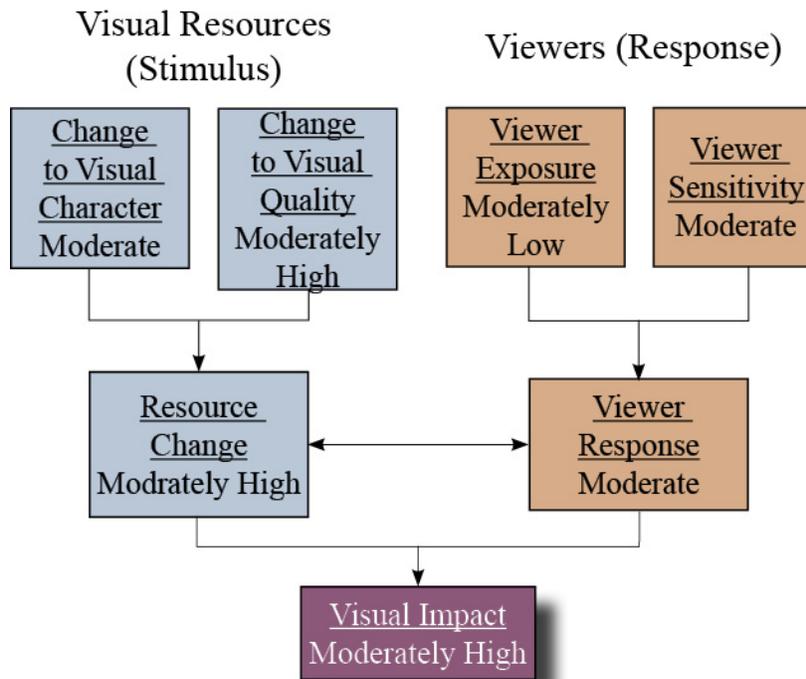
Viewer Sensitivity



6. Resulting Visual Impact

The proposed project elements, particularly the structural elements in the POE, the interchange structures, and the visible portion of the grading for the roadway, would highly contrast with the surrounding currently undeveloped area. Introduction of these features would cause a moderately high level of change to the existing visual resources. The viewers in the area, though few in number, would have a moderate level of response to changes in views from the area represented by Key View 4. The resulting visual impact to Key View 4 would be moderately high.

Key View 4 Visual Impact Summary



E. KEY VIEW 5

1. Orientation

Key View 5, Figure 26, was taken from the center of Sanyo Avenue, north of Airway Road, and is a view looking north. Sanyo Avenue is flat road that extends from the viewer in the center of the photograph. The east side of Sanyo Avenue is bordered by business park and light industrial development; the streetscape associated with these parcels is visible on the right side of the view. This consists mainly of trees on and next to sloped lawns. Some commercial signs and two driveways also are visible on the viewer's right. The parcels to the west (left) side of Sanyo Avenue currently are undeveloped. They are covered with low-growing, (currently) brown vegetation visible on the left side of the view. A tree and a driveway also are visible to the viewer's left; some other trees are visible to the left of the roadway in the distance, but most of the trees and green vegetation in the view is growing to the right of the road. A graded lot with slopes facing southward makes up most of the background of the view; this lot is north Otay Mesa Road, across from the end of Sanyo Avenue. Distant hills are visible beyond the graded area.

(Presumably, there will eventually be buildings on this graded area, and those buildings would block views of most of the hills in the background, although the top of the tallest one might still be visible.)

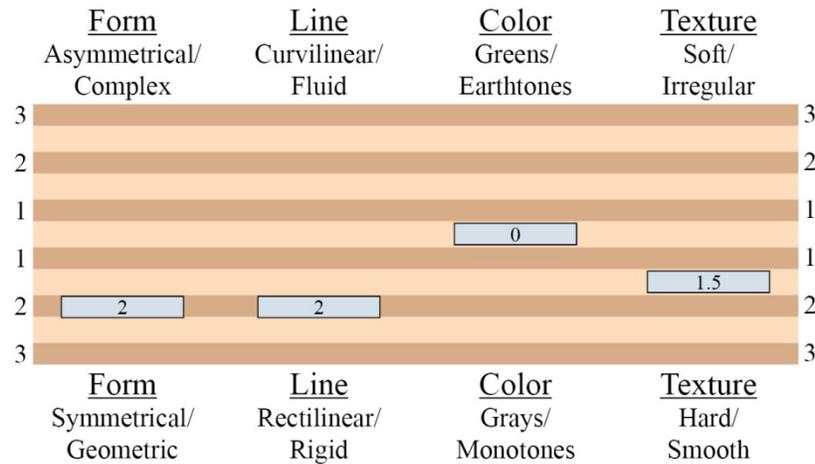
2. Existing Visual Character/Quality

The visual environment of Key View 5 generally is geometric and rectilinear; there are few building elements present in the view, yet most of the elements within the view are introduced rather than natural, including the flat road, the manufactured slopes, and the signs on the right as well as the graded areas in the background. The road and stripes and the sidewalk create strong, straight perspective lines stretching away from the viewer into the background. The road is dark gray, with yellow and white stripes and very light gray sidewalks; the rest of the view is a mix of earth-tones, including the dark green trees, bright green grass, purple mountains, brown vegetation on the left, and even the brown graded areas in the background. The view generally is composed of hard surfaces and smooth textures, including the surface of the road and sidewalks, the even surface of the graded areas in the background, and the mowed lawn on the right. The trees in the view have variety of form, line, color, and texture, and are prominent elements in the view that contrast with the smooth, manufactured surfaces in the view. They do not diminish the regularity of the view, however, in which the man-made elements are dominant. The pattern elements of Key View 5 are summarized in the following chart.

Key View 5

Pattern Elements

Describes the visual attributes of objects

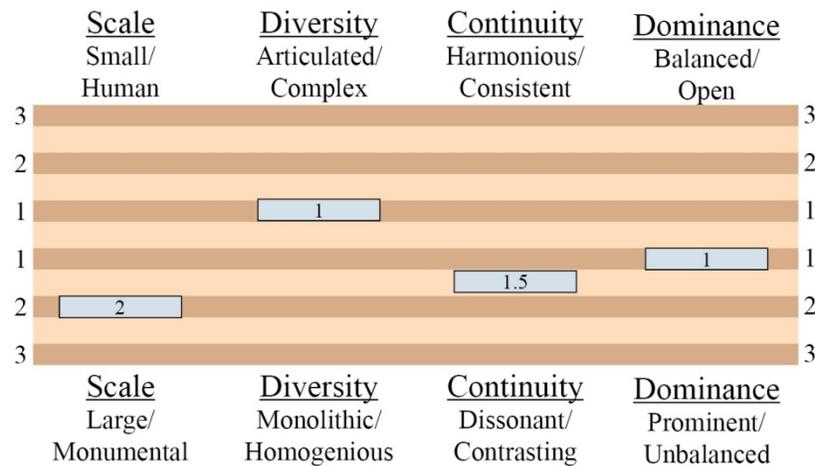


The overall scale of the view is large, due mainly to the perspective of the roadway and the expanse visible to the left and in the background. The sidewalks and trees visible in the view are human-scale elements that ensure that the view is not quite monumental in scale. Key View 5 has more diverse elements than other key views, including the landscape areas and commercial signs. These elements and the view are not highly complex; neither are they highly harmonious. The undeveloped areas on the left side of the view contrast with the developed slopes and landscape on the right side, and with the smoothly-graded area in the background. The view is somewhat balanced, split between developed and undeveloped areas, however, the landscaped areas and the roadway are more dominant features. The relationship between the visual elements and the resulting visual character of Key View 5 is summarized in the following chart.

Key View 5

Pattern Character

Describes the relationships between visual elements





Key View 5:
Existing Conditions



Key View Location



Simulation 5: Northward view toward SR-11 overcrossing from Sanyo Avenue

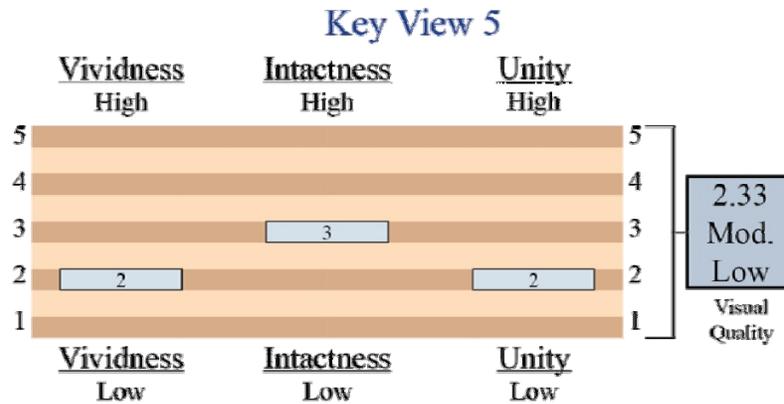
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Photo simulations of the structures do not reflect their final design and are for visual example only

Key View 5/Simulation 5

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Although there are some commercial signs visible in Key View 5 that indicate place and the businesses on this road, generally the combination of the elements comprising this view does not create distinct visual patterns elements. The hills in the background are the most memorable elements, but are not dominant. Overall, the vividness is moderately low. The intactness of the view is moderate. There are no encroaching elements within the view, and the developed and undeveloped areas are distinctly separated, with little visual coherence. The elements also are not harmoniously composed, and the unity of the view also is moderately low. The visual quality of the view is moderately low, as summarized in the following chart.



3. Proposed Project Features Visible in Key View 5

Proposed SR-11 would extend between lots immediately abutting Sanyo Avenue, and would cross over Sanyo Avenue. The Sanyo Avenue undercrossing structure and slopes supporting the roadway would be visible from Key View 5, as illustrated in Simulation 5, Figure 26. The new roadway would extend in an east-west direction in front of the northward-looking viewer, and would cross the view at a higher elevation than the existing Sanyo Avenue and the abutting parcels. Due to the difference in elevation, the roadway would be supported to the west of Sanyo Avenue by slopes facing north and south; viewers on Sanyo Avenue would see these slopes on the left when traveling north (as shown in the simulation) or on the right when traveling south. The undercrossing would be placed approximately where the trucks are visible on Sanyo Avenue in the middle the existing view. The side of the undercrossing structure would be visible as motorists on Sanyo Avenue approach it. The walls supporting the undercrossing would face Sanyo Avenue and would be visible at an oblique angle as motorists approach the structure, and peripherally as they pass under it.

As SR-11 extends to the east of Sanyo Avenue, between the developed areas to on the viewer’s right, it would be supported by retaining walls. The trees and slopes abutting Sanyo Avenue would block views of these walls for most viewers on Sanyo Avenue; they would not be visible from Key View 5. The walls may be visible when the viewer is much nearer to the overcrossing structure and the walls, but the view would be available peripherally for a short period of time before being blocked by the overcrossing supports.

The proposed roadway, though higher than the viewer on Sanyo Avenue, would not block all views to the hills in the background. It would partially block views some of the lawn and tree

areas as well as the undeveloped areas abutting Sanyo Avenue. Most of the graded areas north of Otay Mesa Road also would not be visible after installation of the proposed project. A small portion of the lot beyond Otay Mesa Road may be visible under the overcrossing structure.

4. Change to Visual Quality/Character

The proposed project elements would be more geometric and symmetrical, with more rigid and strongly horizontal, dominant lines. The graded area in the background of the existing view has a strong horizontal line; the new roadway would bring this horizontal line closer to the viewer and would be more dominant. This would reduce the complexity of the view, which would also be much more rectilinear. The new structure and slopes would have more monotonous colors associated with development—more gray concrete would be visible in the overcrossing structure and barriers (not yet visible in the wire-frame model). The slopes would be vegetated with ground covers, shrubs, and some trees. Some existing trees and lawn east of Sanyo Avenue (on the right side of the view) would no longer be visible. Smooth and manufactured surfaces are visible within the existing view; however, fewer trees would be visible behind the new view elements, and the surfaces of the slopes and structures would be smooth and manufactured as well, and smooth surfaces would be dominant within the view.

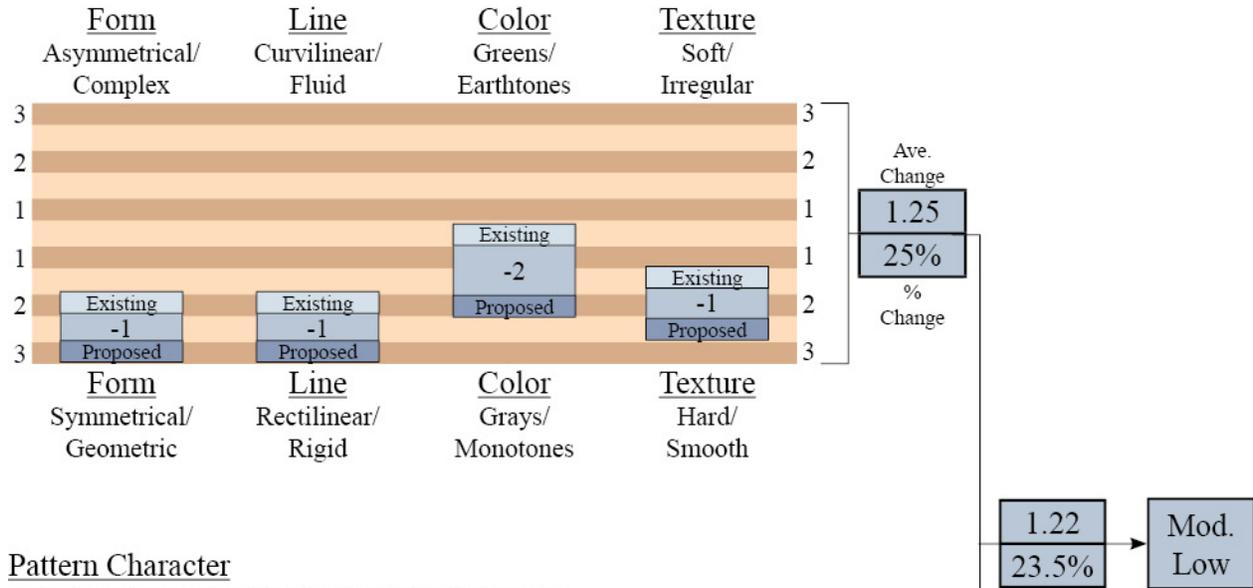
Although the scale of the existing view is large, the proposed project would introduce more large-scale elements into the visual environment of Sanyo Avenue, represented by Key View 5. The roadway and overcrossing would be higher than the surrounding area, and would have large supporting slopes. The view would be monolithic due to the scale of the elements and because the proposed project would not be highly articulated or complex. The proposed roadway, the overcrossing, and the supporting slopes would contrast with the existing view elements, mainly because the slopes and overcrossing would not be integrated with the slopes and undeveloped areas abutting Sanyo Avenue. The existing view does not have high continuity, however, and the change in continuity within the view would be small. The balance of the view would change, however, because the new roadway and elements would be larger and more dominant than existing elements, and would enclose the view, reducing expansive views toward the graded area to the north, and shifting the dominance of the view from to more middle-ground elements.

The proposed project would introduce new elements to the view and change the relationships between the elements. The proposed project features would have similar attributes, however, and level of change would be moderately low. This is summarized in the following chart.

Key View 5 Change to Visual Character

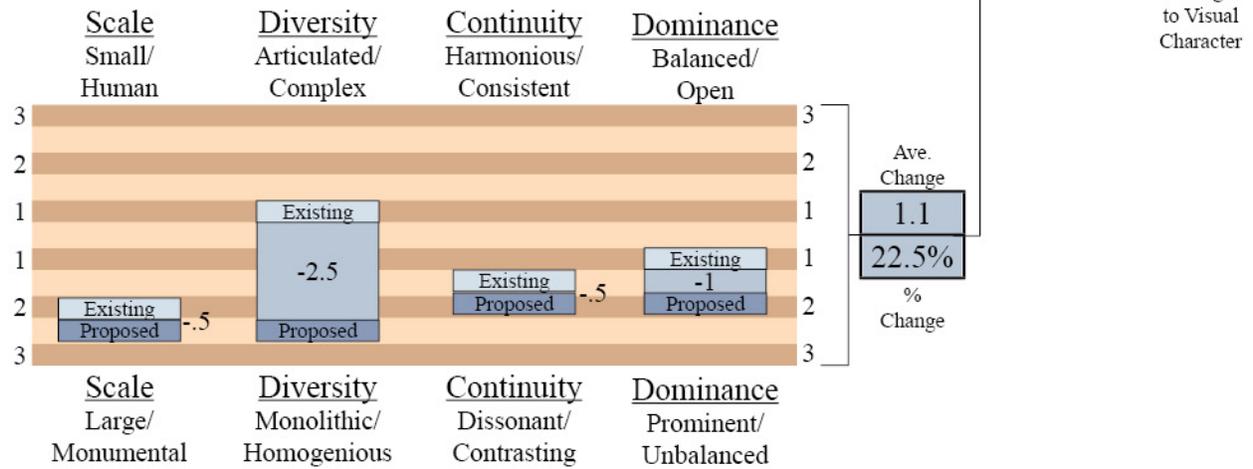
Pattern Elements

Describes the visual attributes of objects



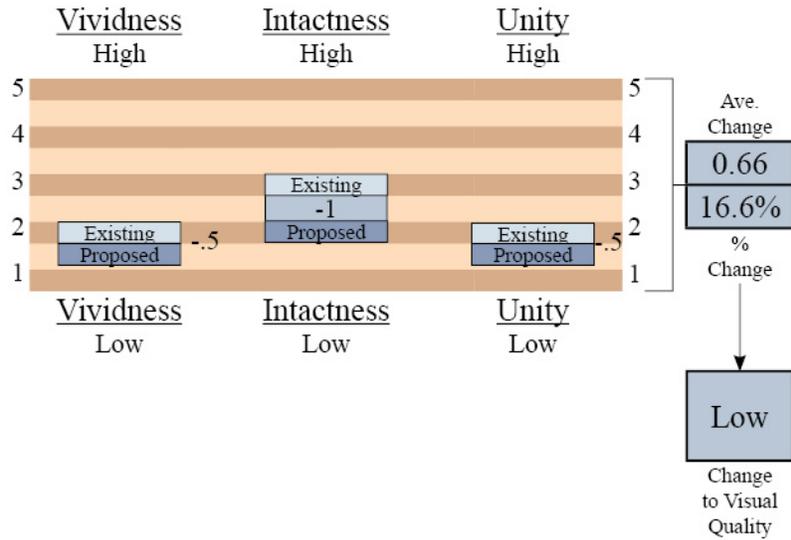
Pattern Character

Describes the relationships between visual elements



The visual quality of the view also would change slightly due to the introduction of the new project features. The currently visible hills in the background would remain so. The new visual elements would not be highly distinct nor contribute to the identification of place; the proposed overpass would have similar details as most of highway structures in the area. In combination with the existing view, the new elements would not create more distinct visual patterns than currently are present, and the vividness of Key View 5 would be slightly reduced. The intactness of the view also would be reduced because the proposed project elements would somewhat encroach into the view, cutting through the undeveloped lots, between the developed areas, and over the existing roadway. These elements would have somewhat similar visual attributes as the existing elements, however, and the unity of the view would shift slightly. The overall change to visual quality would be low, as summarized in the following chart.

Key View 5 Change to Visual Quality

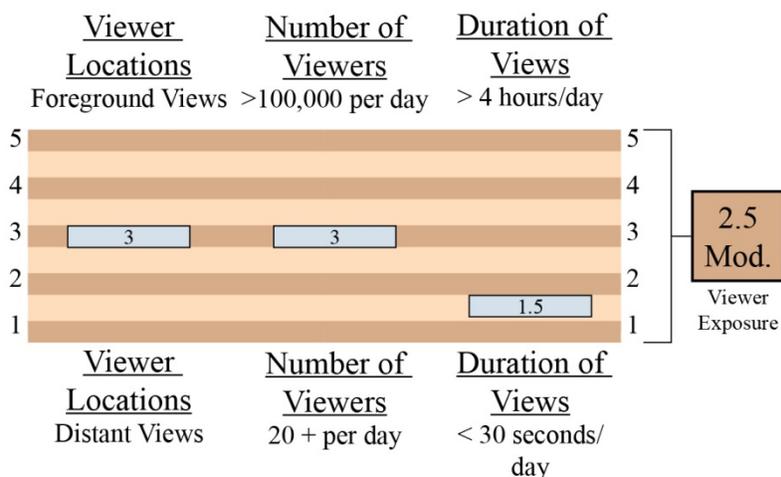


5. Anticipated Viewer Response

Key View 5 represents the view available to motorists on Sanyo Avenue; similar views are available from other north-south trending roadways in the area. Proposed SR-11 would pass under other roadways, however, and this Key View represents the proposed local roadway crossing that would create the most visible change.

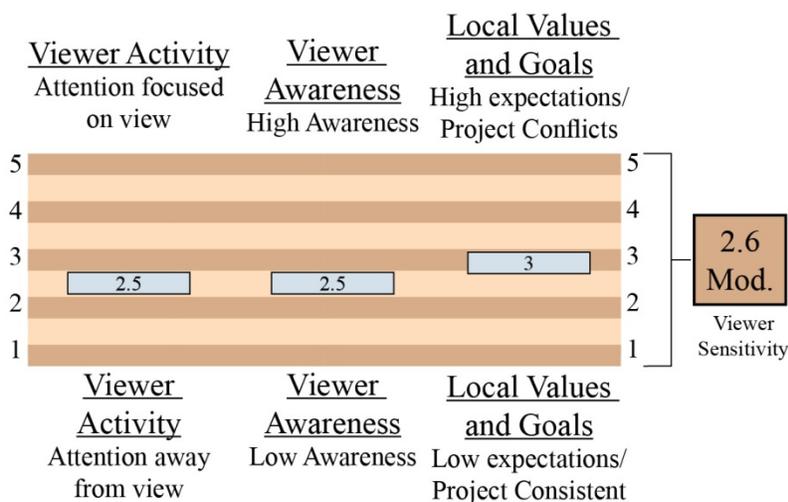
Viewers on Sanyo Avenue generally are motorists accessing the businesses in the area (including those abutting Sanyo Avenue). The proposed project would be in the middle-ground for viewers on Sanyo Avenue traveling north from Airway Road or south from Otay Mesa Road. The viewer would get closer to the project site while traveling on this roadway, with the potential to view proposed project features as foreground elements. The number of projected viewers on Sanyo Avenue is higher than for outlying roadways such as Key Views 1 or 4, and lower than on local highways or major streets like Otay Mesa Road. Traffic on Sanyo Avenue in 2015 is expected to reach 5,000 ADT, and in 2035 is expected to be over 16,000 ADT. The proposed project features would be visible while approaching the project site on Sanyo Avenue from Otay Mesa Road and Airway Road for approximately ¼ mile. Viewers have moderate view durations; the speed limit on this roadway is 25 mph and the project site is visible for approximately 33 seconds. Viewers' exposure is moderate, as summarized in the following chart.

Viewer Exposure



Motorists on Sanyo Avenue do not have high volumes of traffic to navigate, and may be aware of views of the surrounding area, particularly because the hills in the background of the view are directly visible along the roadway. Their attention, however, generally can be assumed to be focused on their destination, which is likely to be in the area. Their awareness may vary depending on their familiarity with the area; the businesses and developed areas are likely to draw their attention more than the undeveloped areas. Their knowledge of the area also may vary, depending on how often they travel the route; some of the viewers may have strong expectations about the types of views available, and some may have no knowledge (or associated expectations) of the area. Generally, the sensitivity of the viewers of Key View 5 is moderate, as shown in the following chart.

Viewer Sensitivity





Key View 6:
Existing Conditions



Simulation 6: Westward view along proposed alignment, east of Sanyo Avenue

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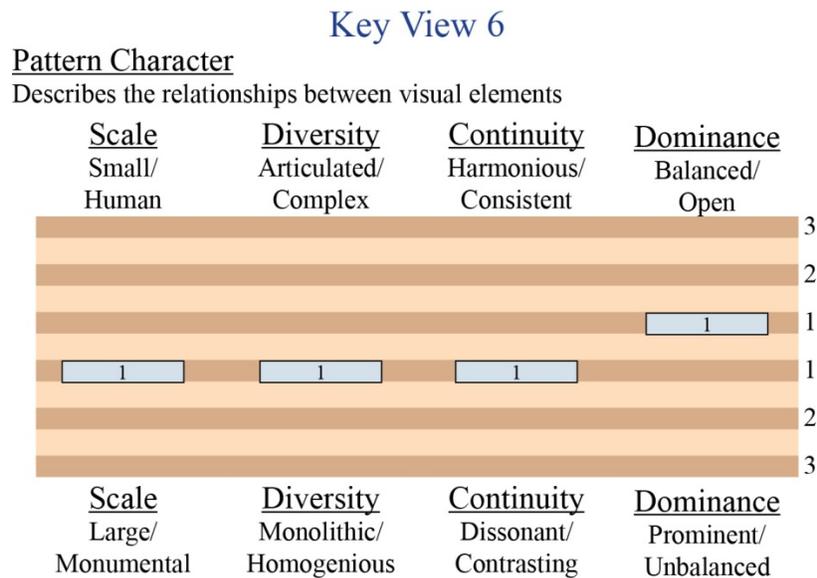
Key View 6/Simulation 6

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extends between the two parcels. The outlying edge of the newly developed lot is visible to the left of the photograph. An undeveloped area extends to the viewer's right. Some other buildings are visible in the distant background. Storage tanks that are taller than the abutting buildings are visible to the right of center in the view. A transmission tower is visible to the left side of the view. Street light standards also extend above the horizon on to the left of the view; besides these taller features, the horizon line of this view is flat.

2. Existing Visual Character/Quality

The character of Key View 6 is geometric and symmetrical; the dominant structures in the view are the boxy, white, light industrial buildings on the parcels in front and below the viewer. The slope in the foreground and the manufactured slope to the viewer's left also are simple and smooth. Similarly, the view is composed of rectilinear and rigid lines. Trees and vegetation near the buildings somewhat soften the edges of the paved areas and the structures, and the dark green trees extending through the center of the view provide a contrasting element to the developed lots on either side; along with the brown vegetation in the foreground, they offset the white and otherwise mono-toned view elements. The vegetation also provides some textural variety in the view, although the smooth surfaces of the buildings and lots are dominant in Key View 6. The pattern elements are summarized in the following chart.



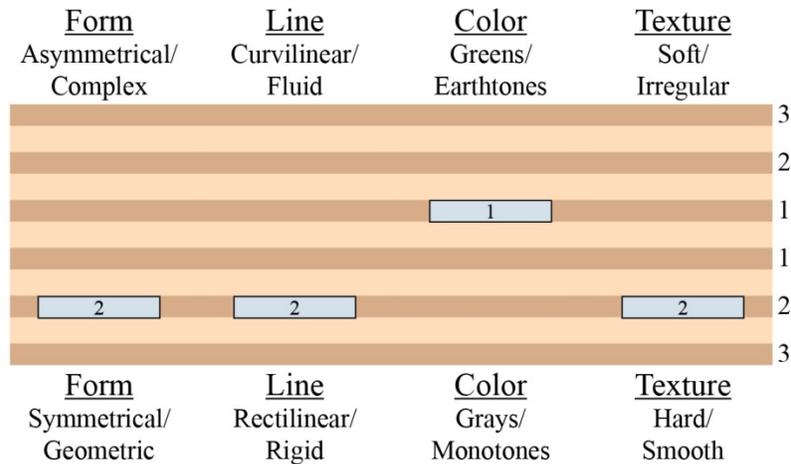
The scale of Key View 6 generally is large; each of the elements that comprise the view is big. The buildings are tall and wide and located on large lots, the hill on which the viewer is standing is taller than the buildings; the view is expansive and the horizon is far away. The scale of the view is limited by the foreground elements, however, which confine views to the periphery. The diversity of the view is limited to buildings, large parking lots, and the undeveloped hillside in the foreground. A mix of buildings and open space also is visible in the background, but those elements are not dominant due to the distance. The vegetation in the view provides some variety of color, texture, and line. Although the diversity of elements is not high, the compositional

arrangement of elements is not highly harmonious. The view generally is more open and balanced than otherwise; because the viewer is at a higher elevation than most of the structures nearby, the view is expansive to the west, and the view includes an almost balanced mix of developed and undeveloped elements. The characteristics of the view elements are summarized in the following chart.

Key View 6

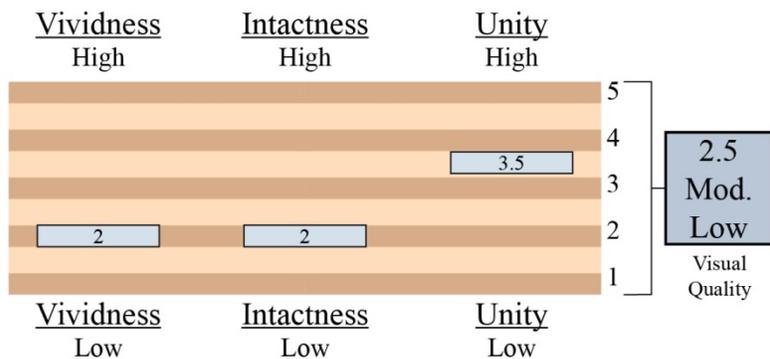
Pattern Elements

Describes the visual attributes of objects



The quality of Key View 6 is moderately low. The view has no highly memorable elements and the buildings and open spaces do not combine to create highly memorable patterns. The arrangement of the elements is typical of the area, with large buildings and associated large parking lots located next to undeveloped lots, with landscaping around the edges. The landscaping does not extend to all lots in the area, and although there is nothing that visually encroaches on any elements in the view, intactness is not high because of the mix of visible developed and undeveloped lots. The unity of the key view is moderately high; there is visual coherence between and among the elements, and although the compositional harmony is not unique or memorable, it is unified by the similar type of development visible. The overall moderately low visual quality is summarized in the following chart.

Key View 6



3. Proposed Project Features Visible in Key View 6

Proposed SR-11 would extend from behind the viewer, between the two buildings visible in front of and below the viewer, and into the background. The view corresponds to westbound lanes of SR-11. The new roadway is simulated in Figure 27. The surface of the road would extend to the left and right of the viewer, as well as in front and away from the viewer; it would be at elevation above the parking lots, slightly below the top of the buildings, and approximately the same as the top of the trees visible between the buildings in the existing key view. Many of the trees visible in Key View 6 would be removed; the trees closest to the buildings would remain. The road would slope downward in front of the viewer, but at a gentle angle, especially compared to the existing slope. Concrete barriers (three feet tall) would extend along each side of the roadway, and an additional three-foot-tall concrete barrier would extend along the median. A small portion of the upper slopes of a proposed detention basin would be visible to the north (right) of the roadway.

The road would be supported by retaining walls that would face the buildings; these would not be visible from Key View 6, but would be visible to users and visitors of the buildings visible in front of and below the viewer.

The buildings closest to the viewer and all of the background features would be visible after the proposed project is developed. The undeveloped lot to the viewer's right would no longer be visible, and the proposed roadway would abut the manufactured slope on the viewer's left. Most of the background would not be disturbed by the proposed project, although the proposed roadway and the SR-905/SR-125/SR-11 Interchange would be discernable in the distance (although not visible in detail).

The new roadway would not have any visible landscaping in the portion seen in Key View 6. Some plants on the detention basin slopes to the north of the roadway may be visible.

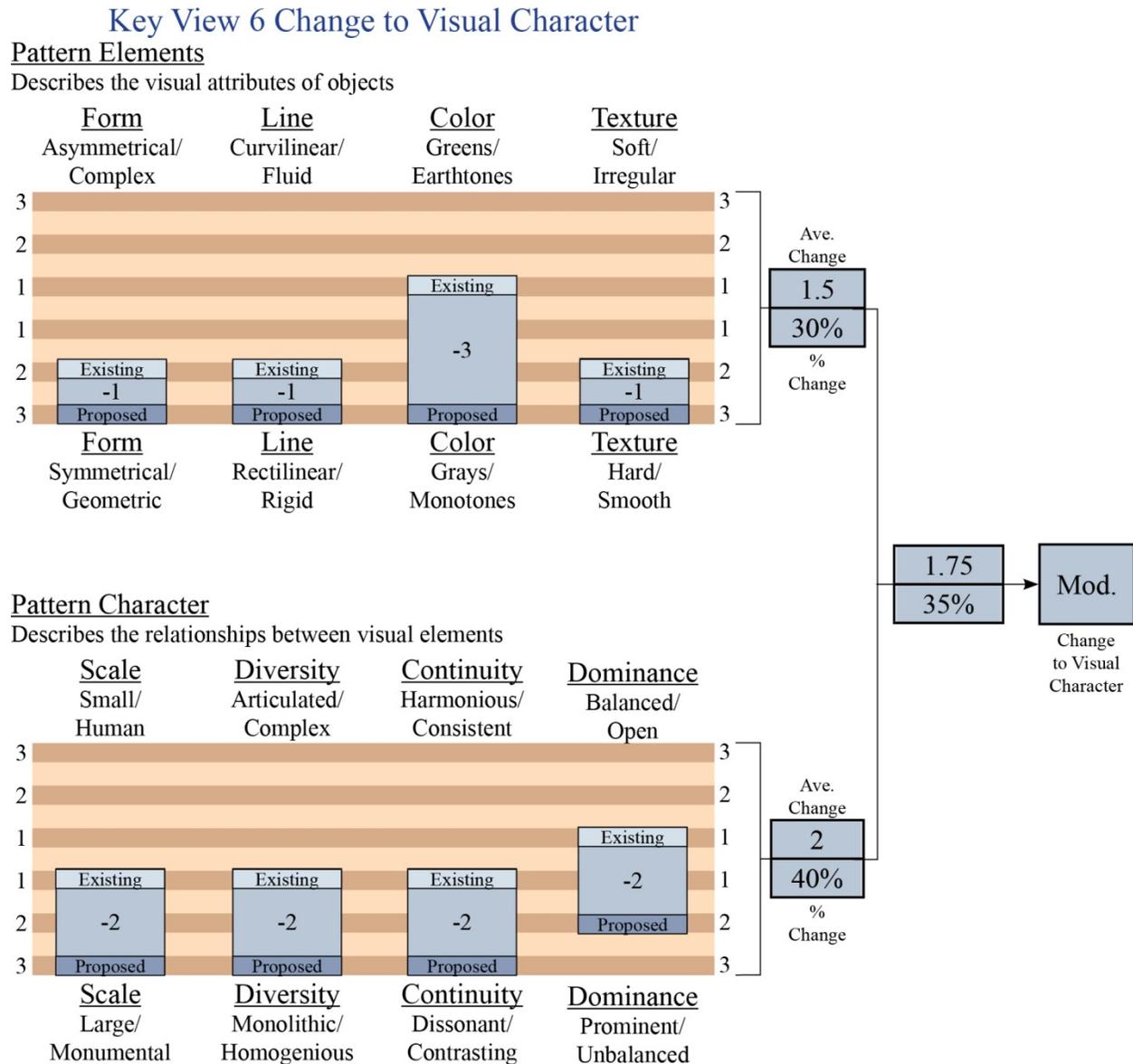
4. Change to Visual Quality/Character

The proposed project elements would be highly geometric and symmetrical, particularly in the foreground, changing from a view of an undeveloped lot to the surface of a roadway. The road would consist of rigid and strong perspective lines. Development of the road would remove some of the trees visible between the buildings, which would reduce the variety of lines in the view, and the rectilinear lines of the buildings and the roadway would become dominant. There would be fewer earth-toned colors in the view as well, due to the removal of the trees and the undeveloped lot in the foreground. The gray monotones of the road would be dominant, as would the smooth roadway surface. The detention basin would be hydroseeded with ground covers and shrubs for erosion control; these plants may be visible on the right side of the view. No other landscaping within the R/W would be visible from this view point.

The dominant roadway in the view would be a much larger-scale element than exists in the view, and would be monumental both due to the width in the foreground and the length extending into the background. While the buildings in the lots in front of and below the viewer would still be visible, as would elements in the background and to the left side of the view, the road would be

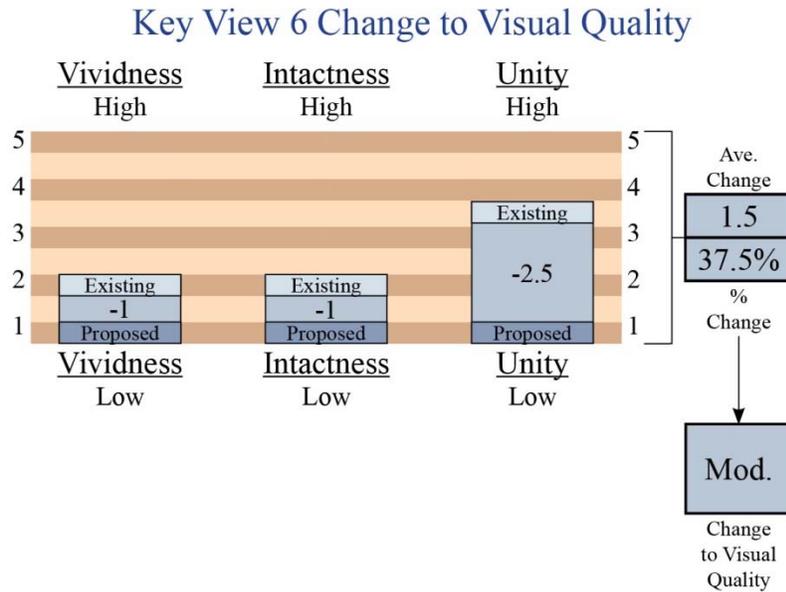
monolithic and would dominant the view, and the diversity would be much lower. This would not increase the continuity of the view because the road would contrast with the abutting elements, increasing the visual dissonance in Key View 6. The introduction of the new dominant roadway also would lower the balance of the view.

The proposed project would create a moderate level of change to the visual character of Key View 6, as summarized in the following charts.



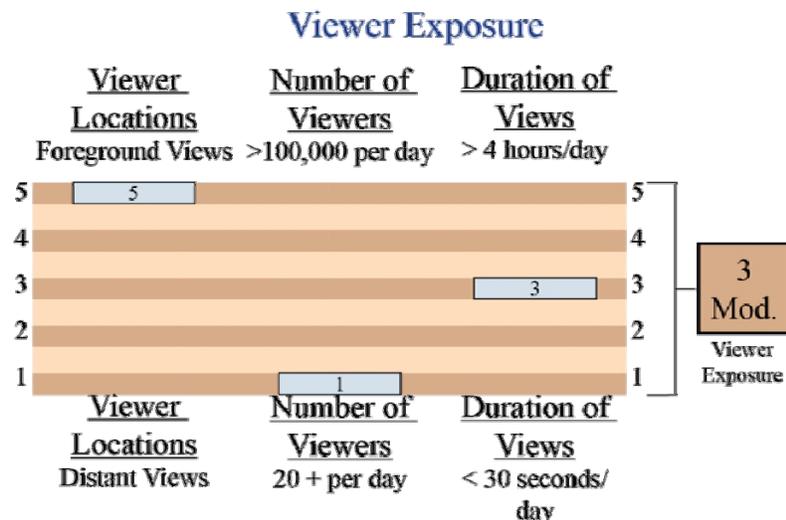
The key view would have low vividness after development of the proposed project; the view of a roadway with no landscaping or distinguishing features would have no memorable elements. The intactness of the view also would be reduced; the roadway would visually encroach on the existing view, replacing the trees between the buildings and lots with a roadway that would be almost as tall as the buildings themselves. The roadway would not be visually integrated with the

surroundings. The unity of the view similarly would be low as a result of the introduction of the proposed project features; there would be no compositional harmony or visual coherence between the new road and the existing features. Although the resulting visual quality of the view would be low, the degree of change between the existing and proposed visual environment would be moderate, as summarized in the following chart.

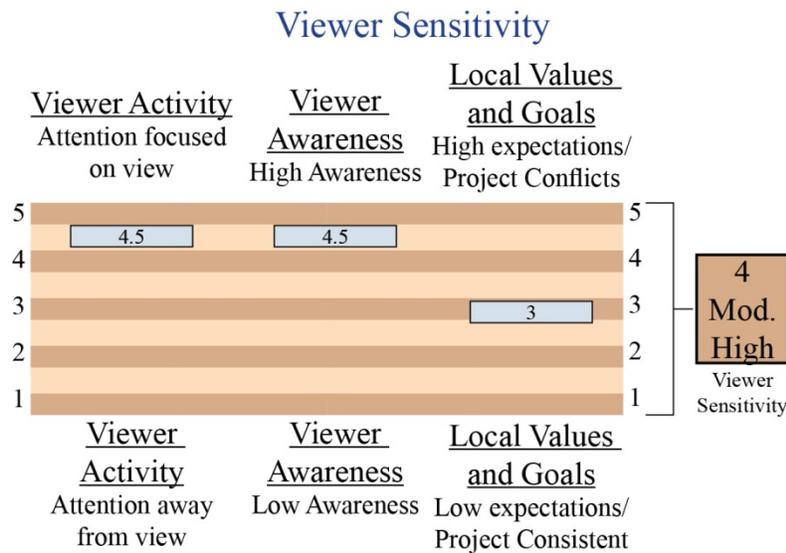


5. Anticipated Viewer Response

Key View 6 represents views available to viewers within the proposed project R/W. The features would be in the foreground for viewers in this location. The number of existing viewers is low; this view was not taken from a public roadway or an area that is easily accessible. The duration of views for existing viewers in this area may vary depending on how long a viewer lingers; existing viewers are pedestrians, and do not move very fast, yet they would have little reason to linger and study the existing view. Their exposure is moderate, as summarized in the following chart.



A viewer's attention at the location of Key View 6 is high; there is little else besides the view to pay attention to. Their awareness of the visual surroundings also is assumed to be high, for the same reason. Their expectations may be somewhat lower. The surrounding area is a mix of developed and undeveloped areas, and they may not have a high expectation for extensive views of undeveloped or highly vivid areas. Overall existing viewer sensitivity is moderately high, as summarized in the following chart.

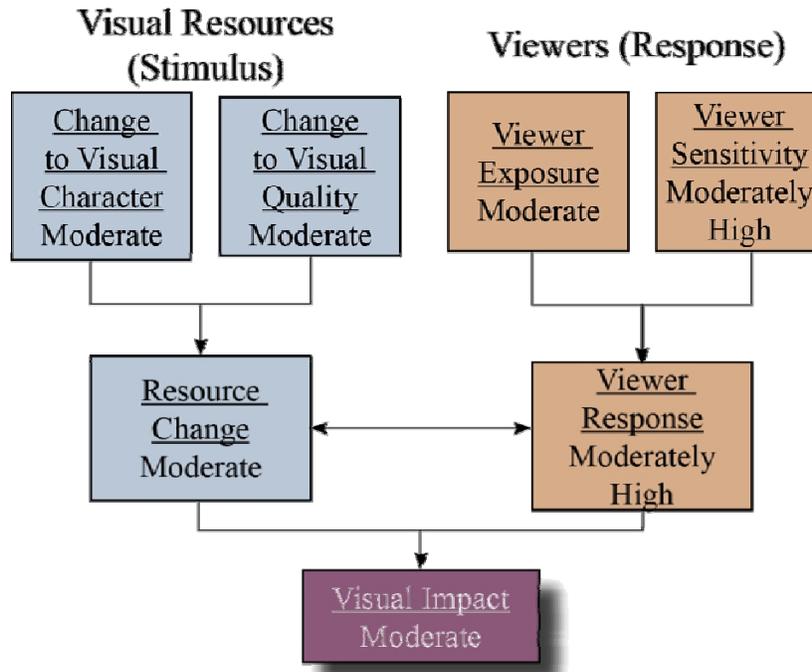


While a large number of projected SR-11 users would see this view, those viewers generally would not have seen the pre-project conditions, and would not have expectations based on prior experience.

6. Resulting Visual Impact

The proposed project would replace views of existing undeveloped lot and vegetation growing between existing buildings with a large roadway and associated fixtures. Although the proposed roadway as seen from Key View 6 would have low visual quality and memorability, and would contrast with and encroach on the surrounding area, the existing view does not have high visual quality, and the resulting change to the visual character and quality of Key View 6 would create a moderate change in Key View 6. Viewers of Key View 6 have a moderately high response to changes in the visual environment. The proposed project therefore would create a moderate visual impact to Key View 6.

Key View 6 Visual Impact Summary



G. ADDITIONAL VISUAL CONSIDERATIONS

1. Enrico Fermi Drive

Enrico Fermi Drive extends north-south and is the only north-south roadway that connects Otay Mesa Road and Airway Road between Sanyo Avenue and Alta Road. Under all alternatives, the proposed project would include a structure to support Enrico Fermi Drive crossing over proposed SR-11. The Two Interchange Alternative would include an interchange at this road that would have on- and off-ramps extending from the overcrossing to each side of the highway. The One Interchange and No Interchange alternatives would include an Enrico Fermi Drive structure crossing over SR-11 with no on-/off-ramps.

Enrico Fermi Drive slopes upward to a high point approximately half way between Otay Mesa Road and Airway Road. The parcels abutting Enrico Fermi Drive mostly are undeveloped; the east side of the road is recently graded, and street trees and a sidewalk have been installed along the roadway. Refer to Photograph 8, Figure 28. Currently, viewers approaching the project site from the north or the south mostly see the road on which they are traveling, and a small portion of the lots immediately bordering the roadway, including either the streetscape or the low-growing weedy vegetation that covers undeveloped lots.

The existing visual environment along Enrico Fermi Drive mostly consists of a two-lane road through a mostly undeveloped area. Views along this road include geometric forms and strong

perspective lines, including the dark gray color and smooth texture of the roadway, and the green and brown earth-tones of the bordering vegetation.

Views along the road toward the project site include the road and undeveloped areas on each side, as well a high horizon line created by the hill over which Enrico Fermi Drive extends. The diversity of the visual environment is relatively low, consisting mostly of the road and vegetation bordering it, with no dissonant elements. The visual environment along Enrico Fermi Drive generally has no prominent visual elements, and although the developed and undeveloped lots on each side of the roadway contrast, they are symmetrically arranged within the view. Peripheral views to the east and west are available from Enrico Fermi Drive, particularly near the high point, and viewers can see the mountains east of Otay Mesa, which are vivid features, but not dominant in northward and southward views.

The visual quality of the area near Enrico Fermi Drive is moderate; the elements have visual coherence and are somewhat harmonious, although the inconsistent development patterns leave discontinuous open space areas interspersed with developed areas, and an incomplete streetscape. The visual integrity of the area is moderate for this reason, although there are no elements visually encroaching into the area. Despite the nearby vivid mountains in the east, northward and southward views along Enrico Fermi Drive have few memorable elements or distinct visual patterns.

The proposed SR-11 alignment would cross under Enrico Fermi Drive approximately at the existing highest point along Enrico Fermi Drive. From north and south of the project site, Enrico Fermi Drive would appear to continue uninterrupted in front of the viewer; the elevation of the roadway may be slightly lower because the bridge would be more flat than the existing roadway, but the change would not be highly discernable. The junction of the proposed interchange ramps with Enrico Fermi Drive would be the most visible aspect of the interchange. Viewers on Enrico Fermi Drive would see the intersection signals or signs, toll monitoring booths and overhead toll structures, and the top of the proposed ramps. The ramps would slope downward on either side of Enrico Fermi Drive in a viewer's peripheral view. The top of the slopes on the opposite side of the highway would be visible on either side of the overcrossing. The proposed features would not block views to the mountains in the east, and most would not extend above the horizon line. The structures that would extend over the ramps would be taller than most features of the proposed highway; however, they generally would be narrow elements that would be similar in appearance to the signs and fixtures that are usual parts of a highway visual environment, and as such would visually blend in with the larger proposed project.

The new features would include more horizontal lines and geometric shapes than exist in the view currently, as well as some more gray surfaces. The visible slopes would have some green plants due to the erosion control landscaping. The new features also would have smooth surfaces. The new features would be large in scale, but would not be extensively visible. Although the highway would cut through the existing topography they would not be highly visible from this roadway and the change to the continuity of the visual environment would be minimal. Similarly, although SR-11 would be large and potentially dominant, it would not be highly visible from outside the R/W, and would not change the views toward the mountains available peripherally to



Photograph 8*: View looking south on Enrico Fermi Drive, between Otay Mesa Road and Airway Road



Photograph 9*: View west from buildings east of Sanyo Avenue, adjacent to and north of the proposed alignment

*Refer to Figure 14 for photo location and direction.

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Site Photographs 8 and 9

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT

viewers on Enrico Fermi Drive; the dominance within the visual environment would be changed only slightly.

The visual quality of the area around Enrico Fermi Drive would be similar to the existing visual quality. The new features would be large in scale and potentially dominant. SR-11 also would not be visually coherent with, and would encroach on the existing topography, yet would not be highly visible, and the change to views along Enrico Fermi Drive would be minimal.

Viewers in this area generally are motorists on Enrico Fermi Drive. Although there are relatively few motorists on this roadway (traffic volume on Enrico Fermi Drive currently is 1,500 ADT), volume is expected to increase to 7,700 ADT in 2015 and to 33,600 ADT in 2035. The proposed project would be in middle- and foreground views for these viewers. The mountains to the east are visible peripherally as they travel north and south on this roadway. Passengers in vehicles on this roadway have more opportunity to view the surrounding area, including the mountains. The length of time a viewer would see the proposed project while approaching it from the north or south would be approximately 30 seconds while traveling at the posted 25 mph. Because there are few motorists on this roadway, their attention is not required to navigate heavy traffic, and they may be focused on the surrounding area. Their awareness is assumed to be mixed, as there are no businesses along Enrico Fermi Drive to which they would be navigating. Their expectations also are assumed to be mixed, depending on their familiarity with the area. Overall, viewer exposure and sensitivity is moderately low.

The low level of change to the visual environment near Enrico Fermi Drive in combination with the moderately low viewer response would suggest that the proposed project would create a moderately low visual impact in this area.

2. Light Industrial Areas Accessed via Sanyo Avenue

The proposed SR-11 alignment near its western extent extends between light industrial parcels. The light industrial parcels are developed with buildings, parking lots, auxiliary structures, and landscaping; these buildings are visible in Key View 6, Figure 27, discussed above. They are accessed via driveways that intersect with Sanyo Avenue, and from Dornoch Court and Carnoustie Road. The driveway of the parcel immediately south of the proposed SR-11 R/W is visible on the right side of Key View 5, Figure 26 (discussed above), which also illustrates the associated roadside planting north of the proposed project R/W and east of Sanyo Avenue.

The visual environment on these light industrial parcels is dominated by large, white or light gray, geometric buildings with rectilinear lines and smooth surfaces (glimpsed behind the trees in Key View 5, Figure 26). Small trees are spaced regularly among the parking spaces in the parking lots. The western side of each parcel slopes down toward Sanyo Avenue and is landscaped with lawn and trees, and in some places dense shrubs also are planted along the upper edge of the slope; the tree canopies and shrubs visible from the parking lot, and block most views of the street. A drainage area extends between the lots, within the location of the proposed project R/W. The drainage is vegetated with dense green shrubs up to approximately eight feet tall, and supports some taller, dark green pine trees. Some taller trees also are located next to the sides of the buildings. The buildings are approximately 30 feet tall, with some taller features

visible in some locations (such as the storage tanks on the south side of one building). The entrance to the building closest to the proposed R/W is on the southeastern corner of the building; a portion of the surface of the wall at this corner is made of glass windows.

The buildings and parking lots comprise bulky visual elements within these parcels. The trees and shrubs lessen the visual scale of the buildings to some extent, but the overall visual environment is large-scale. The vegetation also provides variety and articulation where the buildings would otherwise be monolithic and monotonous. The vegetation, however, does not create a harmonious scene and the continuity of the visual environment within these lots is moderate. The buildings remain prominent features, and the visual environment is not highly balanced.

The area has little vividness or memorability; the buildings are standard light-industrial tilt-up concrete buildings with few distinguishing features, and the landscaping does not create distinct visual patterns. The parcels do have moderately high visual intactness; there are few other elements that encroach into the area. The visual coherence and harmony of the area, and the resulting unity, is moderately low because the vegetation does not combine with the structural elements to create a harmonious visual composition.

The proposed SR-11 R/W and roadway configuration narrows to minimize the footprint that overlaps these parcels. Refer to Figure 4a for a map of proposed project in area and Figure 5 for a cross-section of proposed SR-11 near Sanyo Avenue. SR-11 would extend along the drainage channel, between the light-industrial parcels. The surface of the roadway would be higher in elevation than the surrounding lots and would be supported by retaining walls estimated to be 16 to 26 feet high, that would begin immediately east of Sanyo Avenue and extend approximately 1,250 feet eastward. The wall on the northern side of SR-11 would be placed approximately 38 feet south of the building east of Sanyo Avenue and south of Carnoustie Road. The retaining walls mostly would be the most visible feature of the proposed project from these parcels; they would be somewhat visible from the southern end of Dornoch Court, between the trees that line most of the roadway.

The proposed project walls would cause the greatest amount of change to the visual environment of the parcel east of Sanyo Avenue and south of Carnoustie Road, illustrated in Photograph 9 Figure 28. The new wall would be a large-scale, geometric, feature with rigid lines, and a monotone light-gray (concrete) colored, smooth surface. The wall would remove the pine trees and dense shrubs currently growing along the drainage channel south of this parcel (visible at the left edge of Photograph 7) and the proposed project would not have any visible landscaping in this area. Additionally, the north side of the wall would be in constant shadow, with shadows potentially extending over a portion of the building in the winter. The area would be darker, and would have less vivid and more mono-tone, gray colors. Although the trees next to the building, within the parking lot, and along Sanyo Avenue would not be removed, the removal of the vegetation along the drainage channel and the installation of a tall feature close to the existing building would increase the visual scale of the visual environment, creating a more homogenous and monolithic area. Although the continuity would be slightly higher because the new wall would be visually similar to the existing building, the wall would be a new dominant feature and the visual environment would become more enclosed and unbalanced.

The proposed wall, though potentially visually powerful due to its height and scale, would not have distinguishing features or contribute to a distinct visual pattern within the visual environment of the area, and the vividness would be moderately low. The new roadway and its wall would visually encroach into the area, removing some of the existing vegetation and replacing it with a large-scale feature; the resulting intactness would be low. The wall would not have visual coherence with the existing visual environment, and the unity with the area would be low. The visual quality of the parcel would be low, and the change from the existing visual environment would be high.

The proposed retaining wall would result in similar changes to the visual environment of the other parcels in the area, although it would not be as close to the other buildings, and the visual environment in those areas would not be as confined and monumental; the change in these areas would be moderately high.

The viewers of the proposed project and retaining wall that are present in this area are workers in the buildings and patrons of the businesses, including truck drivers accessing the warehouse loading bays at the back of each of these buildings. Their available views of the project would be in the middle- and foreground. Their numbers are as high as on nearby roadways, but their view duration is relatively high (although there are few windows in the buildings, there are some outdoor break areas and picnic tables on the lots, and the proposed project features would be visible from these areas). Viewers in the area have a moderate exposure.

It is expected that the workers' attention and awareness while in the buildings generally is focused internally; however, as noted, views toward the project site are available from outdoor break areas. During break periods viewers have a greater opportunity to pay attention to the surrounding visual environment. Their expectations for visual quality are assumed to be mixed; the existing environment is not scenic or vivid, but includes vegetation and shade that contribute to a pleasant outdoor experience. Their sensitivity is moderate as well.

The proposed project would introduce features that would cause a high level of change to the visual character and quality of the visual environment of the light industrial parcels near Sanyo Avenue, particularly through the removal of vegetation and the introduction of a large retaining wall face. The viewers in the area would have a moderate response to changes in the area. The resulting visual impact would be moderately high.

3. SR-905 Modifications to Accommodate SR-11 Connections

The current design of SR-905 (under construction) overlaps a portion of Harvest Road between Airway Road and Otay Mesa Road. The approved alignment is planned to extend midway between Airway Road and Otay Mesa Road, westward from Harvest Road. The approved alignment also includes a connection to SR-125. Proposed SR-11 would include connections to approved SR-905 and modifications to the approved alignment to accommodate those connections (refer to Figures 3, 6a, 6b, and 7). Additionally, the portion of Harvest Road south of proposed SR-11 and north of SR-905 would no longer be used. An off-ramp to La Media Road from the SR-11 connector also would be added on the northwestern quadrant of the interchange.

These additions would be similar in appearance to the proposed SR-905/SR-125/SR-11 Interchange, and most of the modifications to accommodate SR-11 connections would not cause noticeable change.

The portion of SR-905 that would be modified west of the SR-905/SR-125/SR-11 Interchange extends between industrial, commercial and institutional (Southwestern College satellite campus) land uses, and vacant lots that are aligned with their main access focus toward streets north and south of the R/W. The visual environment of this area is similar to other developed portions of Otay Mesa in that it mainly consists of large boxy buildings surrounded by parking lots, multiple vehicles, and sparse landscaping.

Viewers at these locations include patrons and employees, generally in fewer numbers than occur on local streets. Their attention and awareness presumably is focused internally, although they may be aware of views, especially if familiar with the surrounding area; their sensitivity is assumed to be moderate. Where views toward the highway are available, they could be of moderate duration, depending on the viewer's activity. For example, some lots may include break areas or, at the college, outdoor athletic areas, from which the highway may be visible. Viewer exposure is moderate.

Some of the modifications to the approved SR-905 west of the interchange would occur in the highway median. The addition of more pavement in the center of the highway would not increase the visual prominence or potential impact of the highway, and there would not be noticeable changes to the design of the highway when viewed from the businesses north and south of the R/W. Less area would be available for planting in the median; however, this change would be only slightly noticeable to viewers traveling along the highway because some unpaved areas would remain visible in the median.

Other modifications to SR-905 would include the widening of the eastbound side of SR-905, between La Media Road and the SR-11 connector by up to 12 feet, and the widening of the westbound side of SR-905 in the same area by up to 24 feet. In addition, the southern (eastbound) connector would follow the approved off-ramp alignment for some of its length, but would curve approximately 110 feet further south, between SR-905 stations 627+00 and 641+00. These modifications would be similar in appearance to the approved SR-905 alignment, although they would introduce more pavement and reduce the landscaped areas. The difference would be most noticeable to viewers traveling along the highway, and less so for patrons and employees of nearby businesses. Overall, the modifications would increase the change to the visual environment caused by approved SR-905. This change would not be mitigable due to the loss of area available for highway planting. The change would have a moderate visual impact.

The portions of Southwestern College that could require a noise attenuation barrier are outdoor sports fields abutting the SR-905 R/W. The fields provide generally open southward views from the highway toward the buildings on the college campus. South and northward views are more limited west of the college where the R/W extends between light industrial parcels. These areas consist of large, geometric buildings surrounded by expanses of pavement and minimal landscaping. An undeveloped lot is located immediately north of Southwestern College, on the other side of the SR-905 R/W, and provides extensive northward views. The parcel east of the

undeveloped lot is a commercial area with a variety of elements such as vehicles, buildings, landscaping, and signs.

The potential 10-foot-high noise attenuation barrier would be placed at the edge of the southern shoulder of SR-905 along the Southwestern College property. The barrier would be approximately 591 feet long. If constructed, the barrier would be a tall, geometric element that would be visually unique in the area. It would be located closer to the road than any other structure in the vicinity, and would restrict southward views from SR-905. This large-scale element would cause a moderately high level of change in the visual environment of SR-905 near Southwestern College.

SR-905 supports a high volume of traffic, indicating that viewer exposure in this area would be high. Viewers' sensitivity would be moderately low; the area is developed, although some extensive views are available, including views of the mountains east of Otay Mesa. The moderately high level of change caused by the potential noise attenuation barrier in combination with the viewers' high exposure and moderately low sensitivity suggests that the noise attenuation barrier would have a moderately high visual impact.

4. Otay Mesa Road

Otay Mesa Road has the highest traffic volumes of the local streets east of SR-905, and the highest number of potential viewers of the proposed project; the traffic volume on Otay Mesa Road currently reaches 11,600 ADT east of the existing SR-125. Some portions of this road are not highlighted as being within the project viewshed (refer to Figure 20), however, due to topographic variations that block views toward the project site from the roadway. Otay Mesa Road is approximately ¼ mile north of the project site and proposed SR-11 alignment. Most viewers on Otay Mesa Road would be traveling east and west, and views to the south would be available only peripherally. Refer to Photograph 10, Figure 29, for a typical view southward from Otay Mesa Road. This view also is representative of views available from the portions of the residential properties north of Otay Mesa Road that are within the project viewshed.

The proposed alignment of SR-11 generally is lower than the existing topography, and the most visible feature of the proposed project from Otay Mesa Road would be the top of the slopes on the south side of SR-11. These mostly would be visible as a new horizontal line to a viewer looking south.

In the western portion of the project area, west of Sanyo Avenue, SR-11 would be elevated above the neighboring parcels. The slopes north of SR-11 would face Otay Mesa Road in this area; they would be visible as new manufactured slopes planted with groundcovers and shrubs for erosion control. The new roadway would not extend above the horizon line, and would not be a dominant feature in southward views from Otay Mesa Road.

The proposed retaining walls east of Sanyo Avenue would not be visible from Otay Mesa Road; the existing buildings would block views toward the wall. None of the features of the proposed project that would be visible from Otay Mesa Road looking south would be dominant or cause a high level of change in the visual environment of the road. The resulting impact would be low.

The proposed POE would be visible from the eastern end of Otay Mesa Road where it terminates at Alta Road. The views from this area would be similar to those discussed in the evaluation of Key View 1, except the viewer would be slightly farther from the proposed features. The proposed project would have a moderately high impact on the visual environment of Key View 1; the impact from the eastern end of Otay Mesa Road would be similar.

Some toll-road facilities such as the ramp meters and changeable message signs would be present, but would not be discernible from Otay Mesa Road. While these elements may be taller than most features of the proposed highway, they generally would be narrow elements that would be similar in appearance to the signs and fixtures that are usual parts of a highway visual environment, and as such would visually blend in with the larger proposed project. Additionally, the signs generally would be directed at the lanes of proposed SR-11, and while they may be visible at an oblique angle from areas outside the proposed R/W, they would not create a high level of change to the visual environment.

5. Border Entry at New POE

The existing site of the proposed POE currently consists of undeveloped land east of Otay Mesa. The area is mostly flat or has gentle topographic variations, and is covered with low-growing vegetation; the visual environment is open and views are expansive. Refer to Key Views 1 and 3, discussed above. The vivid San Ysidro Mountains and foothills are visually dominant in this area, and the development of Otay Mesa, approximately 1½ mile to the west, is not visually dominant. The existing double fence at the border is a dominant feature when looking south. Some of the large buildings in the densely developed area of east Tijuana, Mexico are visible through and beyond the fence. The open, natural character of the POE site is reinforced by the contrast with the extensive development on the Mexican side of the border, and with the border fence.

There currently are very few viewers in the area. The general public has little reason to explore the unpaved roads east of the developed areas of Otay Mesa. As a result, U.S. Border Patrol agents are the most common viewers present at this time. Refer to Photograph 11, Figure 29 for a view of this area.

The proposed POE would be viewed by many more people when completed, however, and would be the first thing visible upon entering the United States from Mexico at the proposed crossing. The proposed POE would have multiple, diverse visual features, such as: one- and two-story structures; possible pedestrian bridges; highway lanes and vehicle inspection booths; roadway directional barriers, signage, and signals; several smaller roadways; a large number of vehicles; lights and other utility fixtures; fences; potential future mass transit areas; parking lots of various sizes; detention basins; and minimal landscaping. The dominant visual pattern elements would be developed, monochromatic, rigid, and mostly geometric structures and roadway elements. The detention basins would be integrated between traffic lanes and inspection buildings (refer to Figure 10) and would be graded to a lower elevation than the surrounding grades. The slopes of the basins would be a uniform 2:1 steepness.



Photograph 10*: View south from Otay Mesa Road to new development along Encrio Fermi Drive



Photograph 11* View south to the area proposed for the Port of Entry

*Refer to Figure 14 for photo location and direction.

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Site Photographs 10 and 11

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT

The POE overall would be large and monumental due to the size of the site and number of facilities. Viewers mostly would be visitors passing through, although employees also would constitute a small proportion of viewers. Visitors generally would view the POE through a series of smaller-scale experiences. For example, motorists entering the site from the south would pass through congested traffic lanes, approach inspection booths underneath or between buildings, and navigate around or between several buildings and parking lots before approaching the northbound highway lanes and the Siempre Viva Road Interchange (discussed above in Key View 3), where the visual environment would be more open and less diverse. The detention basins between the lanes and the facilities would provide open areas interspersed between POE buildings. Views of these basins would not be highly memorable, as they would be geometrically shaped, with uniform slopes vegetated with low-growing plants. Southbound motorists would navigate fewer obstructions, but would slow while approaching the POE and the border in order to safely navigate the area. Pedestrians may also be present, but there would be fewer pedestrians than motorists. Pedestrians would pass through the POE in a carefully directed sequence of smaller spaces, directed by fences, gates, and interior hallways that generally would constrict views to the immediate facility, walkway, or street.

The resulting experience would give the impression of a visual environment composed of diverse elements that generally would be geometric, rectilinear and rigid, gray or neutral toned with few naturally colored accents, and would have smooth or manufactured surfaces, as opposed to softened with natural materials or plants. The combination of these elements would create a complex, often dissonant visual environment with few dominant features.

The visual quality of the POE would be low. Varying elements would not be wholly harmonious or coherent, beyond the structured experiential sequences of passing southbound or northbound through the POE and across the border. The diverse elements would have moderately low intactness and visual integrity due to the low unity and coherence. The vividness would vary depending on a viewer's experience, although the visual elements of the site would not create distinct visual patterns. The visual experience is not expected to be highly memorable beyond a somewhat overall "chaotic nature," resulting from cars positioning in lines and staff moving between them, which are often experienced in close sequence with the border crossing in other areas, and are likely to be present at the proposed crossing as well.

The mountains to the east would be visible between buildings and facilities, but their dominance and vividness would be lessened. The change to the visual character and quality of the POE site would be high. Currently there are few viewers present, however, and most are not focused on the existing view. The resulting change to the visual environment of the POE site would be moderately high.

6. Toll Road Facilities

Proposed SR-11 would operate as a toll-road, and would include automatic toll verification equipment and a toll administration building and parking lot at the northeastern corner of the POE site, near the Siempre Viva Road Interchange. The toll verification equipment would be placed on overhead structures constructed of large steel columns and would be approximately the same height as roadway overcrossing structures. The toll administration building and parking lot

would be visually similar to and not highly distinguishable from the POE facilities. Depending on the placement of the automatic toll verification structures, they may be visible from the surrounding area, particularly where proposed SR-11 would be at the same elevation as or higher than the surrounding area, e.g., at the eastern or western ends of the proposed alignment. Although they would be narrow, they would be tall and may draw attention to the roadway. They generally would be visually associated with the roadway, however, and would contribute an incremental level of visual change to the surrounding area, along with the roadway.

7. Retaining Wall Between POE and Siempre Viva Road Interchange

Between the POE and the Siempre Viva Road Interchange, the northbound passenger vehicle lanes would slope upward to cross over the commercial vehicle lanes with a bridge parallel to Siempre Viva Road. The eastbound lanes approaching the toll plaza would pass under Siempre Viva Road at a lower elevation than the westbound lanes. A retaining wall, 415 feet long and gradually rising in height from 3 feet to 20 feet, would separate the east- and westbound passenger vehicle lanes. The tallest portion of the wall would be next to the Siempre Viva Road bridge over the southbound lanes. Refer to Figure 4d for the location of the wall.

The wall, which would face southwest, would be a piece of the larger overall POE, interchange, and highway visible from Airway Road as represented by Key View 4 (Figure 25), and other east-west roads as represented by Photograph 6 (Figure 18). From these points the wall would be similar in appearance to the buildings at the POE and toll plaza, and would not be highly distinguishable. As mentioned above, the POE would be visually complex and dissonant, with low visual quality. It would not disrupt the vividness of the mountains visible from Key View 4 or other eastward views; however the change to the visual character and quality of the POE site would be high. Due to the low number of viewers, the resulting change to the visual environment of the POE site would be moderately high, and the proposed retaining wall would contribute to that change.

The main viewer group would be people in passenger vehicles traveling southeastward toward the POE. Although it would be visually similar to structures within the interchange and the POE—which viewers would be approaching—and would taper to its smallest point near the toll plaza, the subject wall would be a large-scale structure with high unity and low diversity that would be visually dominant for these viewers. The wall, up to 20 feet high, would block northeastward views for these motorists along most of its length, and would result in high visual impact for motorists in the southbound passenger vehicle lanes. The relatively low number of off-site viewers in this location after the project is constructed, as well as the low number of viewers currently present, in combination with the high impact, would result in a moderately high visual impact overall, which is consistent with the visual impact of the POE as discussed above.

8. SR-11 Detention Basins

In addition to the detention basins in the POE and CVEF, five detention basins would be included within the proposed SR-11 R/W (refer to Figures 4a-4d above). One would be located north of proposed SR-11, east of the industrial buildings at Sanyo Avenue (near the location of

Key View 6). Three others would be located south of the highway—one west of Alta Road, one between Alta Road and the Siempre Viva Road Interchange, and one southwest of the Siempre Viva Road Interchange. A fifth basin potentially would be placed in the area between the passenger lanes and the commercial lanes, directly northwest of the Siempre Viva Road Interchange overcrossing. Four detention basins within the SR-905/SR-125/SR-11 interchange that were previously approved under the SR-905 project would not be altered by the proposed project.

The basins as proposed would be small, generally rectilinear-shaped areas graded to a lower elevation than the proposed roadway and surrounding grades; one of the basins within the SR-905/SR-125/SR-11 interchange would be teardrop shaped, while the basin north of the Siempre Viva Road Interchange overcrossing would be triangular in shape, wedged between the passenger lanes and cargo lanes with the narrow end directly south of where those lanes would diverge. The slopes of all the basins would be a uniform 2:1 steepness.

Because the basins would be lower than the surrounding grades, they generally would not be visible when viewing the project site from the surrounding area, such as from Alta Road (see Key View 1, Figure 22), Airway Road (see Key View 4, Figure 25 and Photograph 6, Figure 18), or Otay Mesa Road (see Photograph 10, Figure 29). The basins may be visible, however, from proposed SR-11; motorists and passengers on the new roadway would see the slopes of the basins and, from some points, may see the bottom of the basins when traveling on SR-11. Views of the basins would be peripheral to travelers' main line of sight; however, the basins would not blend with the generally undeveloped grasslands abutting the R/W because, although the basins would be hydroseeded with ground cover and shrubs for erosion control, they would appear geometric in shape due to their layouts and their uniform slopes.

9. Temporary Construction Period Impacts

The proposed project would be built in one phase over an approximate two- to three-year construction period. During that time, the construction of the proposed project would disrupt the visual character of the project area, and the construction activity and equipment would be visible from each viewpoint discussed above. Visible indications of construction on the roadways would contrast with existing conditions due to the introduction of new dominant elements, including newly cut or filled slopes, raw soil, stockpiled dirt and rocks and bridge formwork, signs, construction period fencing, construction equipment, and night lighting. Other visual disruptions may include detours and local street closures, with signs, equipment, and other visual indicators.

While relatively temporary in nature and ultimately addressed through project design, short-term visual impacts would create a high, unmitigable level of change to the visual environment.

VIII. VISUAL IMPACT ASSESSMENT: DESIGN ALTERNATIVES

Several alternatives and options are being evaluated for this project. For the purpose of this study, the most intensive or “worst-case scenario” alternative, the Two Interchange Alternative, has been evaluated thus far. Generally, the less intensive alternatives and options would result in fewer and less intense impacts to the visual environment. The following is a description of the project alternatives, and their anticipated visual impact in comparison to the impacts discussed above.

A. ONE INTERCHANGE ALTERNATIVE

The designs of the SR-905/SR-125/SR-11 Interchange, the SR-11/SR-905 connectors, SR-905 improvements, the Otay Mesa East POE (including the potential future transit center site), and the CVEF would be the same under this alternative as described above for the Two Interchange Alternative. The unique features of the One Interchange Alternative would involve SR-11.

Under the One Interchange Alternative, proposed SR-11 would be constructed with a single interchange at Alta Road (refer to Figure 3). SR-11 at Siempre Viva Road (at the northeast corner of the POE site) would consist of an overcrossing (the highway would cross under Siempre Viva Road), rather than an interchange. The Enrico Fermi Interchange also would not be built; the overcrossing bridge of Enrico Fermi Drive over SR-11 would be included, and no ramps would connect the highway with the roadway. The ramps are depicted in Simulation 2 (Figure 23); there would be continuous slopes along each side of SR-11 in this area instead.

The interchange at Alta Road under the One Interchange Alternative would include two loop-style ramps and two diamond-style ramps; all the ramps would be on the eastern side of the overcrossing structure. This interchange mostly would be visible from Alta Road, as represented by Key View 1. Viewers at Key View 1 would see the overcrossing of Alta Road over SR-11, similar to that shown in Simulation 1, as well as some portion of the ramps to the west of Alta Road. The ramps, like the roadway, generally would be at a lower elevation than the surrounding area, although the intersection of the ramps and Alta Road would be at the same elevation at Alta Road. The ramps would not cause a higher level of change to the visual environment of the area than SR-11 without the interchange and ramps at Alta Road discussed above.

The One Interchange Alternative would include a similar retaining wall to the wall proposed for the Two Interchange Alternative near the light industrial areas accessed off of Sanyo Avenue. The One Interchange Alternative would have one less auxiliary lane than the Two Interchange Alternative, and the retaining wall would therefore be 50 feet from the buildings, rather than 38 feet, assuming a 22-foot median. Although farther away, this wall would cause a high level of change to the visual character and quality of the visual environment of the light industrial parcels near Sanyo Avenue. The viewers in the area would have a moderate response to changes in the area, and the resulting visual impact would be moderately high.

B. NO INTERCHANGE ALTERNATIVE

Under the No Interchange Alternative, no interchanges or associated ramps would be constructed along proposed SR-11 (refer to Figure 3). Similar to the other alternatives, SR-11 would have an undercrossing structure at Sanyo Avenue (the highway would cross over Sanyo Avenue), and overcrossings at Enrico Fermi Drive, Alta Road, and Siempre Viva Road (at the northeastern corner of the POE—the highway would cross under these roads). The design of the SR-905/SR-125/SR-11 Interchange, Otay Mesa East POE (including the potential future transit center site), and CVEF site would be the same under this alternative as those described above for the Two Interchange and One Interchange alternatives. The No Interchange Alternative would have impacts similar to those discussed above for the Two Interchange Alternative (proposed project), with slightly less visual change to views represented by Key View 2.

Similar to the One Interchange Alternative, the No Interchange Alternative with a 22-foot median would include a retaining wall placed 50 feet from the buildings within the light industrial areas accessed off of Sanyo Avenue. The wall would cause a high level of change to the visual character and quality of the visual environment of the light industrial parcels near Sanyo Avenue. The viewers in the area would have a moderate response to changes in the area, and the resulting visual impact would be moderately high.

Both the One Interchange Alternative and the No Interchange Alternative would create the same, and in some places slightly less, change to the visual environment as the Two Interchange Alternative discussed in the main body of this report.

C. NO BUILD ALTERNATIVE

The No Build Alternative would result in implementation of the existing approved SR-905 alignment as opposed to the above-described alternatives. Under this alternative, the local access ramps between SR-905 and Enrico Fermi Drive, including the elevated alignment east of Sanyo Avenue, would still be implemented, but the ramps would terminate at Enrico Fermi Drive. The moderately-high changes to the visual character of the grassland areas near the eastern end of the build alternatives would not occur. The proposed undercrossing at Sanyo Avenue (the highway would cross over Sanyo Avenue) would be similar to that evaluated in Key View 5, and would have a similar moderate impact. Retaining walls supporting the extension east of Sanyo Avenue would be similar to those discussed above under Additional Views: Light Industrial Areas East of Sanyo Avenue; the walls would cause a moderately high change to the visual environment of the light industrial areas just east of Sanyo Avenue. This project has previously been approved, and these impacts addressed in relation to the SR-905 project.

IX. VARIATIONS ON THE BUILD ALTERNATIVES

A. NO TOLL VARIATION

The No Toll Variation would involve SR-11 operating as a highway instead of a toll highway. The principal design difference under this variation would be the lack of toll-related structures such as toll administration facilities. This would slightly reduce the visual impact of SR-11 because the tall, overhead structures would not be included and the toll administration building near the Siempre Viva Road Interchange would not be built. This variation, therefore, would have the same or slightly less visual impact as the proposed project as evaluated above.

B. 46-FOOT MEDIAN DESIGN VARIATION

The 46-foot median variation would apply to any alternative. Under the Two Interchange Alternative, the wider roadway would require a retaining wall east of Sanyo Avenue of the same height that would be required for the 22-foot median variation evaluated throughout the main discussion of this report. The wall under the 46-foot median variation, however, would be placed in close proximity (within approximately 26 feet) to the existing building north of the proposed R/W and east of Sanyo Avenue; it would require the relocation of the building's driveway and the tanks at the southeast corner of the building (these are visible in the center of Key View 6, Figure 27). The proposed retaining wall would be placed adjacent to the building entrance. It would be a visually dominant, hard-surface, gray, large-scale element with deep shadows falling on the building, that would have no visual continuity with the surrounding area. It would encroach on the visual environment of the building and surrounding parcel, which would, as a result, have no visual unity or intactness. The wall may be visually memorable and therefore vivid, due to its large scale and placement, but the visual quality of the area would be adversely impacted. The wall would be in the immediate foreground for viewers in the area just east of Sanyo Avenue; their awareness attention would be focused on the view of the wall, due to its highly visual placement and scale. The proposed variation on the Two Interchange Alternative would have a high visual impact.

The 46-foot median variation applied to the One Interchange and No Interchange Alternative also would require placement of the retaining wall closer to the building than with the proposed 22-foot median; these alternatives would require one less lane in each direction along SR-11 between Enrico Fermi Drive and the SR-905/SR-125/SR-11 Interchange, however. The wall, therefore, would not be placed as close to the existing building as under the same variation for the Two Interchange Alternative. It would be at a similar location to the Two Interchange Alternative with a 22-foot median (approximately 38 feet from the closest building; evaluated above in the Additional Views section) and would have a similar visual impact; namely, the wall would cause a high level of change to the visual character and quality of the visual environment of the light industrial parcels near Sanyo Avenue. The viewers in the area would have a moderate response to changes in the area, and the resulting visual impact would be moderately high.

C. SR-905/SR-125/SR-11 INTERCHANGE DESIGN VARIATIONS

The proposed project build alternatives include variations on the SR-905/SR-125/SR-11 Interchange (refer to Figure 7), that would add ramp structures to the interchange. These structures would be added to the previously approved interchange in this location, expanding upon a visual environment that is already planned to include multiple highway lanes and large concrete ramp structures. The interchange is located at the western end of the proposed project alignment, within or near the more developed, urban areas of Otay Mesa. The addition of connectors and ramps for either the SR-125 Connector or the SR-905/SR-125/SR-11 Full Interchange variation would have similar visual characteristics as the existing structures, and would not adversely affect the visual quality of the surrounding urban area beyond the impacts already discussed. The proposed and previously approved ramps would be the tallest project features; they would be similar in height or slightly less than the height of the nearby industrial buildings. There are no roads or developed areas directly west of the proposed interchange site. The closest viewers west of the interchange would be on La Media Road or portions of Otay Mesa Road and Airway Road, and would be approximately 1,500 feet or farther away from the interchange (unless traveling on the proposed or approved roadway itself). Viewers would see the interchange structures in eastward-looking views, along with existing industrial buildings on Airway Road, Otay Mesa Road, and (further in the distance) Sanyo Avenue. The ramps and interchange structures would extend above the flat mesa and across views of the mountains (as do the existing buildings), but would not entirely block the mountains or extend higher than the horizon line of created by the mountains. This moderate level of change combined with the low numbers of viewers would suggest that the ramp and interchange structures would cause a moderately low level of change to eastward views from west of the interchange.

1. SR-125 Connector Variation

The addition of ramps would have similar visual character as the approved structures, and would not additionally affect the visual quality of the surrounding urban area. This variation, therefore, would cause a low level of change, and have a low visual impact.

2. SR-905/SR-125/SR-11 Full Interchange Variation

The addition of the connectors under the SR-905/SR-125/SR-11 Full Interchange Variation includes a retaining wall that would be range from approximately 15 to 26 feet high and 150 feet long at the southeastern corner of the interchange, facing southeast. The wall would be part of the support structure for the westbound SR-905 to eastbound SR-11 connection, which would be elevated and, just west of the wall, would consist of a bridge structure. The wall would be placed east of existing Harvest Road. This portion of Harvest Road would no longer be used after construction of the interchange; therefore there would be no future views to the wall from that road.

The wall would be located near the northwestern corner of an existing power generation plant located between Harvest Road and Sanyo Avenue, and accessed via Sanyo Avenue. It would be approximately 300 feet northwest of the power plant building. There are relatively few viewers at that location, and their attention presumably is focused inward, toward their place of business.

Between the sparsely placed trees surrounding the power plant facility, the viewers at that location could see the wall as a portion of the larger interchange.

The wall would be located approximately 1,200 feet, or almost ¼ mile, west of Sanyo Avenue. Viewers on Sanyo Avenue would view the wall peripherally, and as part of the larger interchange and highway that would be introduced into the area (refer to the discussion of Key View 5, above).

The addition of the wall and the connector would not affect the visual character of the approved interchange, and would not additionally affect the visual quality of the surrounding area. The wall and ramps proposed by this variation, therefore, would cause a low level of change, and have a low visual impact.

D. SIEMPRE VIVA ROAD FULL INTERCHANGE VARIATION

This variation would only apply to the Two Interchange Alternative, and would construct a full interchange at SR-11/Siempre Viva Road rather than the half interchange described under the baseline Two Interchange Alternative. The full interchange design under this variation would include a number of features that are the same as (or similar to) those described for the baseline half interchange, as well as additional facilities to accommodate the full range of vehicle movements. This would result in an overall wider highway footprint in the area. The number of structures, ramps, areas of pavement, and signage also would increase with the expansion of the highway footprint and the addition of structures to create a full interchange.

Although larger in scale and potentially less visually unified than the proposed baseline half interchange, the addition of loop-style ramps and facilities as proposed in the Siempre Viva Road Full Interchange Variation would have a similar visual character as the half interchange described under the baseline Two Interchange Alternative (refer to Key View 3). The new geometric, diverse and complex features would be large, and the overall view would appear monumental. The new elements, however, would all be visually related to the new highway and would have visual continuity with the highway. Project elements would contrast with the surrounding area; however, the surrounding area would no longer be visible, and the highway and interchange would comprise the entire view. That view would be much less open, and the new view elements would be large and dominant. This would result in a moderately high change to the visual character of the area. The new elements also would change the visual quality, but to a lesser extent because the resulting quality of the view would be comprised entirely of the new highway and interchange elements and the change would be moderately low.

The low number of existing viewers in this area have moderate exposure and sensitivity (refer to Key View 3 for a discussion of existing viewers in the area). The change to visual resources, therefore, as a combination of the change to the visual character and the change to the visual quality, would be moderate. In combination with the moderate viewer response, this moderate change to visual resources would result in a moderate visual impact. The full interchange, therefore, would be visually similar to the baseline half interchange.

X. CUMULATIVE IMPACTS

Although the area surrounding the project site contains undeveloped land at the present time, there are numerous active development proposals, which are likely to proceed with or without approval of an SR-11 corridor and POE site. Development would not occur sooner or at a more rapid pace because most of the area in the vicinity of the project is already the subject of active development applications in progress with the County. In addition, the pattern of development would be expected to easily adjust to accommodate the project, because these facilities have been indicated on planning documents for many years. Furthermore, the effects of growth that is planned or already in progress in the vicinity of the project would not be expected to result in unanticipated impacts to resources. Any associated development would be in accordance with the EOMSP and have to conform to California Environmental Quality Act (CEQA) and local, state and federal regulatory requirements for the protection of resources. The proposed project was anticipated in that specific plan.

If many of the proposed developments are implemented in addition to the proposed project, the cumulative visual environment of the area east of Enrico Fermi Drive would change from primarily undeveloped grasslands to developed highway, roadways and industrial buildings, as well as the governmental buildings and other facilities at the border within the POE site. The current views of wide expanses of open space would be lost. This change has been previously contemplated in the environmental documents for the EOMSP, and the updates to that plan. Between Enrico Fermi Drive and SR-125, the project would generally be visually compatible with the surrounding developing industrial area.

Just east of Sanyo Avenue, however, the project would construct high retaining walls in close proximity to existing buildings resulting in a substantial adverse impact on the visual environment. This impact would contribute incrementally to the cumulative impact of development in the area by creating additional vertical concrete elements within the viewshed of the existing buildings and the immediately surrounding area. Similarly, west of Sanyo Avenue, potential implementation of the SR-905/SR-125/SR-11 Full Interchange Design Variation for the project, along with previously approved elements of the SR-905/SR-125 Interchange would incrementally contribute to the cumulative visual impact also by creating additional vertical concrete elements in the area.

Overall, proposed project-related modifications would not increase the change to the visual environment caused by approved SR-905 west of the interchange. The proposed widening is expected to be consistent with existing SR-905 and the surrounding planned industrial uses, and the anticipated low visual impact caused by the proposed project in this area, as well as the mitigation measures for the proposed project's visual impacts, including landscaping and architectural treatments for various structures, are expected to minimize the project's contribution to cumulative visual impacts.

If all anticipated development in the area is constructed, the visual character and quality of eastern Otay Mesa would undergo a high level of change and the resulting visual environment would be more urban. Development of the proposed highway and interchanges would visually contribute to the change. Additionally, the new development would bring more viewers to the area, exposing them to the high level of change to the visual environment of eastern Otay Mesa. Per current Caltrans and FHWA guidelines for visual analysis, the transformation of eastern Otay

Mesa from open space and rural areas to urban development would be substantial and adverse. Based on the preceding analysis, it is concluded that the project would contribute to cumulative visual impacts in the EOMSP area during project implementation in Tier II. While the mitigation measures listed below in Chapter VII would serve to minimize project specific impacts, substantial, adverse (and unmitigable) cumulative impacts would remain.

XI. SUMMARY OF IMPACTS

The proposed project impacts to visual character and quality of the project site and surrounding area can be summarized by stating that the semi-rural character of the area would become noticeably more urban. The project as a whole would change a large area of currently undeveloped grassland and open space with a few unpaved roads and views of the San Ysidro Mountains in the eastern portion of Otay Mesa to a more urbanized landscaped transected by a large expanse of concrete resulting from a new highway, associated interchanges, walls, and grading, and a POE and CVEF with buildings, roadways, and associated facilities.

As stated above, there are currently relatively few viewers in the immediate project area and their sensitivity to change may be low because they primarily are working for or doing business with the predominately light industrial or goods movements facilities in the area, rather than seeking outdoor recreational opportunities.

Although viewed by relatively few people at the eastern edges of the developed areas of Otay Mesa, the change from a semi-rural, open view of relatively flat areas and vivid mountains in the background caused by development of proposed SR-11 and the POE would be moderately high, and would result in adverse visual impacts to the area, as discussed above in the evaluation of Key Views 1 and 4, and in the discussion of the POE area.

Additionally, views to the highway would be adversely affected at the right-of-way edges, particularly in areas where the highway elevation is higher than the existing topography, such as the area just east of Sanyo Avenue, between the existing light industrial parcels. In this narrowest portion of project footprint, vertical retaining walls estimated to range up to 26 feet in height would be placed at the edge of the R/W. These walls would be as close as 26 to 50 feet to existing buildings (depending on the project alternative or variation), and at one parcel, directly adjacent to the building entrance. Although few viewers are present, the moderately high level of change to the visual environment caused by the encroachment into the area of the new, large-scale, visually dominant walls would result in adverse impacts to the area (see Photograph 9, Figure 28, and the discussion of the light industrial areas accessed via Sanyo Avenue, above).

The highway would cross over existing Sanyo Avenue, blocking what is currently a view of open space and sky (see the discussion of Key View 5, above). It also would be visible from high points areas east of the lots accessed via Sanyo Avenue (refer to the evaluation of Key View 6). The proposed roadway would increase the scale of the view and introduce more geometric elements. This would change the visual environment of the area and the views, and would result in a visual environment with similar elements of visual character and quality. The proposed project would have a moderate impact in these areas. Similar impacts would occur under the 46-foot median variation for One Interchange and No Interchange Alternatives. The 46-foot

median variation of the Two Interchange Alternative would place the wall directly next to the building east of Sanyo Avenue and north of the proposed R/W; it would have a high visual impact because the visual quality of the area would be highly degraded by this large-scale element that would be placed in the immediate foreground for viewers in the area.

The most heavily traveled thoroughfare in the area, Otay Mesa Road, has very limited views to the project site due to intervening topography. Viewers on this roadway and at the residential properties north of Otay Mesa Road within the project viewshed would not have extensive views of the proposed project due to project grading. None of the features of the proposed project that would be visible from Otay Mesa Road looking south would be dominant or cause a high level of change in the visual environment of the road. The resulting impact would be low.

Views from within the proposed highway R/W, as discussed above under Key View 2, generally would not be adversely affected by the project. The new elements would have similar visual character and quality, however, and the proposed project would have a low impact in the infrequently viewed existing R/W; the most frequent viewers also would be new viewers, and likely would not know the existing visual environment.

The SR-11 project and the directly adjacent proposed Otay II POE would serve as the “Gateway” to the United States from Mexico. As such, the highway, the right-of-way and supporting infrastructure frame the initial visual reference for viewers who could potentially be seeing the United States and our highway system for the first time. The potential exists to create a strong, vivid visual environment. The following mitigation measures create a framework to potentially reduce adverse visual impacts, and create the entry statement.

The high level of contrast with the existing undeveloped areas within and surrounding the project site would be caused by the visible indications of construction due to the introduction of new visually dominant elements. While relatively temporary in nature and ultimately addressed through project design and mitigation, short-term visual impacts would create an adverse visual impact.

The impacts above were determined specifically for the Two Interchange Alternative, which is the largest alternative being proposed. The proposed under- and overcrossings for the One Interchange Alternative and the No Interchange Alternative would be similar in appearance to the interchanges proposed for the Two Interchange Alternative; the main differences would be the smaller grading footprint and the absence of connecting ramps and auxiliary lanes through the Sanyo Avenue area. The One Interchange Alternative and the No Interchange Alternative therefore would have similar impacts visual impacts to the Two Interchange Alternative.

Under the No Build Alternative, retaining walls supporting the local access ramps between SR-905 and Enrico Fermi Drive through the Sanyo Avenue area would be similar to those that would be created by any of the build-alternatives; the walls would cause a moderately high change to the visual environment of the light industrial areas just east of Sanyo Avenue, resulting in an adverse visual impact.

The proposed project variations on the build alternatives generally would not cause additional visual impacts. The 46-Foot Median Variation, if applied to the Two Interchange Alternative, would place the retaining wall east of Sanyo Avenue at a much closer location to the light industrial buildings. This would create a high level of contrast with an expected high level of viewer response, and an adverse visual impact. Applied to the One Interchange Alternative or the No Interchange Alternative, this variation would have the same moderately high visual impact as the 22-Foot Median design evaluated for the Two Interchange Alternative.

Cumulatively, the proposed project in combination with other anticipated development in eastern Otay Mesa would considerably change the visual environment of the area from open space to urban uses, and would contribute to cumulative visual impacts within the EOMSP area during project implementation in Tier II. While the mitigation measures listed above in Chapter VII would serve to minimize project specific impacts, substantial, adverse (and unmitigable) cumulative impacts would remain.

XII. VISUAL MITIGATION

Caltrans recommends that a qualitative aesthetic approach be taken to mitigate for negative visual quality impacts in the project area because this approach would address the actual cumulative loss of visual quality in the project viewshed when the project is implemented. The measures included in this approach also would facilitate public acceptance of the project.

Mitigation for adverse project visual impacts addressed in the Key View assessments and other parts of this study and summarized in the previous section would consist of adhering to design requirements developed in consultation with the Caltrans District 11 Landscape Architect. The visual mitigation measures are arranged by project feature and include design options in order of effectiveness. All visual mitigation project features would be designed and implemented with the concurrence of the Caltrans District 11 Landscape Architect.

Implementation of the following visual mitigation measures would reduce negative impacts of the project to an acceptable level. Many of the mitigation measures are being proposed as project features in the final design phase to avoid adverse visual impacts.

Highway Planting

HP-1: SR-11 Landscape Concept Plan

A landscape concept plan would be developed in consultation with the District 11 Landscape Architect, local community planning groups, City staff, County staff, and the Caltrans Project Development Team. The SR-11 Landscape Concept Plan would incorporate the mitigation measures contained in this VIA. The SR-11 Landscape Concept Plan would identify highway planting and non-living (mulches, rock blankets and other materials) landscape features that define the visual environment and articulate the landscape theme for SR-11. This measure would reduce impacts addressed in the discussions of Key Views 1, 2, 3, 4, and 5, as well as impacts seen from Enrico Fermi Drive, visual effects resulting from the POE, and the retaining wall

between the POE and the Siempre Viva Road Interchange. It also would contribute to reducing the visual impact of the Siempre Viva Road Full Interchange Variation.

HP-2: To reduce impacts discussed in the discussions of Key Views 1, 2, 3, 4, and 5, as well as impacts seen from Enrico Fermi Drive, visual effects resulting from the POE, and from the Siempre Viva Road Full Interchange Variation, the project would receive drought tolerant, low maintenance landscaping that is compatible with the appearance of the adjacent vegetative community and sustainable horticultural practices, per Caltrans standard practices, which specify planting or seeding graded slopes with native species where feasible. All planted areas would receive irrigation; areas planted with native species would receive temporary irrigation.

HP-3: To reduce visual impacts in areas of the project characterized by ornamental landscaping, such as those visible in Key Views 1, 2, 3, 4, and 5, as well as impacts seen from Enrico Fermi Drive, visual effects resulting from the POE, and impacts resulting from the Siempre Viva Road Full Interchange Variation, roadway landscaping that includes trees, shrubs, and groundcover would be installed.

HP-4: To reduce impacts in less developed areas within the limits of disturbance (eastern portion), such as those addressed in the discussion of Key View 4 and visual effects resulting from the POE, trees and shrubs would be planted, and mulch would be spread in planting areas. Areas of native species would include temporary irrigation systems (for at least two growing seasons) to aid in plant establishment and supplement deficient natural precipitation.

Retaining Walls

RW-1: Architectural surface treatment

Architectural features, textures and colors would be used to mitigate the appearance of retaining wall surfaces and deter graffiti. Walls would incorporate architectural features such as pilasters and caps to provide shadow lines, provide relief from monolithic appearance, and reduce their apparent scale. The architectural surface treatment would follow a highway-wide theme as identified in the SR-11 Landscape Concept Plan and utilize/adapt architectural features of the adjacent SR-905 project for continuity. This measure would reduce visual effects resulting from architectural features, such as by the retaining wall between the POE and the Siempre Viva Road Interchange and the retaining walls in the Sanyo Avenue area under the proposed alternatives (particularly the 46-foot Median Variation).

RW-2: Retaining wall/barrier planting pocket

In areas where retaining walls must be placed in close proximity to and above the traveled way, space would be reserved between the wall and the safety barrier to include a six-foot wide planting pocket to reduce the impact of the visible height of the wall. Refer to Figure 30 for an example cross-section of a planting pocket between a barrier and retaining wall.

RW-3: Terraced retaining walls

Where site conditions permit, retaining walls over 15 feet in height would be divided into two separate structures sufficiently offset from one another to create a flat landscape planting area between the two. Refer to Figure 30 for an example cross-section of terraced retaining walls. This measure would reduce visual impacts addressed in the discussion of Key View 3, and those resulting from structures included in the Siempre Viva Road Full Interchange Variation.

RW-4: Mid-Slope retaining walls

Retaining walls would be located at mid-slope wherever possible to provide adequate area for landscape screening between the wall and the highway. See the cross-section in Figure 31 for an example of a retaining wall placed mid-slope. This measure would reduce visual impacts addressed in the discussion of Key View 3, and those resulting from structures included in the Siempre Viva Road Full Interchange Variation.

RW-5: Terrain contoured retaining walls

Retaining walls that follow the contours of the topography and maintain a constant elevation at the top of wall would be used where appropriate. This type of wall would be visually compatible with surrounding terrain and provide room at the base for a landscape screening buffer. Figure 31 depicts an example plan and elevation of a terrain-contoured retaining wall. This measure would reduce visual impacts addressed in the discussion of Key View 3, and those resulting from structures included in the Siempre Viva Road Full Interchange Variation.

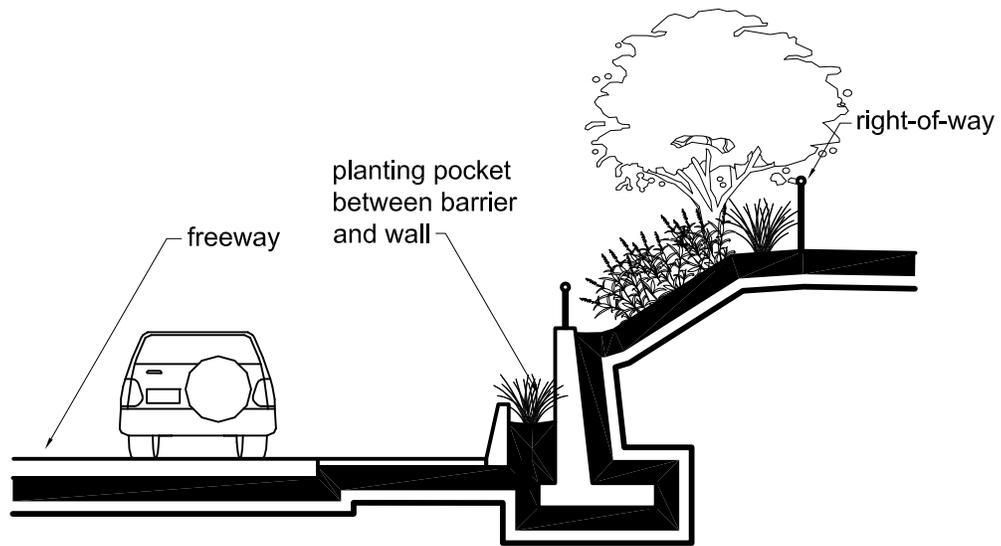
RW-6: Plantable retaining walls

Where Caltrans standard design crib walls may be recommended, Mechanically Stabilized Earth (MSE) walls that utilize a stacking tray design such as Evergreen walls would be used if possible to provide a landscaped surface that would blend in with the surrounding landscape and reduce the potential visual impact of the crib walls.

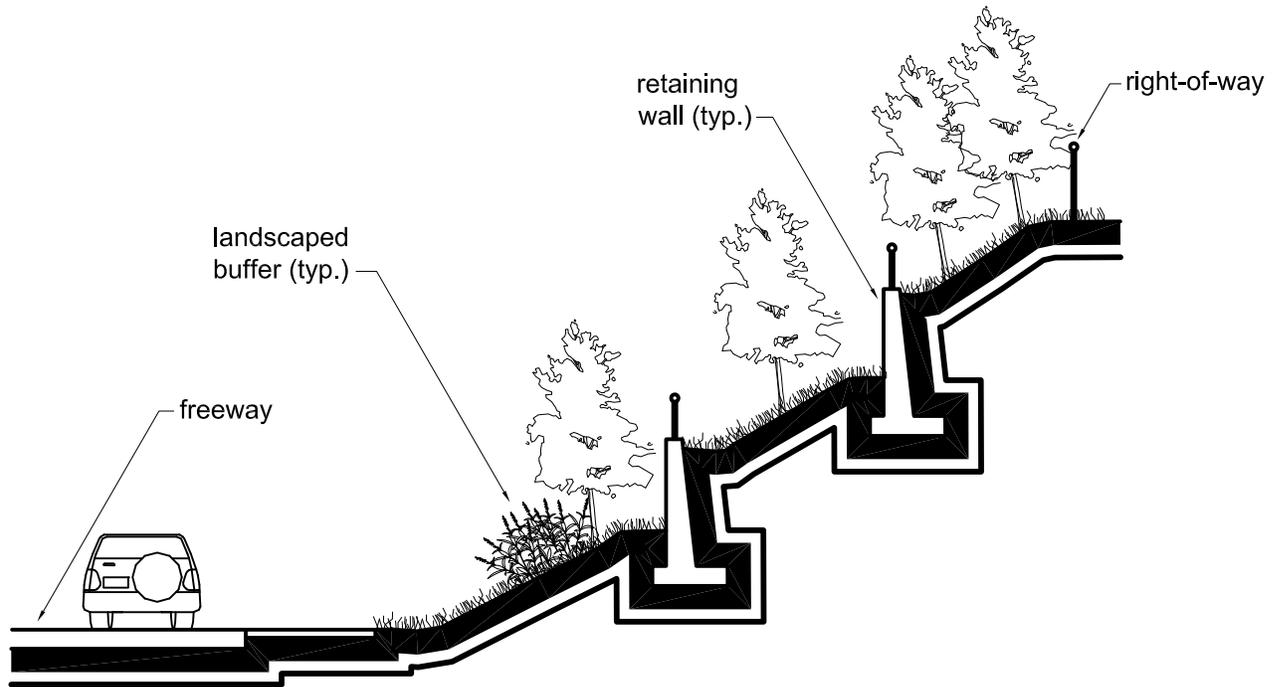
Overcrossing, Undercrossing and/or Bridge Structures

S-1: Structure design would be enhanced with architectural features and be consistent with design themes developed and identified in the SR-11 Landscape Concept Plan. Pedestrian lighting, widened sidewalks (five and one half feet to seven feet width), bicycle lanes, and other urban amenities on local street portions of structures would be provided to be consistent with local community values and goals. This measure would reduce visual impacts resulting from structures addressed in the discussion of Key Views 2, 3, and 5, and those visible from Enrico Fermi Drive, as well as the proposed retaining wall between the POE and Siempre Viva Road Interchange, and included in the Siempre Viva Road Full Interchange Variation.

S-2: To reduce visual impacts of slope paving, such as discussed in relation to Key View 5, slope paving at undercrossings and overcrossings would be enhanced with texture to deter graffiti. Paving texture and color would be consistent with materials used on SR-905.



Cross-section RW-2:
Retaining Wall - Barrier Planting Pocket

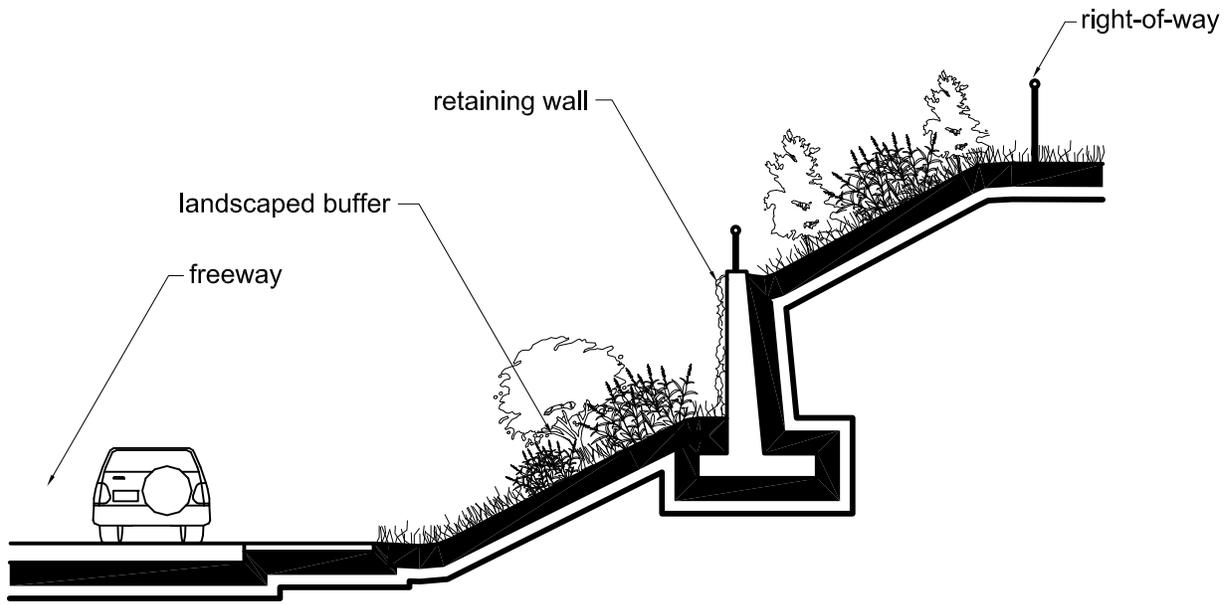


Cross-section RW3:
Terraced Retaining Walls

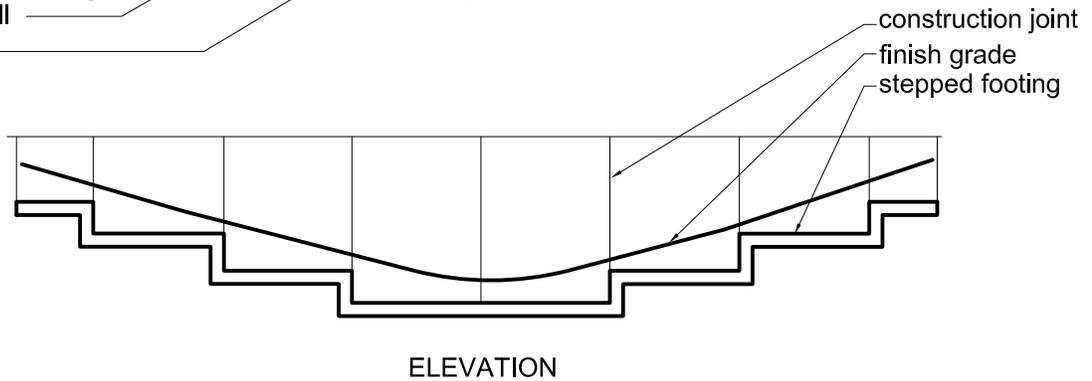
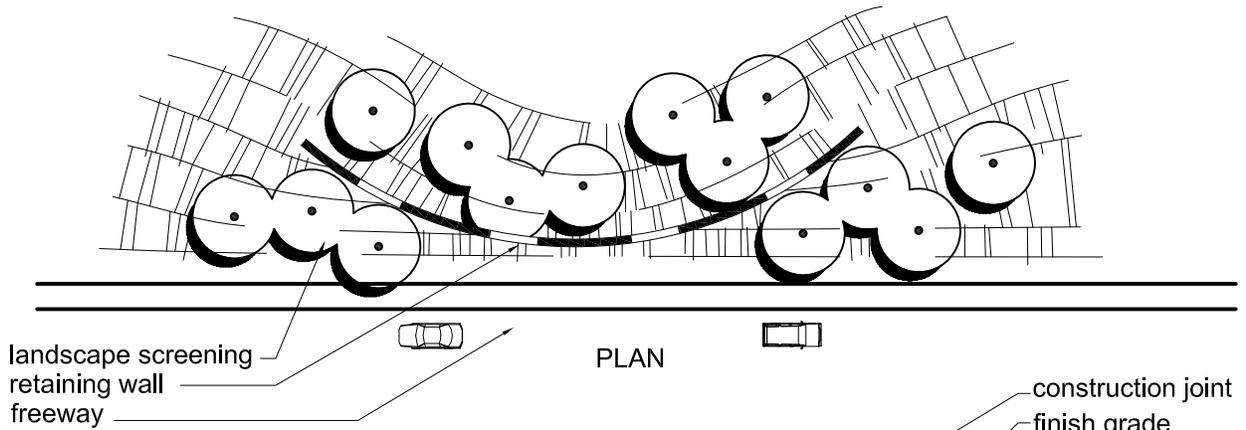
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Conceptual Mitigation Measures

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT



Cross-section RW4:
Mid-slope Retaining Wall



RW5: Terrain Contoured Retaining Wall

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Conceptual Mitigation Measures

STATE ROUTE 11 AND OTAY MESA EAST PORT OF ENTRY - TIER II VISUAL IMPACT ASSESSMENT

S-3: To reduce visual impacts of fences, such as resulting pavement associated with retaining wall between the POE and the Siempre Viva Road Interchange, any solid, screening fences used on structures would be carefully coordinated with bridge aesthetics and architectural elements.

Median Barriers and Edge Barriers

MB-1: To preserve desirable views and reduce the visual scale of the highway facility, such as is visible in Key View 6, concrete median barriers, if used, would be Type 60S and Type 736. Barriers would be colored and textured if so designated in the overall SR-11 Landscape Concept Plan.

To maintain the visual integrity and ensure the effectiveness of the mitigation design measures outlined above, the following mitigation measures would be incorporated throughout the project.

Manufactured Slopes/Grading

G-1: Slopes would be graded 2:1 or flatter to support highway planting and/or non-living landscape materials such as rock mulches as appropriate. Grading would utilize techniques such as slope rounding, slope sculpting, and variable gradients to approximate the appearance of natural topography. Per Caltrans policy, embankment slopes steeper than 4:1 would require an approved design exception.

Lighting and Signage

LS-1: Lighting and mileage/directional signs would be designed and coordinated comprehensively and as a complete package, either as free-standing elements or in conjunction with over/undercrossing structures and architectural features to create a unified design theme and clear driver information.

LS-2: Existing highway lighting and signage design themes identified for SR-905 would be continued.

LS-3: Pedestrian lighting on all overcrossings would be uniform and conform to the SR-11 design theme.

LS-4: Soffit lighting would be provided on all undercrossings with pedestrian facilities.

LS-5: Electrical and signal equipment at ramp termini would be placed in visually unobtrusive locations.

Access control fences

AC-1: Where possible, access control fencing would be placed in visually unobtrusive locations of interchanges and bridges (e.g., near the edge of the R/W). It would be coated with black vinyl where appropriate.

AC-2: Retaining walls near R/W boundaries would be placed in such a way that they become access control, and an additional access control fence would not be needed. The “dead” spaces that occur between walls and fences would be avoided if at all possible by combining walls with fences.

Drainage and Water Quality Facilities

WQ-1: Concrete interceptor ditches would not be placed at the toe of slopes adjacent to residential property or pedestrian use areas. Alternatives such as subterranean drainage placed below finish grade or a planted geo-reinforced drainage surface would also be used where possible.

WQ-2: Concrete drainage devices located in non-landscaped areas would be colored (integral color concrete or by staining) to match the surrounding soil color.

WQ-3: Soft surface alternatives to concrete ditches and rock slope protection would be used wherever possible.

WQ-4: Detention basins and bio-swales in landscaped areas would be planted with visually and functionally compatible native or ornamental ground cover as appropriate, and shaped to mimic natural ponds and/or vernal pools in the area, rather than rectangular or square.

XIII. CONCLUSIONS

The following table outlines the impacts that would be caused by the proposed project alternatives. Where the variations would cause a higher or lower impacts when applied one of the build alternatives (e.g. 46-foot Median Variation plus the Two Interchange Alternative vs. 46-foot Median Variation plus the One Interchange Alternative), the resulting impact is individually called out. The mitigation measures that would apply to each impact are listed, and the resulting level of impact is called out in the last column. Each impact would be mitigated to a moderate impact level or less, except for temporary construction impacts. Although ultimately addressed through project design and mitigation, short-term visual impacts would create a high, unmitigable level of change to the visual environment. Additionally, even with mitigation, the 46-foot Median Variation plus the Two Interchange Alternative would result in a moderately high visual impact.

Impacts, Mitigation and Results			
Area Evaluated	Visual Impact	Mitigation Measure(s)	Result
Two Interchange Alternative			
Key View 1	Moderately High	HP-1, HP-2, HP-3	Moderate
Key View 2	Moderately Low	HP-1, HP-2, HP-3, S-1	Moderately Low
Key View 3	Moderate	HP-1, HP-2, HP-3, RW-3, RW-4, RW-5, S-1	Moderate to Moderately Low
Key View 4	Moderately High	HP-1, HP-2, HP-3, HP-4	Moderate
Key View 5	Moderate	HP-1, HP-2, HP-3, S-1, S-2	Moderate
Key View 6	Moderate	MB-1, WQ-4	Moderate
Enrico Fermi Drive	Moderately Low	HP-1, HP-2, HP-3, S-1	Low
Light Industrial off Sanyo Avenue	Moderately High	RW-1	Moderate
Otay Mesa Road	Low	N/A	Low
SR -905 Modifications to Accommodate SR-11 Connection	Moderate	N/A	Moderate
POE	Moderately High	HP-1, HP-2, HP-3, HP-4	Moderate
Retaining wall between POE and Siempre Viva Road Interchange	Moderately High	RW-1, S-1, S-3	Moderate
Temporary Construction Impacts	High	N/A	High
Variations			
No Toll Variation	No Additional Impacts	N/A	N/A
46-foot Median Variation	High	RW-1	Moderately High
SR-905/SR-125/SR-11 Interchange Design Variations	Low	N/A	Low
Siempre Viva Road Full Interchange Variation	Moderate	HP-1, HP-2, HP-3, RW-3, RW-4, RW-5, S-1	Moderate to Moderately Low
Alternatives			
One Interchange Alternative	Same or slightly less than impacts listed for Two Interchange Variation	See above	See above
No Interchange Alternative	Same or slightly less than impacts listed for Two Interchange Alternative	See above	See above
No Build Alternative	Moderately High	N/A*	Moderate

* Impacts resulting from the No Build Alternative would result from the approved SR-905 project.

Impacts, Mitigation and Results			
Area Evaluated	Visual Impact	Mitigation Measure(s)	Result
Variations applied to One Interchange Alternative or No Interchange Alternative			
No Toll Variation	No Additional Impacts	N/A	N/A
46-foot Median Variation	Moderately High	RW-1	Moderate
SR-905/SR-125/SR-11 Interchange Design Variation: SR-125 Connector	Low	N/A	Low
SR-905/SR-125/SR-11 Interchange Design Variation: Full Interchange	Low	N/A	Low

Cumulatively, the proposed project in combination with other anticipated development in eastern Otay Mesa would considerably change the visual environment of the area from open space to urban uses, and would contribute to cumulative visual impacts within the EOMSP area during project implementation in Tier II. While the mitigation measures listed above in Chapter VII would serve to minimize project specific impacts, substantial, adverse (and unmitigable) cumulative impacts would remain.

XIV. REFERENCES

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