

# State Route 79 Realignment Project: Domenigoni Parkway to Gilman Springs Road

Riverside County, California

District 8-RIV-79-KP R25.4/R54.4 (PM R15.78/R33.80)

08-494000

PN 0800000784

## Final Environmental Impact Report/Environmental Impact Statement and Section 4(f) Evaluation



**Prepared by the State of California Department of Transportation**

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried-out by Caltrans under its assumption of responsibility pursuant to 23 USC 327.



October 2016

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SCH# 2004091040  
08-RIV-79- KP R25.4/R54.4  
(PM R15.78/R33.80)  
EA 08-494000  
PN 0800000784

Realign State Route 79, from south of Domenigoni Parkway to Gilman Springs Road  
(postmile R15.78 to postmile R33.80)

**FINAL**  
**ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL IMPACT STATEMENT**  
**AND SECTION 4(f) EVALUATION**

Submitted Pursuant to: (State) Division 13, California Public Resources Code  
(Federal) 42 USC 4332(2)(C) and 49 USC 303

THE STATE OF CALIFORNIA  
Department of Transportation

COOPERATING AGENCY: United States Army Corps of Engineers

RESPONSIBLE AGENCIES: Riverside County Transportation Commission  
California Transportation Commission

10/27/16  
Date of Approval

  
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**Abstract:** The State Route 79 Realignment Project proposes to realign State Route 79 from Domenigoni Parkway to Gilman Springs Road, a distance of approximately 18 miles, in the cities of Hemet and San Jacinto and unincorporated Riverside County. The realigned highway would be a limited-access, four-lane expressway, with two travel lanes in each direction separated by a median.

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**Appendices**

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## Summary

# Summary

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The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHWA), has prepared this Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS), which examines the potential environmental impacts of the alternatives being considered for the State Route 79 (SR 79) Realignment Project, Domenigoni Parkway to Gilman Springs Road, located in Riverside County, California (Project or proposed Project). The document describes why the Project is being proposed, alternatives for the Project, the existing environment that could be affected by the Project, the potential impacts from each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

The proposed project is a joint project by the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA), and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The Caltrans is the lead agency under NEPA and CEQA. The United States Army Corp of Engineers (USACE) is the cooperating Agency under NEPA, and the Riverside Transportation Commission (RCTC) is a Responsible Agency under CEQA, with Riverside County Flood Control and Water Conservation District acting as a Responsible Agency. In addition, FHWA's responsibility for environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried-out by Caltrans under its assumption of responsibility pursuant to 23 United States Code (USC) 327.

Some impacts determined to be significant under CEQA may not lead to a determination of significance under NEPA. Because NEPA is concerned with the significance of the project as a whole, quite often a "lower level" document is prepared for NEPA. One of the most common joint document types is an Environmental Impact Report/Environmental Assessment (EIR/EA).

After receiving comments from the public and reviewing agencies, the Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS) was prepared. Caltrans prepared a Partially Recirculated Draft Environmental Impact Report/ Supplemental Draft Environmental Impact Report (DEIR/SDEIS) to address comments in August 2015. The Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS) will include responses to comments received on the Draft EIR/EIS, and Partially Recirculated DEIR/SDEIS, and will identify the preferred alternative. After the Final EIR/EIS is circulated, if Caltrans decides to approve the project, a Notice of Determination will be published for compliance with CEQA, and a Record of Decision will be published for compliance with NEPA.

## **S.1 Overview of the Project Area**

The Riverside County Transportation Commission (RCTC), in cooperation with Caltrans, the County of Riverside, the City of Hemet, and the City of San Jacinto, has proposed a project for the realignment of SR 79 in the vicinity of the cities of Hemet and San Jacinto in Riverside County, California.

The Project would realign SR 79 from just south of Domenigoni Parkway to Gilman Springs Road. This realignment would facilitate the regional movement of people and goods, enhance safety, and protect right-of-way (ROW) for future improvements and would provide a more efficient connection between Domenigoni Parkway and Gilman Springs Road. The completed Project would be a limited-access highway with accommodation for oversized trucks and would not preclude future multimodal transportation systems.

## S.2 Purpose and Need

The Project purpose and need was developed in accordance with the NEPA/404 Integration Process in a joint effort among Caltrans, FHWA, United States Army Corps of Engineers (USACE), United States Environmental Protection Agency (USEPA), and United States Fish and Wildlife Service (USFWS) to integrate the NEPA and federal Clean Water Act Section 404(b)(1) alternatives analysis process. Local (City of Hemet, City of San Jacinto, County of Riverside) and state agencies (California Department of Fish and Wildlife<sup>1</sup> [CDFW] and Santa Ana Regional Water Quality Control Board [RWQCB]) also participated in this process. Although the Project would be in the jurisdictions of the Santa Ana RWQCB and the San Diego RWQCB, such a small portion of it would be in San Diego RWQCB jurisdiction that the San Diego RWQCB deferred its participation to the Santa Ana RWQCB. This effort was undertaken and substantively concluded prior to Caltrans assuming all the United States Department of Transportation (USDOT) Secretary's responsibilities under NEPA pursuant to Section 6005 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), codified at 23 USC 327(a)(2)(A), which became effective July 1, 2007.

### S.2.1 Project Purpose

The purpose of the proposed action is to provide a transportation facility that will effectively and efficiently accommodate regional north-south movement of people and goods between Domenigoni Parkway and Gilman Springs Road. The Project will:

- Improve traffic flow for local and regional north-south traffic in the San Jacinto Valley
- Improve operational efficiency and enhance safety conditions by maintaining route continuity and upgrade the facility
- Allow regional traffic, including truck traffic, to bypass local roads
- Reduce the diversion of traffic from state routes onto local roads

The existing SR 79 facility has inadequate capacity to accommodate both local and regional travel demand associated with the projected growth (residential, retail, and commercial development) and regional attractions (Diamond Valley Lake) in the San Jacinto Valley area through the planning year 2040.

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<sup>1</sup> In 2013 the California Department of Fish and Game (CDFG) changed its name to California Department of Fish and Wildlife (CDFW). Therefore, when referring to specific citations or other Department guidelines prior to 2013, the Department is referred to as CDFG. Otherwise, the Department is herein referred to as CDFW.

## S.2.2 Project Need

Several factors have contributed to the deficiencies of the transportation corridor between Domenigoni Parkway and Gilman Springs Road. These include:

- Regional traffic on the current SR 79 competes with local traffic for the limited capacity.
- Current alignment is circuitous with numerous at-grade intersections
- SR 79 and State Route 74 (SR 74) are collocated as one facility for approximately 7 miles (mi)
- Geometric design of SR 79 does not support the movement of trucks exceeding the length of 40 feet, which are authorized under the Surface Transportation Assistance Act (STAA). Currently, STAA vehicles are diverted to Sanderson Avenue.
- Fatal and injury accident rates on most of SR 79 are higher than the statewide average.

## S.2.3 Independent Utility and Logical Termini

The Route Concept Report (1992) evaluated the entire length of SR 79 in Riverside County from the San Diego/Riverside county line to the junction at Interstate 10 (I-10). The ultimate facility was determined to be a six-lane expressway. Part of the analysis for the Route Concept Report was an evaluation of the environmental and geometric constraints of expanding the facility. The analysis resulted in design objectives for parts of SR 79 to allow projects to be developed independently, but in a manner that is compatible with the entire facility. Although most of the alignment was proposed for widening, two areas were identified for realignment. One was from Butterfield Stage Road in Temecula north to Keller Road. The second was the proposed Project, from Newport Road to Gilman Springs Road. Because of the unique purpose and need to realign this portion of SR 79, it was promoted as a separate project and was determined to satisfy FHWA regulations (23 Code of Federal Regulations [CFR] 771.111 [f]) as having independent utility and logical termini. This is further supported when evaluating the objectives for the portions of SR 79 south and north of the proposed Project. The projects discussed below are also included in the Riverside County General Plan, Circulation Element.

Over the past 10 years, several projects have been constructed on SR 79. Many of these have widened SR 79 south of the Project. Immediately to the south, the SR 79 Widening Project (sponsored by Riverside County Transportation Department) improved the existing alignment of SR 79 from Thompson Road to just south of Domenigoni Parkway (proposed Project southern limit), a distance of approximately 5 mi. This portion of SR 79 was constructed as a four-lane facility. The ultimate configuration will be a six-lane facility. Farther south, Riverside County also sponsored several signal and road-widening projects from Hunter Road to Thompson Road. Near the southern limit of the Project, Domenigoni Parkway, which runs perpendicular to SR 79, has been extended west to I-215 from its previous termination at SR 79.

North of the Project limit, SR 79 crosses the San Jacinto River and enters Lamb Canyon. SR 79 is a four-lane expressway through Lamb Canyon to I-10 in Beaumont. Although this section is expected to be widened to six lanes in its ultimate concept, no project is currently proposed. The future Mid County Parkway Project would connect with SR 79 at Ramona Expressway, just south of Gilman Springs Road.

## S.3 Proposed Project

The SR 79 Realignment Project would be located near Hemet and San Jacinto in Riverside County, California, beginning just south of Domenigoni Parkway and continuing north to Gilman Springs Road. It would serve southwestern Riverside County, including the community of Winchester and the cities of Hemet and San Jacinto.

The Project would be a divided limited-access expressway with four travel lanes (two lanes in each direction). Almost all of the realignment would be new construction, in areas where no highway exists. The Project would begin at kilometer post (KP) R25.4 (post mile [PM] R15.78), which is 1.26 mi south of Domenigoni Parkway, and end approximately 18 mi north at the intersection of SR 79 and Gilman Springs Road (KP R54.4 [PM R33.80]).

### S.3.1 Project Alternatives

Along with the No Build Alternative that is required by NEPA and CEQA regulations, the Project alternatives developed to realign SR 79 are Build Alternatives 1a and 1b (including Design Option 1b1), Build Alternative 1b with Refinements (1br), Build Alternatives 2a and 2b (including Design Option 2b1). The following sections describe the Build alternatives and associated design features.

#### ***Design Features of the Build Alternatives***

Each Build alternative is composed of several roadway segments with design features that can generally be described as either common or unique to the Project, as discussed in detail below.

#### ***Roadway Segments***

There are 14 potential roadway segments (designated A through N, from south to north and west to east). Combinations of roadway segments were joined to establish a functional and a reasonable range of alternatives proposed as Build alternatives for the Project. The typical cross-section for the Project was first defined in the 1992 Route Concept Report. The ultimate concept for the facility is a six-lane expressway (three lanes in each direction). The typical dimensions proposed for the Project are those designated by Riverside County for a six-lane expressway. These dimensions include a 60-foot (ft) median and a 220-ft ROW. This is from Riverside County Road Improvement Standards & Specifications, Ordinance 461, Standard 82.

Roadway segments were designed from a typical cross-section for a limited-access expressway according to Riverside County Standard 82. A smaller typical section could be considered during final design to reduce ROW and environmental impacts, but to ensure that all environmental impacts would be analyzed, the smaller cross-section was not considered at this time. Based on this cross-section, roadway segments would include inside and outside shoulders, a median, and two lanes traveling in each direction (referred to as the Project roadway). The total median width would be 84.0 ft, measured from the inside edge of the travel lane on one side of the roadway to the inside edge of the travel lane on the other side. This median width would be consistent with Riverside County Standard 82 because it allows room for a future project to add two more lanes (to achieve the ultimate six-lane concept) without increasing the ROW. The median would have inside shoulders that are each 5 ft wide. The combined width of the two travel lanes would be 24 ft, each 12 ft wide. The outside shoulder width would be 10 ft. An additional 15 ft beyond the toe of slope/top of cut would be provided for maintenance. Side slopes would be required outside the shoulders. Because the widths of the side-slopes would vary based on the elevation of the

roadway, a varying ROW would be required. Therefore, the actual width of the Project ROW would range from 230 ft to 2,035 ft, based on locations that include roadway versus those that include interchanges, respectively.

### ***Common and Unique Design Features***

Design features that are shared by all roadway segments are common design features. Common design features include at-grade intersections, grade-separated interchanges (ramps), bridges, aqueduct crossings, and drainage facilities. These features are inside the Project ROW. Another common design feature, local street improvements, is outside the ROW, but within the Project Impact Area (PIA).

Design features that are unique to a particular roadway segment or occur at a specific location along the Project roadway are unique design features. Unique design features include utility relocation areas and connections to Hemet Channel outside the Project ROW and PIA.

### ***Definition of the Build Alternatives***

Combining the roadway segments described above to link the Project termini of Domenigoni Parkway in the south and Gilman Springs Road in the north resulted in four Build alternatives. The descriptions of the Build alternatives, design options, and roadway segments are as follows:

- **Build Alternative 1a** – Roadway Segments A, E, G, I, J, L, and N
- **Build Alternative 1b and Design Option 1b1** – Roadway Segments B, C, G, I, K, M, and N
- **Build Alternative 1br (Preferred Alternative)** – Roadway Segments B, C, G, I, J, M, and N
- **Build Alternative 2a** – Roadway Segments A, F, H, I, K, L, and N
- **Build Alternative 2b and Design Option 2b1** – Roadway Segments B, D, H, I, J, M, and N

The two design options respond to comments from the Winchester community regarding the height of the profile as initially described for the base condition. Both design options would be on the southern end of the Project near the Winchester community. Design Option 1b1 would affect Roadway Segments B, C, and G of Build Alternative 1b. Design Option 2b1 would affect Roadway Segments B, D, and H of Build Alternative 2b. The design options would not change the roadway profile for Roadway Segments I, K, M, and N of Build Alternative 1b or Roadway Segments I, J, M, and N of Build Alternative 2b.

The design options would include the following changes to the base condition of Build Alternatives 1b and 2b:

- Design Option 1b1
  - Roadway Segment B – An increased area of ROW acquisition and variations in roadway access, affecting intersection, interchange, and bridge design
  - Roadway Segment C – Variations in roadway access, affecting intersection, interchange, and bridge design and a reduced roadway profile
  - Roadway Segment G – A reduced roadway profile

- Design Option 2b1
  - Roadway Segment B – An increased area of ROW acquisition and variations in roadway access, affecting intersection, interchange, and bridge design
  - Roadway Segment D – Variations in roadway access, affecting intersection, interchange, and bridge design and a reduced roadway profile
  - Roadway Segment H – A reduced roadway profile

The design options would include a near-grade crossing over the San Jacinto Branch Line with embankment and structural section for SR 79. The near-grade crossing over the existing railroad would be approximately 3 to 8 ft above grade. According to RCTC, the owner of the rail line, it has not been in operation over the past 5 years or more. However, by placing embankment over the track and not severing it, rail traffic could be restored if using the track becomes necessary. If rail traffic is needed, RCTC would contact Caltrans with detailed, written requirements at least two weeks prior to the expected train operations. The embankment and structural section would be removed, then replaced once the rail activity is finished. A short-term detour would be required for traffic on SR 79. In the future, if a separate project is developed that adds passenger rail service, a grade-separation project would need to be considered.

Public review of the Draft EIR/EIS began on February 7, 2013 and ended on March 25, 2013. The public hearing for the Project was held at Tahquitz High School in Hemet on February 26, 2013 and February 27, 2013 and was attended by members of the public, elected officials, and agencies.

Engineering refinements for Build Alternative 1b (Build Alternative 1br) have been incorporated in response to comments received during the public circulation of the Draft EIR/EIS. Refinements were also made to comply with Caltrans' mandatory design standards and to minimize impacts to the Traditional Cultural Property (TCP) identified during the Native American consultations in 2013 and 2014. Build Alternative 1br stays within the environmental study area, has a reduced ROW and has similar alignments and project limits as Build Alternative 1b.

Build Alternative 1br includes Roadway Segments B, C, G, I, J, M, and N and consists of the following refinements:

1. Access to Winchester: Traffic Signal at Newport Road: An at-grade traffic signal will be provided at the Newport Road/SR 79 intersection. Newport Road will be realigned to Winchester Road to provide direct access to the community of Winchester.
2. Increased loop ramp radii at Domenigoni Parkway: Larger radii loop ramps were designed.
3. Shift in interchange location from Ranchland Road to Grand Avenue: The interchange has been shifted south to Grand Avenue.
4. Westerly shift of alignment around West Hemet Hills: The alignment has been shifted west within the existing environmental study limits to reduce the amount of cut to the West Hemet Hills. The revised alignment would include a retaining wall along the west and north sides of the alignment and eliminates the need to

relocate the existing communication towers. A bridge would be built over Stetson Avenue and the dirt access road will be graded to tie-in to the existing dirt access road so that access to the communication towers can be maintained. The shift lessens the impact to the West Hemet Hills by reducing the amount of cut.

5. Increased loop ramp radii at Florida Avenue: Larger radii loop ramps were designed.

6. Removal of Tres Cerritos Interchange: The interchange was removed in response to public and agency comments received. This eliminates the need to realign Warren Road and eliminates the bridge crossing over the San Diego Canal. A cul-de-sac will be added at Tres Cerritos along the west side of SR 79.

7. Esplanade Avenue interchange revisions to eliminate design exceptions: Revised interchange configuration to eliminate mandatory access control exception. The new proposed improvements include a diamond type interchange and allows access along Esplanade Avenue; realigned Maze Stone Court was eliminated.

8. Increased loop ramp radii at Cottonwood Avenue: Larger radii loop ramp was designed.

9. Sanderson Avenue interchange revisions to eliminate design exceptions: The interchange configuration for the southbound ramps were revised to a diamond configuration. This eliminates the need for a mandatory access control exception. SR 79 was realigned to the southeast and bridges over Sanderson Avenue. The design was revised to avoid impacts to newly constructed improvements at the Eastern Municipal Water District (EMWD) Facility.

10. Increased loop ramp radii at Ramona Expressway: Larger radii loop ramp was designed.

The profile for Build Alternative 1br would be similar to Build Alternative 1b, with the exception of the West Hemet Hills where a steeper profile around the hill was used to minimize cuts to the West Hemet Hills. In addition, the profile of SR 79 at Sanderson Avenue was modified to bridge over Sanderson Avenue instead of Sanderson Avenue bridging over SR 79.

A Partially Recirculated Draft EIR/Supplemental Draft EIS was prepared in August 2015 to provide new information relevant to the proposed Project, information that was not available when the Draft EIR/EIS was circulated for public review and comment in February 2013. The new information included Cultural Resources, Section 4(f) evaluation, updated traffic data, updated air quality data, in addition to, visual and noise impacts due to the westerly realignment of Alternative 1b. Also RCTC and Caltrans included engineering refinements to Build Alternative 1b to minimize impacts as a result of public and Native American comments and coordination.

The cost estimates (including construction and ROW) for each of the four Build alternatives and the two design options are as follows:

- Build Alternative 1a – \$1,072,473,000
- Build Alternative 1b – \$1,071,912,000
- Design Option 1b1 – \$1,044,002,000
- Build Alternative 1br (Preferred Alternative) - \$1,073,000,000

- Build Alternative 2a – \$1,109,535,000
- Build Alternative 2b – \$1,034,939,000
- Design Option 2b1 – \$990,810,000

## S.4 Joint CEQA/NEPA Document

The proposed Project is a joint project by Caltrans and the Federal Highway Administration (FHWA), and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the CEQA and the NEPA. Caltrans is the lead agency under NEPA. Caltrans is the lead agency under CEQA. RCTC is the CEQA Responsible Agency. In addition, FHWA’s responsibility for environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried-out by Caltrans under its assumption of responsibility pursuant to 23 United States Code (USC) 327.

Following receipt of comments from the public and reviewing agencies, a Final EIR/EIS was prepared. The Final EIR/EIS included responses to comments received on the Draft EIR/EIS and Partially Recirculated Draft EIR/SEIS, and identifies the preferred alternative. Following circulation of the Final EIR/EIS, if the decision is made to approve the project, a Notice of Determination (NOD) will be published for compliance with CEQA, and a Record of Decision (ROD) will be published for compliance with NEPA.

## S.5 Project Impacts

Table S-1 summarizes the primary impacts documented in the environmental analysis contained in Chapter 3 of this Final EIR/EIS, along with related avoidance, minimization, and/or mitigation measures to minimize or mitigate those impacts. The measures are also listed in Appendix E, Environmental Commitments Record, in Volume 2 of this document.

A key component of the biological resources analysis is the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), which is described in detail in Chapter 3, Section 3.3.1.3 (Volume 2). The MSHCP is a regional plan created to maintain biological and ecological diversity in southwestern Riverside County, where growth is occurring at a rapid rate.

There are many permittees under the MSHCP, including the Project CEQA/NEPA lead agency (Caltrans) and the cooperating agency for the Project (USACE), RCTC, County of Riverside, the City of Hemet, and the City of San Jacinto.

The Project would be in the area that is addressed by the MSHCP and is identified as a Covered Activity in the MSHCP. As such, there are avoidance, minimization, and mitigation measures shown in Table S-1, throughout Chapter 3, Section 3.3 (Volume 2), and Appendix E (Volume 2) that the Project must incorporate to be in compliance with the MSHCP and to receive take authorization for Covered Species identified in the MSHCP.

**Table S-1 Summary of Primary Environmental Impacts and Related Avoidance, Minimization, and/or Mitigation Measures**

Potential Impacts	No Build Alternative	Build Alternative 1a	Build Alternative 1b (including Design Option 1b1) <sup>a</sup>	Build Alternative 1br (Preferred Alternative)	Build Alternative 2a	Build Alternative 2b (including Design Option 2b1) <sup>a</sup>	Avoidance/ Minimization/ Mitigation Measures
<b>Cost</b>							
<b>Total Costs (Final Design, Right-of-Way, and Construction)</b>	Not applicable	\$1,072,473,000	\$1,071,912,000 OR \$1,044,002,000	<u>\$1,073,000,000</u>	\$1,109,535,000	\$1,034,939,000 OR \$990,810,000	Not Applicable
<b>Human Environment</b>							
<b>Land Use</b>							
<b>Existing and Future Land Use</b>	Rapid and ongoing conversion of current land uses, including agriculture and undeveloped to residential and commercial uses, will continue and convert essentially all farmland and undeveloped land within the next two decades. This is consistent with local land use plans.	Planned use of land converted to transportation use: Agricultural 54.6 ac Commercial/Industrial 127.2 ac  Designated Open Space 33.9 ac Residential 332.8 ac Rural Residential 257.3 ac Services/Facilities 14.1 ac Mixed Use/Specific Plan 263.4 ac Total Land Required 1,083.3 ac	Planned use of land converted to transportation use: Agricultural 59.9 ac Commercial/Industrial 153.5 ac OR 154.3 ac for Design Option 1b1  Designated Open Space 37.4 ac Residential 238.7 ac Rural Residential 263.2 ac Services/Facilities 32.3 ac Mixed Use/Specific Plan 224.1 ac Total Land Required 1,009.1 ac OR 1,009.9 ac for Design Option 1b1	Planned use of land converted to transportation use: Agricultural 40.1 ac Commercial/Industrial 170.8 ac  Designated Open Space 39.3 ac Residential 233.0 ac Rural Residential 194.5 ac Services/Facilities 33.7 ac Mixed Use/Specific Plan 230.4 ac Total Land Required 941.8 ac	Planned use of land converted to transportation use: Agricultural 59.9 ac Commercial/Industrial 126.2 ac  Designated Open Space 36.1 ac Residential 294.3 ac Rural Residential 237.7 ac Services/Facilities 9.7 ac Mixed Use/Specific Plan 259.6 ac Total Land Required 1023.5 ac	Planned use of land converted to transportation use: Agricultural 54.6 ac Commercial/Industrial 155.1 ac OR 156.0 ac for Design Option 1b1  Designated Open Space 32.9 ac Residential 206.2 ac Rural Residential 261.1 ac Services/Facilities 38.1 ac Mixed Use/Specific Plan 228.0 ac Total Land Required 976.0 ac OR 376.9 ac for Design Option 1b1	Measures would be similar with all Build alternatives, so titles only are listed here, with the details available in Chapter 3. LU-1. City of Hemet General Plan and Build Alternative 1a. LU-2. City of San Jacinto General Plan and Build Alternative 1a. LU-3. City of Hemet General Plan and Build Alternative 1b, 1br and Design Option 1b1. LU-4. City of Hemet General Plan and Build Alternative 2a. LU-5. City of San Jacinto General Plan and Build Alternative 2a. LU-7. General Plan Consistency
<b>Growth</b>	Historical growth levels will continue. The area experienced a doubling of population in the past 20 years and is expected to double again from 2000 to 2030. The Southern California Association of Governments anticipates a local annual growth rate of 4 percent, contrasted with 1.4 percent for the region. Between 2010 and 2035, Hemet is projected to grow 87 percent, while San Jacinto is projected to grow 163 percent. Available land indicates that most growth will concentrate in area between Sanderson and California Avenues.  Local jurisdictions have zoned and planned for the growth. Good local access exists along streets such as Sanderson Avenue, Warren Road, California Avenue, Simpson Road, Stetson Avenue, Tres Cerritos Avenue, Esplanade Avenue, and Cottonwood Avenue. Water, sewer, electricity, and other utilities are available to serve the additional households.	Overall level of growth and general location would not change from the No Build Alternative.  Commercial and higher density residential will be most likely near planned intersections and interchanges, including East Newport Road, Domenigoni Parkway, Ranchland Road, Florida Avenue, Tres Cerritos Avenue, Esplanade Avenue, Cottonwood Avenue, Future Street B, Sanderson Avenue, and Ramona Expressway.  Intersections and interchanges at East Newport Road, Florida Avenue, Tres Cerritos Avenue, Esplanade Avenue, Cottonwood Avenue, and Ramona Expressway would be virtually the same for all alternatives.	Build Alternative 1b (including Design Option 1b1) would be the same as Build Alternative 1a except that the interchange with Domenigoni Parkway would be about one mile east, and there would be an interchange with Sanderson Avenue about one mile southeast of the Build Alternative 1a interchange with Future Street B. These differences would affect the location, but not the level or the timing of growth in the vicinity of the interchanges.	<u>Build Alternative 1br would be the same as Build Alternative 1a except that the interchange with Domenigoni Parkway would be about one mile east, and there would be an interchange with Sanderson Avenue about one mile southeast of the Build Alternative 1a interchange with Future Street B. It would also include a westerly shift of alignment around West Hemet Hills, and removal of Tres Cerritos Interchange. These differences would affect the location, but not the level or the timing of growth in the vicinity of the interchanges.</u>	Build Alternative 2a would be the same as Build Alternative 1a except that there would be an interchange with Future Street A instead of one with Ranchland Road. The two locations would be less than a half mile apart. This difference would affect the location, but not the level or the timing of growth in the vicinity.	Build Alternative 2b (including Design Option 2b1) would be the same as Build Alternative 1a except that there would be an interchange with Future Street A instead of one with Ranchland Road about one-half mile southeast, and there would be an interchange with Sanderson Avenue about one mile southeast of the Build Alternative 1a interchange with Future Street B. These differences would affect the location, but not the level or the timing of growth in the vicinity of the interchanges.	No measures are proposed because the Project would address regional traffic and safety needs in response to growth in the Project area.
<b>Farmlands (direct plus indirect)</b>	Ongoing growth and existing development plans of Riverside County and the Cities of Hemet and San Jacinto will see the conversion of virtually all existing farmland to other uses within the next two decades.	Existing Farmland 766.01 ac  Prime Farmland <u>86.33</u> ac  Unique Farmland <u>53.27</u> ac	Existing Farmland 706.45 ac  Prime Farmland <u>74.96</u> ac  Unique Farmland <u>5.56</u> ac	<u>Existing Farmland</u> <u>577.97</u> ac  <u>Prime Farmland</u> <u>66.27</u> ac  <u>Unique Farmland</u> <u>5.17</u> ac	Existing Farmland 759.90 ac  Prime Farmland <u>81.54</u> ac  Unique Farmland <u>53.55</u> ac	Existing Farmland 703.39 ac  Prime Farmland <u>71.08</u> ac  Unique Farmland <u>7.08</u> ac	Measures would be the same with all Build alternatives, so titles only are listed here, with the details available in Chapter 3. AG-1. Maintain Access to Existing Farmlands. AG-2. Coordination with Owners.

**Table S-1 Summary of Primary Environmental Impacts and Related Avoidance, Minimization, and/or Mitigation Measures**

Potential Impacts	No Build Alternative	Build Alternative 1a	Build Alternative 1b (including Design Option 1b1) <sup>a</sup>	Build Alternative 1br (Preferred Alternative)	Build Alternative 2a	Build Alternative 2b (including Design Option 2b1) <sup>a</sup>	Avoidance/ Minimization/ Mitigation Measures
		<p>Farmland of Statewide Importance <u>99.23</u> ac</p> <p>Farmland of Local Importance <u>618.87</u> ac</p> <p>Williamson Act Land 54.40 ac</p> <p>Zoned Riverside County Farmlands (per General Plan data) 54.61 ac</p> <p>Zoned City of Hemet Farmlands (per General Plan data) <u>0</u></p> <p>Partial acquisitions of farm/agricultural operation would be minor and would not require displacement.</p>	<p>Farmland of Statewide Importance <u>87.21</u> ac</p> <p>Farmland of Local Importance <u>61.22</u> ac</p> <p>Williamson Act Land <u>0</u></p> <p>Zoned Riverside County Farmlands (per General Plan data) 59.95 ac</p> <p>Zoned City of Hemet Farmlands (per General Plan data) <u>0</u></p> <p>Partial acquisitions of farm/agricultural operation would be minor and would not require displacement.</p>	<p><u>Farmland of Statewide Importance 88.15 ac</u></p> <p><u>Farmland of Local Importance 602.37 ac</u></p> <p><u>Williamson Act Land 0</u></p> <p><u>Zoned Riverside County Farmlands (per General Plan data) 40.15 ac</u></p> <p><u>Zoned City of Hemet Farmlands (per General Plan data) 0</u></p> <p><u>Partial acquisitions of farm/agricultural operation would be minor and would not require displacement.</u></p>	<p>Farmland of Statewide Importance <u>148.24</u> ac</p> <p>Farmland of Local Importance <u>571.99</u> ac</p> <p>Williamson Act Land Same as Build Alternative 1a</p> <p>Zoned Riverside County Farmlands (per General Plan data) Same as Build Alternative 1b</p> <p>Zoned City of Hemet Farmlands (per General Plan data) <u>0</u></p> <p>Partial acquisitions of farm/agricultural operation would be minor and would not require displacement.</p>	<p>Farmland of Statewide Importance <u>114.17</u> ac</p> <p>Farmland of Local Importance <u>589.39</u> ac</p> <p>Williamson Act Land <u>0</u></p> <p>Zoned Riverside County Farmlands (per General Plan data) Same as Build Alternative 1a</p> <p>Zoned City of Hemet Farmlands (per General Plan data) <u>0</u></p> <p>Partial acquisitions of farm/agricultural operation would be minor and would not require displacement.</p>	<p>AG-3. Notification of Williamson Act Land Acquisition.</p>
<b>Community Character and Cohesion</b>	<p>Planned transportation benefits to existing and future communities would not be provided. Regional traffic would continue to be routed through the center of existing residential communities and commercial areas. Continued or decreased levels of service along existing SR 79 may divide existing communities by encouraging the use of alternate routes through established communities as "shortcuts."</p>	<p>Build Alternative 1a would not impede access or mobility within the Emerging Hemet Community. It would not divide or adversely affect community cohesion.</p> <p>The Project would not affect the cohesion of Tres Cerritos Hills. It would, however, alter the setting of the portion of the community adjacent to the realignment by adding noise barriers, embankments, and a 33-ft -high bridge at Tres Cerritos Avenue.</p> <p>Build Alternative 1a would alter the setting along the realignment and, therefore, the character of the Emerging San Jacinto Community because of noise barriers, embankments, and a 26-ft -high bridge at Cottonwood Avenue. However, it would not affect community cohesion.</p> <p>Embankments, a 26-ft -high interchange at Ramona Expressway, and noise barriers would alter the setting along the realignment and, therefore, the character of the Gateway Specific Plan/River Community. The Project would effectively extend the width of existing Sanderson Avenue but would not affect the cohesion of the Gateway Specific Plan/River Community.</p> <p>Although the Project would divide a number of school attendance areas, the home-to-school routes would remain unchanged other than a few that would pass under or over SR 79. Many areas are already divided by roadways and a canal that SR 79 would parallel. Temporary inconvenience would occur during construction.</p> <p>High embankments would alter the character of the rural environment, dominating views from nearby areas and blocking views of more distant elements of the landscape. Major overcrossing structures would dominate the area and block views of more distant landscape features. Noise barriers could dominate views from nearby areas, block more</p>	<p>Impacts from Build Alternative 1b and Design Option 1b1 would be the same as those from Build Alternative 1a except for the following:</p> <p>Build Alternative 1b and Design Option 1b1 would alter the appearance and geographic setting of Rural Winchester and the Green Acres Community. The alternative would require substantial roadway cuts through a ridge, as well as through the center of the West Hemet Hills. Build Alternative 1b would divide the community of Rural Winchester and could impede social interaction and isolate residents, thereby affecting the cohesion of this rural community.</p> <p>Build Alternative 1b and Design Option 1b1 would alter the appearance and geographic setting of Rural Winchester, as viewed from Green Acres, thereby affecting the character of the Green Acres Community. In addition, this alternative would require noise barriers at specific locations to address noise abatement requirements. Implementation of abatement measures would address potential permanent impacts to community character. However, Build Alternative 1b and Design Option 1b1 would not divide Green Acres or affect the cohesion of this rural community.</p>	<p>Impacts from Build Alternative 1br would be the same as those from Build Alternative 1b and Design Option 1b1 except for the following:</p> <p>Alterations to access at Winchester Road; westerly shift of alignment around West Hemet Hills; interchange at Tres Cerritos Avenue has been removed.</p>	<p>Impacts from Build Alternative 2a would be the same as those from Build Alternative 1a except for the following:</p> <p>Build Alternative 2a would place a new transportation facility on the edge of Winchester. Together with the noise barriers, this would impact the character of the community. However, this alternative would not affect community cohesion in Winchester.</p> <p>Build Alternative 2a would alter the appearance and geographic setting of Rural Winchester and Green Acres Community. The alternative would require substantial roadway cuts through a ridge, as well as through the center of the West Hemet Hills. Although Build Alternative 2a would divide the community of Rural Winchester, crossings that would be built at almost every existing roadway would minimize the potential effect on cohesion.</p> <p>Build Alternative 2a would not divide the community or affect the character or cohesion in the Green Acres Community.</p>	<p>Impacts from Build Alternative 2b and Design Option 2b1 would be the same as those from Build Alternative 1a except for the following:</p> <p>The new roadway, major cuts in a ridge at the Project terminus near Winchester, and noise barriers would all affect the character of that community. The community cohesion is not expected to be changed.</p> <p>Embankments and overpasses would dominate views from nearby areas. Cuts at the Project terminus and in West Hemet Hills would affect community character in Rural Winchester. Although Build Alternative 2b and Design Option 2b1 would pass through rural and rural residential development, crossings that would be built at almost every existing roadway would minimize the potential effect on community cohesion.</p> <p>Build Alternative 2b and Design Option 2b1 would not affect the character or cohesion in the Green Acres Community.</p>	<p>Measures would be the same with all Build alternatives, so titles only are listed here, with the details available in Chapter 3.</p> <p>The measures listed in Visual/Aesthetics would address impacts to community character associated with the creation of high embankments, creation of large cut slopes, creation of large over-crossings, and noise barriers. They are not duplicated here.</p> <p>COM-1. Establish Pedestrian/Bike/Equestrian Paths.</p> <p>COM-2. School District Coordination.</p> <p>COM-3. Traffic Management Plan for Access.</p> <p>COM-4. Recycling during Operations.</p>

**Table S-1 Summary of Primary Environmental Impacts and Related Avoidance, Minimization, and/or Mitigation Measures**

Potential Impacts	No Build Alternative	Build Alternative 1a	Build Alternative 1b (including Design Option 1b1) <sup>a</sup>	<u>Build Alternative 1br (Preferred Alternative)</u>	Build Alternative 2a	Build Alternative 2b (including Design Option 2b1) <sup>a</sup>	Avoidance/ Minimization/ Mitigation Measures
		distant views, and make communities feel less rural or more enclosed. Build Alternative 1a would place a new transportation facility through the community of Rural Winchester. However, linkages between the components of this community would be maintained, and little if any impact on community cohesion is anticipated.					
<b>Relocations and Real Property Acquisition</b>	No Project-related impact	Residential Units 42 Commercial Units 14 Total Units Displaced 56  Residents 134 Employees 89 Total Persons Displaced 223	Residential Units 37 Commercial Units 14 Total Units Displaced 51  Residents 106 Employees 90 Total Persons Displaced 196	Residential Units 26 Commercial Units 19 Total Units Displaced 45  Residents 115 Employees 105 Total Persons Displaced 220	Residential Units 39 Commercial Units 14 Total Units Displaced 53  Residents 107 Employees 89 Total Persons Displaced 196	Residential Units 29 Commercial Units 13 Total Units Displaced 42  Residents 75 Employees 86 Total Persons Displaced 161	Property acquisitions and relocations associated with the Project would comply with the applicable federal and state relocation regulations. Caltrans Relocation Assistance Program (RAP) is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) and Title 49 Code of Federal Regulations (CFR) Part 24.  Mitigation would be the same with all Build alternatives, so the measure is listed here by title, with the details available in Chapter 3. RELOC-1. Relocation Assistance.
<b>Environmental Justice</b>	No Impact	Study Area (Riverside County) Racial minority 18.0% (34.5%) Ethnic (Hispanic) minority 22.8% (36.2%) Low income 12.5% (14.2%)	Study Area (Riverside County) Racial minority 18.0% (34.5%) Ethnic (Hispanic) minority 22.8% (36.2%) Low income 12.5% (14.2%)	Study Area (Riverside County) Racial minority 35.7% (39.0%) Ethnic (Hispanic) minority 38.9% (45.5%) Low income 17.2% (15.6%)	Study Area (Riverside County) Racial minority 18.0% (34.5%) Ethnic (Hispanic) minority 22.8% (36.2%) Low income 12.5% (14.2%)	Study Area (Riverside County) Racial minority 17.5% (34.5%) Ethnic (Hispanic) minority 21.5% (36.2%) Low income 12.7% (14.2%)	Because the minority and low-income populations within the Environmental Justice Study Area would not be adversely affected by the Project, no avoidance, minimization, and/or mitigation measures are required.
<b>Utilities/Emergency Services</b>	No Impact	With Build Alternative 1a, Cable television, electricity, natural gas, sewer, telephone, and water utilities could experience occasional disruption during construction.  Relocation of two utility towers in Segment G could affect cell phone coverage.	Impacts from Build Alternative 1b and Design Option 1b1 would be the same as those from Build Alternative 1a except for the following: Design Option 1b1 would include a near-grade crossing of the San Jacinto Branch Line. This would impact rail operations because the near-grade crossing would prohibit continuous use of the tracks.	<u>Impacts from Build Alternative 1br would be the same as those from Build Alternative 1a except for the following: Build Alternative 1br would not affect the utility towers.</u>	Impacts from Build Alternative 2a would be the same as those from Build Alternative 1a except for the following: Build Alternative 2a would not affect the utility towers.	Impacts from Build Alternative 2b and Design Option 2b1 would be the same as those from Build Alternative 1b and Design Option 1b1 except for the following: Build Alternative 2b and Design Option 2b1 would not affect the utility towers.	Measures would be the same with all Build alternatives, so titles only are listed here, with the details available in Chapter 3. UTIL-1. Coordination with Utility Companies. UTIL-2. Roadway Segment G Utility Tower Relocations. UTIL-3. Temporary Detour for Railroad. UTIL-4. Notification of Underground Service Alert. UTIL-5. Utility Relocation. SERV-1. Coordination with Emergency Responders Prior to Opening Year (2020). SERV-2. Coordination of Temporary Detours with Emergency Responders.

**Table S-1 Summary of Primary Environmental Impacts and Related Avoidance, Minimization, and/or Mitigation Measures**

Potential Impacts	No Build Alternative	Build Alternative 1a	Build Alternative 1b (including Design Option 1b1) <sup>a</sup>	Build Alternative 1br (Preferred Alternative)	Build Alternative 2a	Build Alternative 2b (including Design Option 2b1) <sup>a</sup>	Avoidance/ Minimization/ Mitigation Measures
<b>Traffic and Transportation</b>	Without the proposed Project, 11 of 30 study intersections would operate at level of service (LOS)* D, E, or F. *LOS ratings: A = Free flow B = Reasonably free flow C = Stable flow D = Approaching unstable flow E = Unstable flow F = Forced or breakdown flow	Five intersections are projected to operate at LOS D or worse during the a.m. and/or p.m. peak hours under the 2020 Build Alternative. The 2020 Build Alternative improves operations at four out of five deficient intersections. The intersection of San Jacinto Avenue/Ramona Boulevard/Main Street would remain LOS F under the 2020 Build Alternative, and would cause a 4-second increase in delay. With an increase in delay less than 5 seconds, this intersection is not identified as a deficiency and does not have an adverse impact.  Three intersections are projected to operate at LOS D or worse during the a.m. and/or p.m. peak hours under the 2040 Build Alternative. The LOS at two of these three intersections would improve with the Build Alternative. The intersection of San Jacinto Avenue/Ramona Boulevard/Main Street would remain LOS F under the 2040 Build Alternative, and would cause a slight increase in delay (3 seconds). With an increase in delay less than 5 seconds, this intersection is not identified as deficient.	Impacts from Build Alternative 1b and Design Option 1b1 would be the same as those from Build Alternative 1a except for the following: Design Option 1b1 would include a near-grade crossing of the San Jacinto Branch Line. This would impact rail operations because the near-grade crossing would prohibit continuous use of the tracks. Operational Performance: The access modifications to Olive Avenue and Simpson Road for Design Option 1b1 would permanently remove east-west access on either side of the realigned SR 79.	In 2040, impacts from Build Alternative 1br would be the same as those from Build Alternative 1b.	Impacts from Build Alternative 2a would be the same as those from Build Alternative 1a.	Impacts from Build Alternative 2b and Design Option 2b1 would be the same as those from Build Alternative 1b and Design Option 1b1.	Measures would be the same with all build alternatives, so titles only are listed here, with the details available in Chapter 3. LU-6. County of Riverside Circulation System. UTIL-3. Temporary Detour for Railroad. SERV-1: Coordination with Emergency Responders Prior to Opening Year SERV-2: Coordination of Temporary Detours with Emergency Responders
<b>Pedestrian and Bicycle Facilities</b>	There are no bike paths in the Project study area along California Avenue, Cottonwood Avenue, Devonshire Avenue, Esplanade Avenue, Florida Avenue, Odell Avenue, Ramona Expressway, Sanderson Avenue, Simpson Road, Stetson Avenue, or Warren Road. Local officials confirmed in December 2010 and January 2011 that there are no plans to construct bike paths along these roads in the near future, even as painted areas on the shoulder.	There are no bike paths or sidewalks in the study area for Build Alternative 1a, and no impacts would occur.  Sidewalks are present along portions of existing SR 74 including Florida Avenue and State Street. Bike lanes are painted on the shoulder of some existing streets such as Sanderson Avenue, which also has sidewalks. Reduction of traffic volume in these areas should result in a better experience for pedestrians and bicyclists.	Build Alternative 1b (including Design Option 1b1) would be the same as Build Alternative 1a.	<u>Build Alternative 1br would be the same as Build Alternative 1b.</u>	Build Alternative 2a would be the same as Build Alternative 1a.	Build Alternative 2b (including Design Option 2b1) would be the same as Build Alternative 1a.	Temporary impacts from construction to pedestrian and bicycle transportation would be mitigated with the implementation of the Traffic Management Plan for the Project.
<b>Visual/Aesthetics</b>	The Project would not be built and therefore would not cause any visual changes to the Project area except those that could be associated with a potential increase in surface street congestion over time.	All of the build alternatives and both design options would result in high levels of adverse visual impacts, which would impart a more developed character to the landscape and would affect the character of most of the Project area. All of the build alternatives would alter the natural ridgelines and cause scarring.  Winchester and the Green Acres Community would be affected by Build Alternative 1a, which would not be visible from Hemet and San Jacinto.  The alternative would require road cuts, resulting in scarring along the western and northern sides of the West Hemet Hills and would alter the natural ridgelines. Build Alternative 1a would cause more visible scarring but less ridgeline alteration than Build Alternatives 2a and 2b.	The Green Acres Community would be affected by Build Alternative 1b (including Design Option 1b1), which would not be visible from Hemet and San Jacinto.  Build Alternative 1b (including Design Option 1b1) would cause more visible scarring but less ridgeline alteration than Build Alternatives 2a and 2b.	Design refinements associated with Build Alternative 1br would result in high adverse impacts to visual resources if the design refinements would have high adverse impacts to visual character and visual quality in areas that contain viewers that have high sensitivity to changes to visual resources and long exposure to those changes. Build Alternative 1br would entail creation of significant impacts to visual resources. These impacts will be attenuated by the landscaping and careful treatment of sound walls, where feasible, that would be included as a part of the Project and by Mitigation Measures VIS-1 through VIS-29.	Winchester would be most strongly affected by Build Alternative 2a. Build Alternative 2a may be visible from limited parts of Hemet and San Jacinto.  Build Alternative 2a would require road cuts, resulting in scarring along the western and northern sides of the West Hemet Hills, and would require the removal of a substantial portion of the southern peak, leaving two pyramid-shaped cut slopes in its place.  Users of Eligible State Scenic Highway 74 are likely to be sensitive to visual impacts, but would be impacted less by Build Alternative 2a than by Build Alternatives 1a and 1b because it would require less road cutting than these other alternatives.	Build Alternative 2b (including Design Option 2b1) may be marginally better than the other alternatives in terms of visual character, quality, and degree of exposure and sensitivity.  Build Alternative 2b (including Design Option 2b1) would require the removal of a substantial portion of the southern peak in the West Hemet Hills and would leave two pyramid-shaped cut slopes in its place. Build Alternative 2b may be visible from limited parts of Hemet and San Jacinto.  Build Alternative 2b (including Design Option 2b1) would cause less visible scarring but more ridgeline alteration than Build Alternatives 1a and 1b.  Users of Eligible State Scenic Highway 74 are likely to be sensitive to visual impacts, but would be impacted less by Build Alternative 2b (including Design Option 2b1) than by Build Alternatives 1a and 1b because it would	Measures would be the same with all build alternatives, so titles only are listed here, with the details available in Chapter 3. VIS-1. Corridor Master Plan. VIS-2. Mitigation Planting/Highway Planting. VIS-3. Plantings to Bring Down Apparent Scale. VIS-4. Minimize Visual Impacts with Revegetation. VIS-5. Textured Noise Barriers. VIS-6. Aesthetic Treatment to Structures. VIS-7. Planting on Structures Such as Retaining Walls and Bridges to Minimize Glare. VIS-8. Concentrations of Trees and Shrubs at Interchanges. VIS-9. Screening Treatments in Winchester. VIS-10. Noise Barrier Screening in Winchester. VIS-11. Prepare Contour Grading Plans. VIS-12. Cut Slope Design.

**Table S-1 Summary of Primary Environmental Impacts and Related Avoidance, Minimization, and/or Mitigation Measures**

Potential Impacts	No Build Alternative	Build Alternative 1a	Build Alternative 1b (including Design Option 1b1) <sup>a</sup>	Build Alternative 1br (Preferred Alternative)	Build Alternative 2a	Build Alternative 2b (including Design Option 2b1) <sup>a</sup>	Avoidance/ Minimization/ Mitigation Measures
						require less road cutting than these other alternatives.	VIS-13. Over-Excavate Slopes. VIS-14. Create Artificial Draws. VIS-15. Weathering of Exposed Rock. VIS-16. Revegetate Cut Slopes. VIS-17. Erosion Control. VIS-18. Hydroseed Fill Slopes. VIS-19. Texturize Fill Slopes. VIS-20. Revegetate Fill Slopes. VIS-21. Benched Slopes. VIS-22. Fill Slope Design. VIS-23. Earthen Basins. VIS-24. Nonreflective Materials. VIS-25. Overcrossing Design. VIS-26. Noise Barrier Design Treatments. VIS-27. Noise Barrier Landscaping. VIS-28. Noise Barrier Surfaces. Noise barrier surfaces will be textured to discourage graffiti. VIS-29. Lighting.
<b>Cultural Resources</b>	No permanent impacts would result to archaeological resources or built-environment resources.	The study area for Build Alternative 1a contains six cultural resources determined eligible or presumed eligible for the National Register of Historic Places (NRHP) and/or the California Register of Historical Resources (CRHR). Build Alternative 1a crosses over portions of the Colorado River Aqueduct (CRA) (CA-RIV-6726H), which is eligible for the NRHP. The portions are underground and the State Historic Preservation Officer (SHPO) has concurred with a Finding of No Adverse Effect to this property (letter dated March 2, 2015). A Potential Prehistoric Archaeological District (PPAD) is presumed eligible for inclusion in the NRHP for the purposes of this Project only. Build Alternative 1a would directly impact the PPAD by destroying six bedrock milling sites (CA-RIV-5790, -5791, -7885, -7887, -7907, -7908), causing physical damage to part of one bedrock milling site (CA-RIV-8169), and changing the property's current setting, character, prehistoric/ ethnographic use, and physical features. Build alternative 1a would also introduce visual elements that would indirectly impact the PPAD as demonstrated at 18 bedrock milling sites (CA-RIV-5461, -5462, -5829/H, -6907/H, -7888, -7891, -7893, -7894/H, -8140, -8141, -8142, -8143, -8146, -8147, -8148, -8156/H, -8160, and -8169). The SHPO has concurred with a Finding of Adverse Effect to the PPAD (letter dated March 2, 2015). A TCP identified by the Pechanga Band includes two hills identified as <i>Chéexayam Pum'wáppivu (Seven Sisters)</i> , and <i>'Anó' Potma (Coyote's Mouth)</i> , as well as the intervening valley. The TCP is eligible for listing on the NRHP under Criteria A, B, and D. Build Alternative 1a would cause physical damage to 142.3 ac (4.9%) of the TCP and change the property's current setting,	The study area for Build Alternative 1b (and Design Option 1b1) contains four cultural resources determined eligible or presumed eligible for the NRHP and/or the CRHR. Impacts to the CRA would be the same as with Build Alternative 1a. Build Alternative 1b and Option 1b1 would directly impact the PPAD by destroying three bedrock milling sites (CA-RIV-7885, -7887, -8160), causing physical damage to part of three bedrock milling sites (CA-RIV-8141, -8142, and -8169) and changing the property's current setting, character, prehistoric/ ethnographic use, and physical features. Build Alternative 1b (and Design Option 1b1) would also introduce visual elements that would indirectly impact the PPAD as demonstrated at 21 bedrock milling sites within the Area of Potential Effect (APE) (CA-RIV-5461, -5462, -5790, -5791, -5829/H, -6907/ H, -7888, -7891, -7893, -7894/H, -7907, -7908, -8140, -8141, -8142, -8143, -8146, -8147, -8148, 8156/ H, and -8169). The SHPO has concurred with a Finding of Adverse Effect for the PPAD (letter dated March 2, 2015). Build Alternative 1b would cause physical damage to 142.0 ac (4.9%) of the TCP and change the property's current setting, character, prehistoric/ethnographic use, and physical features. Design Option 1b1 would cause physical damage to 119.9 ac (4.1%) of the TCP. Build Alternative 1b (and Design Option 1b1) would also introduce visual elements that would indirectly impact the TCP. The SHPO has concurred with a Finding of Adverse Effect on the TCP (letter dated March 2, 2015). Impacts to the CBJ Dairy (33-15752) would be the same as with Build Alternative 1a.	The study area for Build Alternative 1br contains four cultural resources determined eligible or presumed eligible for the NRHP and/or the CRHR. Impacts to the Colorado River Aqueduct would be the same as with Build Alternatives 1a and 1b. Build Alternative 1br would directly impact the PPAD by destroying one bedrock milling site (CA-RIV-7885), causing physical damage to part of two bedrock milling sites (CA-RIV-8141 and -8142), and changing the property's current setting, character, prehistoric/ ethnographic use, and physical features. Build Alternative 1b (and Design Option 1b1) would also introduce visual elements that would indirectly impact the PPAD as demonstrated at 23 bedrock milling sites within the APE (CA-RIV-5461, -5462, -5790, -5791, -5829/H, -6907/H, -7887, -7888, -7891, -7893, -7894/H, -7907, -7908, -8140, -8141, -8142, -8143, -8146, -8147, -8148, -8156/H, -8160, -8169). The SHPO has concurred with a Finding of Adverse Effect for the PPAD (letter dated March 2, 2015). Build Alternative 1br would cause physical damage to 99.7 ac (3.4%) of the TCP and change the property's current setting, character, prehistoric/ethnographic use, and physical features. Build Alternative 1br would also introduce visual elements that would indirectly impact the TCP. The SHPO has concurred with a Finding of Adverse Effect on the TCP (letter dated March 2, 2015). Impacts to the CBJ Dairy (33-15752) would be the same as with Build Alternative 1a or 1b.	The study area for Build Alternative 2a contains five cultural resources determined eligible or presumed eligible for the NRHP and/or the CRHR. Impacts to the CRA would be the same as with Build Alternative 1a. Build Alternative 2a would directly impact the PPAD by destroying four bedrock milling sites (CA-RIV-5790, -5791, -7894/H, and -7907), causing physical damage to part of three bedrock milling sites (CA-RIV-7888, -7908, and -8169), and changing the property's current setting, character, prehistoric/ ethnographic use, and physical features. Build Alternative 2a would also introduce visual elements that would indirectly impact the PPAD as demonstrated at 20 bedrock milling sites within the APE (CA-RIV-5461, -5462, -5829/H, -6907/H, -7885, -7887, -7888, -7891, 7893, -7908, -8140, -8141, -8142, -8143, -8146, -8147, -8148, -8156/H, -8160, -8169). The SHPO has concurred with a Finding of Adverse Effect to the PPAD (letter dated March 2, 2015). Build Alternative 2a would cause physical damage to 110.6 ac (3.8%) of the TCP and change the property's current setting, character, prehistoric/ethnographic use, and physical features. Build Alternative 2a would also introduce visual elements that would indirectly impact the TCP. The SHPO has concurred with a Finding of Adverse Effect to the TCP (letter dated March 2,2015) Impacts to site CA-RIV-6907/H would be the same as Build Alternative 1a. Impacts to the CBJ Dairy (33-15752) would be the same as with Build Alternative 1a.	The study area for Build Alternative 2b (and Design Option 2b1) contains five cultural resources determined eligible or presumed eligible for the NRHP and/or the CRHR. Impacts to the CRA would be the same as with Build Alternative 1a. Build Alternative 2b and Option 2b1, would directly impact the PPAD by destroying two bedrock milling sites (CA-RIV-7894/H, and -8160), causing physical damage to part of four bedrock milling sites (CA-RIV-7888, -8141, -8142, and -8169), and changing the property's current setting, character, prehistoric/ ethnographic use, and physical features. Build Alternative 2b (and Design Option 2b1) would also introduce visual elements that would indirectly impact the PPAD as demonstrated at 22 bedrock milling sites within the APE (CA-RIV-5461, -5462, -5790, -5791, -5829/H, -6907/H, -7885, -7887, -7888, -7891, 7893, -7907, -7908, -8140, -8141, -8142, -8143, -8146, -8147, -8148, -8156/H, and -8169). The SHPO has concurred with a Finding of Adverse Effect to the PPAD (letter dated March 2, 2015). Build Alternative 2b would cause physical damage to 110.6 ac (3.8%) of the TCP and change the property's current setting, character, prehistoric/ethnographic use, and physical features. Design Option 2b1 would cause physical damage to 97.2 ac (3.3%) of the TCP. Build Alternative 2b (Design Option 2b1) would also introduce visual elements that would indirectly impact the TCP. The SHPO has concurred with a Finding of Adverse Effect to the TCP (letter dated March 2,2015) Impacts to site CA-RIV-8156/H would be the same as Build Alternative 1a.	Measures would be the same with all Build alternatives, so titles only are listed here, with the details available in Chapter 3. <a href="#">CR-1 Cultural Materials Discovered during Construction</a> , <a href="#">CR-2 Archaeological and Native American Monitoring</a> <a href="#">CR-3 Discovery of Human Remains</a> <a href="#">CR-4 Establishment of ESA</a> <a href="#">CR-5 Preparation of a Historic Context for the PPAD</a> <a href="#">CR-6 Spatial and Visual Analysis of Elements of the PPAD</a> <a href="#">CR-7 Photogrammetric Documentation of Elements of the PPAD</a> <a href="#">CR-8 Support for NRHP Nomination of the TCP</a> <a href="#">CR-9 Collaboration on Reports</a>

**Table S-1 Summary of Primary Environmental Impacts and Related Avoidance, Minimization, and/or Mitigation Measures**

Potential Impacts	No Build Alternative	Build Alternative 1a	Build Alternative 1b (including Design Option 1b1) <sup>a</sup>	Build Alternative 1br (Preferred Alternative)	Build Alternative 2a	Build Alternative 2b (including Design Option 2b1) <sup>a</sup>	Avoidance/ Minimization/ Mitigation Measures
		<p>character, prehistoric/ethnographic use, and physical features. Build alternative 1a would also introduce visual elements that would indirectly impact the TCP. The SHPO. The SHPO has concurred with a Finding of Adverse Effect to the TCP (letter dated March 2, 2015).</p> <p>A mixed component archaeological site (CA-RIV-6907/H) is presumed eligible for inclusion in the NRHP eligible for the purposes of this Project only. If Build Alternative 1a is identified as the Preferred Alternative, site CA-RIV-6907/H would not be impacted and would be protected as an Environmentally Sensitive Area. The SHPO acknowledged this recommendation in a letter dated August 2, 2010.</p> <p>The prehistoric mixed component of a multicomponent archaeological site (CA-RIV-8156/H) is presumed eligible for listing in the NRHP for the purposes of this Project only, with no objection from the Caltrans Cultural Studies Office. If Build Alternative 1a is identified as the Preferred Alternative, the prehistoric component of site CA-RIV-8156/H would not be impacted and would be protected as an Environmentally Sensitive Area. The SHPO acknowledged this recommendation in a letter dated January 20, 2015.</p> <p>The eastern edge of the CBJ Dairy (33-15752), eligible for the CRHR only, is crossed by Build Alternative 1a. Build Alternative 1a would not have a direct impact on the property in a manner that would compromise its significance or integrity as a historical resource.</p>				Impacts to the CBJ Dairy (33-15752) would be the same as with Build Alternative 1a.	
<b>Physical Environment</b>							
<b>Hydrology and Floodplain</b>	There would be no change in water surface elevation.	Build Alternative 1a would result in a 0.85 ft change in water surface elevation in the immediate vicinity of the Sanderson Avenue Bridge of the San Jacinto River floodplain. The impact would be localized and would be minimal compared to the overall floodplain and would also be less than the allowable 1.0 ft increase specified in Federal Emergency Management Agency (FEMA) guidelines. As such, the impact to the floodplain would not be significant.	Build Alternative 1b (including Design Option 1b1) would be the same as Build Alternative 1a.	<u>Build Alternative 1br would be the same as Build Alternative 1a.</u>	Build Alternative 2a would be the same as Build Alternative 1a.	Build Alternative 2b (including Design Option 2b1) would be the same as Build Alternative 1a.	Measures would be the same with all Build alternatives, so titles only are listed here, with the details available in Chapter 3. HYDRA-1. Construct Drainage and Flood Control Facilities. HYDRA-2. Complete a Letter of Map Revision. HYDRA-3. Coordinate with Riverside County Flood Control and Water Conservation District
<b>Water Quality</b>	Although the No Build Alternative would not result in additional impervious surface area that would contribute to an increase in storm water runoff, there may be an increase in traffic on the existing SR 79 alignment. The increase in traffic would result in an increase in the potential for typical vehicle-related pollutants to accumulate and wash into existing drainages. There are no treatment best management practices associated with the No Build Alternative, so the long-term result may be an increase in vehicle-related pollutants and	Build Alternative 1a would add about 236.8 ac of impervious area. It would have two drainage crossings totaling about 1,214 ft of roadway that would pass over Salt Creek. Eight canal crossings totaling about 1,310 ft would pass over San Diego Canal, Casa Loma Canal, and the Colorado River Aqueduct. This alternative could have impacts to vernal pools and seasonal wetlands.	Build Alternative 1b would add about 226.4 ac of impervious area. Design Option 1b1 would add about 229.3 ac. Both would have two drainage crossings totaling about 827 ft of roadway that would pass over Salt Creek and Hemet Channel. Eight canal crossings totaling about 1,588 ft would pass over San Diego Canal, Casa Loma Canal, and the Colorado River Aqueduct. Impacts to vernal pools and seasonal wetlands would be the same as Build Alternative 1a.	<u>Build Alternative 1br would add about 232.5 ac of impervious area. It would have two drainage crossings totaling about 827 ft of roadway that would pass over Salt Creek and Hemet Channel. Seven canal crossings totaling about 1,570 ft would pass over San Diego Canal, Casa Loma Canal, and the Colorado River Aqueduct. Impacts to vernal pools and seasonal wetlands would be the same as Build Alternative 1a.</u>	Build Alternative 2a would add about 233.3 ac of impervious area. It would have five drainage crossings totaling about 1,823 ft of roadway that would pass over Salt Creek and Hemet Channel. Eight canal crossings totaling about 1,605 ft would pass over San Diego Canal, Casa Loma Canal, and the Colorado River Aqueduct. Impacts to vernal pools and seasonal wetlands would be the same as Build Alternative 1a.	Build Alternative 2b would add about 224.1 ac of impervious area. Design Option 2b1 would add about 226.8 ac. Both would have three drainage crossings totaling about 1,286 ft of roadway that would pass over Salt Creek and Hemet Channel. Eight canal crossings totaling about 1,293 ft would pass over San Diego Canal, Casa Loma Canal, and the Colorado River Aqueduct. Impacts to vernal pools and seasonal wetlands would be the same as Build Alternative 1a.	Although no measures have been proposed to address minimizing impervious area, the Project has been designed to add as little impervious surface as possible, thereby limiting its effects on existing drainage patterns and storm water runoff. Measures that address drainage and storm water runoff would be the same with all Build alternatives, so titles only are listed here, with the details available in Chapter 3.

**Table S-1 Summary of Primary Environmental Impacts and Related Avoidance, Minimization, and/or Mitigation Measures**

Potential Impacts	No Build Alternative	Build Alternative 1a	Build Alternative 1b (including Design Option 1b1) <sup>a</sup>	<u>Build Alternative 1br (Preferred Alternative)</u>	Build Alternative 2a	Build Alternative 2b (including Design Option 2b1) <sup>a</sup>	Avoidance/ Minimization/ Mitigation Measures
	degradation of water quality in downstream water bodies.						WQ-1. Construction Best Management Practices in Compliance with Project Planning and Design Guide (PPDG), Storm Water Management Plan (SWMP), Storm Water Pollution Prevention Plan (SWPPP), and Standard Special Provisions (SSP). WQ-2. Revegetation. WQ-3. Disturbed Slope Stabilization. WQ-4. Treatment BMPs. WQ-5. Dewatering Permit.
<b>Paleontology</b>	There would be no permanent impacts to paleontological resources in the Project area as a result of the No Build Alternative because there would be no earth-moving activity that would disturb any fossil-bearing strata.	Potential permanent impacts to paleontological resources would be the same for all of the Build alternatives. Direct impacts would result mostly from earth-moving activities (particularly excavation) in previously undisturbed strata, making the strata and their resources permanently unavailable for future scientific investigation. Indirect impacts could result from unauthorized fossil collecting by construction personnel, rock hounds, and amateur and commercial fossil collectors who would be afforded easier access to fresh exposures of fossiliferous strata by these earth-moving activities.	Build Alternative 1b (including Design Option 1b1) would be the same as Build Alternative 1a.	<u>Build Alternative 1br would be the same as Build Alternative 1a.</u>	Build Alternative 2a would be the same as Build Alternative 1a.	Build Alternative 2b (including Design Option 2b1) would be the same as Build Alternative 1a.	Measures would be the same with all Build alternatives, so titles only are listed here, with the details available in Chapter 3. PALEO-1. Paleontological Mitigation Plan (PMP). • PALEO-1a. Retention of <u>Qualified Paleontologist</u> . • PALEO-1b. Museum Storage Agreement. • PALEO-1c. Additional Paleontological Survey. • PALEO-1d. Preconstruction Coordination with Resident Engineer. • PALEO-1e. Monitoring Plan. • PALEO-1f. Specimen Handling. • PALEO-1g. Transfer of Fossil Collection to Museum. • PALEO-1h. Reporting.
<b>Hazardous Materials</b>	Unknown risk potential	Potential risks include: Agricultural parcels provide a low to moderate potential for pesticide residue in soil. Buildings constructed prior to the 1980s pose a low to moderate risk of lead-based paint or asbestos-containing material. Parcels within the current ROW of SR 79/ Winchester Road, SR 74/Florida Avenue, and Domenigoni Parkway have a low to moderate potential for aerially deposited lead in soil. <u>Temporary demolition and construction impacts include the potential to encounter or generate LBP, ACM, and hazardous or solid wastes and debris.</u>	Build Alternative 1b (including Design Option 1b1) would be the same as Build Alternative 1a.	<u>Build Alternative 1br would be the same as Build Alternative 1a.</u>	Build Alternative 2a would be the same as Build Alternative 1a.	Build Alternative 2b (including Design Option 2b1) would be the same as Build Alternative 1a.	Measures would be the same with all Build alternatives, so titles only are listed here, with the details available in Chapter 3. HAZMAT-1. Phase II Environmental Site Assessment. HAZMAT-2. Aerially Deposited Lead Surveys. HAZMAT-3. Asbestos-Containing Materials and Lead-Based Paint Surveys. HAZMAT-4. Hazardous Materials Contingency Plan. HAZMAT-5. National Pollutant Discharge Elimination System Permit.
<b>Air Quality</b>	The No Build Alternative would have increased congestion levels, more stop-and-go travel, and lower operating speeds than existing conditions. All are associated with high levels of air emissions. Regional mobile source air toxics (MSAT) emissions will improve by 2040 because of EPA national control programs. At the Project level, the No Build Alternative would have higher MSAT emissions than the Build alternatives due to its poor LOS.	The Project is included in the SCAG 2012-2035 RTP, through Amendment #2. The FHWA and the Federal Transit Administration (FTA) concurred with the air quality conformity finding on December 15, 2014. The Project is also included in the SCAG 2015 Federal Transportation Improvement Plan (FTIP) through Amendment 15-01, which was found to conform by FHWA and FTA on December 15, 2014. The Project demonstrates conformity with localized CO and particulate matter with a diameter of 10 micrometers or less (PM <sub>10</sub> ) and particulate matter with a diameter of 2.5 micrometers or less (PM <sub>2.5</sub> ) requirements. It would not cause or	Build Alternative 1b (including Design Option 1b1) would be the same as Build Alternative 1a.	Build Alternative 1br would be the same as Build Alternative 1a.	Build Alternative 1br would be the same as Build Alternative 1a.	Build Alternative 2a would be the same as Build Alternative 1a.	Measures would be the same with all Build alternatives, so titles only are listed here, with the details available in Chapter 3 AQ-1. First-Stage Smog Alerts. AQ-2. Electricity. AQ-3. Construction Parking. AQ-4. Construction Truck Routes. AQ-5. Onsite Construction Traffic Control. AQ-6. Construction Vehicle Turn Lanes. AQ-7. Blasting Activities. AQ-8. Signal Boards. AQ-9. Environmentally Sensitive Areas (ESAs). AQ-10: Construction Equipment AQ-11: Construction Areas

**Table S-1 Summary of Primary Environmental Impacts and Related Avoidance, Minimization, and/or Mitigation Measures**

Potential Impacts	No Build Alternative	Build Alternative 1a	Build Alternative 1b (including Design Option 1b1) <sup>a</sup>	<u>Build Alternative 1br (Preferred Alternative)</u>	Build Alternative 2a	Build Alternative 2b (including Design Option 2b1) <sup>a</sup>	Avoidance/ Minimization/ Mitigation Measures
		contribute to any new localized CO, PM <sub>10</sub> or PM <sub>2.5</sub> violations, would not increase the frequency or severity of any existing violations of the CO, PM <sub>10</sub> or PM <sub>2.5</sub> National Ambient Air Quality Standards (NAAQS), and would not delay timely attainment of the CO, PM <sub>10</sub> or PM <sub>2.5</sub> NAAQS. Regional MSAT emissions will improve by 2040 because of EPA national control programs. At the Project level, all Build alternatives would be the same and would have lower emissions than the No Build Alternative because of improvements in LOS.					AQ-12: Street Sweeping AQ-13: Traffic Speed Control AQ-14: Grading
<b>Noise</b>	The No Build Alternative would result in some increases over existing noise levels. Such increases in future noise levels would be due to higher traffic volume on local roadways, a result of development and growth in the surrounding communities. Similar to existing conditions, some sensitive receiver locations would experience noise levels that approach or exceed the noise abatement criteria (NAC).	Noise levels with Build Alternative 1a would approach or exceed the NAC at nearly all studied locations. Temporary construction noise impacts would occur at all noise-sensitive locations adjacent to Build Alternative 1a. Based on the studies completed to date for Build Alternative 1a, Caltrans intends to incorporate noise abatement in the form of five noise barriers with average heights ranging between 8 and 14 ft and a total length of 17,465 ft. Calculations based on preliminary design data indicate that feasible and reasonable barriers will substantially reduce noise levels for 282 to 331 residences at an estimated total cost of \$14.98 million to \$16.52 million.	Noise levels with Build Alternative 1b (including Design Option 1b1) would approach or exceed the NAC at nearly all studied locations. Temporary construction noise impacts would occur at all noise-sensitive locations adjacent to Build Alternative 1b (including Design Option 1b1).Based on the studies completed to date for Build Alternative 1b and Design Option 1b1, Caltrans intends to incorporate noise abatement in the form of six noise barriers with average heights ranging between 8 and 14 ft and a total length of 22,013 ft. Calculations based on preliminary design data indicate that feasible and reasonable barriers will substantially reduce noise levels for 388 to 451 residences at an estimated total cost of \$18.13 to \$22.11 million.	Noise levels with Build Alternative 1br would approach or exceed the NAC at nearly all studied locations. Temporary construction noise impacts would occur at all noise-sensitive locations adjacent to Build Alternative 1br. Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of six noise barriers with average heights ranging between 8 and 14 ft and a total length of 22,013 ft. Calculations indicate that these noise barriers will substantially reduce noise levels. Calculations based on preliminary design data indicate that feasible and reasonable barriers will substantially reduce noise levels for 369 to 432 residences at an estimated total cost of \$19.03 to \$22.11 million.	Noise levels with Build Alternative 2a would approach or exceed the NAC at nearly all studied locations. Temporary construction noise impacts would occur at all noise-sensitive locations adjacent to Build Alternative 2a. Based on the studies completed to date for Build Alternative 2a, Caltrans intends to incorporate noise abatement in the form of five noise barriers with average heights ranging between 8 and 14 ft and a total length of 15,394 ft. Calculations based on preliminary design data indicate that feasible and reasonable barriers will substantially reduce noise levels for 286 to 293 residences at an estimated total cost of \$14.08 to \$14.79 million.	Noise levels with Build Alternative 2b (including Design Option 2b1) would approach or exceed the NAC at nearly all studied locations. Temporary construction noise impacts would occur at all noise-sensitive locations adjacent to Build Alternative 2b (including Design Option 2b1).Based on the studies completed to date for Build Alternative 2b and Design Option 2b1, the Department intends to incorporate noise abatement in the form of six noise barriers with average heights ranging between 8 and 14 ft. and a total length of 20,798 feet. Calculations based on preliminary design data indicate that feasible and reasonable barriers will substantially reduce noise levels for 352 to 386 residences at an estimated total cost of \$17.96 to \$20.85 million.	NO-1. Installation of Recommended Noise Barriers Shown to be Feasible and Reasonable. Recommended noise barriers that are shown to be feasible and reasonable under each Build alternative or design option should be considered further for inclusion as part of the project. While primarily an abatement measure for traffic noise, barriers will also provide abatement of construction noise if they are in place prior to construction. The noise barriers per alternative are: <ul style="list-style-type: none"> <li>• Build Alternative 1a: Five noise barriers including 1A-E1, 1A-G1, 1A-J2, 1A-L2, and 1A-L3.</li> <li>• Build Alternative 1b (including Design Option 1b1): Six noise barriers including 1B-G2, 1B-K3, 1B-M3, 1B-M4, 1B-N1, and 1B-N2.</li> <li>• Build Alternative 2a: Five noise barriers including 2A-F1, 2A-H1, 2A-K3, 2A-L2, and 2A-L3.</li> <li>• Build Alternative 2b (including Design Option 2b1): Six noise barriers including 2B-H1, 2B-J2, 2B-M3, 2B-M4, 2B-N1, and 2B-N2.</li> <li>• Build Alternative 1b with Refinements (Alternative 1br): Six noise barriers, including 1B-G2, 1B-K3, 1B-M3, 1B-M4, 1B-N1, and 1B-N2</li> </ul> Measures beyond those listed in NO-1 would be the same with all Build alternatives, so the titles only are listed here, with the details available in Chapter 3. NO-2. Observation of Time Restrictions and Use of Alternative Alarms. NO-3. Use Mufflers on Equipment with Internal Combustion Engines. NO-4. Placement of Stationary Equipment. NO-5. Construction Equipment Staging.
<b>Biological Environment</b>							
<b>Natural Communities and Wildlife Movement (direct and indirect)</b>	No Project-related impacts to natural communities or wildlife movement would occur with this alternative.	Nine sensitive natural communities would be impacted by Build Alternative 1a. <ul style="list-style-type: none"> <li>• Alkali Grassland: 36.3 ac</li> <li>• Alkali Playa: 0.079 ac</li> </ul>	Nine sensitive natural communities would be impacted by Build Alternative 1b and Design Option 1b1. <ul style="list-style-type: none"> <li>• Alkali Grassland: 25.0 ac</li> <li>• Alkali Playa: 0.15 ac</li> </ul>	<u>Nine sensitive natural communities would be impacted by the Preferred Alternative.</u> <ul style="list-style-type: none"> <li>• <u>Alkali Grassland: 17.2 ac</u></li> </ul>	Nine sensitive natural communities would be impacted by Build Alternative 2a. <ul style="list-style-type: none"> <li>• Alkali Grassland: 56.6 ac</li> <li>• Alkali Playa: 0.25 ac</li> </ul>	Nine sensitive natural communities would be impacted by Build Alternative 2b and Design Option 2b1. <ul style="list-style-type: none"> <li>• Alkali Grassland: 43.5 ac</li> <li>• Alkali Playa: 0.08 ac</li> </ul>	BIO-15. Crossing Structures and Spacing Intervals for a Variety of Species. BIO-1. Landscaping Plants. BIO-2. Avoid the Use of Invasive and Non-Native Plants.

**Table S-1 Summary of Primary Environmental Impacts and Related Avoidance, Minimization, and/or Mitigation Measures**

Potential Impacts	No Build Alternative	Build Alternative 1a	Build Alternative 1b (including Design Option 1b1) <sup>a</sup>	Build Alternative 1br (Preferred Alternative)	Build Alternative 2a	Build Alternative 2b (including Design Option 2b1) <sup>a</sup>	Avoidance/ Minimization/ Mitigation Measures
		<ul style="list-style-type: none"> <li>Cottonwood Willow Riparian Forest: 1.7 ac</li> <li>Emergent Wetland: 0.5 ac</li> <li>Mulefat Scrub: 0.01 ac</li> <li>Riversidian Sage Scrub: 147.5 ac</li> <li>Seasonal Wetland: 12.4 ac</li> <li>Vernal Pool: 2.7 ac</li> <li>Willow Riparian Scrub and Forest: 4.0 ac</li> </ul> <p>Eight wildlife corridors would be impacted by Build Alternative 1a.</p> <ul style="list-style-type: none"> <li>Existing Constrained Linkage B (Salt Creek): Avian, Large Mammals, Small Mammals, Reptile, Amphibian, and Insects</li> <li>Newport Road Hills to Patton Road: Avian, Large Mammals, Small Mammals, Reptile, Amphibian, and Insects</li> <li>Hemet Channel: Avian Wildlife, Large Mammals, Small Mammals, Reptile, Amphibian, and Insects</li> <li>San Jacinto Branch Line: Avian, Large Mammals, Small Mammals, Reptile, and Amphibian</li> <li>Double Butte to West Hemet Hills: Avian, Large Mammals, Small Mammals, Reptile, and Amphibian</li> <li>West Hemet Hills to Lakeview Mountains: Avian and Large Mammals</li> <li>Lakeview Mountains to Tres Cerritos Hills: Avian and Large Mammals</li> <li>Colorado River Aqueduct: Avian, Large Mammals, Small Mammals, Reptile, and Amphibian</li> </ul>	<ul style="list-style-type: none"> <li>Cottonwood Willow Riparian Forest: 2.0 ac</li> <li>Emergent Wetland: 0.2 ac</li> <li>Mulefat Scrub: 0.01 ac</li> <li>Riversidian Sage Scrub: 141.3 ac</li> <li>Seasonal Wetland: 12.8 ac</li> <li>Vernal Pool: 0.74 ac</li> <li>Willow Riparian Scrub and Forest: 4.7 ac</li> </ul> <p>Eight wildlife corridors would be impacted by Build Alternative 1b and Design Option 1b1. These would be the same as Build Alternative 1a.</p>	<ul style="list-style-type: none"> <li>Alkali Playa: 0.202 ac</li> <li>Cottonwood Willow Riparian Forest: 1.9 ac</li> <li>Emergent Wetland: 0.2 ac</li> <li>Mulefat Scrub: 0.01 ac</li> <li>Riversidian Sage Scrub: 83.0 ac</li> <li>Seasonal Wetland: 13.3 ac</li> <li>Vernal Pool: 2.8 ac</li> <li>Willow Riparian Scrub and Forest: 4.6 ac</li> </ul> <p>Eight wildlife corridors would be impacted by Build Alternative 1br. These would be the same as Build Alternative 1a, 1b and Design Option 1b1.</p>	<ul style="list-style-type: none"> <li>Cottonwood Willow Riparian Forest: 1.7 ac</li> <li>Emergent Wetland: 0.5 ac</li> <li>Mulefat Scrub: 0.01 ac</li> <li>Riversidian Sage Scrub: 163.8 ac</li> <li>Seasonal Wetland: 12.4 ac</li> <li>Vernal Pool: 3.2 ac</li> <li>Willow Riparian Scrub and Forest: 4.0 ac</li> </ul> <p>Seven wildlife corridors would be impacted by Build Alternative 2a. These would be the same as Build Alternative 1a except as follows.</p> <ul style="list-style-type: none"> <li>Double Butte to West Hemet Hills and West Hemet Hills to Lakeview are not involved.</li> <li>Hemet Channel: Avian Wildlife, Large Mammals, Small Mammals, Reptile, Amphibian, Insects, and Passive Dispersers</li> <li>West Hemet Hills to Hemet-Ryan Airport: Avian Wildlife, Large Mammals, Small Mammals, Reptile, and Amphibian</li> </ul>	<ul style="list-style-type: none"> <li>Cottonwood Willow Riparian Forest: 2.0 ac</li> <li>Emergent Wetland: 0.2 ac</li> <li>Mulefat Scrub: 0.01 ac</li> <li>Riversidian Sage Scrub: 157.7 ac</li> <li>Seasonal Wetland: 13.3 ac</li> <li>Vernal Pool: 5.2 ac</li> <li>Willow Riparian Scrub and Forest: 4.7 ac</li> </ul> <p>Seven wildlife corridors would be impacted by Build Alternative 2b and Design Option 2b1. These would be the same as Build Alternative 1a except as follows.</p> <ul style="list-style-type: none"> <li>Double Butte to West Hemet Hills and West Hemet Hills to Lakeview are not involved.</li> <li>West Hemet Hills to Hemet-Ryan Airport: Same as Build Alternative 2a</li> </ul>	<p>BIO-3. Barrier Fencing along ROW.</p> <p>BIO-4. Slope Construction within ROW.</p> <p>BIO-5. Equipment Storage, Fueling, and Staging Areas.</p> <p>BIO-6. Training about Sensitive Biological Resources.</p> <p>BIO-7. Fire Season Work.</p> <p>BIO-8. Dust Minimization.</p> <p>BIO-9. Designated Areas for Equipment Maintenance and Staging.</p> <p>BIO-10. Litter Control.</p> <p>BIO-11. Bridge over Salt Creek Channel.</p> <p>BIO-12. Avoidance of San Jacinto River.</p> <p>BIO-13. Avoidance of Existing Constrained Linkage C.</p> <p>BIO-14. Night Lighting.</p> <p>BIO-16. Openings in K-Rails for Small Animals.</p> <p>BIO-17. Wildlife Crossings Intended for Large Mammalian Wildlife.</p> <p>BIO-18. Use of Tree and Shrub Buffers Around Crossing Entrances, No Artificial Lighting.</p> <p>BIO-19. Wildlife Crossings Vegetated as Naturally as Possible.</p> <p>BIO-20. <u>Use of Biodegradable Material in Erosion and Sediment Control Devices.</u></p> <p>BIO-21. <u>Use of Natural Objects in the Crossing Facility.</u></p> <p>BIO-22. Installation of Vegetative Cover Near the Entrances to Culverts.</p> <p>BIO-23. Installation of Dirt, Rock, or Concrete Benches on at Least One Side of Large Mammal Crossings.</p> <p>BIO-24. <u>Wildlife fencing.</u></p> <p>BIO-25. <u>Installation of Jump-Outs and Escape Ramps.</u></p> <p>BIO-26. Enhancements to Wildlife Corridors.</p>

**Table S-1 Summary of Primary Environmental Impacts and Related Avoidance, Minimization, and/or Mitigation Measures**

Potential Impacts	No Build Alternative	Build Alternative 1a	Build Alternative 1b (including Design Option 1b1) <sup>a</sup>	Build Alternative 1br (Preferred Alternative)	Build Alternative 2a	Build Alternative 2b (including Design Option 2b1) <sup>a</sup>	Avoidance/ Minimization/ Mitigation Measures
<b>Wetlands and Other Waters</b>	No Project-related impacts would occur with this alternative.	Build Alternative 1a would cross the Salt Creek Channel (2.85 ac). Additional wetlands and other waters present are: 3 vernal pools 1.99 ac 7 seasonal wetlands 0.93 ac 5 agricultural seasonal wetlands 9.05 ac 3 constructed ponds 2.63 ac 4 riparian areas 1.58 ac 36 drainage ditches 5.09 ac 7 erosional drainages 0.31 ac There would be no indirect impacts to wetlands or other waters with this Build alternative.	Build Alternative 1b (including Design Option 1b1) would cross both Salt Creek Channel (2.77 ac) and Hemet Channel (0.72 ac). Additional wetlands and other waters present are: 2 vernal pools 0.01 ac 8 seasonal wetlands 0.93 ac 5 agricultural seasonal wetlands 9.05 ac 7 constructed ponds 6.33 ac 5 riparian areas 1.58 ac 35 drainage ditches 4.43 ac 7 erosional drainages 0.31 ac There would be no indirect impacts to wetlands or other waters with this Build alternative.	Build Alternative 1br would cross both Salt Creek Channel (2.77 ac) and Hemet Channel (0.72 ac). Additional wetlands and other waters present are: 3 vernal pools 1.99 ac 8 seasonal wetlands 0.93 ac 5 agricultural seasonal wetlands 9.42 ac 3 constructed ponds 1.35 ac 5 riparian areas 1.58 ac 35 drainage ditches 4.43 ac 4 erosional drainages 0.09 ac There would be no indirect impacts to wetlands or other waters with the Preferred Alternative.	Build Alternative 2a would cross both Salt Creek Channel (2.85 ac) and Hemet Channel (1.85 ac). Additional wetlands and other waters present are: 2 vernal pools 0.01 ac 8 seasonal wetlands 1.06 ac 5 agricultural seasonal wetlands 9.05 ac 4 constructed ponds 2.63 ac 4 riparian areas 1.59 ac 36 drainage ditches 4.96 ac 6 erosional drainages 0.08 ac Indirect Impacts: Vernal Pool Complex 2.43 ac	Build Alternative 2b (including Design Option 2b1) would cross both Salt Creek Channel (3.15 ac) and Hemet Channel (1.32 ac). Additional wetlands and other waters present are: 3 vernal pools 1.99 ac 9 seasonal wetlands 1.06 ac 5 agricultural seasonal wetlands 9.05 ac 6 constructed ponds 6.435 ac 5 riparian areas 1.59 ac 36 drainage ditches 4.62 ac 6 erosional drainages 0.08 ac Indirect Impacts: Vernal Pool Complex 2.43 ac	Measures would be the same with all Build alternatives, so titles only are listed here, with the details available in Chapter 3. WQ-1. Construction Best Management Practices in Compliance with Project Planning and Design Guide (PPDG), Storm Water Management Plan (SWMP), Storm Water Pollution Prevention Plan (SWPPP) and Standard Special Provisions (SSP). WQ-4. Treatment BMPs. WQ-5. Dewatering Permit. BIO-27. Environmentally Sensitive Area Fencing. BIO-28. Onsite and Offsite Drainage Facilities in the Project ROW. BIO-29. Maintenance of Constructed Storm Water Systems. BIO-30. No Erodible Materials Deposited in Watercourses. BIO-31. Ongoing Monitoring and Reporting. BIO-32. Modification of the Project Design to Construct a Gravity-Based Surface Water Diversion System. BIO-33. Mitigation of Impacts to Water Features.
<b>Plant Species<sup>d</sup></b>	No Project-related impacts would occur with this alternative.	Special Status Plants: • Species observed – 10 Eight MSHCP Covered Species shown by populations (plants): • Davidson's saltscale: 1 (6) • Plummer's mariposa lily: 1 (2) • Smooth tarplant: 248 (99,584) • Parry's spineflower: 27 (112,536) • Long-spined spineflower: 4 (4,465) • Vernal Barley: 12 (18,921) • Coulter's goldfields: 23 (5,435) • Little mousetail: 2 (18,589) Two Special Status Plants not Covered by the MSHCP: • Robinson's peppergrass: 16 (79,124) • Paniculate Tarplant: 37 (21,374) Three species with long-term conservation value (MSHCP term used to describe plants that will contribute to MSHCP objectives and reserve assembly): • Smooth tarplant • Coulter's goldfields • Little mousetail Criteria Area Cells (MSHCP term used to describe groups of land that will guide assembly of Additional Reserve Lands throughout the MSHCP Conservation Area): 3683, 3584, 3291, 2774, 2775, and 2778 through 2878	Special-Status Plants: • Species observed – 10 Eight MSHCP Covered Species shown by populations (plants): • Davidson's saltscale: 1 (6) • Plummer's mariposa lily: 1 (2) • Smooth tarplant: 251 (529,988) • Parry's spineflower: 26 (111,996) • Long-spined spineflower: 4 (4,465) • Vernal Barley: 16 (18,221) • Coulter's goldfields: 4 (29,125) • Little mousetail: 2 (19,886) Two Special Status Plants not Covered by the MSHCP: • Robinson's peppergrass: 16 (79,124) • Paniculate Tarplant: 29 (6,998) Two species with long-term conservation value: • Smooth tarplant • Little mousetail Criteria Area Cells: 3683, 3584, 3291, and 2364	Special-Status Plants: • Species observed – 9 Seven MSHCP Covered Species shown by populations (plants): • Davidson's saltscale: 1 (6) • Smooth tarplant: 205 (531,481) • Parry's spineflower: 17 (9,806) • Long-spined spineflower: 5 (13,917) • Vernal Barley: 15 (13,848) • Coulter's goldfields: 3 (2,504) • Little mousetail: 2 (19,403) Two Special Status Plants not Covered by the MSHCP: • Robinson's peppergrass: 8 (9,056) • Paniculate Tarplant: 26 (9,793) One species with long-term conservation value: • Smooth tarplant Criteria Area Cells: 3683, 3584, 3291, and 2364	Special Status Plants: • Species observed – 12 Ten MSHCP Covered Species shown by populations (plants): • Davidson's saltscale: 60 (12,142) • Smooth tarplant: 257 (103,556) • Parry's spineflower: 36 (13,893) • Long-spined spineflower: 27 (15,564) • Vernal Barley: 14 (5,026,922) • Coulter's goldfields: 23 (5,435) • Parish's brittlescale: 13 (1,320) • Little mousetail: 15 (22,750) • Small-flowered microseris: 1 (15) • Palmer's grapplinghook: 1 (500) Two Special Status Plants not covered by the MSHCP: • Robinson's peppergrass: 19 (7,872) • Paniculate Tarplant: 39 (42,424) Five species with long-term conservation value: • Little mousetail • Smooth tarplant • Coulter's goldfields • Parish's brittlescale • Davidson's saltscale Criteria Area Cells: 2683, 2774, 2775, 2878, 2364, 3584, 3683, 3684, 3791, 3891, 3887, and 4007	Special Status Plants: • Species observed – 12 Ten MSHCP Covered Species shown by populations (plants): • Davidson's saltscale: 60 (12,142) • Smooth tarplant: 252 (527,426) • Parry's spineflower: 35 (13,353) • Long-spined spineflower: 27 (15,564) • Vernal Barley: 17 (5,025,722) • Coulter's goldfields: 4 (29,125) • Parish's brittlescale: 13 (1,320) • Little mousetail: 15 (21,395) • Small-flowered microseris: 1 (15) • Palmer's grapplinghook: 1 (500) Two Special Status Plants not Covered by the MSHCP: • Robinson's peppergrass: 19 (7,872) • Paniculate Tarplant: 31 (28,044) Five species with long-term conservation value: • Little mousetail • Smooth tarplant • Coulter's goldfields • Parish's brittlescale • Davidson's saltscale Criteria Area Cells: 2683, 2774, 2775, 2878, 2364, 3584, 3683, 3684, 3791, 3891, 3887, and 4007	Measures would be the same with all Build alternatives, so titles only are listed here, with the details available in Chapter 3. BIO-1. Landscaping Plans. BIO-2. Avoid the Use of Invasive and Non-Native Plants. BIO-27. Environmentally Sensitive Area Fencing. BIO-32. Modification of the Project Design to Construct a Gravity-Based Surface Water Diversion System. BIO-34. Avoidance of Sensitive Plant Populations. BIO-35. Avoid the Spread of Invasive Plant Species. BIO-36. Mitigation for Robinson's Peppergrass Populations. BIO-37. Coulter's Goldfields and Smooth Tarplant Populations. BIO-38. Culvert/Drainage System for Coulter's Goldfields and Smooth Tarplant Populations.
<b>Animal Species (permanent and/or temporary)</b>	No Project-related impacts would occur with this alternative.	Bats: Loss of roosting habitat	Impacts to bats would be the same as Build Alternative 1a.	Impacts to bats would be the same as Build Alternative 1a.	Impacts to bats would be the same as Build Alternative 1a.	Impacts to bats would be the same as Build Alternative 1a.	Measures would be the same with all Build alternatives, so titles only are listed here, with the details available in Chapter 3.

**Table S-1 Summary of Primary Environmental Impacts and Related Avoidance, Minimization, and/or Mitigation Measures**

Potential Impacts	No Build Alternative	Build Alternative 1a	Build Alternative 1b (including Design Option 1b1) <sup>a</sup>	Build Alternative 1br (Preferred Alternative)	Build Alternative 2a	Build Alternative 2b (including Design Option 2b1) <sup>a</sup>	Avoidance/ Minimization/ Mitigation Measures
		Burrowing owl: 6 pairs, 1 single male Barn owl: 3 pairs Red-tailed hawk: 9 pairs White-tailed kite: 2 pairs Los Angeles pocket mouse: 4.8 ac of occupied habitat	Burrowing owl: 7 pairs Barn owl: 2 pairs Red-tailed hawk: 10 pairs White-tailed kite: 2 pairs Impacts to the Los Angeles pocket mouse: would be the same as Build Alternative 1a.	<u>Burrowing owl:</u> <u>5 pairs</u> <u>Barn owl:</u> <u>2 pairs</u> <u>Red-tailed hawk:</u> <u>7 pairs</u> <u>White-tailed kite:</u> <u>2 pairs</u> <u>Impacts to the Los Angeles pocket mouse: would be the same as Build Alternative 1a.</u>	<u>Burrowing owl:</u> <u>6 pairs, 1 single male</u> Impacts to barn owls would be the same as Build Alternative 1a. Cooper's hawk: 1 pair Impacts to red-tailed hawk would be the same as Build Alternative 1a. White-tailed kite: 4 pairs Impacts to the Los Angeles pocket mouse: would be the same as Build Alternative 1a.	Impacts to burrowing owls would be the same as Build Alternative 1b. Impacts to barn owls would be the same as Build Alternative 1b. Impacts to Cooper's hawk would be the same as Build Alternative 2a. Impacts to red-tailed hawk would be the same as Build Alternative 1b. White-tailed kite: 2 pairs Impacts to the Los Angeles pocket mouse: would be the same as Build Alternative 1a.	BIO-14. Night Lighting. BIO-39. Conduct Presence/Absence Surveys Immediately Prior to Construction Each Year. BIO-40. Relocation of Burrowing Owls. BIO-41. Maintenance of Hydrology to Existing Vernal Pool/Alkali Playa Habitat. BIO-42. Conducting Vegetation Clearance to Avoid Active Breeding Season (February 15 through September 15). BIO-43. Nesting Raptor Surveys and Implementation of Nest Exclusion. BIO-44. Inspections for Roosting Bats before Demolition. BIO-45. Installation of Bat-Friendly Gate on Mine Adit Adjacent to Roadway Segments A, B, and C. BIO-46. Provision of Suitable Habitat for Vegetation-Roosting Bats.
<b>Threatened and Endangered Species (permanent and/or temporary)</b>	No Project-related impacts would occur with this alternative.	Potential impact to Stephens' kangaroo rat habitat: 581.0 ac Potential impact to Quino checkerspot butterfly habitat: 615.4 ac Potential impact to coastal California gnatcatcher habitat: 172.5 ac No impact to vernal pool branchiopods Potential impact to suitable least Bell's vireo habitat: 27.16 ac <sup>c</sup> Potential impact to suitable southwestern willow flycatcher habitat: 27.16 ac <sup>c</sup> San Jacinto Valley crownscale: 15 populations (6,727 individuals) Spreading navarretia critical habitat: 4.7 ac	Potential impact to Stephens' kangaroo rat habitat: 573.9 ac Potential impact to Quino checkerspot butterfly habitat: 642.9 ac Potential impact to coastal California gnatcatcher habitat: 167.49 ac No impact to vernal pool branchiopods Potential impact to suitable least Bell's vireo habitat: 41.84 ac <sup>c</sup> Potential impact to suitable southwestern willow flycatcher habitat: 41.84 ac <sup>c</sup> San Jacinto Valley crownscale: 15 populations (6,727 individuals) Spreading navarretia critical habitat: 4.7 ac Design Option 1b1: Quino checkerspot butterfly habitat: 643.5 ac	<u>Potential impact to Stephens' kangaroo rat habitat: 491.1 ac</u> <u>Potential impact to Quino checkerspot butterfly habitat: 562.27 ac</u> <u>Potential impact to coastal California gnatcatcher habitat: 111.19 ac</u> <u>No impact to vernal pool branchiopods</u> <u>Potential impact to suitable least Bell's vireo habitat: 41.58 ac<sup>c</sup></u> <u>Potential impact to suitable southwestern willow flycatcher habitat: 41.58 ac<sup>c</sup></u> <u>No impact to threatened and endangered plants</u> <u>Spreading navarretia critical habitat: 7.44 ac</u>	Potential impact to Stephens' kangaroo rat habitat: 572.9 ac Potential impact to Quino checkerspot butterfly habitat: 952.8 ac Potential impact to coastal California gnatcatcher habitat: 214.6 ac Potential impact to vernal pool branchiopod habitat: 1.79 ac Potential impact to suitable least Bell's vireo habitat: 27.16 ac <sup>c</sup> Potential impact to suitable southwestern willow flycatcher habitat: 27.16 ac <sup>c</sup> San Jacinto Valley crownscale: 36 populations (7,137 individuals) Spreading navarretia: 15 populations (28,533 individuals) California Orcutt grass: 2 populations (4,266 individuals) Thread-leaved brodiaea: <sup>b</sup> 9 populations (231 individuals) Spreading navarretia critical habitat: 333.8 ac	Potential impact to Stephens' kangaroo rat habitat: 562.6 ac Potential impact to Quino checkerspot butterfly habitat: 994.9 ac Potential impact to coastal California gnatcatcher habitat: 209.6 ac Potential impact to vernal pool branchiopod habitat: 1.79 ac Potential impact to suitable least Bell's vireo habitat: 41.84 ac <sup>c</sup> Potential impact to suitable southwestern willow flycatcher habitat: 41.84 ac <sup>c</sup> San Jacinto Valley crownscale: 36 populations (7,137 individuals) Spreading navarretia: 15 populations (28,533 individuals) California Orcutt grass: 2 populations (4,266 individuals) Thread-leaved brodiaea: <sup>b</sup> 9 populations (231 individuals) Spreading navarretia critical habitat: 333.8 ac Design Option 2b1: Quino checkerspot butterfly habitat: 995.6 ac	Measures would be the same with all Build alternatives, so titles only are listed here, with the details available in Chapter 3. BIO-27. Environmentally Sensitive Area Fencing. BIO-34. Avoidance of Sensitive Plant Populations. BIO-47. Conducting Clearance of Riparian Habitat Outside Riparian Bird Active Breeding Season (February 15 through September 15 with the peak generally from March 1 through June 30).

Note: MSHCP = Western Riverside County Multiple Species Habitat Conservation Plan

BMP = best management practice

ROW = right-of-way

ac = acre

<sup>a</sup>Information is presented first for the base condition of Build Alternatives 1b and 2b, followed by Design Options 1b1 and 2b1. If there is no variation between the base condition and the design options, the information is given only once.

<sup>b</sup>Although nine populations of thread-leaved brodiaea were observed in Additional Indirect Impact Study Area 1, the hydrology in this area had already been altered by the construction of roads and drainage ditches. The proposed Project would not change these existing conditions, and impacts are not likely to occur.

<sup>c</sup>Although potential impacts are shown for least Bell's vireo and southwestern willow flycatcher habitat, these species were not detected in the study area. A "not likely to adversely affect" determination is requested for these two species.

<sup>d</sup>Some plant populations extend into both the direct and indirect impact areas. Therefore, total plant populations presented in the affected environment may not equal the sum of the populations that will be directly and indirectly impacted in order to avoid double counting.

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## S.6 Coordination with Public and Other Agencies

Coordination for the Project was led by RCTC (the responsible agency) and Caltrans (the NEPA and CEQA lead agency), with participation by USACE (Cooperating Agency), USEPA, USFWS, CDFW, RWQCB, and other agencies with an interest in the Project. FHWA was also a participant in this regard until July 1, 2007, when Caltrans began its assignment of NEPA responsibilities, pursuant to Section 6005 of SAFETEA-LU (23 USC 327). This team was formed to ensure collaborative planning at key decision points during the environmental review process.

Team activities included coordination for technical assistance and concurrent review of environmental documents and technical reports. Agencies were also consulted at key decision points and Project milestones, including:

- Preliminary Agreement on Purpose and Need from USACE and USEPA (December 2003)
- Preliminary Agreement on the Final Project Criteria and Alternatives Selection (June 2004)
- Response to the request for Cooperating Agency participation (April 2005)
- Preliminary Agreement on Supplemental Information for Project Criteria and Alternatives Selection (May 2005)
- Final Agreement on the Build Alternatives to be Identified in the Draft Environmental Impact Statement (July 2007)

Due to the length and complexity of the documentation supporting the above steps, correspondence and reports documenting these activities are incorporated herein by reference (FHWA 2005b, 2007a, 2007b, 2007c).

A range of realignment alternatives was presented to the community during development of the Project scope. The alignment alternatives in the western, central, and eastern portions of the Project area were identified through an alternatives analysis process described in detail in a document entitled *Project Criteria and Alternatives Selection for Preliminary Agreement* of June 2004.

The alternatives were further refined through the NEPA/404 Memorandum of Understanding (MOU) integration process, incorporating comments from the public scoping process, as well as from the analyses in technical studies. In addition to the Build alternatives, a No Build Alternative has been included as required by NEPA and CEQA regulations. The Project alternatives to be analyzed were identified in the May 21, 2007, *Request for Final Agreement on Build Alternatives to be Identified in the Draft Environmental Impact Statement for State Route 79 Realignment Project from Domenigoni Parkway to Gilman Springs Road* (FHWA 2007c).

Agency consultation and public participation for the Project have been accomplished through a variety of formal and informal methods. Coordination included monthly Project development team meetings, interagency coordination meetings, and focused discipline-specific technical meetings, as well as ongoing consultation with Native American tribes. Public participation was incorporated into the environmental process through meetings held in September and October 2004 and October 2005, public notices, newsletters/fact sheets, newspaper advertisements, updates on the Project website, and email notifications. Specifically, public opinion was requested on the potential concerns about and benefits of alternatives that would be considered in focused technical analyses and in the Draft EIR/EIS. Public concerns can be categorized into three general topic areas:

- Environmental (aesthetics/visual resource, biological resources, community impacts, etc.)

*Summary*

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- Engineering (construction phasing, route design, access, etc.)
- General (decision-making authority, implementation, public outreach)

Based on public concerns, stakeholders were generally supportive of the Project. However, responses indicated varying preferences for the alternative that might be chosen for the Project. Please see Chapter 5, Section 5.3, Public Participation (Volume 2 of this environmental document), for a detailed discussion of public participation activities and the outcomes from them.

In May 2009, comments were received from the public (specifically the Winchester Homeowners Association [HOA] and the County of Riverside) regarding the proposed design of the Project. The Winchester HOA requested that two items be considered in a modified design. The first was a lower profile of the roadway south of Stowe Road. The second was access at Newport Road. In response to the comments received, design options to Build Alternatives 1b and 2b were developed. Stakeholders were informed about the design options, and their feedback was positive. In June 2009, the design options were incorporated into the Project, and studies to identify and evaluate potential impacts that would be specific to the design options were begun. All of the design-option studies were completed by August 2010.

Public review of the Draft EIR/EIS began on February 7, 2013 and ended on March 25, 2013. Engineering refinements for Build Alternative 1br have been incorporated in response to comments received during the public circulation of the Draft EIR/EIS. Refinements were also made to comply with Caltrans’ mandatory design standards and to minimize impacts to the Traditional Cultural Property (TCP) identified during the Native American consultations in 2013 and 2014.

### **S.6.1 Permits and Approvals Needed**

The permits and approvals required for the Project are listed in Table S-2. In addition, after certification of the Final EIR/EIS by Caltrans, this EIR/EIS may be used for related steps under CEQA, including General Plan Amendments by Riverside County and the Cities of Hemet and San Jacinto.

**Table S-2 Permits and Approvals Needed**

<b>Agency</b>	<b>Permit/Approval</b>	<b>Status</b>
<b>Federal</b>		
United States Army Corps of Engineers	<ul style="list-style-type: none"> <li>• Individual Section 404 permit for impacts to waters of the United States</li> </ul>	A Department of the Army Individual Permit application will be submitted after identification of a Preferred Alternative for the Project <u>during PS&amp;E phase of the project.</u>
United States Department of Transportation Federal Highway Administration	<ul style="list-style-type: none"> <li>• Draft Project Management Plan</li> <li>• Cost Estimate/Financial Plan</li> </ul>	These plans will be developed after a Preferred Alternative is identified for the Project and will be submitted prior to the final NEPA determination.
California Department of Transportation, on behalf of United States Department of Transportation Federal Highway Administration	<ul style="list-style-type: none"> <li>• Section 4(f) Determination</li> </ul>	<u>Section 4(f) Properties within the Project Area of Potential Effect</u> 1. <u>The Traditional Cultural Property (TCP) consisting of Cheexayam</u>

**Table S-2 Permits and Approvals Needed**

Agency	Permit/Approval	Status
		<u>Pomwappivu, and 'Anó' Potma, and the intervening valley</u> <u>2. The Potential Prehistoric Archaeological District (PPAD) includes 24 bedrock milling sites/components (BRMs)</u>
United States Fish and Wildlife Service	<ul style="list-style-type: none"> <li>• Section 7 consultation for threatened and endangered species</li> <li>• Consistency Determination required per the Western Riverside County MSHCP</li> </ul>	Consultation <u>was</u> conducted following identification of a Preferred Alternative for the Project. <u>An MSHCP Consistency Determination for the Preferred Alternative was issued by USFWS on November 23, 2015.</u> <u>Section 7 Consultation was initiated on December 15, 2015 for the Preferred Alternative. USFWS issued a Biological Opinion (FWS-WRIV-09B0190-16F0335) on March 10, 2016.</u>
<b>State</b>		
California Department of Fish and <u>Wildlife</u>	<ul style="list-style-type: none"> <li>• Streambed Alteration Agreement</li> </ul>	Coordination to be conducted and applications to be submitted after identification of the Preferred Alternative and prior to construction.
California Transportation Commission	<ul style="list-style-type: none"> <li>• Route adoption</li> </ul>	Coordination to be conducted based on Final EIR/EIS and after Record of Decision.
Regional Water Quality Control Board	<ul style="list-style-type: none"> <li>• Section 401 Water Quality Certification</li> <li>• Section 402 National Pollutant Discharge Elimination System (NPDES):               <ul style="list-style-type: none"> <li>– NPDES Permit: Order No. <u>2012-0011-DWQ</u>, NPDES No. CAS000003</li> <li>– Construction General Permit: Order No. <u>2012-0006-DWQ</u>, NPDES No. CAS000002</li> </ul> </li> </ul>	Notice of Intent (NOI) will be submitted prior to start of construction. If applicable, a separate dewatering permit will be requested from the Santa Ana Regional Water Quality Control Board for the San Jacinto Watershed; the permit number is NPDES CAG 998001.
State Historic Preservation Office	Section 106 compliance: <ul style="list-style-type: none"> <li>• Historic Property Determinations of Eligibility Finding of Effect Resolution of Adverse Effects, Memorandum of Agreement (MOA)</li> </ul>	<u>SHPO concurrence on the MOA was issued on March 25, 2016.</u>
<b>Regional/Local</b>		
Riverside County and Cities of Hemet and San Jacinto	<ul style="list-style-type: none"> <li>• Freeway Agreement between each local entity and Caltrans</li> <li>• Street construction permits, approval of street closures and rerouting, and associated improvements within the public ROW</li> <li>• Noise variance for temporary exceedance of noise ordinances during Project construction</li> <li>• Riverside County MS4 Permit (Order No. R8-2010-0033, NPDES No. CAS618033)</li> </ul>	Coordination to be conducted and approvals/permits to be issued prior to construction.

**Table S-2 Permits and Approvals Needed**

Agency	Permit/Approval	Status
Riverside County Flood Control and Water Conservation District (RCFCWCD)	Encroachment permit for improvements affecting RCFCWCD facilities	Coordination to be conducted based on final design and prior to construction.
Western Riverside County Regional Conservation Authority	<ul style="list-style-type: none"> <li>• Consistency Determination required per the Western Riverside County MSHCP</li> <li>• <u>A Determination of Biological Equivalent or Superior Preservation (DBESP) required per the Western Riverside County MSHCP</u></li> </ul>	<u>Consistency Determination was issued on September 30, 2015.</u>



# Chapter 1 Proposed Project

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## 1.1 Introduction

The Riverside County Transportation Commission (RCTC), in cooperation with the Federal Highway Administration (FHWA), the California Department of Transportation (Caltrans), the County of Riverside, the City of Hemet, and the City of San Jacinto, has proposed a project for the realignment of State Route 79 (SR 79) (Project or proposed Project) in the vicinity of the cities of Hemet and San Jacinto in Riverside County, California. Caltrans is the lead agency under the National Environmental Policy Act (NEPA). Caltrans is the lead agency under the California Environmental Quality Act (CEQA). RCTC is the CEQA Responsible agency. The United States Army Corps of Engineers (USACE) is a Cooperating Agency under NEPA (USACE 2005).<sup>1</sup> A map showing the regional location of the Project is in Figure 1.1-1 at the end of this chapter. The realignment is proposed to begin south of Domenigoni Parkway and continue north to Gilman Springs Road, a distance of approximately 18 miles (mi). The existing portion of SR 79 proposed for realignment is shown in Figure 1.1-2. This Final EIS/EIR includes responses to comments received on the Draft EIS/EIR and Partially Recirculated DEIR/SDEIS, identifies the preferred alternative and provides complete environmental documentation of the project alternatives. Some of this information has been modified in response to public comments on the analyses provided in the Draft EIS/EIR and Partially Recirculated DEIR/SDEIS. Vertical lines appeared in the margin of the Partially Recirculated DEIR/DEIS where the text was modified. That modified text has now been fully integrated into Final EIS/EIR. For the sections that were recirculated, where the text is different (due to addition or deletion) in this Final EIR/EIS than it appeared in the Partially Recirculated DEIR/DEIS, a vertical line appears in the margin. Additionally, a vertical line appears in the margin of those sections that were not recirculated where the text is different (due to addition or deletion) in this Final EIS/EIR than it appeared in the Draft EIS/EIR. Following circulation of the Final EIS/EIR, if the decision is made to approve the project, a Notice of Determination will be published for compliance with the California Environmental Quality Act, and a Record of Decision will be published for compliance with the National Environmental Policy Act.

### 1.1.1 Project Background

#### 1.1.1.1 Project History

The intent to realign SR 79 was first identified in the Route Concept Report in 1992 (Department 1992). The Route Concept Report determined that the existing route required realignment and defined the ultimate facility type as a six-lane expressway that would maintain a level of service (LOS) D (see Table 1.1-2 and Table 3.1-35 for definitions of LOS).

Subsequently, a Route Concept Fact Sheet was prepared (Department 1999b). The fact sheet noted that—due to the collocation of SR 79 with State Route 74 (SR 74) on Florida Avenue, the more than 90 driveways directly accessing SR 79, and other right-of-way (ROW) issues—most of the existing alignment could not be reasonably upgraded to an expressway, and any lesser improvements would not adequately accommodate future traffic (Department 1992).

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<sup>1</sup>Complete references for all citations are in Chapter 8.

The fact sheet was also supported by the technical information included in the SR 79 Realignment Study Report (1998).

Following these activities, the Project Study Report/Project Development Support (PSR/PDS) (2002) evaluated conceptual alternatives for the Project. During this same period, the Riverside County Integrated Project (RCIP) planning process and the Cities' general plan update processes were being developed.

The elements of the RCIP include the Riverside County General Plan (led by the County of Riverside), the Community and Environmental Transportation Acceptability Process (CETAP) (led by RCTC), and the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) (led by the County of Riverside). These elements guided the choices and decisions made about how to address the changes necessary to accommodate and support predicted growth in the county.

The Project alternatives identified in the PSR/PDS were also vetted through the NEPA/Clean Water Act Section 404 Integration Process and were closely coordinated with the local community. This process began with the development of the Project Purpose and Need (2003) and continued with the determination of environmental screening criteria (including field surveys) and the screening of preliminary alternatives (2004 and 2005), formal scoping (2005), and the selection of the Build alternatives to be included in technical studies and the Environmental Impact Report/Environmental Impact Statement (EIR/EIS) (2005). This effort was undertaken because of the potential for substantial impacts to waters of the United States, primarily to wetlands (vernal pools) and the species they support, including listed and endemic species. Each of the approving or commenting federal and state agencies associated with these resources participated in this process to ensure that impacts to resources of concern would be avoided or minimized.

This coordination effort has resulted in the development of a reasonable range of Build alternatives for the Project, which are also included in the RCIP and City planning documents. The general plans for the County of Riverside (County 2003a), the City of Hemet (Hemet 2011b), and the City of San Jacinto (San Jacinto 2006) include goals and policies for improved circulation and access in association with a realigned SR 79.

Both the City of San Jacinto and the City of Hemet have adopted, via city council resolutions, Locally Preferred Alternatives (LPAs) for the Project (San Jacinto 2001, Hemet 2008). The respective LPAs are included in the general plans of each jurisdiction. Riverside County has not designated an LPA, but has included all of the Build alternatives in the County General Plan. In addition, the MSHCP has specific criteria included so that the Project is provided "Covered Activity" status.

The City of Hemet updated its General Plan in 2012, Riverside County updated its General Plan in 2008, and San Jacinto updated its General Plan in 2012. The Final EIR/EIS incorporates the goals of the City of Hemet 2030 General Plan, Riverside County General Plan (County 2008a), The Harvest Valley/Winchester Area Plan (HVWAP) (County 2014b) and the San Jacinto Valley Area Plan (SJVAP) (County 2014c) and San Jacinto General Plans (2012). Build Alternative 1br is inconsistent with the Hemet General Plan and San Jacinto General Plan, however the cities anticipated changes since their adoption and indicated in their general plans they will revise their General Plan circulation system to reflect changes in the Final EIR/EIS.

Public review of the Draft EIR/EIS began on February 7, 2013 and ended on March 25, 2013. The public hearing for the Project was held at Tahquitz High School in Hemet on February 26, 2013 and February 27, 2013 and was attended by members of the public, elected officials, and agencies.

A Partially Recirculated Draft EIR/Supplemental Draft EIS was prepared in August 2015 to provide new information relevant to the proposed Project, information that was not available when the Draft EIR/EIS was circulated for public review and comment in February 2013. The new information included Cultural Resources, Section 4(f) evaluation, updated traffic data, updated air quality data, in addition to, visual and noise impacts due to the westerly realignment of Alternative 1b. In addition, the Riverside County Transportation Commission (RCTC) and Caltrans have included engineering refinements to Build Alternative 1b in order to minimize impacts as a result of public and Native American comments and coordination.

Section 106 consultation meetings between Caltrans and six tribal communities occurred as part of the community outreach. During a meeting, Pechanga Band representatives identified a named place of cultural and religious significance to the Luiseño people. This Traditional Cultural Property (TCP) included two hills, identified as Chéexayam Pum'wáppivu, and 'Anó' Potma, and the intervening valley. The Pechanga Band requested that grading limits through 'Anó' Potma, as proposed in Build Alternative 2b, be adjusted to avoid impacts to the West Hemet Hills. Since adjustments could not be made to Build Alternative 2b to minimize impacts, the Pechanga Band considered it a fatal flaw in the Project and would oppose it. The Pechanga Band went on to suggest that Build Alternative 1b could be acceptable if the alternative could be adjusted to reduce impacts to 'Anó' Potma. In response to the Pechanga Band's concerns over the undertaking's potential to adversely affect 'Anó' Potma, Project proponents considered possible adjustments to Build Alternative 1b. Build Alternative 1br proposed to shift the road alignment to the west through the TCP area and increase the grade of the profile so that the grading limits could be reduced through the West Hemet Hills, which reduced the direct impacts to 'Anó' Pótma. In addition, Build Alternative 1br included refinements to comply with Caltrans' mandatory design standards, as described in detail in Chapter 2, Section 2.2.1.

The Project addresses the vision and long-range goals, policies, and strategies for development and population growth in the county.

### **1.1.1.2 Funding and Programming**

#### ***Funding***

Funding for the Project Approval/Environmental Document (PA/ED) phase of the Project, including preparation of this Draft EIR/EIS, is provided by the Federal Transportation Equity Act for the 21st Century (TEA-21), Riverside County Measure "A," and Transportation Uniform Mitigation Fees (TUMF), as described below. Additionally, federal, state, and local funds (Measure "A" and TUMF funds) are expected to be used to continue the Project beyond the PA/ED phase. This Project was identified in the voter-approved Riverside County Transportation Expenditure Plan and, as such, is a priority project for RCTC.

#### ***Federal Congressionally Designated Funding***

TEA-21 was originally enacted on June 9, 1998, as Public Law 105-178. As part of this authorization, a High Priority Projects Program was established subject to 23 United States Code (USC) 117. The Project is listed as High

Priority Project No. 193 (FHWA 2011). TEA-21 authorized the federal surface transportation programs for highways, highway safety, and transit for the 6-year period from 1998 to 2003 and expired September 30, 2003. Under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which was enacted August 10, 2005, as Public Law 109-59, which reauthorized TEA-21 for the 5-year period 2005 through 2009, the Project was listed again as High Priority Projects Program 1421. In addition, the Project was listed as Section 112 Surface Transportation Project CA794 in the annual Appropriations Act.

**Riverside County Measure A**

Approved in 1988, Measure A designates a “half-cent” sales tax for transportation improvements in three districts of Riverside County—Western Riverside County, Coachella Valley, and Palo Verde. Transportation project funding for each district is proportionate to the sales tax contribution each district provides. In 2002, Measure A was extended by Riverside County voters and will continue to fund transportation improvements, including the proposed Project, through 2039.

**Transportation Uniform Mitigation Fee**

Approved as part of the Measure A extension in 2002, developers of residential, industrial, and commercial property pay a development fee to fund transportation projects that will be required as a result of the growth new developments create. TUMF is administered by the Western Riverside Council of Governments, funding both local area projects and improvements to the arterial backbone system of the region, such as the SR 79 Realignment Project (RCTC 2008b).

Table 1.1-1 is a summary of the Project funding plan that RCTC submitted to the Southern California Association of Governments (SCAG) on September 11, 2012, for inclusion in the Federal Transportation Improvement Program (FTIP).

**Table 1.1-1 Funding Sources for SR 79 Realignment Project (x\$1,000)**

	Engineering	Right-of-Way	Construction	Fund Total
Agency	\$66,649	\$233,500	\$65,000	\$365,149
Bonds – Local			\$710,000	\$710,000
City Funds	\$1,055			\$1,055
Demo – TEA-21	\$4,222			\$4,222
Demo – SAFETEA-LU 2	\$2,160			\$2,160
FFY 2006 Appropriations Earmarks	\$693			\$693
Western Riverside TUMF	\$25,659	\$16,500		\$42,159
TOTAL	\$100,438	\$250,000	\$775,000	\$1,125,438

Source: SCAG 2012

Note: FFY = federal fiscal year

**Programming**

**Federal Transportation Improvement Program**

Per the approved 2015 FTIP, the project is funded through construction and will be funded with local agency and

bond funds. The proposed Project is listed in the SCAG 2012-2035 financially constrained RTP, which was found to conform by SCAG on April 4, 2012, and FHWA and the Federal Transit Administration (FTA) made a regional conformity determination on June 4, 2012. The Amendment #2 to the 2013-2035 RTP was approved by the SCAG in September 2014 and the conformity determination was approved by FHWA and FTA on December 15, 2014. The Project is also included in the SCAG financially constrained 2015 FTIP, and through Amendments 15-01, and is listed on page 8 of 13 of the Riverside County Project Listing, State Highway, project ID RIV 62024. The SCAG 2015 FTIP Project Listing, State Highway, project ID RIV 62024 was determined to conform by FHWA and FTA on December 15, 2014. The Project description in the 2012-2035 RTP and 2015 FTIP is: “On SR 79 in Southwestern Riverside County between 2.0 kilometers south of Domenigoni Parkway to Gilman Springs Road: Realign and Widen SR 79 from 2 to 4 through lanes.” The design concept and scope of the proposed Project are consistent with the project description in the 2012-2035 RTP through Amendment #2, and the and the 2015 FTIP (through Amendment 15-01), and the “open to traffic” assumptions of the SCAG’s regional emissions analysis.

### 1.1.2 Purpose and Need

The Project purpose and need were developed in accordance with the NEPA/404 Integration Process in a joint effort among Caltrans, FHWA, USACE, the United States Environmental Protection Agency (USEPA), and the United States Fish and Wildlife Service (USFWS) to integrate the NEPA and federal Clean Water Act Section 404(b)(1) alternatives analysis process. Local (City of Hemet, City of San Jacinto, County of Riverside) and state agencies (California Department of Fish and Wildlife<sup>2</sup> [CDFW] and the Santa Ana Regional Water Quality Control Board [RWQCB]) also participated in this process. Although the Project would be in the jurisdictions of the Santa Ana RWQCB and the San Diego RWQCB, such a small portion of it would be in San Diego RWQCB jurisdiction that the San Diego RWQCB deferred its participation to the Santa Ana RWQCB on October 14, 2004 (CARWQCB 2004).

### 1.1.3 Project Purpose

The purpose of the proposed action is to provide a transportation facility that will effectively and efficiently accommodate regional north-south movement of people and goods between Domenigoni Parkway and Gilman Springs Road. The Project will:

- Improve traffic flow for local and regional north-south traffic in the San Jacinto Valley
- Improve operational efficiency and enhance safety conditions by maintaining route continuity and upgrade the facility
- Allow regional traffic, including truck traffic, to bypass local roads
- Reduce the diversion of traffic from state routes onto local roads

<sup>2</sup> In 2013 the California Department of Fish and Game (CDFG) changed its name to California Department of Fish and Wildlife (CDFW). When referring to specific citations or other Department guidelines prior to 2013, the Department is referred to as CDFG. Otherwise, the Department is herein referred to as CDFW.

The existing SR 79 facility has inadequate capacity to accommodate both local and regional travel demand associated with the projected growth (residential, retail, and commercial development) and regional attractions (Diamond Valley Lake) in the San Jacinto Valley area through the planning year 2040.

### 1.1.4 Project Need

Several factors have contributed to the deficiencies of the transportation corridor between Domenigoni Parkway and Gilman Springs Road. These include:

- Regional traffic on the current SR 79 competes with local traffic for the limited capacity.
- Current alignment is circuitous with numerous at-grade intersections.
- SR 79 and SR 74 are collocated as one facility for approximately 7 mi.
- Geometric design of SR 79 does not support the movement of trucks exceeding the length of 40 feet, which are authorized under the Surface Transportation Assistance Act (STAA). Currently, STAA vehicles are diverted to Sanderson Avenue.
- Fatal and injury accident rates on most of SR 79 are higher than the statewide average.

### 1.1.5 Capacity, Transportation Demand, and Safety

#### 1.1.5.1 Roadway Capacity (Level of Service)

The traffic analysis conducted for the Project found that portions of the existing SR 79 alignment operate at LOS D, E, or F (see Table 1.1-2 for definitions of LOS). SR 79 operates at LOS E between Sanderson Avenue and State Street and LOS D between State Street and San Jacinto Street. This is the portion of SR 79 collocated with SR 74, an east-west state route that passes through downtown Hemet. Other portions of SR 79 along San Jacinto Street, Ramona Expressway, Sanderson Avenue, and Lamb Canyon Road operate at LOS D or worse, as shown in Table 1.1-3. The remainder of SR 79 operates at an acceptable LOS (C or better) in the Project study area.

With no project, in 2040, the SR 79 facility would operate at LOS D or worse over more than half of the entire route in the study area, even after ultimate general plan classification roadway improvements have been made (see Table 1.1-3). Existing SR 79 and the local street system do not provide sufficient capacity to accommodate the number of trips that are expected in the Project area in 2040. Because of the configuration of existing SR 79, regional traffic currently diverts from SR 79 to travel on more direct north-south routes on the local road network, such as Sanderson Avenue and Warren Road. Table 1.1-3 also shows the traffic operations under the build conditions. The Build alternatives are discussed in detail in Chapter 2, and more detailed information about existing and future traffic operations is provided in Section 3.1.6.

The original base year traffic volumes represent 2004 conditions. The traffic study was revised in 2009 and 2014 to revalidate the traffic forecasts. At that time, since five years had elapsed since the existing counts were conducted, new field counts were obtained to determine whether the 2004 counts were still appropriate to use as the basis for the study's forecasts. The evaluation of the five-year traffic growth showed that actual traffic growth in the study area had been consistently less than the projected growth. It was concluded that the recent growth was well within

the parameters of the 2004-2035 traffic growth forecasts, and the long-term growth forecasts still provided an appropriate basis for future “No Project” traffic conditions. Therefore, the 2035 forecasts were not changed. The 2004 existing conditions analysis was also left unchanged. The 2014 supplemental traffic report included a 2014 existing conditions analysis and a updated revalidation analysis using the same approach used in the 2009 revalidation. To revalidate the original 2035 forecasts, a comparison of traffic volumes was conducted to compare the growth observed in the field (between 2004 and 2014) to the projected growth summarized in the original forecasts (2004 to 2035). The original 2004 ADT data and the updated 2014 ADT data was the basis for the analysis. The data used for 2035 was the projected model forecasts summarized in the original traffic report. The revalidation analysis revealed that traffic volumes in the study area were slightly lower than projected in the original model forecasts, but still trended upward. Therefore, the conclusion was that the original 2035 forecasts were still valid for evaluating traffic impacts and form the basis of the 2020 and 2040 forecasts and analysis in the supplemental traffic report. Additionally, a screenline analysis was completed to compare the original 2035 forecasts with the current 2012 Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP) forecast volumes. Based on the 2012 SCAG model screenline comparative analysis results, the overall conclusion was that the previous forecasts were consistent with the new SCAG model.

**Table 1.1-2 Level of Service Definitions for Multi-Lane Highways**

<b>LEVELS OF SERVICE</b> for Multi-Lane Highways			
Level of Service	Flow Conditions	Operating Speed (mph)	Technical Descriptions
<b>A</b>		60	Highest level of service. Traffic flows freely with little or no restrictions on maneuverability. <b>No delays</b>
<b>B</b>		60	Traffic flows freely, but drivers have slightly less freedom to maneuver. <b>No delays</b>
<b>C</b>		60	Density becomes noticeable with ability to maneuver limited by other vehicles. <b>Minimal delays</b>
<b>D</b>		57	Speed and ability to maneuver is severely restricted by increasing density of vehicles. <b>Minimal delays</b>
<b>E</b>		55	Unstable traffic flow. Speeds vary greatly and are unpredictable. <b>Minimal delays</b>
<b>F</b>		<55	Traffic flow is unstable, with brief periods of movement followed by forced stops. <b>Significant delays</b>

Source: 2000 HCM, Exhibit 21-3, Speed-Flow Curves with LOS Criteria for Multi-Lane Highways

**Table 1.1-3 SR 79 2014 Existing Conditions and 2040 Average Daily Traffic Volumes and Level of Service**

SR 79 Roadway	<u>2014<sup>a</sup> Existing Conditions</u>			<u>2040 No Project</u>			<u>2040 Build Alternatives<sup>b</sup></u>		
	LOS C Roadway Capacity	Daily Traffic Volumes	LOS	LOS C Roadway Capacity <sup>c</sup>	Daily Traffic Volumes	LOS	LOS C Roadway Capacity <sup>c</sup>	Daily Traffic Volumes	LOS
<b>Winchester Road (SR 79) between:</b>									
Newport Road and Domenigoni Parkway	<u>28,700</u>	<u>21,626</u>	<u>C or better</u>	27,300	<u>40,400</u>	F	27,300	<u>1,300</u>	C or better
Domenigoni Parkway and Simpson Avenue	14,400	<u>10,728</u>	C or better	27,300	<u>42,000</u>	F	27,300	<u>3,700</u>	C or better
Simpson Avenue and Florida Avenue	14,400	<u>10,215</u>	C or better	27,300	<u>38,600</u>	F	27,300	<u>4,300</u>	C or better
<b>Florida Avenue (SR 74/SR 79) between:</b>									
Winchester Road and Warren Road	32,700	<u>28,574</u>	C or better	49,000	<u>63,200</u>	E	49,000	<u>32,400</u>	C or better
Warren Road and Sanderson Avenue	32,700	<u>22,509</u>	C or better	49,000	<u>53,200</u>	<u>D</u>	49,000	<u>36,000</u>	C or better
Sanderson Avenue and State Street	27,300	<u>31,012</u>	<u>E</u>	27,300	<u>39,900</u>	F	27,300	<u>39,400</u>	F
State Street and San Jacinto Street	27,300	<u>28,073</u>	<u>D</u>	27,300	<u>34,300</u>	<u>F</u>	27,300	<u>33,400</u>	<u>E</u>
<b>San Jacinto Street (SR 79) between:</b>									
Florida Avenue and <u>Menlo Avenue</u>	20,700	<u>17,029</u>	C or better	20,700	<u>20,800</u>	<u>D</u>	20,700	<u>19,000</u>	C or better
<u>Menlo Avenue</u> and <u>Esplanade Avenue</u>	20,700	<u>18,296</u>	C or better	<u>27,300</u>	<u>31,400</u>	<u>E</u>	<u>27,300</u>	<u>28,700</u>	<u>D</u>
<u>Esplanade Avenue</u> and <u>Seventh Street</u>	20,700	<u>15,955</u>	C or better	<u>27,300</u>	<u>22,900</u>	<u>C or better</u>	<u>27,300</u>	<u>20,300</u>	C or better
<u>Seventh Street</u> and <u>Main Street</u>	10,400	<u>11,151</u>	<u>D</u>	<u>27,300</u>	<u>18,000</u>	C or better	<u>27,300</u>	<u>16,200</u>	C or better
<b>Ramona Boulevard (SR 79) between:</b>									
Main Street and State Street	10,400	<u>6,166</u>	C or better	20,700	<u>13,300</u>	C or better	20,700	<u>13,400</u>	C or better
<b>State Street (SR 79) between:</b>									
Ramona Boulevard and Ramona Expressway	27,300	<u>18,436</u>	C or better	27,300	<u>23,000</u>	C or better	27,300	<u>23,400</u>	C or better
<b>Ramona Expressway (SR 79) between:</b>									
State Street and Sanderson Avenue	14,400	<u>17,460</u>	<u>E</u>	43,100	<u>39,600</u>	C or better	43,100	<u>41,000</u>	C or better
<b>Sanderson Avenue (SR 79) between:</b>									
Ramona Expressway and Gilman Springs Road	27,300	<u>36,743</u>	<u>E</u>	<u>49,000</u>	<u>53,600</u>	<u>D</u>	<u>49,000</u>	<u>51,900</u>	<u>D</u>
<b>Lamb Canyon Road (SR 79) between:</b>									
Gilman Springs Road and Interstate 10	28,700	<u>30,294</u>	<u>D</u>	61,200	<u>54,500</u>	C or better	61,200	<u>60,200</u>	C or better

**Table 1.1-3 SR 79 2014 Existing Conditions and 2040 Average Daily Traffic Volumes and Level of Service**

SR 79 Roadway	<u>2014<sup>a</sup> Existing Conditions</u>			<u>2040 No Project</u>			<u>2040 Build Alternatives<sup>b</sup></u>		
	LOS C Roadway Capacity	Daily Traffic Volumes	LOS	LOS C Roadway Capacity <sup>c</sup>	Daily Traffic Volumes	LOS	LOS C Roadway Capacity <sup>c</sup>	Daily Traffic Volumes	LOS

Source: Final SR 79 Realignment Project Supplemental Traffic Report, September 2014

<sup>a</sup>2014 was used as the existing conditions year for the traffic analysis. More information is provided in Section 3.1.6.

<sup>b</sup>For purposes of the traffic analysis, the different alignments do not substantially affect traffic; therefore, a generic Build alternative was analyzed.

<sup>c</sup>Capacity of the roadway in 2040 reflects the ultimate General Plan classification of the roadway.

The current alignment of SR 79 does not facilitate the movement of local and regional traffic between Domenigoni Parkway and Gilman Springs Road. SR 79 is circuitous, with numerous at-grade intersections, residential and commercial driveways, traffic signals, and other impediments to efficient travel. The numerous direct access points to and from SR 79 result in conflicts between local and regional traffic that degrade the operational characteristics of the facility. With no viable alternative facilities, Sanderson Avenue and Warren Road have become default north-south routes for regional traffic, thereby adding regional traffic onto local streets. This regional traffic, particularly heavy trucks, is not consistent with the pavement section and land use on these local roads.

More detailed information about existing and future traffic operations is provided in Section 3.1.6.

### 1.1.5.2 Safety

According to the most recent data available from Caltrans Traffic Accident Surveillance & Analysis System (TASAS) Table B, the actual accident rate on SR 79 between Domenigoni Parkway and Gilman Springs Road is 1.36, which is 47 percent higher than the statewide average rate of 0.92 for similar facilities. A summary of the accident rates and types of accidents on SR 79 in the study area for a 3-year period from January 1, 2011, through December 31, 2013, is provided in Tables 1.1-4 and 1.1-5.

The most common types of accidents reported in the Project study area were rear-end (34 percent), broadside (23 percent), and hit-object (17 percent) accidents. Rear-end and broadside collisions are typically congestion-related accidents (Spainhour 2005). Also, the large number of access points along existing SR 79 increases the frequency of turning movements into and out of driveways and intersections. This increases the number of conflict points and the potential for accidents. Mixing local and regional traffic along with the numerous access points increases congestion and potential conflicts, which may increase the potential for accidents along existing SR 79. Design elements for the proposed Project to improve safety should separate local and regional traffic and reduce the volumes on the existing alignment, which is expected to decrease the total number of accidents.

**Table 1.1-4 SR 79 Actual and Average Accident Rates from January 1, 2011 to December 31, 2013**

Location	Total Number of Accidents	Actual Rates (Mainline rates are per million vehicle miles)			Statewide Average Rates (Mainline rates are per million vehicle miles)		
		F*	F + I**	Total	F*	F+I**	Total
PM R15.78/R33.88 – Domenigoni Parkway to Gilman Springs Road	<u>103</u>	<u>0.013</u>	<u>0.69</u>	<u>1.36</u>	<u>0.02</u>	<u>0.39</u>	<u>0.92</u>

Source: Caltrans, Traffic Accident Surveillance and Analysis System (TASAS) Selective Record Retrieval for the period of January 1, 2011, to December 31, 2013.

Note: Post miles (PMs) are the limits of this traffic data. These, although similar, are not the same as the Project limits.

\* Fatal

\*\* Fatal and injury

**Table 1.1-5 Summary of Types of Accidents from January 1, 2011 to December 31, 2013**

Location	Head-On	Sideswipe	Rear-End	Broadside	Hit Object	Overturn	Pedestrian	Other	Total
PM R15.78/R33.88 – Domenigoni Parkway to Gilman Springs Road	<u>9%</u>	<u>5%</u>	<u>34%</u>	<u>23%</u>	<u>17%</u>	<u>9%</u>	<u>2%</u>	<u>1%</u>	<u>100%</u>

Source: Caltrans, TASAS Selective Record Retrieval for the period of January 1, 2011, to December 31, 2013.

Note: Post miles (PMs) are the limits of this traffic data. These, although similar, are not the same as the Project limits.

### 1.1.6 Roadway Deficiencies

As stated in Section 1.2.2, in Hemet, the north-south corridor of SR 79 overlaps with the east-west corridor of SR 74 for approximately 7 mi on Florida Avenue. Much of this portion of SR 74/Florida Avenue intersects with local streets that lead directly to residential neighborhoods and provides access to various businesses. As a result, the north-south regional traffic on SR 79 is mixed with the east-west regional traffic on SR 74/Florida Avenue and with local traffic.

As shown in Figure 1.1-3, the existing SR 79 alignment is circuitous and overly long for regional traffic. The straight-line distance from Domenigoni Parkway to Gilman Springs Road is about 10 mi. Along existing SR 79, the distance is about 18 mi. The existing route intersects both Sanderson Avenue and State Street twice. Not only is this route overly long and doubles back on itself, but, as described in the following section, it is characterized by numerous at-grade intersections, residential and commercial driveways, traffic signals, and other impediments that degrade the operational characteristics of the facility. Some traffic diverts to a shorter route (14 mi) by turning from Florida Avenue onto Sanderson Avenue. Although legal, this type of traffic is not compatible with the primarily residential land uses through which it passes.

### 1.1.6.1 Roadway Design—Access

One of the design issues of the route on existing SR 79 is that numerous access points exist along the facility (driveways for residential and commercial properties, as well as intersecting streets), especially in Winchester, Hemet, and San Jacinto. Access points along SR 79 between Newport Road and Gilman Springs Road include driveway access (307), T-intersections (35), and full intersections (58) (as of February 2002). The locations of the driveways along SR 79 are presented in Figure 1.1-4, while the T-intersections and full intersections are shown in Figure 1.1-5. The presence of access points along SR 79 encourages turning movements into and out of these driveways, thereby decreasing the efficiency of traffic movement. Consequently, mixing local and regional traffic along this facility has resulted in portions of SR 79 not being able to provide effective traffic movement. This situation is also documented in the Route Concept Report (Department 1992). To improve the LOS on SR 79 between Domenigoni Parkway and Gilman Springs Road, the number of access points would need to be significantly reduced.

### 1.1.6.2 Roadway Design—Geometrics

The Truck Network on California State Highways was instituted by Assembly Bill 866 (1983–1984 Reg. Sess.) to implement the federal Surface Transportation Assistance Act (STAA) of 1982. The STAA requires states to allow larger single and double trailer trucks on a National Network of interstates and the non-interstate Federal-Aid Primary System. In addition to the National Network, Terminal Access (TA) state highways meet the geometric standards to accommodate STAA trucks, with no special restrictions for weight or length. Advisory state highways have special restrictions for weight or length because they are not safe for trucks of specific lengths. The length of a truck is measured from the kingpin (the main pivot in the steering mechanism of a vehicle) to the rear axle (KPR). Trucks with a KPR of less than 40 ft (less than KPR 40) are restricted on Advisory routes unless the route is posted for a lesser KPR length.

SR 79 is a TA route from San Jacinto Street to Domenigoni Parkway and north of Gilman Springs Road. The portion of SR 79 between these locations is an Advisory route for KPR 30 (trucks 30 ft long). The geometrics of the route are inadequate for longer vehicles such as are common for local and regional freight movement. In Municipal Code 10.08.040, San Jacinto allows vehicles that exceed 14,000 pounds gross vehicle weight rating (GVWR) on Sanderson Avenue from the Ramona Expressway southbound to the southernmost city limits. In municipal code section 78-61, Hemet allows vehicles that exceed 14,000 pounds GVWR on Sanderson Avenue from the northernmost city limit to Domenigoni Parkway. Sanderson Avenue, which passes through primarily residential areas, has become a route for large regional trucks due to the inadequacy of SR 79.

In general, the responsibility for providing roads that serve regional traffic, particularly truck traffic, is a state and federal responsibility. SR 79 through Hemet and San Jacinto is a state route that is a designated truck route, but geometric deficiencies have resulted in the road being restricted for longer trucks (e.g., STAA 40 and STAA 35). Because other alternatives are not available, local authorities allow STAA 40 vehicles up to 14,000 pounds on Sanderson Avenue and Warren Road, although these local streets were not designed for heavy trucks and will deteriorate more quickly than an appropriately designed highway.

## 1.1.7 Social Demands or Economic Development

Regional population is forecast to increase an additional 153,624 people between 2005 and 2035. The city of Hemet could double in population between 2005 and 2035, from 68,591 to 144,888 people. The city of San Jacinto could increase threefold, from 30,007 to 96,107. Winchester is the relatively slow-growth community in the area, with its population forecast to increase 63 percent, from 17,739 to 28,966, by 2035 (County 2006).

The existing and planned land uses, the adopted general plans, and a number of specific plans in the City of Hemet, City of San Jacinto, and Riverside County that would affect the proposed Project are described in Section 3.1.1. Hemet and San Jacinto, from the foot of the San Jacinto Mountains on the east to Sanderson Avenue on the west, are almost fully developed. Areas between Sanderson Avenue and Warren Road are rapidly developing. Land use plans and zoning for areas west of Hemet and northwest of San Jacinto document planned residential and commercial development. The San Jacinto General Plan shows several new or enhanced secondary roads in the area. The City of Hemet General Plan Circulation Element Update includes a number of collector, arterial, secondary, and other major roadways that would provide access to developable areas.

## 1.1.8 Legislation

The legislation associated with the Project was also discussed in Section 1.1.1.2, and is summarized below. The Project has been included in three authorizations.

- High Priority Project Program, Project No. 193 in the TEA-21 High Priority Projects Program, authorized between June 9, 1998, and September 30, 2003 (FHWA 2011).
- High Priority Projects Program, Project No. 1421 in SAFETEA-LU, authorized on August 10, 2005.
- Section 112 Surface Transportation Project #CA794 in the annual Appropriations Act.

## 1.1.9 Modal Interrelationships and System Linkages

### 1.1.9.1 Bus

The Riverside Transit Agency (RTA) operates local and regional bus service in the Hemet/San Jacinto area. RTA operates bus route 31 from Hemet to Beaumont, route 74 from San Jacinto to Perris, route 79 from Hemet to Temecula, routes 27 and 212 from Hemet to Riverside, and route 217 from San Jacinto to Escondido. All of these routes pass through the Project area, and the Project would not preclude current transit service.

As a state highway, SR 79 is intended to be a route for local and regional traffic, including private vehicles, buses, and commercial vehicles. It links the rural areas of San Diego County to the western communities of Riverside County and connects the communities of Rancho California, Murrieta Hot Springs, and Winchester and the cities of Temecula, Murrieta, Hemet, San Jacinto, and Beaumont. Existing SR 79 has limited compatibility with future multimodal transportation systems. The north-south segment of SR 79 between Florida Avenue and Ramona Expressway is often narrow, with development to the edge of the ROW, several signalized intersections, and many cross streets and driveways, so it is not well suited for large vehicles. In this area, SR 79 is posted as a KPRA 30 advisory route, meaning that longer vehicles are advised to use another route. This is an indication that the route is not well suited as an express or commuter bus route. A realigned SR 79 would be more amenable to express or

commuter bus service because buses would be able to move more quickly and maintain more predictable schedules, factors that can lead to higher passenger ridership.

### 1.1.9.2 Airport

Other transportation facilities in the region that city residents and workers use include the Ontario International Airport, French Valley Airport, and Hemet-Ryan Airport. Ontario International Airport is a commercial service airport about 55 mi northwest of SR 79. French Valley Airport and Hemet-Ryan Airport are general aviation airports owned by the County of Riverside. French Valley Airport is about 20 mi southwest of the Project. The Hemet-Ryan Airport, a public-use airport, is located about 2 mi east of the realigned SR 79. The realigned SR 79 would provide a new north-south limited-access expressway connection to the airport via a proposed interchange on Florida Avenue in Hemet. Hemet-Ryan Airport provides ground support, fuel, fuel services, maintenance, and aircraft-storage services to fixed-based operators and recreational flyers. It is the site of the Ryan Field Air Museum and California Department of Forestry and Fire Protection firefighting operations at Ryan Air Attack Base, Hemet-Ryan Airport.

### 1.1.9.3 Rail

There is no current light or commuter rail project programmed in the Hemet/San Jacinto area. The San Jacinto Branch Line is an existing rail line owned by RCTC. Plans call for the expansion of Metrolink service along the San Jacinto Branch Line that would connect the downtown areas of Hemet and San Jacinto with downtown Riverside. The Hemet General Plan shows a Metrolink station at the future West Hemet Business Park/Mixed Use area that would link to the proposed SR 79 Project, which would not preclude these future plans. This would allow connections to Metrolink service to Los Angeles, Orange, and San Bernardino counties and other parts of Riverside County.

RCTC, in December 2015, completed the extension on the San Jacinto Branch Line Commuter Rail (Perris Valley Line) Project, a 24-mi extension of the Metrolink 91 Line that currently provides service from Riverside to Fullerton and downtown Los Angeles. The Perris Valley Line extension parallels Interstate 215 (I-215) and starts at the existing Riverside Downtown Metrolink Station and proceed north on the Burlington Northern Santa Fe Line for about 3 mi before turning southeast along the San Jacinto Branch Line. The terminus of this extension is at SR 74 and Ethanac Road in Perris. The Perris Valley Line is expected to begin operation in March 2016.

The nearest opportunity for passenger rail service from San Jacinto to downtown Riverside is the South Perris Station, where Metrolink operates commuter trains to Los Angeles, Orange, and San Bernardino counties. There is also a commuter express bus link that provides a route between Temecula, Murrieta, Lake Elsinore, and the Corona Metrolink station. Metrolink is operated by the Southern California Regional Rail Authority (SCRRA), which provides transit services to the counties of Los Angeles, Riverside, San Bernardino, San Diego, Orange, and Ventura. Amtrak operates passenger service from Los Angeles and San Bernardino to Palm Springs and points east of California on a line that roughly parallels Interstate 10 (I-10) north of the Hemet/San Jacinto area.

#### 1.1.9.4 Transportation System Linkages

There are limited regional transportation facilities, either vehicular or rail, directly serving Hemet and San Jacinto. SR 79 is the major roadway connecting the San Jacinto Valley with the surrounding region. SR 79 provides north-south connectivity through the San Jacinto Valley to I-10 to the north and the Murrieta, Temecula, and French Valley areas and connections to I-15 to the south. Local roads such as Warren Road, Sanderson Avenue, and State Street provide north-south connectivity within the valley, although not beyond.

SR 74 (Florida Avenue) is the primary east-west corridor in Hemet, while the Ramona Expressway serves the same purpose for San Jacinto. Also, both roads link with I-215 to the west. They also merge onto SR 74 east of Hemet and traverse the mountains to reach the Palm Desert/Rancho Mirage area. Domenigoni Parkway is an additional east-west road through the southern portion of the San Jacinto Valley that links I-215 with State Street. Stetson Avenue and Esplanade Avenue provide local east-west connectivity within the valley.

A realigned SR 79 would shorten travel distances and travel times, would remove north-south traffic that now mixes with east-west traffic on SR 74, and would provide a truck route with appropriate geometrics that does not pass through residential areas. Realigned SR 79 would improve linkages between Domenigoni Parkway and SR 74 and between SR 74 and the Ramona Expressway and eventually the Mid County Parkway (MCP), as well as local roads such as Warren Road, Sanderson Avenue, State Street, Stetson Avenue, and Esplanade Avenue.

The MCP is a proposed 16-mile east-west limited-access route for western Riverside County that will connect the San Jacinto area with the Perris area and points west. The MCP will provide east-west circulation capacity and serve as an integral link to SR 79, Sanderson Avenue, and Ramona Expressway.

#### 1.1.10 Independent Utility and Logical Termini

FHWA regulations (23 Code of Federal Regulations [CFR] 771.111 [f]) require that the action evaluated:

- Connect logical termini and be of sufficient length to address environmental matters on a broad scope
- Have independent utility or independent significance (be usable and require a reasonable expenditure even if no additional transportation improvements in the area are made)
- Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements

The Route Concept Report (1992) evaluated the entire length of SR 79 in Riverside County from the San Diego/Riverside county line to the junction at I-10. The ultimate facility was determined to be a six-lane expressway. Part of the analysis for the Route Concept Report was an evaluation of the *environmental and geometric constraints of expanding the facility*. The analysis resulted in design objectives for parts of SR 79 to allow projects to be developed independently, but in a manner that is compatible with the entire facility. Although most of the alignment was proposed for widening, two areas were identified for realignment. One was from Butterfield Stage Road in Temecula north to Keller Road. The second was the proposed Project, from Newport Road to Gilman Springs Road. Because of the unique purpose and need to realign this portion of SR 79, it was promoted as a separate project and was determined to satisfy FHWA regulations (23 CFR 771.111 [f]) as having independent utility and logical termini. This is further supported when evaluating the objectives for the portions of

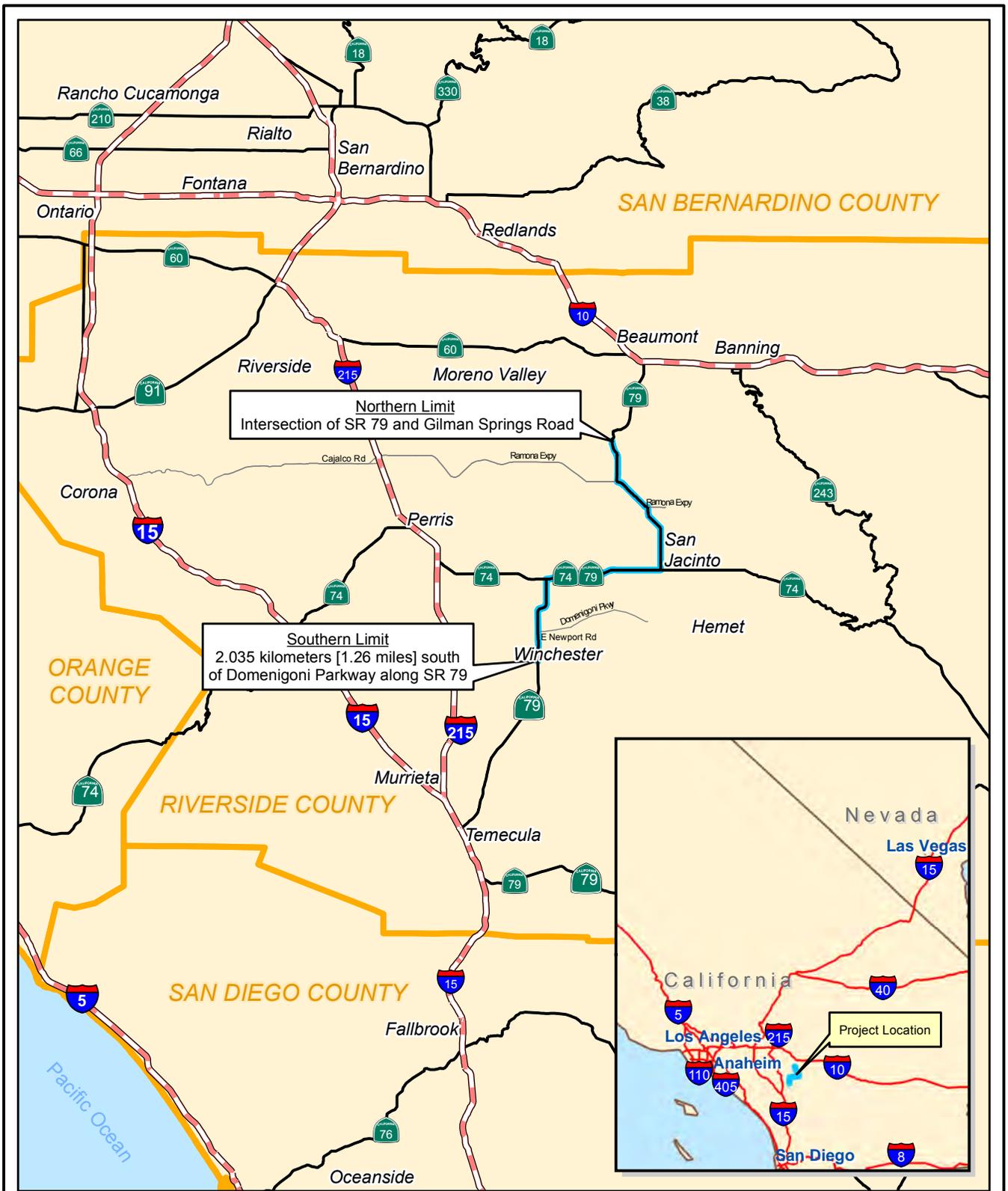
SR 79 south and north of the proposed Project. The projects discussed below are also included in the Riverside County General Plan, Circulation Element.

Over the past 10 years, several projects have been constructed on SR 79. Many of these have widened SR 79 south of the Project. Immediately to the south, the SR 79 Widening Project (sponsored by Riverside County Transportation Department) will improve the existing alignment of SR 79 from Thompson Road to just south of Domenigoni Parkway (proposed Project southern limit), a distance of approximately 5 mi. This portion of SR 79 would initially be constructed as a four-lane facility and then ultimately a six-lane facility. Currently, the first phase of the four-lane widening is under construction. Farther south, Riverside County also sponsored several signal and road-widening projects from Hunter Road to Thompson Road. Near the southern limit of the Project, Domenigoni Parkway, which runs perpendicular to SR 79, has been extended west to I-215 from its previous termination at SR 79.

North of the Project limit, SR 79 crosses the San Jacinto River and enters Lamb Canyon. SR 79 is a four-lane expressway through Lamb Canyon to I-10 in Beaumont. Although this section is expected to be widened to six lanes in its ultimate concept, no project is currently proposed. The future MCP Project would connect with SR 79 at Ramona Expressway, just south of Gilman Springs Road.

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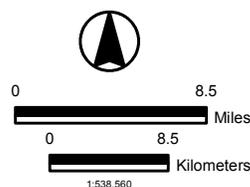


Basemap Data: ESRI StreetMaps, 2004.

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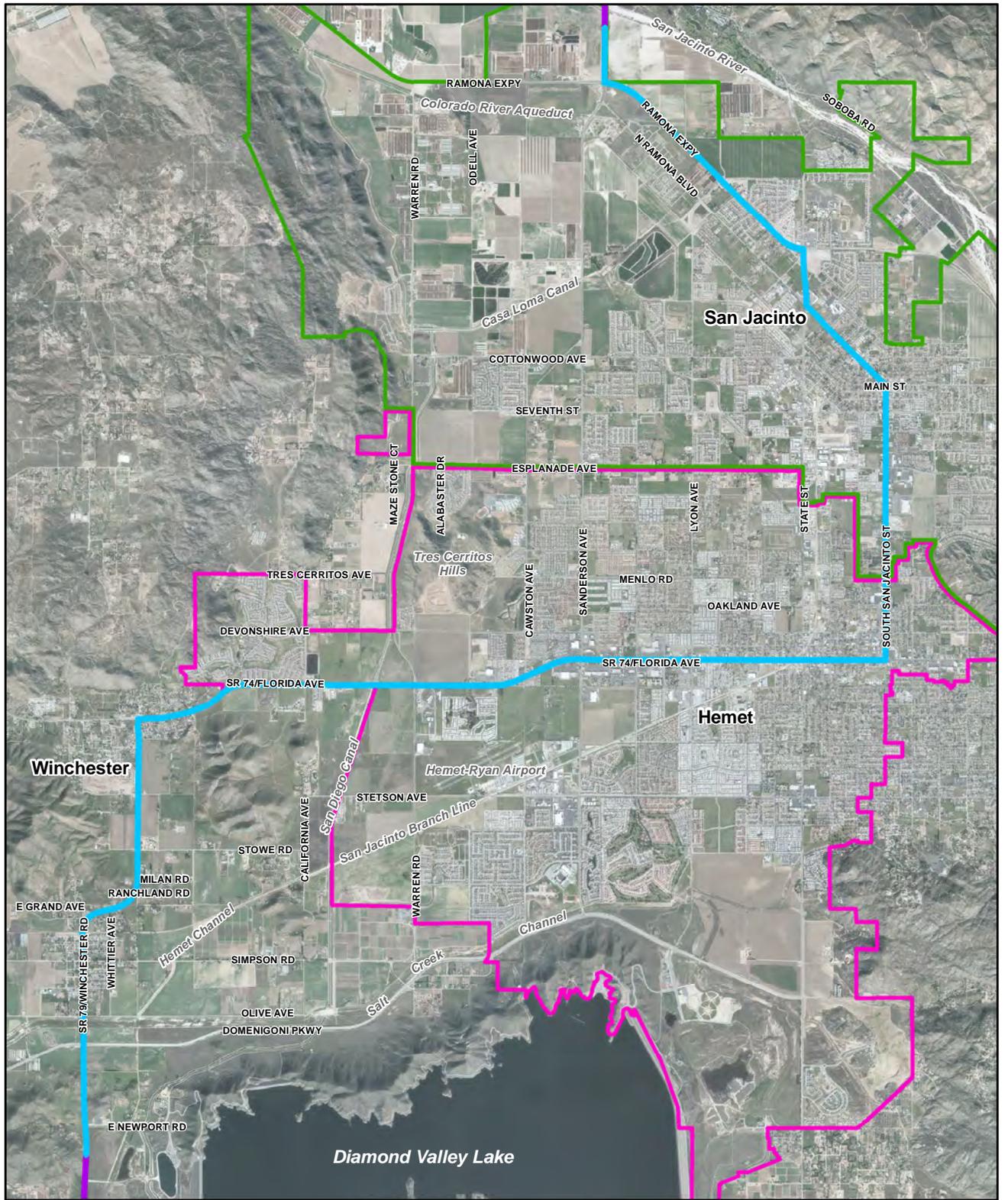
**LEGEND**

-  Existing State Route 79
-  Proposed for Realignment
-  Interstate<sup>ES</sup>
-  State Route<sup>ES</sup>
-  Local Road<sup>ES</sup>
-  County Boundary<sup>CR</sup>



**Figure 1.1-1**  
**Regional Project Location**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project

Sources: CR - County of Riverside; ES - ESRI

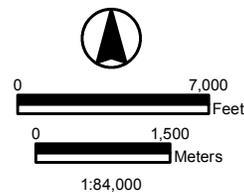


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**LEGEND**

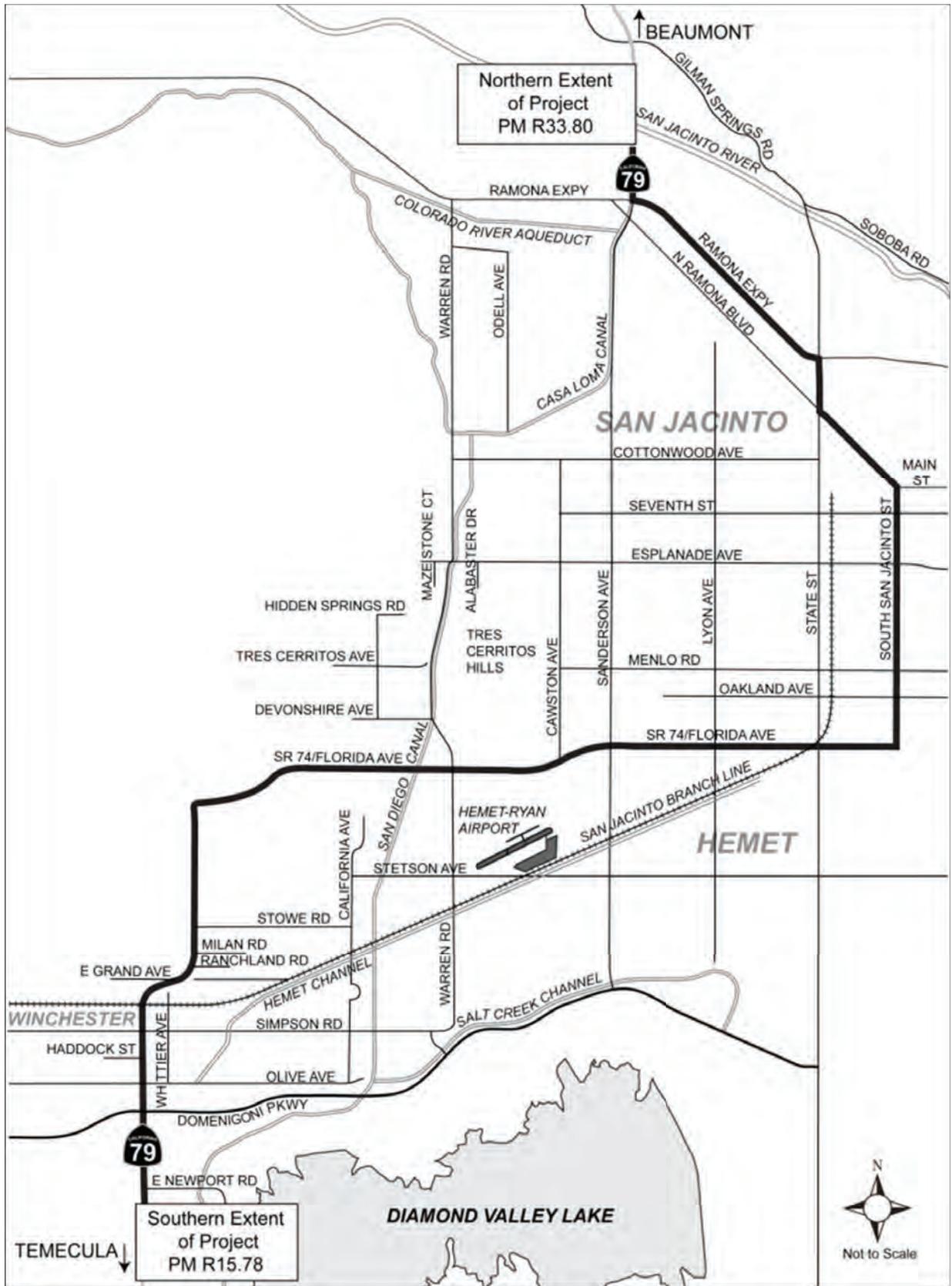
-  Existing State Route 79
-  Proposed for Realignment
-  Existing State Route 79
-  Not to be Improved
-  City of Hemet<sup>CR</sup>
-  City of San Jacinto<sup>CR</sup>



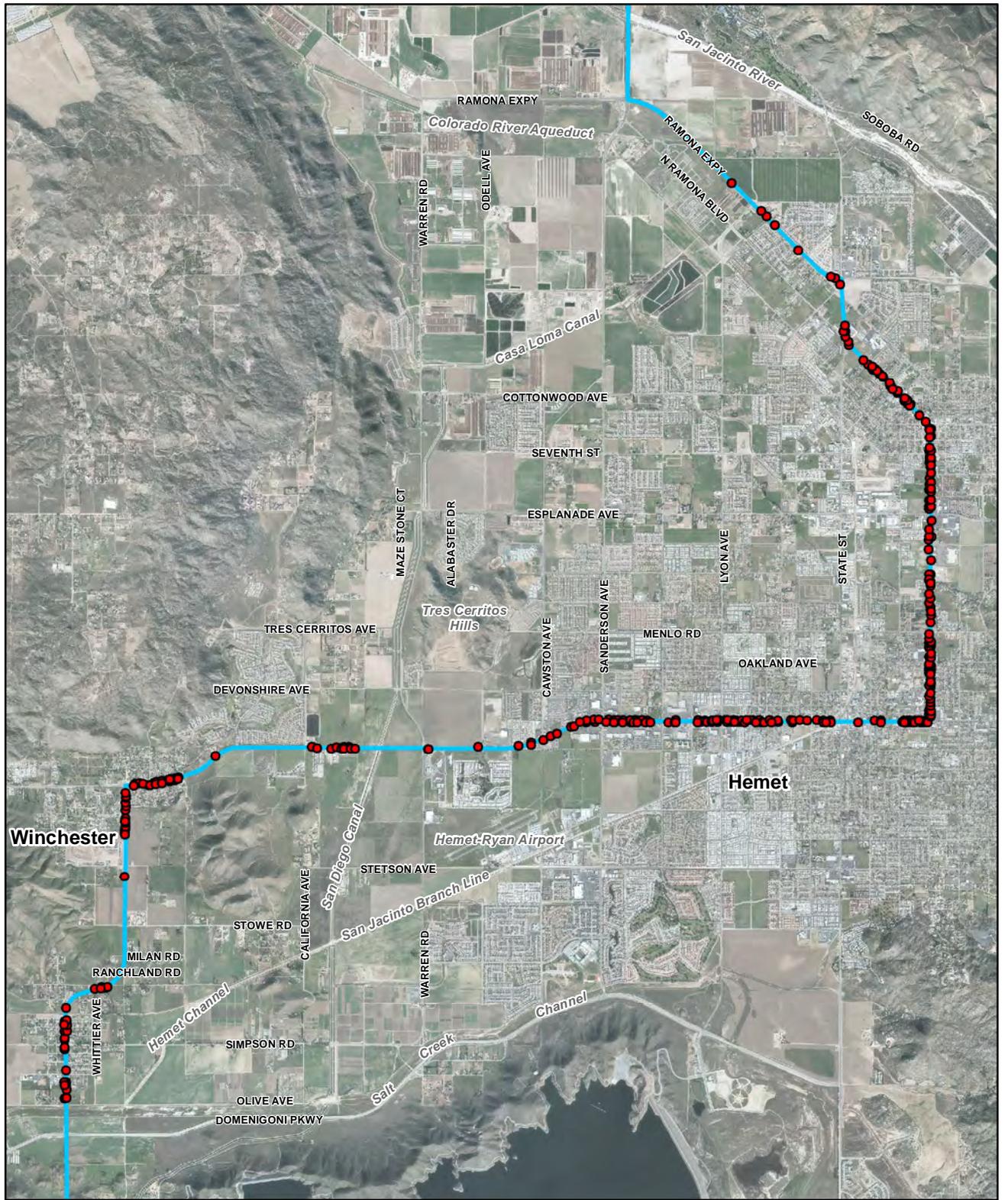
**Figure 1.1-2**  
**Existing State Route 79**  
**with City Boundaries**

Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project

Source: CR - County of Riverside



**Figure 1.1-3**  
**Existing SR 79 Alignment**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project

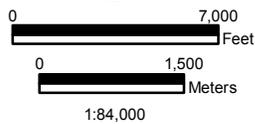


Aerial Date: February 2011, Aero-Graphics

\\GALT\PROJ\RCTC\171146\2015\MAPFILES\EIS\CH2\PAD\_DRIVEWAYENCROACH\_B.MXD PAD\_DRIVEWAYENCROACH\_B.PDF 12/16/2015

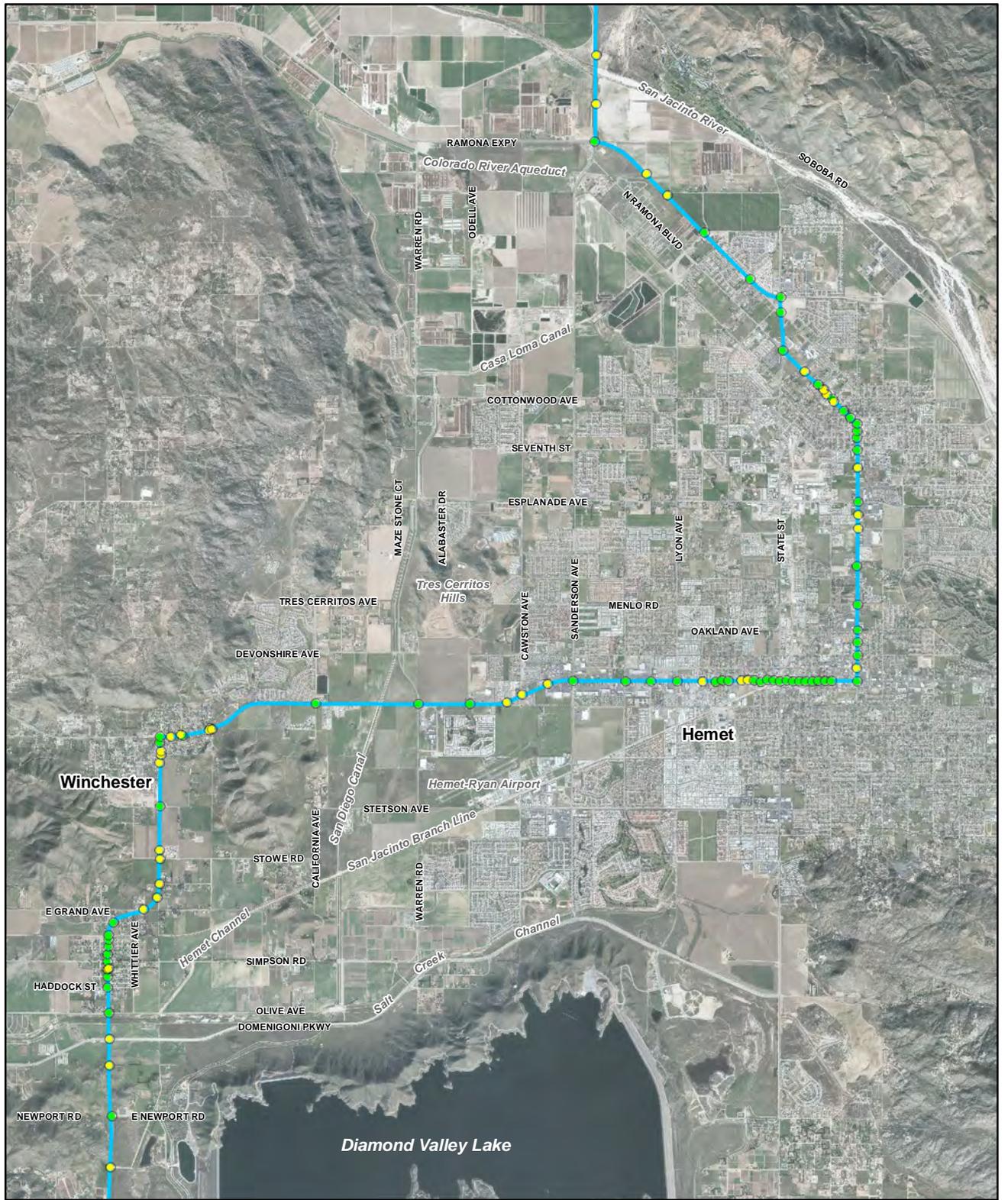
**LEGEND**

- Driveway
- State Route 79



**Figure 1.1-4  
SR 79 Driveway  
Locations**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

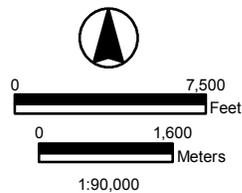


Aerial Date: February 2011, Aero-Graphics

\\GALTI\PRO\J\RCTC\171146\2015\MAPFILES\EIS\CH2PAD\_INTERENCROACH\_B.MXD PAD\_INTERENCROACH\_B.PDF 12/16/2015

**LEGEND**

- Existing Intersection
- Existing T-Intersection
- Existing State Route 79



**Figure 1.1-5**

**SR 79 Existing Intersection Locations**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

Source: Final Purpose and Need, 2003.



# Chapter 2 Project Alternatives

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## 2.1 Project Description

This chapter describes the proposed action and the design alternatives that were developed to meet the identified need through accomplishing the defined purpose(s), while avoiding or minimizing environmental impacts. The alternatives are Build Alternative 1a, Build Alternative 1b, Design Option 1b1, Build Alternative 1b with Refinements (1br), Build Alternative 2a, Build Alternative 2b, Design Option 2b1, and the No Build Alternative.

The Project would be located on State Route 79 (SR 79) in the western portion of the San Jacinto Valley, Riverside County, and is proposed as a divided limited-access expressway with four travel lanes (two lanes in each direction) on a new alignment. The Project limits begin at kilometer post (KP) R25.4 (post mile [PM] R15.78), which is 1.26 miles (mi) south of Domenigoni Parkway, and end approximately 18 mi north at the intersection of SR 79 and Gilman Springs Road (KP R54.4 [PM R33.80]). The proposed Mid County Parkway (MCP) project would connect with SR 79 at this location.

Additional construction would be required to incorporate access modifications for the ultimate roadway design, a four-lane freeway (all remaining intersections would be converted to grade-separated interchanges). Timing would depend on funding, roadway capacity, operation, or safety needs, but the additional construction would be completed after Opening Year (2020) and prior to the 20-Year Design Horizon of the Project (2040). The Opening Year (2020) conditions are shown in Figure 2.1-1, and the 20-Year Design Horizon conditions are illustrated in Figure 2.1-2. Although the Project would be phased, potential environmental impacts have been analyzed for the 20-Year Design Horizon because this condition represents the full Project impact.

Right-of-way (ROW) would include all permanent acquisition, temporary easements, and permanent easements to accommodate construction, operation, and maintenance activities associated with a new transportation facility. Together, these are called the Project ROW. The Project Impact Area (PIA) includes the Project ROW and all local road improvements made by the Project, including street realignments and cul-de-sacs. The PIA is included in figures to show this.

## 2.2 Project Alternatives

The Project alternatives were developed in accordance with the National Environmental Policy Act (NEPA)/Section 404 Integration Process in a joint effort among federal, state, and local agencies (California Department of Transportation [Department], Federal Highway Administration [FHWA], United States Army Corps of Engineers [USACE], United States Environmental Protection Agency [USEPA], United States Fish and wildlife Service [USFWS], California Department of Fish and Wildlife [CDFW], Regional Water Quality Control Board [RWQCB], Riverside County Transportation Commission [RCTC], City of Hemet, City of San Jacinto, and County of Riverside), supported by community involvement over several years. This process involved identifying all possible alignments for SR 79 between Newport Road (the southern terminus specified in the Route Concept Report of 1992) and Gilman Springs Road and evaluating each based on selected criteria.

The specific criteria applied in this analysis included an evaluation of the four bullet items listed below.

- Purpose and Need
- Feasible (Constructible)
- Regulatory Constraint (Permittable)
- Reasonable (Fundable)

The evaluation of the criteria was supported by various field work and records review and coordination with the local agencies. This coordination ensured the compatibility of the Project alternatives with each element of the Riverside County Integrated Project (RCIP) (which includes the Community and Environmental Transportation Acceptability Process [CETAP], the Western Riverside County Multiple Species Habitat Conservation Plan [MSHCP], and the Riverside County General Plan) and the developing general plans of the Cities of Hemet and San Jacinto. This effort is summarized in Section 2.2.5, Alternatives Considered But Eliminated from Further Discussion, documented in several reports (see Chapter 1, Project History and the List of Technical Studies at the beginning of Chapter 3), and determined the Project alternatives described below. These Project alternatives were approved by each of the NEPA/404 Memorandum of Understanding (MOU) signatory agencies in their respective Final Agreements in July 2007 (FHWA 2007a, b, c; USACE 2007; USEPA 2007; USFWS 2007).<sup>1</sup>

## 2.2.1 Build Alternatives

The Project alternatives are Build Alternatives 1a and 1b (including Design Option 1b1), Build Alternative 1b with Refinements (1br), Build Alternatives 2a and 2b (including Design Option 2b1), and the No Build Alternative. The No Build Alternative, which is required by NEPA and California Environmental Quality Act (CEQA) regulations, is considered a “do nothing” or “no action” alternative.

### 2.2.1.1 Design Features of the Build Alternatives

The Build alternatives were defined based on specific elements of roadway design. As illustrated in Figure 2.2-1, each Build alternative is composed of several roadway segments. Each roadway segment has specific design features that are either common to all Build alternatives or unique to one or more Build alternatives, but not common to all. Below is a summary of the roadway segments that are the basis of the Build alternatives, followed by descriptions of common and unique features of the Build alternatives.

#### **Roadway Segments**

Roadway segments have been created to describe the Project at specific locations along the alignment. There are 14 potential roadway segments (designated A through N, south to north), as illustrated in Figure 2.2-1. The typical cross-section for the Project was first defined in the 1992 Route Concept Report. The ultimate concept for the facility is a six-lane expressway (three lanes in each direction). The typical dimensions proposed for the Project are those designated by Riverside County for a six-lane expressway. These dimensions include a 60-foot (ft) median

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<sup>1</sup>Complete references for all citations are in Chapter 8.

and a 220-ft ROW. This is from Riverside County Road Improvement Standards & Specifications, Ordinance 461, Standard 82.

Roadway segments were designed from a typical cross-section for a limited-access expressway according to these standards (see Figure 2.2-2). A smaller typical section could be considered during final design to reduce ROW and environmental impacts, but to ensure that all environmental impacts would be analyzed, the smaller cross-section was not considered at this time. Based on this cross-section, roadway segments would include inside and outside shoulders, a median, and two lanes in each direction (referred to as the Project roadway). The median width would be 84.0 ft measured from the inside edge of the travel lane on one side of the roadway to the inside edge of the travel lane on the other side. This median width would be consistent with Riverside County Standard 82 because it allows room for a future project to add two more lanes (to achieve the ultimate six-lane concept) without increasing the ROW. Within the median, there would be inside shoulders that are each 5.0 ft wide. The combined width of the two travel lanes would be 24.0 ft, each 12.0 ft wide. The outside shoulder width would be 10.0 ft. Side slopes would be required outside the shoulders. An additional 15.0 ft beyond the toe of slope/top of cut would be provided for maintenance. Because the width of the side slopes would vary based on the elevation along the roadway, a varying ROW would be required. Therefore, the actual width of the Project ROW would range from 230 ft to 2,035 ft, based on locations that include roadway versus those that include interchanges, respectively.

Combining the roadway segments described above to link the Project termini south of Domenigoni Parkway at the southern end of the Project and south of Gilman Springs Road in the north resulted in five Build alternatives and two design options.

**Common and Unique Design Features**

Table 2.2-1 lists the major design features of each of the Build alternatives and the two design options. Design features found in all six are common design features. Design features that are exclusive to a particular roadway segment or that occur at a specific location along the Project roadway are unique design features. Unique design features include utility relocation areas and connections to Hemet Channel outside the Project ROW and are described in Section 2.2.1.2.

**Table 2.2-1 Major Design Features of Build Alternatives and Design Options**

Design Feature	Build Alternative 1a	Build Alternative 1b	Build Alternative 2a	Build Alternative 2b	Design Option 1b1	Design Option 2b1	<u>Build Alternative 1br (Preferred Alternative)</u>
<i>Roadway Segments</i>	A, E, G, I, J, L, and N	B, C, G, I, K, M, and N	A, F, H, I, K, L, and N	B, D, H, I, J, M, and N	B, C, G, I, K, M, and N	B, D, H, I, J, M, and N	<u>B, C, G, I, J, M, and N</u>
<i>See Figure</i>	<u>2.2-3a</u>	<u>2.2-3b</u>	<u>2.2-4a</u>	<u>2.2-4b</u>	<u>2.2-3b</u>	<u>2.2-4b</u>	<u>2.2-3c</u>
Southern Project limit at SR 79 KP R25.4 (PM R15.78)	X	X	X	X	X	X	<u>X</u>
Newport Road bridge over SR 79	X	X	X	X			

**Table 2.2-1 Major Design Features of Build Alternatives and Design Options**

Design Feature	Build Alternative 1a	Build Alternative 1b	Build Alternative 2a	Build Alternative 2b	Design Option 1b1	Design Option 2b1	<u>Build Alternative 1b (Preferred Alternative)</u>
<i>Roadway Segments</i>	A, E, G, I, J, L, and N	B, C, G, I, K, M, and N	A, F, H, I, K, L, and N	B, D, H, I, J, M, and N	B, C, G, I, K, M, and N	B, D, H, I, J, M, and N	<u>B, C, G, I, J, M, and N</u>
<i>See Figure</i>	<u>2.2-3a</u>	<u>2.2-3b</u>	<u>2.2-4a</u>	<u>2.2-4b</u>	<u>2.2-3b</u>	<u>2.2-4b</u>	<u>2.2-3c</u>
Partial interchange with Newport Road bridging over SR 79 <sup>a</sup>					X	X	
Bridge over Patterson Avenue		X		X	X	X	<u>X</u>
Bridge over Patton Avenue		X		X	X	X	<u>X</u>
Full interchange with bridge over Domenigoni Parkway	X	X	X	X	X	X	<u>X</u>
Bridge over Salt Creek Channel, Winchester Road, and Olive Avenue	X		X				
Bridge over Salt Creek Channel					X <sup>b</sup>	X <sup>c</sup>	
Cul-de-sac at Olive Avenue					X <sup>b</sup>	X <sup>c</sup>	
Cul-de-sac at Simpson Road					X <sup>b</sup>	X <sup>c</sup>	
Bridge over Salt Creek Channel and Olive Avenue		X		X			<u>X</u>
Bridge over Whittier Avenue	X		X				
Bridge over Patterson Avenue	X		X				
Bridge over Simpson Road	X	X	X	X			<u>X</u>
Full interchange with a bridge over Future Street "A" <sup>d</sup>			X	X		X <sup>c</sup>	
Bridge over San Jacinto Branch Line	X						
Bridge over Hemet Channel and San Jacinto Branch Line		X	X	X			<u>X</u>
Bridge over Hemet Channel					X <sup>b</sup>	X <sup>c</sup>	
Near at-grade crossing of San Jacinto Branch Line					X <sup>b</sup>	X <sup>c</sup>	
<u>Full interchange with bridge over Grand Avenue</u>							<u>X</u>
Cul-de-sac on Grand Avenue	X	X			X <sup>b</sup>		
Full interchange with bridge over Ranchland Road	X	X			X <sup>b</sup>		
Cul-de-sac on Milan Road	X	X			X		<u>X</u>
Bridge over Stowe Road	X	X	X	X	X <sup>b</sup>	X <sup>c</sup>	<u>X</u>
<u>Bridge over Stetson Avenue</u>							<u>X</u>

**Table 2.2-1 Major Design Features of Build Alternatives and Design Options**

Design Feature	Build Alternative 1a	Build Alternative 1b	Build Alternative 2a	Build Alternative 2b	Design Option 1b1	Design Option 2b1	<u>Build Alternative 1br (Preferred Alternative)</u>
<i>Roadway Segments</i>	A, E, G, I, J, L, and N	B, C, G, I, K, M, and N	A, F, H, I, K, L, and N	B, D, H, I, J, M, and N	B, C, G, I, K, M, and N	B, D, H, I, J, M, and N	<u>B, C, G, I, J, M, and N</u>
<i>See Figure</i>	<u>2.2-3a</u>	<u>2.2-3b</u>	<u>2.2-4a</u>	<u>2.2-4b</u>	<u>2.2-3b</u>	<u>2.2-4b</u>	<u>2.2-3c</u>
Bridge over California Avenue	X	X	X	X	X	X	<u>X</u>
Full interchange with bridge over Florida Avenue	X	X	X	X	X	X	<u>X</u>
Bridge over SR 79 at Devonshire Avenue	X	X	X	X	X	X	<u>X</u>
<u>Cul-de-sac on Tres Cerritos Avenue</u>							<u>X</u>
Full interchange with bridge over SR 79 at Tres Cerritos Avenue	X	X	X	X	X	X	
<u>Full interchange with bridge over Esplanade Avenue, Warren Road, and San Diego Canal</u>	X	X	X	X	X	X	<u>X</u>
Bridge over Seventh Street	X	X	X	X	X	X	<u>X</u>
Full interchange with bridge over Cottonwood Avenue	X	X	X	X	X	X	<u>X</u>
Bridge over Casa Loma Canal	X		X				
Full interchange with a bridge over Future Street "B" <sup>e</sup>	X		X				
Sanderson Avenue bridge over SR 79	X		X				
<u>Full interchange with bridge over Sanderson Avenue</u>							<u>X</u>
Full interchange with a bridge over SR 79 at Sanderson Avenue		X		X	X	X	
Crossing the Colorado River Aqueduct	X	X	X	X	X	X	<u>X</u>
Bridge over Ramona Expressway	X	X	X	X	X	X	<u>X</u>
Bridge between Ramona Expressway and San Jacinto River <sup>f</sup>	X	X	X	X	X	X	<u>X</u>
Northern Project limit at SR 79 KP R54.4 (PM R33.80)	X	X	X	X	X	X	<u>X</u>

**Table 2.2-1 Major Design Features of Build Alternatives and Design Options**

Design Feature	Build Alternative 1a	Build Alternative 1b	Build Alternative 2a	Build Alternative 2b	Design Option 1b1	Design Option 2b1	<u>Build Alternative 1br (Preferred Alternative)</u>
<i>Roadway Segments</i>	A, E, G, I, J, L, and N	B, C, G, I, K, M, and N	A, F, H, I, K, L, and N	B, D, H, I, J, M, and N	B, C, G, I, K, M, and N	B, D, H, I, J, M, and N	<u>B, C, G, I, J, M, and N</u>
<i>See Figure</i>	<u>2.2-3a</u>	<u>2.2-3b</u>	<u>2.2-4a</u>	<u>2.2-4b</u>	<u>2.2-3b</u>	<u>2.2-4b</u>	<u>2.2-3c</u>

Source: Project Description, 2007

Note: X – Feature is part of the alternative.

- a Includes a northbound off-ramp to existing Winchester Road, and a southbound on-ramp from existing Winchester Road.
- b Roadway profile lower than Build Alternative 1b.
- c Roadway profile lower than Build Alternative 2b.
- d Future Street “A” improvements to be built by others. This is noted as the Stetson Avenue/Grand Avenue realignment in the Hemet General Plan.
- e Future Street “B” improvements to be built by others. This is noted as Bridge Street in the San Jacinto General Plan.
- f To accommodate 100-year storm event.

The two design options respond to comments from the Winchester community regarding the height of the profile as initially described for the base condition. Both design options would be on the southern end of the Project near the Winchester community. Design Option 1b1 would affect Roadway Segments B, C, and G of Build Alternative 1b. Design Option 2b1 would affect Roadway Segments B, D, and H of Build Alternative 2b.

Both of the design options would include a near-grade crossing over the San Jacinto Branch Line with embankment and structural section for SR 79. The near-grade crossing over the existing railroad would be approximately 3 to 8 ft above grade. The rail line is not used frequently and no trains have operated over the past 5 years. However, by placing embankment over the track and not severing it, rail traffic could be restored if using the track becomes necessary. If rail traffic is needed, RCTC would contact the Department with detailed, written requirements at least two weeks prior to the expected train operations. The embankment and structural section would be removed, then replaced once the rail activity is finished. A short-term detour would be required for traffic on SR 79. In the future, if passenger rail service is added; a grade-separation project would be completed under a separate environmental process.

Engineering refinements for Build Alternative 1b (Build Alternative 1br) were incorporated in response to comments received during the public circulation of the Draft EIR/EIS. Refinements were also made to comply with Caltrans’ mandatory design standards and to minimize impacts to the Traditional Cultural Property (TCP) identified during the Native American consultations in 2013 and 2014. Build Alternative 1br stays within the environmental study area, has a reduced ROW and has similar alignments and project limits as Build Alternative 1b.

Build Alternative 1br includes Roadway Segments B, C, G, I, J, M, and N which are shown on Figure 2.2-3c. The location of the refinements are shown on Figure 2.2-5.

Build Alternative 1br consists of the following refinements:

1. Access to Winchester: Traffic Signal at Newport Road: An at-grade traffic signal will be provided at the Newport Road/SR 79 intersection. Newport Road will be realigned to Winchester Road to provide direct access to the community of Winchester (Figure 2.2-5a).
2. Increased loop ramp radii at Domenigoni Parkway: Larger radii loop ramps were designed (Figure 2.2-5b).
3. Shift in interchange location from Ranchland Road to Grand Avenue: The interchange was shifted south to Grand Avenue (Figure 2.2-5c).
4. Westerly shift of alignment around West Hemet Hills: The alignment was shifted west within the existing environmental study limits to reduce the cut to the West Hemet Hills. The revised alignment would include a retaining wall along the west and north side of the alignment and eliminates the need to relocate the existing communication towers. A bridge would be built over Stetson Avenue and the dirt access road will be graded to tie-in to the existing dirt access road so that access to the communication towers can be maintained. The shift lessens the impact to the West Hemet Hills by reducing the amount of cut (Figure 2.2-5d and Figure 2.2-5e).
5. Increased loop ramp radii at Florida Avenue: Larger radii loop ramps were designed (Figure 2.2-5f).
6. Removal of Tres Cerritos Interchange: The interchange was removed in response to public and agency comments received. This eliminates the need to realign Warren Road and eliminates the bridge crossing over the San Diego Canal. A cul-de-sac will be added at Tres Cerritos along the west side of SR 79 (Figure 2.2-5g).
7. Esplanade Avenue interchange revisions to eliminate design exceptions: Revised interchange configuration to eliminate mandatory access control exception. The new proposed improvements include a diamond type interchange and allows access along Esplanade Avenue; realigned Maze Stone Court was eliminated (Figure 2.2-5h).
8. Increased loop ramp radii at Cottonwood Avenue: Larger radii loop ramp was designed (Figure 2.2-5i).
9. Sanderson Avenue interchange revisions to eliminate design exceptions: The interchange configuration for the southbound ramps were revised to a diamond configuration. This eliminates mandatory access control exception. SR 79 has been realigned to the southeast and bridges over Sanderson Avenue. The design was revised to avoid impacts to newly constructed improvements at the Eastern Municipal Water District (EMWD) Facility (Figure 2.2-5j).
10. Increased loop ramp radii at Ramona Expressway: Larger radii loop ramp was designed (Figure 2.2-5k).

The profile for Build Alternative 1br would be similar to Build Alternative 1b, with the exception of the West Hemet Hills where a steeper profile around the hill has been used to minimize cuts to the West Hemet Hills. In addition, the profile of SR 79 at Sanderson Avenue has been modified to bridge over Sanderson Avenue instead of Sanderson Avenue bridging over SR 79. A side-by-side comparison of Build Alternative 1b to 1br is shown in Figures 2.2-10 thru 2.2-16.

The Build alternative discussions throughout this document generally address the base condition for the five proposed Build alternatives. As applicable, Build Alternatives 1b and 2b discussions address both the base condition and the design options. The minimum study area for each Build alternative is 500 ft beyond the Project Impact Area (PIA). Resource-specific analyses may require a different study area.

The cost estimates (including construction and ROW) for each of the five Build alternatives and the two design options are as follows:

- Build Alternative 1a – \$1,072,473,000
- Build Alternative 1b – \$1,071,912,000
- Design Option 1b1 – \$1,044,002,000
- Build Alternative 2a – \$1,109,535,000
- Build Alternative 2b – \$1,034,939,000
- Design Option 2b1 – \$990,810,000
- Build Alternative 1br (Preferred Alternative)– \$ 1,073,000,000

### 2.2.1.2 Common Design Features of the Build Alternatives' Roadway Segments

Common design features are permanent components of the Build alternatives that are same or very similar. The common design features of the Build alternatives include:

- At-grade intersections to allow at-grade access to, from, or across the realigned SR 79 (Table 2.2-1)
- Grade-separated interchanges (ramps) to allow grade-separated access to and from the realigned SR 79 (Table 2.2-2)
- Bridges to allow grade-separated roadway crossings of existing features, including local cross streets, surface waterways, and railroad tracks
- Aqueduct crossings to allow continuation of realigned SR 79 across the Metropolitan Water District Colorado River Aqueduct
- Local street improvements to provide adequate at-grade intersection and grade-separated interchange spacing, maintain local access, provide cul-de-sacs on streets where access has been removed, and provide conforming roadway geometry, based on applicable standards
- Drainage facilities to minimize adverse effects to water quality, maintain onsite drainage, and direct offsite storm water away from the Project during operation

#### ***At-Grade Intersections***

At-grade intersections would be constructed to allow signalized access to and from local streets or across realigned SR 79. Under the base condition for the Build alternatives, all at-grade intersections would be constructed as part of Opening Year (2020) for Roadway Segments I, J, K, L, and M. With Design Options 1b1 and 2b1, at-grade

intersections would also be constructed for Roadway Segments C and D. At-grade intersections that would be constructed for Opening Year (2020) are identified by Build alternative in Table 2.2-2.

**Table 2.2-2 At-Grade Intersections: Opening Year (2020)**

	Location <sup>a</sup>
<b>Build Alternative 1a</b>	
Roadway Segment I	Tres Cerritos Avenue
Roadway Segment J	Alabaster Drive/Esplanade Avenue <sup>b</sup>
Roadway Segment L	Cottonwood Avenue Future Street B <sup>c</sup>
Roadway Segment N	N/A
<b>Build Alternative 1b (including Design Option 1b1)</b>	
Roadway Segment C	N/A OR Simpson Road <sup>d</sup>
Roadway Segment I	Tres Cerritos Avenue
Roadway Segment K	Alabaster Drive/Esplanade Avenue <sup>b</sup>
Roadway Segment M	Cottonwood Avenue
<b>Build Alternative 2a</b>	
Roadway Segment I	Tres Cerritos Avenue
Roadway Segment K	Alabaster Drive/Esplanade Avenue <sup>b</sup>
Roadway Segment L	Cottonwood Avenue Future Street B <sup>c</sup>
<b>Build Alternative 2b (including Design Option 2b1)</b>	
Roadway Segment D	N/A OR Simpson Road <sup>d</sup>
Roadway Segment I	Tres Cerritos Avenue
Roadway Segment J	Alabaster Drive/Esplanade Avenue <sup>b</sup>
Roadway Segment M	Cottonwood Avenue
<b><u>Build Alternative 1br (Preferred Alternative)</u></b>	
<u>Roadway Segment B</u>	<u>Newport Road/Winchester Road</u>
<u>Roadway Segment J</u>	<u>Alabaster Drive/Esplanade Avenue<sup>b</sup></u>
<u>Roadway Segment M</u>	<u>Cottonwood Avenue</u>

Note: N/A (Not Applicable) – An at-grade intersection is not associated with this roadway segment.

<sup>a</sup> All at-grade intersections would be constructed as part of Opening Year (2020) and would be replaced with grade-separated interchanges prior to the 20-Year Design Horizon (2040).

<sup>b</sup> A local street improvement (access modification) would be required at this location. Existing Alabaster Drive would be continued north of Esplanade Avenue to provide an at-grade intersection with SR 79 for Esplanade Avenue.

<sup>c</sup> A local cross street does not currently exist in this location, but is expected to exist prior to the construction of this Project feature. This future street will be constructed by others as part of a separate project.

<sup>d</sup> This roadway segment is part of Build Alternative 1b and/or Build Alternative 2b. At-grade intersection design is presented first for the base condition of Build Alternatives 1b and 2b, followed by that for Design Options 1b1 and 2b1. Build Alternatives 1b and 2b would not require an at-grade intersection on Roadway Segments C and D. However, Design Options 1b1 and 2b1 would include construction of an at-grade intersection at Simpson Road. Ultimately, local access to SR 79 from Simpson Road would be removed by cul-de-sacs before the 20-Year Design Horizon (2040).

With the base condition for the Build alternatives, at-grade intersections would be removed and replaced with grade-separated interchanges (ramps) prior to the 20-Year Design Horizon (2040). With Design Options 1b1 and 2b1, the at-grade intersection at Simpson Road would be replaced by cul-de-sacs once the Ranchland Road (Roadway Segment C) or Future Street A (Roadway Segment D) grade-separated interchange is built.

As with the base conditions, the design options would have grade-separated interchanges to be constructed prior to the 20-Year Design Horizon. Some of these locations on Roadway Segments C and D would not include at-grade intersections for Opening Year (2020). These locations are shown on the left in Figures 2.2-22 and 2.2-23.

**Grade-Separated Interchanges (Ramps)**

Grade-separated interchanges (ramps) would consist of a bridge and ramps that would provide vehicular access to and from the realigned SR 79. Grade-separated interchanges would be constructed under both Opening Year (2020) and 20-Year Design Horizon (2040) conditions. Grade-separated interchange types and locations were chosen based on coordination during Project Development Team meetings with the local jurisdictions, planning for future development, and continuity of community access while trying to maintain the Department-standard minimum requirement of 1 mi between interchanges. If traffic volume is heavy where SR 79 would cross a major facility, then a grade-separated interchange would be provided for Opening Year (2020). Where traffic counts are currently low but are expected to increase in the future, or to comply with the local city general plans, an interchange would be provided during the 20-Year Design Horizon (2040). The type of interchange proposed to accommodate the traffic demand was a partial cloverleaf. A partial cloverleaf was selected because it would accommodate more traffic than a standard diamond interchange.

Interchange locations are identified by Build alternative in Table 2.2-3. Focused views of the grade-separated interchanges that would be constructed with the base condition at the 20-Year Design Horizon are shown in Figures 2.2-6a through 2.2-6n. Side-by-side comparisons of base condition Opening Day (2020) and 20-Year Design Horizon are shown by roadway segment in Figures 2.2-20 through 2.2-28. Similar comparisons for the design options are shown in Figures 2.2-29 and 2.2-30.

With Design Options 1b1 and 2b1, the location and design of grade-separated interchanges along Roadway Segments B, C, and D would vary from the base condition. Side-by-side comparisons of base condition and design option for these roadway segments are provided in Figures 2.2-7 through 2.2-9. In each figure, the base condition for each roadway segment is on the left, and the design option is on the right.

**Table 2.2-3 Grade-Separated Interchanges (Ramps):  
Opening Year (2020) and 20-Year Design Horizon (2040)**

	Location and Relative Position to Local Cross Streets	
	Opening Year (2020)	20-Year Design Horizon (2040)
<b>Build Alternative 1a</b>		
Roadway Segment A	SR 79 over Domenigoni Parkway <sup>a</sup>	SR 79 over Domenigoni Parkway <sup>a</sup>
Roadway Segment E	N/A	SR 79 over Ranchland Road <sup>b</sup>
Roadway Segment G	SR 79 over Florida Avenue <sup>a</sup>	SR 79 over Florida Avenue <sup>a</sup>
Roadway Segment I	N/A	Tres Cerritos Avenue over SR 79 <sup>b</sup>
Roadway Segment J	N/A	SR 79 over Esplanade Avenue <sup>b</sup>
Roadway Segment K	N/A	SR 79 over Esplanade Avenue <sup>b</sup>
Roadway Segment L	N/A N/A	Cottonwood Avenue over SR 79 <sup>b</sup> Future Street B over SR 79 <sup>b, c</sup>
Roadway Segment N	SR 79 over Ramona Expressway <sup>a</sup>	SR 79 over Ramona Expressway <sup>a</sup>

**Table 2.2-3 Grade-Separated Interchanges (Ramps):  
Opening Year (2020) and 20-Year Design Horizon (2040)**

	Location and Relative Position to Local Cross Streets	
	Opening Year (2020)	20-Year Design Horizon (2040)
<b>Build Alternative 1b</b> (including Design Option 1b1)		
Roadway Segment B	N/A OR East Newport Road NB off-ramp over SR 79 <sup>b</sup>	N/A OR East Newport Road NB off-ramp over SR 79 <sup>d</sup>
Roadway Segment C	SR 79 over Domenigoni Parkway <sup>a</sup> N/A	SR 79 over Domenigoni Parkway <sup>a</sup> SR 79 over Ranchland Road <sup>b</sup> OR Ranchland Road over SR 79 <sup>e</sup>
Roadway Segment G	SR 79 over Florida Avenue <sup>a</sup>	SR 79 over Florida Avenue <sup>a</sup>
Roadway Segment I	N/A	Tres Cerritos Avenue over SR 79 <sup>b</sup>
Roadway Segment K	N/A	SR 79 over Esplanade Avenue <sup>b</sup>
Roadway Segment M	Sanderson Avenue over SR 79 <sup>a</sup> N/A	Sanderson Avenue over SR 79 <sup>a</sup> Cottonwood Avenue over SR 79 <sup>b</sup>
Roadway Segment N	SR 79 over Ramona Expressway <sup>a</sup>	SR 79 over Ramona Expressway <sup>a</sup>
<b>Build Alternative 2a</b>		
Roadway Segment A	SR 79 over Domenigoni Parkway <sup>a</sup>	SR 79 over Domenigoni Parkway <sup>a</sup>
Roadway Segment F	N/A	SR 79 over Future Street A <sup>b, c</sup>
Roadway Segment H	SR 79 over Florida Avenue <sup>a</sup>	SR 79 over Florida Avenue <sup>a</sup>
Roadway Segment I	N/A	Tres Cerritos Avenue over SR 79 <sup>b</sup>
Roadway Segment K	N/A	SR 79 over Esplanade Avenue <sup>b</sup>
Roadway Segment L	N/A N/A	Cottonwood Avenue over SR 79 <sup>b</sup> Future Street B over SR 79 <sup>b, c</sup>
Roadway Segment N	SR 79 over Ramona Expressway <sup>a</sup>	SR 79 over Ramona Expressway <sup>a</sup>
<b>Build Alternative 2b</b> (including Design Option 2b1)		
Roadway Segment B	N/A OR East Newport Road NB off-ramp over SR 79 <sup>b</sup>	N/A OR East Newport Road NB off-ramp over SR 79 <sup>d</sup>
Roadway Segment D	SR 79 over Domenigoni Parkway <sup>a</sup> N/A	SR 79 over Domenigoni Parkway <sup>a</sup> SR 79 over Future Street A <sup>b, c</sup> OR Future Street A over SR 79 <sup>e</sup>
Roadway Segment H	SR 79 over Florida Avenue <sup>a</sup>	SR 79 over Florida Avenue <sup>a</sup>
Roadway Segment I	N/A	Tres Cerritos Avenue over SR 79 <sup>b</sup>
Roadway Segment J	N/A	SR 79 over Esplanade Avenue <sup>b</sup>
Roadway Segment M	Sanderson Avenue over SR 79 <sup>a</sup> N/A	Sanderson Avenue over SR 79 <sup>a</sup> Cottonwood Avenue over SR 79 <sup>b</sup>
Roadway Segment N	SR 79 over Ramona Expressway <sup>a</sup>	SR 79 over Ramona Expressway <sup>a</sup>
<b>Build Alternative 1br</b> (Preferred Alternative)		
<u>Roadway Segment C</u>	<u>SR 79 over Domenigoni Parkway<sup>a</sup></u> <u>N/A</u>	<u>SR 79 over Domenigoni Parkway<sup>a</sup></u> <u>SR 79 over Grand Avenue<sup>b</sup></u>
<u>Roadway Segment G</u>	<u>SR 79 over Florida Avenue<sup>a</sup></u>	<u>SR 79 over Florida Avenue<sup>a</sup></u>
<u>Roadway Segment J</u>	<u>N/A</u>	<u>SR 79 over Esplanade Avenue<sup>b</sup></u>
<u>Roadway Segment M</u>	<u>SR 79 over Sanderson Avenue<sup>a</sup></u> <u>N/A</u>	<u>SR 79 over Sanderson Avenue<sup>a</sup></u> <u>Cottonwood Avenue over SR 79<sup>b</sup></u>
<u>Roadway Segment N</u>	<u>SR 79 over Ramona Expressway<sup>a</sup></u>	<u>SR 79 over Ramona Expressway<sup>a</sup></u>

**Table 2.2-3 Grade-Separated Interchanges (Ramps):  
Opening Year (2020) and 20-Year Design Horizon (2040)**

	Location and Relative Position to Local Cross Streets	
	Opening Year (2020)	20-Year Design Horizon (2040)

Note: N/A (Not Applicable) – A grade-separated interchange would not be constructed for this roadway segment in this phase of the Project.

NB – northbound

<sup>a</sup> Grade-separated interchanges constructed for Opening Year (2020) would not be modified prior to the 20-Year Design Horizon.

<sup>b</sup> A bridge would be constructed at this location prior to Opening Year (2020). Ramps would be added to this bridge to form a grade-separated interchange prior to the 20-Year Design Horizon (2040).

<sup>c</sup> A local cross street does not currently exist at this location. This local cross street is part of the City of Hemet or the City of San Jacinto General Plans and is expected to exist prior to the construction of this Project feature.

<sup>d</sup> This roadway segment is part of Build Alternative 1b and/or Build Alternative 2b. Grade-separated interchange design is presented first for the base condition of Build Alternatives 1b and 2b, followed by that for Design Options 1b1 and 2b1. Build Alternatives 1b and 2b do not require a grade separation along Roadway Segment B. However, Design Options 1b1 and 2b1 require that the East Newport Road NB off-ramp be grade separated over proposed SR 79 prior to Opening Year (2020).

<sup>e</sup> This roadway segment is part of Build Alternative 1b and/or Build Alternative 2b. Grade-separated interchange design is presented first for the base condition of Build Alternatives 1b and 2b, followed by that for Design Options 1b1 and 2b1. Build Alternatives 1b and 2b require SR 79 to be grade separated over existing local streets along Roadway Segments C and D by 20-Year Design Horizon. However, Design Options 1b1 and 2b1 require existing local streets to be grade separated over proposed SR 79 by 20-Year Design Horizon (2040).

Prior to the 20-Year Design Horizon (2040), additional grade-separated interchanges would be constructed. The phasing of this construction would not vary between the base condition and the design options. In both the base condition and design option figures, grade-separated interchanges to be built prior to the 20-Year Design Horizon are shown on the right as “Project Features to be Constructed Prior to 20-Year Design Horizon.”

**Bridges**

Bridges would be constructed to separate the realigned SR 79 roadway from existing features, which would include local cross streets, surface waterways, and the San Jacinto Branch Line. For crossings of local streets, realigned SR 79 would be elevated over an at-grade street or constructed at grade with a local cross street elevated over it. SR 79 would be elevated for crossings of water-conveyance facilities and, with the base condition only, the San Jacinto Branch Line. The bridge types have been defined generically for the Project and are summarized in Table 2.2-4. The design of the bridge structures, such as the length, width, and number of footings, would vary depending on the feature to be crossed.

**Table 2.2-4 Bridge Types and Definitions**

Bridge Type	Definition
Bridge over SR 79	Elevate local traffic over realigned SR 79
Bridge over Local Street	Elevate SR 79 traffic over local cross streets
Bridge over Other Feature	Elevate traffic over nonroadway features such as water-conveyance facilities, railroad tracks, and drainage features
Bridge over Local Street and Other Feature	Elevate traffic over local cross streets and nonroadway features

Bridges would be constructed for both Opening Year (2020) and 20-Year Design Horizon conditions. One bridge constructed for Opening Year (2020) would be removed and replaced with a bridge in a new location prior to the 20-

Year Design Horizon (2040). Other bridges constructed for Opening Year (2020) would be widened prior to the 20-Year Design Horizon (2040). Bridge locations are identified by roadway segment in relation to an existing feature, property access, or as identified in the local city general plan for future development and continuity of community access in Table 2.2-5. Focused views of the bridges to be constructed for the base-condition 20-Year Design Horizon are shown in Figures 2.2-6a through 2.2-6n.

### **Aqueduct Crossings**

An aqueduct crossing is an at-grade crossing of the Colorado River Aqueduct (CRA). The CRA is an underground water-conveyance facility. To protect it from heavy loads and to allow maintenance access, Metropolitan Water District of Southern California has special design parameters for roadways that cross the CRA. These parameters would be required for roadway segments and local street improvements that intersect the CRA. The CRA itself would not be modified. The roadway would be constructed on graded material over the CRA. A concrete encasement would surround the CRA to protect it from embankment and traffic loads. CRA crossings would be constructed prior to Opening Year (2020) and would remain at the 20-Year Design Horizon (2040). Roadway Segments L and M and Sanderson Avenue would intersect the CRA. The locations of these CRA crossings are illustrated in Figures 2.2-6l and 2.2-6m.

**Table 2.2-5 Bridges: Opening Year (2020) and 20-Year Design Horizon (2040)**

	Location and Timing of Construction		Relative Position to Existing Feature
	Opening Year (2020)	20-Year Design Horizon (2040)	
<b>Build Alternative 1a</b>			
Roadway Segment A	East Newport Road over SR 79	East Newport Road over SR 79	Bridge over SR 79
	SR 79 over Domenigoni Parkway <sup>a</sup>	SR 79 over Domenigoni Parkway <sup>a</sup>	Bridge over Local Street
	SR 79 over Olive Avenue, Winchester Road, and Salt Creek Channel	SR 79 over Olive Avenue, Winchester Road, and Salt Creek Channel	Bridge over Local Street and Other Feature <sup>b</sup>
Roadway Segment E	SR 79 over Whittier Avenue	SR 79 over Whittier Avenue	Bridge over Local Street
	SR 79 over Patterson Avenue	SR 79 over Patterson Avenue	Bridge over Local Street
	SR 79 over Simpson Road	SR 79 over Simpson Road	Bridge over Local Street
	SR 79 over San Jacinto Branch Line <sup>c</sup>	SR 79 over San Jacinto Branch Line	Bridge over Other Feature <sup>b</sup>
	SR 79 over Ranchland Road <sup>c</sup>	SR 79 over Ranchland Road <sup>a</sup>	Bridge over Local Street
	SR 79 over Stowe Road	SR 79 over Stowe Road	Bridge over Local Street
Roadway Segment G	SR 79 over California Avenue	SR 79 over California Avenue	Bridge over Local Street
	SR 79 over Florida Avenue <sup>a</sup>	SR 79 over Florida Avenue <sup>a</sup>	Bridge over Local Street
Roadway Segment I	Devonshire Avenue over SR 79	Devonshire Avenue over SR 79	Bridge over SR 79
	N/A	Tres Cerritos Avenue over SR 79 <sup>a</sup>	Bridge over SR 79
	Tres Cerritos Avenue over the San Diego Canal	Tres Cerritos Avenue over the San Diego Canal <sup>f</sup>	Bridge over Other Feature <sup>b</sup>
Roadway Segment J	SR 79 over Warren Road, Esplanade Avenue, and the San Diego Canal	SR 79 over Warren Road, Esplanade Avenue, and the San Diego Canal <sup>a</sup>	Bridge over Local Street and Other Feature <sup>b</sup>
	SR 79 over Seventh Street	SR 79 over Seventh Street	Bridge over Local Street
	N/A	Esplanade Avenue NB off-ramp over San Diego Canal and Warren Road <sup>a</sup>	Bridge over Local Street and Other Feature <sup>b</sup>
	N/A	Esplanade Avenue SB off-ramp over San Diego Canal, Esplanade Avenue, and Warren Road <sup>a</sup>	Bridge over Local Street and Other Feature <sup>b</sup>
Roadway Segment L	N/A	Cottonwood Avenue over SR 79 <sup>a</sup>	Bridge over SR 79
	SR 79 over Casa Loma Canal <sup>d</sup>	SR 79 over Casa Loma Canal	Bridge over Other Feature <sup>b</sup>
	Sanderson Avenue over SR 79	Sanderson Avenue over SR 79	Bridge over SR 79
	N/A	Future Street B <sup>c</sup> over SR 79 <sup>a</sup>	Bridge over SR 79

**Table 2.2-5 Bridges: Opening Year (2020) and 20-Year Design Horizon (2040)**

	Location and Timing of Construction		Relative Position to Existing Feature
	Opening Year (2020)	20-Year Design Horizon (2040)	
Roadway Segment N	SR 79 over Ramona Expressway <sup>a</sup>	SR 79 over Ramona Expressway <sup>a</sup>	Bridge over Local Street
	SR 79 over Drainage Area	SR 79 over Drainage Area	Bridge over Other Feature <sup>b</sup>
<b>Build Alternative 1b</b> (including Design Option 1b1)			
Roadway Segment B	East Newport Road over SR 79 OR East Newport Road over SR 79 and East Newport NB off-ramp over SR 79 <sup>d</sup>	East Newport Road over SR 79 OR East Newport Road over SR 79 and East Newport NB off-ramp over SR 79 <sup>d</sup>	Bridge over SR 79 OR Bridge over SR 79 <sup>d</sup>
	SR 79 over Patterson Avenue	SR 79 over Patterson Avenue	Bridge over Local Street
	SR 79 over Patton Avenue	SR 79 over Patton Avenue	Bridge over Local Street
Roadway Segment C	SR 79 over Domenigoni Parkway <sup>a</sup>	SR 79 over Domenigoni Parkway <sup>a</sup>	Bridge over Local Street
	SR 79 over Olive Avenue and Salt Creek Channel OR SR 79 over Salt Creek Channel	SR 79 over Olive Avenue and Salt Creek Channel OR SR 79 over Salt Creek Channel	Bridge over Local Street and Other Feature <sup>b</sup> OR Bridge over Other Feature <sup>d</sup>
	SR 79 over Simpson Road OR N/A	SR 79 over Simpson Road OR N/A	Bridge over Local Street OR N/A <sup>d</sup>
	SR 79 over San Jacinto Branch Line and Hemet Channel OR SR 79 over Hemet Channel <sup>d</sup>	SR 79 over San Jacinto Branch Line and Hemet Channel OR SR 79 over Hemet Channel <sup>d</sup>	Bridge over Other Feature <sup>b</sup> OR Bridge over Other Feature <sup>d</sup>
	SR 79 over Ranchland Road <sup>c</sup> OR N/A <sup>d</sup>	SR 79 over Ranchland Road <sup>a</sup> OR Ranchland Road over SR 79 <sup>d</sup>	Bridge over Local Street OR Bridge over SR 79 <sup>d</sup>
	SR 79 over Stowe Road	SR 79 over Stowe Road	Bridge over Local Street
Roadway Segment G	SR 79 over California Avenue	SR 79 over California Avenue	Bridge over Local Street
	SR 79 over Florida Avenue <sup>a</sup>	SR 79 over Florida Avenue <sup>a</sup>	Bridge over Local Street
Roadway Segment I	Devonshire Avenue over SR 79	Devonshire Avenue over SR 79	Bridge over SR 79
	N/A	Tres Cerritos Avenue over SR 79 <sup>a</sup>	Bridge over SR 79
	Tres Cerritos Avenue over the San Diego Canal	Tres Cerritos Avenue over the San Diego Canal <sup>f</sup>	Bridge over Other Feature <sup>b</sup>
Roadway Segment K	SR 79 over Warren Road, Esplanade Avenue, and the San Diego Canal	SR 79 over Warren Road, Esplanade Avenue, and the San Diego Canal <sup>a</sup>	Bridge over Local Street and Other Feature <sup>b</sup>
	SR 79 over Seventh Street	SR 79 over Seventh Street	Bridge over Local Street
	N/A	Esplanade Avenue NB off-ramp over San Diego Canal and Warren Road <sup>a</sup>	Bridge over Local Street and Other Feature <sup>b</sup>
	N/A	Esplanade Avenue SB off-ramp over San Diego Canal, Esplanade Avenue, and Warren Road <sup>a</sup>	Bridge over Local Street and Other Feature <sup>b</sup>

**Table 2.2-5 Bridges: Opening Year (2020) and 20-Year Design Horizon (2040)**

	Location and Timing of Construction		Relative Position to Existing Feature
	Opening Year (2020)	20-Year Design Horizon (2040)	
Roadway Segment M	N/A	Cottonwood Avenue over SR 79 <sup>a</sup>	Bridge over SR 79
	Sanderson Avenue over SR 79 <sup>a</sup>	Sanderson Avenue over SR 79 <sup>a</sup>	Bridge over SR 79
	Sanderson Avenue on-ramp over Casa Loma Canal <sup>a</sup>	Sanderson Avenue on-ramp over Casa Loma Canal <sup>a</sup>	Bridge over Other Feature <sup>b</sup>
Roadway Segment N	SR 79 over Ramona Expressway <sup>a</sup>	SR 79 over Ramona Expressway <sup>a</sup>	Bridge over Local Street
	SR 79 over Drainage Area	SR 79 over Drainage Area	Bridge over Other Feature <sup>b</sup>
<b>Build Alternative 2a</b>			
Roadway Segment A	East Newport Road over SR 79	East Newport Road over SR 79	Bridge over SR 79
	SR 79 over Domenigoni Parkway <sup>a</sup>	SR 79 over Domenigoni Parkway <sup>a</sup>	Bridge over Local Street
	SR 79 over Olive Avenue, Winchester Road, and Salt Creek Channel	SR 79 over Olive Avenue, Winchester Road, and Salt Creek Channel	Bridge over Local Street and Other Feature <sup>b</sup>
Roadway Segment F	SR 79 over Whittier Avenue	SR 79 over Whittier Avenue	Bridge over Local Street
	SR 79 over Patterson Avenue	SR 79 over Patterson Avenue	Bridge over Local Street
	SR 79 over San Jacinto Branch Line and Hemet Channel	SR 79 over San Jacinto Branch Line and Hemet Channel	Bridge over Other Feature <sup>b</sup>
	SR 79 over Simpson Road <sup>c</sup>	SR 79 over Simpson Road	Bridge over Local Street
	SR 79 over Future Street A <sup>c, e</sup>	SR 79 over Future Street A <sup>a, e</sup>	Bridge over Local Street
	SR 79 over Stowe Road	SR 79 over Stowe Road	Bridge over Local Street
Roadway Segment H	SR 79 over California Avenue	SR 79 over California Avenue	Bridge over Local Street
	SR 79 over Florida Avenue <sup>a</sup>	SR 79 over Florida Avenue <sup>a</sup>	Bridge over Local Street
Roadway Segment I	Devonshire Avenue over SR 79	Devonshire Avenue over SR 79	Bridge over SR 79
	N/A	Tres Cerritos Avenue over SR 79 <sup>a</sup>	Bridge over SR 79
	Tres Cerritos Avenue over the San Diego Canal	Tres Cerritos Avenue over the San Diego Canal <sup>f</sup>	Bridge over Other Feature <sup>b</sup>
Roadway Segment K	SR 79 over Warren Road, Esplanade Avenue, and the San Diego Canal	SR 79 over Warren Road, Esplanade Avenue, and the San Diego Canal <sup>a</sup>	Bridge over Local Street and Other Feature <sup>b</sup>
	SR 79 over Seventh Street	SR 79 over Seventh Street	Bridge over Local Street
	N/A	Esplanade Avenue NB off-ramp over San Diego Canal and Warren Road <sup>a</sup>	Bridge over Local Street and Other Feature <sup>b</sup>

**Table 2.2-5 Bridges: Opening Year (2020) and 20-Year Design Horizon (2040)**

	Location and Timing of Construction		Relative Position to Existing Feature
	Opening Year (2020)	20-Year Design Horizon (2040)	
	N/A	Esplanade Avenue SB off-ramp over San Diego Canal, Esplanade Avenue, and Warren Road <sup>a</sup>	Bridge over Local Street and Other Feature <sup>b</sup>
Roadway Segment L	N/A	Cottonwood Avenue over SR 79 <sup>a</sup>	Bridge over SR 79
	SR 79 over Casa Loma Canal <sup>d</sup>	SR 79 over Casa Loma Canal	Bridge over Other Feature <sup>b</sup>
	Sanderson Avenue over SR 79	Sanderson Avenue over SR 79	Bridge over SR 79
	N/A	Future Street B <sup>c</sup> over SR 79 <sup>a</sup>	Bridge over SR 79
Roadway Segment N	SR 79 over Ramona Expressway <sup>a</sup>	SR 79 over Ramona Expressway <sup>a</sup>	Bridge over Local Street
	SR 79 over Drainage Area	SR 79 over Drainage Area	Bridge over Other Feature <sup>b</sup>
<b>Build Alternative 2b</b> (including Design Option 2b1)			
Roadway Segment B	East Newport Road over SR 79 OR East Newport Road over SR 79 and East Newport NB off-ramp over SR 79 <sup>d</sup>	East Newport Road over SR 79 OR East Newport Road over SR 79 and East Newport NB off-ramp over SR 79 <sup>d</sup>	Bridge over SR 79 OR Bridge over SR 79 <sup>d</sup>
	SR 79 over Patterson Avenue	SR 79 over Patterson Avenue	Bridge over Local Street
	SR 79 over Patton Avenue	SR 79 over Patton Avenue	Bridge over Local Street
Roadway Segment D	SR 79 over Domenigoni Parkway <sup>a</sup>	SR 79 over Domenigoni Parkway <sup>a</sup>	Bridge over Local Street
	SR 79 over Olive Avenue and Salt Creek Channel OR SR 79 over Salt Creek Channel	SR 79 over Olive Avenue and Salt Creek Channel OR SR 79 over Salt Creek Channel	Bridge over Local Street and Other Feature <sup>b</sup> OR Bridge over Other Feature <sup>d</sup>
	SR 79 over Simpson Road <sup>c</sup> OR N/A <sup>d</sup>	SR 79 over Simpson Road OR N/A <sup>d</sup>	Bridge over Local Street OR N/A <sup>d</sup>
	SR 79 over Future Street A <sup>c, e</sup> OR N/A <sup>d</sup>	SR 79 over Future Street A <sup>a, e</sup> OR Future Street A over SR 79 <sup>d</sup>	Bridge over Local Street OR Bridge over SR 79 <sup>d</sup>
	SR 79 over San Jacinto Branch Line and Hemet Channel OR SR 79 over Hemet Channel <sup>d</sup>	SR 79 over San Jacinto Branch Line and Hemet Channel OR SR 79 over Hemet Channel <sup>d</sup>	Bridge over Other Feature <sup>b</sup> OR Bridge over Other Feature
	SR 79 over Stowe Road	SR 79 over Stowe Road	Bridge over Local Street
Roadway Segment H	SR 79 over California Avenue	SR 79 over California Avenue	Bridge over Local Street
	SR 79 over Florida Avenue <sup>a</sup>	SR 79 over Florida Avenue <sup>a</sup>	Bridge over Local Street
Roadway Segment I	Devonshire Avenue over SR 79	Devonshire Avenue over SR 79	Bridge over SR 79
	N/A	Tres Cerritos Avenue over SR 79 <sup>a</sup>	Bridge over SR 79
	Tres Cerritos Avenue over the San Diego Canal	Tres Cerritos Avenue over the San Diego Canal <sup>f</sup>	Bridge over Other Feature <sup>b</sup>

**Table 2.2-5 Bridges: Opening Year (2020) and 20-Year Design Horizon (2040)**

	Location and Timing of Construction		Relative Position to Existing Feature
	Opening Year (2020)	20-Year Design Horizon (2040)	
Roadway Segment J	SR 79 over Warren Road, Esplanade Avenue, and the San Diego Canal	SR 79 over Warren Road, Esplanade Avenue, and the San Diego Canal <sup>a</sup>	Bridge over Local Street and Other Feature <sup>b</sup>
	SR 79 over Seventh Street	SR 79 over Seventh Street	Bridge over Local Street
	N/A	Esplanade Avenue NB off-ramp over San Diego Canal and Warren Road <sup>a</sup>	Bridge over Local Street and Other Feature <sup>b</sup>
	N/A	Esplanade Avenue SB off-ramp over San Diego Canal, Esplanade Avenue, and Warren Road <sup>a</sup>	Bridge over Local Street and Other Feature <sup>b</sup>
Roadway Segment M	N/A	Cottonwood Avenue over SR 79 <sup>a</sup>	Bridge over SR 79
	Sanderson Avenue over SR 79 <sup>a</sup>	Sanderson Avenue over SR 79 <sup>a</sup>	Bridge over SR 79
	Sanderson Avenue on-ramp over Casa Loma Canal <sup>a</sup>	Sanderson Avenue on-ramp over Casa Loma Canal <sup>a</sup>	Bridge over Other Feature <sup>b</sup>
Roadway Segment N	SR 79 over Ramona Expressway <sup>a</sup>	SR 79 over Ramona Expressway <sup>a</sup>	Bridge over Local Street
	SR 79 over Drainage Area	SR 79 over Drainage Area	Bridge over Other Feature <sup>b</sup>
<b><u>Build Alternative 1br (Preferred Alternative)</u></b>			
<u>Roadway Segment B</u>	<u>SR 79 over Patterson Avenue</u>	<u>SR 79 over Patterson Avenue</u>	<u>Bridge over Local Street</u>
	<u>SR 79 over Patton Avenue</u>	<u>SR 79 over Patton Avenue</u>	<u>Bridge over Local Street</u>
<u>Roadway Segment C</u>	<u>SR 79 over Domenigoni Parkway<sup>a</sup></u>	<u>SR 79 over Domenigoni Parkway<sup>a</sup></u>	<u>Bridge over Local Street</u>
	<u>SR 79 over Olive Avenue and Salt Creek Channel</u>	<u>SR 79 over Olive Avenue and Salt Creek Channel</u>	<u>Bridge over Local Street and Other Feature<sup>b</sup></u>
	<u>SR 79 over Simpson Road</u>	<u>SR 79 over Simpson Road</u>	<u>Bridge over Local Street</u>
	<u>SR 79 over San Jacinto Branch Line and Hemet Channel</u>	<u>SR 79 over San Jacinto Branch Line and Hemet Channel</u>	<u>Bridge over Other Feature<sup>b</sup></u>
	<u>SR 79 over Grand Avenue</u>	<u>SR 79 over Grand Avenue<sup>a</sup></u>	<u>Bridge over Local Street</u>
	<u>SR 79 over Stowe Road</u>	<u>SR 79 over Stowe Road</u>	<u>Bridge over Local Street</u>
<u>Roadway Segment G</u>	<u>SR 79 over Stetson Avenue</u>	<u>SR 79 over Stetson Avenue</u>	<u>Bridge over Local Street</u>
	<u>SR 79 over California Avenue</u>	<u>SR 79 over California Avenue</u>	<u>Bridge over Local Street</u>
	<u>SR 79 over Florida Avenue<sup>a</sup></u>	<u>SR 79 over Florida Avenue<sup>a</sup></u>	<u>Bridge over Local Street</u>
<u>Roadway Segment I</u>	<u>Devonshire Avenue over SR 79</u>	<u>Devonshire Avenue over SR 79</u>	<u>Bridge over SR 79</u>

**Table 2.2-5 Bridges: Opening Year (2020) and 20-Year Design Horizon (2040)**

	Location and Timing of Construction		Relative Position to Existing Feature
	Opening Year (2020)	20-Year Design Horizon (2040)	
<u>Roadway Segment J</u>	<u>SR 79 over Warren Road, Esplanade Avenue, and the San Diego Canal</u>	<u>SR 79 over Warren Road, Esplanade Avenue, and the San Diego Canal<sup>a</sup></u>	<u>Bridge over Local Street and Other Feature<sup>b</sup></u>
	<u>SR 79 over Seventh Street</u>	<u>SR 79 over Seventh Street</u>	<u>Bridge over Local Street</u>
	<u>N/A</u>	<u>Esplanade Avenue NB off-ramp over San Diego Canal and Warren Road<sup>a</sup></u>	<u>Bridge over Local Street and Other Feature<sup>b</sup></u>
	<u>N/A</u>	<u>Esplanade Avenue SB off-ramp over San Diego Canal and Warren Road<sup>a</sup></u>	<u>Bridge over Local Street and Other Feature<sup>b</sup></u>
<u>Roadway Segment M</u>	<u>N/A</u>	<u>Cottonwood Avenue over SR 79<sup>a</sup></u>	<u>Bridge over SR 79</u>
	<u>SR 79 over Sanderson Avenue<sup>a</sup></u>	<u>SR 79 over Sanderson Avenue<sup>a</sup></u>	<u>Bridge over Local Street</u>
<u>Roadway Segment N</u>	<u>SR 79 over Ramona Expressway<sup>a</sup></u>	<u>SR 79 over Ramona Expressway<sup>a</sup></u>	<u>Bridge over Local Street</u>
	<u>SR 79 over Drainage Area</u>	<u>SR 79 over Drainage Area</u>	<u>Bridge over Other Feature<sup>b</sup></u>

Note: N/A (Not Applicable) – A bridge would not be constructed at this location for Opening Year (2020), but would be built as part of a grade-separated interchange (ramp) prior to the 20-Year Design Horizon (2040).

NB – northbound

<sup>a</sup> Bridge is associated with a grade-separated interchange (ramp).

<sup>b</sup> The term “Other Feature” refers to nonroadway features such as water-conveyance facilities (Salt Creek Channel, Hemet Channel, San Diego Canal, Casa Loma Canal, and Colorado River Aqueduct); railroad tracks (San Jacinto Branch Line); and drainage areas (areas of undeveloped land that could accommodate overland water flow from offsite locations).

<sup>c</sup> The bridge constructed at this location for Opening Year (2020) would be widened prior to the 20-Year Design Horizon (2040).

<sup>d</sup> This roadway segment is part of Build Alternative 1b and/or Build Alternative 2b. Bridge design is presented first for the base condition of Build Alternatives 1b and 2b, followed by that for Design Options 1b1 and 2b1.

<sup>e</sup> A local street does not currently exist in this location. This local street is part of the City of Hemet or the City of San Jacinto General Plans and is expected to exist before construction of this Project feature.

<sup>f</sup> The bridge constructed prior to Opening Year (2020) would be removed and replaced by a bridge in a new location prior to the 20-Year Design Horizon (2040).

## Local Street Improvements

Local street improvements would be required to provide adequate spacing for at-grade intersections and grade-separated interchanges, as well as sufficient roadway geometry, in compliance with applicable standards. Local street improvements would modify local circulation patterns to maintain traffic flow and control access to the realigned SR 79. Local street improvements include:

- Cul-de-sacs (where realigned SR 79 would close a local street and alter access so that traffic has only one inlet/outlet)
- Realignments (where portions of existing streets would be moved to new locations)
- Access modifications (where access points would be changed and construction of additional roadway would connect the existing local street to a new location)
- Maintenance roads (where access would be provided for maintenance of local canals)

Local street improvements would be required with the base condition for Roadway Segments A, C, E, I, J, K, M, and N and with the design options for Roadway Segments B, C, and D. These improvements would be permanent. With the design options, the locations and designs of local street improvements along Roadway Segments B, C, and D would vary from the base condition. The locations, sequences, and types of local street improvements are identified for each roadway segment in Table 2.2-6. Focused views of the local street improvements are shown for the base condition in Figures 2.2-6a, 2.2-6c, 2.2-6e, 2.2-6i, 2.2-6j, 2.2-6k, 2.2-6m, and 2.2-6n.

With the design options, the locations and designs of local street improvements along Roadway Segments B, C, and D would vary from the base condition. The improvements required for Roadway Segments B, C, and D with the design options are shown in Figures 2.2-7 through 2.2-9. In each figure, the base condition for each roadway segment is on the left, and the design option is on the right.

**Table 2.2-6 Local Street Improvements:  
Opening Year (2020) and 20-Year Design Horizon (2040)**

	Location and Timing of Construction		Type
	Opening Year (2020)	20-Year Design Horizon (2040)	
<b>Build Alternative 1a</b>			
Roadway Segment A	Winchester Road	N/A	Cul-de-sac
Roadway Segment G	N/A	N/A	N/A
Roadway Segment I	Warren Road	N/A	Realignment
Roadway Segment J	Alabaster Drive/Esplanade Avenue <sup>a</sup>	N/A	Access Modification
	Maze Stone Court/Warren Road <sup>b</sup>	N/A	Access Modification
Roadway Segment L <sup>c</sup>	N/A	N/A	N/A
Roadway Segment N	Sanderson Avenue	N/A	Realignment

**Table 2.2-6 Local Street Improvements:  
Opening Year (2020) and 20-Year Design Horizon (2040)**

	Location and Timing of Construction		Type
	Opening Year (2020)	20-Year Design Horizon (2040)	
<b>Build Alternative 1b</b> (including Design Option 1b1)			
Roadway Segment B	N/A OR Winchester Road <sup>d</sup>	N/A OR Winchester Road <sup>d</sup>	N/A OR Access Modification <sup>d</sup>
Roadway Segment C	N/A	N/A OR Simpson Road <sup>d</sup>	N/A OR Cul-de-sac
	N/A OR Olive Avenue <sup>d</sup>	N/A	N/A OR Cul-de-sac <sup>d</sup>
	Milan Road	N/A	Cul-de-sac
	East Grand Avenue	N/A	Cul-de-sac
Roadway Segment G	N/A	N/A	N/A
Roadway Segment I	Warren Road	N/A	Realignment
Roadway Segment K	Alabaster Drive/Esplanade Avenue <sup>a</sup>	N/A	Access Modification
	Maze Stone Court/Warren Road <sup>b</sup>	N/A	Access Modification
Roadway Segment M	Sanderson Avenue Casa Loma Canal	N/A	Realignment Maintenance Road
Roadway Segment N	Sanderson Avenue	N/A	Realignment
<b>Build Alternative 2a</b>			
Roadway Segment A	Winchester Road	N/A	Cul-de-sac
Roadway Segment F	N/A	N/A	N/A
Roadway Segment H	N/A	N/A	N/A
Roadway Segment I	Warren Road	N/A	Realignment
Roadway Segment K	Alabaster Drive/Esplanade Avenue <sup>a</sup>	N/A	Access Modification
	Maze Stone Court/Warren Road <sup>b</sup>	N/A	Access Modification
Roadway Segment L <sup>c</sup>	N/A	N/A	N/A
Roadway Segment N	Sanderson Avenue	N/A	Realignment
<b>Build Alternative 2b</b> (including Design Option 2b1)			
Roadway Segment B	N/A OR Winchester Road <sup>d</sup>	N/A OR Winchester Road <sup>d</sup>	N/A OR Access Modification <sup>d</sup>
Roadway Segment D	N/A	N/A OR Simpson Road	N/A OR Cul-de-sac <sup>d</sup>
	N/A OR Olive Avenue <sup>d</sup>	N/A	N/A OR Cul-de-sac <sup>d</sup>
Roadway Segment H	N/A	N/A	N/A
Roadway Segment I	Warren Road	N/A	Realignment
Roadway Segment J	Alabaster Drive/Esplanade Avenue <sup>a</sup>	N/A	Access Modification
	Maze Stone Court/Warren Road <sup>b</sup>	N/A	Access Modification
Roadway Segment M	Sanderson Avenue Casa Loma Canal	N/A	Realignment Maintenance Road
Roadway Segment N	Sanderson Avenue	N/A	Realignment
<b>Build Alternative 1br</b> (Preferred Alternative)			
Roadway Segment B	<u>Newport Road</u>	<u>N/A</u>	<u>Realignment</u>
	<u>Winchester Road</u>	<u>N/A</u>	<u>Access Modification</u>

**Table 2.2-6 Local Street Improvements:  
Opening Year (2020) and 20-Year Design Horizon (2040)**

	Location and Timing of Construction		Type
	Opening Year (2020)	20-Year Design Horizon (2040)	
<u>Roadway Segment C</u>	<u>Milan Road</u>	<u>N/A</u>	<u>Cul-de-sac</u>
<u>Roadway Segment G</u>	<u>Stetson Avenue</u>	<u>N/A</u>	<u>Realignment Maintenance Road</u>
<u>Roadway Segment I</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>Roadway Segment J</u>	<u>Alabaster Drive/Esplanade Avenue<sup>a</sup></u>	<u>N/A</u>	<u>Access Modification</u>
<u>Roadway Segment M</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
<u>Roadway Segment N</u>	<u>Sanderson Avenue</u>	<u>N/A</u>	<u>Realignment</u>

Note: N/A (Not Applicable) – A local street improvement is not associated with this roadway segment for this phase of the Project.

<sup>a</sup> An additional portion of existing Alabaster Drive would be constructed north of Esplanade Avenue to provide an at-grade intersection with SR 79 for Esplanade Avenue.

<sup>b</sup> An additional portion of existing Maze Stone Court would be constructed north of Esplanade Avenue to provide access to Warren Road during Opening Year (2020).

<sup>c</sup> A local street, Sanderson Avenue, is located along this roadway segment. However, improvements to Sanderson Avenue would be associated with bridge construction at this location and would not be included as part of local street improvements identified in this table.

<sup>d</sup> This roadway segment is part of Build Alternative 1b and/or Build Alternative 2b. Local street improvements are presented first for the base condition of Build Alternatives 1b and 2b, followed by Design Options 1b1 and 2b1.

### ***Drainage Facilities***

Drainage facilities would be permanent features and would be required for Project operation. As discussed in greater detail in Section 3.2.2.3, the drainage facilities would minimize adverse effects to water quality, maintain onsite drainage, and direct offsite storm water away from the Project. Drainage facilities would be located within the Project ROW and would consist of the following:

- Treatment Best Management Practices (treatment BMPs)
- Storm Water Conveyance Facilities (to manage onsite and offsite storm water flows)

### ***Treatment Best Management Practices***

Treatment BMPs would be part of the drainage facilities, thus would be located inside the Project ROW. The types of treatment BMPs to be implemented (infiltration device, Austin sand filter, detention basin, or biofiltration system) will depend on site-specific conditions and will be determined during final design.

### ***Storm Water Conveyance Facilities***

Storm water conveyance facilities are required to ensure proper onsite drainage for the Project and to maintain existing offsite water flows in the Project area. Onsite storm water is the surface runoff from paved areas of the Project, while offsite storm water flows are generated in areas outside the Project facilities and need to be conveyed from one side of the Project to the other. Thus the storm water conveyance facilities for the Project would be one of two types, for onsite drainage or for offsite drainage. Drainage facilities associated with the Project would be designed to maintain existing flow patterns whenever possible.

## Onsite Drainage Facilities

Onsite drainage facilities, typically consisting of drainage pipes, inlets, and outlets, would ensure proper drainage by directing onsite storm water flows to a treatment BMP facility and ultimately to a flood control facility (expected to be Hemet Channel or Salt Creek Channel). Onsite drainage facilities would be located inside the Project ROW, with specific locations to be determined during the final design phase of the Project.

## Offsite Drainage Facilities

Offsite drainage facilities would consist of culverts and roadside ditches. Culverts would maintain existing offsite flows by allowing storm water to pass under the Project roadway from one side to the other. Roadside ditches would redirect storm water away from the roadway. Roadside ditches would ultimately connect to existing flood control facilities (expected to be Hemet Channel or Salt Creek Channel). Offsite drainage facilities would be inside the Project ROW except for connections to existing flood control facilities, as discussed in Connections to Hemet Channel Outside the Project ROW. The specific locations of offsite drainage facilities will be determined during the final design phase of the Project.

### 2.2.1.3 Unique Features of Build Alternatives

Unique design features of the Project include the specific locations of common features in addition to unique design features that are only found in particular Build alternatives. Unique design features only found in particular Build alternatives include:

- Utility Relocation Areas
- Connections to Hemet Channel Outside the Project ROW

#### ***Utility Relocation Areas***

To comply with Department policy that excludes them from the ROW of a limited-access expressway, utilities would be relocated to areas outside the Project ROW. These areas can be local streets, cul-de-sacs, or designated utility corridors (Department 2006). Two areas outside the Project ROW have been designated as utility corridors. The utility relocation areas would be established in two permanent utility easements. Utility Relocation Areas 1 and 2 would ensure that the Project would not interrupt existing utility services and that it would adhere to established Department policy. Study areas have been designated that extend 500 ft beyond the boundary of each of the utility relocation areas.

Utility Relocation Area 1 would be immediately west of Roadway Segments G and H, just north of State Route 74 (SR 74)/Florida Avenue and south of Devonshire Avenue. An overhead line currently runs down Hyatt Avenue. Utility Relocation Area 1 would realign the overhead line along the outside of the southbound off-ramp proposed at Florida Avenue.

Utility Relocation Area 2 would be immediately west of Roadway Segments L, M, and N, north of the CRA. It would end south of the northern terminus of Roadway Segment N. An overhead line currently runs down Sanderson Avenue. Utility Relocation Area 2 would realign the overhead line along the west side of the new SR 79 roadway and back to the existing line location at Sanderson Avenue.

The utility relocation areas are shown as unique design features in Figure 2.2-17 and with their associated study areas in Figures 2.2-18a and 2.2-18b.

### **Connections to Hemet Channel Outside the Project ROW**

The offsite drainage facilities would be inside the Project ROW, except at the connections to Hemet Channel, as discussed earlier in this section. Connections to Hemet Channel outside the Project ROW would convey storm water away from the Project to specific discharge points in Hemet Channel. Each connection would consist of a pipe culvert, an outlet, and erosion-control features to protect the bed and banks of Hemet Channel against scouring. Because these connections would be established outside the Project ROW but on Riverside County Flood Control and Water Conservation District property, they would require encroachment permits. Study areas have been designated that extend 500 ft beyond each of the connections.

Connections outside the Project ROW are proposed at three discharge points into Hemet Channel, near Roadway Segments E and F. Connections 1 and 2 would be to the east of Roadway Segment E, south of the San Jacinto Branch Line. Connection 3 would be to the north of Roadway Segment F, south of Simpson Road. Connections 1 and 2 would be required for Build Alternatives 1a and 2a. Connection 3 would be required for Build Alternative 2a only. Build Alternatives 1b and 2b would not require connections to Hemet Channel.

The connections are shown as unique design features in Figure 2.2-17 and with their associated study areas in Figures 2.2-19a and 2.2-19b.

## **2.2.2 Transportation System Management and Transportation Demand Alternatives**

Transportation Systems Management (TSM)/Transportation Demand Management (TDM) measures are strategies to enhance the efficiency of the transportation system while lowering cost. TSM measures seek to increase the number of vehicle trips that can be carried without adding lanes. TDM focuses on regional strategies for reducing vehicle trips and miles traveled and increasing vehicle occupancy. Based on the 2010 Census, the City of Hemet population was approximately 78,000 and the City of San Jacinto population was approximately 37,000. As identified in California Government Code § 65080(b)(1), the policy element of transportation planning agencies is based on populations that exceed 200,000 persons for their regional transportation plans in regards to the development of measures of mobility and traffic congestion, including, but not limited to, daily vehicle hours of delay per capita and vehicle miles traveled per capita.

The population for the Project urban areas is not larger than 200,000 persons and as a result does not meet the requirements of California Government Code § 65080. Therefore, a separate TSM/TDM alternative was not evaluated for the Project.

However, TSM/TDM strategies were considered in the definition of the Project purpose and need, and appropriate measures have been incorporated into the design of the Build alternatives. The Project facility is designed for limited access, with grade-separated interchanges to enhance travel efficiency and improve local and regional traffic flow. The Project is associated with right-of-way allowances that support the implementation of such TSM

measures as ramp metering and enforcement areas. In addition, the facility would not preclude future (as yet undefined) multimodal transportation systems.

### 2.2.3 No Build (No Action) Alternative

The No Build Alternative would require no action by the Project proponent. Existing and projected capacity and operational benefits would not be realized. Existing SR 79 would not be realigned, ROW would not be acquired, and roadway construction would not occur.

The assumptions used for the traffic analysis of the No Build Alternative at the 20-Year Design Horizon of the Project (2040) include:

- The Mid County Parkway (formerly Cajalco/Ramona Corridor) would be a four-lane expressway.
- Arterial streets would be built to city or county general plan classification standards by 2040.
- Improvements planned by the Department and the County of Riverside for the portion of SR 79 between Hunter Road and Newport Road would be in place. There would be no further improvements on this portion of SR 79 before 2040.
- All regional facilities would be in accordance with the SCAG RTP.

The portion of SR 79 proposed for realignment would remain in place and unchanged, as shown in Figure 1.1-2. The selection of the No Build Alternative would not preclude construction of projects currently included in the General Plans of Riverside County, the City of Hemet, and the City of San Jacinto or any projects that might be proposed in the future.

### 2.2.4 Comparison of Alternatives

A comparison of the environmental impacts expected from the Project alternatives and design options is in Table S-1, included in the Summary at the beginning of this Final EIR/EIS.

The City of San Jacinto adopted Resolution No. 2309, dated August 2, 2001, identifying a Locally Preferred Alternative (San Jacinto 2001). Its Locally Preferred Alternative is the easternmost alignment through the city, Roadway Segments J, M, and N, which was subsequently included in their updated general plan (San Jacinto 2006).

The City of Hemet also adopted Resolution No. 4216, dated May 13, 2008, to identify the alignment of its Locally Preferred Alternative as Build Alternative 2. The intent of this resolution was to replace the Locally Preferred Alternative specified in the 1992 Hemet General Plan, which had been eliminated from the Project (Hemet 2008). As part of this process, the City of Hemet proposed and elected on May 24, 2005, to adopt an “Interim Urgency Ordinance” establishing the Western Hemet Planning Area and temporary development regulations applicable to this Planning Area, pending completion of a comprehensive and collaborative planning process. That effort has since been completed with the adoption of the 2012 Hemet General Plan (Hemet 2012), which includes a narrative and figure (Figure 4.1, Roadway Circulation Master Plan) in Chapter 4, Circulation, that shows the alignment

consistent with Resolution No. 4216. The alignment shown in Figure 4.1 of the 2012 Hemet General Plan is consistent with Project Roadway Segments B, D, H, I, and J.

The Locally Preferred Alternatives identified by San Jacinto and Hemet are compatible, in that they connect and can operate as intended. The County of Riverside has not identified a Locally Preferred Alternative.

After the public circulation period, all comments were considered, and the Department identified a Preferred Alternative that most effectively meets the stated purpose and need. The Department has made the final determination of the Project's effect on the environment, using factors such as impacts to community and natural environment and Project costs. In accordance with CEQA, the Department certified that the Project complies with CEQA, prepared findings for all significant impacts identified, prepared a Statement of Overriding Considerations for impacts that will not be mitigated below a level of significance, and certified that the findings contained in the Statement of Overriding Considerations were considered prior to Project approval. The Department will then file a Notice of Determination with the State Clearinghouse that will identify whether the Project will have significant impacts, if mitigation measures were included as conditions of Project approval, that findings were made, and that a Statement of Overriding Considerations was adopted. With respect to NEPA, the Department, as assigned by FHWA, will document and explain its decision regarding the Selected Alternative, Project impacts, and mitigation measures in a Record of Decision in accordance with NEPA.

## **2.2.5 Alternatives Considered But Eliminated from Further Discussion Prior to the Draft Environmental Document**

This section of the document describes the process undertaken and the resulting alternatives evaluated for the Project. The alternatives eliminated prior to the preparation of this Final EIR/EIS are also identified, which are no longer considered viable for the Project.

### **2.2.5.1 Route Concept Report (1992)**

The project development process was begun in 1992 with the release of the Route Concept Report for SR 79 (Department 1992). Within the document, the intent to realign this portion of SR 79 and the concept for the ultimate facility type were stated. The conclusion of this report was to initiate a study to analyze potential alternatives for the proposed Project. During the preliminary studies for the SR 79 Realignment Project, a wide range of possible transportation alternatives were evaluated. Alternatives were identified based on past studies and comments received from stakeholders, including elected officials, city and resources agency staff, and the community. The resulting segments were evaluated and refined through a several screening process to identify the alternatives that best meet the Need and Purpose of the study. The screening process is detailed in Appendix J of this Final EIR/EIS and is summarized below.

### **2.2.5.2 State Route 79 Realignment Study Report (1998)**

The State Route 79 Realignment Study Report (January 1998) documented the first attempt to identify alternatives for the proposed Project. The alternatives developed included the No Build alternative, as well as eight design alternatives. This included four alternatives for the southern section (Domenigoni Parkway to north of Devonshire Avenue) and four for the northern section (north of Devonshire Avenue to Gilman Springs Road) of the San Jacinto

Valley. They are identified as Alternatives A through H in the report and are included in Appendix J of this document (Volume 2). The material in the Realignment Study Report was used to initiate a discussion of the proposed Project with the public and regulatory agencies. The report concluded with documentation of the meetings and did not eliminate any of the alternatives from further study.

### **2.2.5.3 Project Study Report/Project Development Support (2002)**

Following the completion of the Realignment Study Report (1998), a study was prepared to advance the detail on the alternatives considered for the Project. The Project Study Report/Project Development Support (PSR/PDS) (2002) was undertaken to advance the concepts for the alternatives for the proposed Project. Because of this study, the initial eight design sections were improved to create a number of alternative segments for the Project. The locations of these segments in the San Jacinto Valley are shown in Exhibit H of the PSR/PDS and are included in Appendix J (Volume 2). The segments that were determined acceptable to move forward in the process are shown in blue. Those that were not found acceptable are shown in red. Summaries of the eliminated segments are provided below.

Segment WR – As stated in the PSR/PDS, this alignment runs on top of existing Warren Road, which would remove the capacity of the existing road from the local circulation. Segment WR was eliminated because it would have created a regulatory constraint due to the inconsistency with the City of San Jacinto Circulation Element of the General Plan because it would remove that segment of Warren Road from the local circulation identified within the General Plan.

Segment 5N – This alignment also runs on top of existing Warren Road, which would remove the capacity of the existing road from the local circulation. Segment 5N was eliminated because it would have created a regulatory constraint due to the inconsistency with the City of San Jacinto Circulation Element of the General Plan because it would remove that segment of Warren Road from the local circulation identified within the General Plan.

Segment 6N – This alignment cuts several parcels at a diagonal. Segment 6N was eliminated because the large skew angle between the SR 79 and Ramona Expressway would require a much longer structure than a perpendicular crossing and the interchange geometrics would require a larger amount of land to provide proper intersection geometrics for the ramp intersections.

Segment 3N – This alignment was modified to become Alignment 3NR as shown in Exhibit B. Segment 3N was eliminated because it would not be compatible with current Caltrans design standards. Interchanges would have a smaller skew angle, which would be on a large radius curve such that it would require a large amount of land to provide the necessary turning movements when compared with a standard perpendicular crossing at existing and/or planned future interchanges.

Segment 2N – This alignment impacts the wetlands area adjacent to the wastewater treatment plant. Segment 2N was eliminated to avoid a regulatory constraint. Segment 2N was not compatible with current and planned land uses (public wastewater treatment facility) and would have impacted biological resources (wetlands).

Segment 4N – This alignment also impacts the wetlands area adjacent to the wastewater treatment plant. Segment 4N was eliminated to avoid a regulatory constraint. Segment 4N was not compatible with current and planned land uses (public wastewater treatment facility) and would have impacted biological resources (wetlands).

Segment 1N – This alignment is too close to existing Sanderson Avenue and would create geometry at its crossing of Sanderson Avenue that would not be compatible with current Caltrans design standards. The skew angle between Sanderson Avenue and the proposed alignment would require major realignment of Sanderson for an at-grade intersection in the expressway condition and for a freeway condition the structure would be very long over Sanderson. Also, the geometrics for an interchange with Sanderson and SR 79 would not be standard. A far greater amount of land would be needed than with a perpendicular crossing.

Segment 1M – This alignment impacts the vernal pool complex on the east side of the San Diego Canal. There was a preliminary biological resources survey prepared in 2001. The survey found that the alignment would have occurred on top of two of the largest vernal pool complexes in the playa, which contained listed plant species. It would have eliminated a great deal of the playa (estimated at 25 to 40 percent), potentially disrupted the hydrology for half of the playa, and eliminated 2 of the 3 largest vernal pools in the complex. Segment 1M was eliminated to avoid a regulatory constraint and impacts to biological resources of the vernal pool complex, which is regulated by USACE, CDFW, and RWQCB as it is a Water of the U.S. per Section 404 of the Clean Water Act.

Segment 2M – Similar to Segment 1M, this alignment impacts the vernal pool complex on the east side of the San Diego Canal. There was a preliminary biological resources survey prepared in 2001. The survey found that the alignment would have occurred on top of two of the largest vernal pool complexes in the playa, which contained listed plant species. It would have eliminated a great deal of the playa (estimated at 25 to 40 percent), potentially disrupted the hydrology for half of the playa, and eliminated 2 of the 3 largest vernal pools in the complex. Segment 2M was eliminated to avoid a regulatory constraint and impacts to biological resources of the vernal pool complex, which is regulated by USACE, CDFW, and RWQCB as it is a Water of the U.S. per Section 404 of the Clean Water Act.

Segment 5S – This alignment was shifted to the west to provide greater separation from the end of the runway at the Hemet-Ryan Airport. SR 79 is required to be far enough west to provide room for the runway expansion and for the realignment of Warren Road. Segment 5S was revised to meet FAA design standards for a runway protection zone. As such, Segment 5S was eliminated and replaced with Segment 2MR.

Segment 2S – This alternative was eliminated because it did not meet the Project's purpose and need. As stated in the PSR/PDS, this alignment utilizes existing Domenigoni Parkway between Winchester Road and California Avenue, which combines east-west traffic with north-south traffic and minimizes the overall capacity of this link in the overall highway system.

Segment 1S – This alternative was eliminated to avoid a regulatory constraint. As discussed in the PSR/PDS, this alignment would run adjacent to and just south of Domenigoni Parkway between Winchester Road and California Avenue. This would impact habitat for the Quino Checkerspot Butterfly, which is a listed species regulated by USFWS, and would also make the geometrics of an interchange with Domenigoni Parkway not compatible with current Caltrans design standards.

Segment 4S – This alignment would have paralleled the railroad tracks, either being north of the railroad or having the railroad tracks in the median of SR 79. It was concluded that the vernal pools present east of California Avenue and north of the railroad would make any construction on the north side of the railroad tracks undesirable from an environmental standpoint. Segment 4S was eliminated to avoid a regulatory constraint, as it would have an increased impact to potential biological resources. Segment 4S is being carried forward as Alignment 4SR and will run on the south side of the railroad tracks to avoid the impact to the vernal pools.

Sanderson Avenue – This alignment would have upgraded existing Sanderson Avenue to expressway standards; however, this alternative was found to be unreasonable because of the existing development, numerous signals, and driveway connections along Sanderson Avenue. This alternative would also not meet the Project’s purpose and need as it would remove the capacity of the existing road.

Existing SR 79 – The alternative of upgrading the existing SR 79 alignment was eliminated as unreasonable because of the existing development, numerous traffic signals, and private driveway connections along alignment. As stated in the PSR/PDS, upgrading this alignment to expressway standards would result in massive disruption to the business districts of these communities and would not be compatible with adjacent land uses. Moreover, this alternative would not meet the Project’s purpose and need as it would remove the capacity of the existing road.

The segments considered appropriate for further study are shown in Exhibit B of the PDR/PDS and are included in Appendix J (Volume 2). These include Segment WRR, Segment 6S, Segment 2MR, Segment 3MR, Segment 4SR, and Segment 3SR.

#### **2.2.5.4 Final Project Criteria and Alternatives Selection for Preliminary Agreement (June 2004)**

As part of the project development process, the state and federal resource agencies were consulted regarding the proposed Project. Resource agency meetings were initiated during the preparation and review of the Project’s Purpose and Need (2003), as specified under the NEPA/404 Integration Process. This approach was adopted for the Project because construction had the potential to permanently impact more than 5 acres of jurisdictional wetlands. During this early consultation, the resource agencies identified that the biological resources within the areas of the San Jacinto Valley, primarily in an alkali vernal pool/playa complex in Hemet, were deemed so biologically sensitive (supporting threatened and endangered species, some endemic) that a more comprehensive review of the proposed Project Build alternatives was requested to be undertaken. This resulted in a more comprehensive approach to reviewing all possible alignment alternatives in the San Jacinto Valley for the Project.

As part of this process, 91 roadway segments between Domenigoni Parkway and Gilman Springs Road were identified. Included in the 91 roadway segments were the segments evaluated in the PSR/PDS. This meant that any alternative previously considered and/or eliminated for the Project as part of the PSR/PDS was now being reconsidered for the Project. To analyze each segment, they were classified by type and then screened against essential Project criteria. Segments were eliminated from further evaluation if they were inconsistent with the Project purpose and need or were otherwise infeasible or avoidable based on constructability, environmental impacts, or reasonability. Based on criteria screening, 30 segments were eliminated from further evaluation. Eleven segments were eliminated for MSHCP avoidance, five segments were eliminated because of community impact

avoidance, six segments were eliminated for Section 4(f) avoidance, four segments were eliminated because of inconsistencies with the Project purpose and need, three segments were eliminated for Hemet Ryan Airport avoidance, and one segment was eliminated for landfill avoidance. In addition, 11 segments were eliminated from further evaluation due to their connection to an eliminated segment and subsequent isolation from the remaining viable segments. All of the roadway segments reviewed in this process are shown in Figure ES of the 2004 Final Project Criteria and Alternatives Selection for Preliminary Agreement, which is included in Appendix J (Volume 2). Each of the eliminated segments is shown in a color that identifies the criterion applied to remove it from further evaluation. Those segments that were deemed appropriate for further analysis are shown in Figure E3 of the 2004 Final Project Criteria and Alternatives Selection for Preliminary Agreement, which is also included in Appendix J (Volume 2). This analysis was documented in the report Final Project Criteria and Alternatives Selection for Preliminary Agreement (June 2004).

Based on the results of the screening evaluation described above, segments were considered collectively to identify complete alignment alternatives for further study. In areas where more than one segment remained and similarities occurred (i.e., adjacent location or connection points from and to other segments), an “Alignment Review Area” was created. The Alignment Review Areas created for the remaining roadway segments are shown in Figure K of the 2004 Final Project Criteria and Alternatives Selection for Preliminary Agreement and consolidated and shown in Figure L1 of that document. Both figures are included in Appendix J (Volume 2).

At the conclusion of this report, three alignment alternatives containing Alignment Review Areas (corridors) were identified and proposed for further analysis for the Project. They included the Western, Central, and Eastern alignments (Figures L2, L3, and L4 of the 2004 Final Project Criteria and Alternatives Selection for Preliminary Agreement [see Appendix J, Volume 2]). The resource agencies approved these alignment alternatives for the Project, as documented in the correspondence for Preliminary Agreement pursuant to the NEPA/404 MOU.

#### **2.2.5.5 Value Analysis Study Report (2006)**

A Value Analysis (VA) Study was conducted for the Project to review alternatives to optimize Project design with respect to costs and impacts. Through this process, a new VA alternative was identified and accepted for the Project, as shown in Number 3.1.2 of the 2006 Value Analysis Study Report (see also Appendix J [Volume 2]). This alternative was determined acceptable because it would reduce the environmental impact and improve the separation between regional and local traffic in the area. This alternative was named the “Midwestern Alternative.”

#### **2.2.5.6 Supplemental Information for Project Criteria and Alternatives Selection for Updated Preliminary Agreement (May 2005) and Request for Updated Preliminary Agreement for Project Criteria and Alternatives Selection and Responses (August 2005)**

After the Preliminary Agreement was issued, new information was acquired for the Project and shared with the resource agencies. As a result, FHWA made a request to the resource agencies to remove Segment 6 from the Project and substitute the New Alternative for the Eastern Alternative. Segment 6 was determined, with the assistance of USFWS, to impact Southwestern Riverside County Multi-Species Reserve. Segment 6 was eliminated to avoid impacts to the Southwestern Riverside County Multi-Species Reserve. The Eastern Alternative was proposed to be eliminated to minimize substantial community impacts. This information is documented in

Supplemental Information for Project Criteria and Alternatives Selection for Updated Preliminary Agreement (May 2005) The locations of the segments removed from further analysis are shown in Figure E4 of that document (see also Appendix J [Volume 2]). Segment 6 and the Eastern Alternative are shown in red in Figure E4. In addition, 8 segments (Segments 17, 27, 28, I-K, K-M, M-U, W-Z, and FF-NN), shown in yellow in Figure E4, were eliminated from further evaluation due to their connection to an eliminated segment and subsequent isolation from the remaining viable segments. The proposed eliminations were approved by the resource agencies (Updated Preliminary Agreement), and the Eastern Alignment and the isolated segments were eliminated from further consideration for the Project.

The remaining roadway segments for this analysis are shown in Figure E5 of the 2005 Supplemental Information for Project Criteria and Alternatives Selection for Updated Preliminary Agreement (also in Appendix J [Volume 2]). The corresponding alternative corridors, Western (Corridor 1), Central (Corridor 2), and Midwestern (Corridor 3), are shown, respectively, in Figures L5 through L8 of that document and included in Appendix J (Volume 2). This decision was documented in Request for Updated Preliminary Agreement for Project Criteria and Alternatives Selection and Responses (August 2005).

During the process of obtaining Updated Preliminary Agreement, the City of Hemet proposed and elected on May 24, 2005, to adopt an “Interim Urgency Ordinance” establishing the Western Hemet Planning Area and temporary development regulations applicable to this Planning Area, pending completion of a comprehensive and collaborative planning process. The intent of this ordinance was to provide the Project technical team time to complete the review of the Midwestern Alternative prior to making decisions on the development applications in the immediate area of the alternative.

Subsequent to the technical review, the City of Hemet changed its designation of the Locally Preferred Alternative from the alignment shown in the 1992 Hemet General Plan (Central Alternative [Corridor 2]) to the Midwestern Alternative (Corridor 3). This was documented in the City of Hemet Resolution No. 4216, dated May 13, 2008. As a result of this action, the Central Corridor was also eliminated from further study for the Project.

### **2.2.5.7 Additional Coordination**

Refinement of the Western, Midwestern, and Central Alignments continued in 2006 and 2007. As a result of the environmental field survey work done on all the alternatives, it became apparent that the Central Alignment would heavily impact the vernal pool complex that is south of Florida Avenue and east of the San Diego Canal. Other segments carried forward would not have as large an environmental impact on vernal pool resources as the Central Alignment. After discussions with the various stakeholders, it was agreed to eliminate the Central Alignment from further consideration to avoid impacts to vernal pools, biological resources, and MSHCP proposed conservation areas. The Central Alignment is shown as Alignment Review Area A in Figures L5 and L7 of the 2005 Supplemental Information for Project Criteria and Alternatives Selection for Updated Preliminary Agreement (also in Appendix J [Volume 2]).

Once this was accomplished, the Western and Midwestern alignments were renamed as Alternative Corridors 1 and 2, respectively. Build Alternatives 1a, 1b, 2a, and 2b were established to represent four sets of possible roadway segment combinations from those two corridors. This naming convention was then carried forward into formal

scoping and the preparation of the technical reports for the Project. These Build alternatives are also described in this chapter and shown in Figures 2.2-3a, 2.2-3b, 2.2-4a, and 2.2-4b.

### **2.2.5.8 Winchester Homeowners Association Comments (2009)**

In May 2009, comments were received from the public (specifically the Winchester Homeowners Association [HOA] and the County of Riverside) regarding the design of the Project. The Winchester HOA requested that two items be considered in a modified design. The first was a lower profile of the roadway south of Stowe Road. The second was access at Newport Road. Because of the comments received, the Project alternatives were modified and now include design options (Design Option 1b1 and 2b1) to the base condition for Build Alternatives 1b and 2b. The design options include variations in access at SR 79/Winchester Road, Olive Avenue, Simpson Road, and Ranchland Road/Future Street A. They also include a lower roadway profile for Roadway Segments B, C, and G in Design Option 1b1 and Roadway Segments B, D, and H in Design Option 2b1, generally from Domenigoni Parkway north to Florida Avenue. Stakeholders were informed about the proposed design options, and their feedback was positive. In June 2009, the design options were incorporated into the Project.

### **2.2.5.9 Winchester Homeowners Association Comments (2014)**

A meeting with the Winchester HOA was held with members of the Winchester community to present changes that had been made to the Project, including the inclusion of additional project alternatives, design options and refinements. A PowerPoint presentation was given to present the community members with relevant project changes, such as the addition of new alternatives, design options and refinements. Meeting materials included displays of the alignments presented in the Draft EIR/EIS and displays of the updated alignments. The community was very interested in the status of the Project. Feedback indicated that the public wanted to maintain access into and out of their community along Winchester Road. Economic impacts and the future growth of the community of Winchester were also voiced. Concerns related to air quality, noise and aesthetics and how these potential impacts would be addressed were also brought up during the meeting.

## **2.3 Identification of a Preferred Alternative (Build Alternative 1b with Refinements)**

As the Lead Agency under CEQA and NEPA, Caltrans identified a Preferred Alternative for the SR 79 Realignment Project. The identification of the Preferred Alternative was based upon the data presented in the Draft EIR/EIS and Partially Recirculated Draft EIR/Supplemental Draft EIS, as well as comments received from agencies and individuals during the public review periods.

Through the process of identifying a Preferred Alternative, Caltrans was guided by the Project's purpose and need found in Chapter 1, as well as a detailed evaluation to determine the Least Environmentally Damaging Practicable Alternative (LEDPA) as required under the NEPA/404 MOU, as described in detail in the following sections.

In addition, Caltrans and RCTC reviewed all of the comments provided by agencies, elected officials, organizations and members of the public and carefully considered all of the comments received. The information contained in this Final EIR/EIS, which addresses all comments and responses on the Draft EIR/EIS and Partially Recirculated Draft EIR/Supplemental Draft EIS, was evaluated, discussed and used as the basis for identifying a Preferred Alternative.

### 2.3.1 Local Governments

Caltrans held a scoping meeting in late 2004 in the City of Hemet and presented the various alignment variations to the public. The public showed equal degrees of opposition to the Western and Eastern Alignments, and showed about the same number of endorsements to the Western and Central Alignments. At another scoping meeting held in the City of San Jacinto, opposition to the Eastern Alignment was strong, with no clear endorsement of any particular alignment.

SR-79 is recognized in local planning documents as a planned alignment. However, Alternative 1br, specifically roadway segments C, D, G and H, would be inconsistent with the Locally Preferred Alternative (LPA) in the City of Hemet 2030 General Plan. The alignments of Build Alternatives 1a, 1b, 1b1 and 2a would also be inconsistent. The alignments of Build Alternatives 1a and 2a would be inconsistent with the City of San Jacinto's General Plan. Both Hemet and San Jacinto, however, anticipated changes in the proposed alignments when their General Plan amendments occurred in 2012 and language was included in their general plans that they would revise their general plans at the appropriate time. Build Alternative 1br meets these criteria and is therefore consistent with the LPA for the City of San Jacinto. The San Jacinto Unified School District expressed opposition to Build Alternatives 1a and 2a but had no preference with regards to Build Alternatives 1b, 1br, and 2b and Design Option 1b1. The County Circulation Element includes all of the alignments and indicates no preference for any one. The City of San Jacinto will continue to work with the County of Riverside and the RCTC to support the preferred alternative of the SR 79. While the City of San Jacinto acknowledged corridors for the Project in its General Plan, should the selected Build alternative differ from the Project identified in the approved General Plan, the City of San Jacinto is committed to amending the circulation element of its General Plan. The Circulation Element of the General Plan stated: "The City will also continue to participate in proposed roadway modifications (including SR 79) and revise the General Plan circulation system, if necessary, to reflect changes in these modifications" (San Jacinto 2012).

This approach by all three affected jurisdictions means that the Project, including the alignment ultimately selected, will be consistent with the General Plans of the jurisdictions; although, it will be necessary for the City of Hemet or the City of San Jacinto to carry out their commitments to amend their plans.

### 2.3.2 Public circulation

The Draft EIR/ EIS public circulation period was from February through March 2013 and there were 489 comments submitted, with many members of the general public indicating specific preferences to build the project. During the Partially Recirculated Draft EIR/Supplemental Draft EIS comment period in August 2015, there were 105 comments submitted. The comments covered about 20 issues and represented viewpoints from government agencies, organizations, business groups, residents and property owners. Most expressed support or opposition as well as various opinions about the project or its alternatives. Of the total 594 submittals, most comments were related to biological, noise, air quality, relocation, and traffic impacts from individual, federal, state and local agencies, and community groups. Of the comments received, approximately 43 comments from the Draft EIR/EIS were generally opposed to all the alternatives, while 28 generally supported to build the project.

### **2.3.3 Preliminary Least Environmentally Damaging Practicable Alternative**

Criteria for the preliminary selection and evaluation of the Least Environmentally Damaging Practicable Alternative (LEDPA) included the following three broad categories with specific criteria for each category: Purpose and Need, Reasonable and Practicable, Environmental Impacts. Using findings from SR 79 Realignment technical studies, the Draft EIR/EIS and the Partially Recirculated Draft EIR/Supplemental Draft EIS, Table 2.3-1 was developed to present information based on these criteria and to allow for comparison of the alternatives.

The preliminary LEDPA analyses are described briefly in the following sections and are documented in detail in the Preferred Alternative/Preliminary LEDPA Identification (NEPA/404 Checkpoint 3) Report (March 2015), which is provided in Appendix M. Agency consultation supporting the Preliminary LEDPA analyses and determination process is described in Chapter 5, Comments and Coordination in this Final EIR/EIS.

#### **2.3.3.1 Analysis of the Preferred Alternative**

As a result of the analysis provided in this Final EIR/EIS and public comments received, Caltrans determined the Preferred Alternative, Build Alternative 1br, provides a balance between the purpose and need, the important environmental factors that differentiate the alternatives, and the concerns of the stakeholders. Generally, environmental issues identified are grouped into natural resources impacts, community impacts, and effects during construction. As prescribed by NEPA, Caltrans considered the intensity and context of impacts before applying mitigation. Table 2.3-1 includes broad categories with specific criteria for each category. Using findings from the SR 79 Realignment technical studies, the table was developed to present information to allow for comparison of the alternatives based on these criteria. The No Build Alternative is not included in the matrix because it does not meet the Project's purpose and need.

All of the build alternatives meet the purpose and need of the Project and overall there is very little differentiation between the build alternatives in terms of adverse effects to the human environment and natural resources. Given the lack of distinction, the Project Development Team (PDT) examined the results of the technical studies and analyses to identify the Preferred Alternative.

Build Alternative 2b was originally included as an "avoidance alternative for biological resources" subsequent consultation with Native American Tribes indicated that a TCP will be directly affected, and subsequently cause a Section 4(f) use. The Native American Tribes would not concur with the build alternatives, as designed, to move forward without a redesign. Caltrans proposed Build Alternative 1br as a feasible and prudent alternative that would minimize adverse effects of this Section 4(f) use.

Vernal Pool Wetlands are located north of Stowe Road east of the Hemet Hills. All build alternatives avoid direct impacts to this area. Build Alternatives 1a and 1b (including Build Alternative 1b1 and 1br) would also avoid any potential indirect impacts. Build Alternatives 2a and 2b (including Design Option 2b1) would impact a portion of the upper watershed of these vernal pools.

Alternative 1br has the fewest direct impacts to federal jurisdictional waters of the U.S., including wetlands, as well as federally listed endangered species found in the vernal pools. Alternative 1br also has the fewest temporary

impacts to the West Hemet Hills. Furthermore, Alternative 1br results in less impacts to habitat for federally listed species compared to the other build alternatives.

The alternatives were also analyzed from an engineering and design perspective. For the most part, all of the Project build alternatives have similar engineering and design elements. Design Options 1b1 and 2b1 are less desirable, however, because they would both require a truck-climbing lane, impact the San Jacinto Branch Line, and would not maintain an east-west connection to Winchester Road. Build Alternatives 1a and 2a are also less desirable because they do not provide any direct access to Winchester Road. Build Alternatives 1b and 2b are favored, in terms of design and engineering, because both of these alternatives avoid the need for a truck-climbing lane, avoid impacts to the San Jacinto Branch Line, maintain east-west road connections in Winchester, and provide direct access to Winchester Road.

Build Alternative 1br has been identified as the Preferred Alternative and, through coordination with resource agencies, as the Least Environmentally Damaging Practicable Alternative under Section 404 of the Clean Water Act. Build Alternative 1br has the fewest direct impacts to federal jurisdictional waters of the U.S., including wetlands. Alternative 1br also has the fewest temporary impacts to the Hemet Hills.

Impacts to natural resources are not substantially different among the Build Alternatives. However, the environmental impacts of Alternative 1br are consistently less than the impacts of Alternatives 1a, 1b, 2a, and 2b. Based on the key evaluation criteria for Build Alternatives in Table 2.3-1 and Table 3.3-3. Alternative 1br has slightly less total permanent impacts to federally jurisdictional waters than Build Alternatives 2a and 2b, and is ranked slightly higher in temporary impacts than the other Build Alternatives. Build Alternative 1br will remove the Tres Cerritos interchange from the Project design, and therefore, direct impacts to federally listed threatened and endangered plants will be eliminated. Build Alternatives 2a, 2b, and Design Option 2b1 could result in potentially significant indirect impacts to San Jacinto Valley crownscale (*Atriplex coronata var. notatior*), Spreading navarretia (*Navarretia fossalis*), and California Orcutt grass (*Orcuttia californica*), whereas Build Alternatives 1a, 1b, 1br and Design Option 1b1 would avoid indirect impacts to these species. All Project alternatives would result in both direct and indirect impacts to designated critical habitat for spreading navarretia. Direct impacts to critical habitat are 2.3 acres for Build Alternatives 1a, 1b, and Design Option 1b1, 2.9 acres for Build Alternative 1br, and 2.4 acres for Build Alternatives 2a, 2b, and Design Option 2b1.

Vernal pool fairy shrimp (*Branchinecta lynchi*), a federally listed endangered species, were found in the vernal pools north of Stowe Road east of the Hemet Hills. All build alternatives avoid direct impacts to this area, and Build Alternatives 1a and 1b (including Build Alternative 1b1 and 1br) also avoid any potential indirect impacts. Build Alternatives 2a and 2b (including Design Option 2b1) would impact a portion of the upper watershed of these vernal pools, resulting in 1.8 acres of indirect impacts to occupied vernal pool fairy shrimp habitat. Potentially suitable habitat is present for three additional federal- and or state-listed threatened and endangered wildlife species including Stephens' kangaroo rat (*Dipodomys stephensi*), Quino checkerspot butterfly (*Euphydryas edita quino*), and coastal California gnatcatcher (*Polioptila californica californica*). With the design refinements to minimize impacts on the Hemet Hills, Build Alternative 1br would result in the fewest direct and potential impacts to suitable habitat for these species.

The number of relocations of homes and businesses is about the same with either alternative. However, Build Alternative 1br has fewer residential relocations at 26 units but higher residential displacements at 115 displacements, when compared to Build Alternative 2b and Design Option 2b1 at 29 units and 75 displacements. Build Alternative 1b and Design Option 1b1 would have 37 units with 106 displacements. Alternative 1a would have the highest acquisitions with 42 units and 134 displacements.

Business and employee displacements for Build Alternative 1br would be 26 units acquired and 105 employees displaced. Build Alternatives 2b and Design Option 2b1 would require 13 units and 86 displacements. Alternatives 1a and 2a, which would require 14 units and 89, 86 displacements, respectively. Build Alternatives 1b and Design Option 1b1 would each require 14 units and 90 displacements. Overall, Build Alternative 2b and Design Option 2b1 would require the fewest number of residential and business relocations, and Build Alternatives 1a would require the greatest number of employ displacements.

The Build alternatives and design options would all result in the direct use of the TCP. As a result of consultation, the project team adjusted Build Alternative 1b, which became Alternative 1br, to minimize adverse impacts the TCP relative to the other build alternatives. Consequently, it also reduces visual impacts to the West Hemet Hill from the reduction of cut needed for this alternative.

Overall, Alternative 1br would be expected to have less impact to the community of Winchester because of the redesign of the Newport Road interchange to provide access by incorporating a traffic signal at the intersection of Newport Road. Alternative 1br requires less earthwork than the other build Alternatives.

Alternative 1br cost is estimated at \$1,073 million, while the cost of the other build alternatives range from \$991 to \$1,072 million. Alternative 1br provides a safe design while balancing impacts to the sensitive environmental resources and the private property along the corridor. Overall, the environmental impacts of Alternative 1br are consistently lower than the impacts of the other build alternatives as shown in Table 2.3-1. For further details on impacts, please see Table S-1 and Chapter 3.

Other criteria discussed in the Draft EIR/EIS had no substantial distinctions between alternatives and were therefore not included in the evaluation and selection process of the Preferred Alternative. The following resources were not included in this discussion because either the effects were less than significant, or the effects were common among all alternatives considered; air quality, hydrology, public utilities/emergency services, energy, geology, soils and seismicity, hazardous waste, paleontology, water quality, hydrology/ floodplain, environmental justice, growth and visual resources. Each section in Chapter 3 of the Final EIR/EIS contains mitigation measures for significant impacts and discusses whether the impact remains significant with the inclusion of the proposed mitigation. The following sections provide a detailed description of each of the distinguishing criteria that were used in the identification of the Preferred Alternative.

After full consideration of the technical studies prepared, and based on public and resource agency input, the Preferred Alternative that has been identified is Build Alternative 1br. Overall, it would have fewer impacts to biological resources, the vernal pool complex at Stowe Rd, and to Section 4(f) resources than the other Alternatives, and it presents a more cost-effective solution to the project purpose and need.

**Table 2.3-1 Detailed Matrix of Evaluation of Build Alternatives and Design Options**

<u>Evaluation Criteria</u>	<u>Build Alternative 1a</u>	<u>Build Alternative 1b</u>	<u>Build Alternative 1b1</u>	<u>Preferred Alternative Build Alternative 1br</u>	<u>Build Alternative 2a</u>	<u>Build Alternative 2b</u>	<u>Build Alternative 2b1</u>
<b><u>Reasonable and Practicable</u></b>							
<u>Purpose and Need</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>
<u>Cost (billions)</u>	<u>\$1,072</u>	<u>\$1,071</u>	<u>\$1,044</u>	<u>\$1,073</u>	<u>\$1,109</u>	<u>\$1,034</u>	<u>\$991</u>
<b><u>Traffic</u></b>							
<u>To improve traffic flow for local and regional north-south traffic in San Jacinto Valley</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>
<u>To improve operational efficiency and enhance safety conditions by maintaining route continuity and upgrading the facility</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>
<u>To allow regional traffic, including truck traffic, to adequately bypass local roads</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>
<u>To reduce the diversion of traffic from state routes into local roads</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>
<u>Does the alternative reduce congestion and cut-through traffic on local streets, and provide an acceptable LOS on the new alignment?</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>
<b><u>Engineering Design</u></b>							
<u>Does the alternative meet current design standards for a limited access expressway</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>
<u>Does the alternative avoid the need for a truck climbing lane?</u>	<u>Yes</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>No</u>
<u>Does the alternative avoid impacts to the San Jacinto Branch Line?</u>	<u>Yes</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>No</u>
<u>Does the alternative maintain east-west road connections to the community of Winchester?</u>	<u>Yes</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>	<u>No</u>
<u>Does the alternative provide direct access to Winchester Road?</u>	<u>No</u>	<u>No</u>	<u>Yes</u>	<u>Yes</u>	<u>No</u>	<u>No</u>	<u>Yes</u>

**Table 2.3-1 Detailed Matrix of Evaluation of Build Alternatives and Design Options**

<u>Evaluation Criteria</u>	<u>Build Alternative 1a</u>	<u>Build Alternative 1b</u>	<u>Build Alternative 1b1</u>	<u>Preferred Alternative Build Alternative 1br</u>	<u>Build Alternative 2a</u>	<u>Build Alternative 2b</u>	<u>Build Alternative 2b1</u>
<u>Cubic Yards of Roadway Excavation (million)</u>	<u>14.7</u>	<u>12.9</u>	<u>12.6</u>	<u>1.7</u>	<u>14.9</u>	<u>13.0</u>	<u>12.4</u>
<b><u>Biological Resources</u></b>							
<u>Stephens' Kangaroo Rat (FE, ST) Habitat (acres)</u>	<u>250.4</u> <u>330.6</u>	<u>247.1</u> <u>326.8</u>	<u>247.1</u> <u>326.8</u>	<u>182.3</u> <u>308.8</u>	<u>216.1</u> <u>356.8</u>	<u>212.5</u> <u>350.1</u>	<u>212.5</u> <u>350.1</u>
<u>Quino Checkerspot Butterfly (FE) Suitable Habitat. (acres)</u>	<u>419.5</u> <u>196.0</u>	<u>432.7</u> <u>210.3</u>	<u>433.2</u> <u>210.4</u>	<u>375.4</u> <u>186.9</u>	<u>371.0</u> <u>581.7</u>	<u>401.9</u> <u>592.9</u>	<u>402.4</u> <u>593.0</u>
<u>California Gnatcatcher (FT, CSC) Suitable Habitat. (acres)</u>	<u>144.7</u> <u>27.9</u>	<u>138.9</u> <u>28.6</u>	<u>138.9</u> <u>28.6</u>	<u>72.7</u> <u>38.5</u>	<u>114.0</u> <u>100.7</u>	<u>108.3</u> <u>101.4</u>	<u>108.3</u> <u>101.4</u>
<u>Los Angeles pocket mouse (CSC) Habitat (Acres)</u>	<u>2.6</u> <u>2.2</u>	<u>2.6</u> <u>2.2</u>	<u>2.6</u> <u>2.2</u>	<u>2.6</u> <u>2.2</u>	<u>2.6</u> <u>2.2</u>	<u>2.6</u> <u>2.2</u>	<u>2.6</u> <u>2.2</u>
<u>Burrowing Owl (CSC)</u>	<u>1 pair</u> <u>5 pairs &amp; 1 ind</u>	<u>1 pair</u> <u>6 pairs</u>	<u>1 pair</u> <u>6 pairs</u>	<u>1 pair</u> <u>4 pairs</u>	<u>2 pairs</u> <u>4 pairs &amp; 1 ind</u>	<u>2 pairs</u> <u>5 pairs</u>	<u>2 pairs</u> <u>5 pairs</u>
<u>White Tailed Kite (FP)</u>	<u>0</u> <u>2 pairs</u>	<u>0</u> <u>2 pairs</u>	<u>0</u> <u>2 pairs</u>	<u>0</u> <u>2 pairs</u>	<u>0</u> <u>4 pairs</u>	<u>0</u> <u>2 pairs</u>	<u>0</u> <u>2 pairs</u>
<u>Biological Resources – Vernal Pools (acres) Permanent Direct</u>	<u>2.0</u>	<u>2.0*</u>	<u>2.0*</u>	<u>2.0</u>	<u>2.0*</u>	<u>2.0</u>	<u>2.0</u>
<u>Biological Resources – Seasonal Wetlands (acres) Permanent Direct</u>	<u>0.9</u>	<u>0.9</u>	<u>0.9</u>	<u>0.9</u>	<u>1.1</u>	<u>1.1</u>	<u>1.1</u>
<u>Biological Resources- Riparian Seasonal Wetlands (acres)</u>	<u>1.6</u>	<u>1.6</u>	<u>1.6</u>	<u>1.6</u>	<u>1.6</u>	<u>1.6</u>	<u>1.6</u>
<u>Does the alternative avoid crossing MSHCP Criteria Cells?</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>

**Table 2.3-1 Detailed Matrix of Evaluation of Build Alternatives and Design Options**

<b>Evaluation Criteria</b>	<b>Build Alternative 1a</b>	<b>Build Alternative 1b</b>	<b>Build Alternative 1b1</b>	<b>Preferred Alternative Build Alternative 1br</b>	<b>Build Alternative 2a</b>	<b>Build Alternative 2b</b>	<b>Build Alternative 2b1</b>
<u>Does the alternative avoid crossing MSCHP Linkage B (Salt Creek)?</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>
<u>Does the alternative avoid crossing MSCHP Linkage C (San Jacinto River)?</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>
<u>Does the alternative avoid impacts to local wildlife crossings?</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>
* Build Alternative initially avoided vernal pools VP0109 and VP0110, however updated design standards make avoidance infeasible.							
<b>Community Impacts</b>							
<u>Does the alternative have an unacceptable adverse social, economic, or environmental impacts</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>
<u>Does the alternative create a Community Disruption</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>
<u>Is the alternative consistent with the Hemet Locally Preferred Alternative?</u>	<b><u>No</u></b>	<b><u>No</u></b>	<b><u>No</u></b>	<b><u>No</u></b>	<b><u>No</u></b>	<u>Yes</u>	<b><u>No</u></b>
<u>Is the alternative consistent with the San Jacinto Locally Preferred Alternative?</u>	<b><u>No</u></b>	<b><u>No</u></b>	<b><u>No</u></b>	<b><u>No</u></b>	<b><u>No</u></b>	<u>Yes</u>	<b><u>No</u></b>
<u>Does the alternatives avoid the need for residential or commercial property relocations?</u>	<b><u>No</u></b>	<b><u>No</u></b>	<b><u>No</u></b>	<b><u>No</u></b>	<b><u>No</u></b>	<b><u>No</u></b>	<b><u>No</u></b>
<u>Number of Residential Acquisitions</u>	<u>42</u>	<u>37</u>	<u>37</u>	<u>26</u>	<u>39</u>	<u>29</u>	<u>29</u>
<u>Number of Residential Displacements</u>	<u>134</u>	<u>106</u>	<u>106</u>	<u>115</u>	<u>107</u>	<u>75</u>	<u>75</u>
<u>Number of Commercial Acquisitions</u>	<u>14</u>	<u>14</u>	<u>14</u>	<u>19</u>	<u>14</u>	<u>13</u>	<u>13</u>
<u>Number of Employee Displacements</u>	<u>89</u>	<u>90</u>	<u>90</u>	<u>105</u>	<u>89</u>	<u>86</u>	<u>86</u>
<b>Noise</b>							
<u>Does the alternative avoid impacts to sensitive receptors?</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>
<u>Number of benefitted Residential Units</u>	<u>374</u>	<u>563</u>	<u>563</u>	<u>105</u>	<u>446</u>	<u>545</u>	<u>545</u>
<u>Number of Sound Barriers</u>	<u>5</u>	<u>6</u>	<u>6</u>	<u>6</u>	<u>5</u>	<u>6</u>	<u>6</u>

**Table 2.3-1 Detailed Matrix of Evaluation of Build Alternatives and Design Options**

<u>Evaluation Criteria</u>	<u>Build Alternative 1a</u>	<u>Build Alternative 1b</u>	<u>Build Alternative 1b1</u>	<u>Preferred Alternative Build Alternative 1br</u>	<u>Build Alternative 2a</u>	<u>Build Alternative 2b</u>	<u>Build Alternative 2b1</u>
<b><u>Farmlands</u></b>							
<u>Does the alternative avoid impacts to Farmland resources?</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>
<u>Prime Farmlands (acres)</u>	<u>86.33</u>	<u>74.96</u>	<u>74.96</u>	<u>66.27</u>	<u>81.54</u>	<u>71.08</u>	<u>71.08</u>
<u>Unique Farmland (acres)</u>	<u>53.27</u>	<u>5.56</u>	<u>5.56</u>	<u>5.17</u>	<u>53.55</u>	<u>7.08</u>	<u>7.08</u>
<u>Important Farmlands (acres)</u>	<u>99.23</u>	<u>87.21</u>	<u>87.21</u>	<u>88.15</u>	<u>148.24</u>	<u>114.17</u>	<u>114.17</u>
<b><u>Section 4(f)</u></b>							
<u>Section 4(f) (direct uses)</u>	<u>7</u>	<u>6</u>	<u>6</u>	<u>3</u>	<u>7</u>	<u>6</u>	<u>6</u>
<b><u>Cultural Resources</u></b>							
<u>Does the alternative avoid impacts to TCP?</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>
<u>Number of Historic Properties (Prehistoric archaeological)</u>	<u>7</u>	<u>6</u>	<u>6</u>	<u>3</u>	<u>7</u>	<u>6</u>	<u>6</u>
<u>Number of Historic Properties (Historic-era archaeological/architectural)</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
<u>Acres of direct acquisition of the TCP.</u>	<u>206.6</u>	<u>206.6</u>	<u>206.6</u>	<u>141.1</u>	<u>139.6</u>	<u>139.6</u>	<u>139.6</u>

### **Section 404 No Federal Action Alternative**

The No Build Alternative would entail no action by the Project proponent. Existing and projected capacity and operational benefits would not be realized. Existing SR 79 would not be realigned, ROW would not be acquired, and roadway construction would not occur.

The assumptions used for the traffic analysis of the No Build Alternative at the 20-Year Design Horizon of the Project (2040) include:

- The Mid County Parkway (formerly Cajalco/Ramona Corridor) would be a four-lane expressway.
- Arterial streets would be built to City or County General Plan classification standards by 2040.
- Improvements planned by Caltrans and the County of Riverside for the portion of SR 79 between Hunter Road and Newport Road would be in place. There would be no further improvements on this portion of SR 79 before 2040.
- Regional facilities would be in accordance with the Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP).

The portion of SR 79 proposed for realignment would remain in place and unchanged. The selection of the No Build Alternative would not preclude construction of projects currently included in the General Plans of Riverside County, the City of Hemet, and the City of San Jacinto or of projects that might be proposed in the future.

### **Identification of the Preferred Alternative**

Based on the analyses discussed above, Build Alternative 1br has been identified as the Preferred Alternative. The SR 79 Realignment Project Development Team (PDT), consisting of representatives from RCTC, Caltrans, County of Riverside, The city of San Jacinto, the city of Hemet, the Community of Winchester, concurred with the identification of Build Alternative 1br as the Preferred Alternative at January 7, 2016 PDT Meeting.

As presented above in Section 2.3.3.1, the process for identifying the Preferred Alternative was extensive. Build Alternatives 1b1 and Design Option 2b1 were eliminated due to engineering considerations, as both would require a truck climbing lane, would result in direct impacts to the San Jacinto Branch Line, and would not maintain east-west road connections with Winchester Road. Build Alternatives 1a and 2a were eliminated from further consideration as these alternatives do not provide direct access to Winchester Road. Initially, Build Alternative 2b was considered for the preferred alternative, as it was consistent with all of the locally preferred alternatives, met the engineering and design criteria, and involved the least amount of residential and commercial relocations. Through our coordination with resource agencies, Build Alternative 1br has demonstrated the greatest avoidance and minimization of impacts to Jurisdictional Wetlands and Waters of the U.S. and habitats at the Salt Creek Plain as demonstrated in the identification of the LEDPA (NEPA 404/Checkpoint C) May 2015. However, impacts to a TCP in the West Hemet Hills would result in a significant cultural resource and Section 4(f) impact which requires a test for a feasible and prudent avoidance alternatives, however, it was determined that there is not a feasible and prudent alternative to avoid the use of any and all Section 4(f) properties. Therefore, Build Alternative 1b, with design refinements to minimize impacts on the TCP, both a cultural and Section 4(f) resource, and to conform to current roadway

specifications, was selected as the preferred alternative. With the design refinements to minimize impacts to the Hemet Hills, Build Alternative 1br also results in fewer impacts to threatened and endangered species habitat than the other Project alternatives.

Build Alternative 1br also addressed and incorporated refinements based on a number of the comments received during the public circulation of the Draft EIR/EIS and Partially Recirculated Draft EIR/Supplemental Draft EIS. Refinements were also made to comply with Caltrans' mandatory design standards and to minimize impacts to the TCP identified during the Native American consultations in 2013 and 2014. Build Alternative 1br will remain within the environmental study area and has a reduced right-of-way and has similar alignments and project limits as Build Alternative 1b. Build Alternative 1b, with design refinements to minimize impacts to the Hemet Hills, would be the Least Environmentally Damaging Practicable Alternative.

## **2.4 Permits and Approvals Needed**

The permits and approvals required for the Project are listed in Table 2.4-1. In addition, following certification of the Final EIR/EIS by the Department, this EIR/EIS may be used for related discretionary actions under CEQA, including general plan amendments by Riverside County and the Cities of Hemet and San Jacinto.

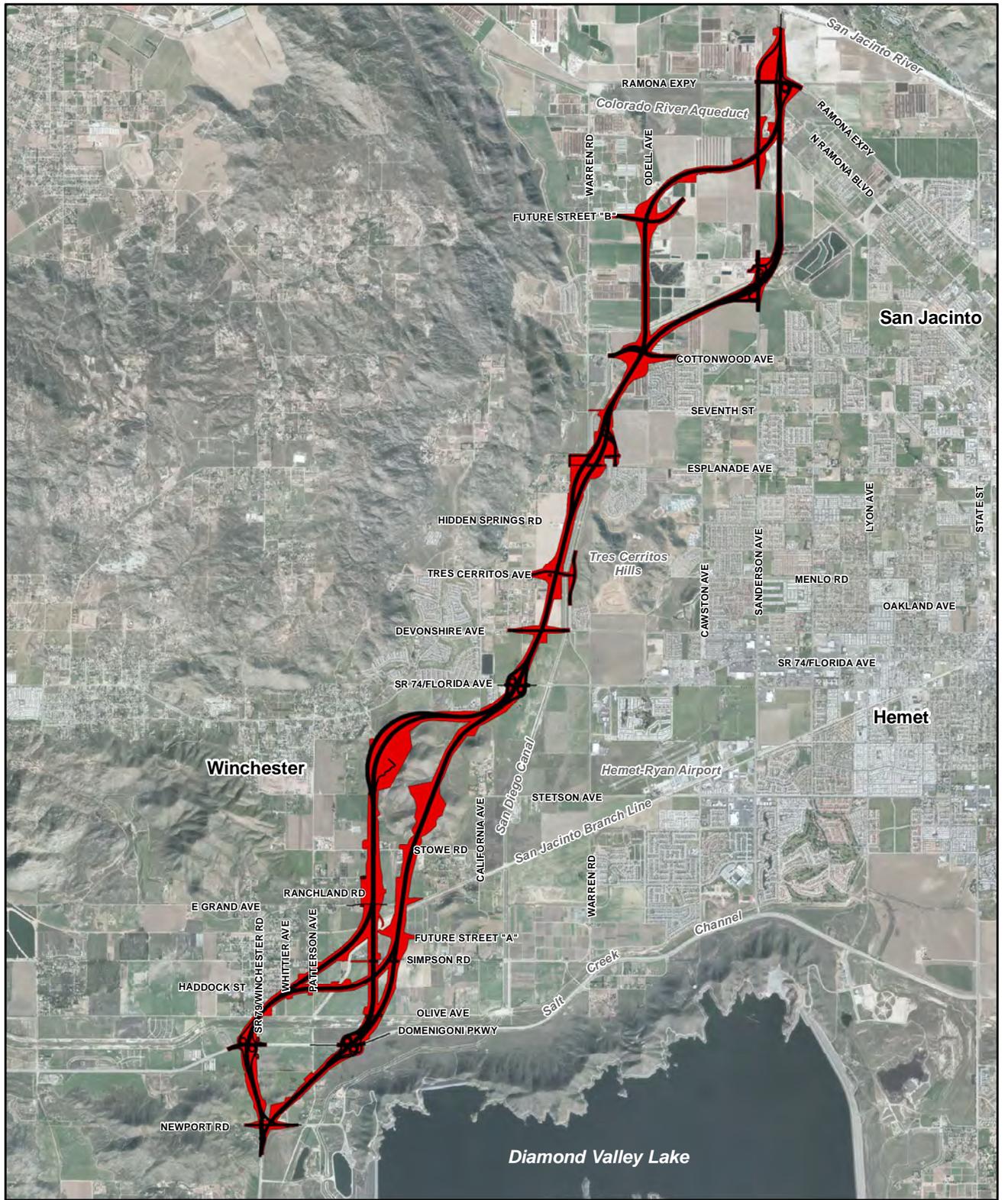
**Table 2.4-1 Permits and Approvals Needed**

Agency	Permit/Approval	Status
<b>Federal</b>		
United States Army Corps of Engineers (USACE)	<ul style="list-style-type: none"> <li>Individual Section 404 permit for impacts to waters of the United States</li> </ul>	A Department of the Army Individual Permit application will be submitted after identification of a Preferred Alternative for the Project <u>during PS&amp;E phase of the project.</u>
United States Department of Transportation Federal Highway Administration (FHWA)	<ul style="list-style-type: none"> <li>Draft Project Management Plan</li> <li>Cost Estimate/Financial Plan</li> </ul>	These plans will be developed after a Preferred Alternative is identified for the Project and will be submitted prior to the final NEPA determination.
California Department of Transportation, on behalf of United States Department of Transportation Federal Highway Administration	<ul style="list-style-type: none"> <li>Section 4(f) Determination</li> </ul>	<p><u>Caltrans determined, and SHPO concurred, that the Project will have an Adverse Effect on two historic properties pursuant to Section 106 PA Stipulation X.C and CFR 800.5: a traditional cultural property (TCP) consisting of two hills known as (Chéexayam Pum'wáppivu (Seven Sisters), and 'Anó' Potma (Coyote's Mouth), and the intervening valley) and collection of archaeological resources that potentially contribute to a presumed Potential Prehistoric Archaeological District (PPAD). Caltrans consulted with the SHPO and Consulting Native American Tribe's on the resolution of effects to these two resources and an MOA has been signed by the parties.</u></p> <p><u>The MOA has been approved, and was signed by SHPO and Caltrans Headquarters on March 25, 2016 and by Caltrans District 8 on March 28, 2016. All required mitigation is included in the MOA as well as documented in the ECR.</u></p>
United States Fish and Wildlife Service	<ul style="list-style-type: none"> <li>Section 7 consultation for threatened and endangered species</li> <li>Consistency Determination required per the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)</li> </ul>	<p>Consultation <u>was</u> conducted following identification of a Preferred Alternative for the Project.</p> <p><u>An MSHCP Consistency Determination for the Preferred Alternative was issued by USFWS on November 23, 2015.</u></p> <p><u>Section 7 Consultation was initiated on December 15, 2015 for the Preferred Alternative. USFWS issued a Biological Opinion (FWS-WRIV-09B0190-16F0335) on March 10, 2016.</u></p>
<b>State</b>		
California Department of Fish and <u>Wildlife</u>	<ul style="list-style-type: none"> <li>Streambed Alteration Agreement</li> </ul>	Coordination to be conducted and applications to be submitted after identification of the Preferred Alternative and prior to construction.
California Transportation Commission	<ul style="list-style-type: none"> <li>Route adoption</li> </ul>	Coordination to be conducted based on Final EIR/EIS and after Record of Decision.

**Table 2.4-1 Permits and Approvals Needed**

Agency	Permit/Approval	Status
Regional Water Quality Control Board	<ul style="list-style-type: none"> <li>• Section 401 Water Quality Certification</li> <li>• Section 402 National Pollutant Discharge Elimination System (NPDES):                             <ul style="list-style-type: none"> <li>– NPDES Permit: Order No. <u>2012-0011</u>-DWQ, NPDES No. CAS000003</li> <li>– Construction General Permit: Order No. <u>2012-0006</u>-DWQ, NPDES No. CAS000002</li> </ul> </li> </ul>	Notice of Intent (NOI) will be submitted prior to start of construction. If applicable, a separate dewatering permit will be requested from the Santa Ana Regional Water Quality Control Board for the San Jacinto Watershed; the permit number is NPDES CAG 998001.
State Historic Preservation Office	Section 106 compliance: <ul style="list-style-type: none"> <li>• Historic Property Determinations of Eligibility                             <ul style="list-style-type: none"> <li>Finding of Effect</li> <li>Resolution of Adverse Effects, Memorandum of Agreement (MOA)</li> </ul> </li> </ul>	<u>SHPO concurrence on the MOA was issued on March 25, 2016.</u>
<b>Regional/Local</b>		
Riverside County and Cities of Hemet and San Jacinto	<ul style="list-style-type: none"> <li>• Freeway Agreement between each local entity and <u>Caltrans</u></li> <li>• Street construction permits, approval of street closures and rerouting, and associated improvements within the public ROW</li> <li>• Noise variance for temporary exceedance of noise ordinances during Project construction</li> <li>• Riverside County MS4 Permit (Order No. R8-2010-0033, NPDES No. CAS618033)</li> </ul>	Coordination to be conducted and approvals/permits to be issued prior to construction.
Riverside County Flood Control and Water Conservation District (RCFCWCD)	Encroachment permit for improvements affecting RCFCWCD facilities	Coordination to be conducted based on final design and prior to construction.
Western Riverside County Regional Conservation Authority	<ul style="list-style-type: none"> <li>• Consistency Determination required per the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)</li> <li>• <u>A Determination of Biological Equivalent or Superior Preservation (DBESP) required per the Western Riverside County MSHCP</u></li> </ul>	<u>Consistency Determination was issued on September 30, 2015.</u>



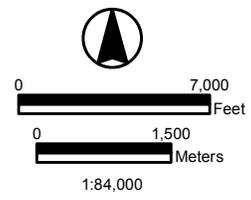


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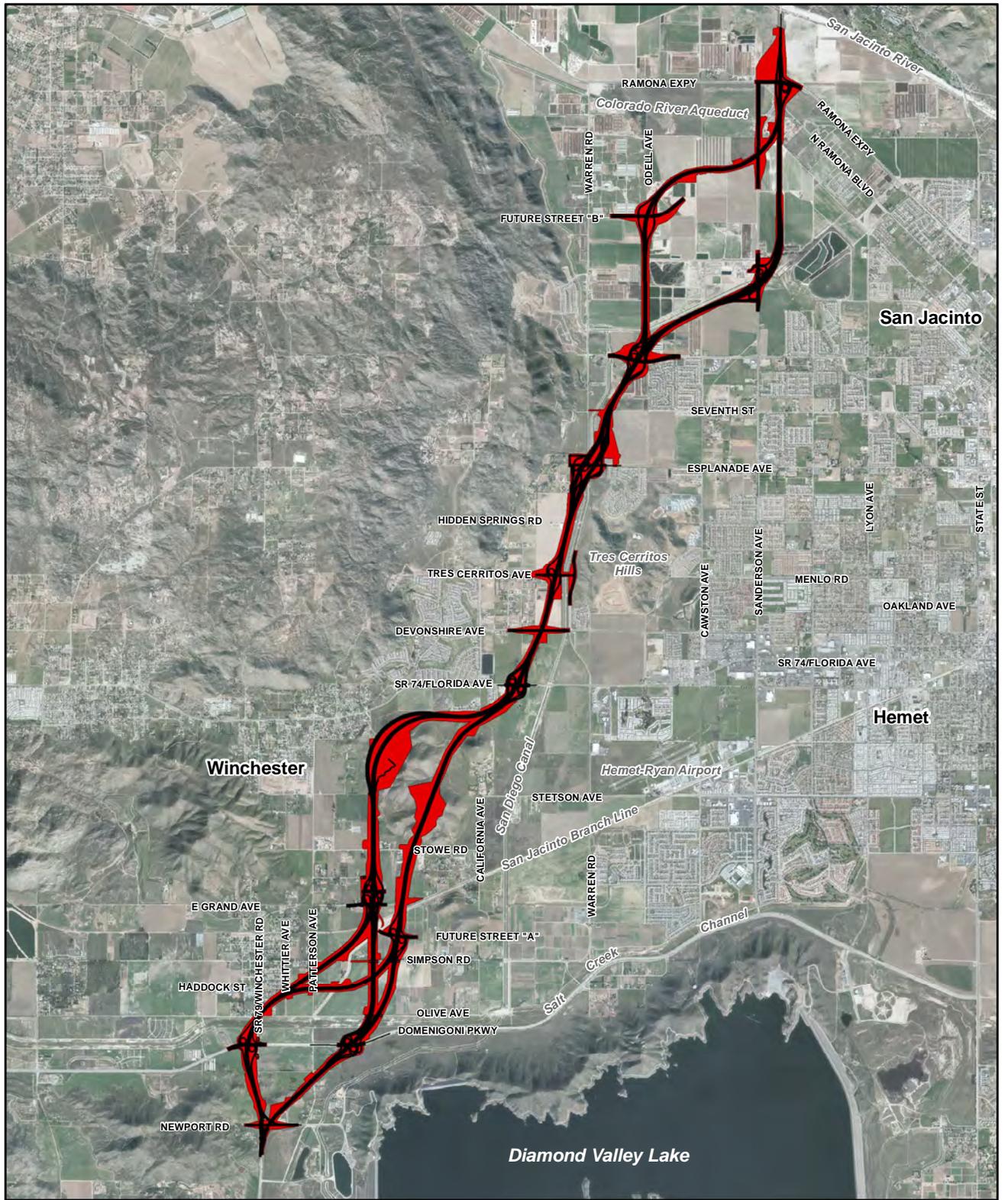
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**LEGEND**

-  Project Roadway and Local Street Improvements
-  Project Impact Area



**Figure 2.1-1**  
**Build Alternatives**  
**Opening Year (2020)**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project

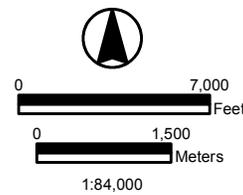


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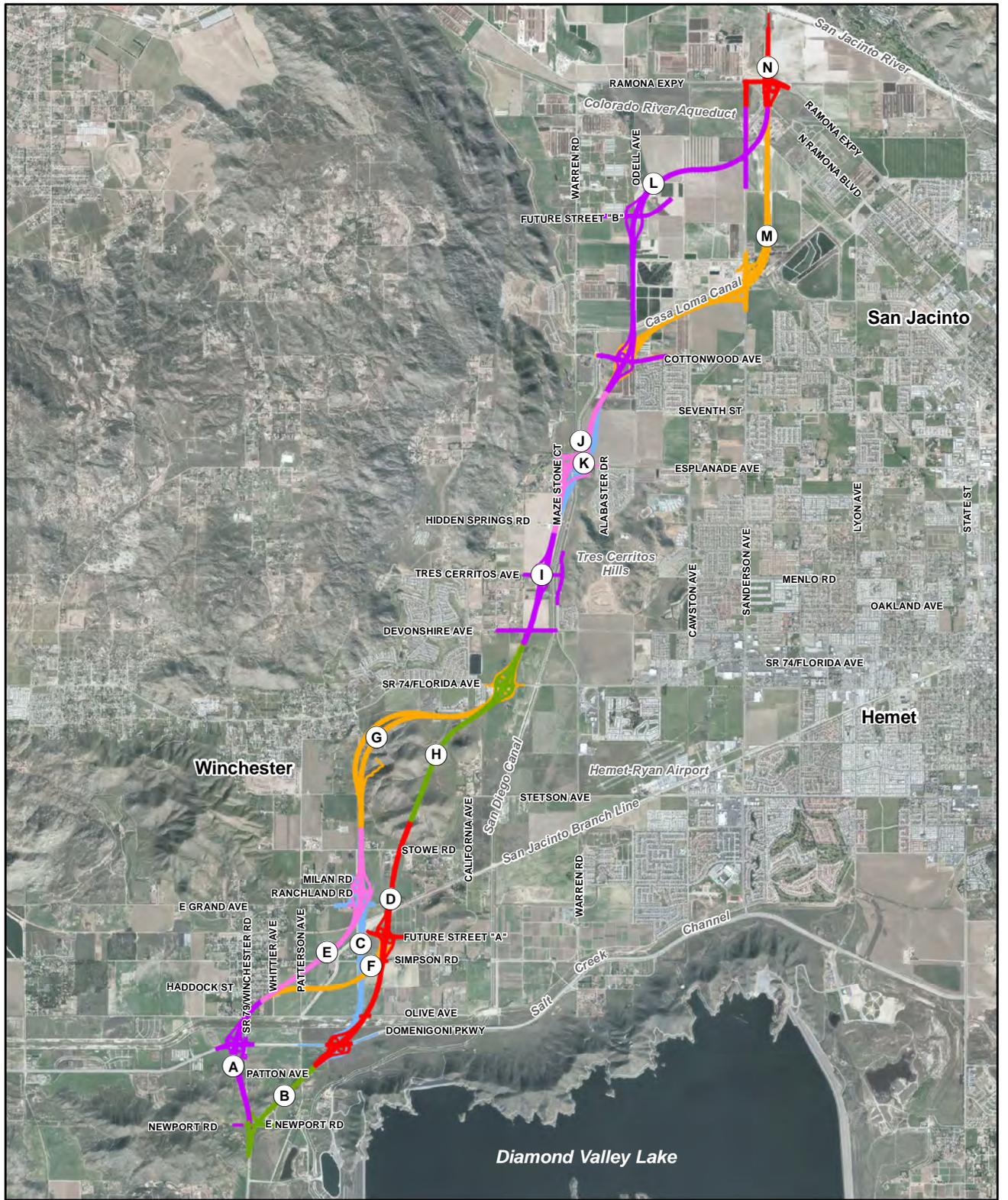
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**LEGEND**

-  Project Roadway and Local Street Improvements
-  Project Impact Area



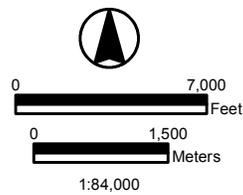
**Figure 2.1-2**  
**Build Alternatives**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



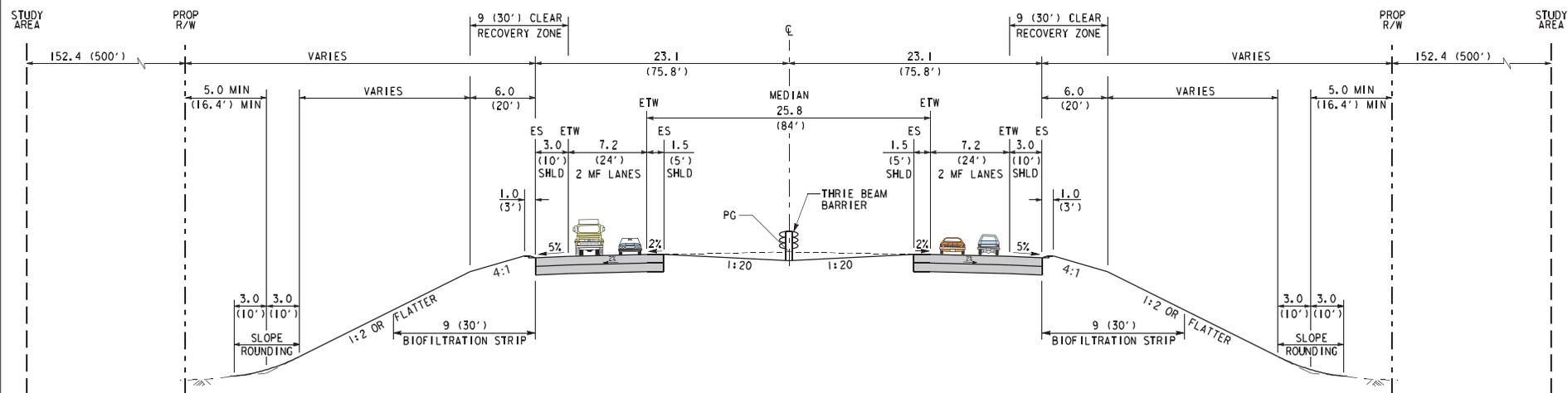
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Note: This figure depicts the proposed roadway alignment by roadway segment. The roadway segments are shown in multiple colors to differentiate them from each other. The colors and letters shown on the roadway alignment identify independent roadway segments that have been assembled to create Project Build alternatives.



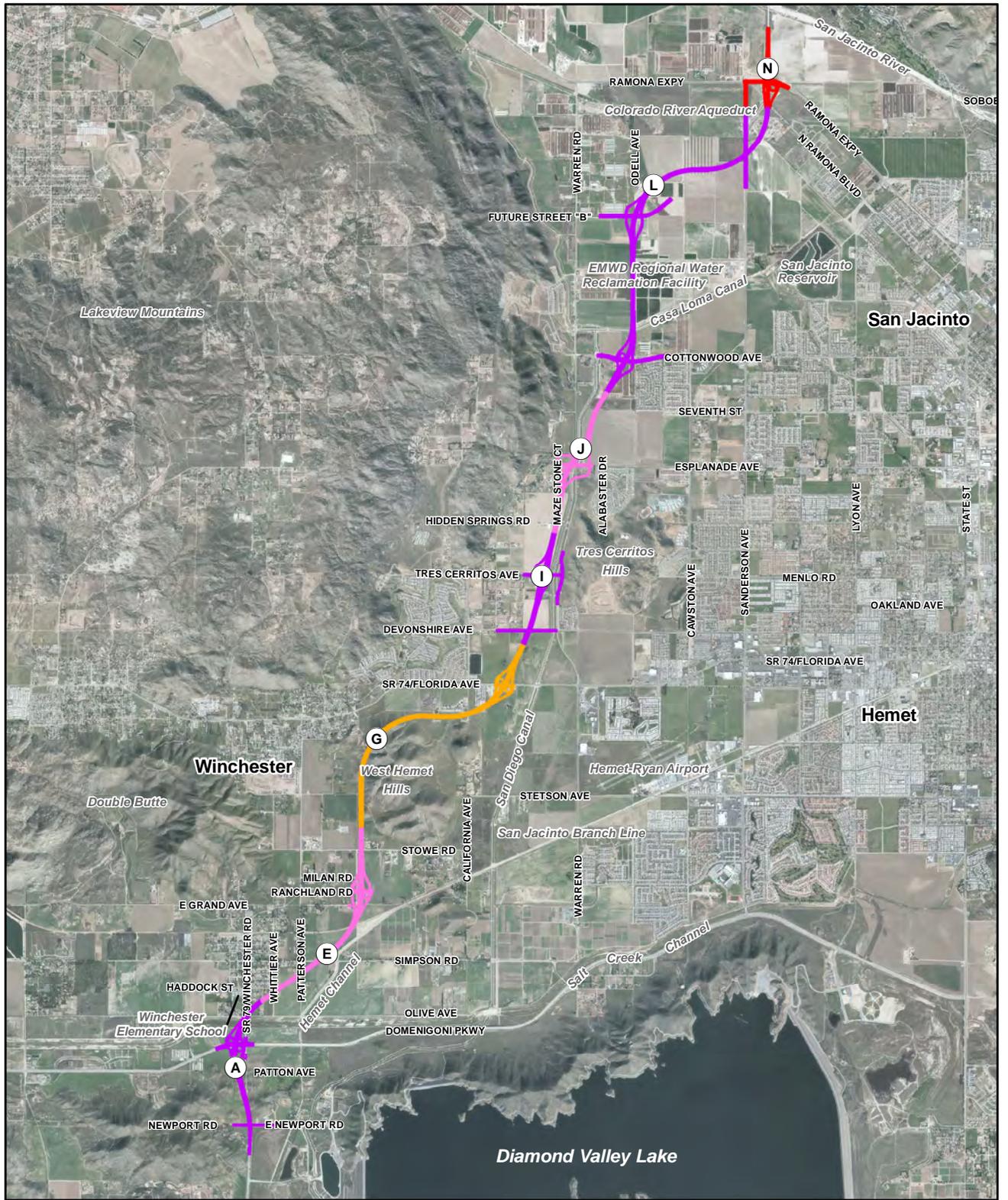
**Figure 2.2-1**  
**Project Roadway Segments**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



Source: Final Project Description, November 2007

**Figure 2.2-2**  
**Typical Roadway Cross-Section**  
**Limited-Access Expressway**

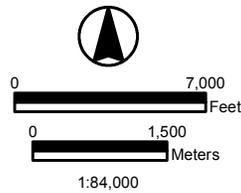
Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



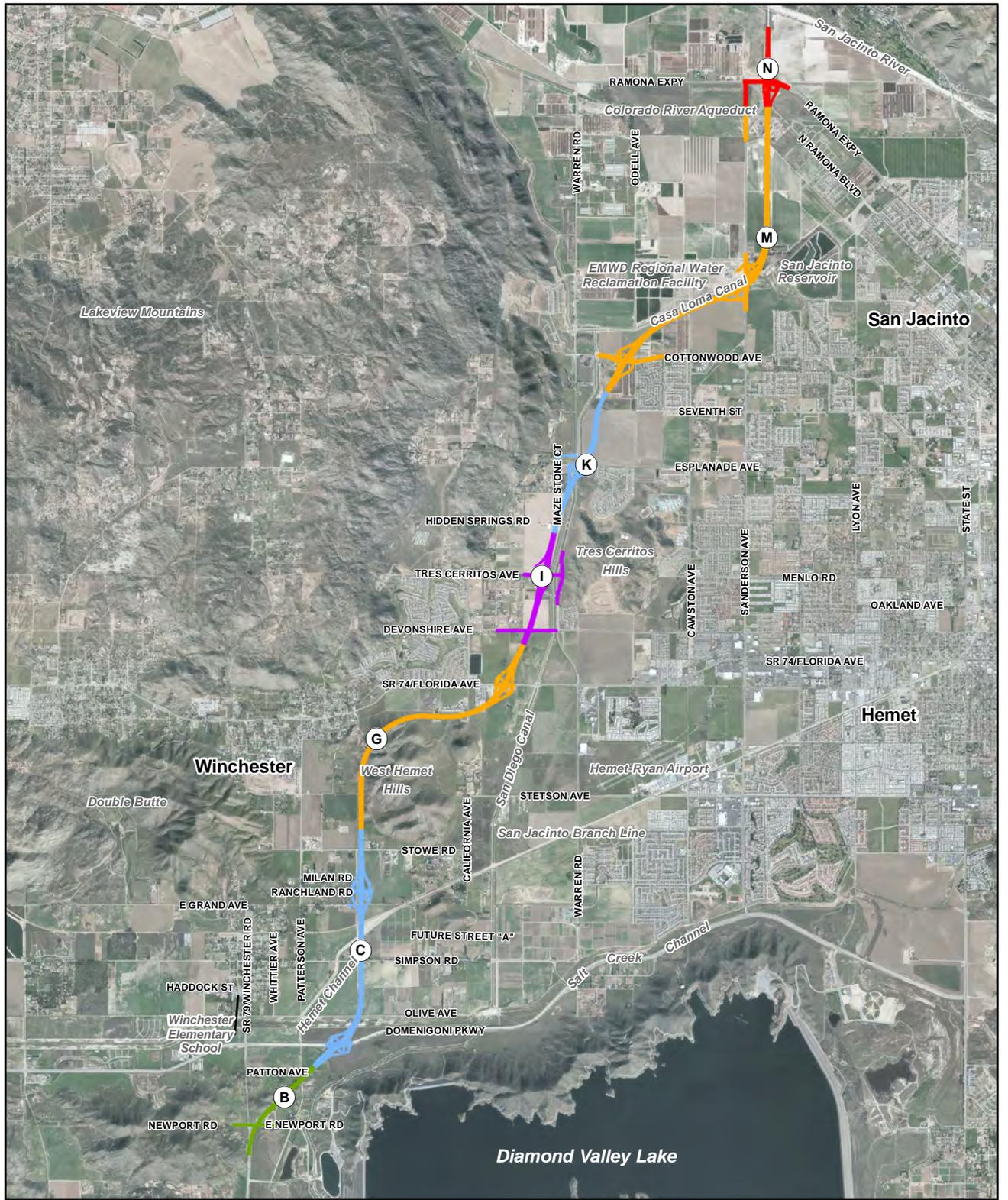
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Note: This figure depicts the proposed roadway alignment by roadway segment. The roadway segments are shown in multiple colors to differentiate them from each other. The colors and letters shown on the roadway alignment identify independent roadway segments that have been assembled to create Project Build alternatives.



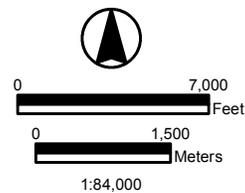
**Figure 2.2-3a**  
**Build Alternative 1a**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



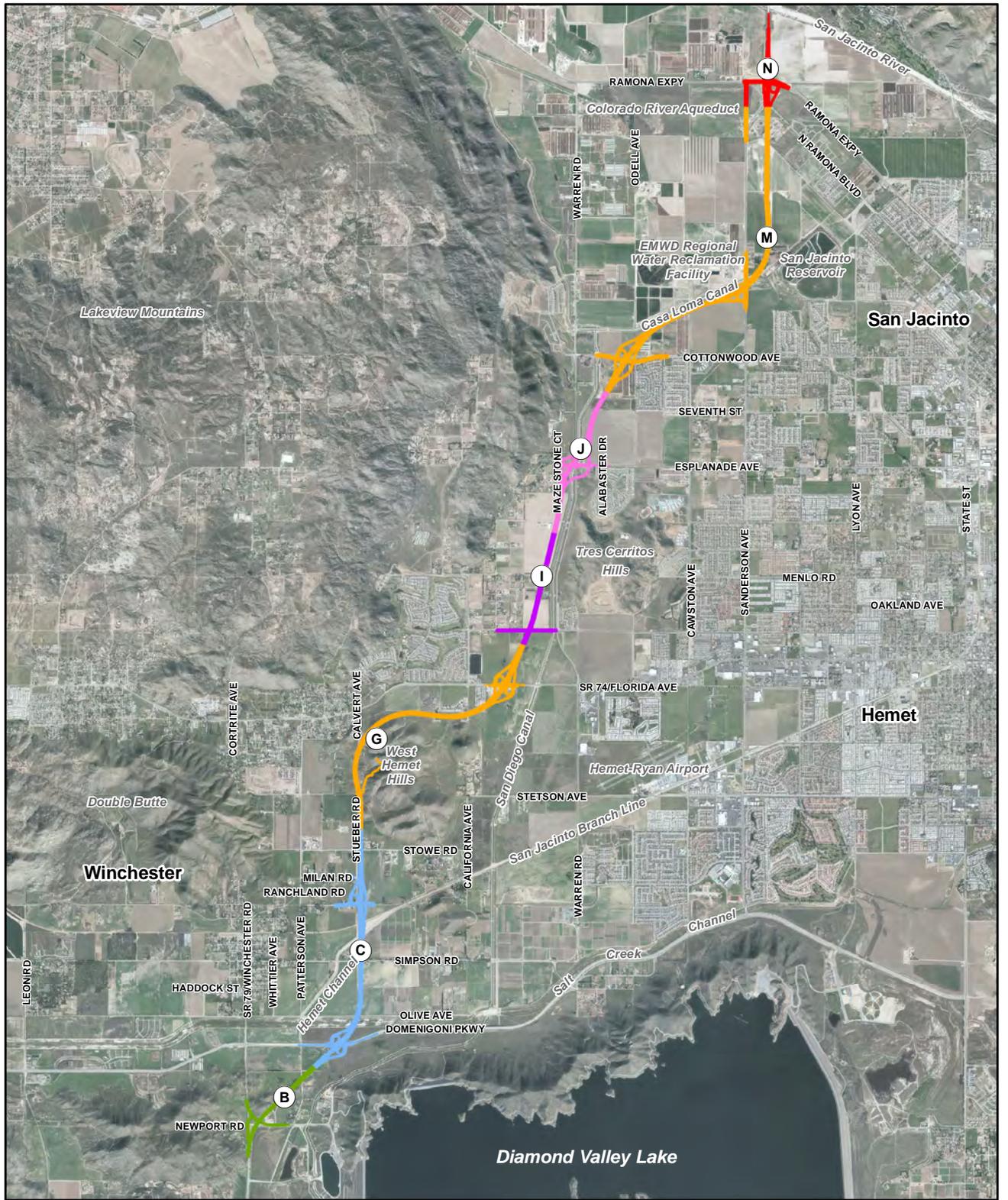
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Note: This figure depicts the proposed roadway alignment by roadway segment. The roadway segments are shown in multiple colors to differentiate them from each other. The colors and letters shown on the roadway alignment identify independent roadway segments that have been assembled to create Project Build alternatives.



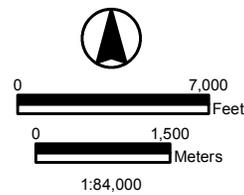
**Figure 2.2-3b**  
**Build Alternative 1b**  
**and Design Option 1b1**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



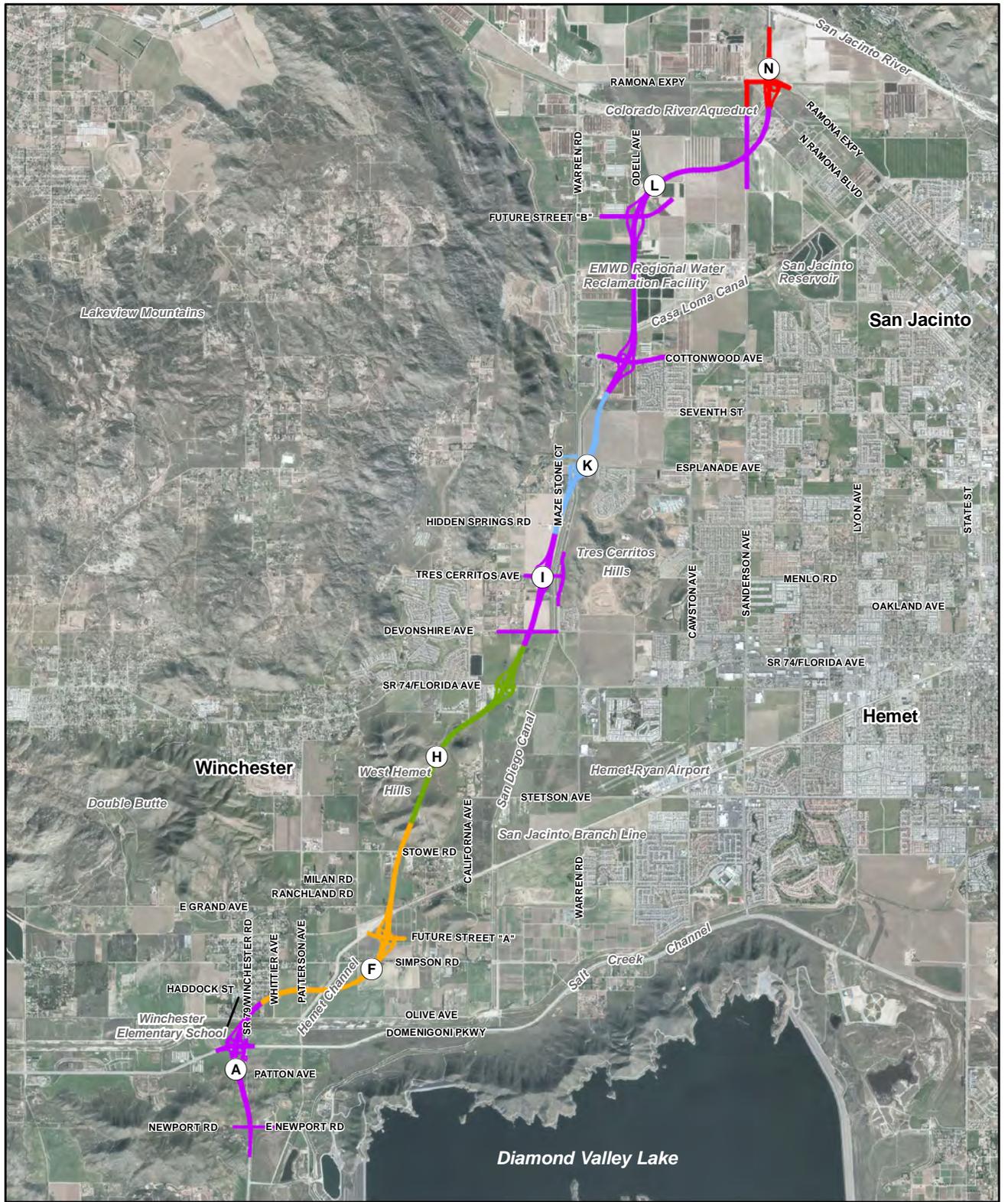
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Note: This figure depicts the proposed roadway alignment by roadway segment. The roadway segments are shown in multiple colors to differentiate them from each other. The colors and letters shown on the roadway alignment identify independent roadway segments that have been assembled to create Project Build alternatives.



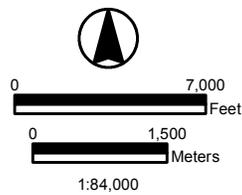
**Figure 2.2-3c**  
**Build Alternative 1br**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



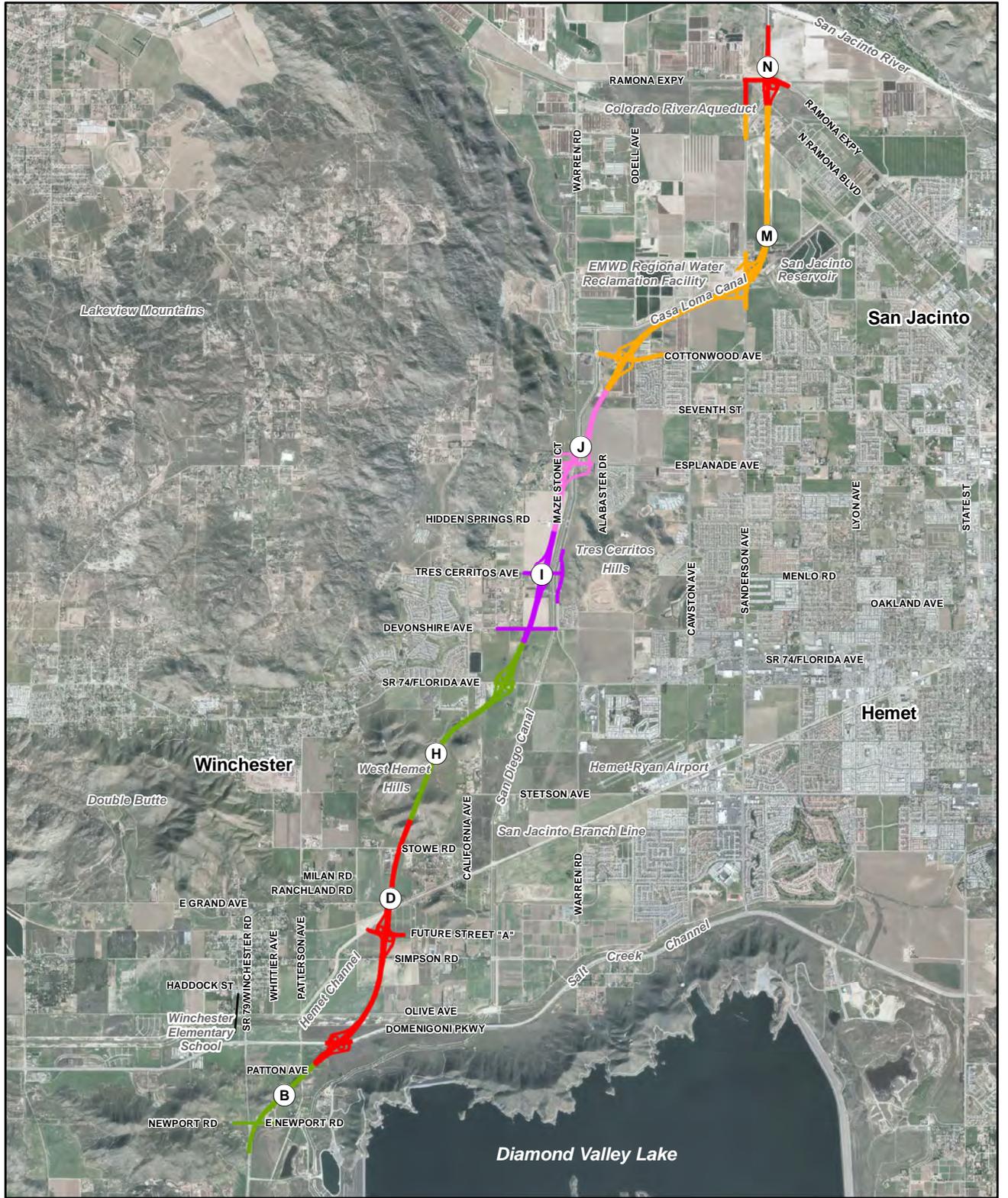
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Note: This figure depicts the proposed roadway alignment by roadway segment. The roadway segments are shown in multiple colors to differentiate them from each other. The colors and letters shown on the roadway alignment identify independent roadway segments that have been assembled to create Project Build alternatives.



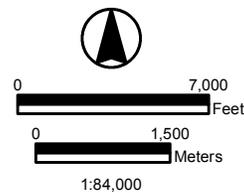
**Figure 2.2-4a**  
**Build Alternative 2a**  
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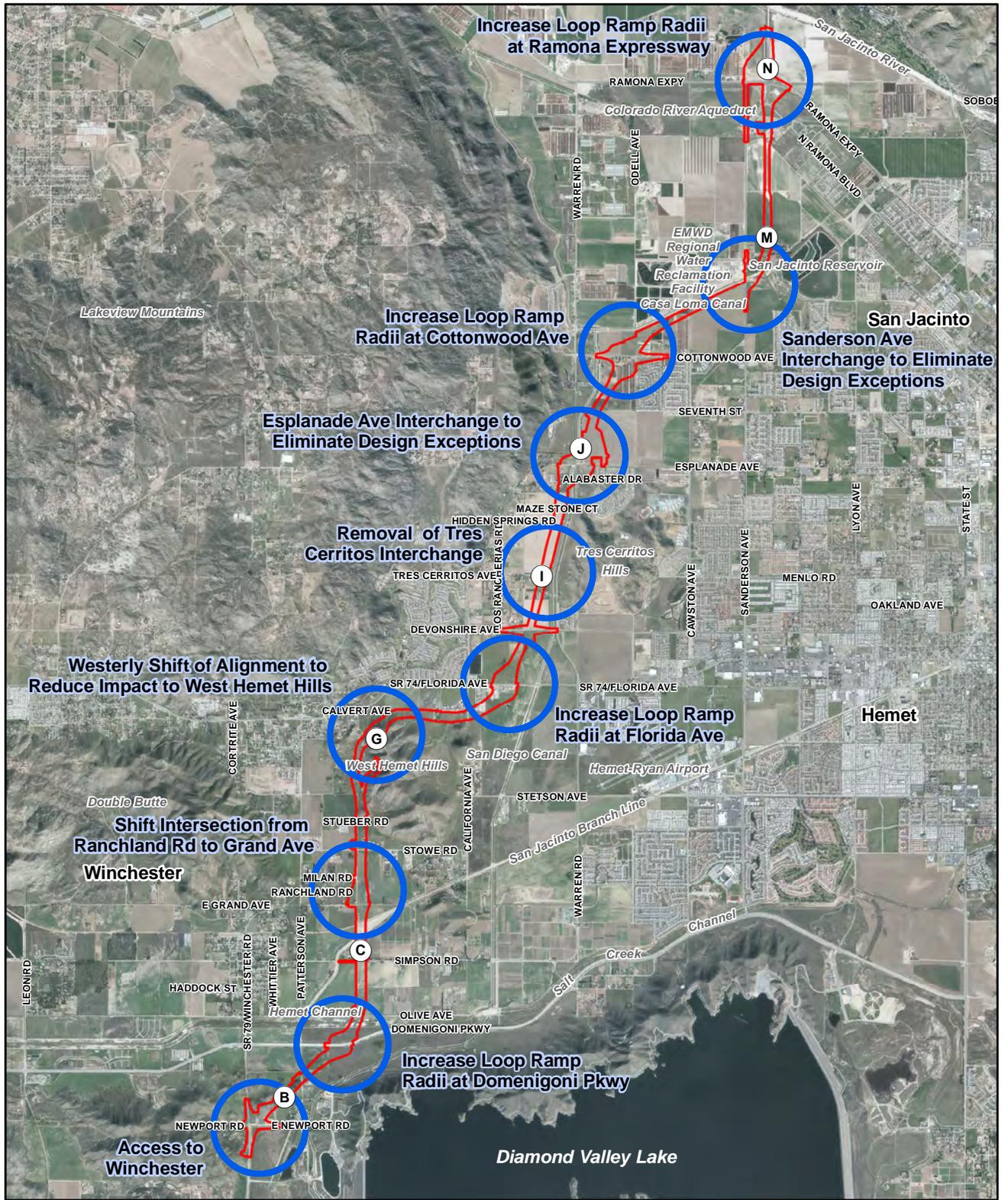
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Note: This figure depicts the proposed roadway alignment by roadway segment. The roadway segments are shown in multiple colors to differentiate them from each other. The colors and letters shown on the roadway alignment identify independent roadway segments that have been assembled to create Project Build alternatives.



**Figure 2.2-4b**  
**Build Alternative 2b**  
**and Design Option 2b1**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project

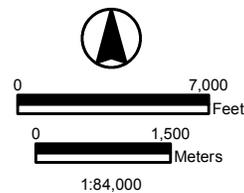


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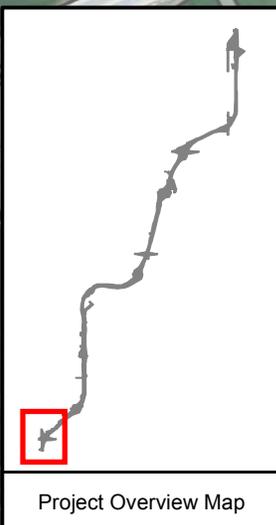
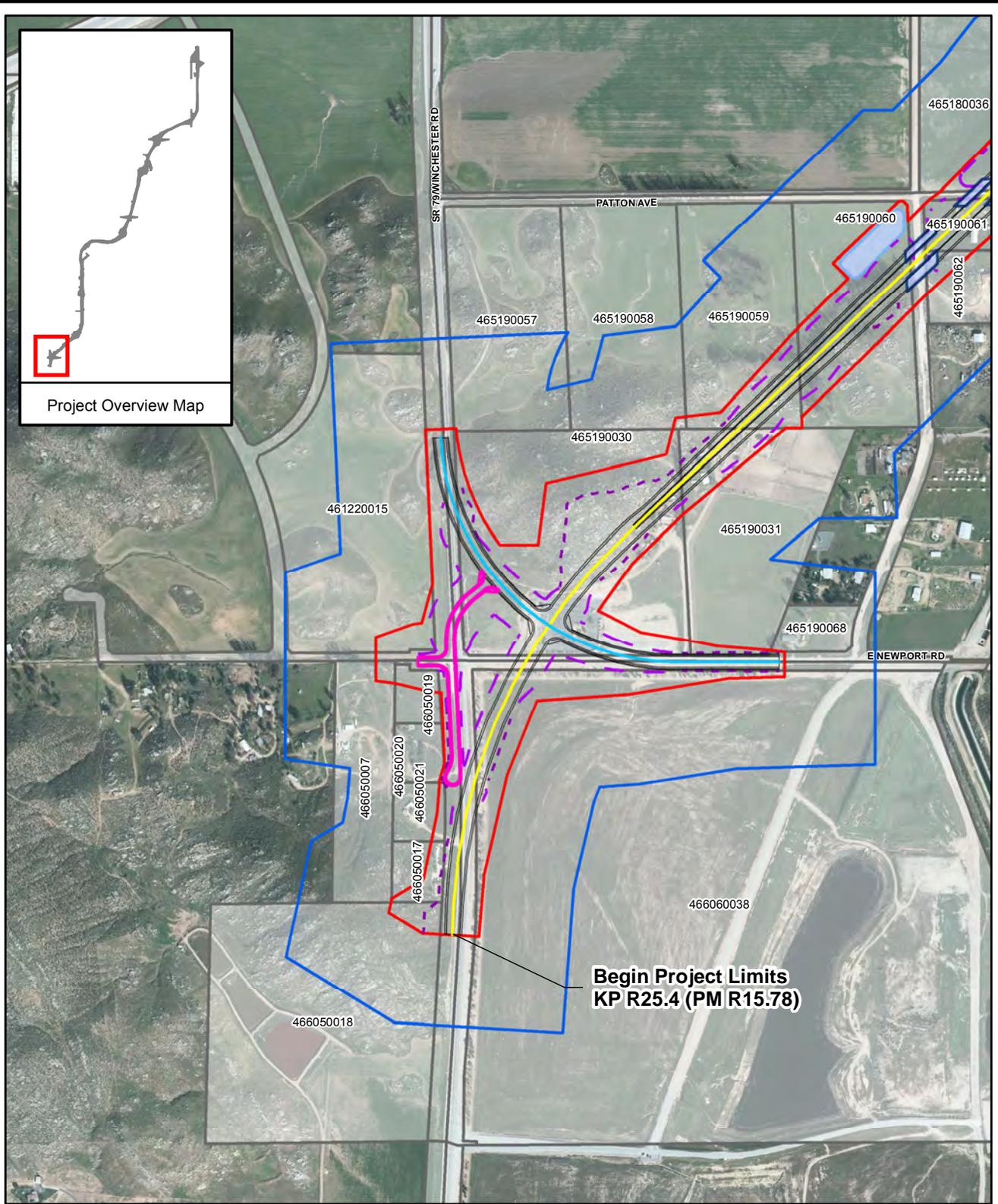
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**LEGEND**

 Right-of-Way

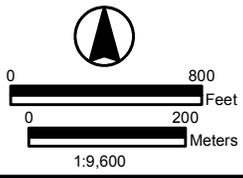


**Figure 2.2-5**  
**Location of Refinements**  
**for Build Alternative 1br**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project

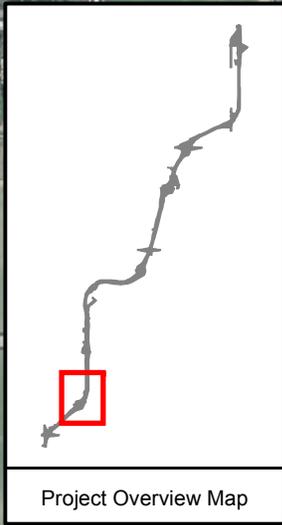
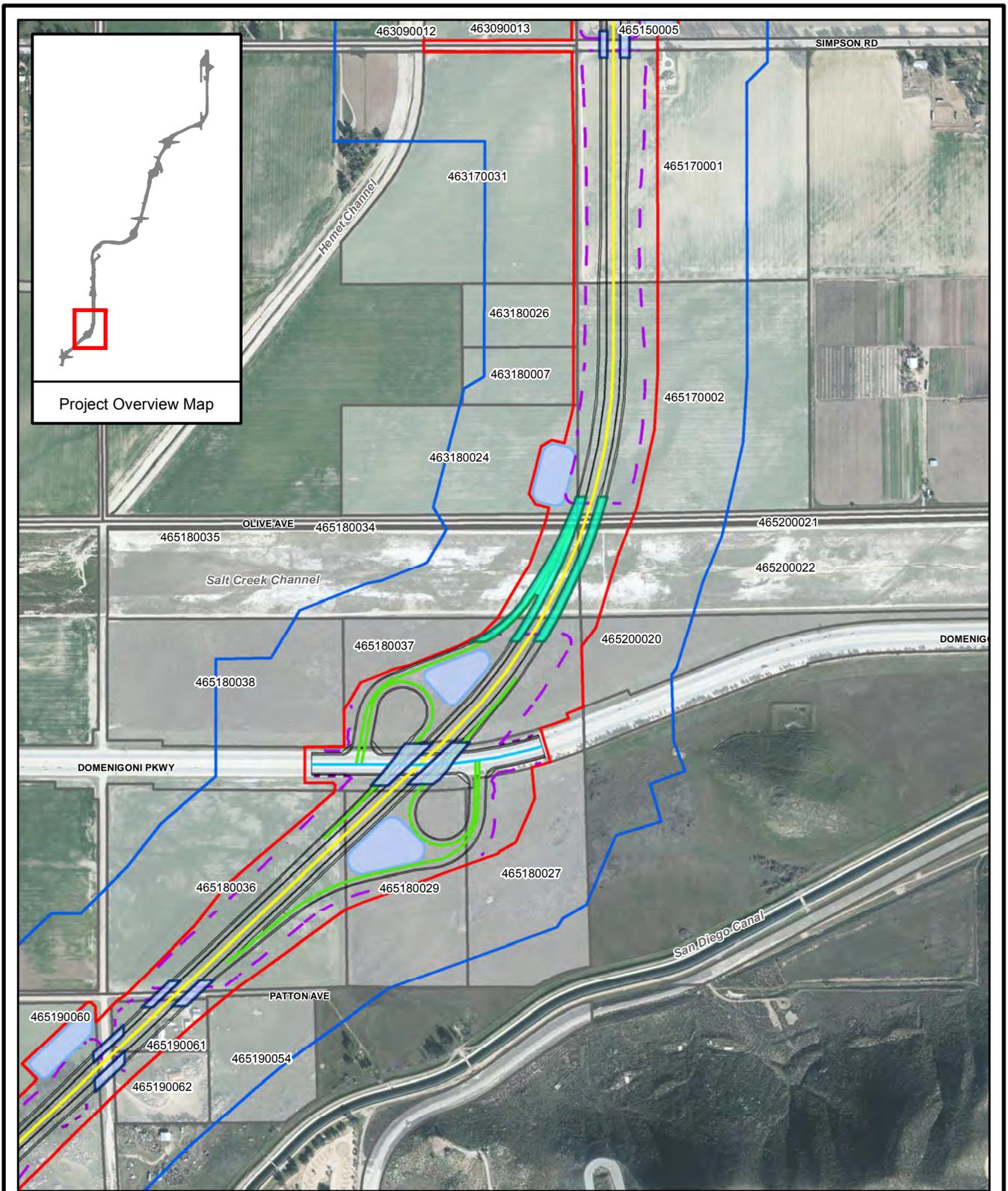


Aerial Date: February 2011, Aero-Grphics, Inc \\GALT\PROJ\RCTC\171146\2016\MAPFILES\EIS\BMP\_REFINE1B\_MB\_A.MXD BMP\_REFINE1B\_MB\_A.PDF 07/19/2016

<b>LEGEND</b>	Project Impact Area	County Assessor's Parcel <sup>CR</sup>
Project Roadway	Project Study Area	Best Management Practices (BMPs)
Grade-Separated Interchange (Ramps)	Aqueduct Crossing	
Local Cross Street	Bridge over Local Street and Other Feature	
Cul-de-Sac	Bridge over Other Feature	
Local Road	Bridge over SR79	
Cut Line		
Fill Line		



**Figure 2.2-5a**  
**Newport Road**  
**Build Alternative 1br**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project

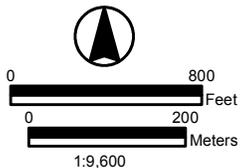


Aerial Date: February 2011, Aero-Graphics, Inc

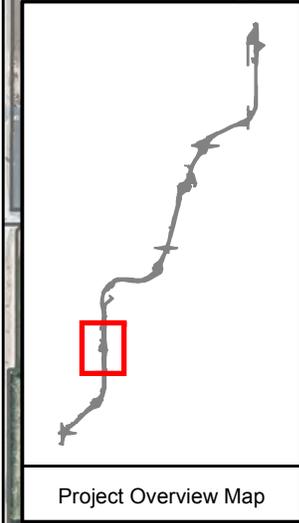
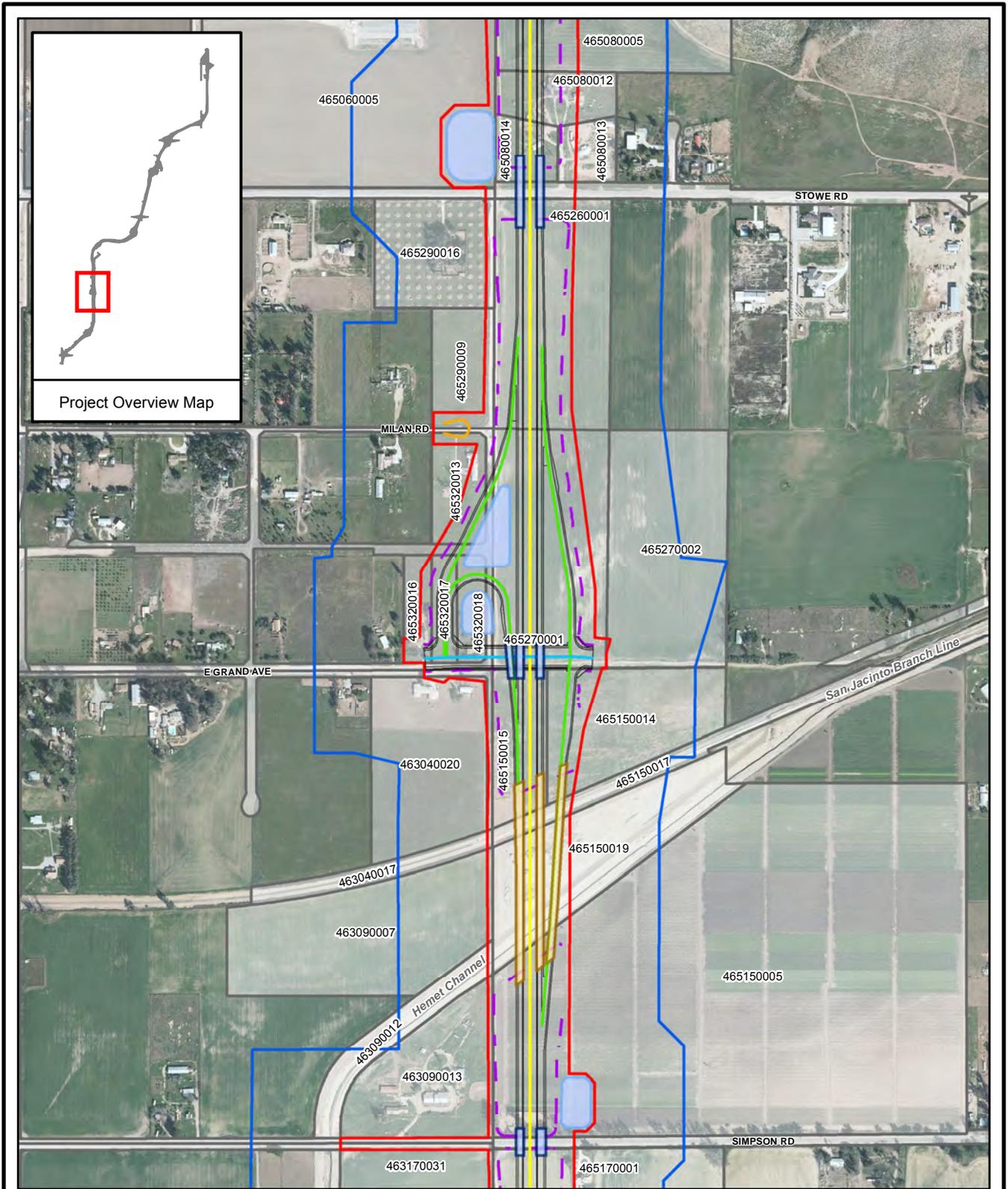
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**LEGEND**

- Project Roadway
- Grade-Separated
- Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Cut Line
- Fill Line
- Project Impact Area
- Project Study Area
- Aqueduct Crossing
- Bridge over Local Street
- Bridge over Local Street and Other Feature
- Bridge over Other Feature
- Bridge over SR79
- County Assessor's Parcel<sup>CR</sup>
- Best Management Practices (BMPs)



**Figure 2.2-5b**  
**Domenigoni Parkway**  
**Build Alternative 1br**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project

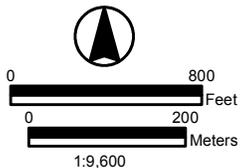


Aerial Date: February 2011, Aero-Grphics, Inc

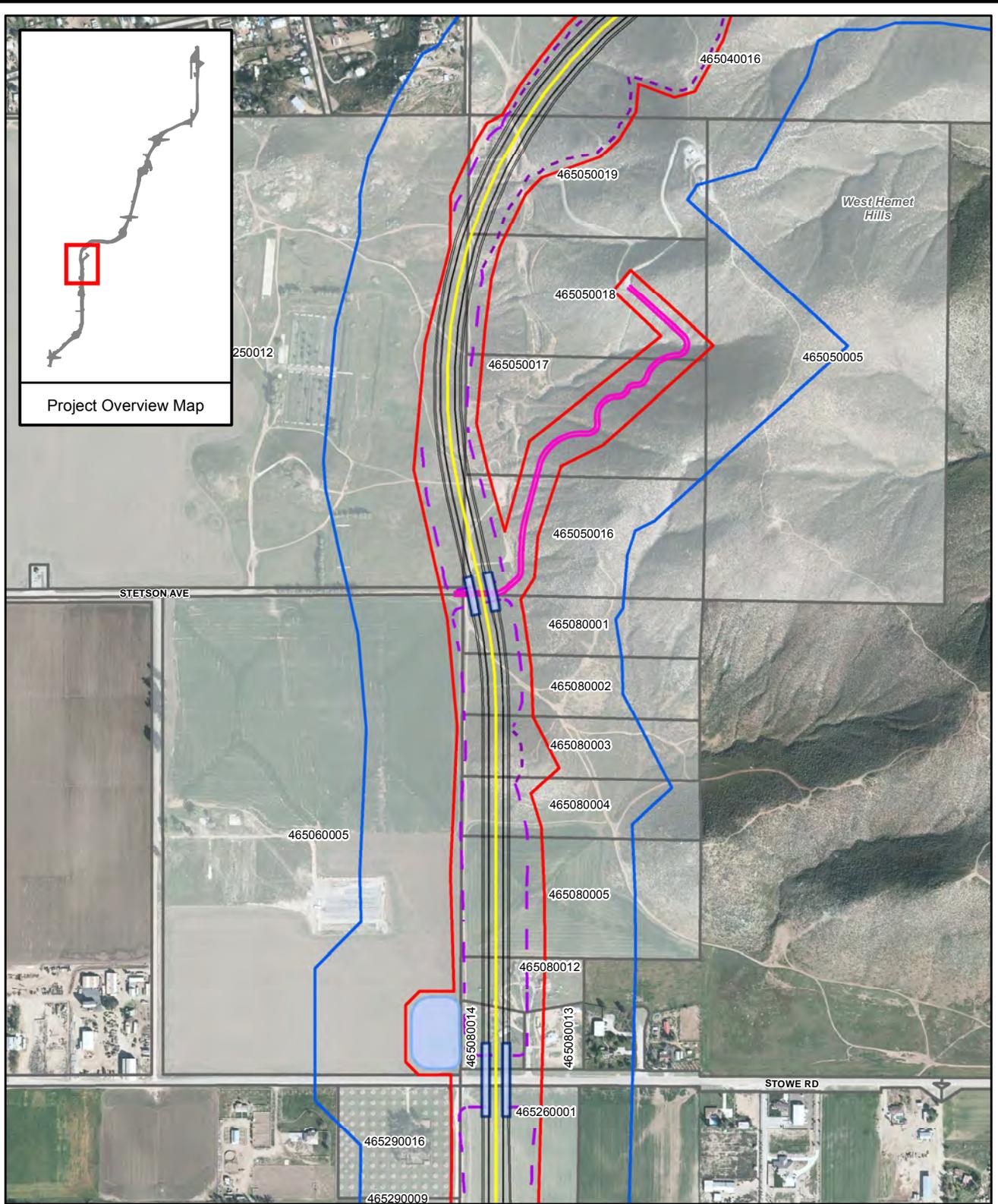
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**LEGEND**

- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Cut Line
- Fill Line
- Project Impact Area
- Project Study Area
- Aqueduct Crossing
- Bridge over Local Street and Other Feature
- Bridge over Other Feature
- Bridge over SR79
- County Assessor's Parcel<sup>CR</sup>
- Best Management Practices (BMPs)



**Figure 2.2-5c**  
**Grand Avenue**  
**Build Alternative 1br**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project

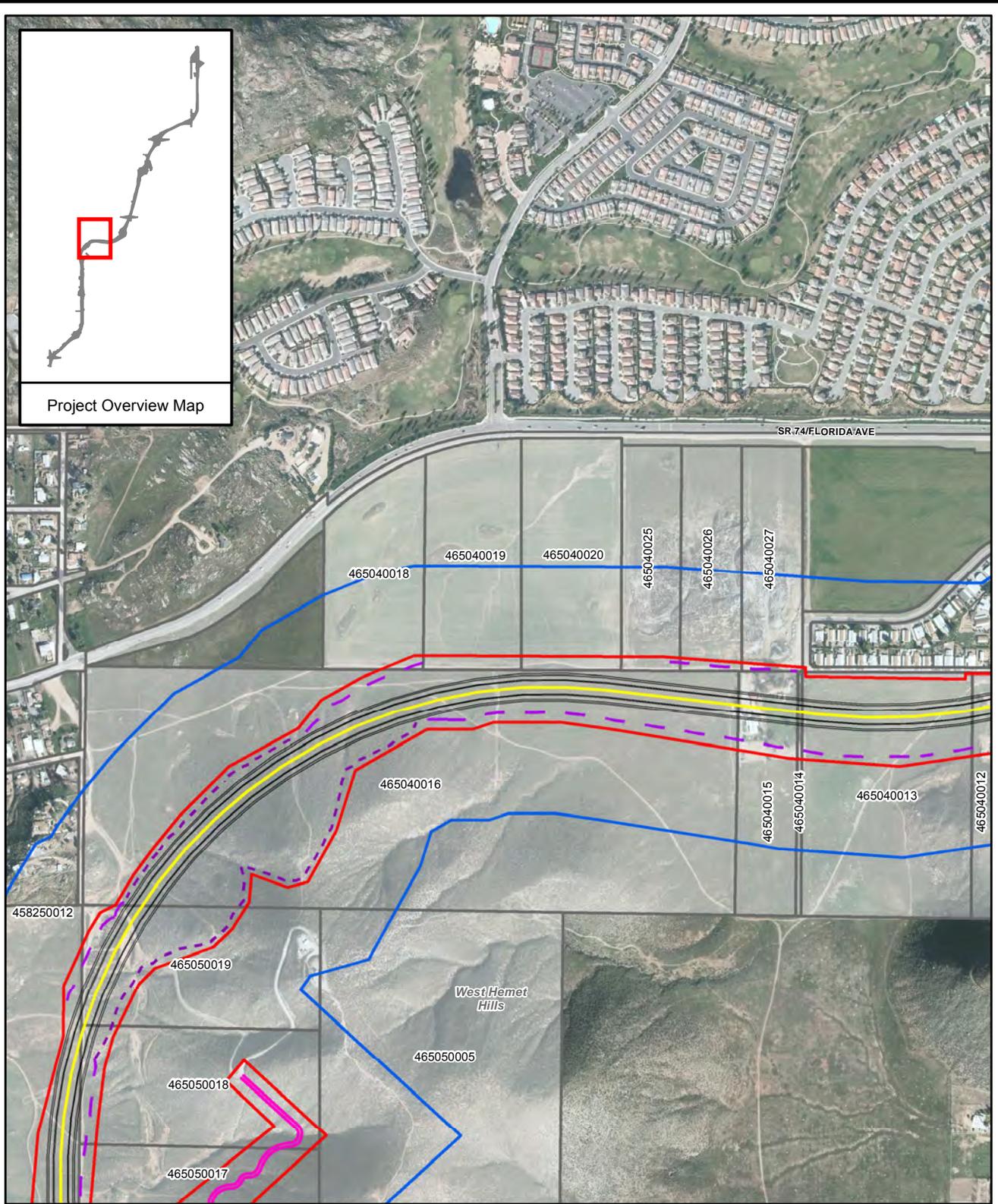


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<b>LEGEND</b>	Project Impact Area	County Assessor's Parcel <sup>CR</sup>
Project Roadway	Project Study Area	Best Management Practices (BMPs)
Grade-Separated Interchange (Ramps)	Aqueduct Crossing	
Local Cross Street	Bridge over Local Street	
Cul-de-Sac	Bridge over Local Street and Other Feature	
Local Road	Bridge over Other Feature	
Cut Line	Bridge over SR79	
Fill Line		

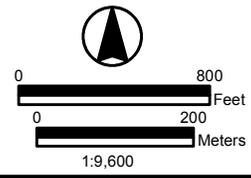
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**Figure 2.2-5d**  
**West Hemet Hills**  
**Build Alternative 1br**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project

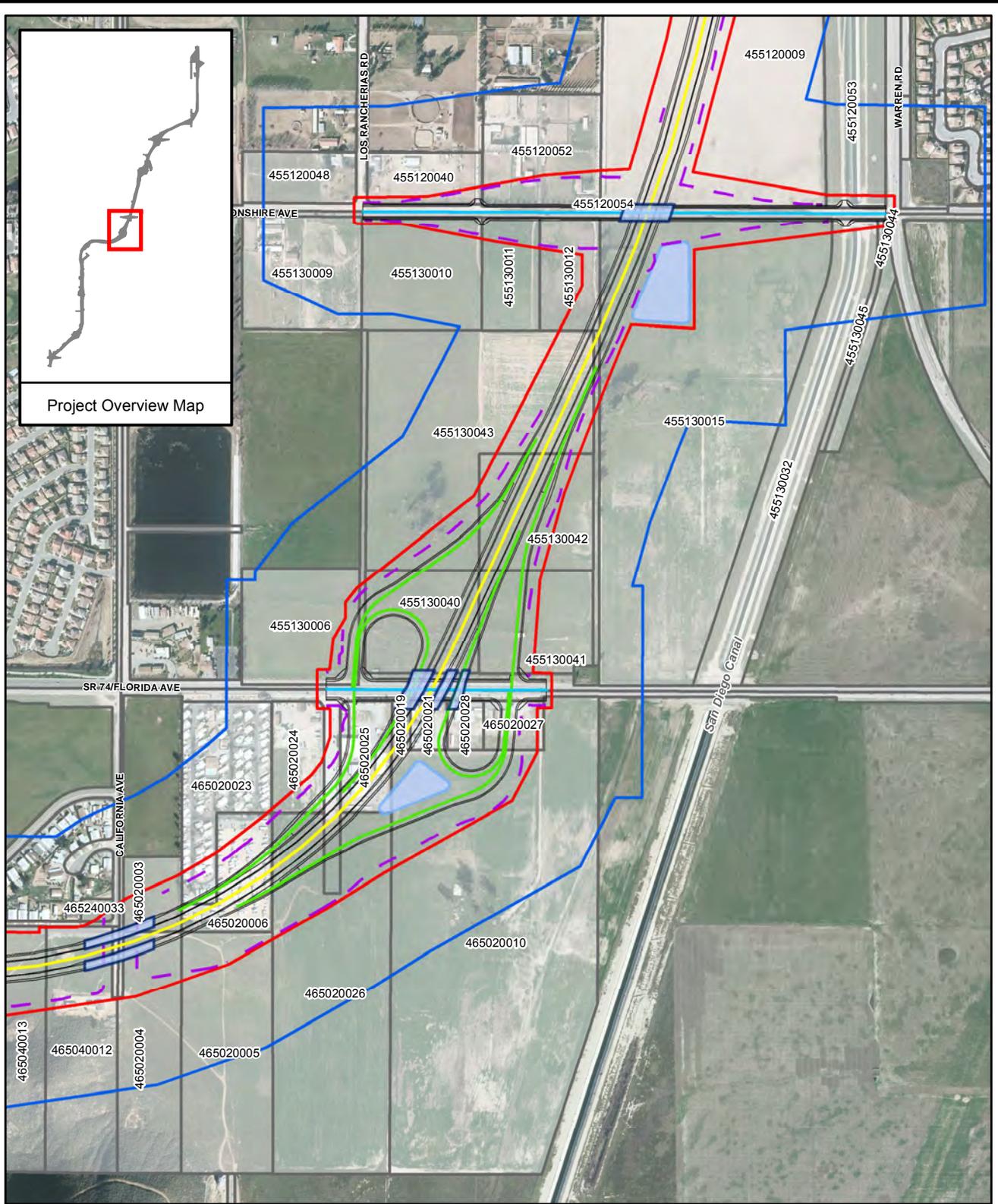


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<b>LEGEND</b>	Project Impact Area	County Assessor's Parcel <sup>CR</sup>
Project Roadway	Project Study Area	Best Management Practices (BMPs)
Grade-Separated Interchange (Ramps)	Aqueduct Crossing	
Local Cross Street	Bridge over Local Street and Other Feature	
Cul-de-Sac	Bridge over Other Feature	
Local Road	Bridge over SR79	
Cut Line		
Fill Line		



**Figure 2.2-5e**  
**West Hemet Hills**  
**Build Alternative 1br**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project

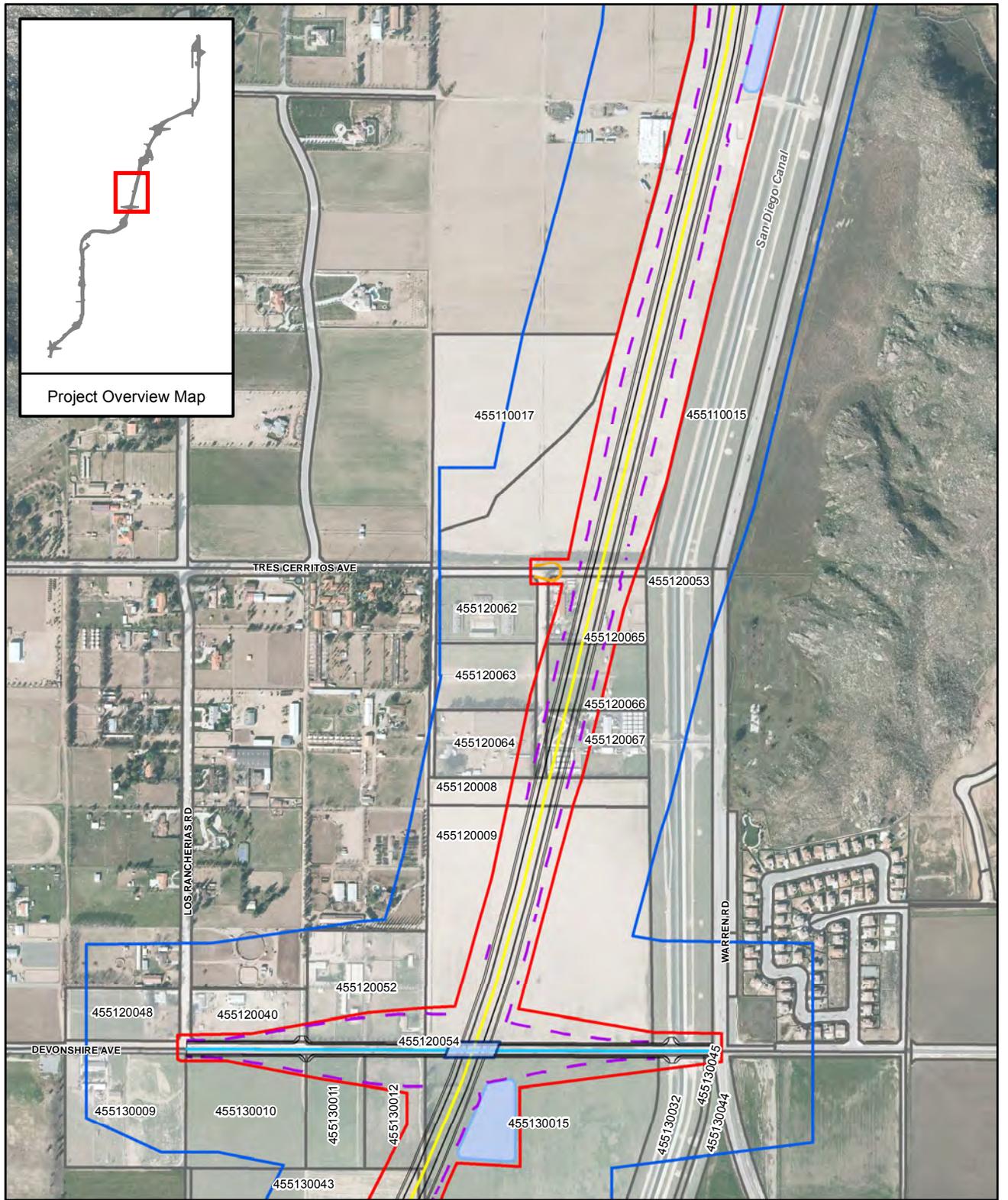
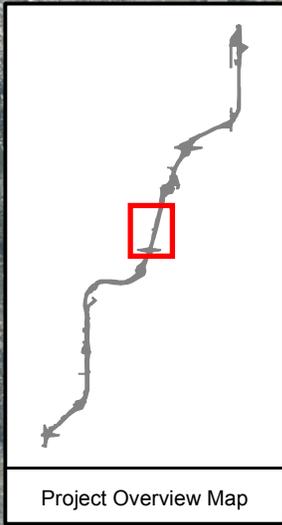


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<b>LEGEND</b>	Project Impact Area	County Assessor's Parcel <sup>CR</sup>
Project Roadway	Project Study Area	Best Management Practices (BMPs)
Grade-Separated Interchange (Ramps)	Aqueduct Crossing	
Local Cross Street	Bridge over Local Street and Other Feature	
Cul-de-Sac	Bridge over Other Feature	
Local Road	Bridge over SR79	
Cut Line		
Fill Line		

1:9,600

**Figure 2.2-5f**  
**Florida Avenue**  
**Build Alternative 1br**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project

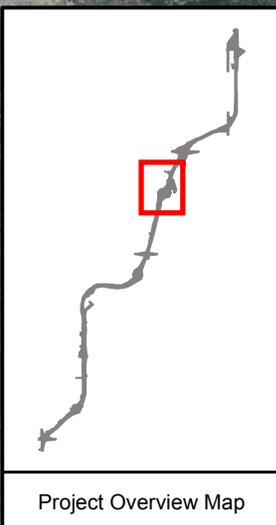
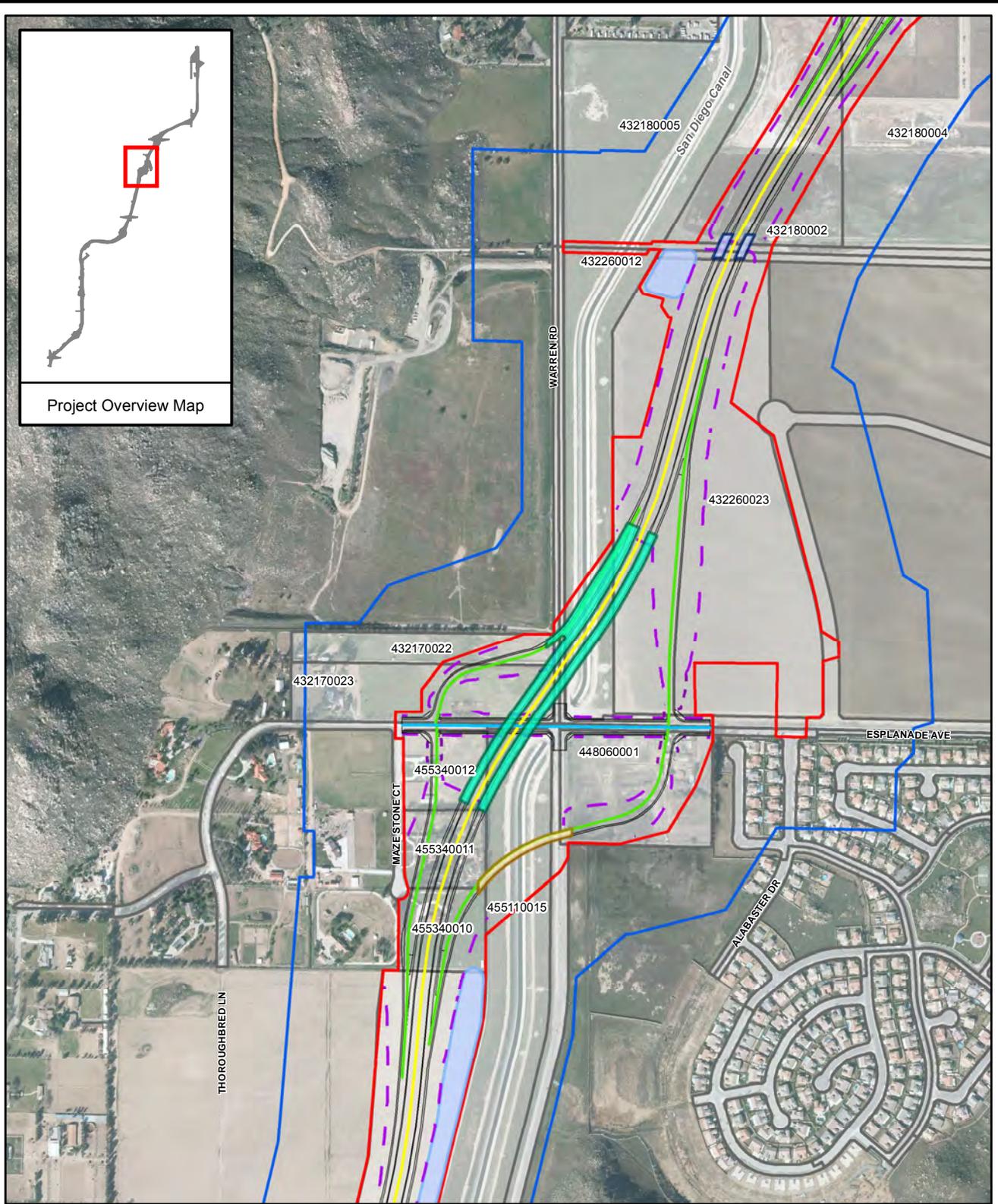


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<b>LEGEND</b>	Project Impact Area	County Assessor's Parcel <sup>CR</sup>
Project Roadway	Project Study Area	Best Management Practices (BMPs)
Grade-Separated Interchange (Ramps)	Aqueduct Crossing	
Local Cross Street	Bridge over Local Street and Other Feature	
Cul-de-Sac	Bridge over Other Feature	
Local Road	Bridge over SR79	
Cut Line		
Fill Line		

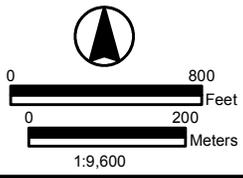
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**Figure 2.2-5g**  
**Tres Cerritos Avenue**  
**Build Alternative 1br**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project

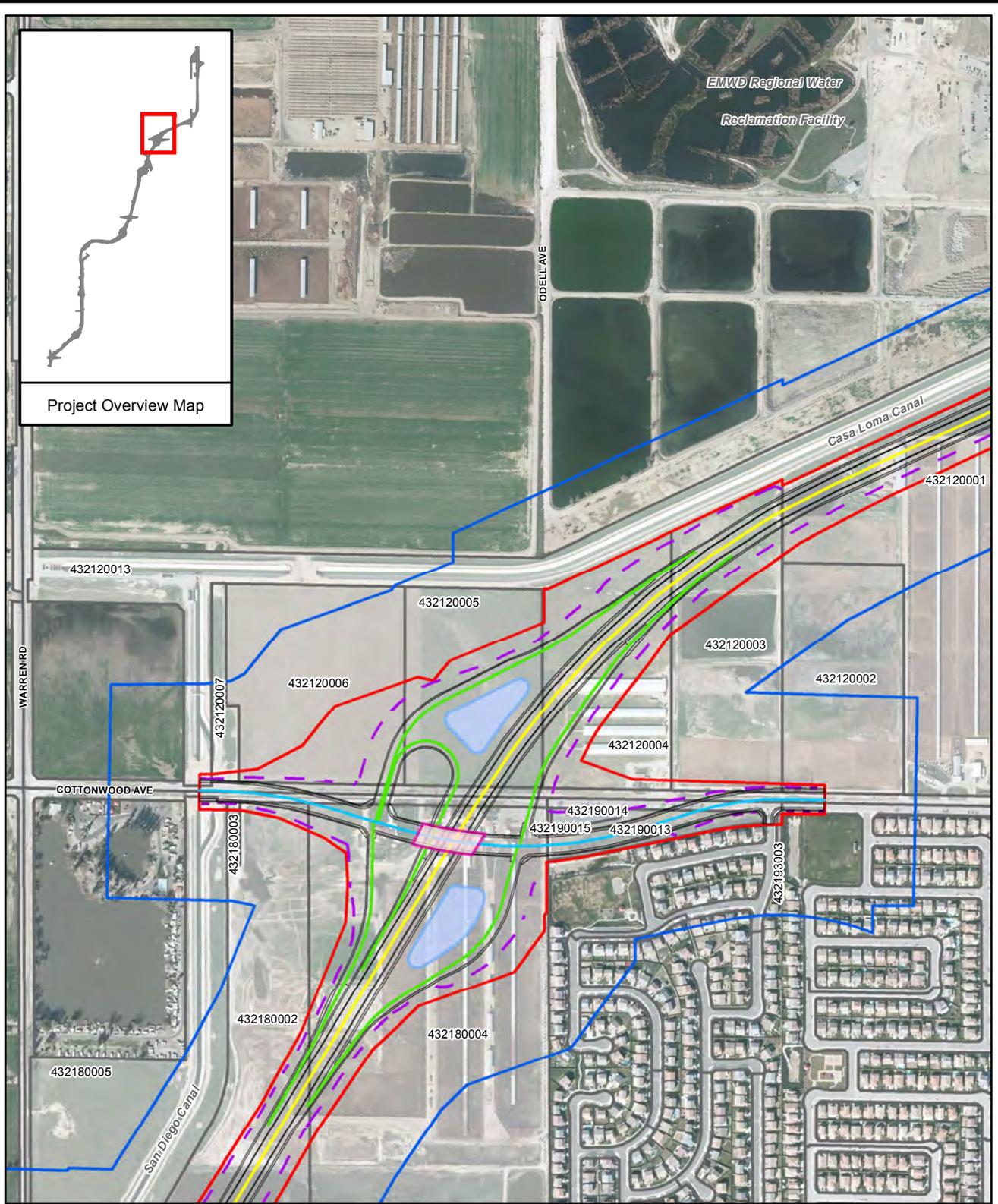


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<b>LEGEND</b>	Project Impact Area	County Assessor's Parcel <sup>CR</sup>
Project Roadway	Project Study Area	Best Management Practices (BMPs)
Grade-Separated Interchange (Ramps)	Aqueduct Crossing	
Local Cross Street	Bridge over Local Street and Other Feature	
Cul-de-Sac	Bridge over Other Feature	
Local Road	Bridge over SR79	
Cut Line		
Fill Line		



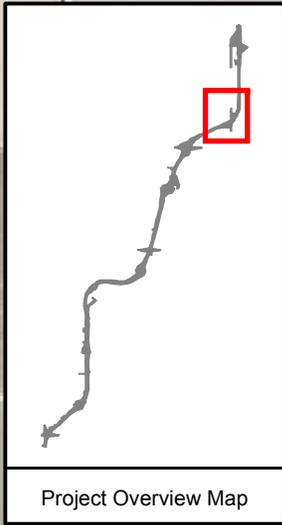
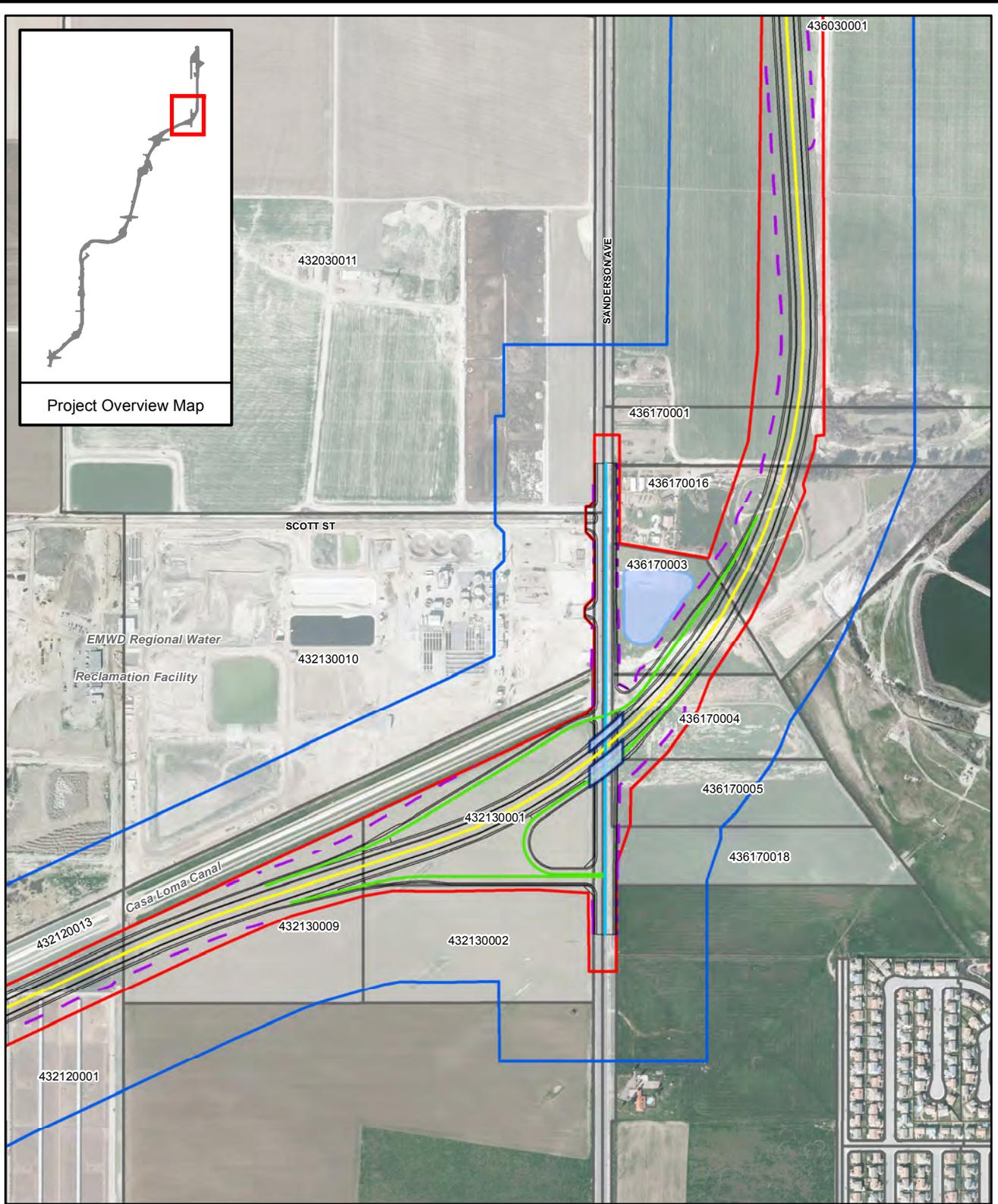
**Figure 2.2-5h**  
**Esplanade Avenue**  
**Build Alternative 1br**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



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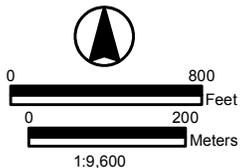
<b>LEGEND</b>	Project Impact Area	County Assessor's Parcel <sup>CR</sup>
Project Roadway	Project Study Area	Best Management Practices (BMPs)
Grade-Separated Interchange (Ramps)	Aqueduct Crossing	
Local Cross Street	Bridge over Local Street and Other Feature	
Cul-de-Sac	Bridge over Other Feature	
Local Road	Bridge over SR79	
Cut Line		
Fill Line		

**Figure 2.2-5i**  
**Cottonwood Avenue**  
**Build Alternative 1br**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project

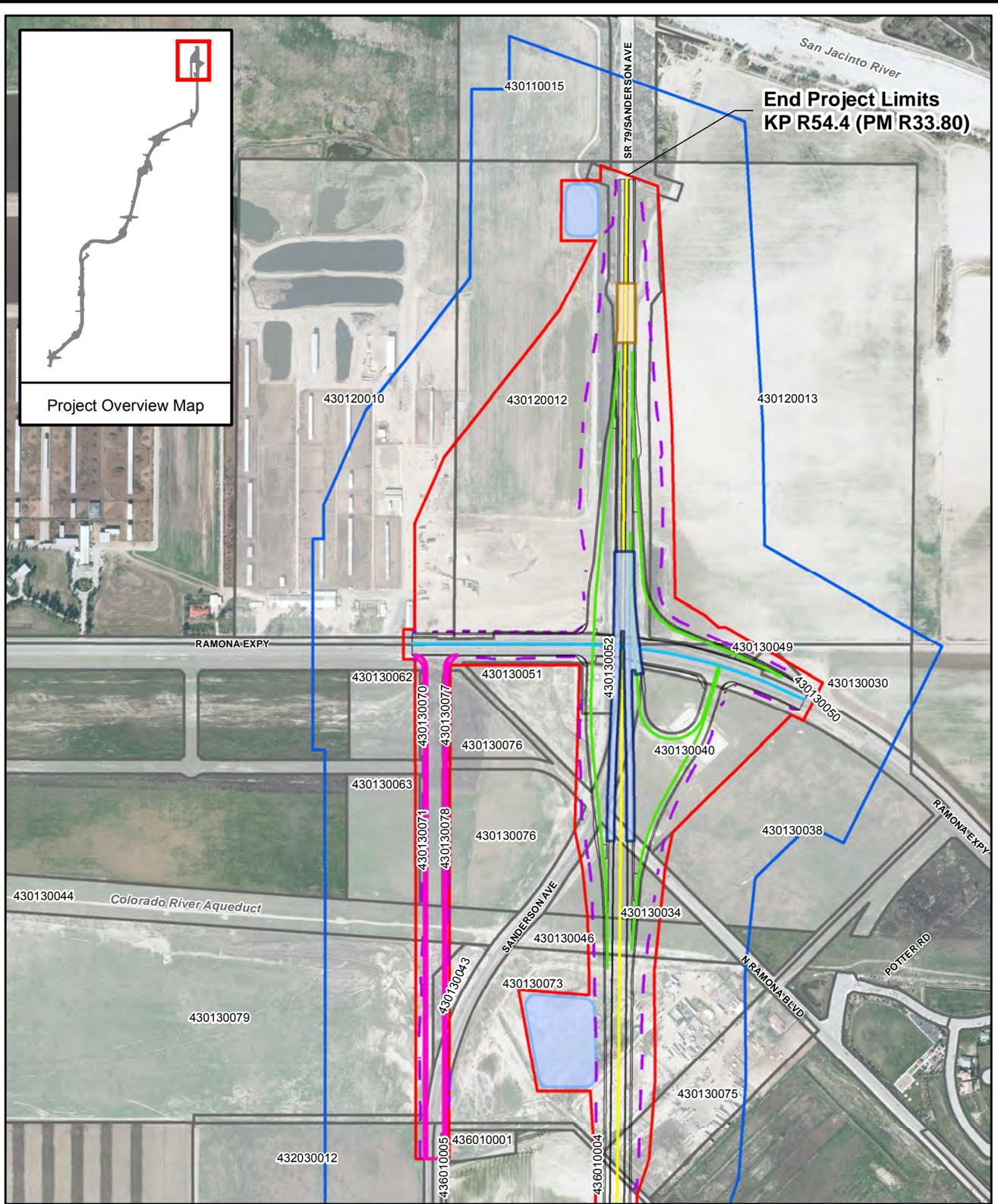


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<b>LEGEND</b>	Project Impact Area	County Assessor's Parcel <sup>CR</sup>
Project Roadway	Project Study Area	Best Management Practices (BMPs)
Grade-Separated Interchange (Ramps)	Aqueduct Crossing	
Local Cross Street	Bridge over Local Street and Other Feature	
Cul-de-Sac	Bridge over Other Feature	
Local Road	Bridge over SR79	
Cut Line		
Fill Line		



**Figure 2.2-5j**  
**Sanderson Avenue**  
**Build Alternative 1br**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



**End Project Limits**  
 KP R54.4 (PM R33.80)

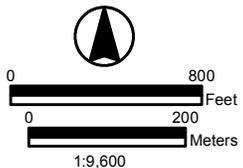
Project Overview Map

Aerial Date: February 2011, Aero-Grphics, Inc

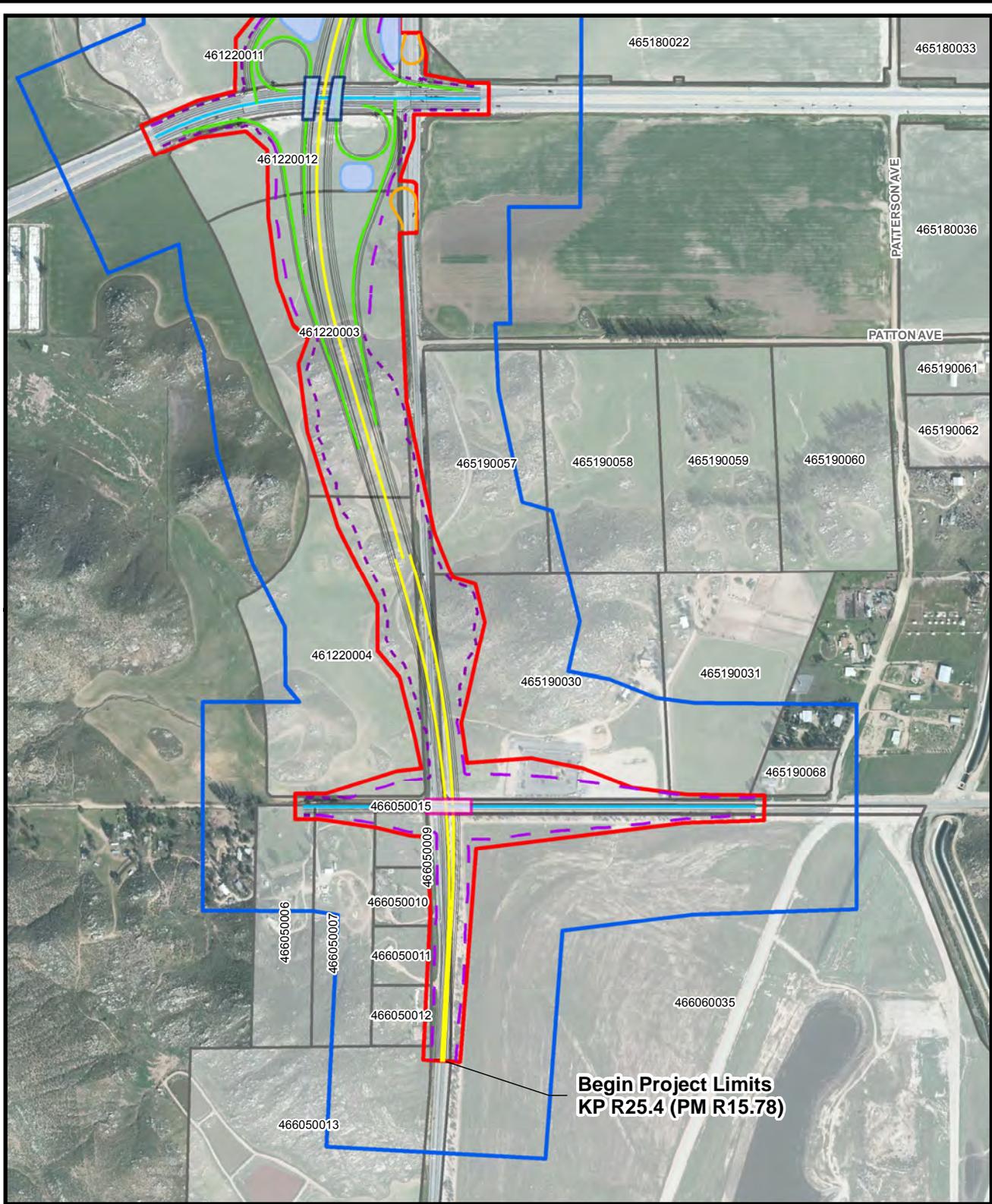
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**LEGEND**

- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Cut Line
- Fill Line
- Project Impact Area
- Project Study Area
- Aqueduct Crossing
- Bridge over Local Street and Other Feature
- Bridge over Other Feature
- Bridge over SR79
- County Assessor's Parcel<sup>CR</sup>
- Best Management Practices (BMPs)



**Figure 2.2-5k**  
**Ramona Expressway**  
**Build Alternative 1br**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



Aerial Date: February 2011, Aero-Graphics, Inc

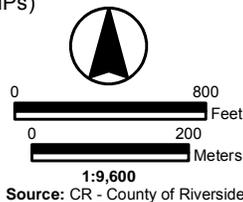
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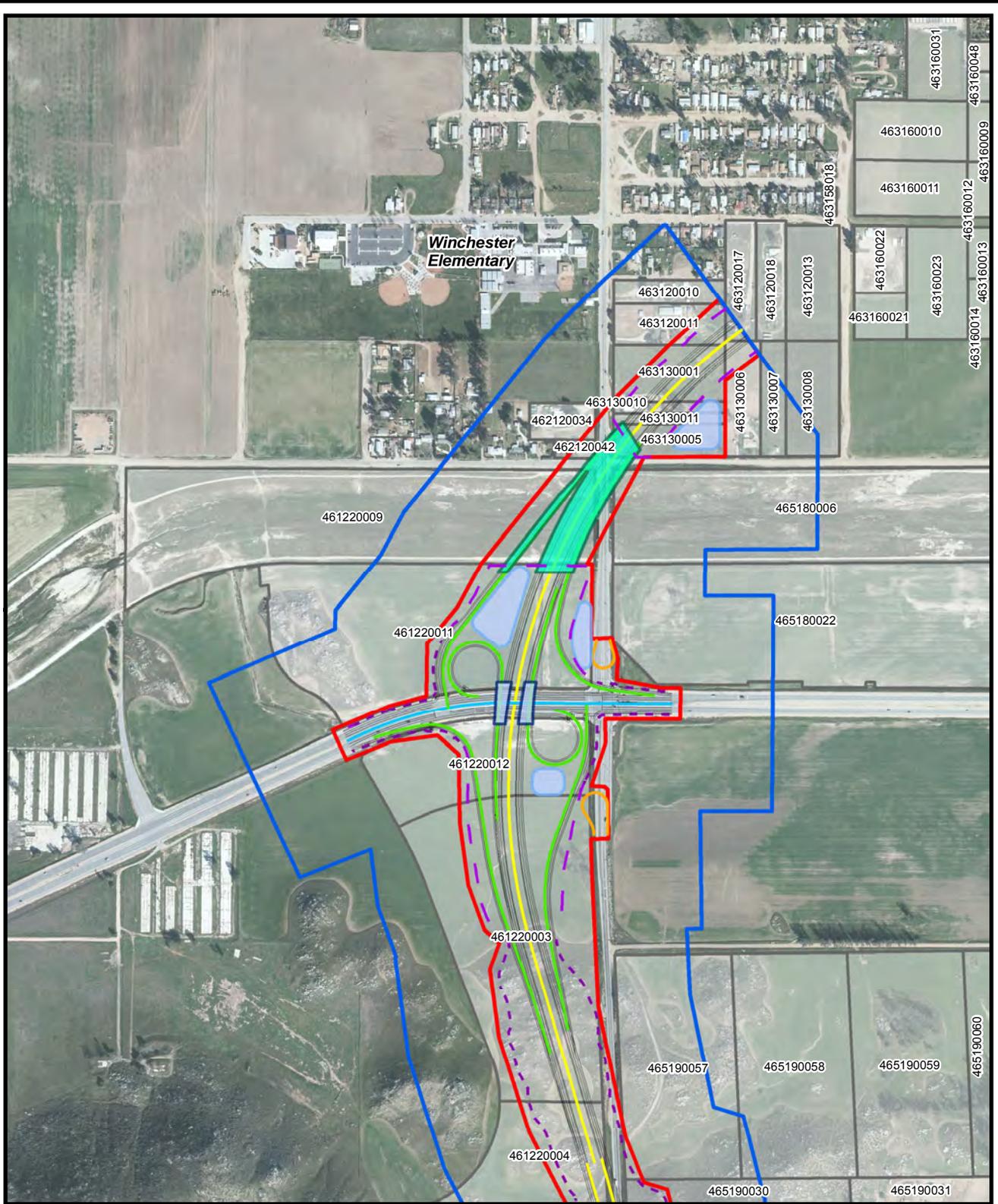
- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Cut Line
- Fill Line

- Project Impact Area
- Study Area
- Aqueduct Crossing
- Bridge over Local Street
- Bridge over Local Street and Other Feature
- Bridge over Other Feature
- Bridge over SR 79

- County Assessor's Parcel<sup>CR</sup>
- Best Management Practices (BMPs)



**Figure 2.2-6a 1 of 2**  
**Roadway Segment A**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



Aerial Date: February 2011, Aero-Graphics, Inc

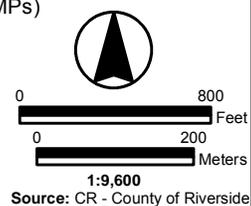
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**LEGEND**

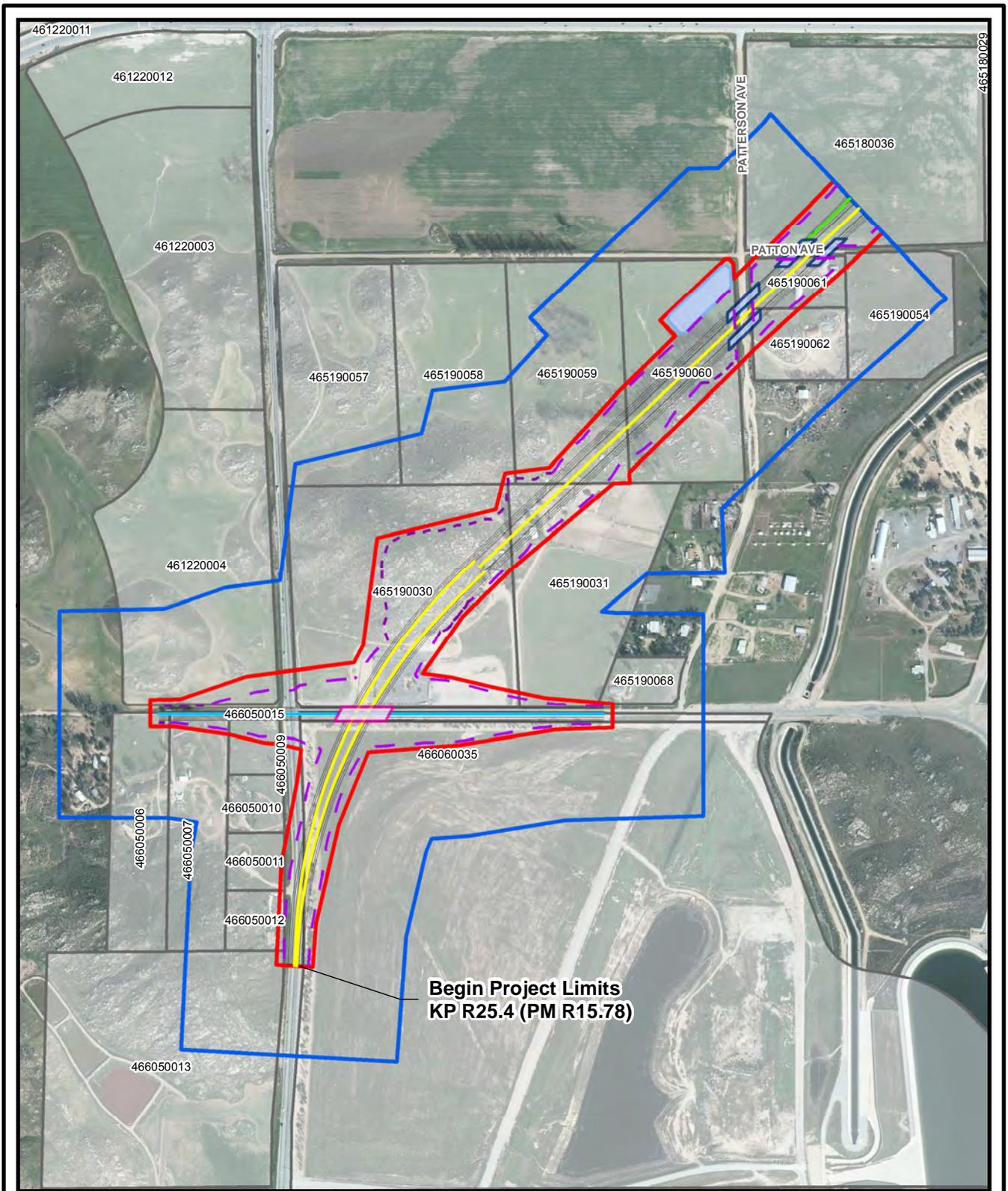
- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Cut Line
- Fill Line

- Project Impact Area
- Study Area
- Aqueduct Crossing
- Bridge over Local Street
- Bridge over Local Street and Other Feature
- Bridge over Other Feature
- Bridge over SR 79

- County Assessor's Parcel<sup>CR</sup>
- Best Management Practices (BMPs)



**Figure 2.2-6a 2 of 2**  
**Roadway Segment A**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



Aerial Date: February 2011, Aero-Graphics, Inc

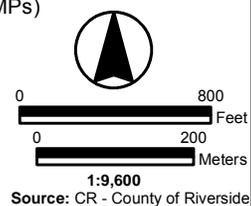
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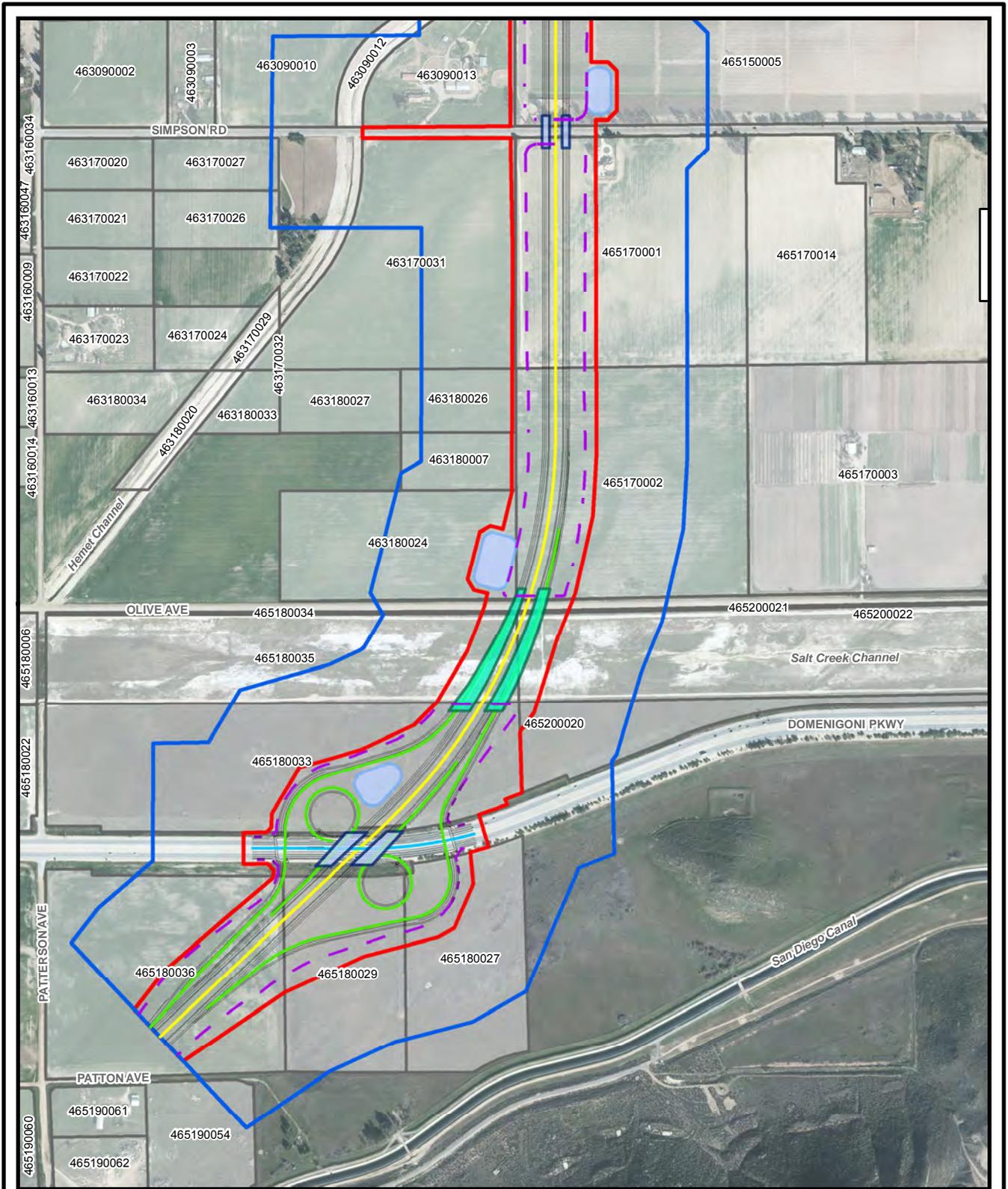
- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Cut Line
- Fill Line

- Project Impact Area
- Study Area
- Aqueduct Crossing
- Bridge over Local Street
- Bridge over Local Street and Other Feature
- Bridge over Other Feature
- Bridge over SR 79

- County Assessor's Parcel<sup>CR</sup>
- Best Management Practices (BMPs)



**Figure 2.2-6b 1 of 1**  
**Roadway Segment B**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



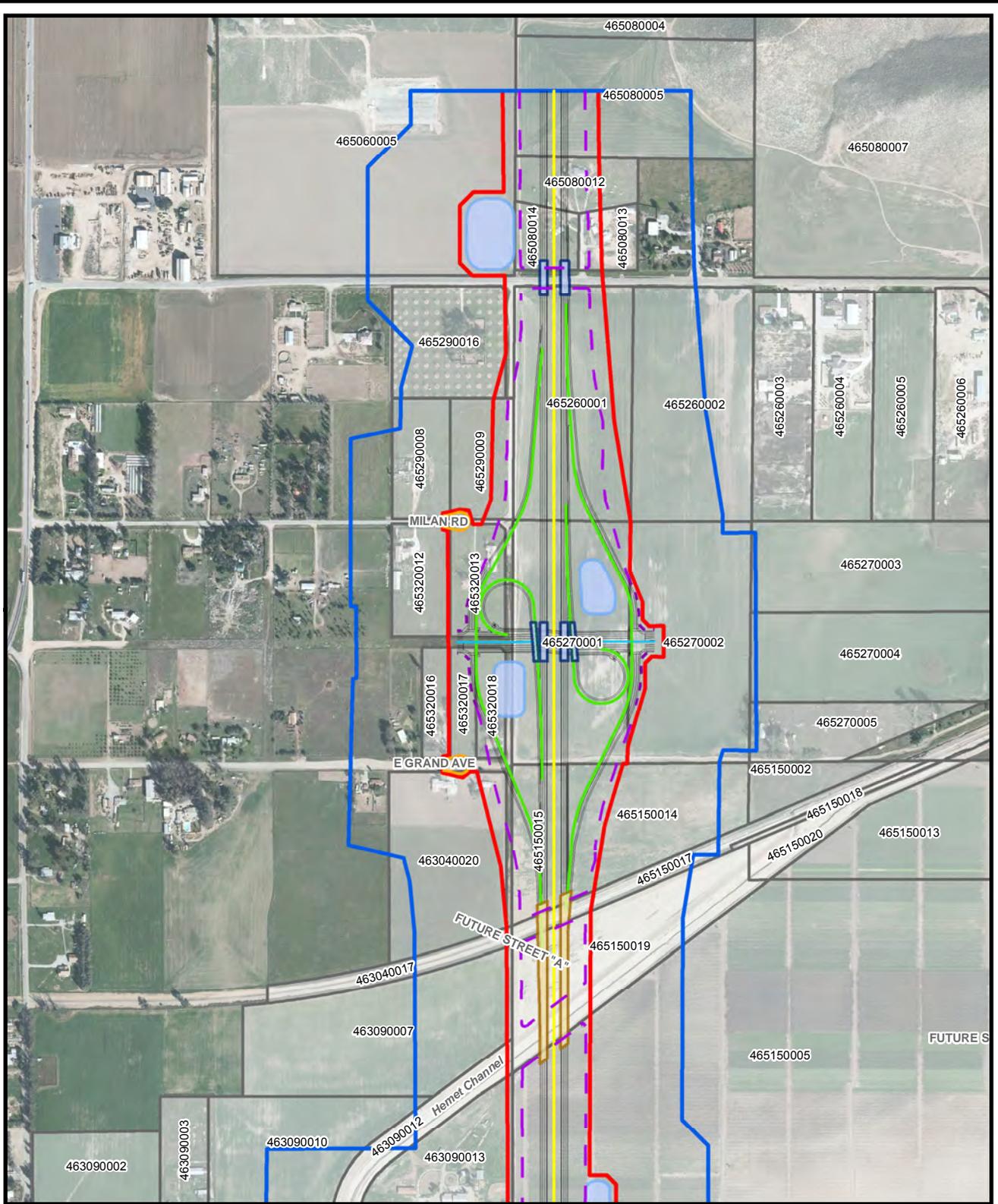
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**LEGEND**

- |                                     |  |   |
|-------------------------------------|--|---|
| Project Roadway                     | Project Impact Area                        | County Assessor's Parcel <sup>CR</sup>  |
| Grade-Separated Interchange (Ramps) | Study Area                                 | Best Management Practices (BMPs)        |
| Local Cross Street                  | Aqueduct Crossing                          |   |
| Cul-de-Sac                          | Bridge over Local Street                   |   |
| Local Road                          | Bridge over Local Street and Other Feature |   |
| Cut Line                            | Bridge over Other Feature                  | <b>1:9,600</b>                          |
| Fill Line                           | Bridge over SR 79                          | <b>Source: CR - County of Riverside</b> |

**Figure 2.2-6c 1 of 2**  
**Roadway Segment C**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
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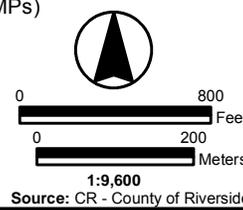


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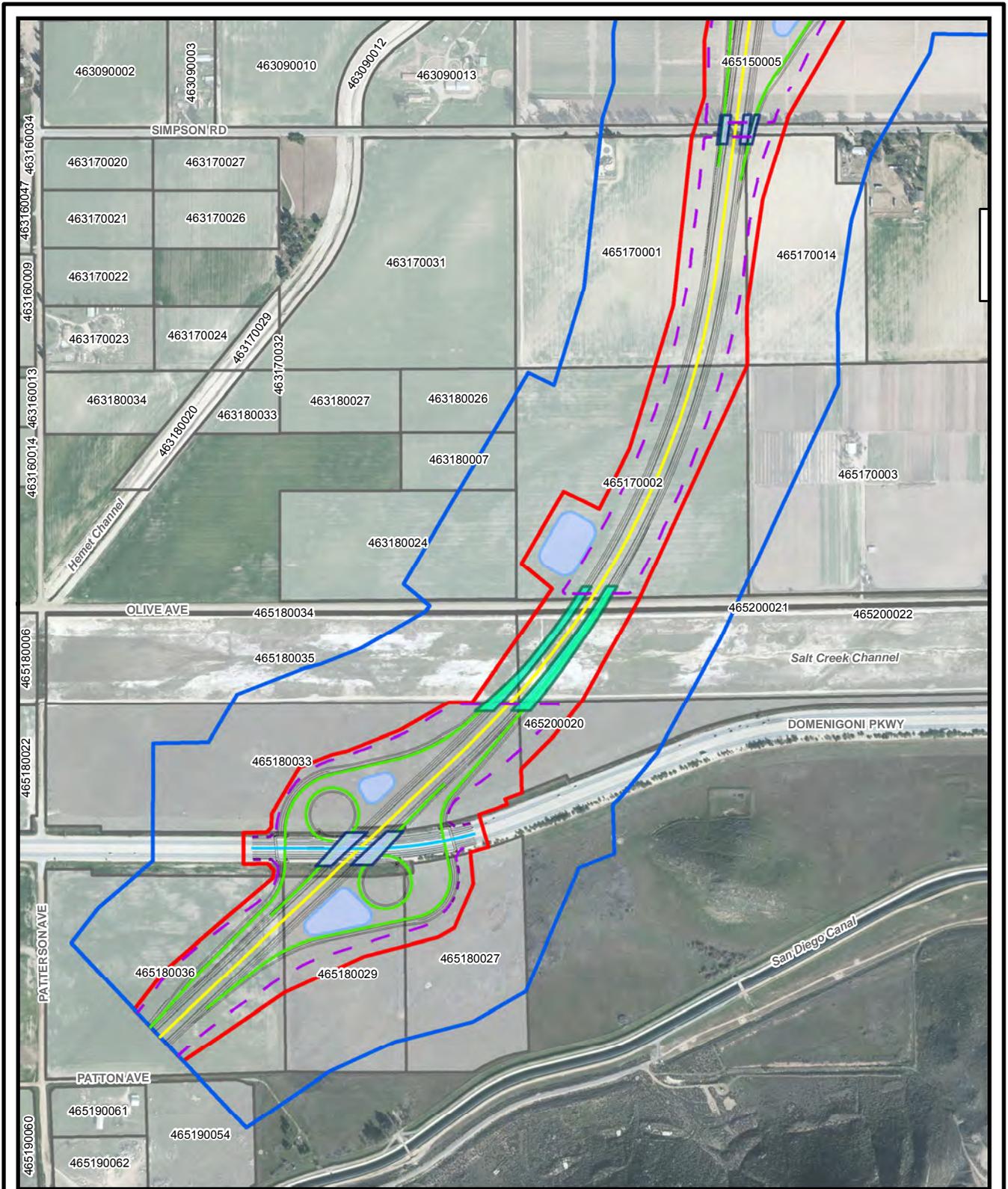
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**LEGEND**

- |  |                                     |  |  |  |  |
|--|-------------------------------------|--|--|--|--|
|  | Project Roadway                     |  | Project Impact Area                        |  | County Assessor's Parcel <sup>CR</sup> |
|  | Grade-Separated Interchange (Ramps) |  | Study Area                                 |  | Best Management Practices (BMPs)       |
|  | Local Cross Street                  |  | Aqueduct Crossing                          |  | Bridge over Local Street               |
|  | Cul-de-Sac                          |  | Bridge over Local Street and Other Feature |  | Bridge over Other Feature              |
|  | Local Road                          |  | Bridge over SR 79                          |  |  |
|  | Cut Line                            |  |  |  |  |
|  | Fill Line                           |  |  |  |  |



**Figure 2.2-6c 2 of 2**  
**Roadway Segment C**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project

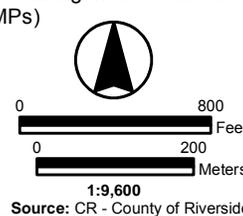


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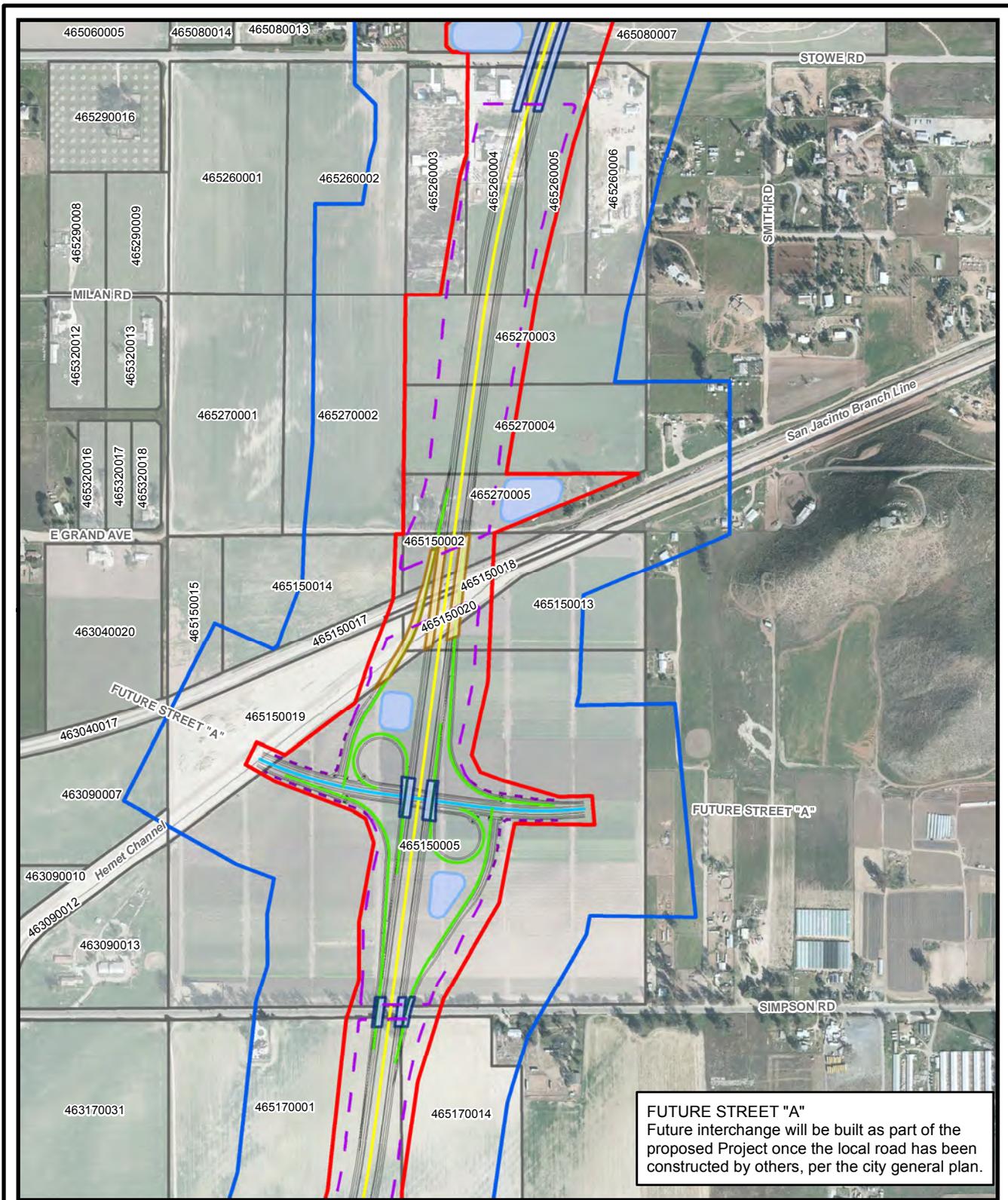
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**LEGEND**

- |                                     |  |  |
|-------------------------------------|--|--|
| Project Roadway                     | Project Impact Area                        | County Assessor's Parcel <sup>CR</sup> |
| Grade-Separated Interchange (Ramps) | Study Area                                 | Best Management Practices (BMPs)       |
| Local Cross Street                  | Aqueduct Crossing                          | Bridge over Local Street               |
| Cul-de-Sac                          | Bridge over Local Street and Other Feature | Bridge over Other Feature              |
| Local Road                          | Bridge over SR 79                          |  |
| Cut Line                            |  |  |
| Fill Line                           |  |  |



**Figure 2.2-6d 1 of 3**  
**Roadway Segment D**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project

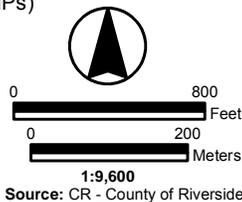


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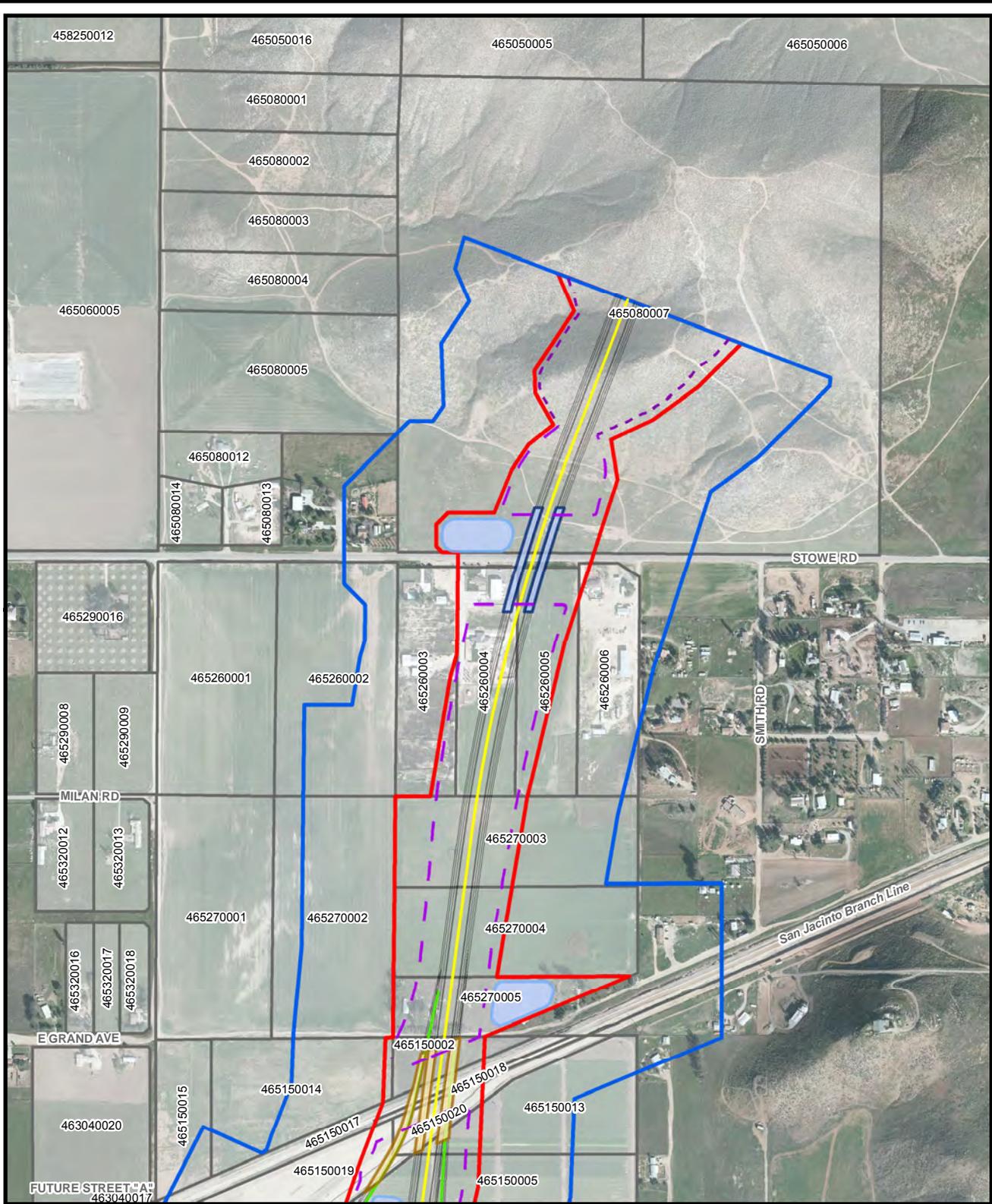
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**LEGEND**

- |                                     |  |  |
|-------------------------------------|--|--|
| Project Roadway                     | Project Impact Area                        | County Assessor's Parcel <sup>CR</sup> |
| Grade-Separated Interchange (Ramps) | Study Area                                 | Best Management Practices (BMPs)       |
| Local Cross Street                  | Aqueduct Crossing                          |  |
| Cul-de-Sac                          | Bridge over Local Street                   |  |
| Local Road                          | Bridge over Local Street and Other Feature |  |
| Cut Line                            | Bridge over Other Feature                  |  |
| Fill Line                           | Bridge over SR 79                          |  |



**Figure 2.2-6d 2 of 3**  
**Roadway Segment D**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



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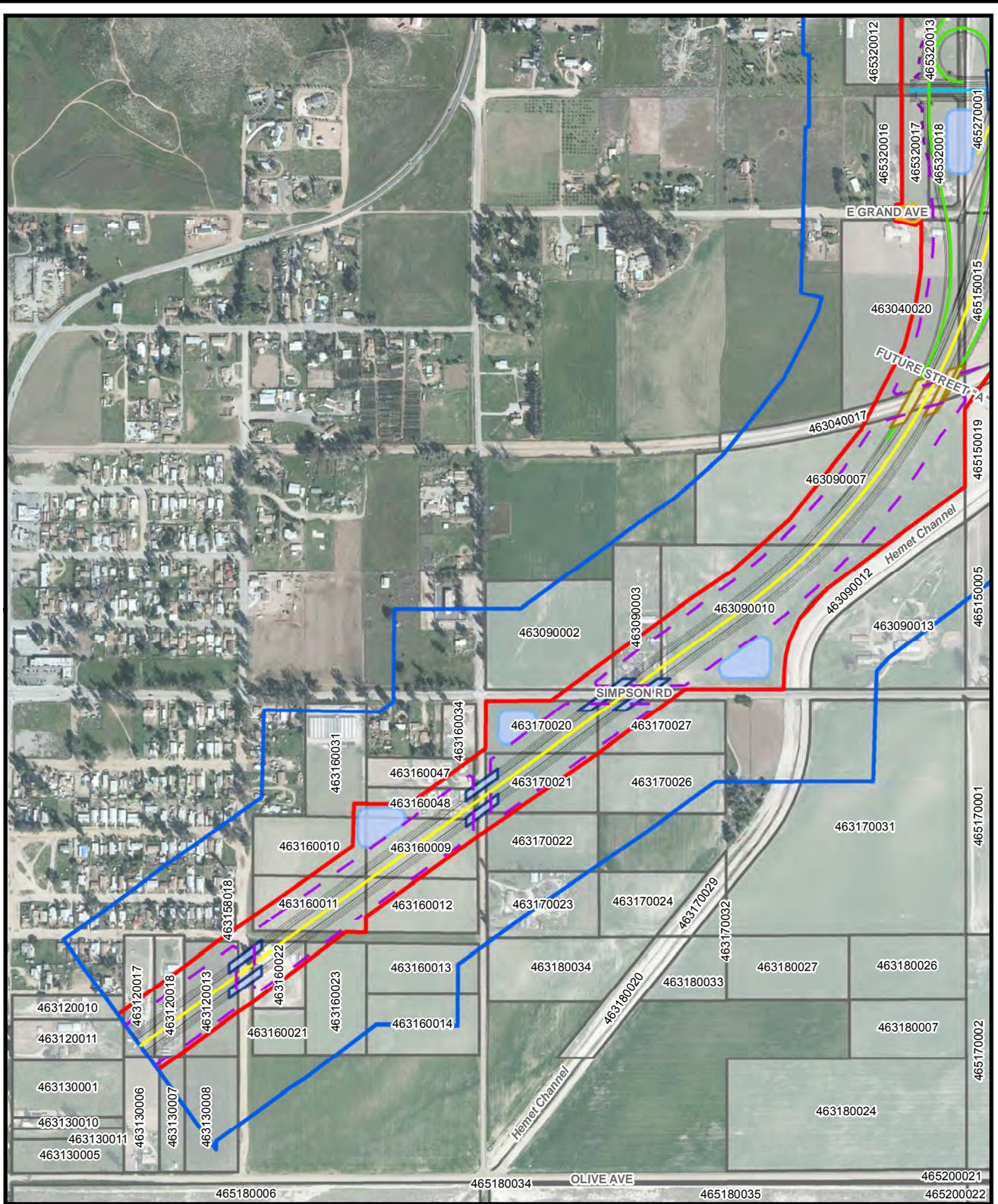
**LEGEND**

- |  |                                     |  |  |  |  |
|--|-------------------------------------|--|--|--|--|
|  | Project Roadway                     |  | Project Impact Area                        |  | County Assessor's Parcel <sup>CR</sup> |
|  | Grade-Separated Interchange (Ramps) |  | Study Area                                 |  | Best Management Practices (BMPs)       |
|  | Local Cross Street                  |  | Aqueduct Crossing                          |  | Bridge over Local Street               |
|  | Cul-de-Sac                          |  | Bridge over Local Street and Other Feature |  | Bridge over Other Feature              |
|  | Local Road                          |  | Bridge over SR 79                          |  |  |
|  | Cut Line                            |  |  |  |  |
|  | Fill Line                           |  |  |  |  |



1:9,600  
Source: CR - County of Riverside

**Figure 2.2-6d 3 of 3**  
**Roadway Segment D**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



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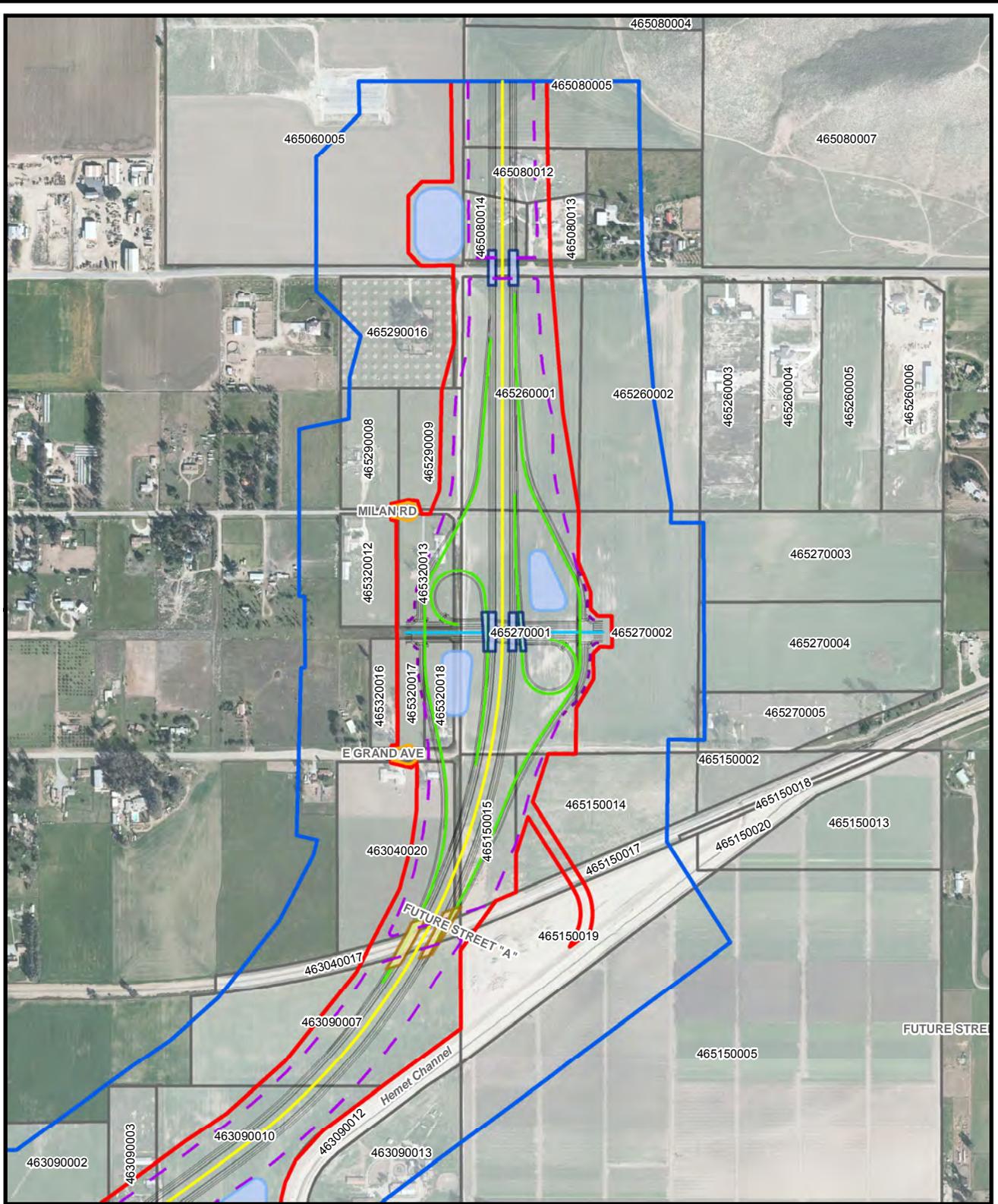
**LEGEND**

- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Cut Line
- Fill Line
- Project Impact Area
- Study Area
- Aqueduct Crossing
- Bridge over Local Street
- Bridge over Local Street and Other Feature
- Bridge over Other Feature
- Bridge over SR 79
- County Assessor's Parcel<sup>CR</sup>
- Best Management Practices (BMPs)



1:9,600  
Source: CR - County of Riverside

**Figure 2.2-6e 1 of 2**  
**Roadway Segment E**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



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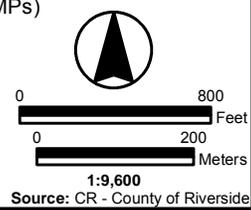
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**LEGEND**

- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Cut Line
- Fill Line

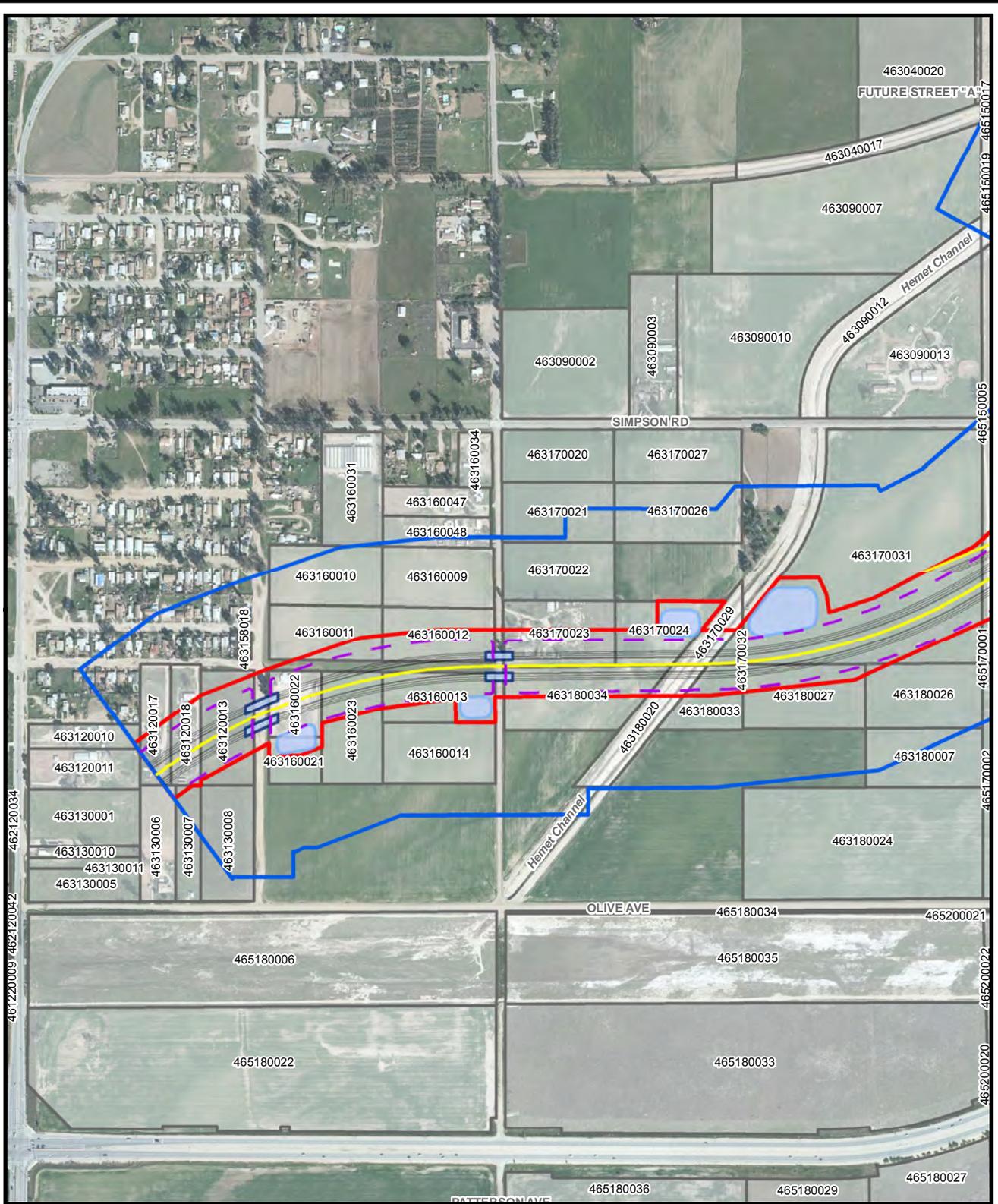
- Project Impact Area
- Study Area
- Aqueduct Crossing
- Bridge over Local Street
- Bridge over Local Street and Other Feature
- Bridge over Other Feature
- Bridge over SR 79

- County Assessor's Parcel<sup>CR</sup>
- Best Management Practices (BMPs)



Source: CR - County of Riverside

**Figure 2.2-6e 2 of 2**  
**Roadway Segment E**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



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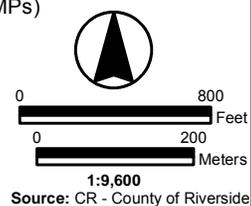
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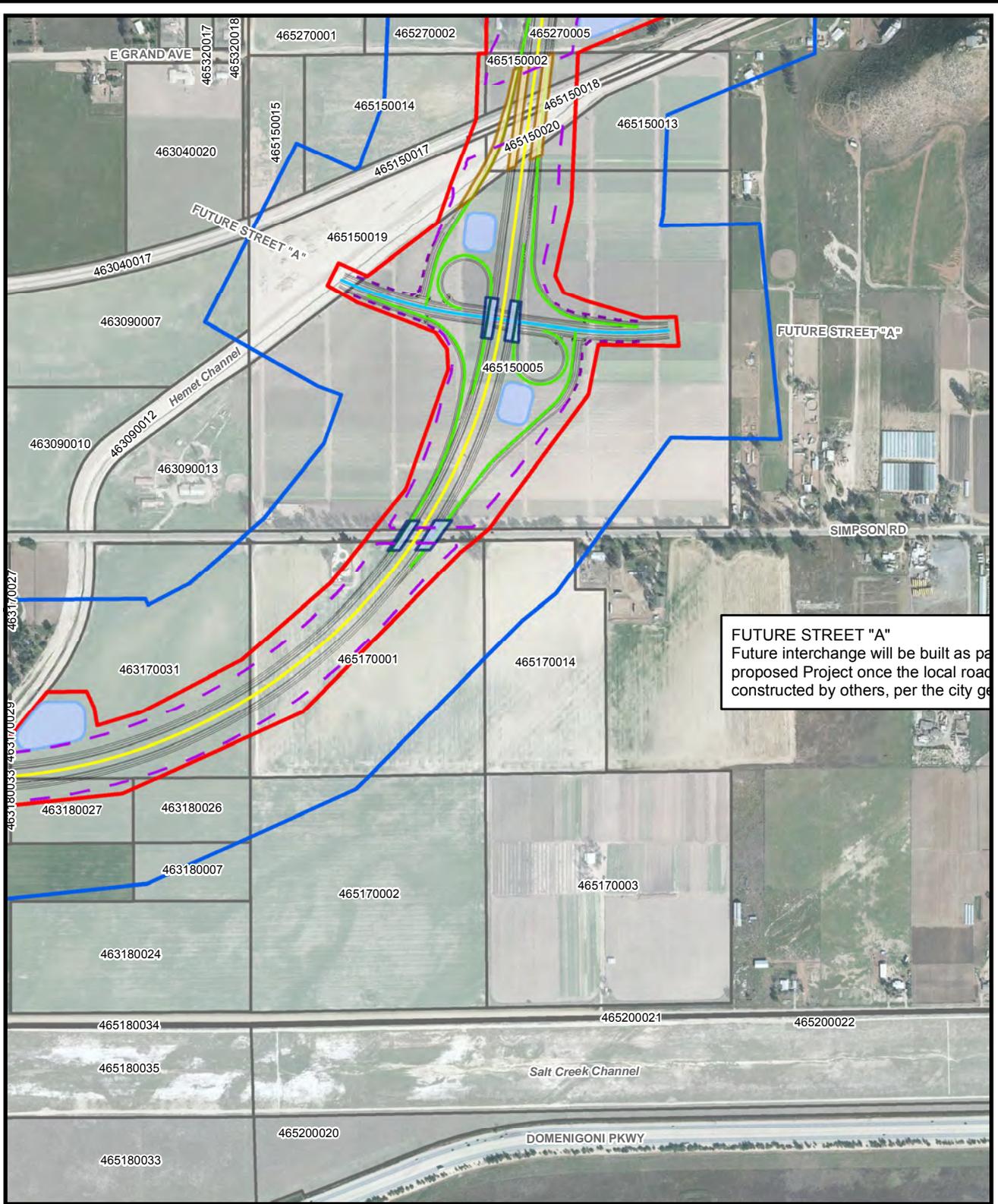
- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Cut Line
- Fill Line

- Project Impact Area
- Study Area
- Aqueduct Crossing
- Bridge over Local Street
- Bridge over Local Street and Other Feature
- Bridge over Other Feature
- Bridge over SR 79

- County Assessor's Parcel<sup>CR</sup>
- Best Management Practices (BMPs)



**Figure 2.2-6f 1 of 3**  
**Roadway Segment F**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project

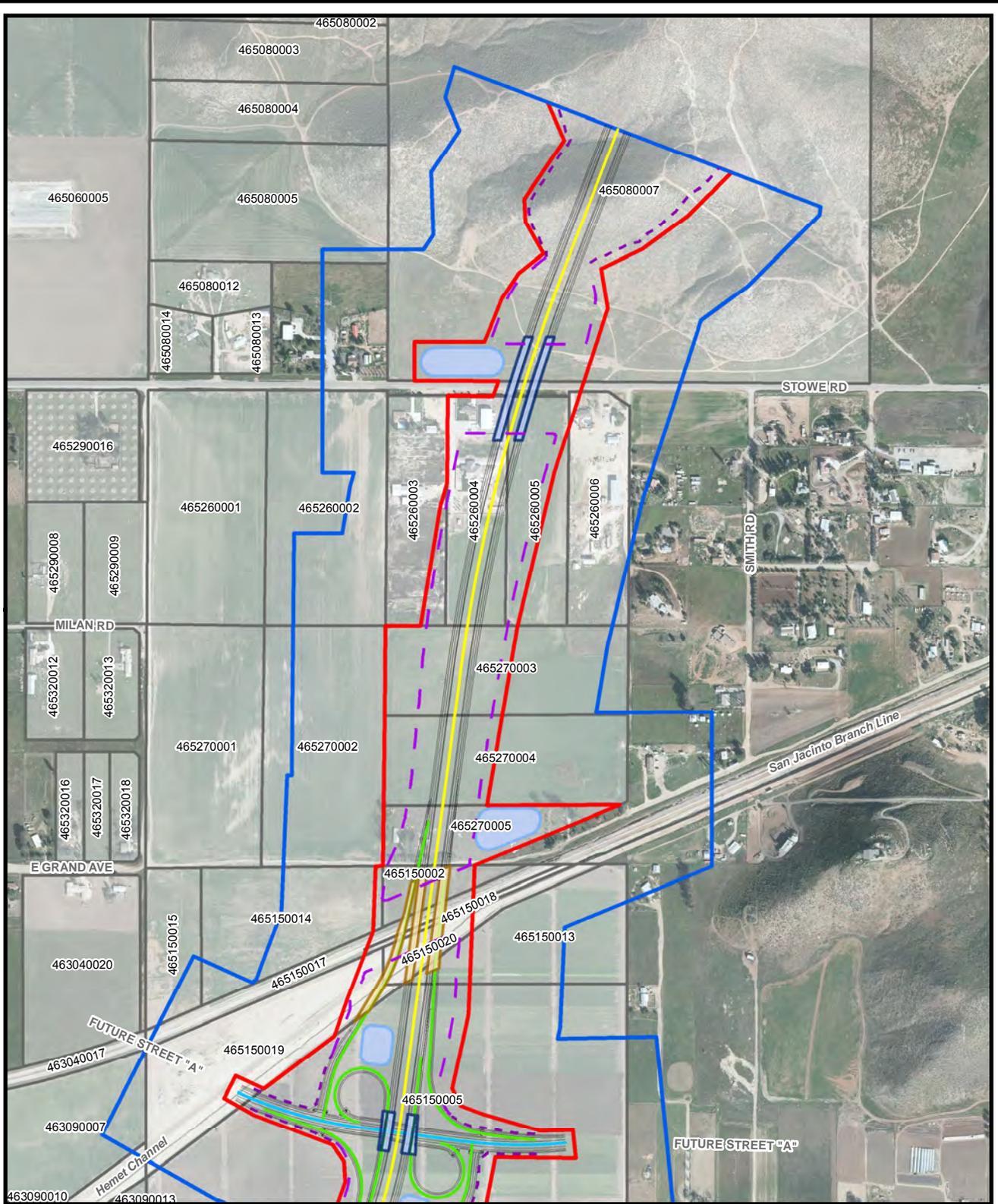


**FUTURE STREET "A"**  
 Future interchange will be built as part of the proposed Project once the local road is constructed by others, per the city of Riverside.

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<b>LEGEND</b>	Project Impact Area	County Assessor's Parcel <sup>CR</sup>
Project Roadway	Study Area	Best Management Practices (BMPs)
Grade-Separated Interchange (Ramps)	Aqueduct Crossing	
Local Cross Street	Bridge over Local Street	
Cul-de-Sac	Bridge over Local Street and Other Feature	
Local Road	Bridge over Other Feature	<b>1:9,600</b>
Cut Line	Bridge over SR 79	<b>Source: CR - County of Riverside</b>
Fill Line		

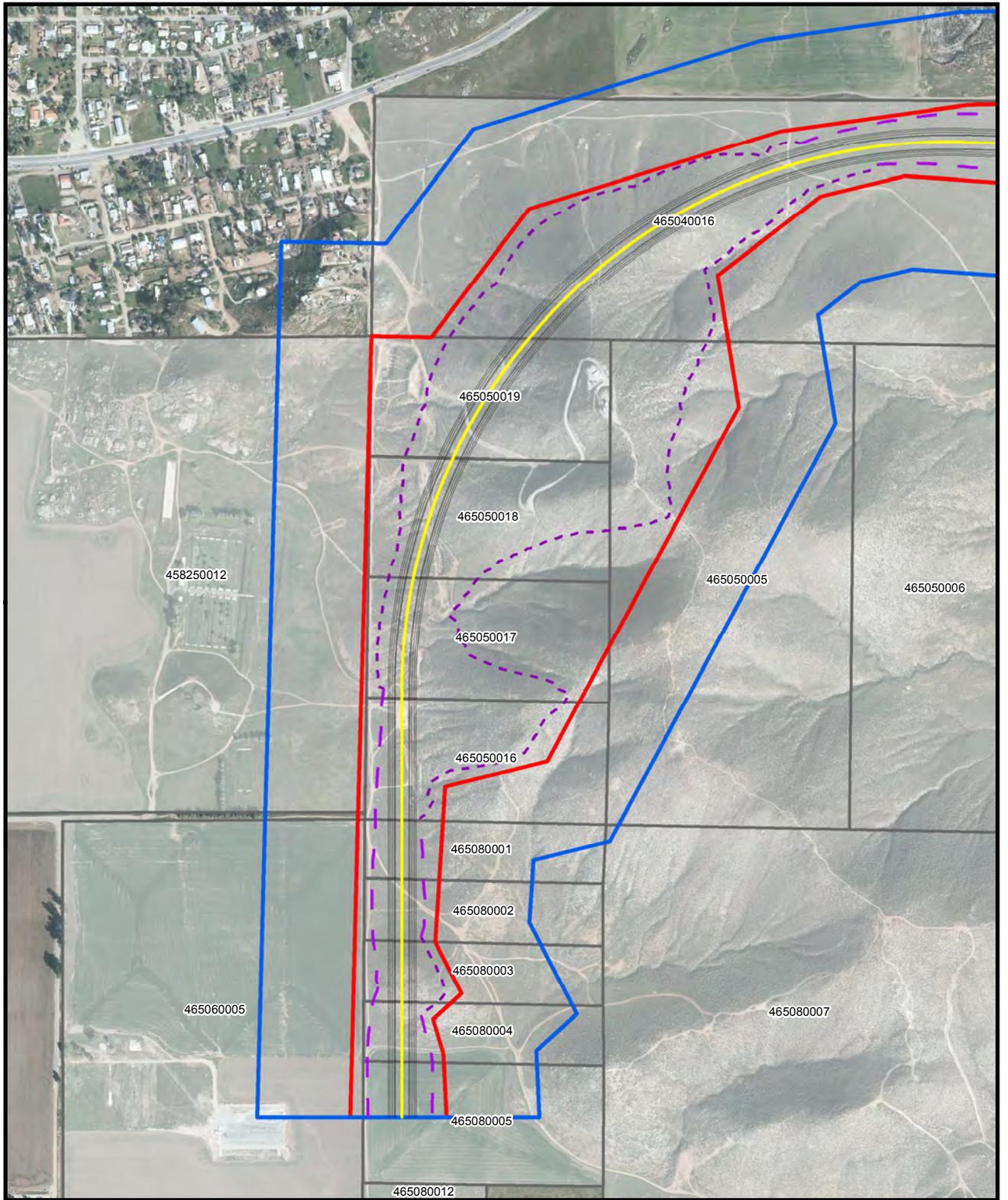
**Figure 2.2-6f 2 of 3**  
**Roadway Segment F**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



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<b>LEGEND</b>	Project Impact Area	County Assessor's Parcel <sup>CR</sup>
Project Roadway	Study Area	Best Management Practices (BMPs)
Grade-Separated Interchange (Ramps)	Aqueduct Crossing	
Local Cross Street	Bridge over Local Street	
Cul-de-Sac	Bridge over Local Street and Other Feature	
Local Road	Bridge over Other Feature	<b>1:9,600</b>
Cut Line	Bridge over SR 79	Source: CR - County of Riverside
Fill Line		

**Figure 2.2-6f 3 of 3**  
**Roadway Segment F**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



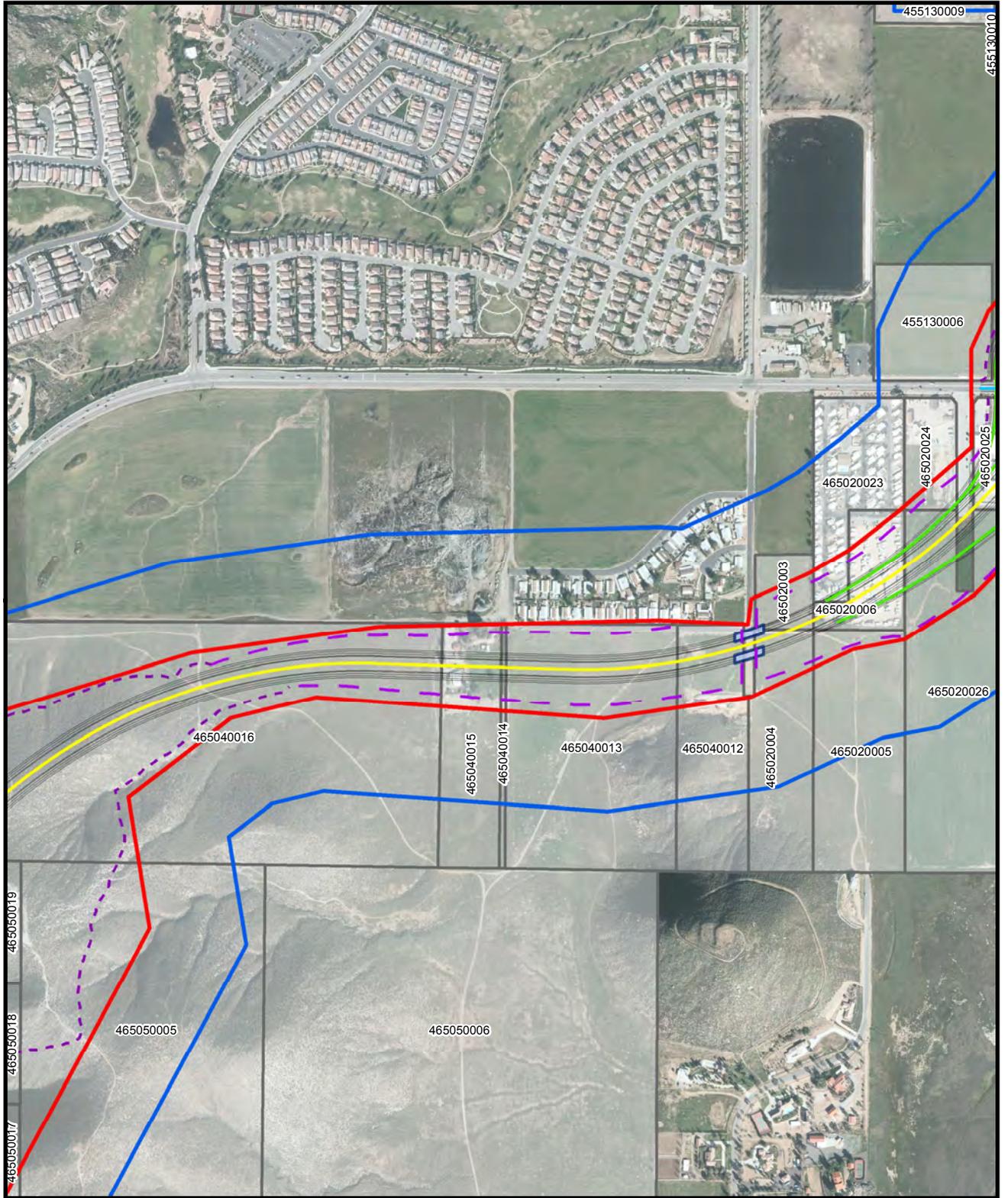
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**LEGEND**

- |                                     |  |   |
|-------------------------------------|--|---|
| Project Roadway                     | Project Impact Area                        | County Assessor's Parcel <sup>CR</sup>  |
| Grade-Separated Interchange (Ramps) | Study Area                                 | Best Management Practices (BMPs)        |
| Local Cross Street                  | Aqueduct Crossing                          |   |
| Cul-de-Sac                          | Bridge over Local Street                   |   |
| Local Road                          | Bridge over Local Street and Other Feature |   |
| Cut Line                            | Bridge over Other Feature                  | <b>1:9,600</b>                          |
| Fill Line                           | Bridge over SR 79                          | <b>Source: CR - County of Riverside</b> |

**Figure 2.2-6g 1 of 3**  
**Roadway Segment G**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



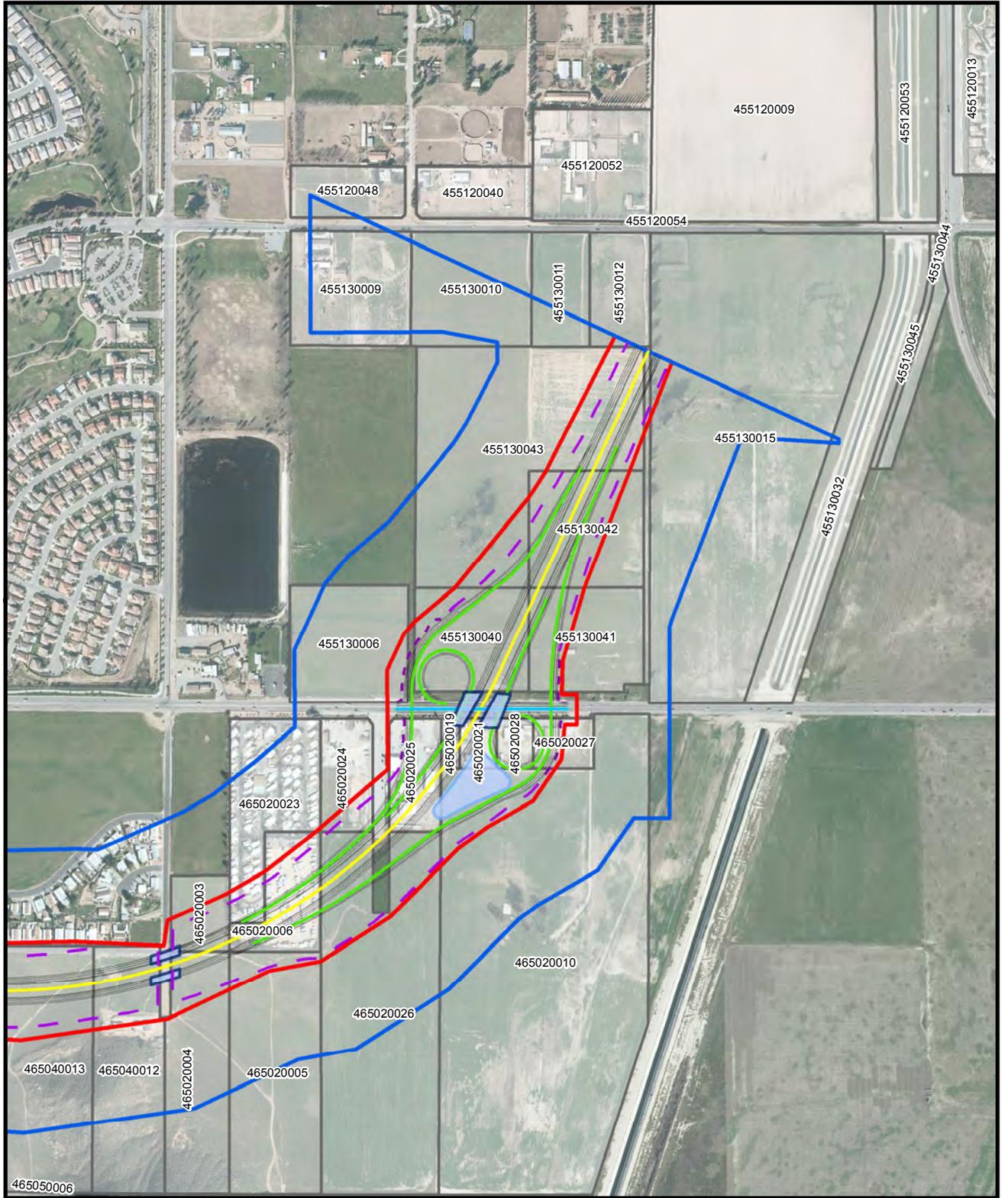
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**LEGEND**

- |                                     |  |  |
|-------------------------------------|--|--|
| Project Roadway                     | Project Impact Area                        | County Assessor's Parcel <sup>CR</sup> |
| Grade-Separated Interchange (Ramps) | Study Area                                 | Best Management Practices (BMPs)       |
| Local Cross Street                  | Aqueduct Crossing                          |  |
| Cul-de-Sac                          | Bridge over Local Street                   |  |
| Local Road                          | Bridge over Local Street and Other Feature |  |
| Cut Line                            | Bridge over Other Feature                  | <b>1:9,600</b>                         |
| Fill Line                           | Bridge over SR 79                          | Source: CR - County of Riverside       |

**Figure 2.2-6g 2 of 3**  
**Roadway Segment G**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



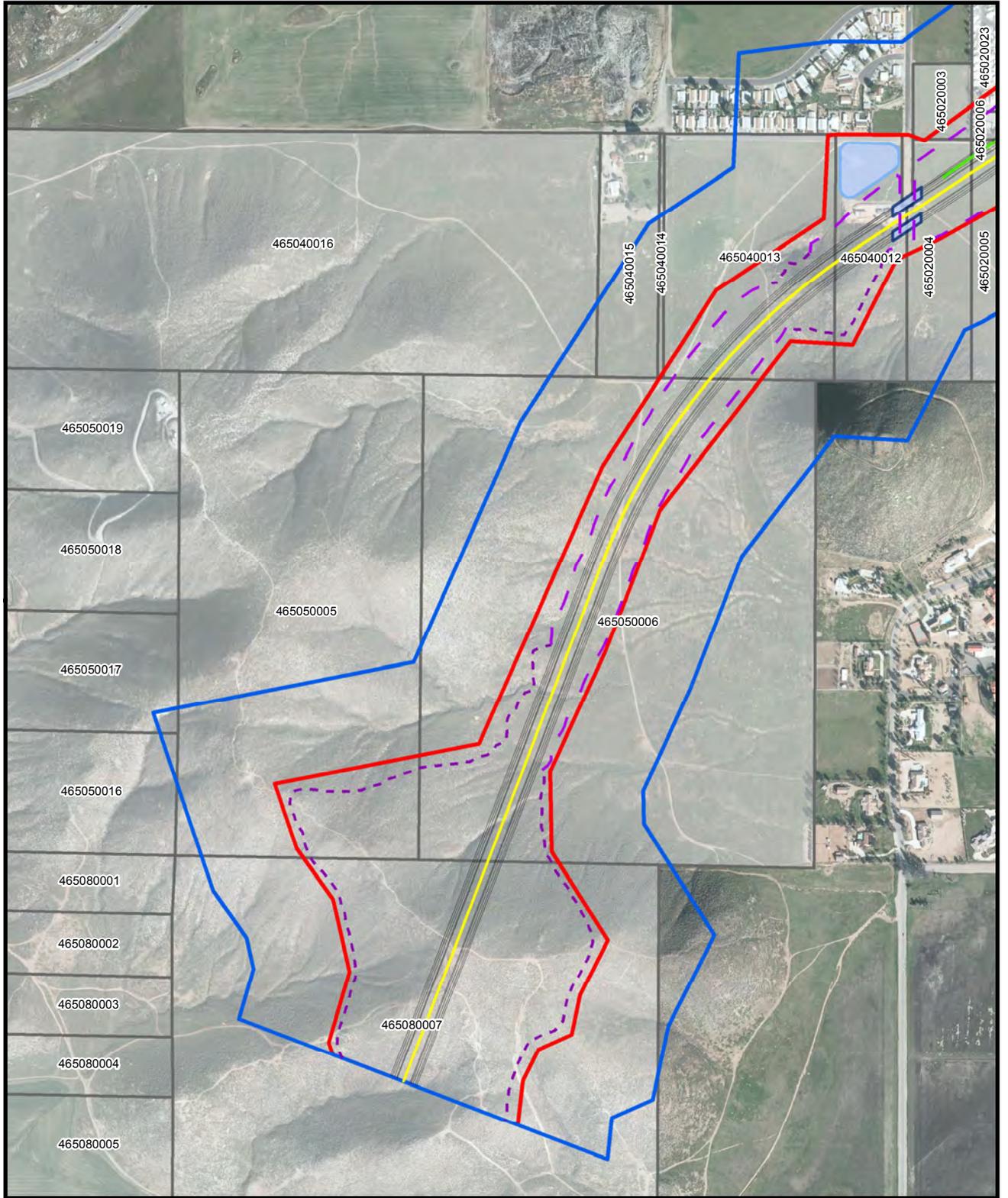
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**LEGEND**

- |                                     |  |  |
|-------------------------------------|--|--|
| Project Roadway                     | Project Impact Area                        | County Assessor's Parcel <sup>CR</sup> |
| Grade-Separated Interchange (Ramps) | Study Area                                 | Best Management Practices (BMPs)       |
| Local Cross Street                  | Aqueduct Crossing                          |  |
| Cul-de-Sac                          | Bridge over Local Street                   |  |
| Local Road                          | Bridge over Local Street and Other Feature |  |
| Cut Line                            | Bridge over Other Feature                  | <b>1:9,600</b>                         |
| Fill Line                           | Bridge over SR 79                          | Source: CR - County of Riverside       |

**Figure 2.2-6g 3 of 3**  
**Roadway Segment G**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



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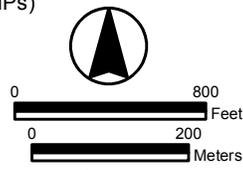
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**LEGEND**

- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Cut Line
- Fill Line

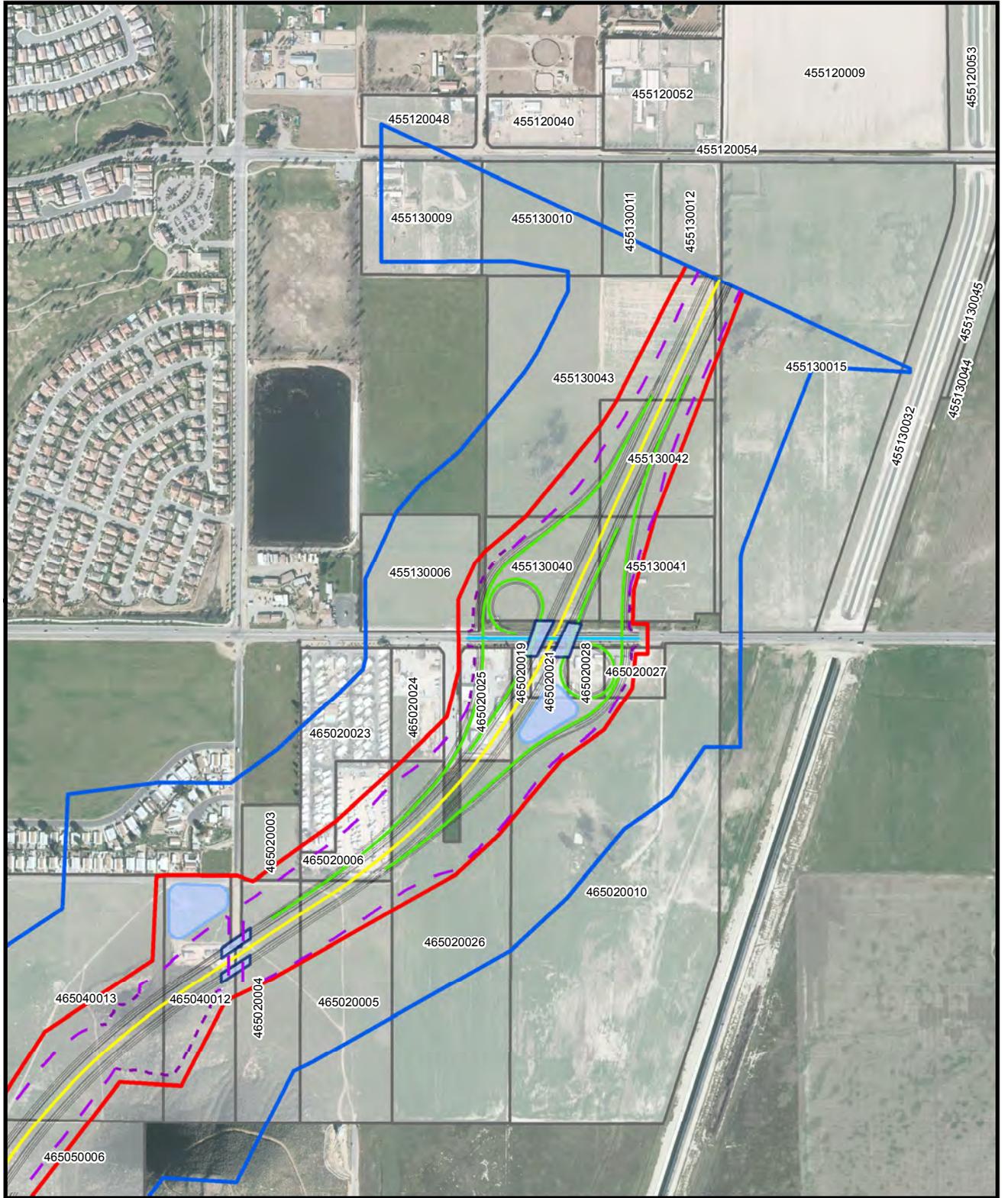
- Project Impact Area
- Study Area
- Aqueduct Crossing
- Bridge over Local Street
- Bridge over Local Street and Other Feature
- Bridge over Other Feature
- Bridge over SR 79

- County Assessor's Parcel<sup>CR</sup>
- Best Management Practices (BMPs)



1:9,600  
Source: CR - County of Riverside

**Figure 2.2-6h 1 of 2**  
**Roadway Segment H**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



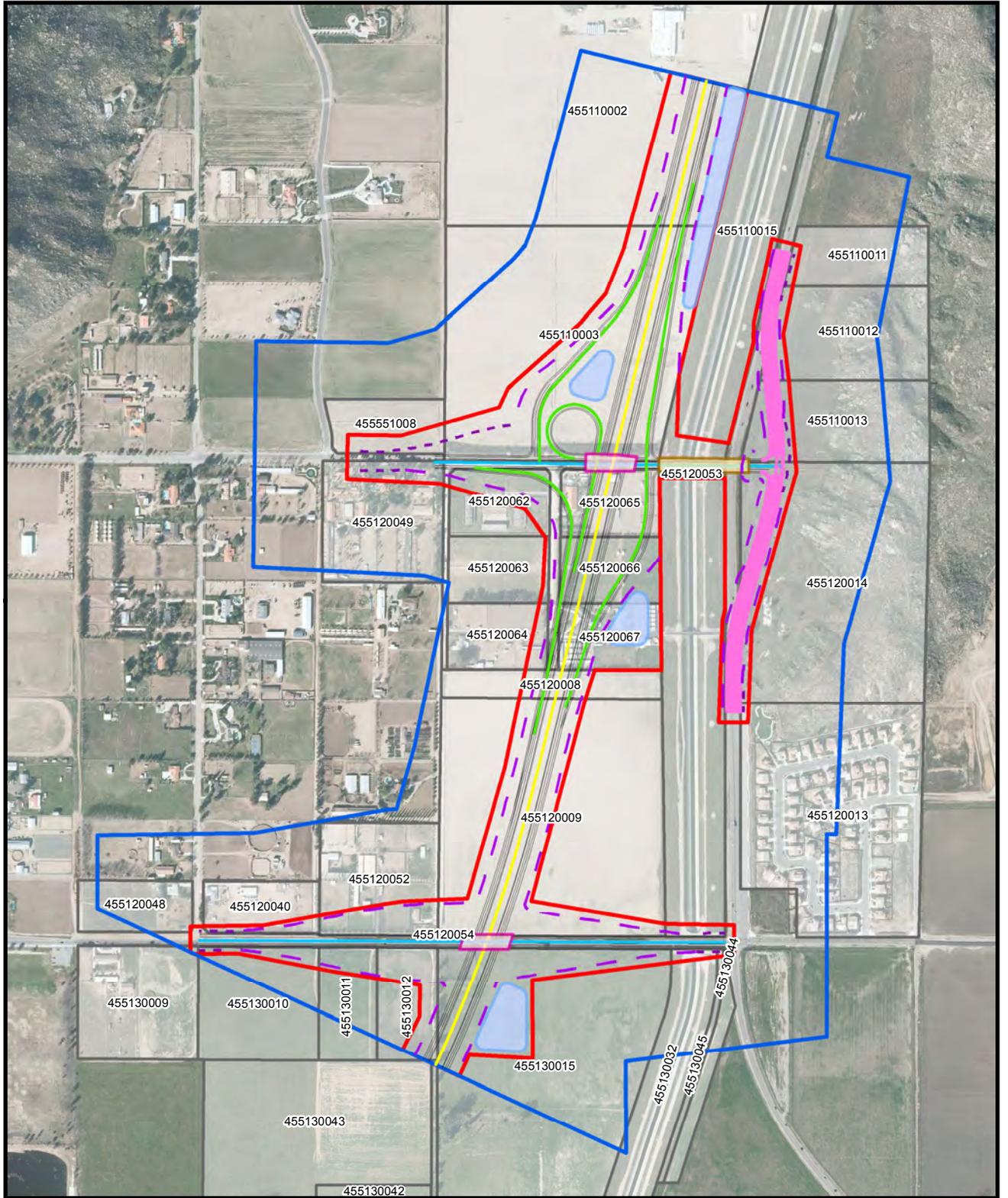
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**LEGEND**

- |                                     |  |  |
|-------------------------------------|--|--|
| Project Roadway                     | Project Impact Area                        | County Assessor's Parcel <sup>CR</sup> |
| Grade-Separated Interchange (Ramps) | Study Area                                 | Best Management Practices (BMPs)       |
| Local Cross Street                  | Aqueduct Crossing                          | North Arrow                            |
| Cul-de-Sac                          | Bridge over Local Street                   | 0 800 Feet                             |
| Local Road                          | Bridge over Local Street and Other Feature | 0 200 Meters                           |
| Cut Line                            | Bridge over Other Feature                  | <b>1:9,600</b>                         |
| Fill Line                           | Bridge over SR 79                          | Source: CR - County of Riverside       |

**Figure 2.2-6h 2 of 2**  
**Roadway Segment H**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project

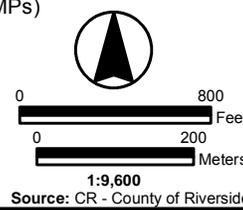


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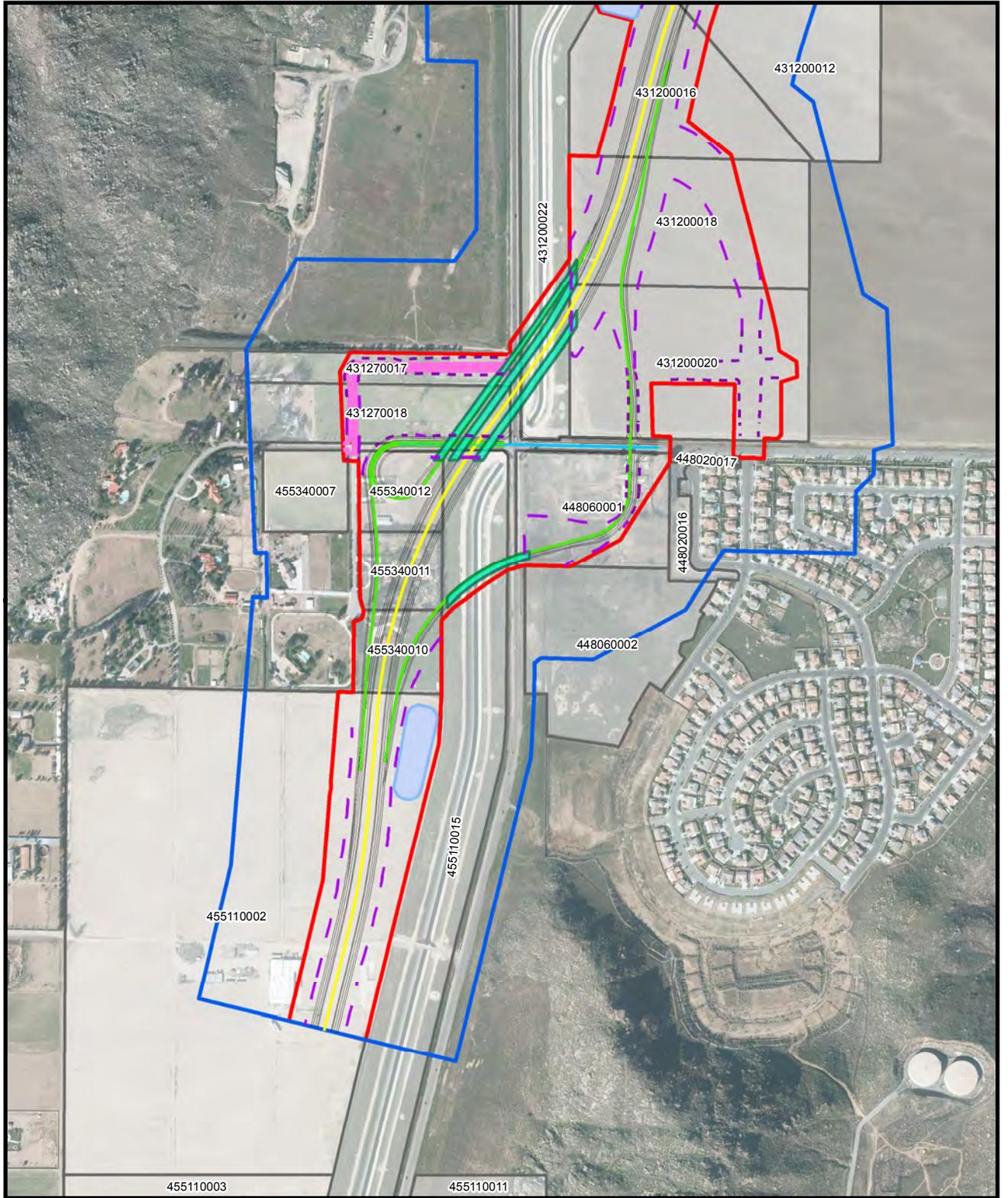
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**LEGEND**

- |                                     |  |  |
|-------------------------------------|--|--|
| Project Roadway                     | Project Impact Area                        | County Assessor's Parcel <sup>CR</sup> |
| Grade-Separated Interchange (Ramps) | Study Area                                 | Best Management Practices (BMPs)       |
| Local Cross Street                  | Aqueduct Crossing                          | Bridge over Local Street               |
| Cul-de-Sac                          | Bridge over Local Street and Other Feature | Bridge over Other Feature              |
| Local Road                          | Bridge over SR 79                          |  |
| Cut Line                            |  |  |
| Fill Line                           |  |  |



**Figure 2.2-6i 1 of 1**  
**Roadway Segment I**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



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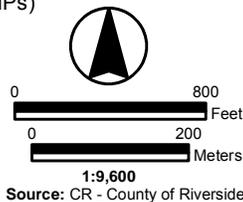
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**LEGEND**

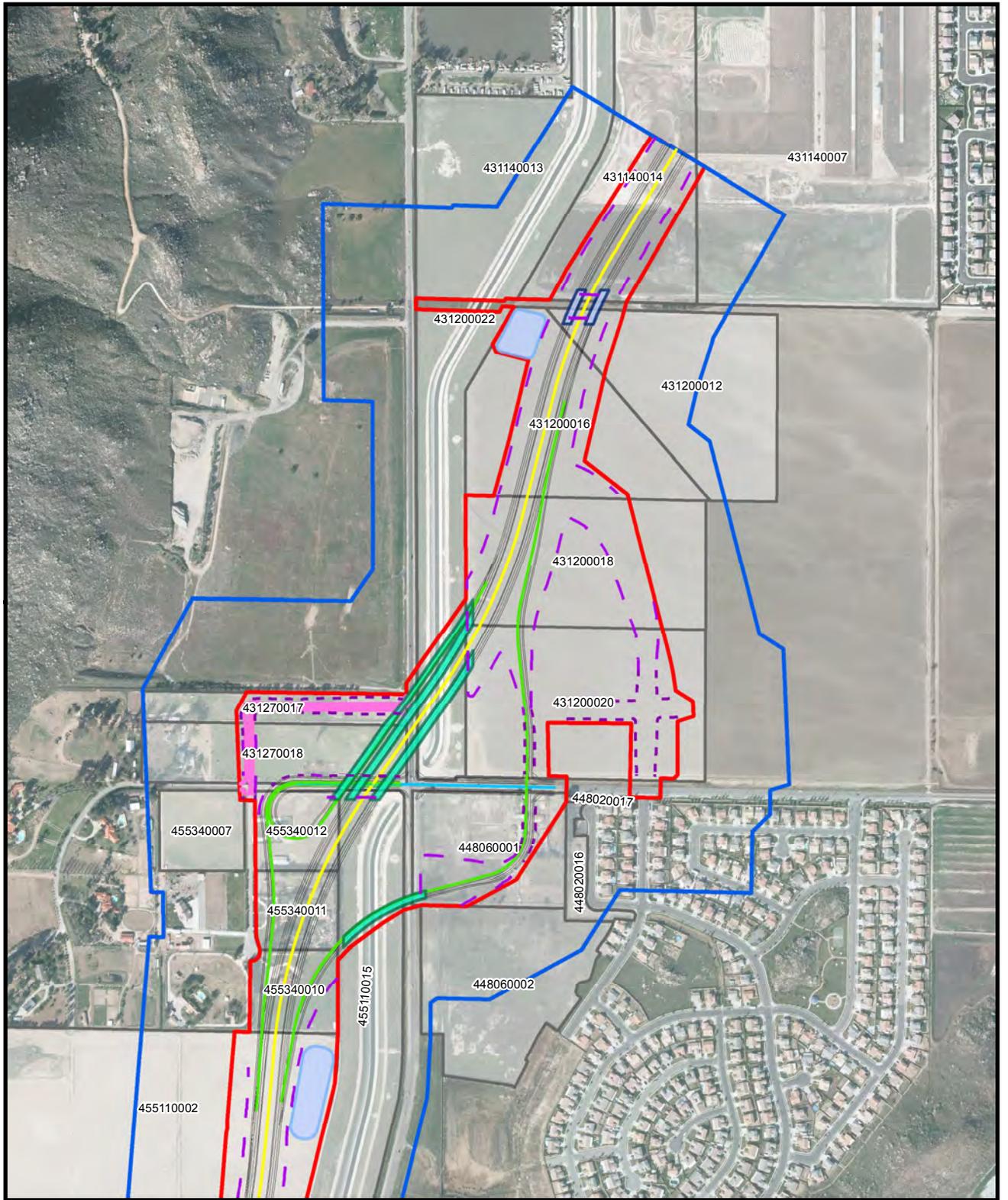
- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Cut Line
- Fill Line

- Project Impact Area
- Study Area
- Aqueduct Crossing
- Bridge over Local Street
- Bridge over Local Street and Other Feature
- Bridge over Other Feature
- Bridge over SR 79

- County Assessor's Parcel<sup>CR</sup>
- Best Management Practices (BMPs)



**Figure 2.2-6j 1 of 2**  
**Roadway Segment J**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



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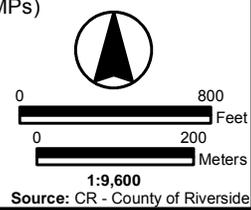
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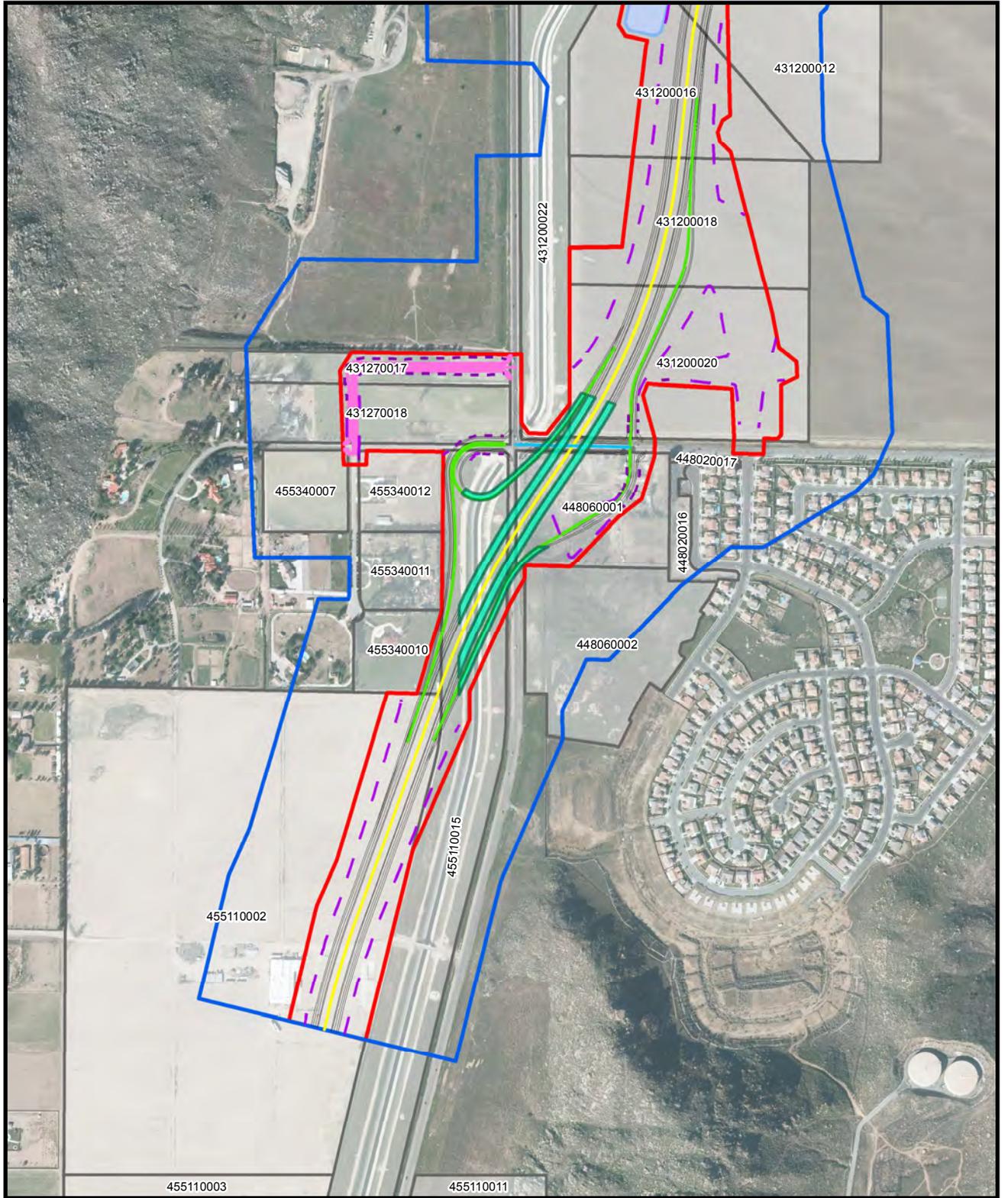
- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Cut Line
- Fill Line

- Project Impact Area
- Study Area
- Aqueduct Crossing
- Bridge over Local Street
- Bridge over Local Street and Other Feature
- Bridge over Other Feature
- Bridge over SR 79

- County Assessor's Parcel<sup>CR</sup>
- Best Management Practices (BMPs)



**Figure 2.2-6j 2 of 2**  
**Roadway Segment J**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



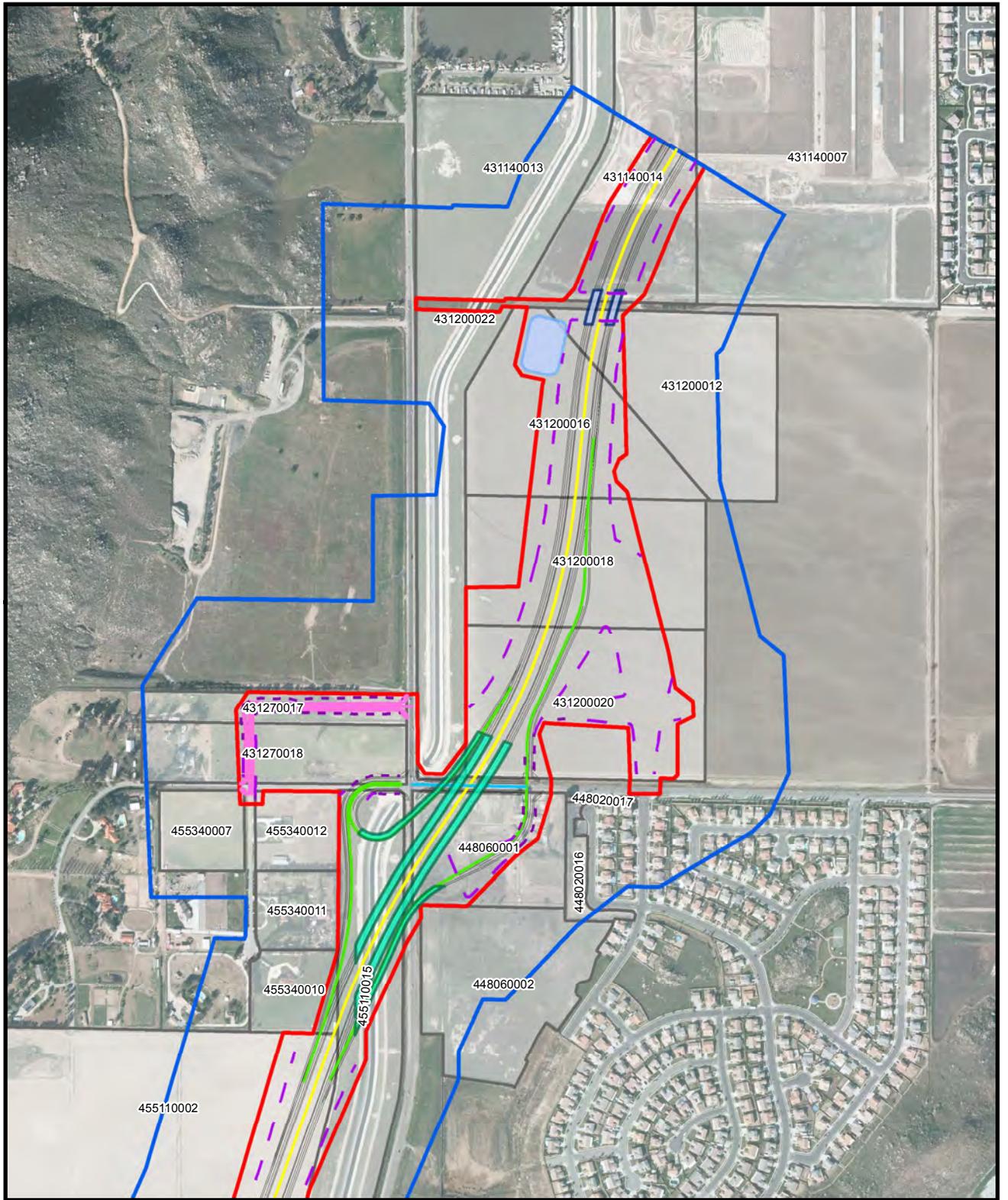
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**LEGEND**

- |                                     |  |  |
|-------------------------------------|--|--|
| Project Roadway                     | Project Impact Area                        | County Assessor's Parcel <sup>CR</sup> |
| Grade-Separated Interchange (Ramps) | Study Area                                 | Best Management Practices (BMPs)       |
| Local Cross Street                  | Aqueduct Crossing                          |  |
| Cul-de-Sac                          | Bridge over Local Street                   |  |
| Local Road                          | Bridge over Local Street and Other Feature |  |
| Cut Line                            | Bridge over Other Feature                  | <b>1:9,600</b>                         |
| Fill Line                           | Bridge over SR 79                          | Source: CR - County of Riverside       |

**Figure 2.2-6k 1 of 2**  
**Roadway Segment K**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



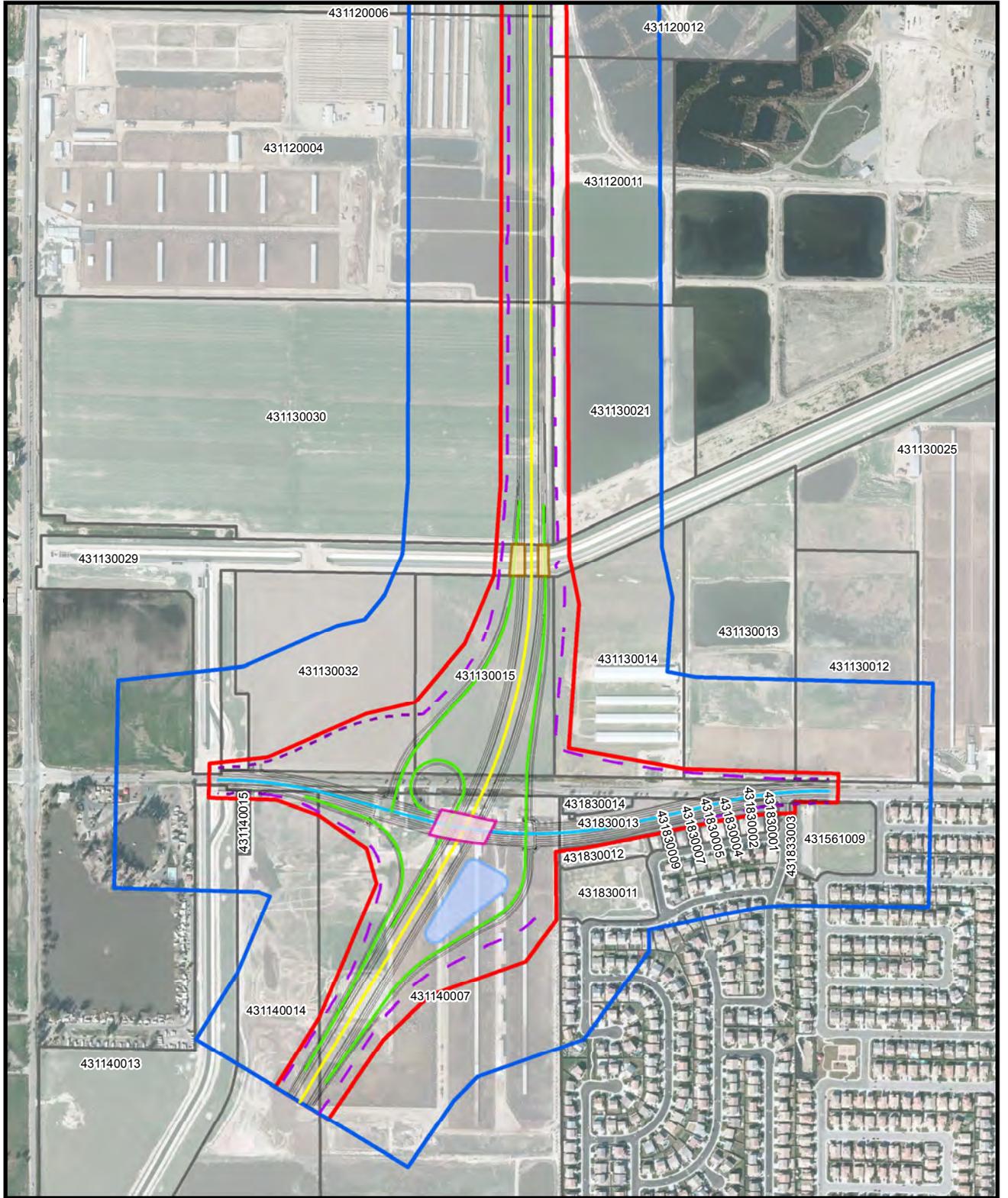
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**LEGEND**

- |                                     |  |  |
|-------------------------------------|--|--|
| Project Roadway                     | Project Impact Area                        | County Assessor's Parcel <sup>CR</sup> |
| Grade-Separated Interchange (Ramps) | Study Area                                 | Best Management Practices (BMPs)       |
| Local Cross Street                  | Aqueduct Crossing                          |  |
| Cul-de-Sac                          | Bridge over Local Street                   |  |
| Local Road                          | Bridge over Local Street and Other Feature |  |
| Cut Line                            | Bridge over Other Feature                  | <b>1:9,600</b>                         |
| Fill Line                           | Bridge over SR 79                          | Source: CR - County of Riverside       |

**Figure 2.2-6k 2 of 2**  
**Roadway Segment K**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



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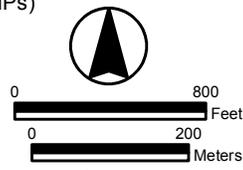
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**LEGEND**

- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Cut Line
- Fill Line

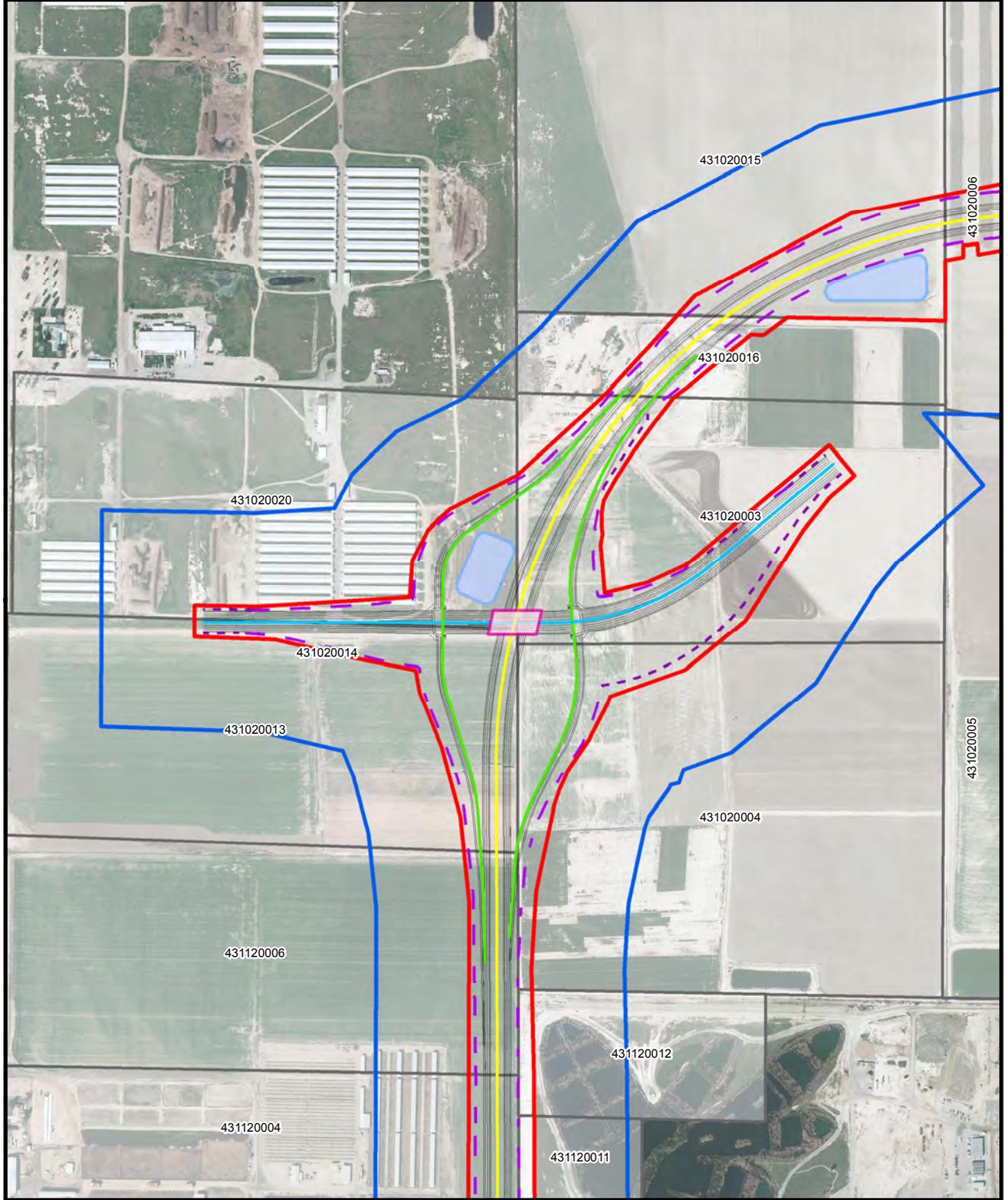
- Project Impact Area
- Study Area
- Aqueduct Crossing
- Bridge over Local Street
- Bridge over Local Street and Other Feature
- Bridge over Other Feature
- Bridge over SR 79

- County Assessor's Parcel<sup>CR</sup>
- Best Management Practices (BMPs)



Source: CR - County of Riverside

**Figure 2.2-6I 1 of 3**  
**Roadway Segment L**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



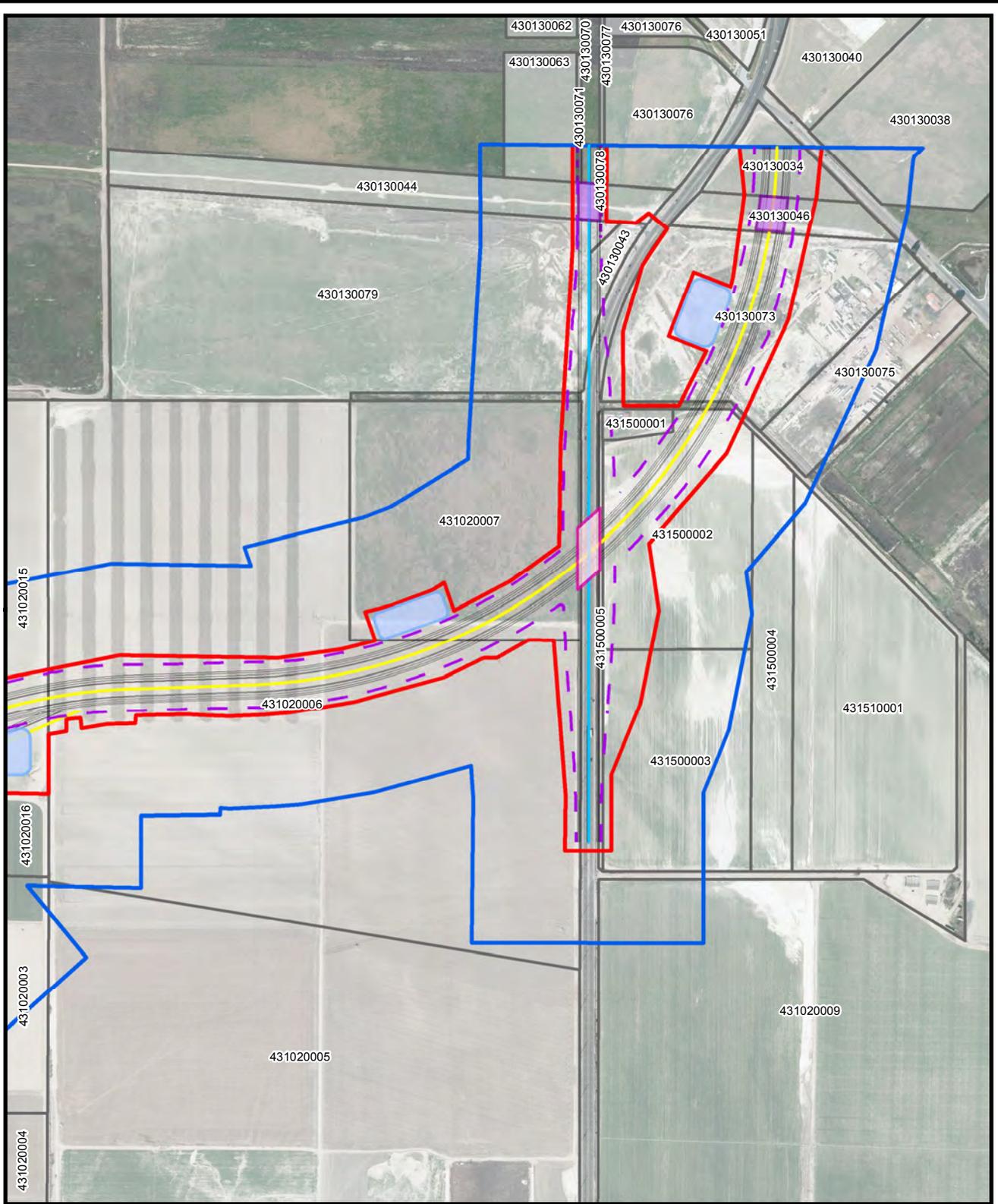
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**LEGEND**

- |                                     |  |  |
|-------------------------------------|--|--|
| Project Roadway                     | Project Impact Area                        | County Assessor's Parcel <sup>CR</sup> |
| Grade-Separated Interchange (Ramps) | Study Area                                 | Best Management Practices (BMPs)       |
| Local Cross Street                  | Aqueduct Crossing                          |  |
| Cul-de-Sac                          | Bridge over Local Street                   |  |
| Local Road                          | Bridge over Local Street and Other Feature |  |
| Cut Line                            | Bridge over Other Feature                  | <b>1:9,600</b>                         |
| Fill Line                           | Bridge over SR 79                          | Source: CR - County of Riverside       |

**Figure 2.2-6I 2 of 3**  
**Roadway Segment L**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project

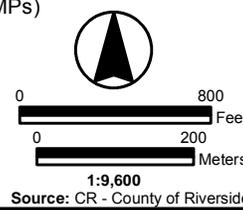


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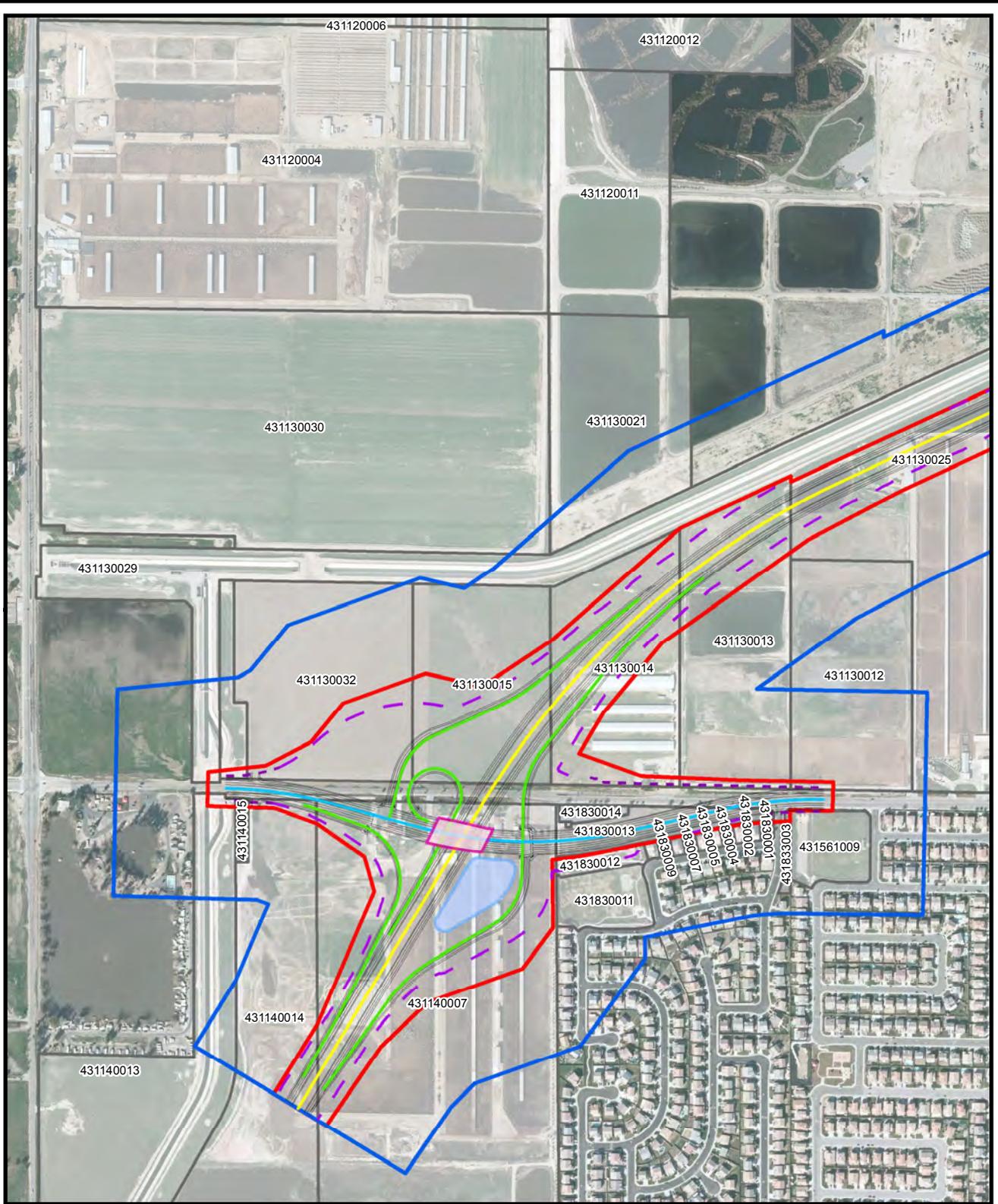
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**LEGEND**

- |  |                                     |  |  |  |  |
|--|-------------------------------------|--|--|--|--|
|  | Project Roadway                     |  | Project Impact Area                        |  | County Assessor's Parcel <sup>CR</sup> |
|  | Grade-Separated Interchange (Ramps) |  | Study Area                                 |  | Best Management Practices (BMPs)       |
|  | Local Cross Street                  |  | Aqueduct Crossing                          |  | Bridge over Local Street               |
|  | Cul-de-Sac                          |  | Bridge over Local Street and Other Feature |  | Bridge over Other Feature              |
|  | Local Road                          |  | Bridge over SR 79                          |  |  |
|  | Cut Line                            |  |  |  |  |
|  | Fill Line                           |  |  |  |  |



**Figure 2.2-6I 3 of 3**  
**Roadway Segment L**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



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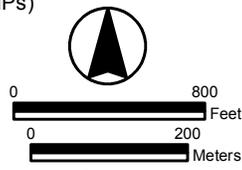
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**LEGEND**

- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Cut Line
- Fill Line

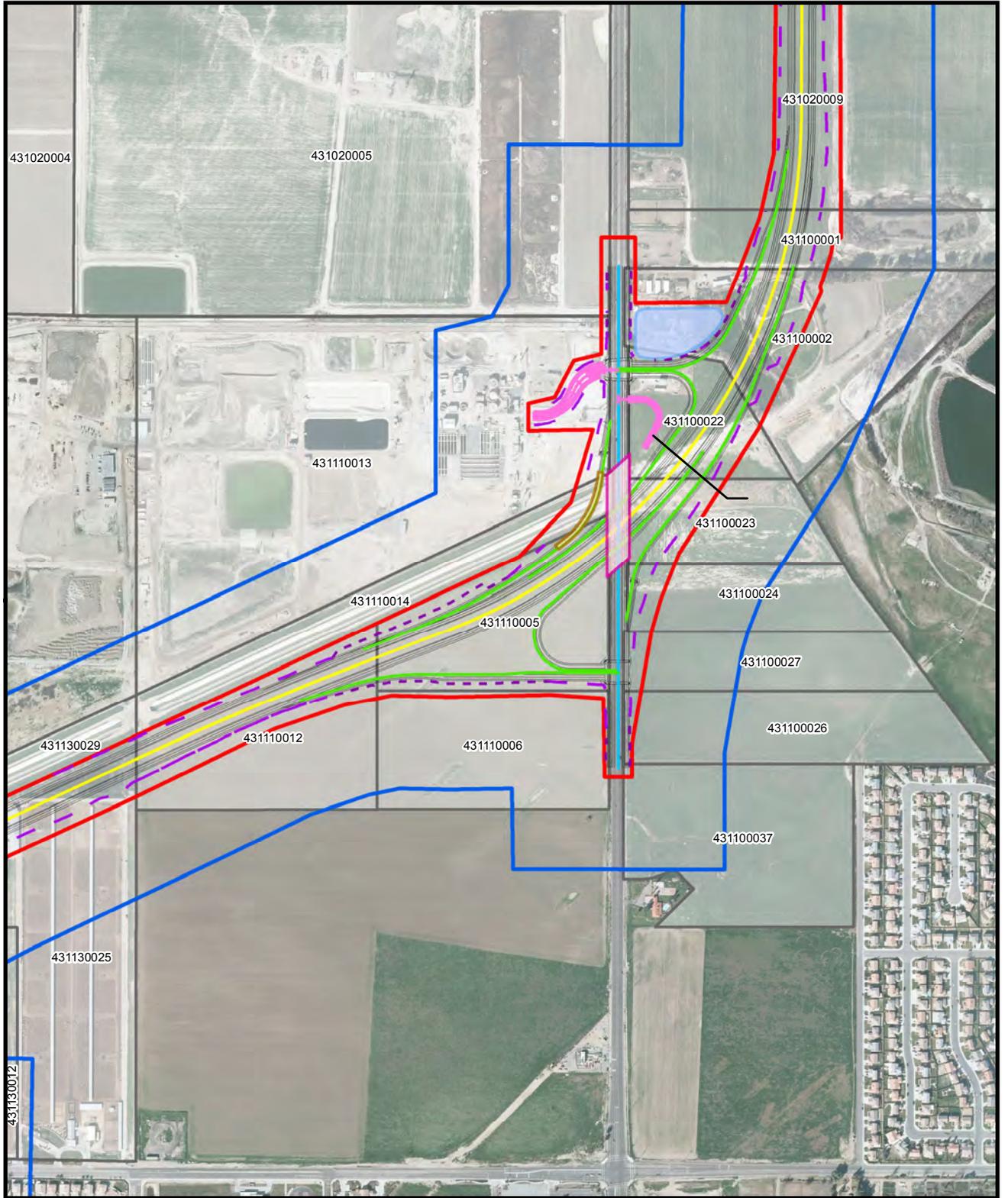
- Project Impact Area
- Study Area
- Aqueduct Crossing
- Bridge over Local Street
- Bridge over Local Street and Other Feature
- Bridge over Other Feature
- Bridge over SR 79

- County Assessor's Parcel<sup>CR</sup>
- Best Management Practices (BMPs)



Source: CR - County of Riverside

**Figure 2.2-6m 1 of 3**  
**Roadway Segment M**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



Aerial Date: February 2011, Aero-Graphics, Inc

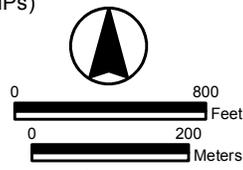
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**LEGEND**

- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Cut Line
- Fill Line

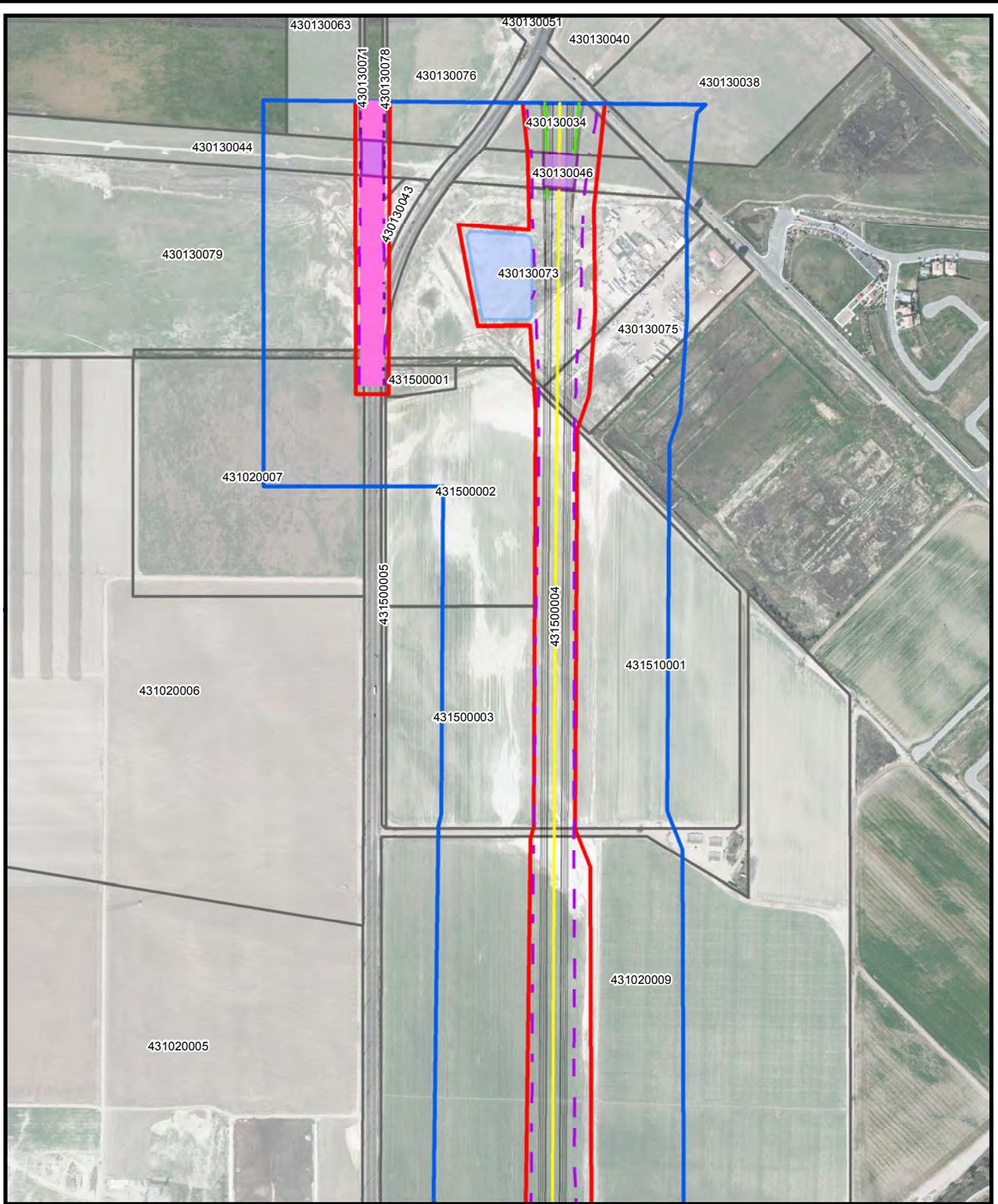
- Project Impact Area
- Study Area
- Aqueduct Crossing
- Bridge over Local Street
- Bridge over Local Street and Other Feature
- Bridge over Other Feature
- Bridge over SR 79

- County Assessor's Parcel<sup>CR</sup>
- Best Management Practices (BMPs)



Source: CR - County of Riverside

**Figure 2.2-6m 2 of 3**  
**Roadway Segment M**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



Aerial Date: February 2011, Aero-Graphics, Inc

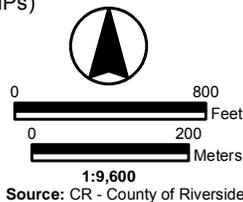
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**LEGEND**

- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Cut Line
- Fill Line

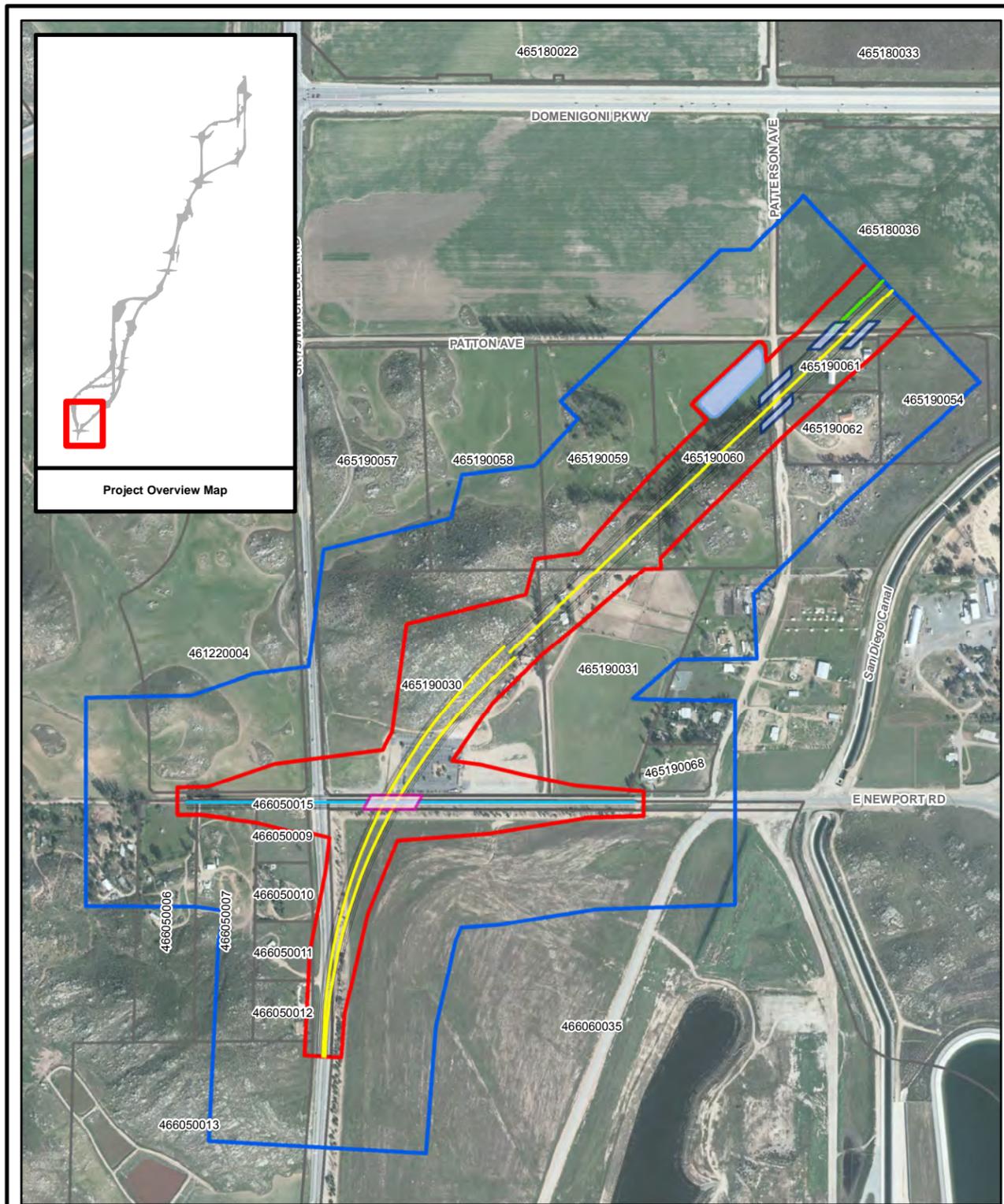
- Project Impact Area
- Study Area
- Aqueduct Crossing
- Bridge over Local Street
- Bridge over Local Street and Other Feature
- Bridge over Other Feature
- Bridge over SR 79

- County Assessor's Parcel<sup>CR</sup>
- Best Management Practices (BMPs)



**Figure 2.2-6m 3 of 3**  
**Roadway Segment M**  
**Base Condition**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project

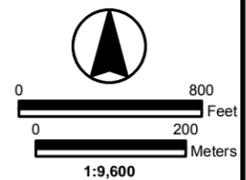




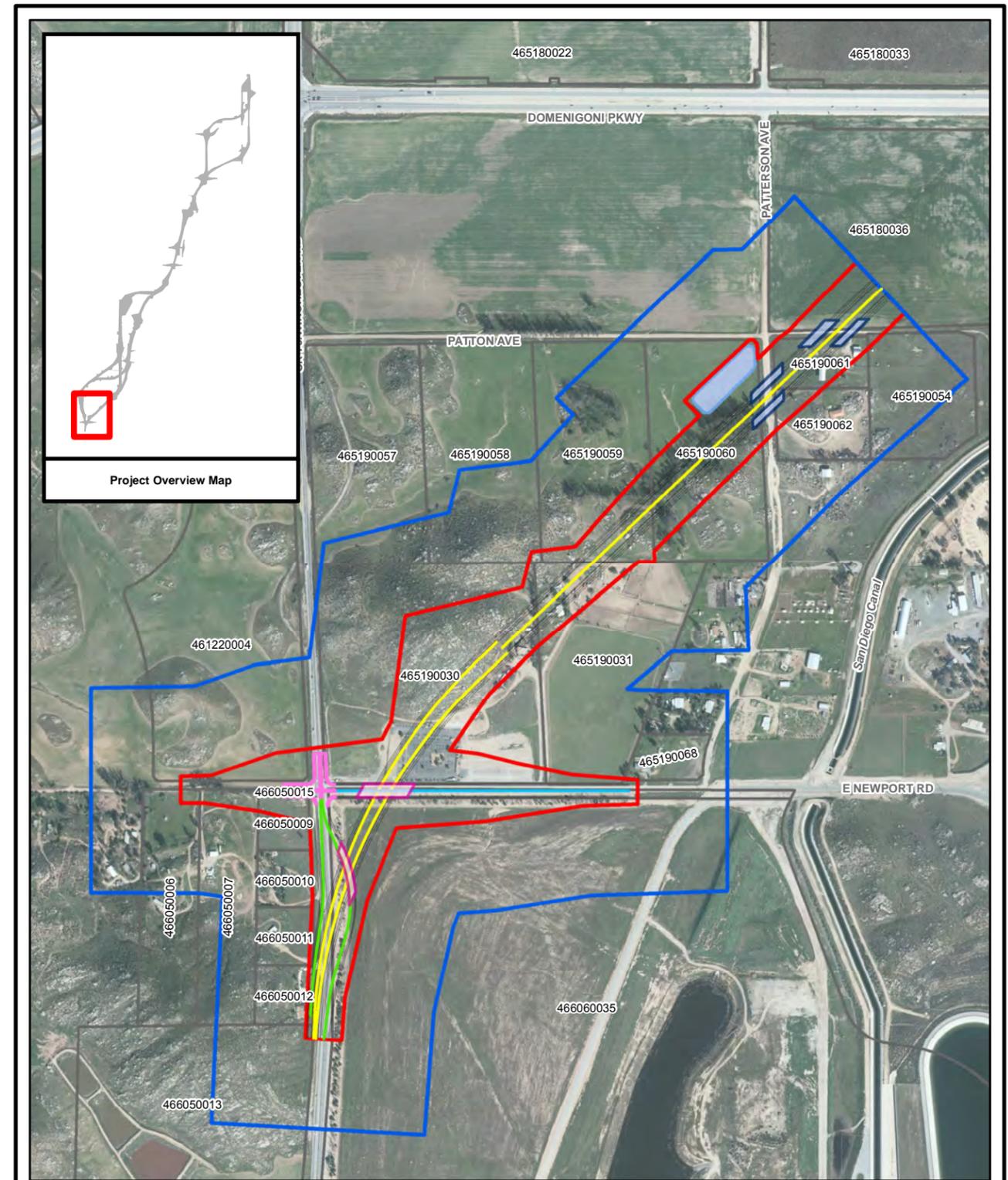
Aerial Date: February 2011, Aero-Graphics, Inc

**LEGEND**

- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Project Impact Area
- Study Area
- County Assessor's Parcel<sup>CR</sup>
- Bridge over Local Street
- Bridge over Local Street and Other Feature
- Bridge over Other Feature
- Bridge over SR79
- Best Management Practices (BMPs)



**Figure 2.2-7 1 of 2**  
**Roadway Segment B**  
**Base Condition**  
**Build Alternatives 1b and 2b**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project

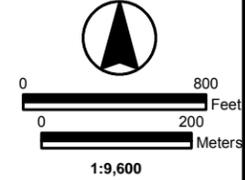


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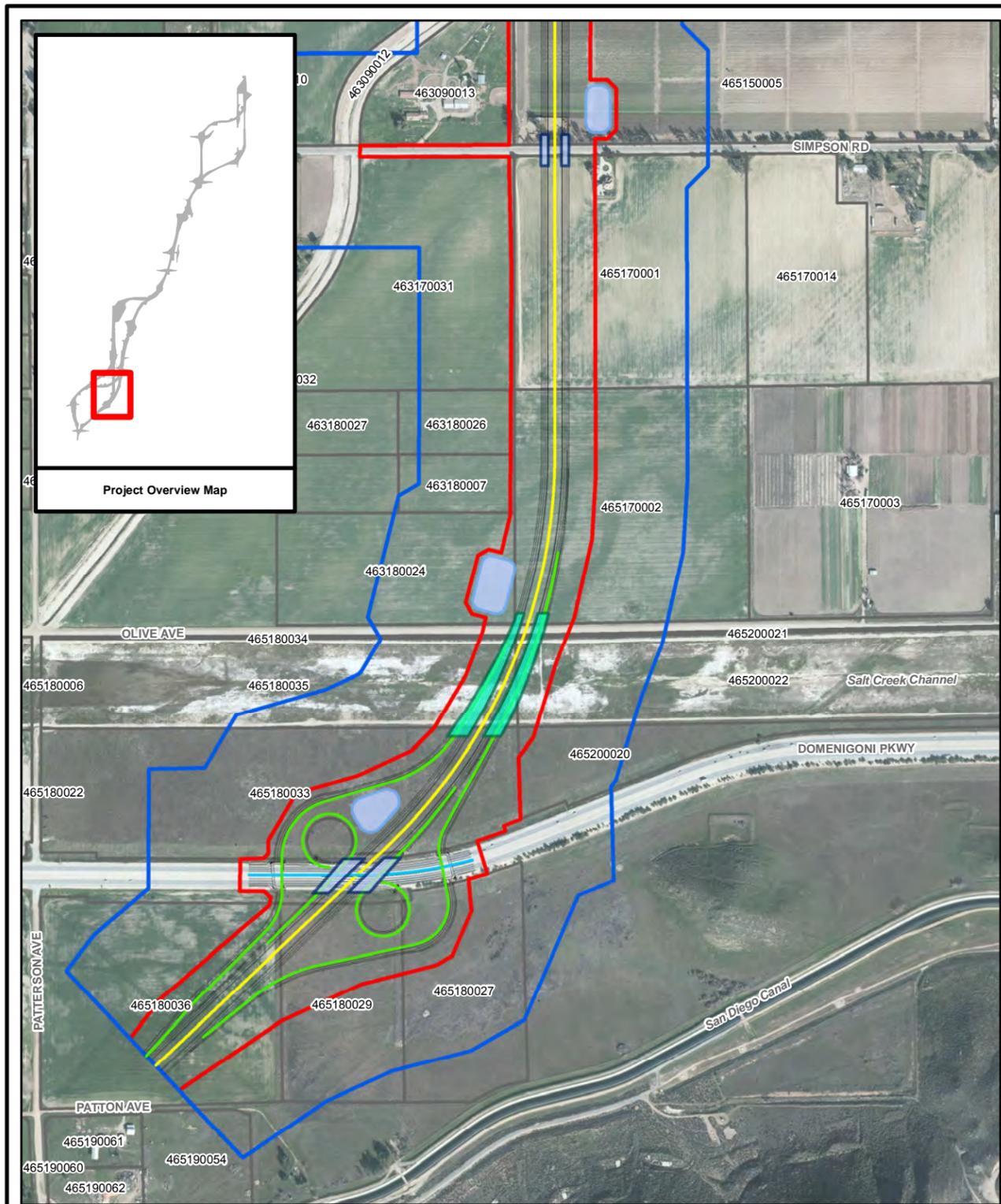
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**LEGEND**

- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Project Impact Area
- Study Area
- County Assessor's Parcel<sup>CR</sup>
- Bridge over Local Street
- Bridge over Local Street and Other Feature
- Bridge over Other Feature
- Bridge over SR79
- Best Management Practices (BMPs)



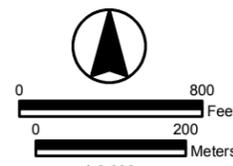
**Figure 2.2-7 2 of 2**  
**Roadway Segment B**  
**Design Options 1b1 and 2b1**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



Aerial Date: February 2011, Aero-Graphics, Inc

**LEGEND**

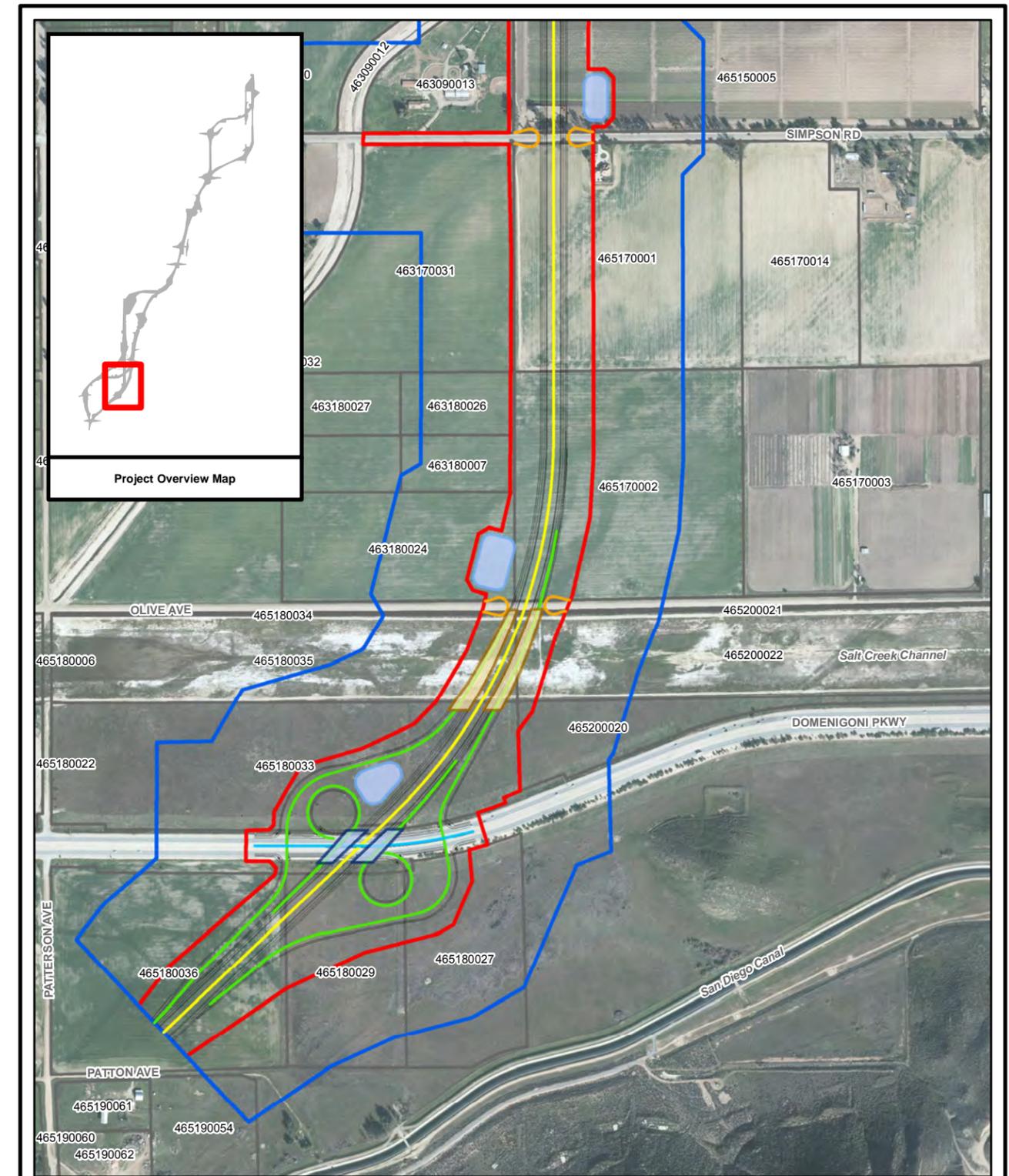
- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Project Impact Area
- Study Area
- County Assessor's Parcel<sup>CR</sup>
- Bridge over Local Street
- Bridge over Local Street and Other Feature
- Bridge over Other Feature
- Bridge over SR79
- Best Management Practices (BMPs)



1:9,600  
Source: CR - County of Riverside

**Figure 2.2-8a 1 of 2  
Roadway Segment C  
Base Condition  
Build Alternative 1b  
20-Year Design Horizon**

Final Environmental Impact Report/  
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State Route 79 Realignment Project

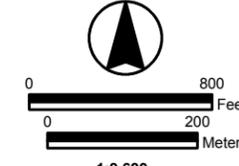


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**LEGEND**

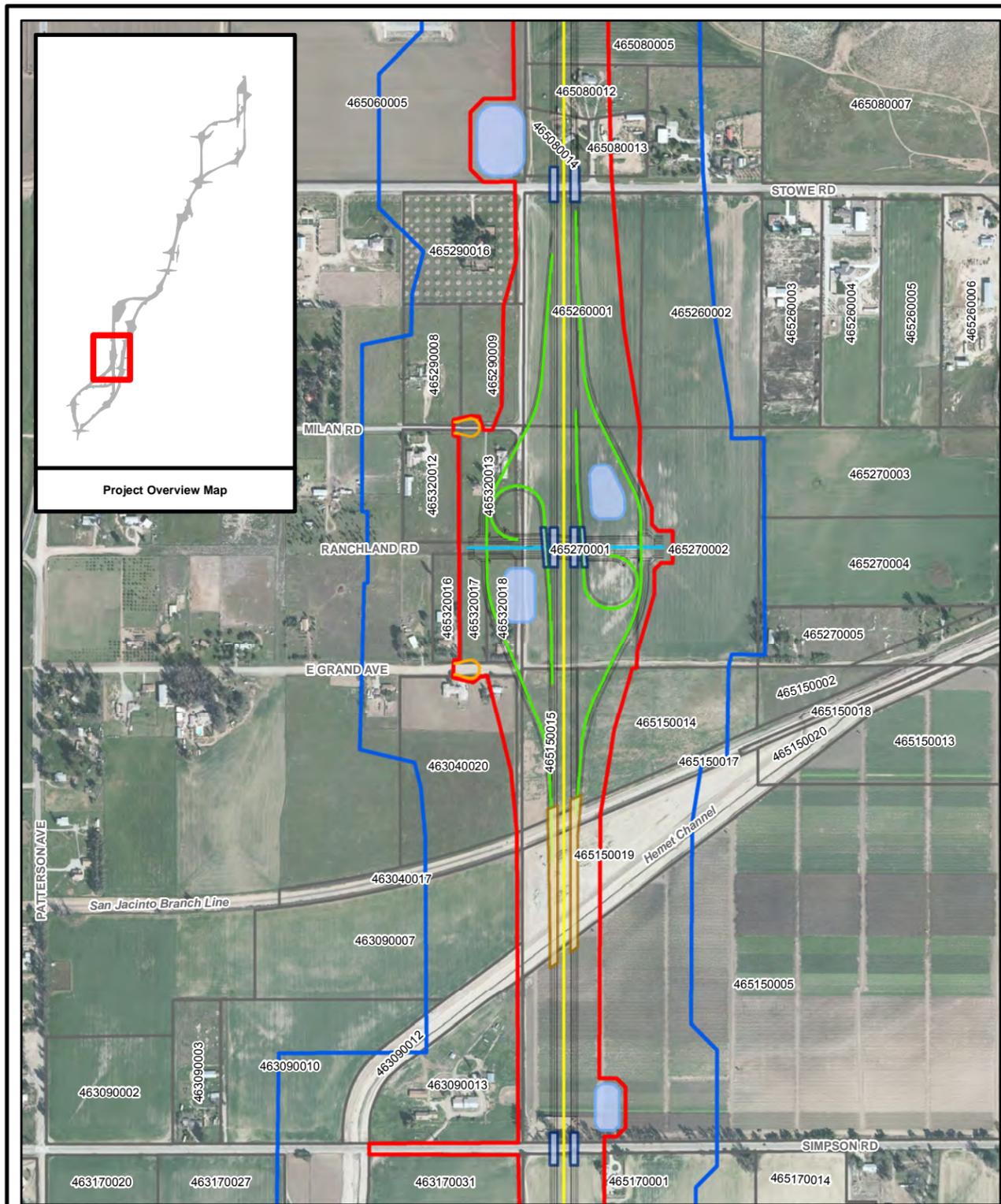
- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Project Impact Area
- Study Area
- County Assessor's Parcel<sup>CR</sup>
- Bridge over Local Street
- Bridge over Local Street and Other Feature
- Bridge over Other Feature
- Bridge over SR79
- Best Management Practices (BMPs)



1:9,600  
Source: CR - County of Riverside

**Figure 2.2-8a 2 of 2  
Roadway Segment C  
Design Option 1b1  
20-Year Design Horizon**

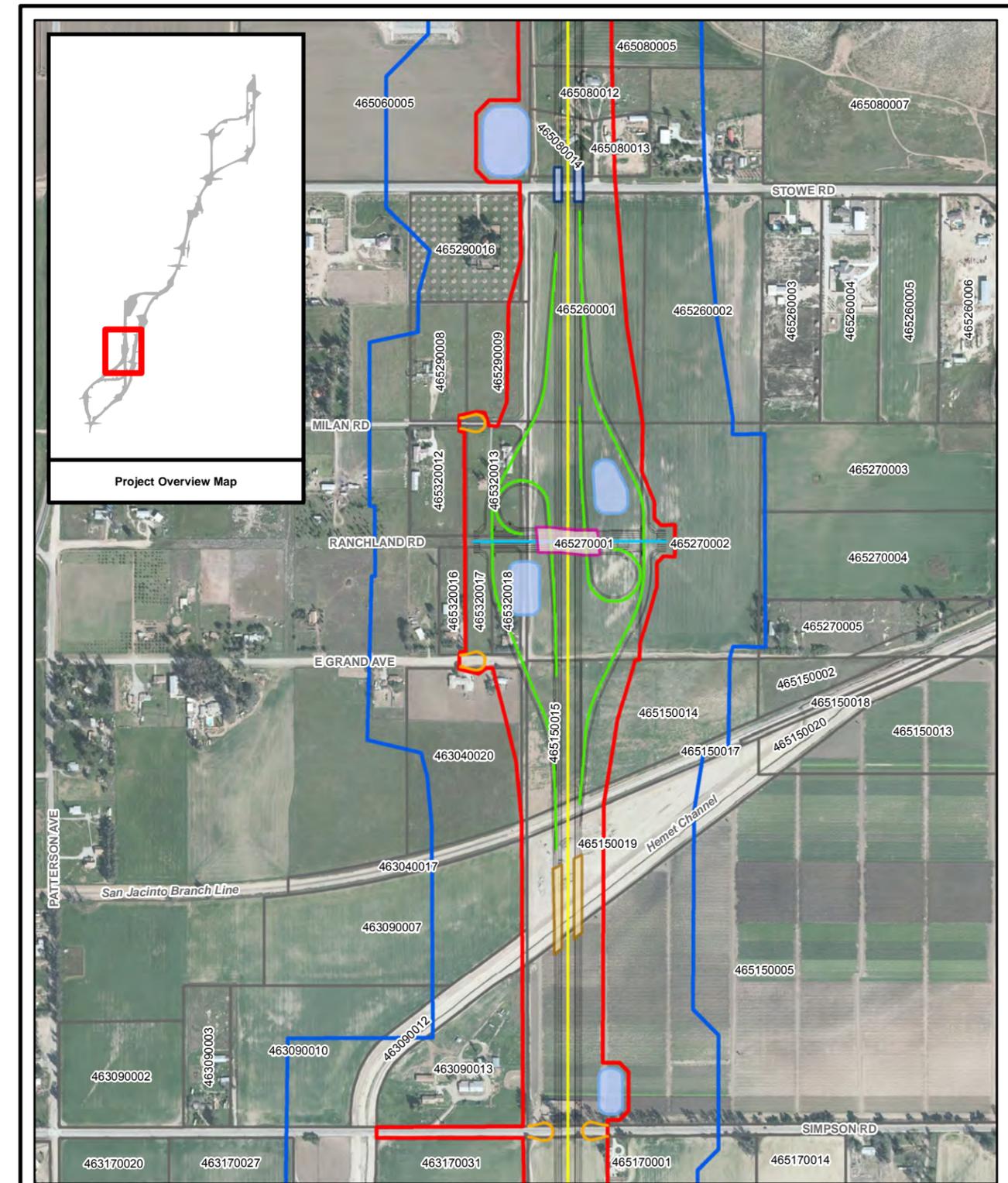
Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project



Aerial Date: February 2011, Aero-Graphics, Inc

<b>LEGEND</b>	Study Area	Best Management Practices (BMPs)
Project Roadway	County Assessor's Parcel <sup>CR</sup>	North
Grade-Separated Interchange (Ramps)	Bridge over Local Street	0 200 800 Feet
Local Cross Street	Bridge over Local Street and Other Feature	0 200 Meters
Cul-de-Sac	Bridge over Other Feature	1:9,600
Local Road	Bridge over SR79	Source: CR - County of Riverside
Project Impact Area		

**Figure 2.2-8b 1 of 2**  
**Roadway Segment C**  
**Base Condition**  
**Build Alternative 1b**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
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 State Route 79 Realignment Project

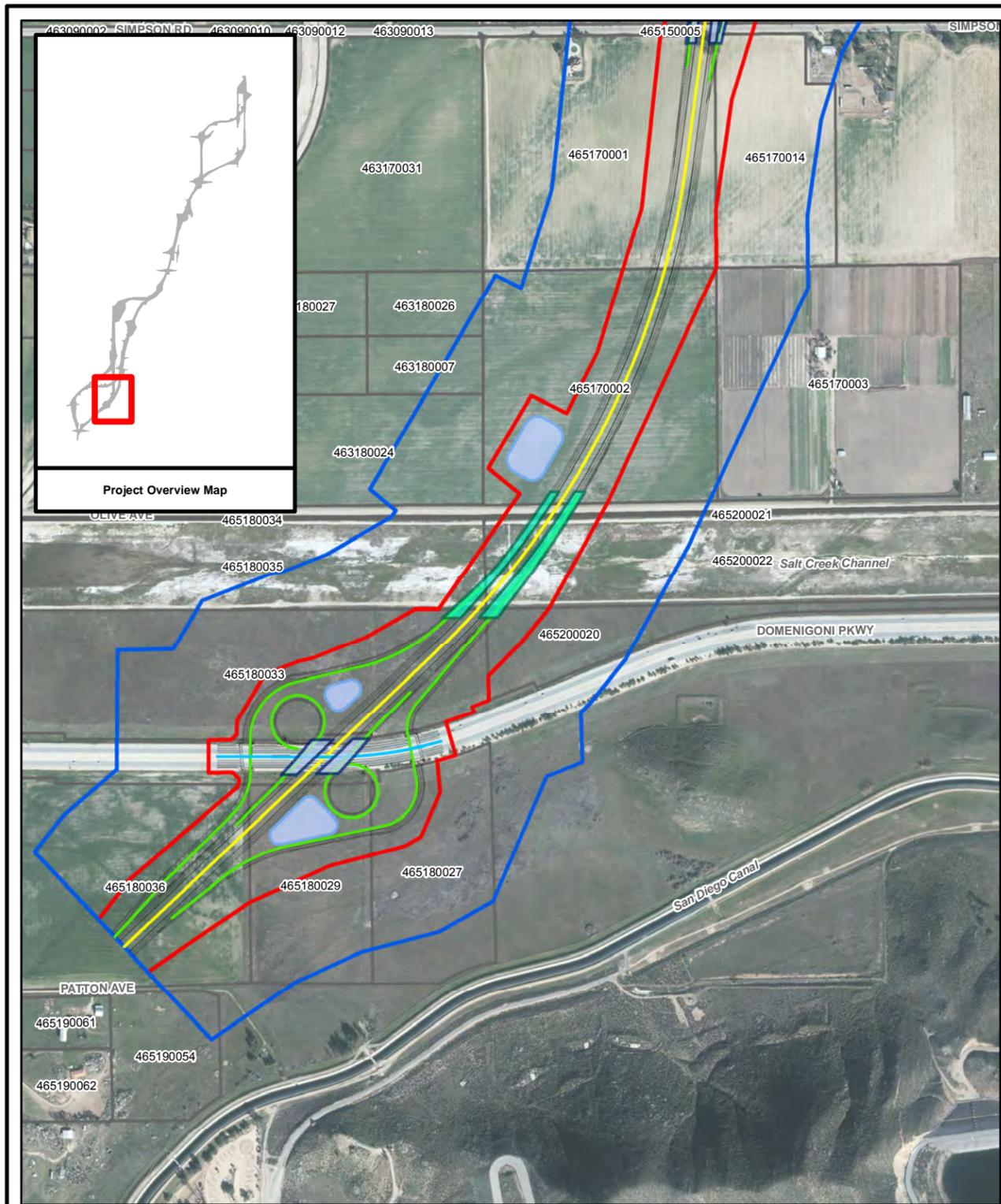


Aerial Date: February 2011, Aero-Graphics, Inc

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<b>LEGEND</b>	Study Area	Best Management Practices (BMPs)
Project Roadway	County Assessor's Parcel <sup>CR</sup>	North
Grade-Separated Interchange (Ramps)	Bridge over Local Street	0 200 800 Feet
Local Cross Street	Bridge over Local Street and Other Feature	0 200 Meters
Cul-de-Sac	Bridge over Other Feature	1:9,600
Local Road	Bridge over SR79	Source: CR - County of Riverside
Project Impact Area		

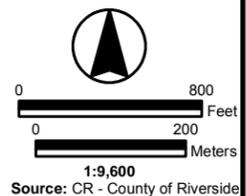
**Figure 2.2-8b 2 of 2**  
**Roadway Segment C**  
**Design Option 1b1**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



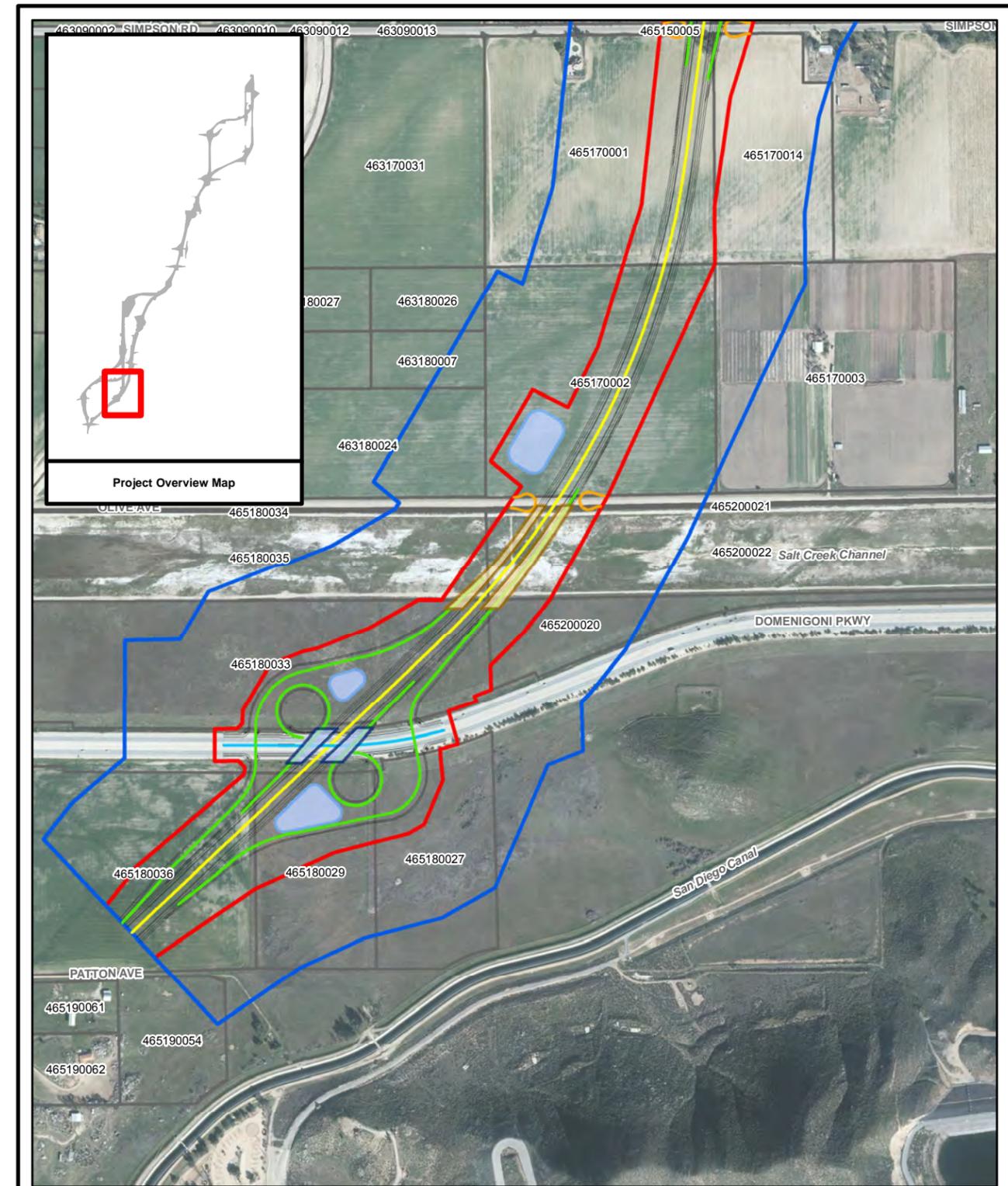
Aerial Date: February 2011, Aero-Graphics, Inc

**LEGEND**

- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Project Impact Area
- Study Area
- County Assessor's Parcel<sup>CR</sup>
- Bridge over Local Street
- Bridge over Local Street and Other Feature
- Bridge over Other Feature
- Bridge over SR 79
- Best Management Practices (BMPs)



**Figure 2.2-9a 1 of 2**  
**Roadway Segment D**  
**Base Condition**  
**Build Alternative 2b**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
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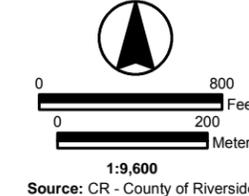


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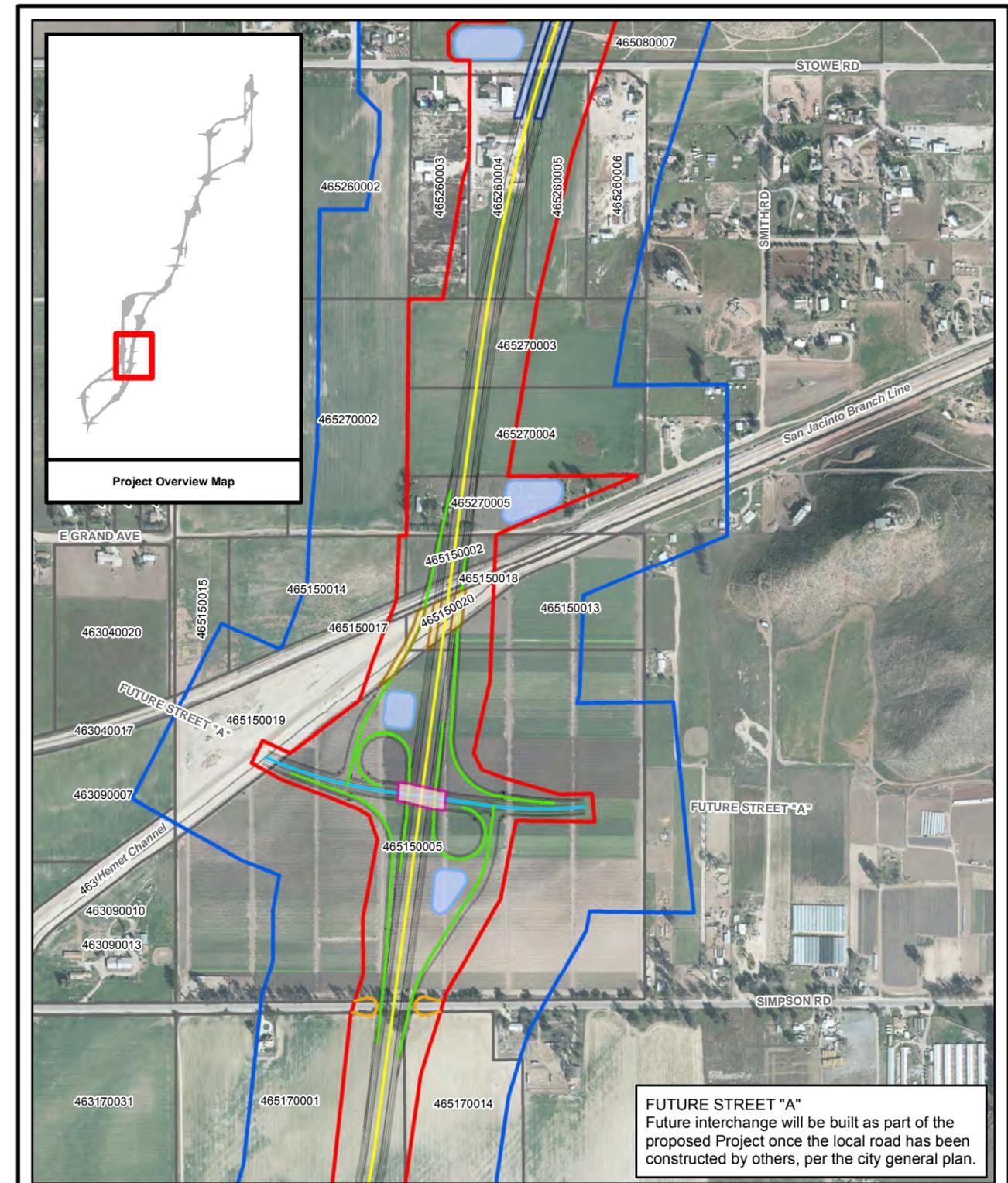
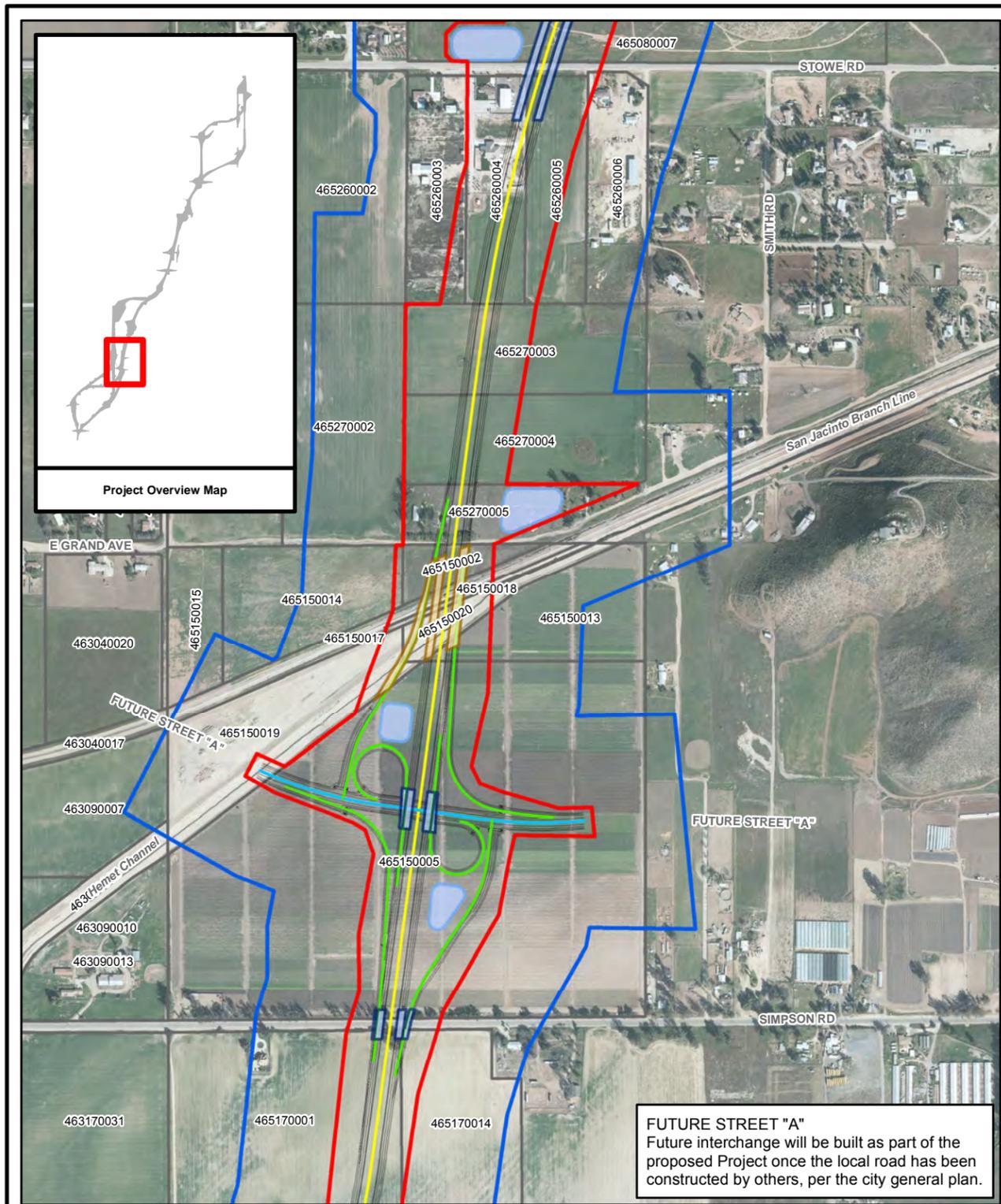
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**LEGEND**

- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Project Impact Area
- Study Area
- County Assessor's Parcel<sup>CR</sup>
- Bridge over Local Street
- Bridge over Local Street and Other Feature
- Bridge over Other Feature
- Bridge over SR 79
- Best Management Practices (BMPs)



**Figure 2.2-9a 2 of 2**  
**Roadway Segment D**  
**Design Option 2b1**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
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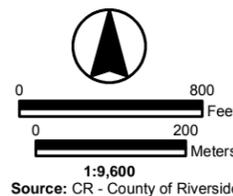
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Aerial Date: February 2011, Aero-Graphics, Inc

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**LEGEND**

- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Project Impact Area
- Study Area
- County Assessor's Parcel<sup>CR</sup>
- Bridge over Local Street
- Bridge over Local Street and Other Feature
- Bridge over Other Feature
- Bridge over SR79
- Best Management Practices (BMPs)

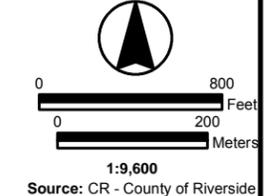


**Figure 2.2-9b 1 of 2  
Roadway Segment D  
Base Condition  
Build Alternative 2b  
20-Year Design Horizon**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

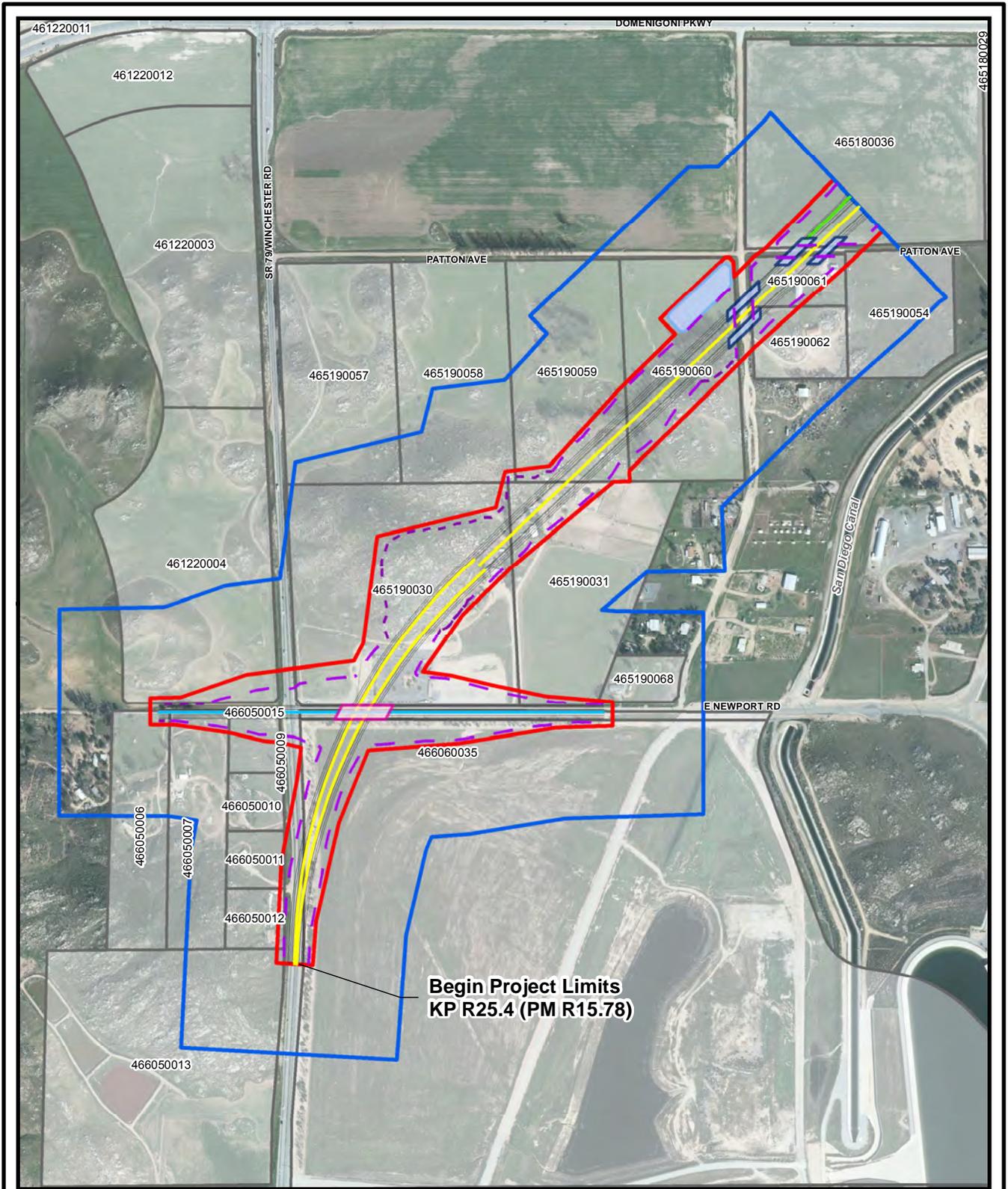
**LEGEND**

- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Project Impact Area
- Study Area
- County Assessor's Parcel<sup>CR</sup>
- Bridge over Local Street
- Bridge over Local Street and Other Feature
- Bridge over Other Feature
- Bridge over SR79
- Best Management Practices (BMPs)



**Figure 2.2-9b 2 of 2  
Roadway Segment D  
Design Option 2b1  
20-Year Design Horizon**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project



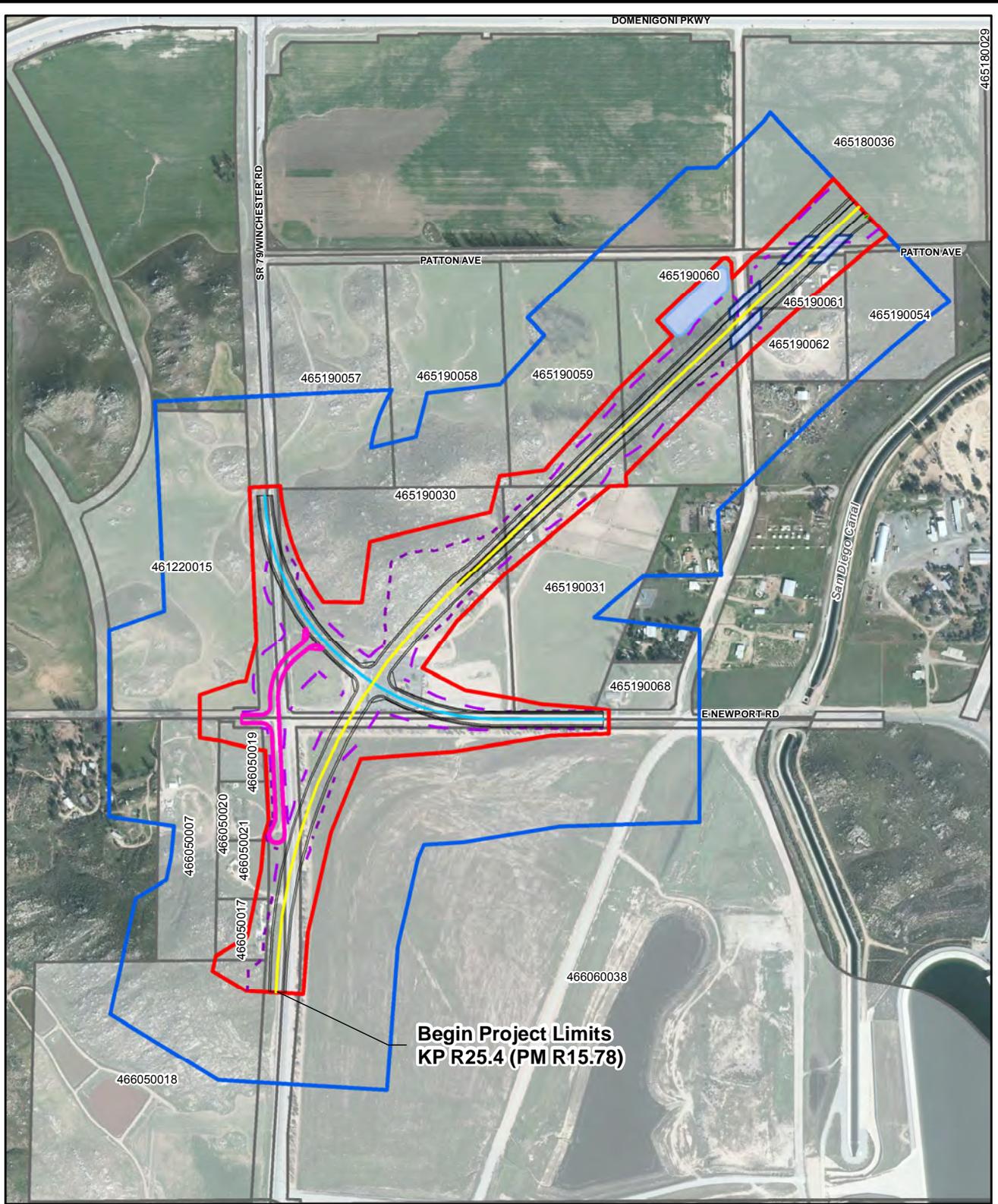
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**LEGEND**

- |                                     |  |  |
|-------------------------------------|--|--|
| Project Roadway                     | Project Impact Area                        | County Assessor's Parcel <sup>CR</sup> |
| Grade-Separated Interchange (Ramps) | Study Area                                 | Best Management Practices (BMPs)       |
| Local Cross Street                  | Aqueduct Crossing                          |  |
| Cul-de-Sac                          | Bridge over Local Street                   |  |
| Local Road                          | Bridge over Local Street and Other Feature |  |
| Cut Line                            | Bridge over Other Feature                  |  |
| Fill Line                           | Bridge over SR 79                          | <b>1:9,600</b>                         |

Source: CR - County of Riverside

**Figure 2.2-10 1 of 2**  
**Roadway Segment B**  
**Build Alternative 1b**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
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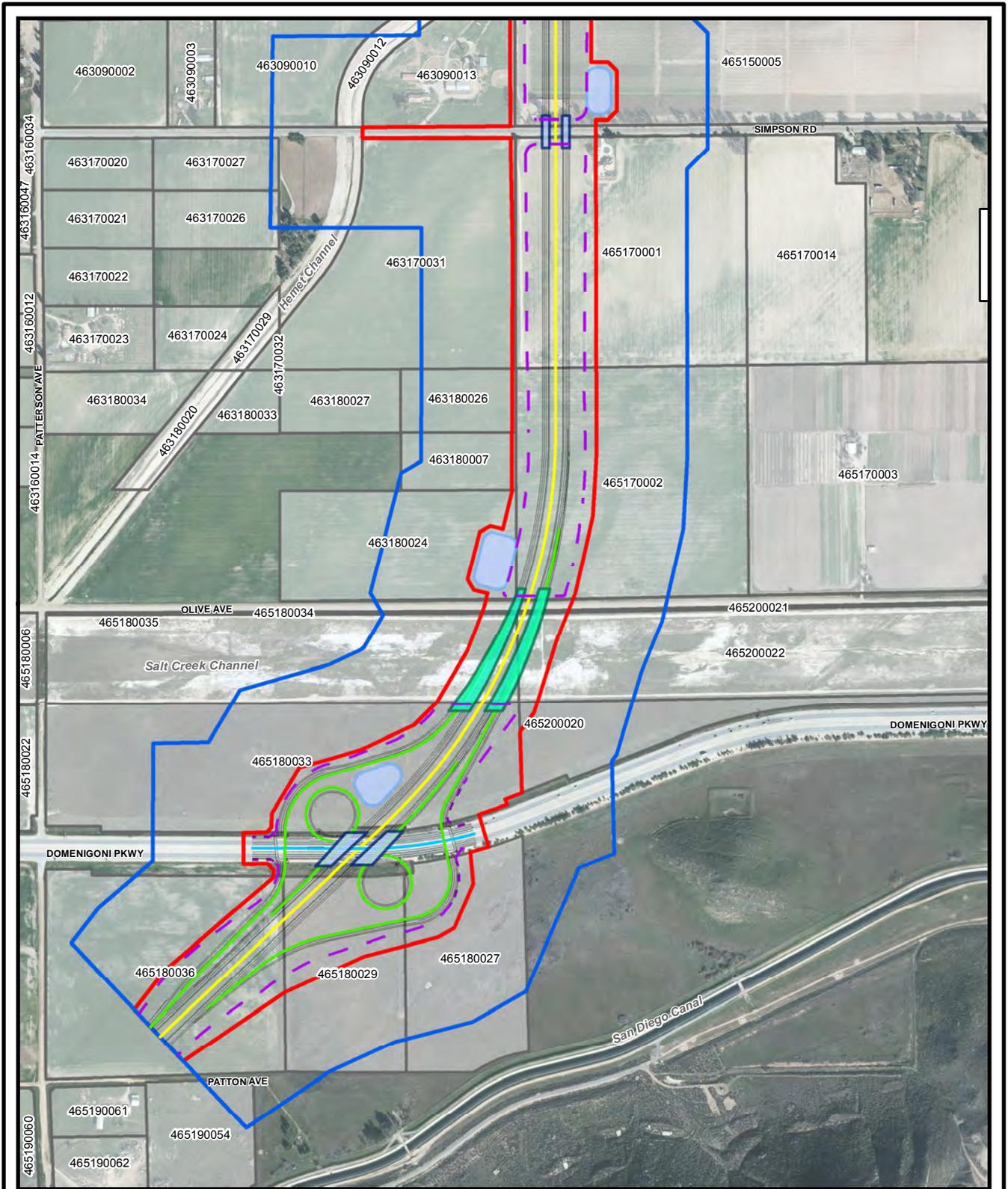
**LEGEND**

-  Project Roadway
-  Grade-Separated Interchange (Ramps)
-  Local Cross Street
-  Cul-de-Sac
-  Local Road
-  Cut Line
-  Fill Line
-  Project Impact Area
-  Project Study Area
-  Aqueduct Crossing

-  County Assessor's Parcel<sup>CR</sup>
-  Best Management Practices (BMPs)



**Figure 2.2-10 2 of 2**  
**Roadway Segment B**  
**Build Alternative 1br**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
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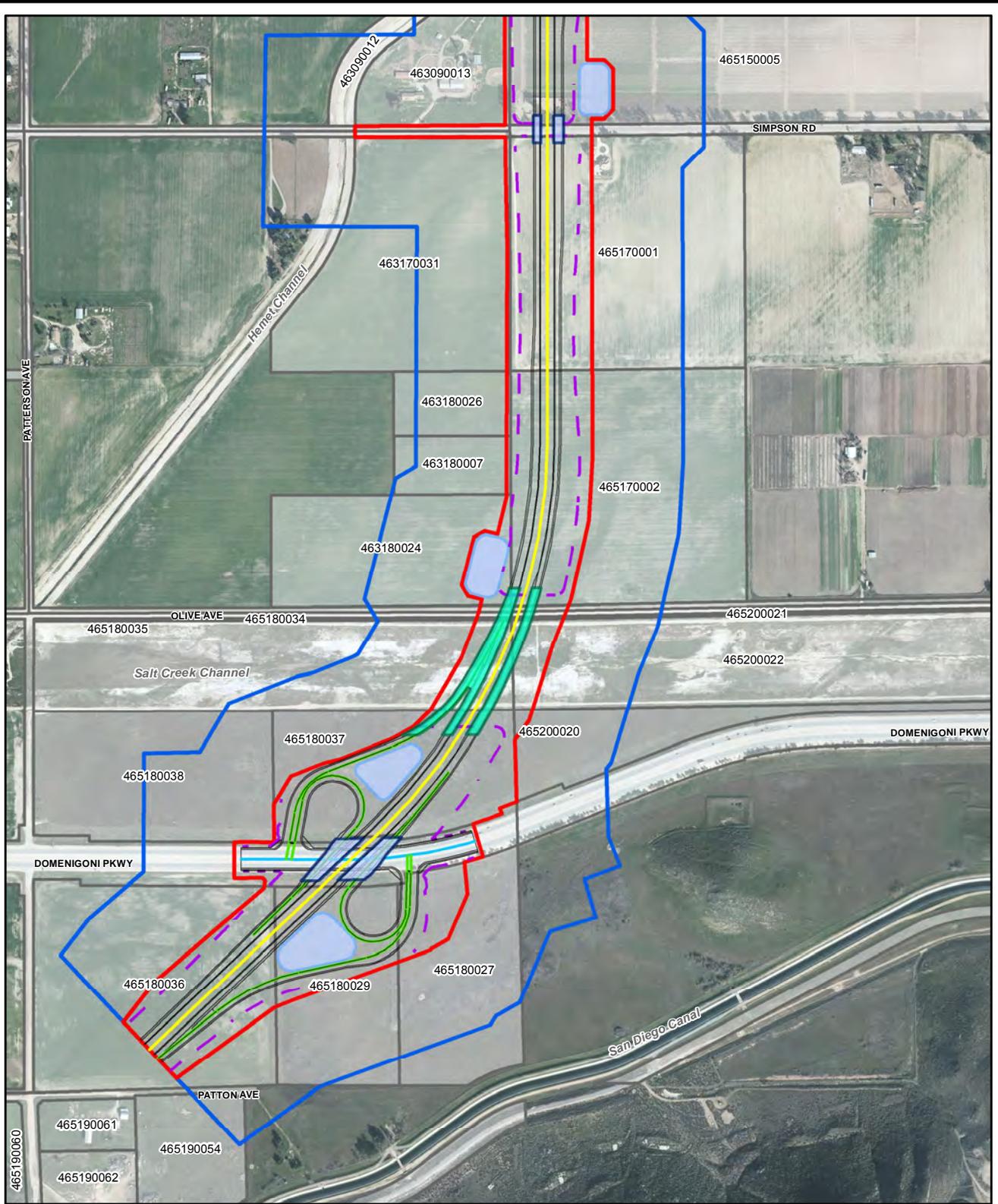


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**LEGEND**

- |                                     |  |  |
|-------------------------------------|--|--|
| Project Roadway                     | Project Impact Area                        | County Assessor's Parcel <sup>CR</sup> |
| Grade-Separated Interchange (Ramps) | Study Area                                 | Best Management Practices (BMPs)       |
| Local Cross Street                  | Aqueduct Crossing                          |  |
| Cul-de-Sac                          | Bridge over Local Street                   |  |
| Local Road                          | Bridge over Local Street and Other Feature |  |
| Cut Line                            | Bridge over Other Feature                  | <b>1:9,600</b>                         |
| Fill Line                           | Bridge over SR 79                          | Source: CR - County of Riverside       |

**Figure 2.2-11a 1 of 2**  
**Roadway Segment C**  
**Build Alternative 1b**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
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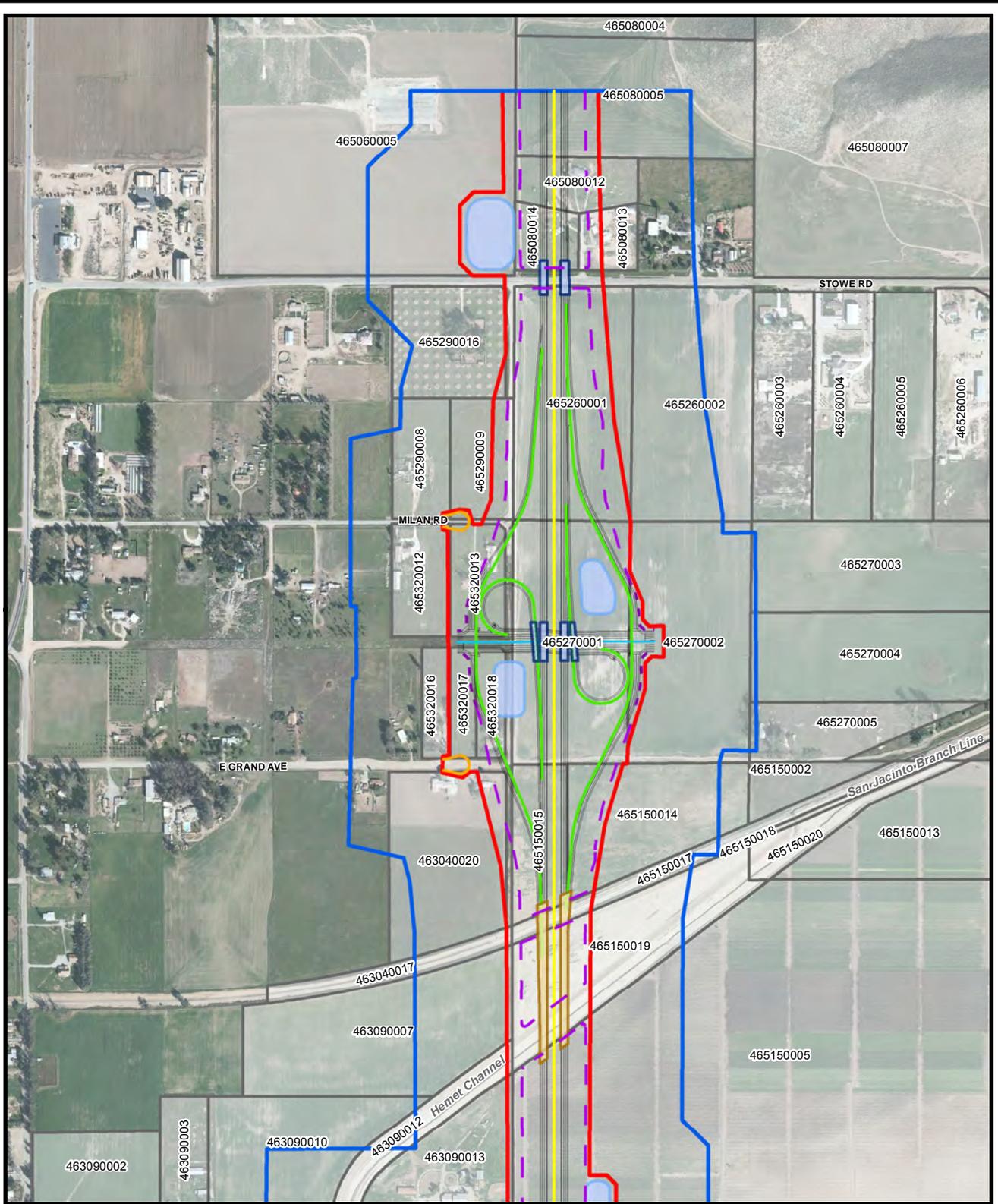


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**LEGEND**

- |                                     |                     |  |
|-------------------------------------|---------------------|--|
| Project Roadway                     | Project Impact Area | County Assessor's Parcel <sup>CR</sup> |
| Grade-Separated Interchange (Ramps) | Project Study Area  | Best Management Practices (BMPs)       |
| Local Cross Street                  | Aqueduct Crossing   |  |
| Cul-de-Sac                          |                     |  |
| Local Road                          |                     |  |
| Cut Line                            |                     | 1:9,600                                |
| Fill Line                           |                     |  |

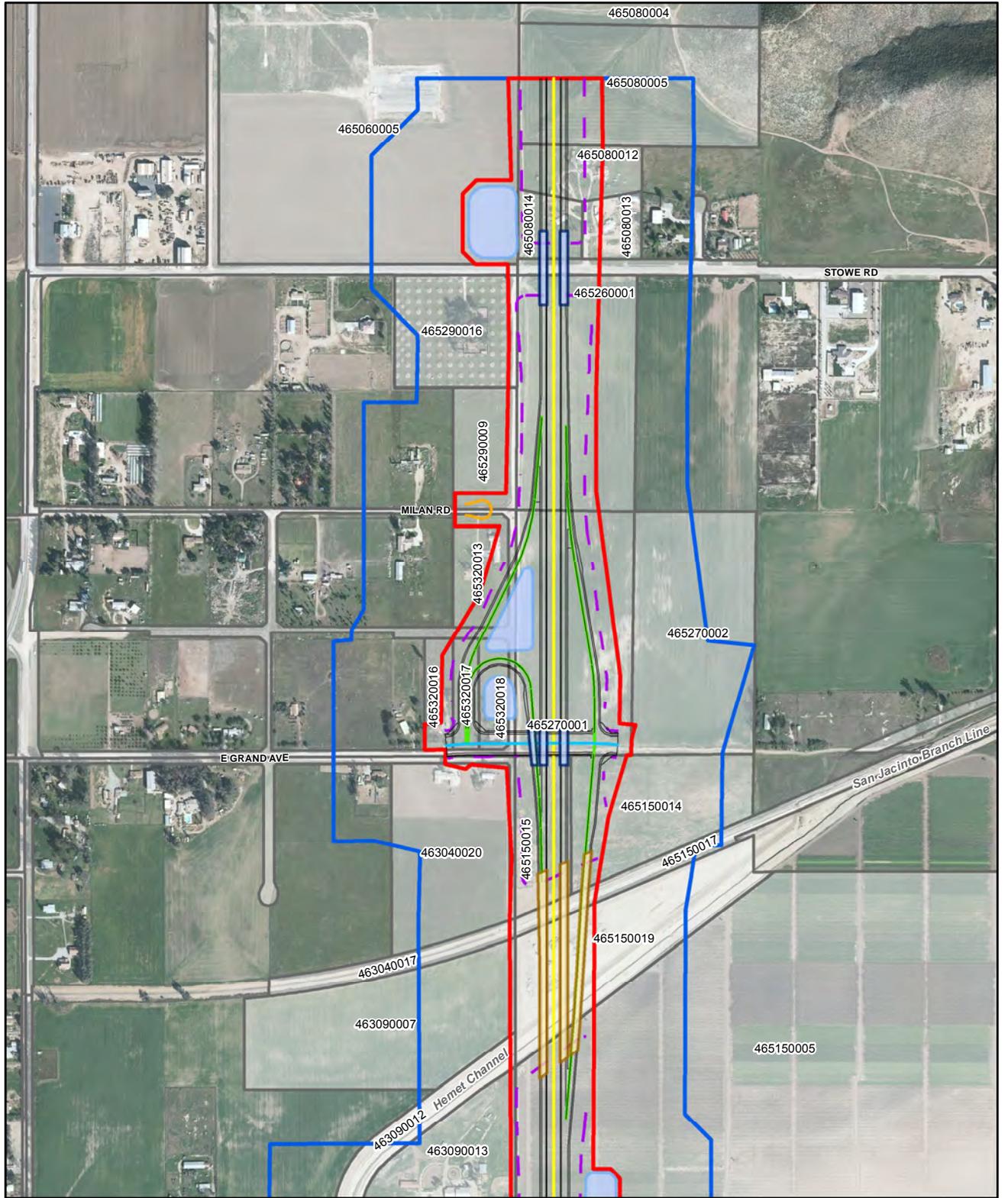
**Figure 2.2-11a 2 of 2**  
**Roadway Segment C**  
**Build Alternative 1br**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
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<b>LEGEND</b>	Project Impact Area	County Assessor's Parcel <sup>CR</sup>
Project Roadway	Study Area	Best Management Practices (BMPs)
Grade-Separated Interchange (Ramps)	Aqueduct Crossing	
Local Cross Street	Bridge over Local Street	
Cul-de-Sac	Bridge over Local Street and Other Feature	
Local Road	Bridge over Other Feature	<b>1:9,600</b>
Cut Line	Bridge over SR 79	<b>Source: CR - County of Riverside</b>
Fill Line		

**Figure 2.2-11b 1 of 2**  
**Roadway Segment C**  
**Build Alternative 1b**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



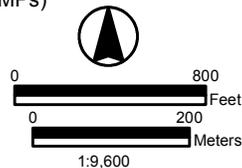
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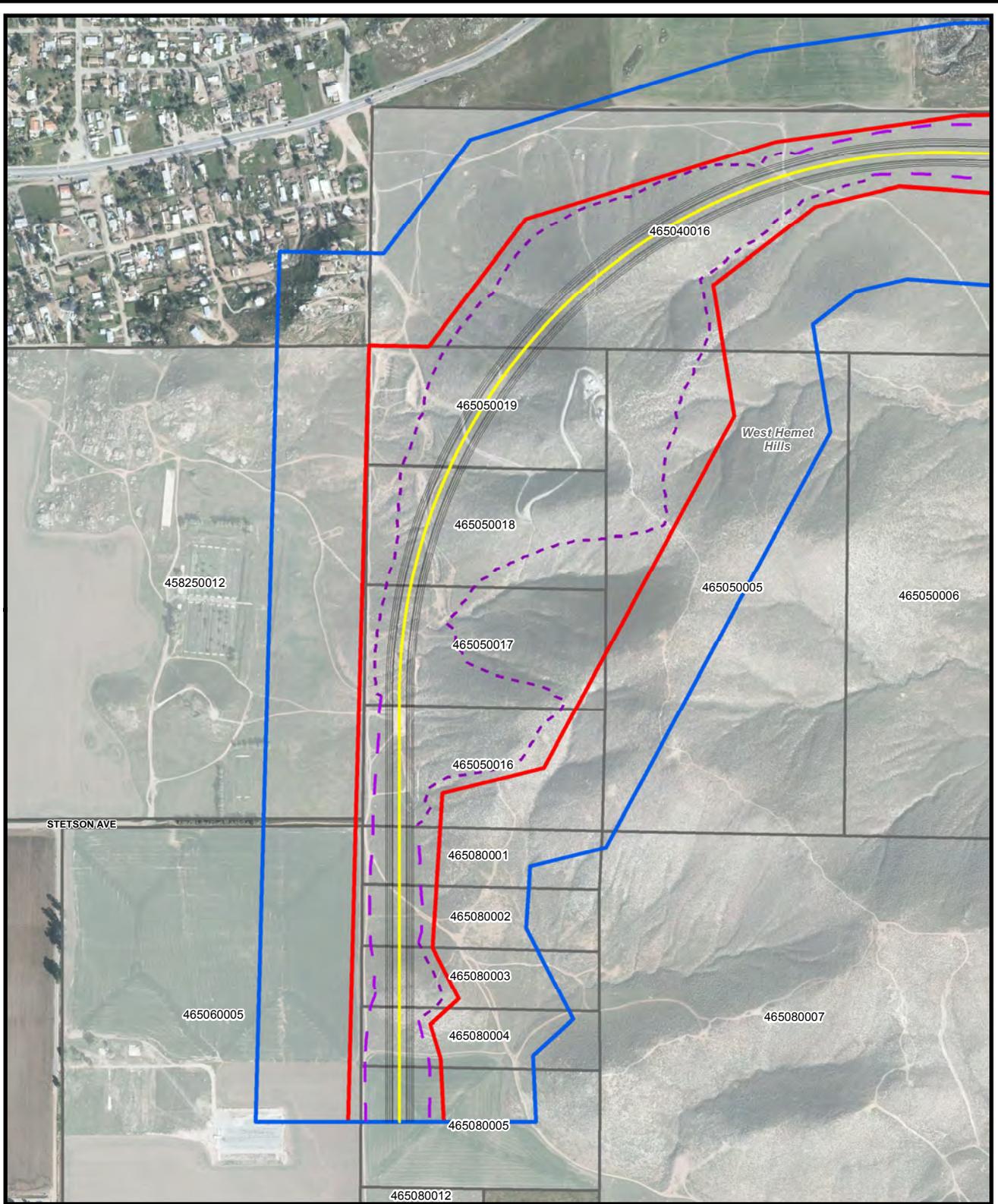
**LEGEND**

- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Cut Line
- Fill Line
- Project Impact Area
- Project Study Area
- Aqueduct Crossing

- County Assessor's Parcel<sup>CR</sup>
- Best Management Practices (BMPs)



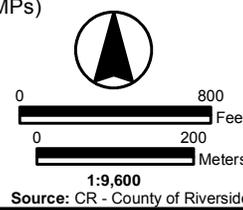
**Figure 2.2-11b 2 of 2**  
**Roadway Segment C**  
**Build Alternative 1br**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



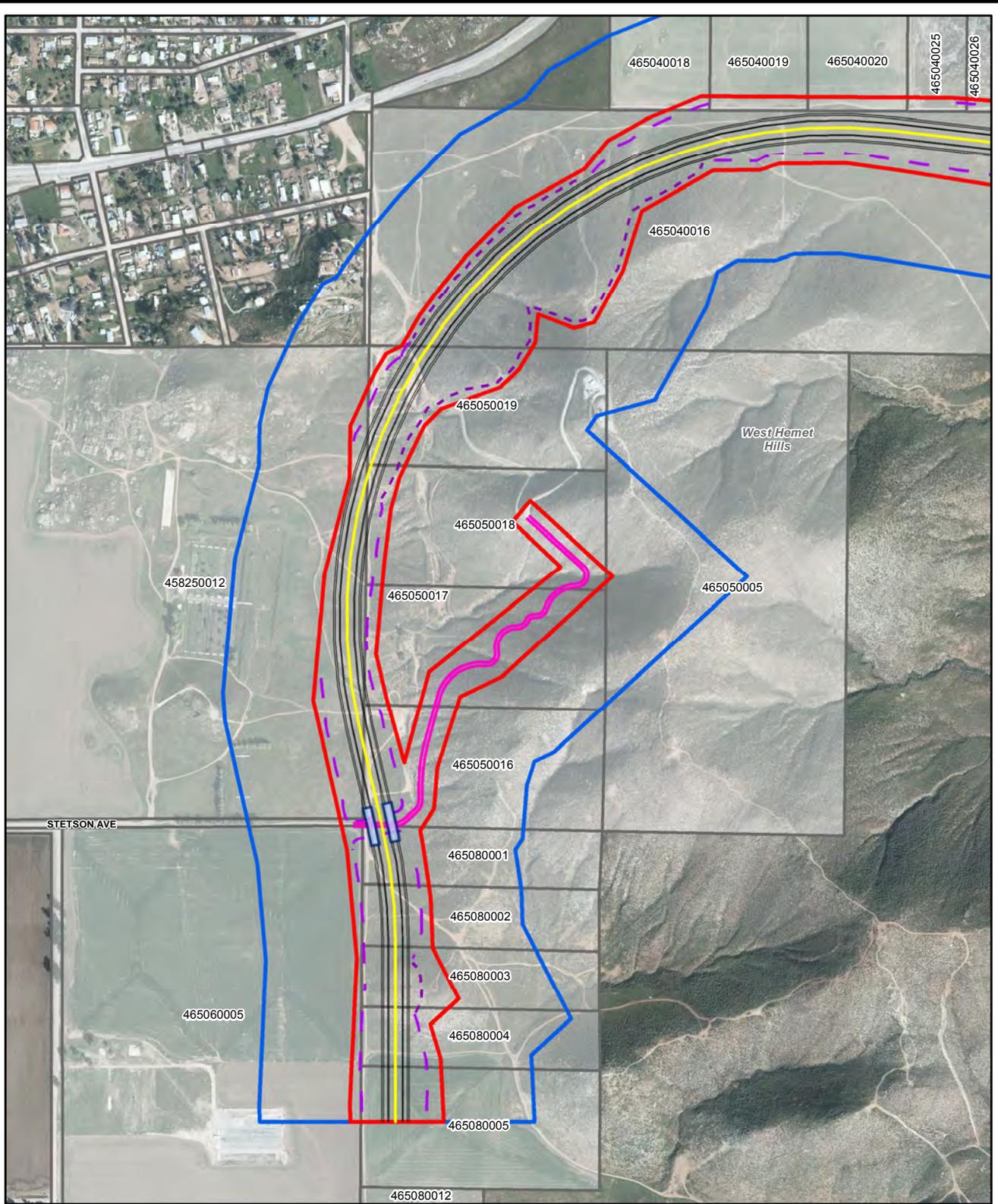
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**LEGEND**

- |                                     |  |  |
|-------------------------------------|--|--|
| Project Roadway                     | Project Impact Area                        | County Assessor's Parcel <sup>CR</sup> |
| Grade-Separated Interchange (Ramps) | Study Area                                 | Best Management Practices (BMPs)       |
| Local Cross Street                  | Aqueduct Crossing                          | Bridge over Local Street               |
| Cul-de-Sac                          | Bridge over Local Street and Other Feature | Bridge over Other Feature              |
| Local Road                          | Bridge over SR 79                          |  |
| Cut Line                            |  |  |
| Fill Line                           |  |  |



**Figure 2.2-12a 1 of 2**  
**Roadway Segment G**  
**Build Alternative 1b**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
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**LEGEND**

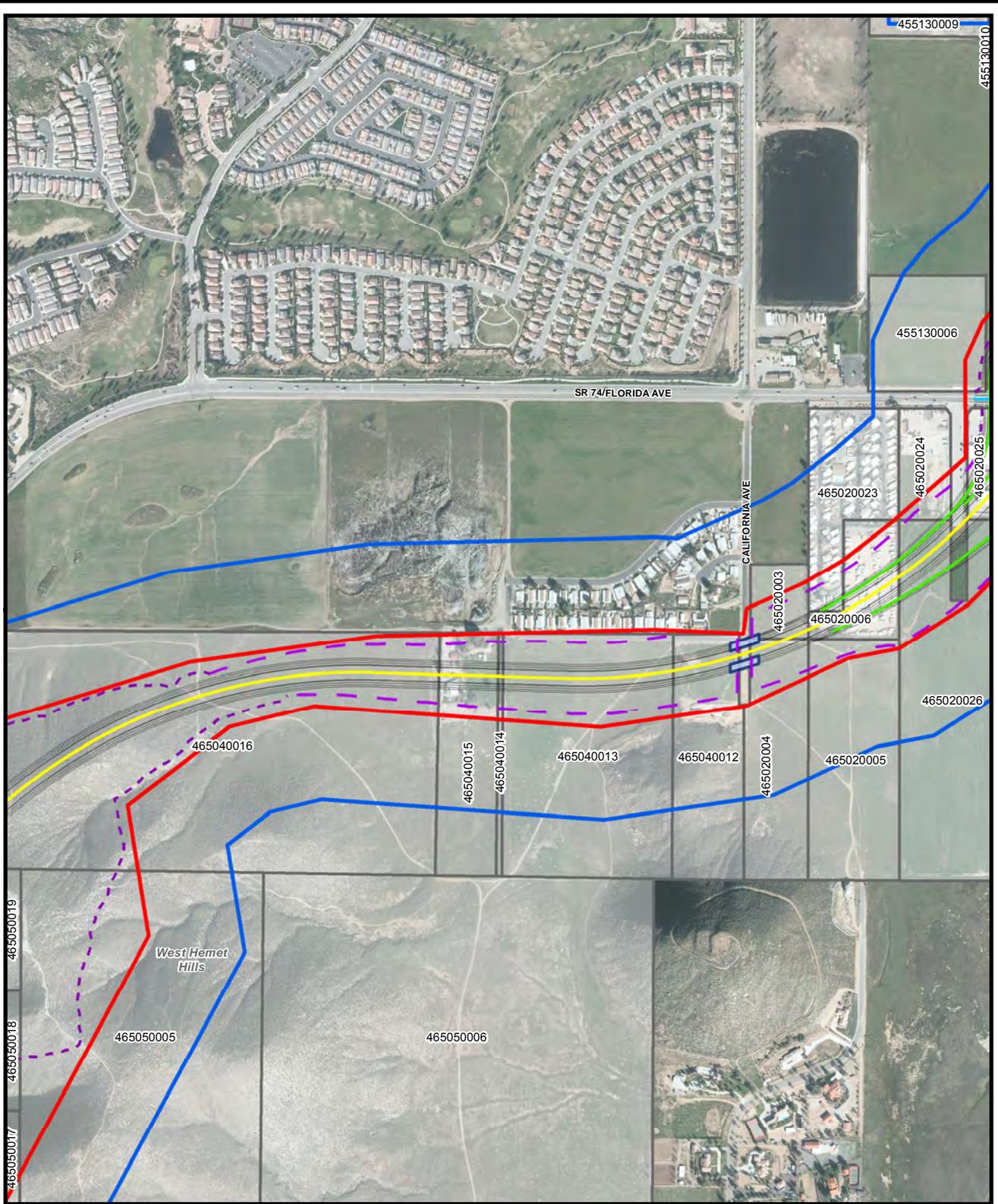
- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Cut Line
- Fill Line
- Project Impact Area
- Project Study Area
- Aqueduct Crossing

County Assessor's Parcel<sup>CR</sup>

Best Management Practices (BMPs)

1:9,600

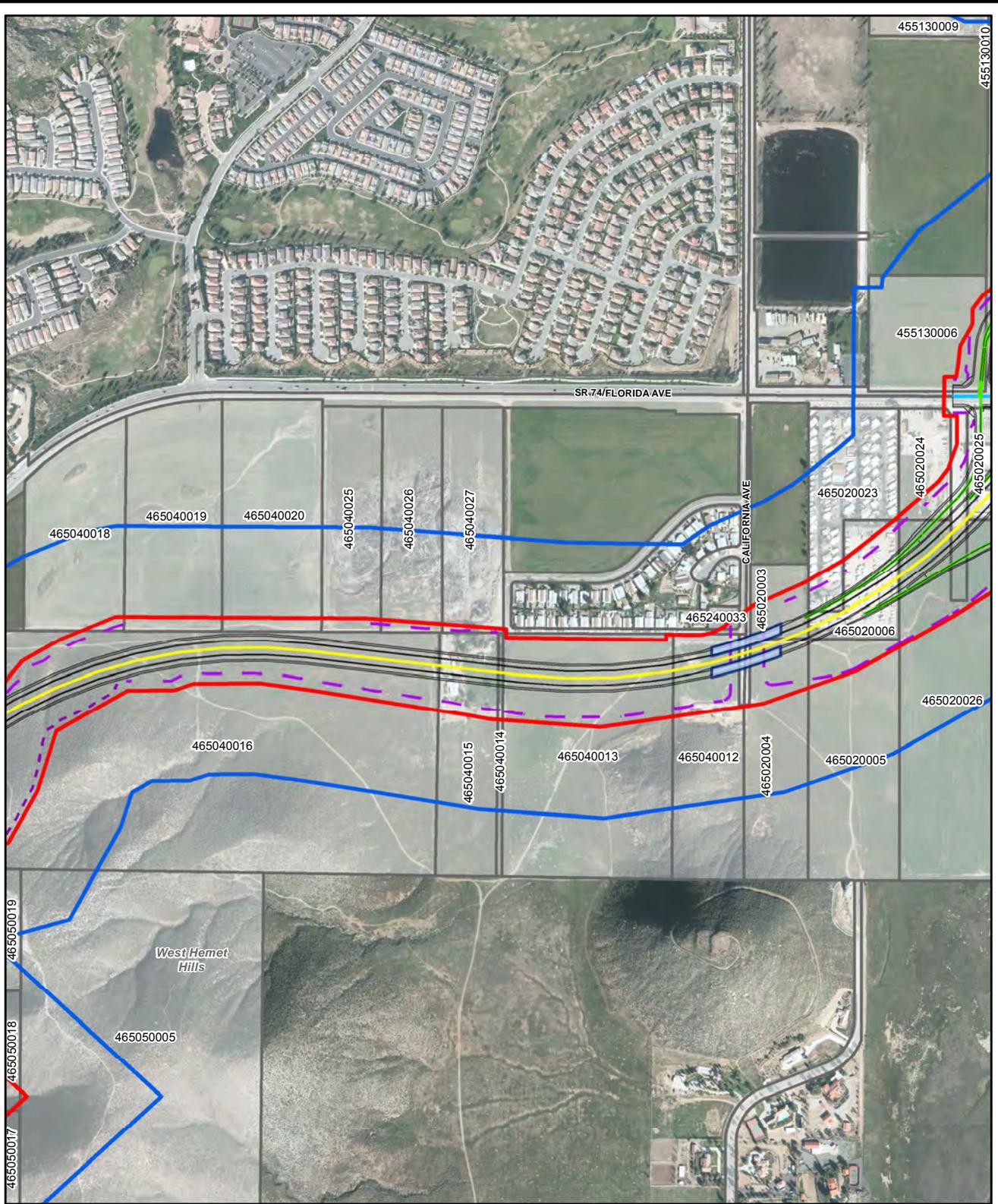
**Figure 2.2-12a 2 of 2**  
**Roadway Segment G**  
**Build Alternative 1br**  
**20-Year Design Horizon**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project



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<b>LEGEND</b>	Project Impact Area	County Assessor's Parcel <sup>CR</sup>
Project Roadway	Study Area	Best Management Practices (BMPs)
Grade-Separated Interchange (Ramps)	Aqueduct Crossing	
Local Cross Street	Bridge over Local Street	
Cul-de-Sac	Bridge over Local Street and Other Feature	
Local Road	Bridge over Other Feature	
Cut Line	Bridge over SR 79	<b>1:9,600</b>
Fill Line		Source: CR - County of Riverside

**Figure 2.2-12b 1 of 2**  
**Roadway Segment G**  
**Build Alternative 1b**  
**20-Year Design Horizon**  
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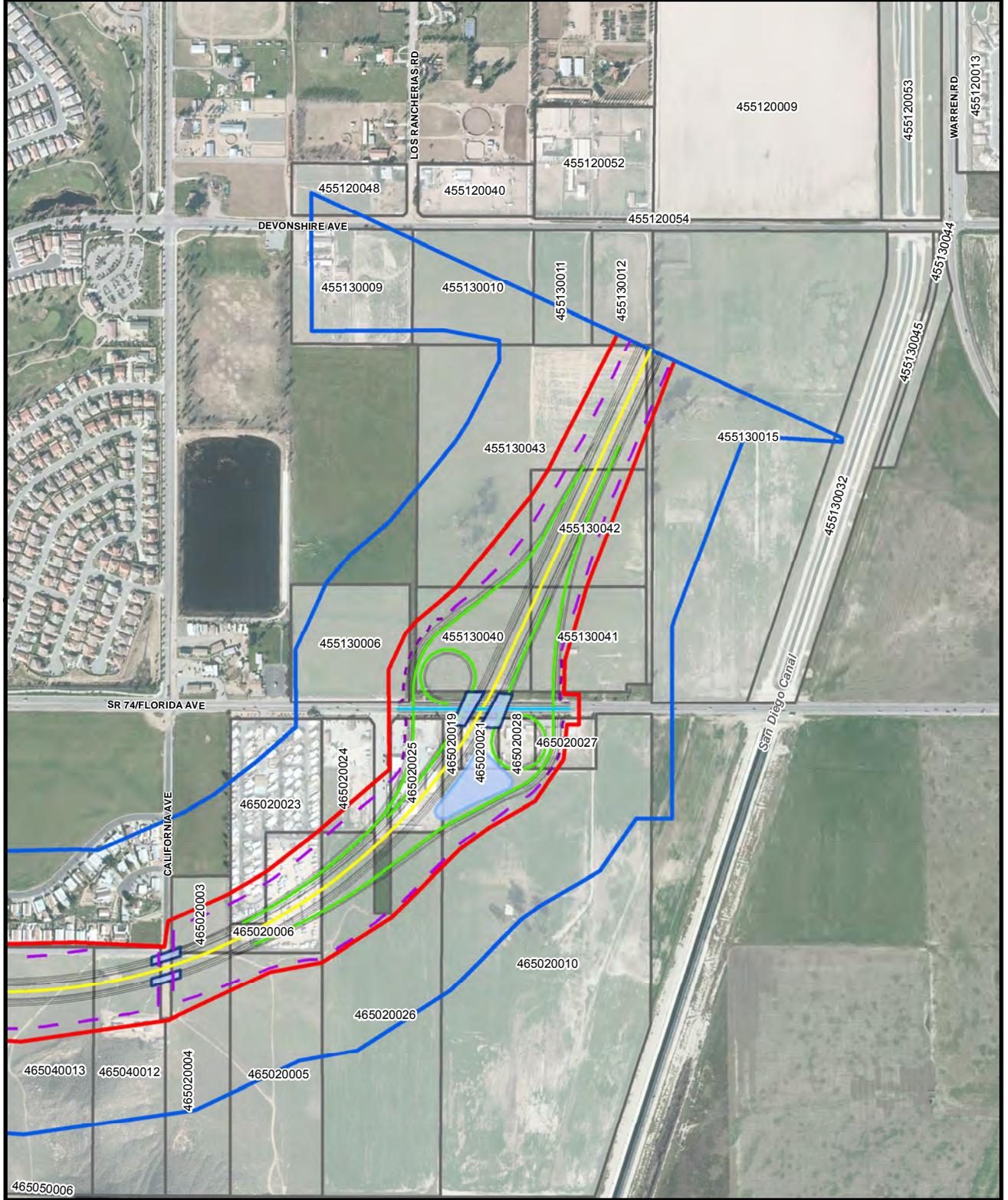


Aerial Date: February 2011, Aero-Grphics, Inc \\GALT\PROJ\RCTC\171146\2016\MAPFILES\EIS\BMP\_COMP1BR\_MB\_A.MXD BMP\_COMP1BR\_MB\_A.PDF 07/19/2016

**LEGEND**

- |                                     |                     |  |
|-------------------------------------|---------------------|--|
| Project Roadway                     | Project Impact Area | County Assessor's Parcel <sup>CR</sup> |
| Grade-Separated Interchange (Ramps) | Project Study Area  | Best Management Practices (BMPs)       |
| Local Cross Street                  | Aqueduct Crossing   |  |
| Cul-de-Sac                          | Cut Line            |  |
| Local Road                          | Fill Line           |  |
|                                     |                     | 1:9,600                                |

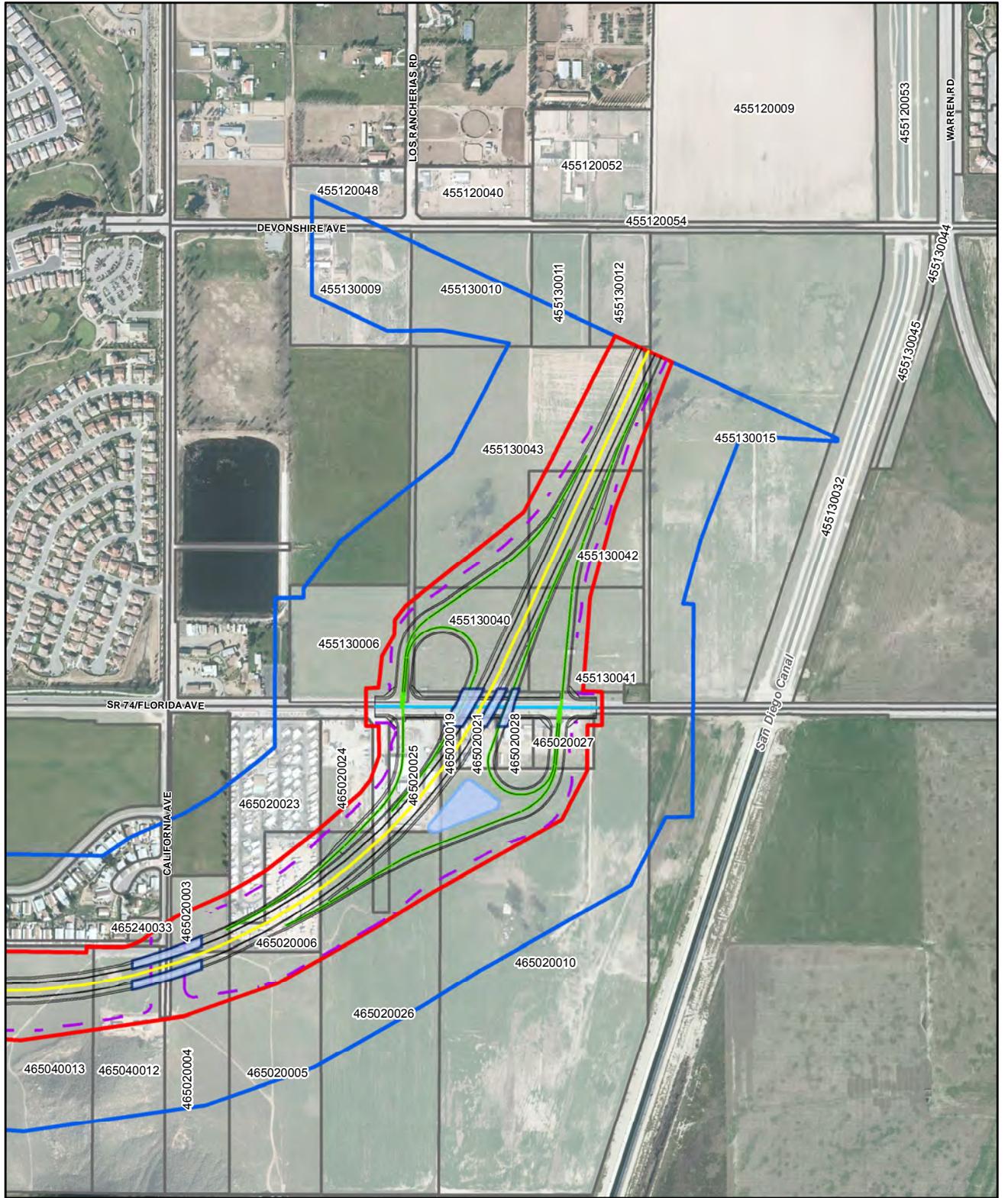
**Figure 2.2-12b 2 of 2**  
**Roadway Segment G**  
**Build Alternative 1br**  
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<b>LEGEND</b>	Project Impact Area	County Assessor's Parcel <sup>CR</sup>
Project Roadway	Study Area	Best Management Practices (BMPs)
Grade-Separated Interchange (Ramps)	Aqueduct Crossing	
Local Cross Street	Bridge over Local Street	
Cul-de-Sac	Bridge over Local Street and Other Feature	
Local Road	Bridge over Other Feature	
Cut Line	Bridge over SR 79	<b>1:9,600</b>
Fill Line		Source: CR - County of Riverside

**Figure 2.2-12c 1 of 2**  
**Roadway Segment G**  
**Build Alternative 1b**  
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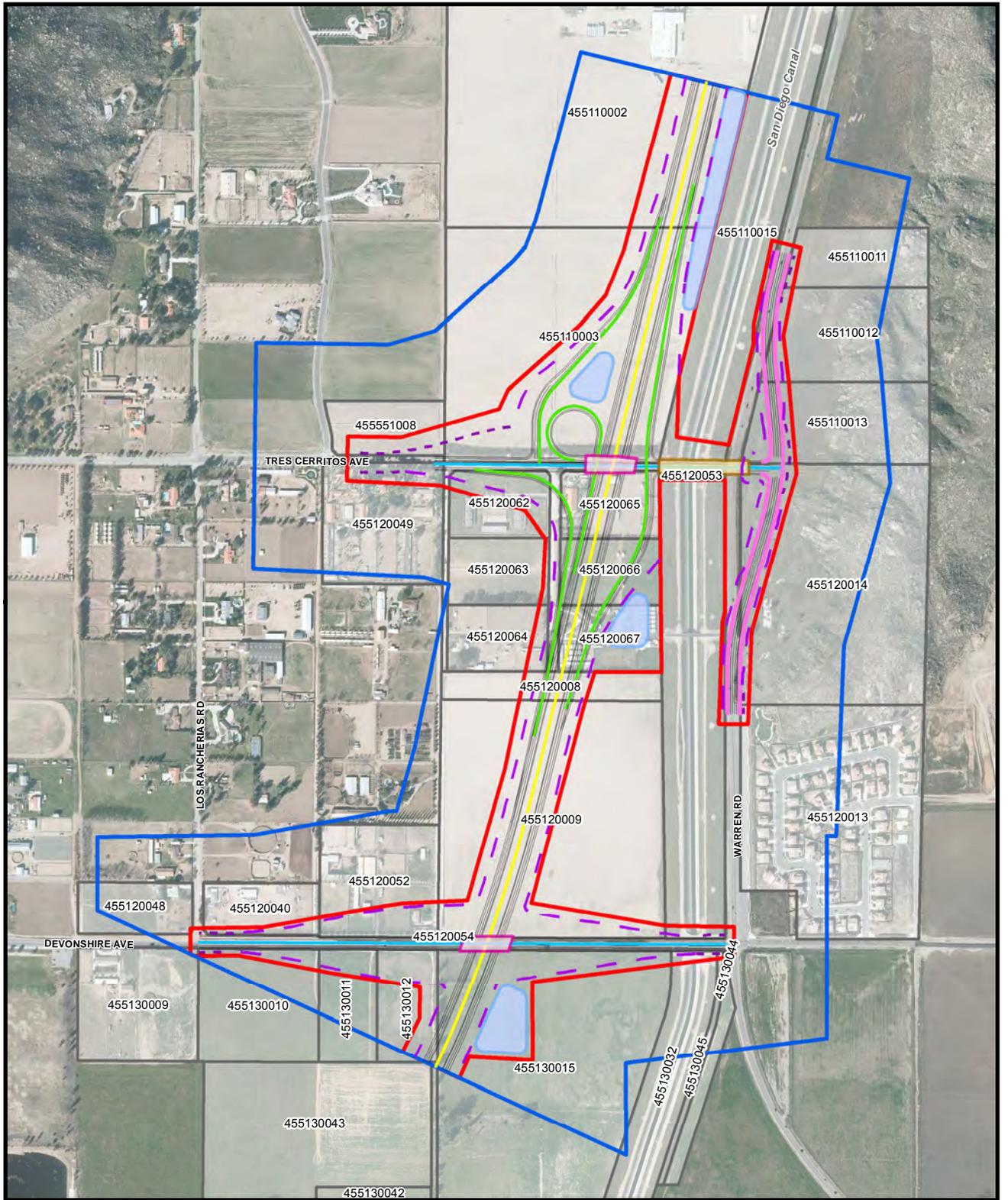
**LEGEND**

- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Cut Line
- Fill Line
- Project Impact Area
- Project Study Area
- Aqueduct Crossing

- County Assessor's Parcel<sup>CR</sup>
- Best Management Practices (BMPs)

1:9,600

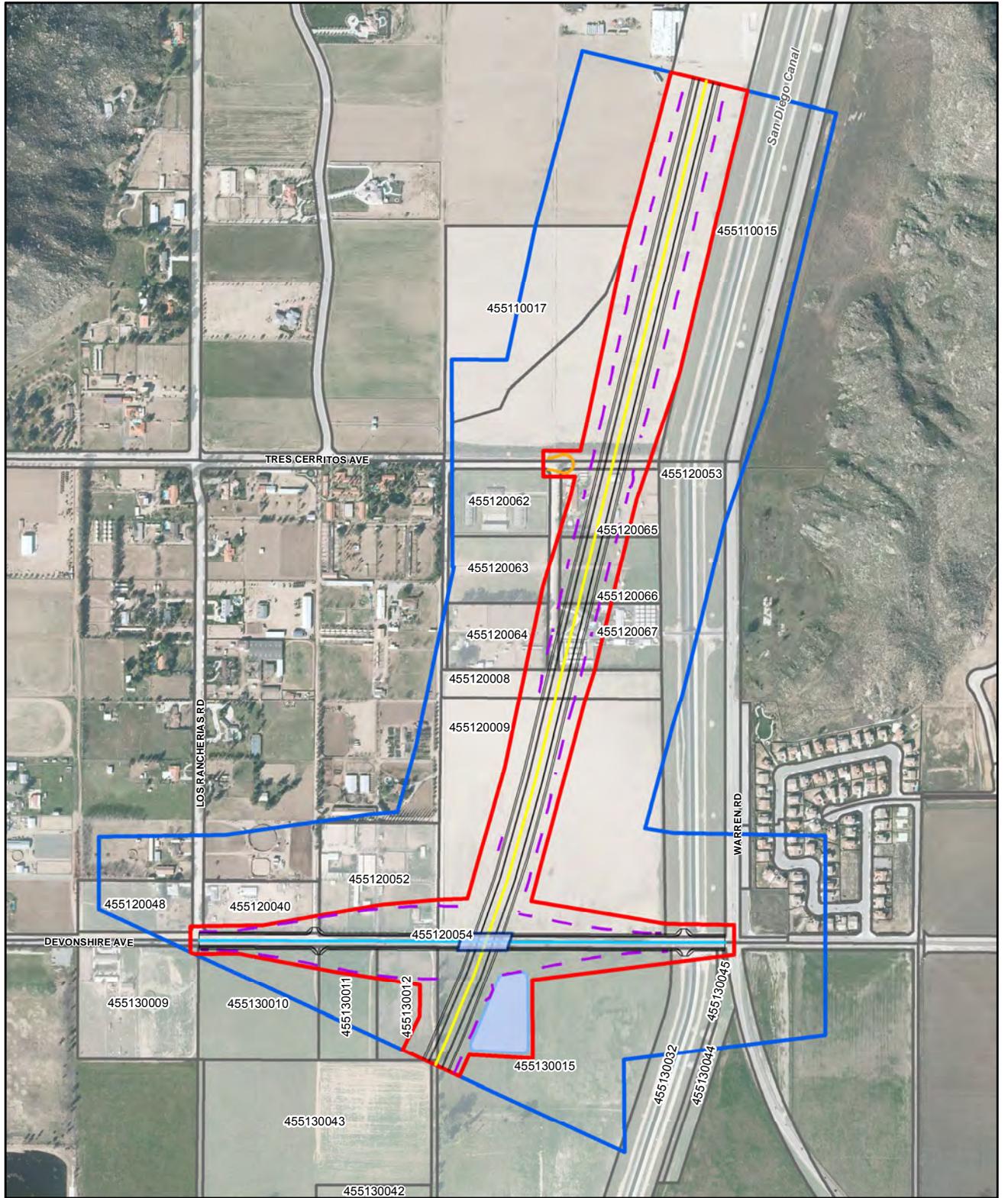
**Figure 2.2-12c 2 of 2**  
**Roadway Segment G**  
**Build Alternative 1br**  
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<b>LEGEND</b>	Project Impact Area	County Assessor's Parcel <sup>CR</sup>
Project Roadway	Study Area	Best Management Practices (BMPs)
Grade-Separated Interchange (Ramps)	Aqueduct Crossing	
Local Cross Street	Bridge over Local Street	
Cul-de-Sac	Bridge over Local Street and Other Feature	
Local Road	Bridge over Other Feature	
Cut Line	Bridge over SR 79	<b>1:9,600</b>
Fill Line		Source: CR - County of Riverside

**Figure 2.2-13 1 of 2**  
**Roadway Segment 1b**  
**Build Alternative 1b**  
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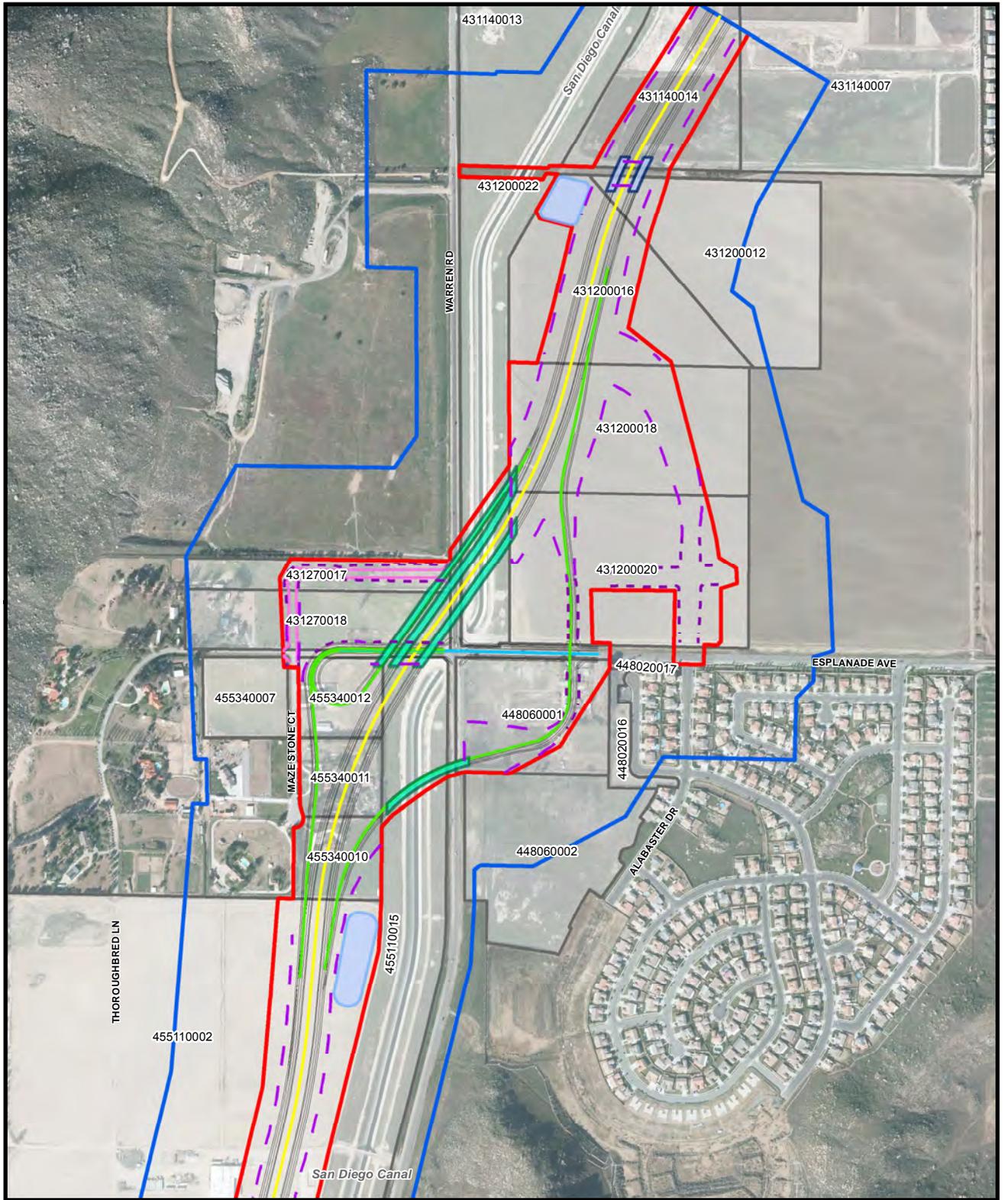
**LEGEND**

-  Project Roadway
-  Grade-Separated Interchange (Ramps)
-  Local Cross Street
-  Cul-de-Sac
-  Local Road
-  Cut Line
-  Fill Line
-  Project Impact Area
-  Project Study Area
-  Aqueduct Crossing

-  County Assessor's Parcel<sup>CR</sup>
-  Best Management Practices (BMPs)



**Figure 2.2-13 2 of 2**  
**Roadway Segment I**  
**Build Alternative 1br**  
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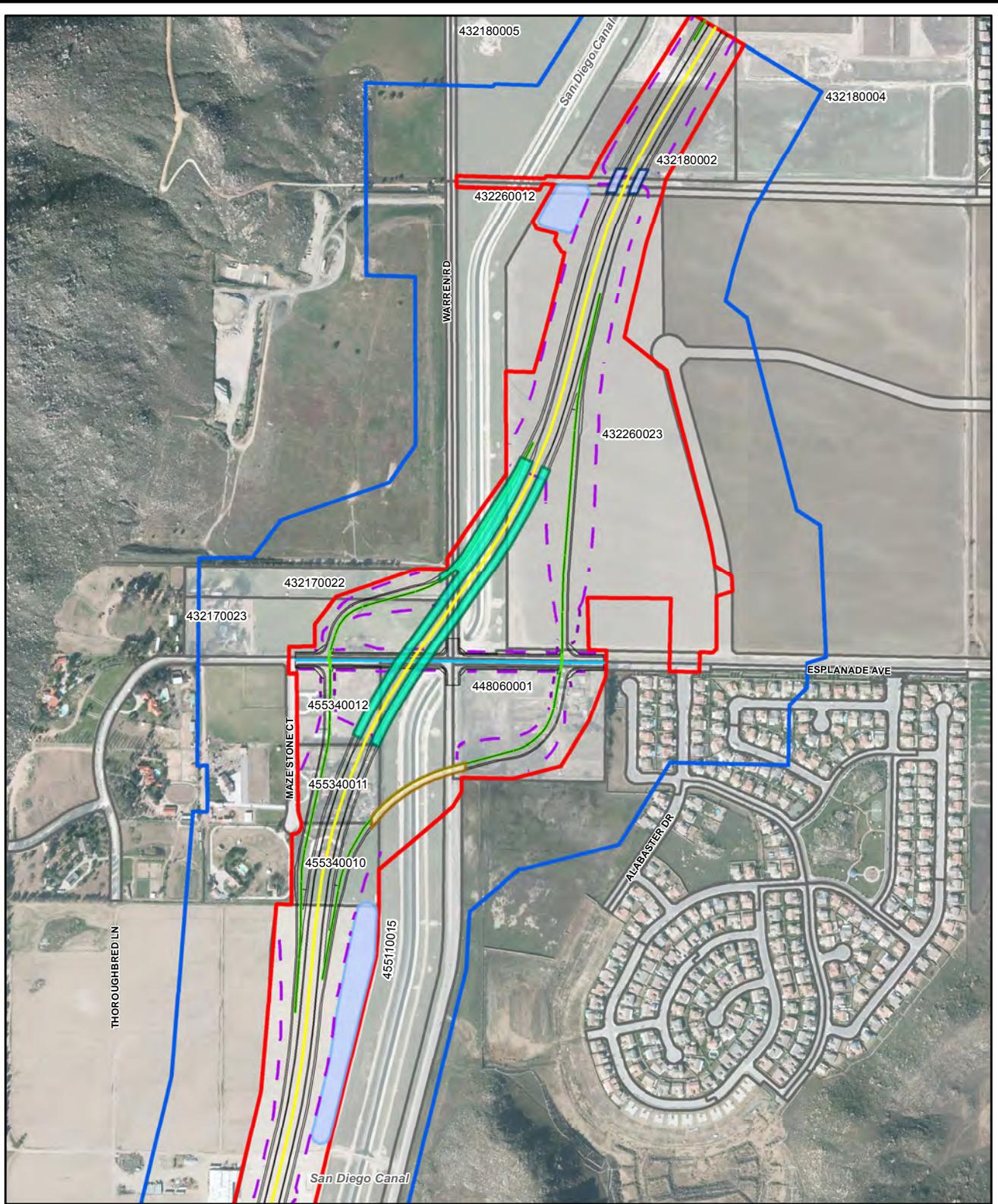
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**LEGEND**

- |                                     |  |  |
|-------------------------------------|--|--|
| Project Roadway                     | Project Impact Area                        | County Assessor's Parcel <sup>CR</sup> |
| Grade-Separated Interchange (Ramps) | Study Area                                 | Best Management Practices (BMPs)       |
| Local Cross Street                  | Aqueduct Crossing                          |  |
| Cul-de-Sac                          | Bridge over Local Street                   |  |
| Local Road                          | Bridge over Local Street and Other Feature |  |
| Cut Line                            | Bridge over Other Feature                  |  |
| Fill Line                           | Bridge over SR 79                          | <b>1:9,600</b>                         |

**Figure 2.2-14 1 of 2**  
**Roadway Segment J**  
**Build Alternative 1b**  
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Source: CR - County of Riverside



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**LEGEND**

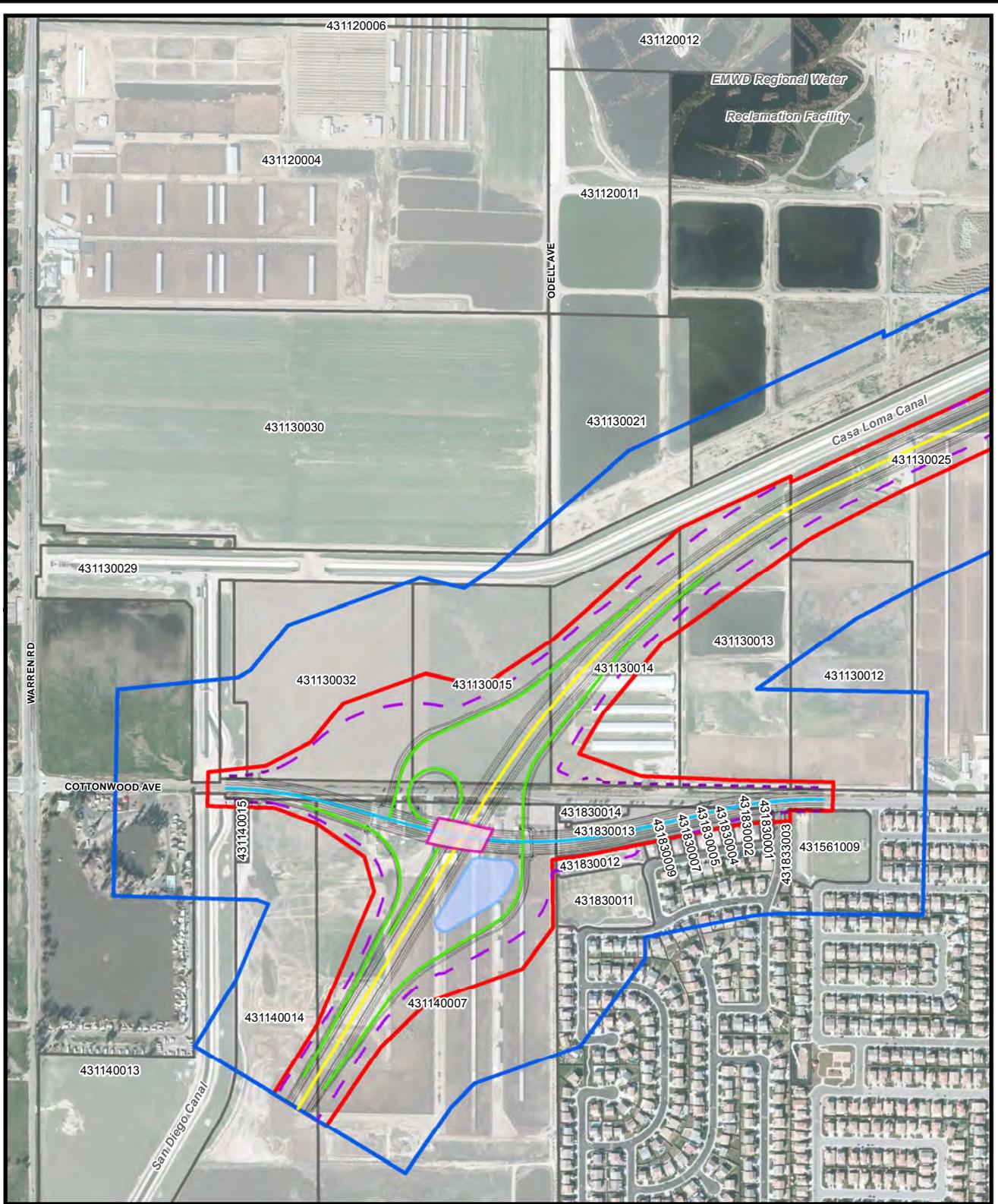
-  Project Roadway
-  Grade-Separated Interchange (Ramps)
-  Local Cross Street
-  Cul-de-Sac
-  Local Road
-  Cut Line
-  Fill Line
-  Project Impact Area
-  Project Study Area
-  Aqueduct Crossing

 County Assessor's Parcel<sup>CR</sup>

 Best Management Practices (BMPs)

  
  
  
 1:9,600

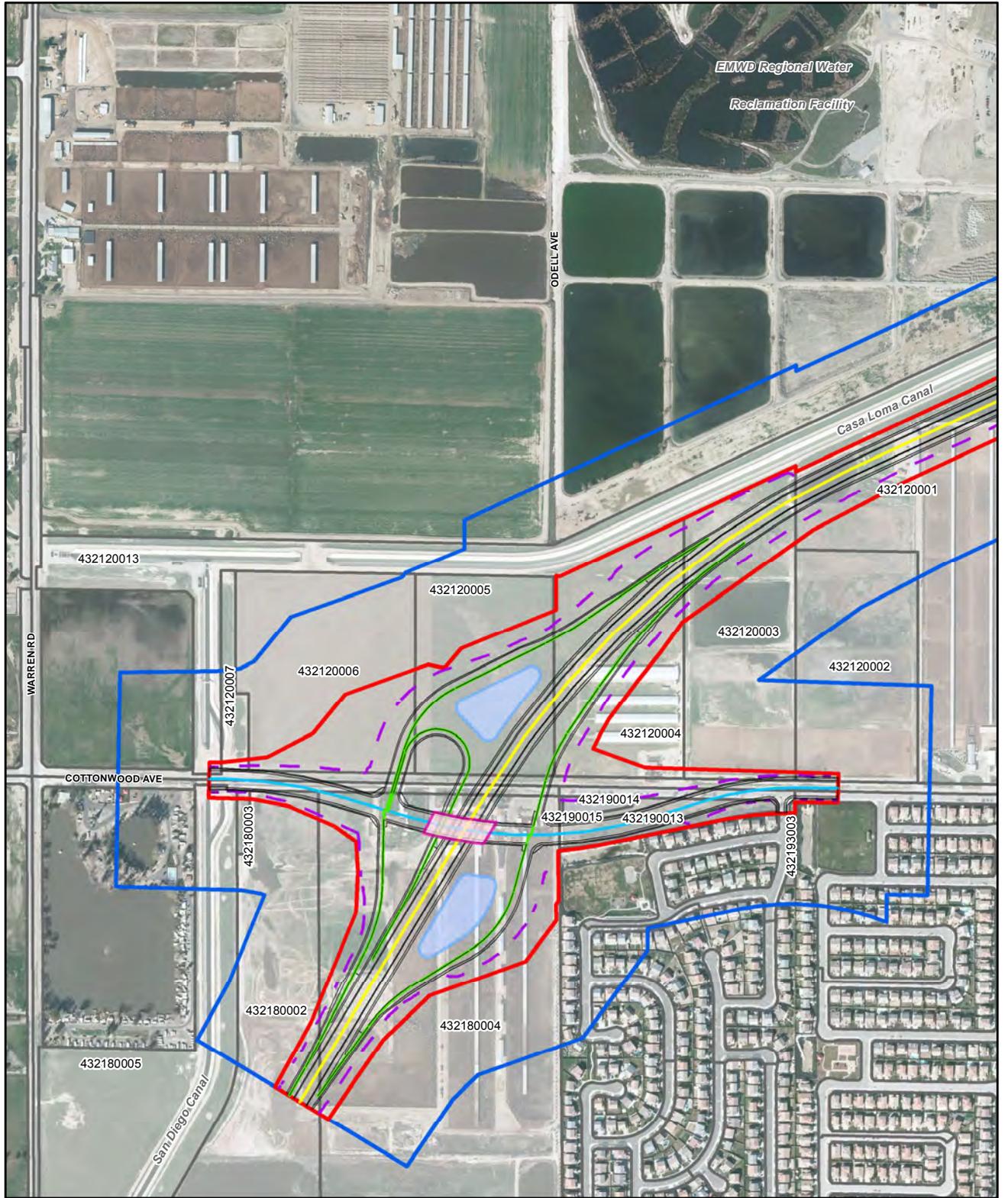
**Figure 2.2-14 2 of 2**  
**Roadway Segment J**  
**Build Alternative 1br**  
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<b>LEGEND</b>	Project Impact Area	County Assessor's Parcel <sup>CR</sup>
Project Roadway	Study Area	Best Management Practices (BMPs)
Grade-Separated Interchange (Ramps)	Aqueduct Crossing	
Local Cross Street	Bridge over Local Street	
Cul-de-Sac	Bridge over Local Street and Other Feature	
Local Road	Bridge over Other Feature	
Cut Line	Bridge over SR 79	<b>1:9,600</b>
Fill Line		Source: CR - County of Riverside

**Figure 2.2-15a 1 of 2**  
**Roadway Segment M**  
**Build Alternative 1b**  
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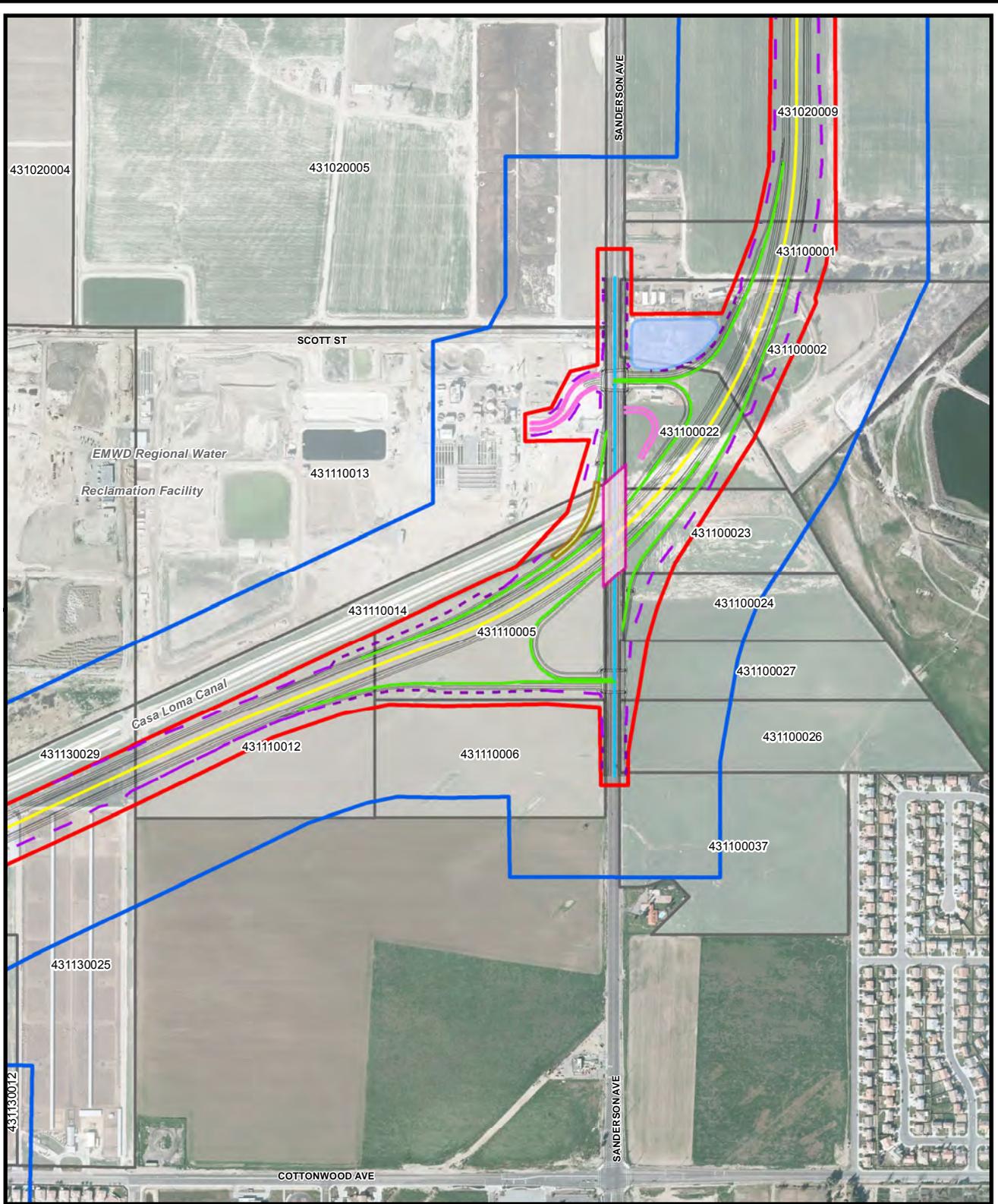
**LEGEND**

- Project Roadway
- Grade-Separated Interchange (Ramps)
- Local Cross Street
- Cul-de-Sac
- Local Road
- Cut Line
- Fill Line
- Project Impact Area
- Project Study Area
- Aqueduct Crossing

- County Assessor's Parcel<sup>CR</sup>
- Best Management Practices (BMPs)



**Figure 2.2-15a 2 of 2**  
**Roadway Segment M**  
**Build Alternative 1br**  
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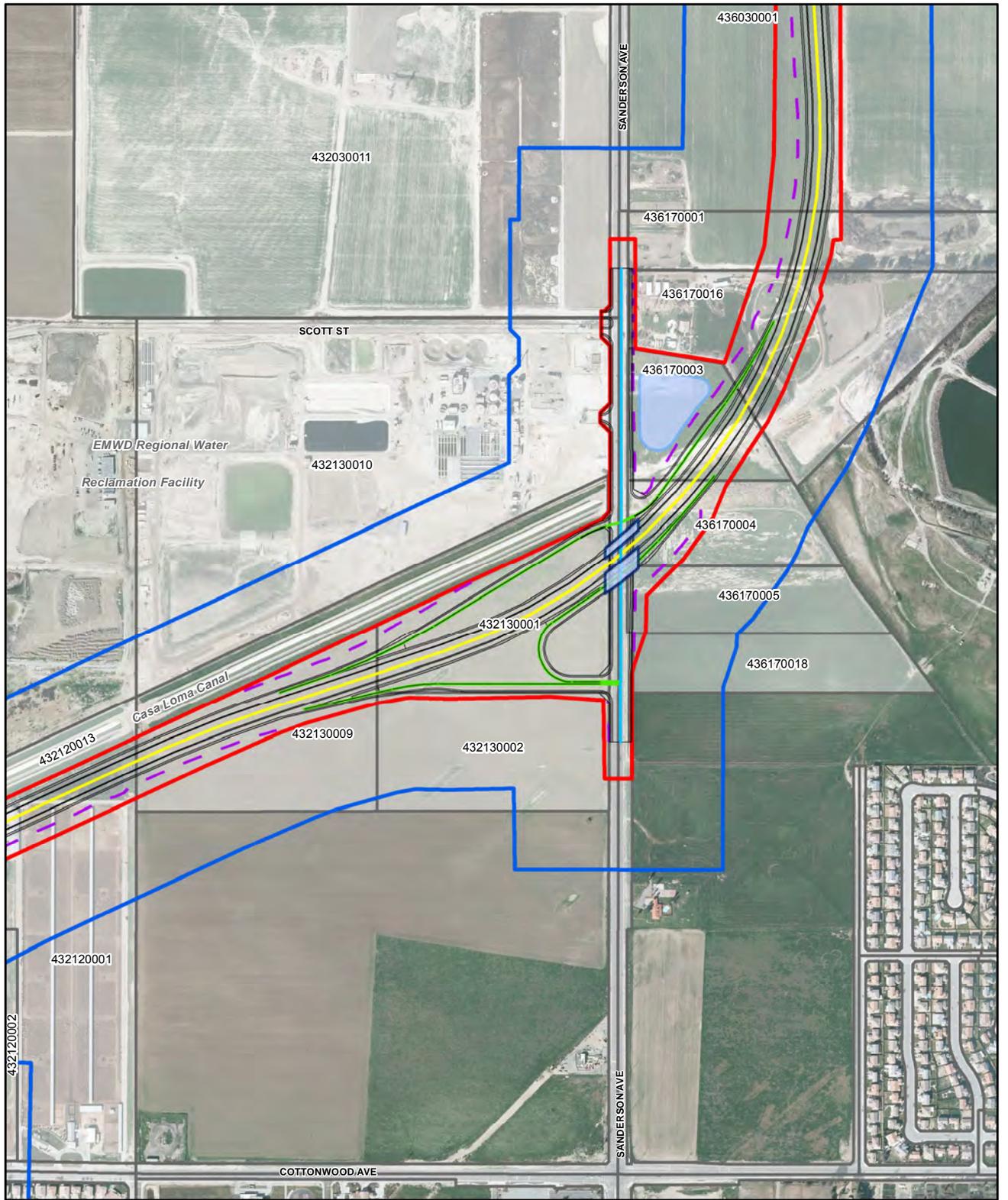
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**LEGEND**

- |                                     |  |  |
|-------------------------------------|--|--|
| Project Roadway                     | Project Impact Area                        | County Assessor's Parcel <sup>CR</sup> |
| Grade-Separated Interchange (Ramps) | Study Area                                 | Best Management Practices (BMPs)       |
| Local Cross Street                  | Aqueduct Crossing                          |  |
| Cul-de-Sac                          | Bridge over Local Street                   |  |
| Local Road                          | Bridge over Local Street and Other Feature |  |
| Cut Line                            | Bridge over Other Feature                  |  |
| Fill Line                           | Bridge over SR 79                          | <b>1:9,600</b>                         |

Source: CR - County of Riverside

**Figure 2.2-15b 1 of 2**  
**Roadway Segment M**  
**Build Alternative 1b**  
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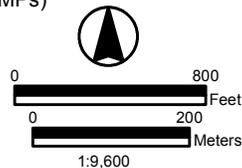
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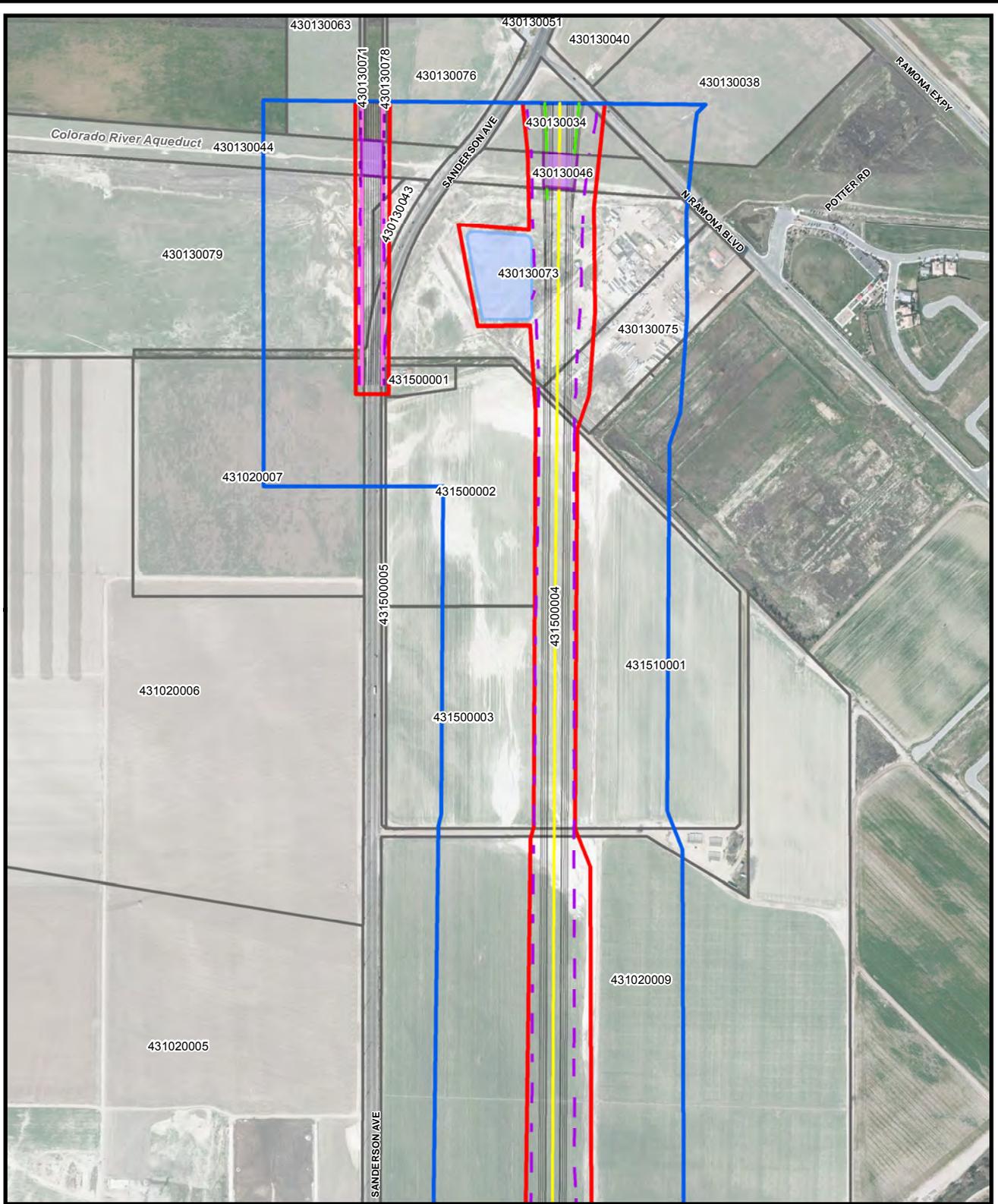
**LEGEND**

-  Project Roadway
-  Grade-Separated Interchange (Ramps)
-  Local Cross Street
-  Cul-de-Sac
-  Local Road
-  Cut Line
-  Fill Line
-  Project Impact Area
-  Project Study Area
-  Aqueduct Crossing

-  County Assessor's Parcel<sup>CR</sup>
-  Best Management Practices (BMPs)



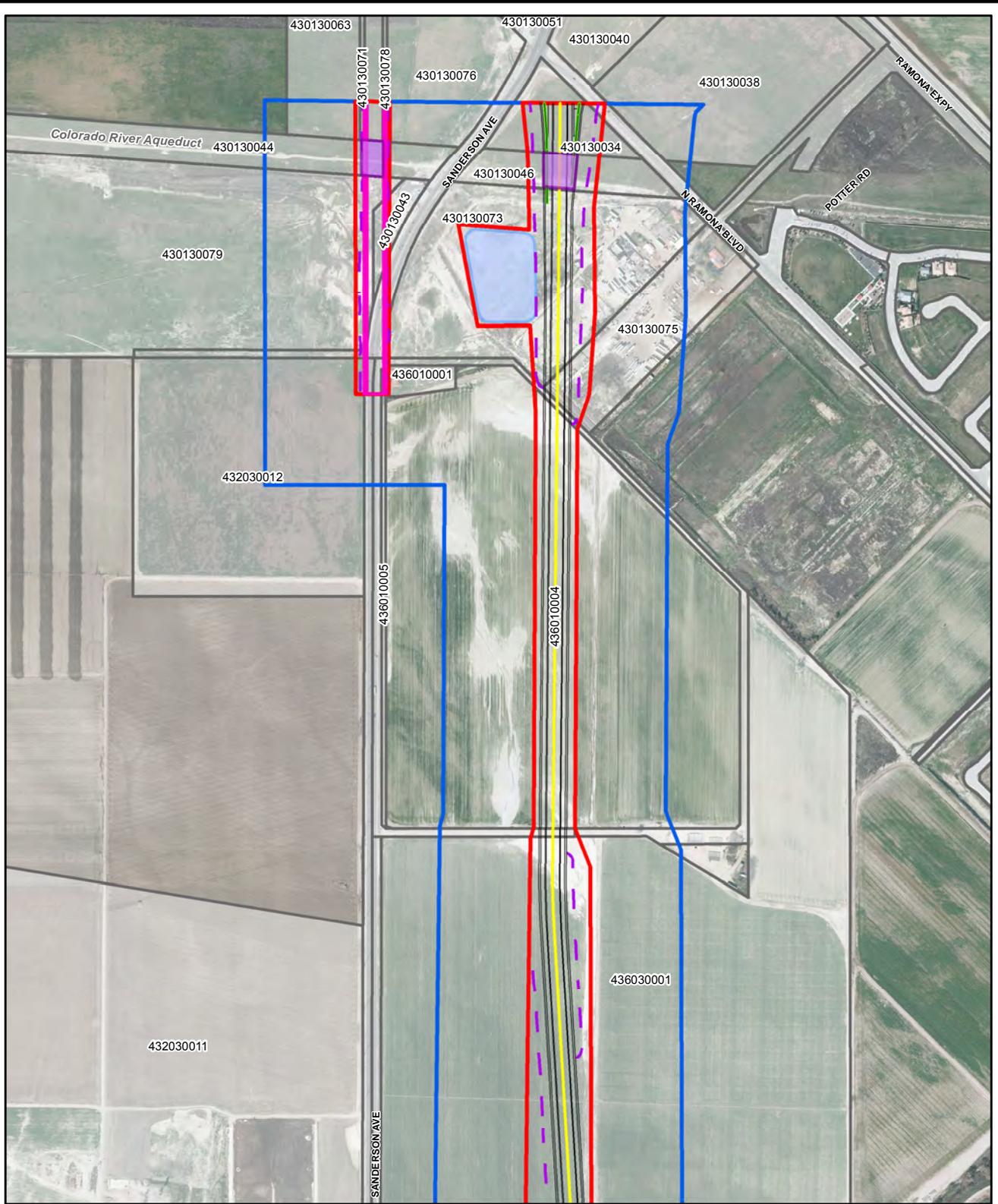
**Figure 2.2-15b 2 of 2**  
**Roadway Segment M**  
**Build Alternative 1br**  
**20-Year Design Horizon**  
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<b>LEGEND</b>	Project Impact Area	County Assessor's Parcel <sup>CR</sup>
Project Roadway	Study Area	Best Management Practices (BMPs)
Grade-Separated Interchange (Ramps)	Aqueduct Crossing	
Local Cross Street	Bridge over Local Street	
Cul-de-Sac	Bridge over Local Street and Other Feature	
Local Road	Bridge over Other Feature	<b>1:9,600</b>
Cut Line	Bridge over SR 79	Source: CR - County of Riverside
Fill Line		

**Figure 2.2-15c 1 of 2**  
**Roadway Segment M**  
**Build Alternative 1b**  
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**LEGEND**

-  Project Roadway
-  Grade-Separated Interchange (Ramps)
-  Local Cross Street
-  Cul-de-Sac
-  Local Road
-  Cut Line
-  Fill Line
-  Project Impact Area
-  Project Study Area
-  Aqueduct Crossing

-  County Assessor's Parcel<sup>CR</sup>
-  Best Management Practices (BMPs)

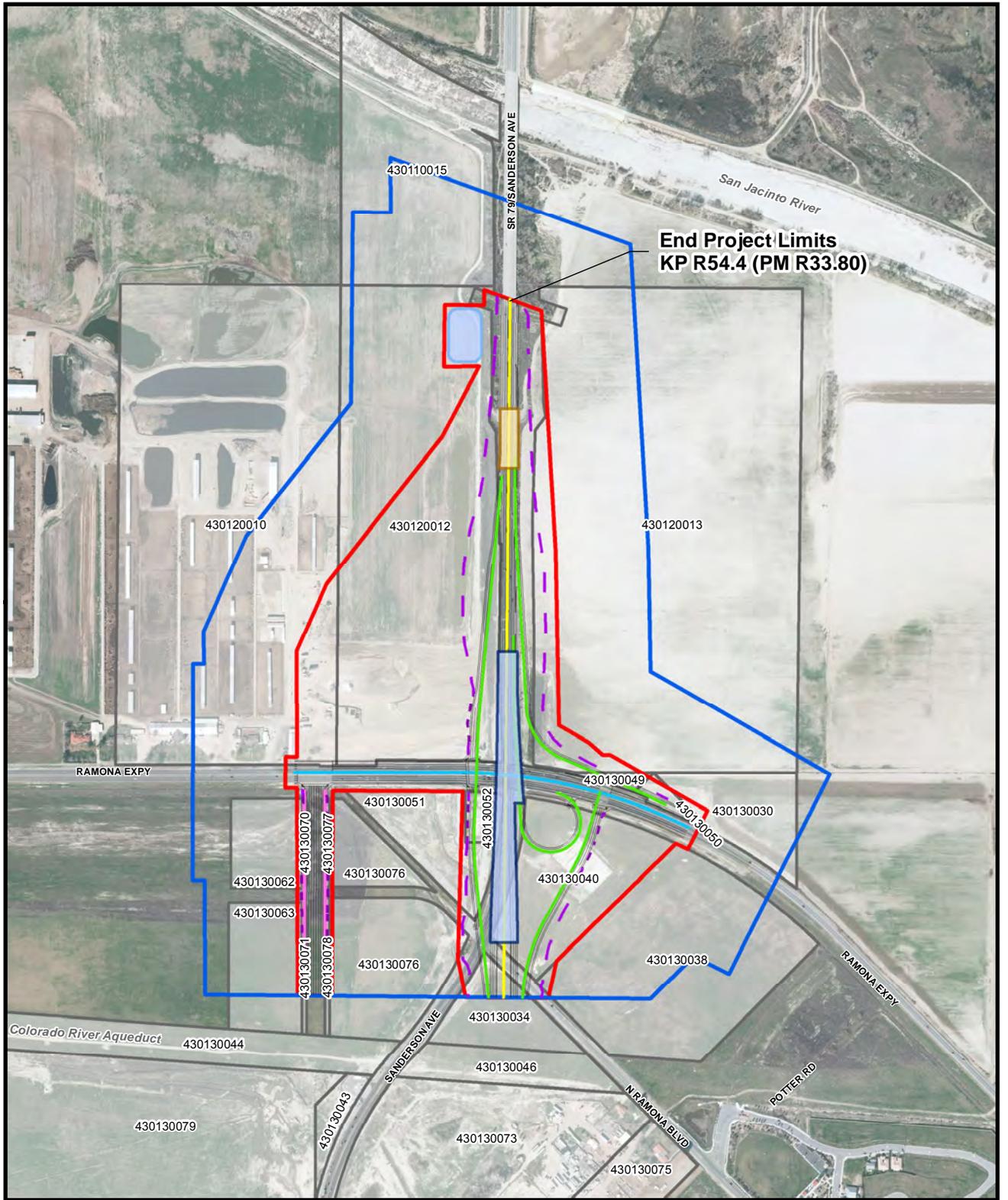

  

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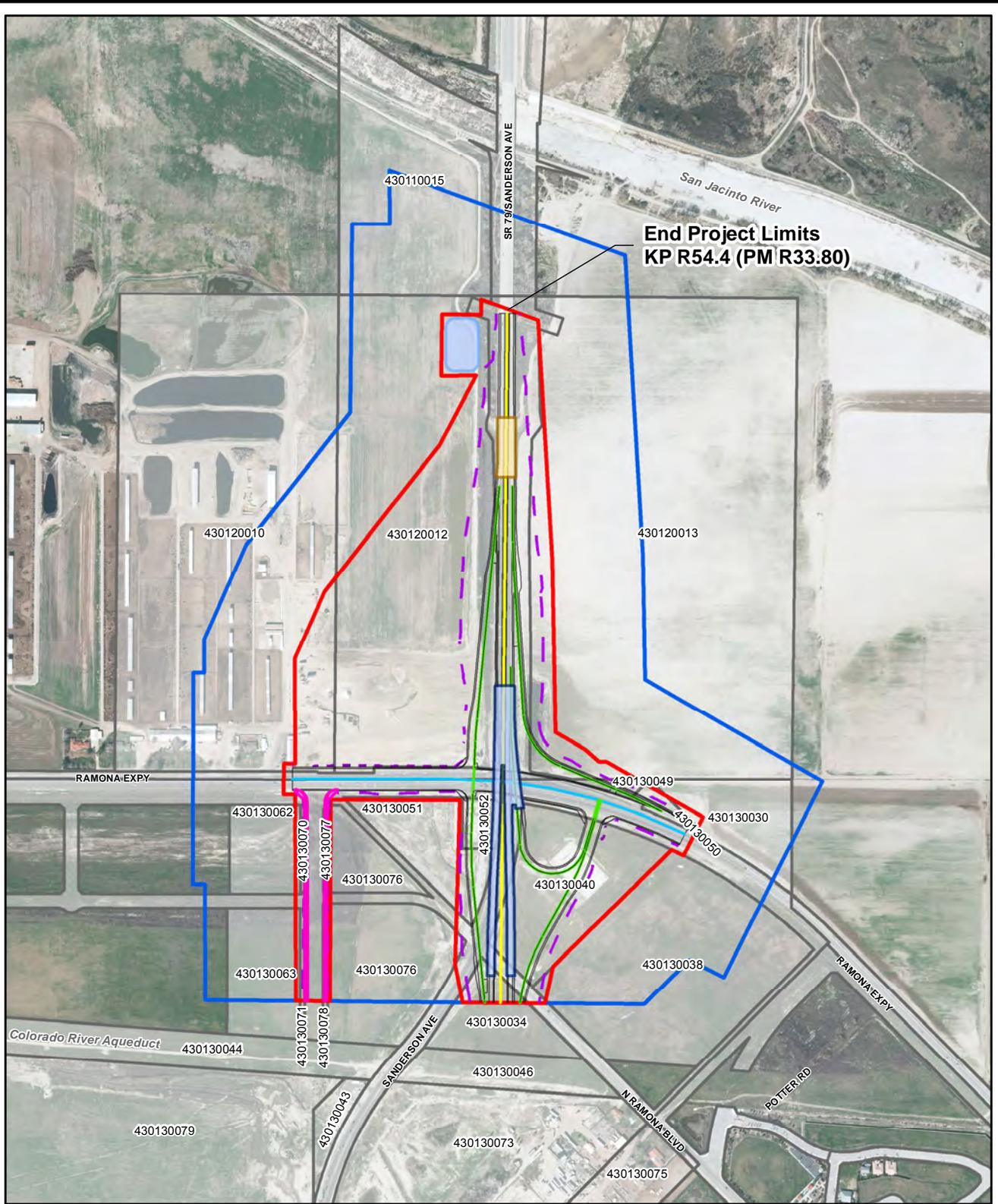
**Figure 2.2-15c 2 of 2**  
**Roadway Segment M**  
**Build Alternative 1br**  
**20-Year Design Horizon**  
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<b>LEGEND</b>	Project Impact Area	County Assessor's Parcel <sup>CR</sup>
Project Roadway	Study Area	Best Management Practices (BMPs)
Grade-Separated Interchange (Ramps)	Aqueduct Crossing	
Local Cross Street	Bridge over Local Street	
Cul-de-Sac	Bridge over Local Street and Other Feature	
Local Road	Bridge over Other Feature	
Cut Line	Bridge over SR 79	<b>1:9,600</b>
Fill Line		Source: CR - County of Riverside

**Figure 2.2-16 1 of 2**  
**Roadway Segment N**  
**Build Alternative 1b**  
**20-Year Design Horizon**  
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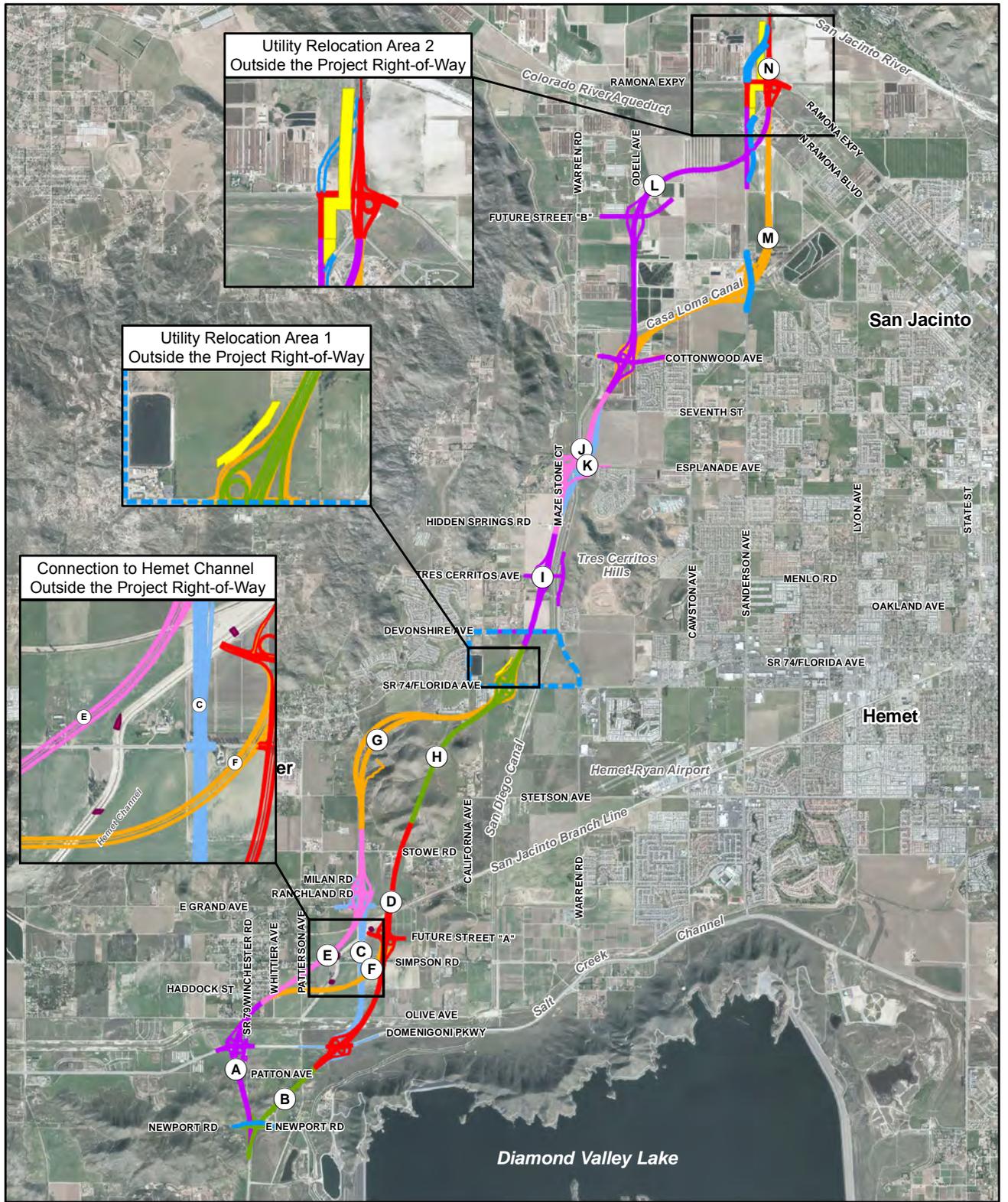


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**LEGEND**

- |   |   |  |
|---|---|--|
|  Project Roadway                     |  Project Impact Area |  County Assessor's Parcel <sup>CR</sup> |
|  Grade-Separated Interchange (Ramps) |  Project Study Area  |  Best Management Practices (BMPs)       |
|  Local Cross Street                  |  Aqueduct Crossing   |                                        |
|  Cul-de-Sac                          |  Cut Line            |                                        |
|  Local Road                          |  Fill Line           |                                        |
|   |   | 1:9,600  |

**Figure 2.2-16 2 of 2**  
**Roadway Segment N**  
**Build Alternative 1br**  
**20-Year Design Horizon**  
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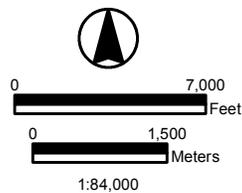
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**LEGEND**

- ▬▬▬ Long-Term Traffic Detour
- ▬▬▬ Constructed Traffic Detour
- ▬▬▬ Utility Relocation Area
- ▬▬▬ Connection to Hemet Channel Outside the Project Right-of-Way

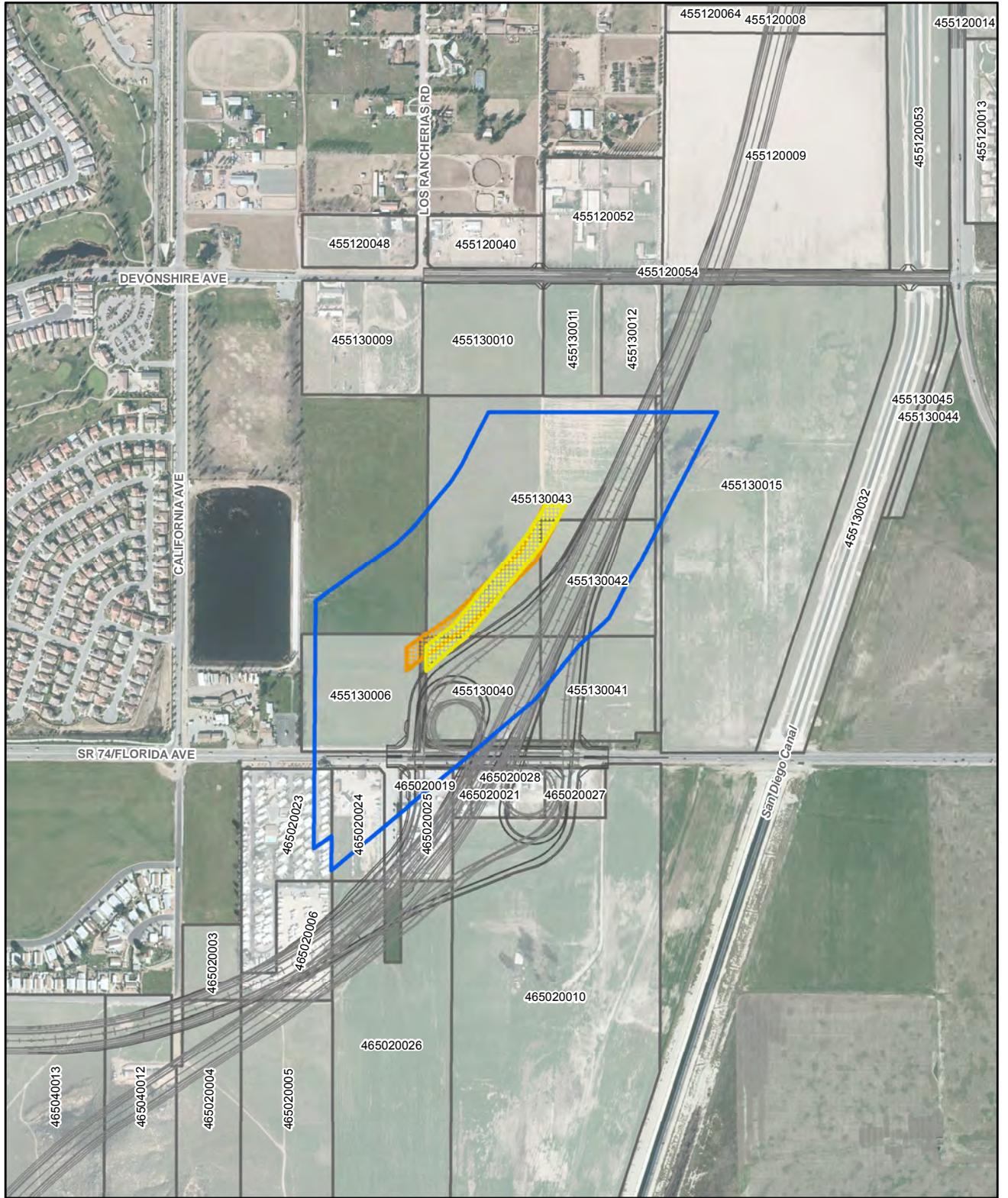
Source: Final Project Description, November 2007

Note: This figure depicts the proposed roadway alignment by roadway segment. The roadway segments are shown in multiple colors to differentiate them from each other.



**Figure 2.2-17  
Unique Design Features  
(including Long-Term  
Traffic Detours)**

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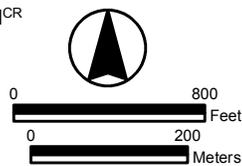
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**LEGEND**

- Project Roadway and Local Street Improvements
- Project Roadway and Local Street Improvements for 1br
- Utility Relocation Area
- Utility Relocation Area for 1br

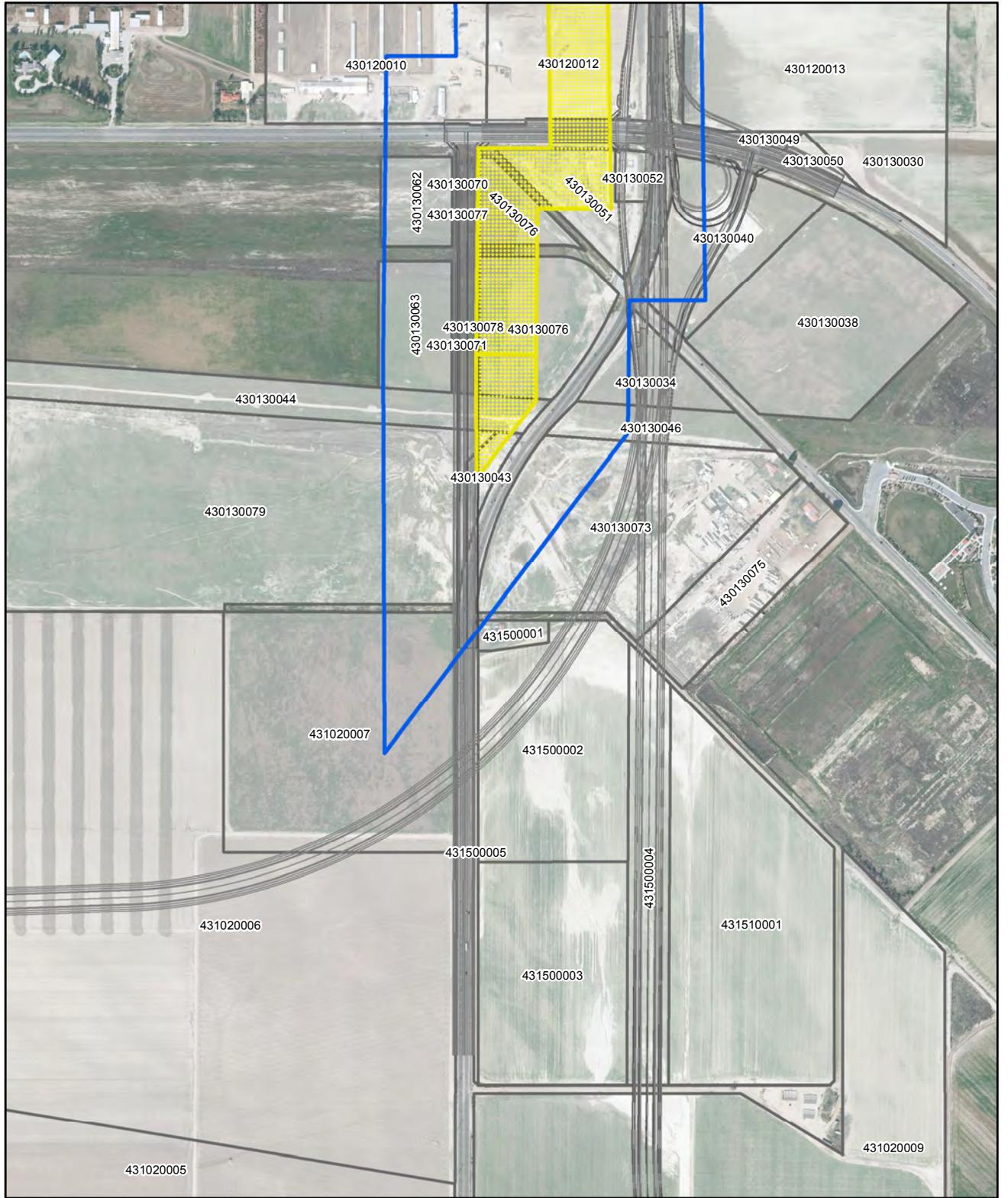
- Study Area
- County Assessor's Parcel<sup>CR</sup>



Source: CR - County of Riverside

**Figure 2.2-18a  
Utility Relocation Area 1  
(Roadway Segments  
G and H)  
20-Year Design Horizon**

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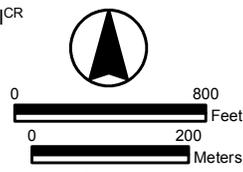
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\\GALT\PROJ\RCTC\171146\2016\MAPFILES\EIS\CH2\PFV\_RWT\_UT\_A.MXD PFV\_PWT\_UT\_A.PDF 07/19/2016

**LEGEND**

- Project Roadway and Local Street Improvements
- Project Roadway and Local Street Improvements for 1br
- ▨ Utility Relocation Area
- ▨ Utility Relocation Area for 1br

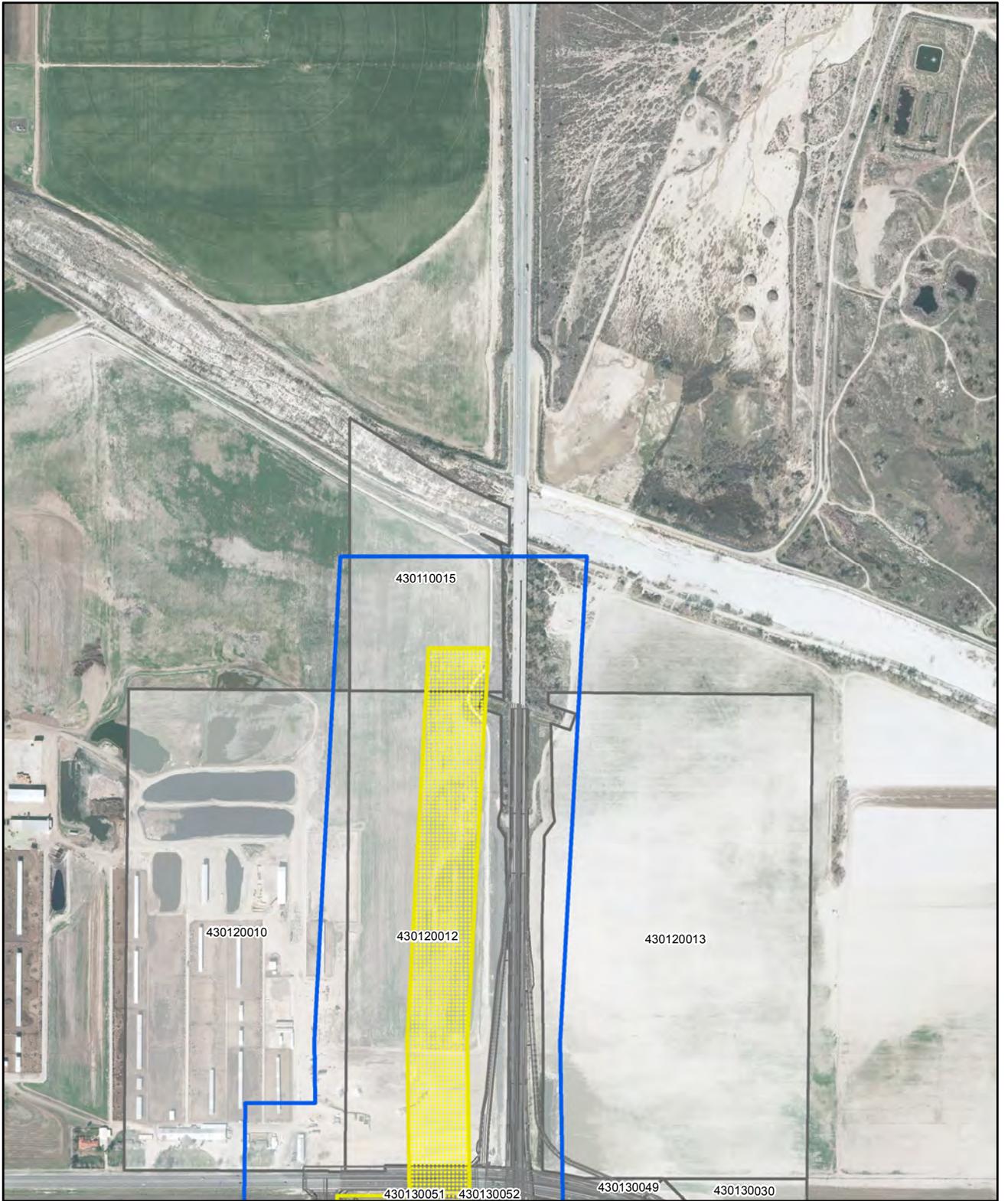
- ▭ Study Area
- ▭ County Assessor's Parcel<sup>CR</sup>



Source: CR - County of Riverside

**Figure 2.2-18b 1 of 2  
Utility Relocation Area 2  
(Roadway Segments L, M, and N)  
20-Year Design Horizon**

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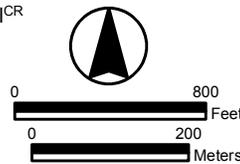
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**LEGEND**

- Project Roadway and Local Street Improvements
- Project Roadway and Local Street Improvements for 1br
- ▨ Utility Relocation Area
- ▨ Utility Relocation Area for 1br

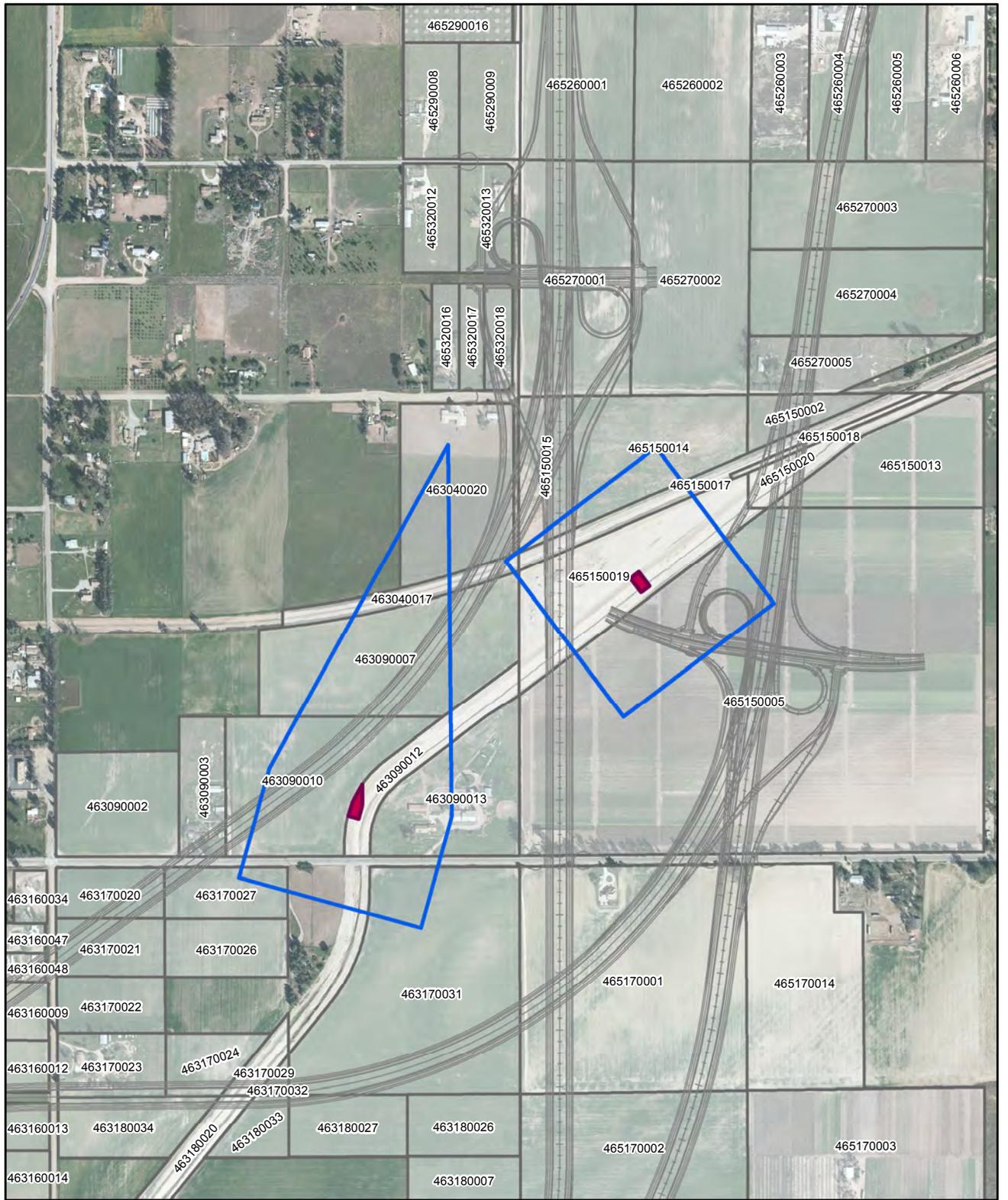
- ▭ Study Area
- ▭ County Assessor's Parcel<sup>CR</sup>



1:9,600  
Source: CR - County of Riverside

**Figure 2.2-18b 2 of 2  
Utility Relocation Area 2  
(Roadway Segments  
L, M, and N)  
20-Year Design Horizon**

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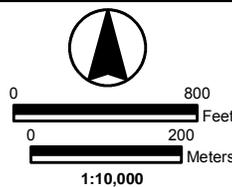


Aerial Date: February 2011, Aero-Graphics, Inc

\\GALT\PROJ\RCTC\171146\2016\MAPFILES\EIS\CH2\PFV\_RWT\_UT\_A.MXD PFV\_PWT\_UT\_A.PDF 07/19/2016

**LEGEND**

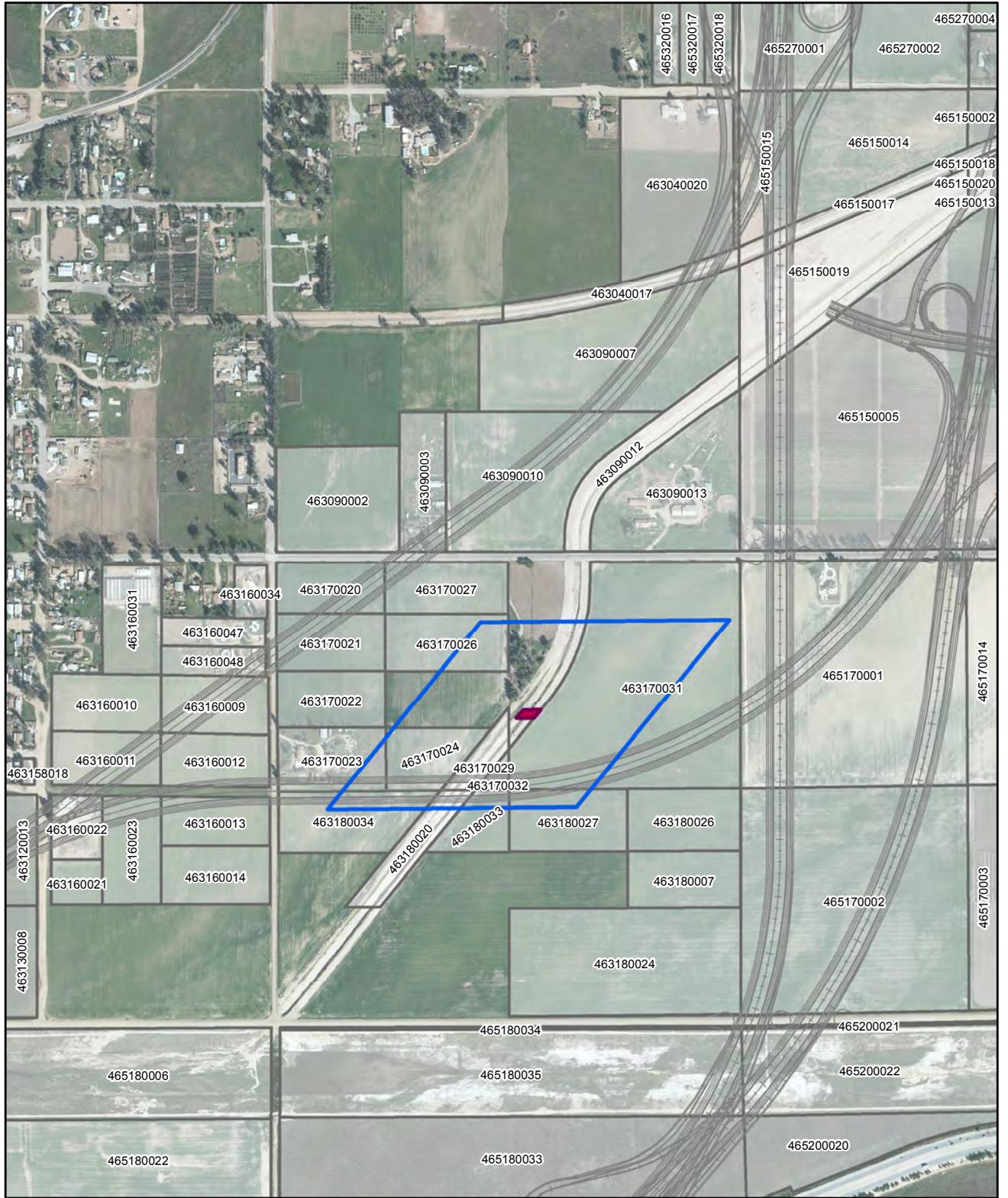
-  Project Roadway and Local Street Improvements
-  Connection to Hemet Channel Outside the Project Right-of-Way
-  Study Area
-  County Assessor's Parcel<sup>CR</sup>



**Figure 2.2-19a**  
**Connections 1 and 2 to Hemet Channel Outside the Project Right-of-Way (Segment E)**  
**20-Year Design Horizon**

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Source: CR - County of Riverside

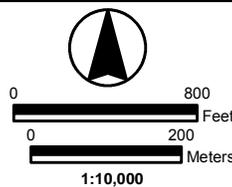


Aerial Date: February 2011, Aero-Graphics, Inc

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**LEGEND**

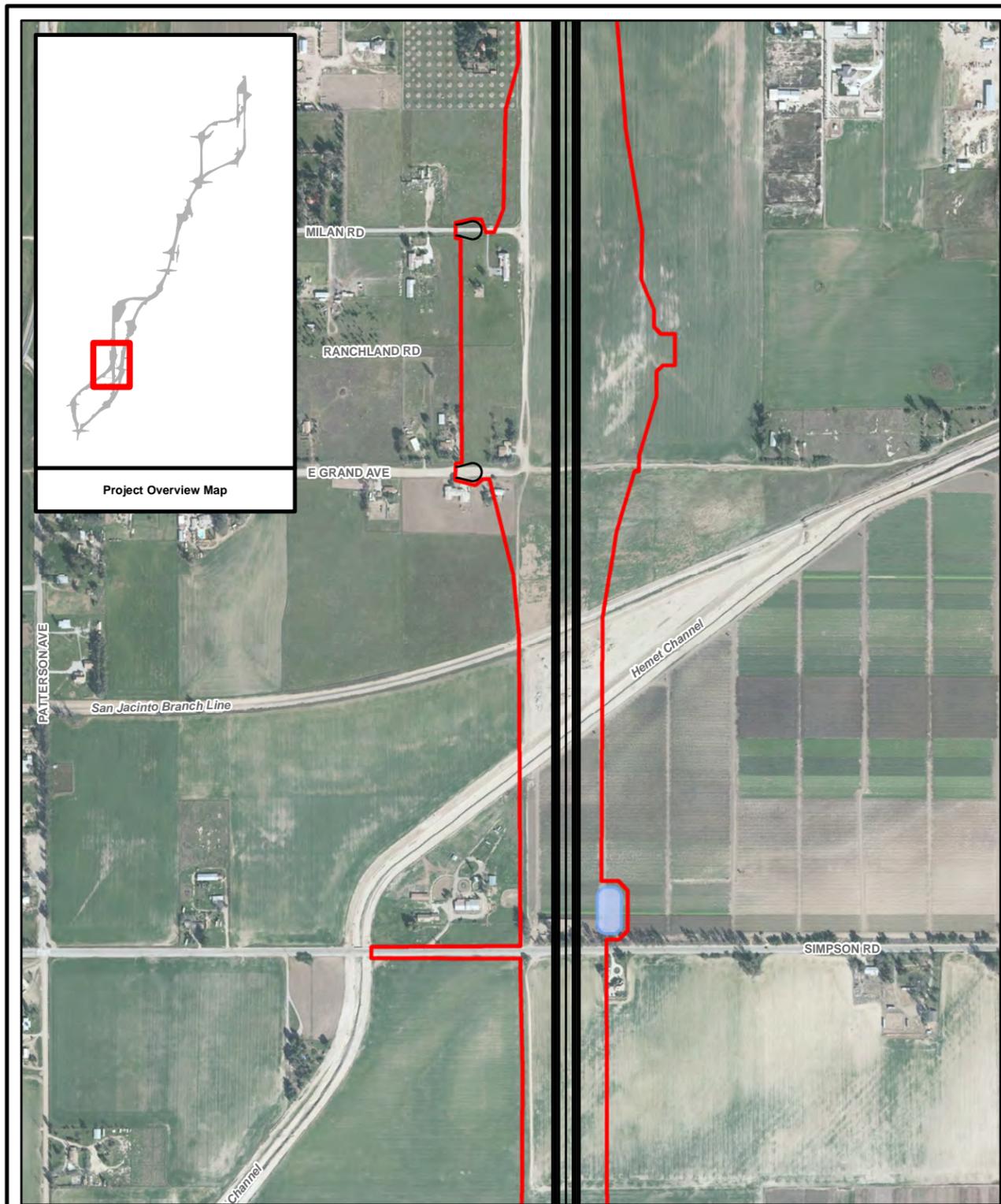
-  Project Roadway and Local Street Improvements
-  Connection to Hemet Channel Outside the Project Right-of-Way
-  Study Area
-  County Assessor's Parcel<sup>CR</sup>



**Figure 2.2-19b  
Connection 3 to  
Hemet Channel Outside  
the Project Right-of-Way  
(Segment F)**

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Environmental Impact Statement  
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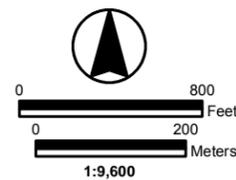
Source: CR - County of Riverside



Aerial Date: February 2011, Aero-Graphics, Inc

**LEGEND**

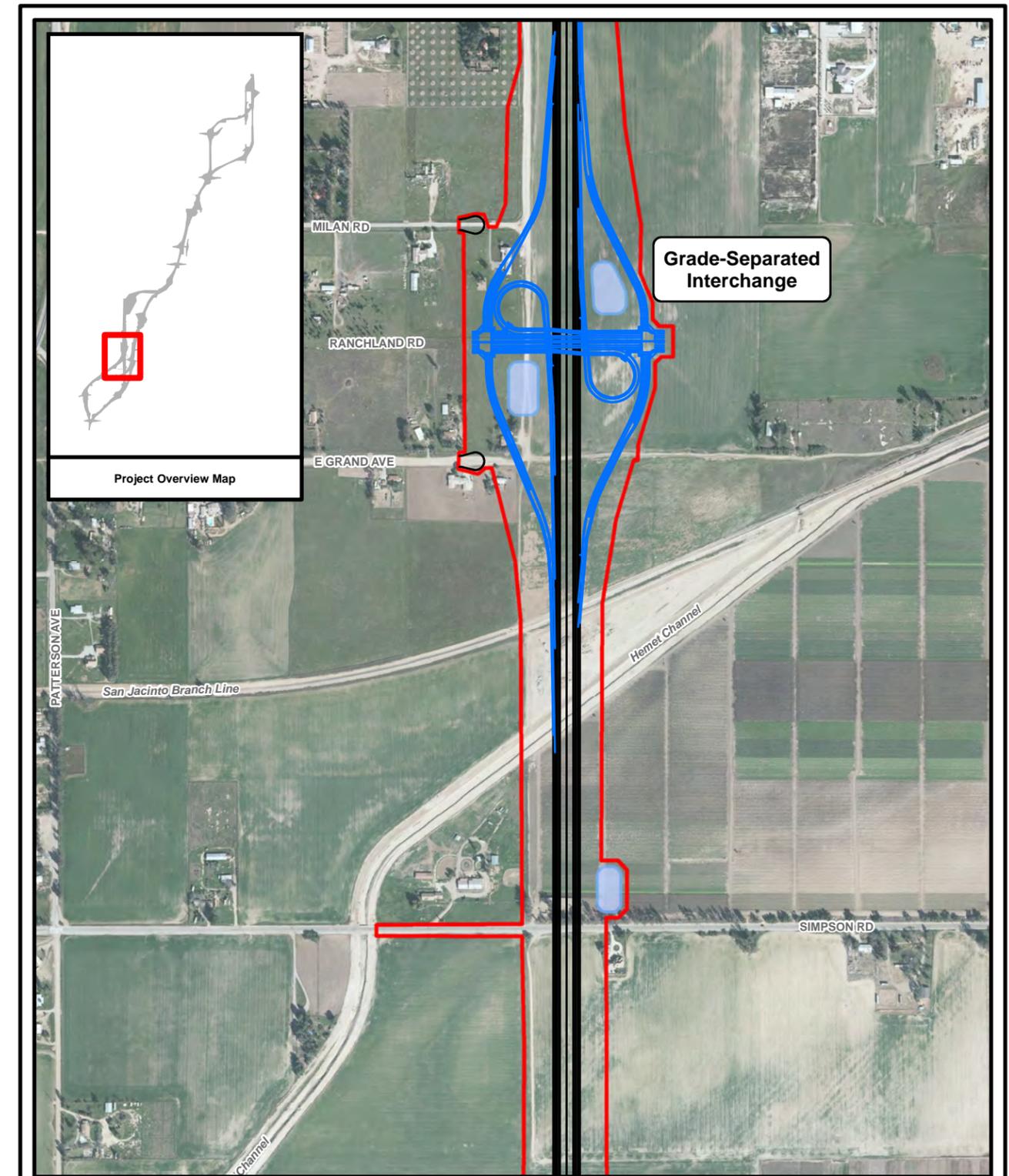
- Opening Year (2020) Features to be Removed Prior to the 20-Year Design Horizon
- Opening Year (2020) Features to Remain at the 20-Year Design Horizon
- Project Impact Area



**Figure 2.2-20a 1 of 2  
Roadway Segment C  
Base Condition  
Opening Year (2020)**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

Source: Final Project Description, November 2007

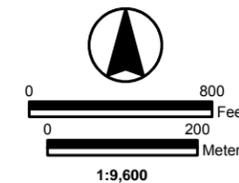


Aerial Date: February 2011, Aero-Graphics, Inc

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**LEGEND**

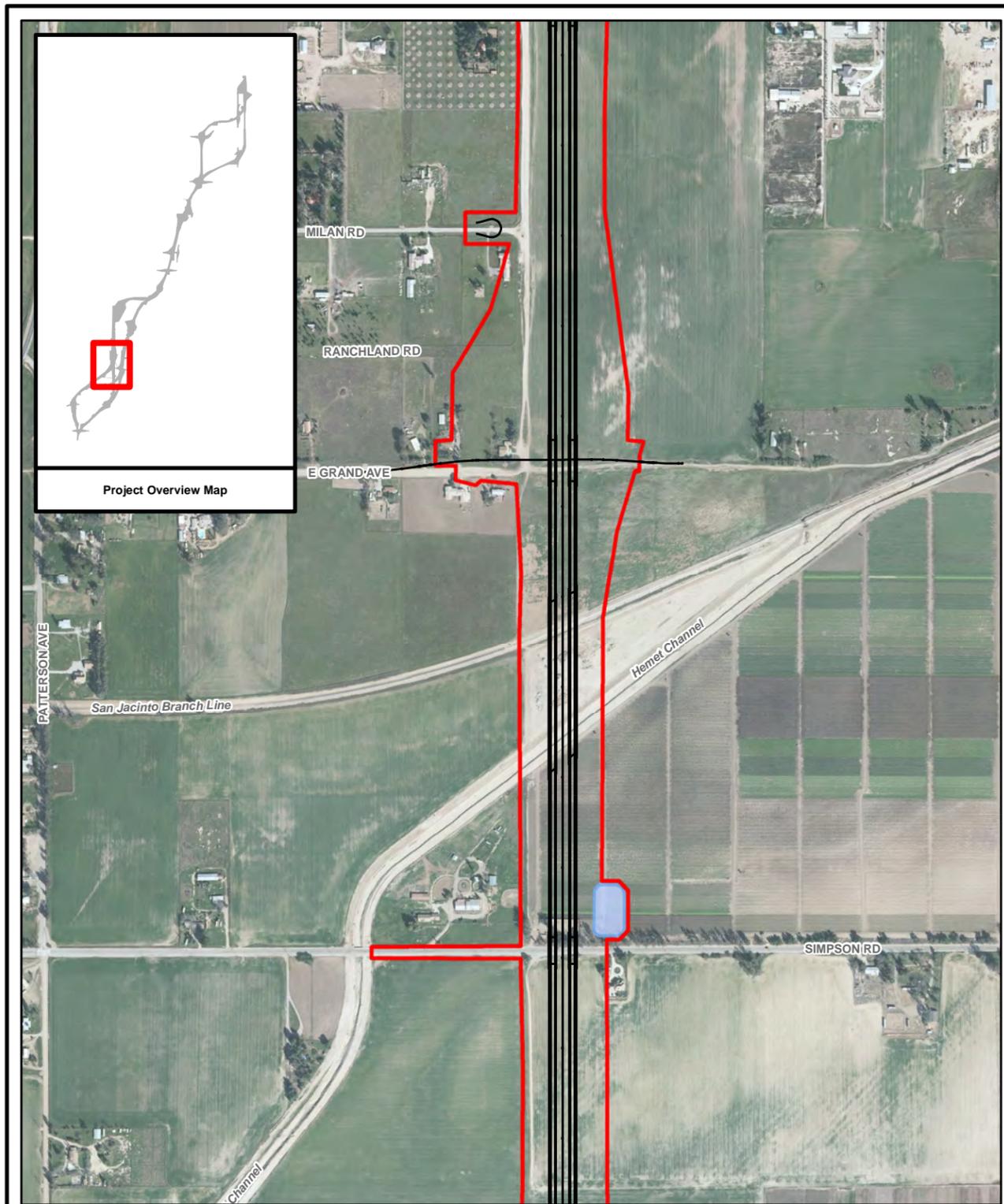
- Project Features to be Constructed prior to the 20-Year Design Horizon<sup>CH</sup>
- Opening Day Features to Remain at the 20-Year Design Horizon<sup>CH</sup>
- Project Impact Area
- Best Management Practices (BMPs)



**Figure 2.2-20a 2 of 2  
Roadway Segment C  
Base Condition  
20-Year Design Horizon**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

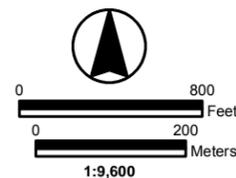
Source: Final Project Description, November 2007



Aerial Date: February 2011, Aero-Graphics, Inc

**LEGEND**

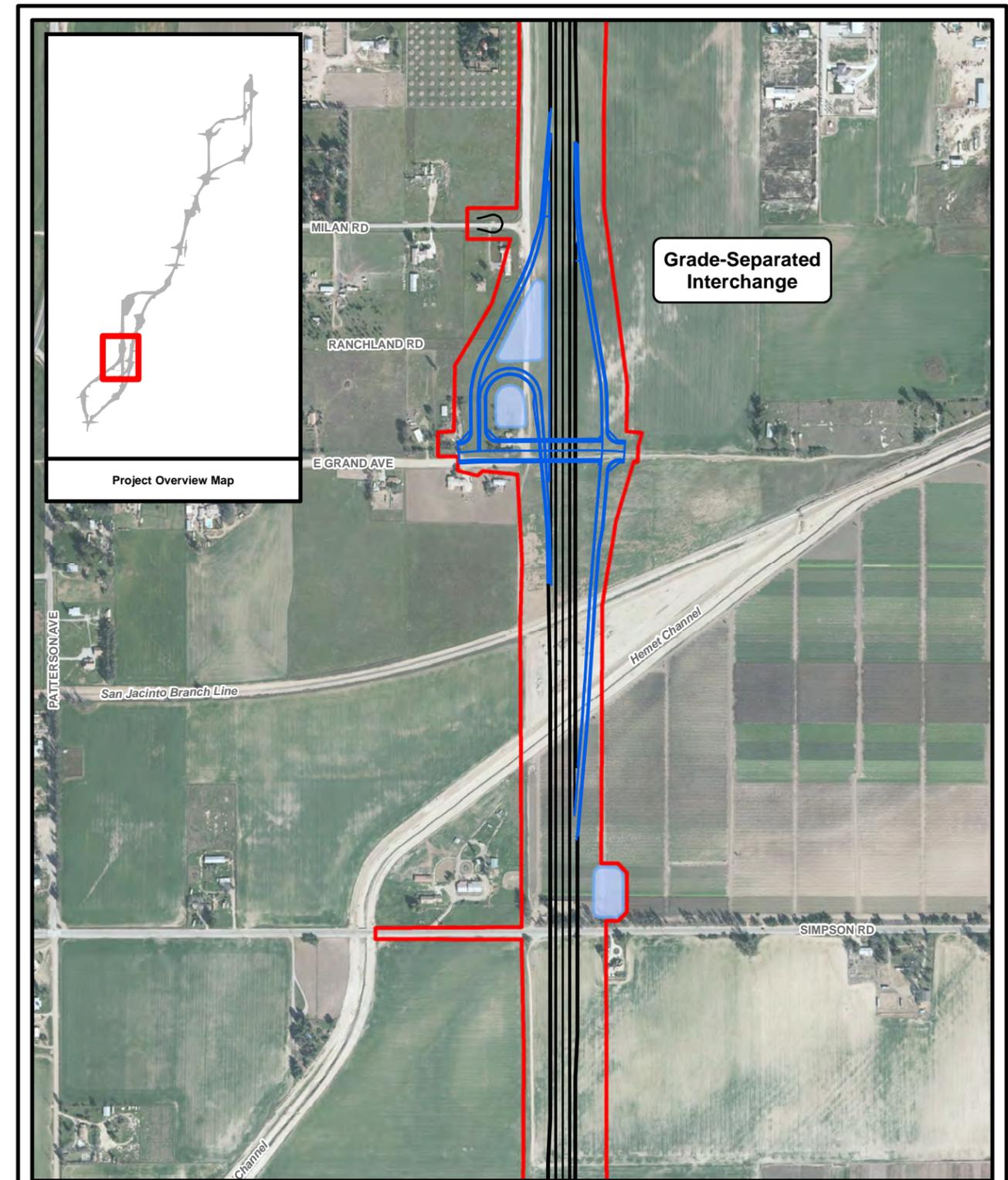
- Opening Year (2020) Features to be Removed Prior to the 20-Year Design Horizon
- Opening Year (2020) Features to Remain at the 20-Year Design Horizon
- Project Impact Area
- Best Management Practices (BMPs)



**Figure 2.2-20b 1 of 2  
Roadway Segment C,  
Build Alternative 1br  
Base Condition  
Opening Year (2020)**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

Source: Final Project Description, November 2007

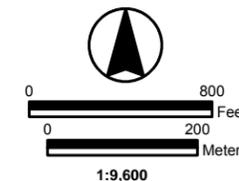


Aerial Date: February 2011, Aero-Graphics, Inc

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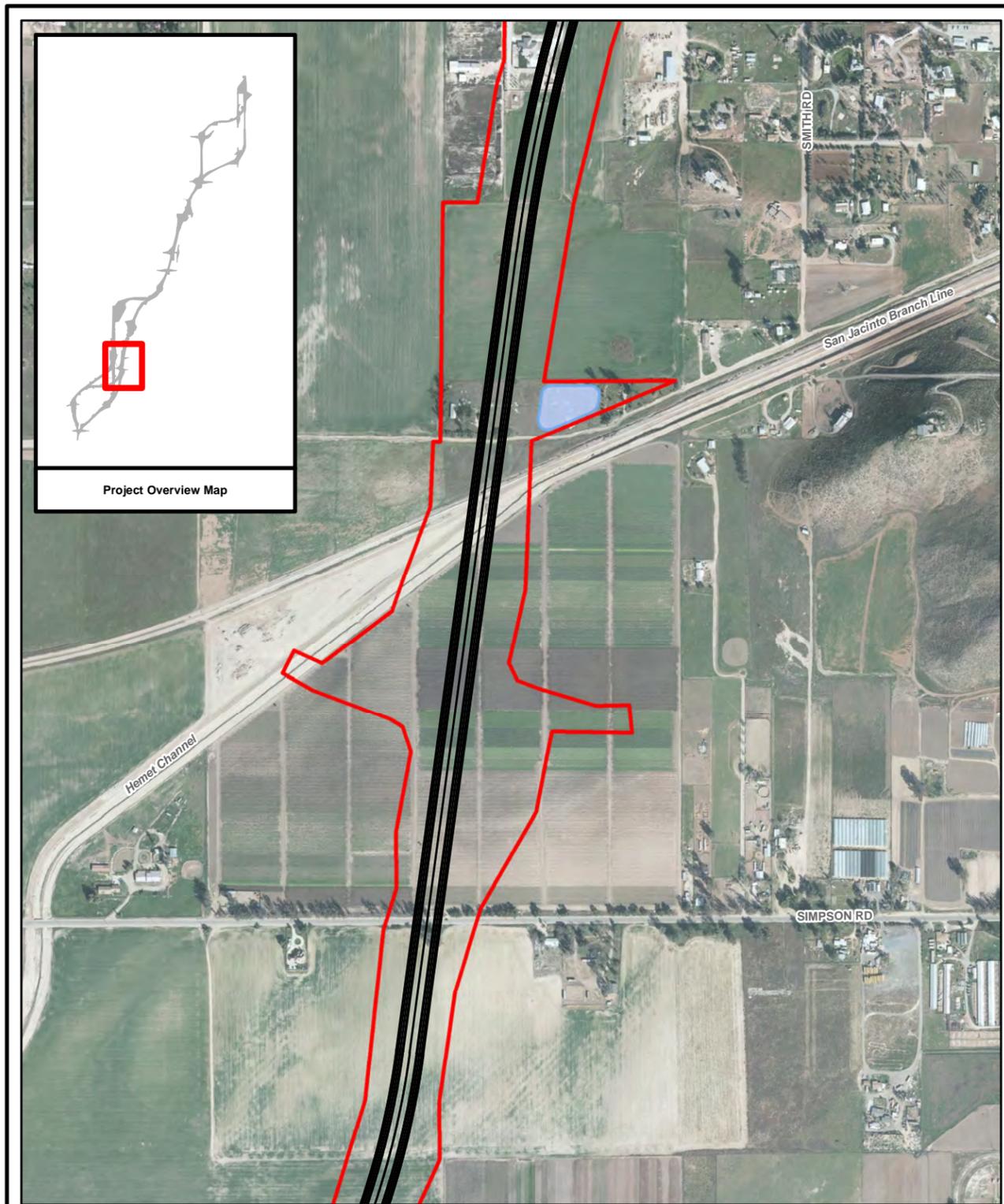
- Project Features to be Constructed prior to the 20-Year Design Horizon
- Opening Day Features to Remain at the 20-Year Design Horizon
- Project Impact Area
- Best Management Practices (BMPs)



**Figure 2.2-20b 2 of 2  
Roadway Segment C,  
Build Alternative 1br  
Base Condition  
20-Year Design Horizon**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

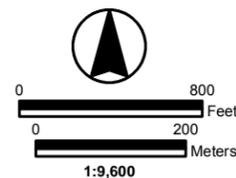
Source: Final Project Description, November 2007



Aerial Date: February 2011, Aero-Graphics, Inc

**LEGEND**

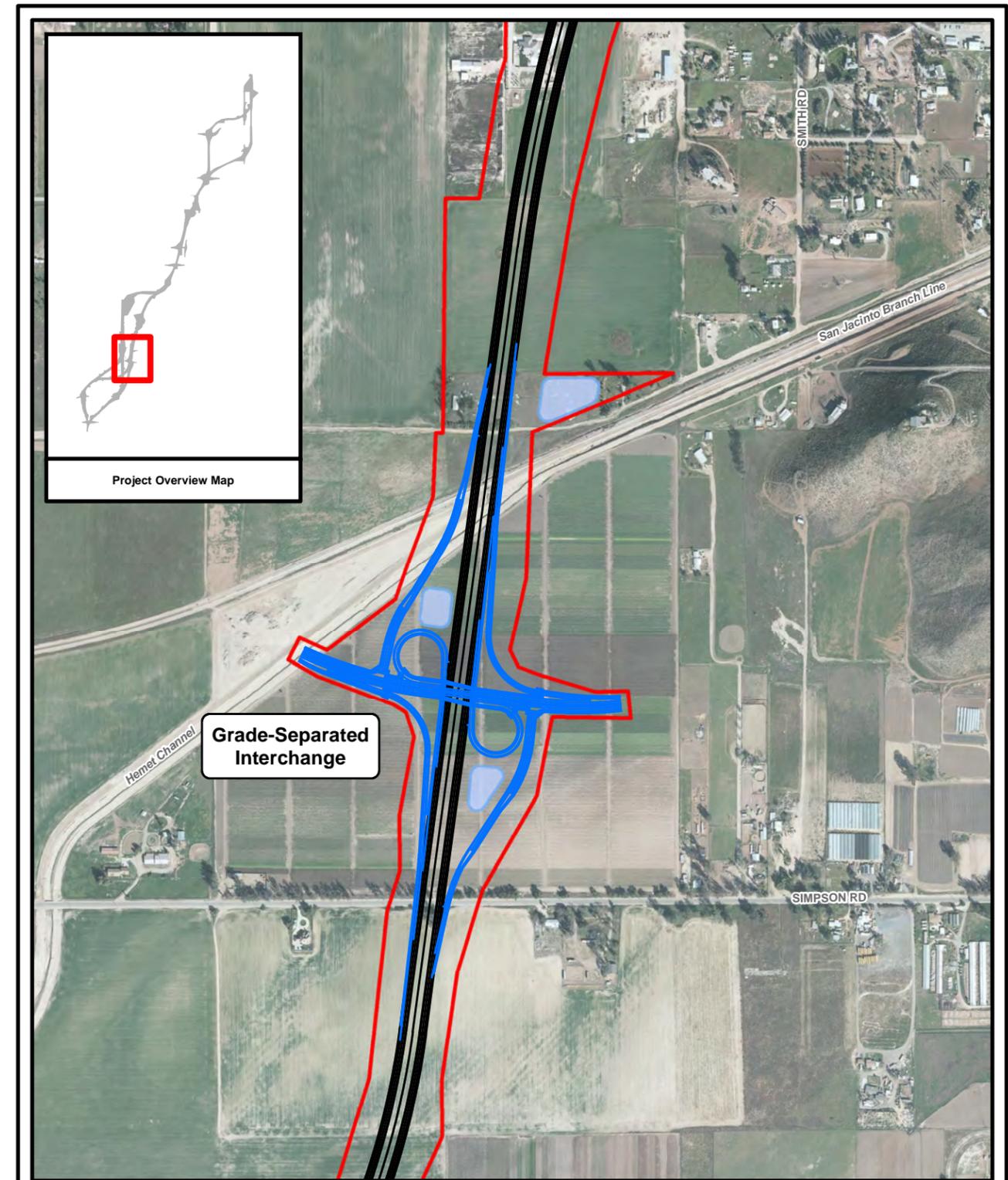
- Opening Year (2020) Features to be Removed Prior to the 20-Year Design Horizon
- Opening Year (2020) Features to Remain at the 20-Year Design Horizon
- Project Impact Area



**Figure 2.2-21 1 of 2  
Roadway Segment D  
Base Condition  
Opening Year (2020)**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

Source: Final Project Description, November 2007

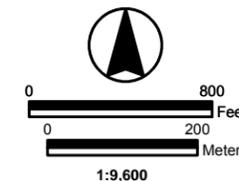


Aerial Date: February 2011, Aero-Graphics, Inc

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**LEGEND**

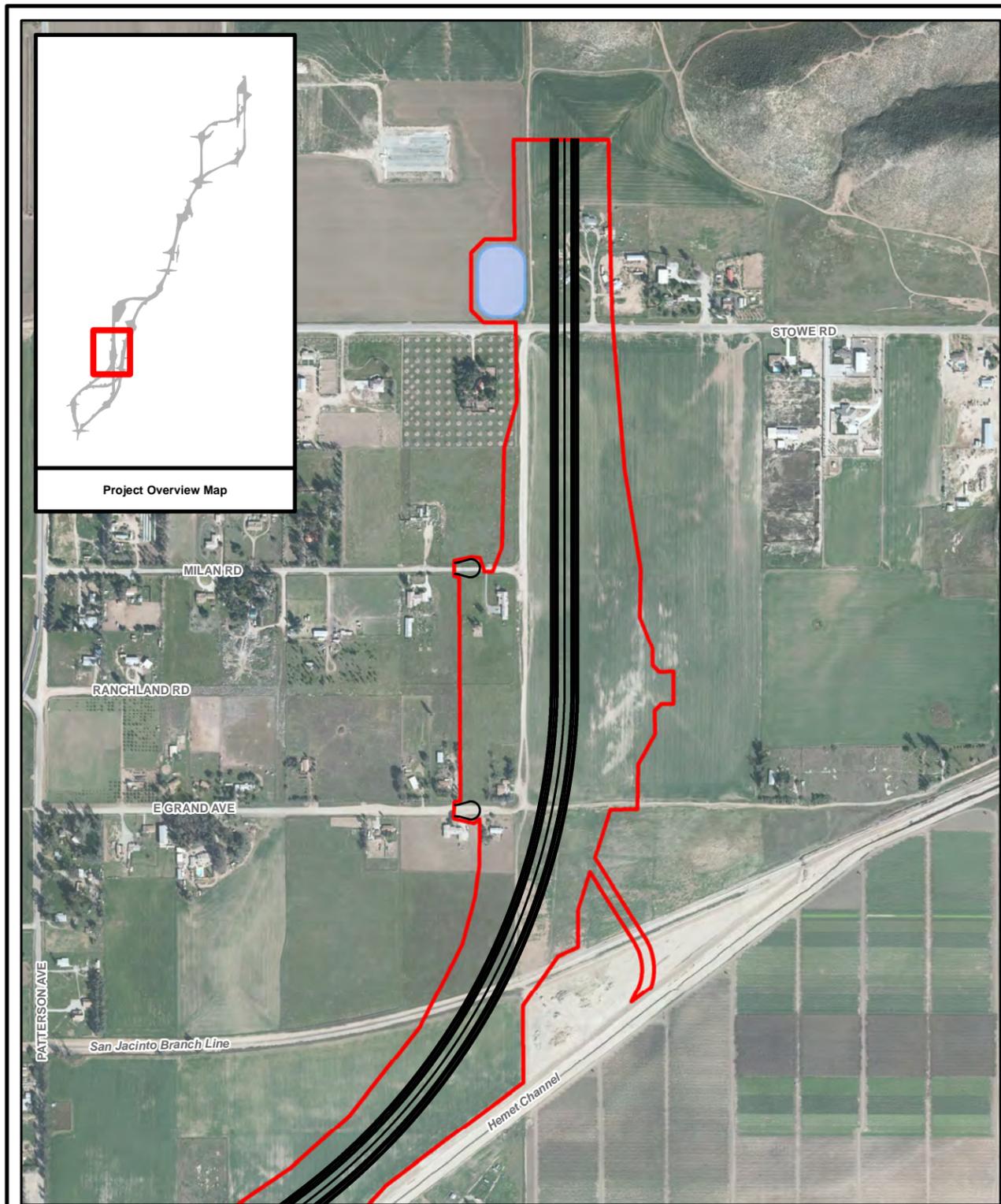
- Project Features to be Constructed prior to the 20-Year Design Horizon<sup>CH</sup>
- Opening Day Features to Remain at the 20-Year Design Horizon<sup>CH</sup>
- Project Impact Area
- Best Management Practices (BMPs)



**Figure 2.2-21 2 of 2  
Roadway Segment D  
20-Year Design Horizon  
Base Condition**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

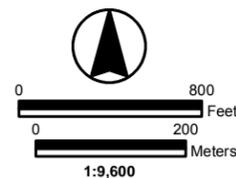
Source: Final Project Description, November 2007



Aerial Date: February 2011, Aero-Graphics, Inc

**LEGEND**

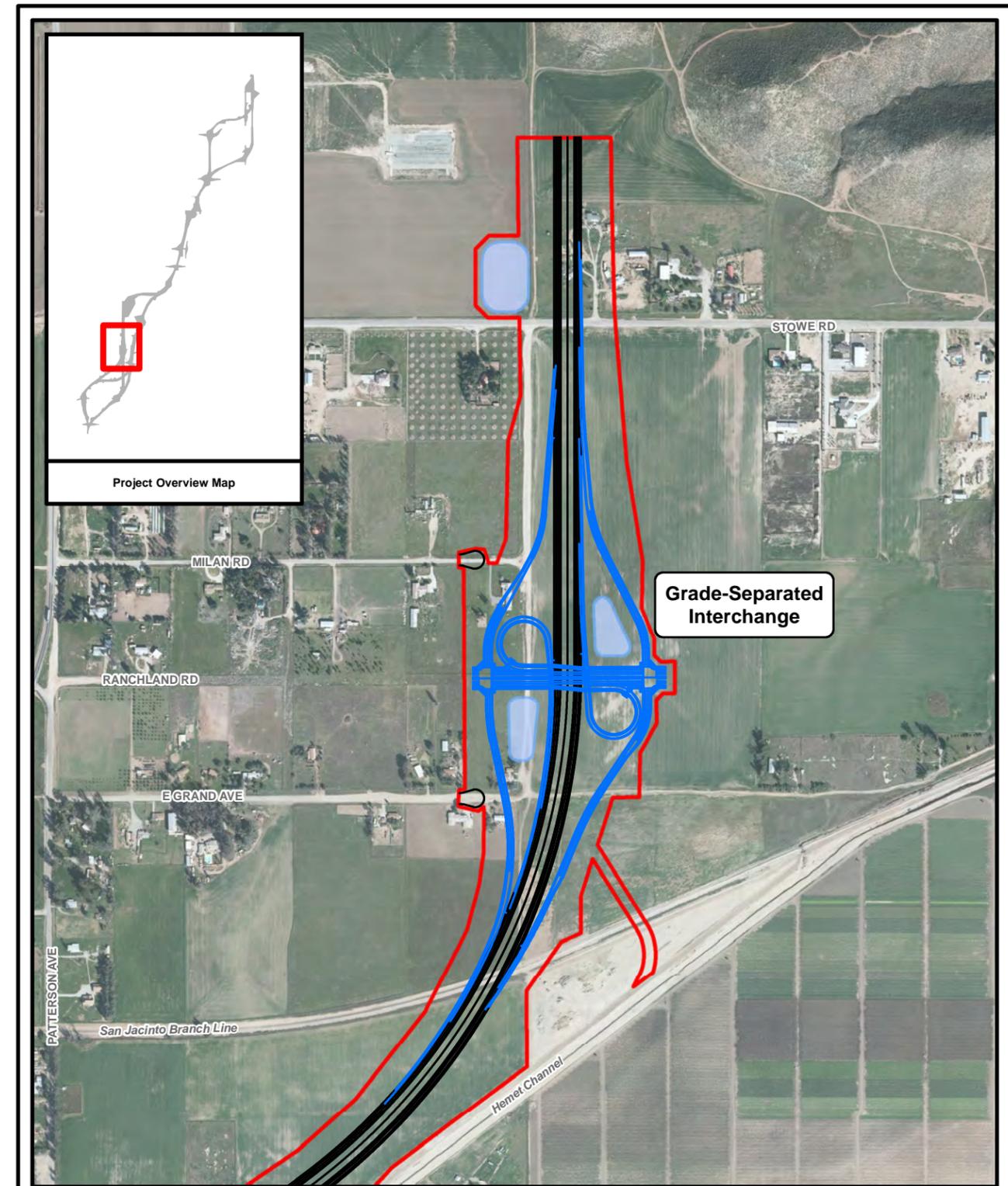
- Opening Year (2020) Features to be Removed Prior to the 20-Year Design Horizon
- Opening Year (2020) Features to Remain at the 20-Year Design Horizon
- Project Impact Area



**Figure 2.2-22 1 of 2  
Roadway Segment E  
Base Condition  
Opening Year (2020)**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

Source: Final Project Description, November 2007

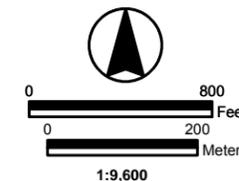


Aerial Date: February 2011, Aero-Graphics, Inc

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**LEGEND**

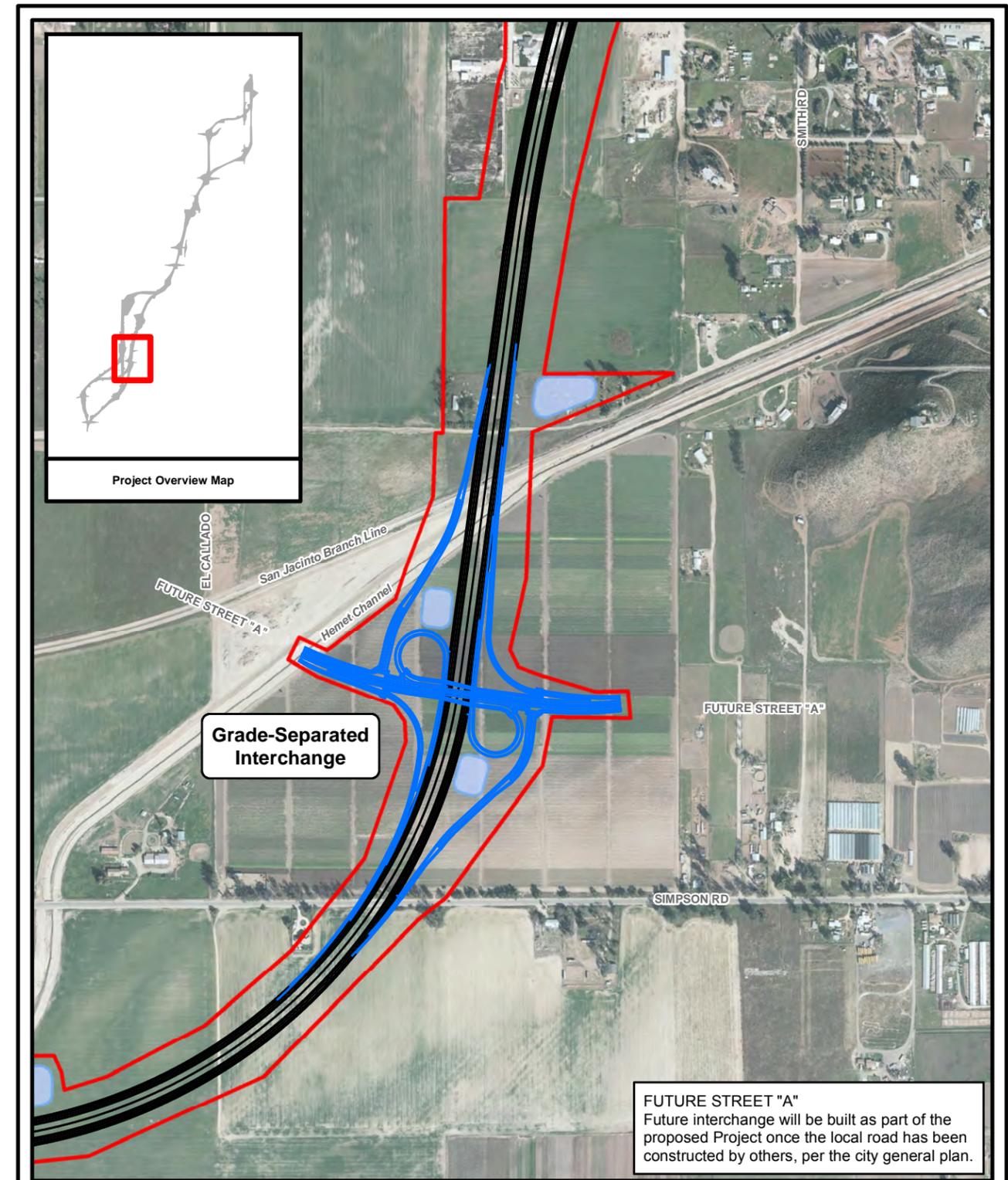
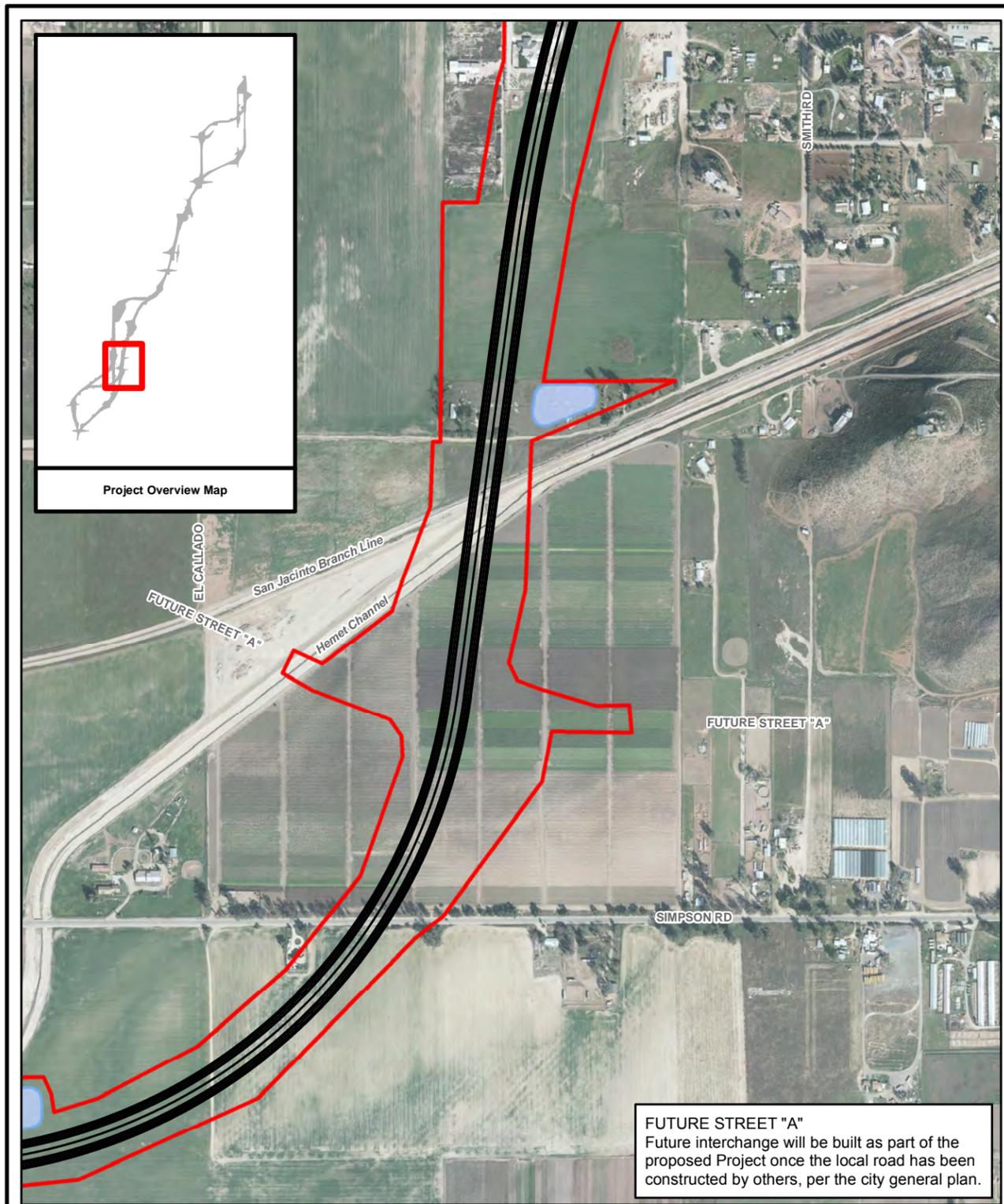
- Project Features to be Constructed prior to the 20-Year Design Horizon<sup>CH</sup>
- Opening Day Features to Remain at the 20-Year Design Horizon<sup>CH</sup>
- Project Impact Area
- Best Management Practices (BMPs)



**Figure 2.2-22 2 of 2  
Roadway Segment E  
Base Condition  
20-Year Design Horizon**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

Source: Final Project Description, November 2007



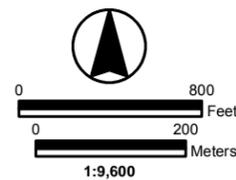
Aerial Date: February 2011, Aero-Graphics, Inc

Aerial Date: February 2011, Aero-Graphics, Inc

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**LEGEND**

- Opening Year (2020) Features to be Removed Prior to the 20-Year Design Horizon
- Opening Year (2020) Features to Remain at the 20-Year Design Horizon
- Project Impact Area



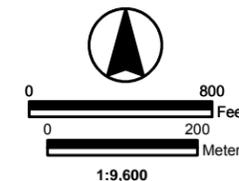
**Figure 2.2-23 1 of 2  
Roadway Segment F  
Base Condition  
Opening Year (2020)**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

Source: Final Project Description, November 2007

**LEGEND**

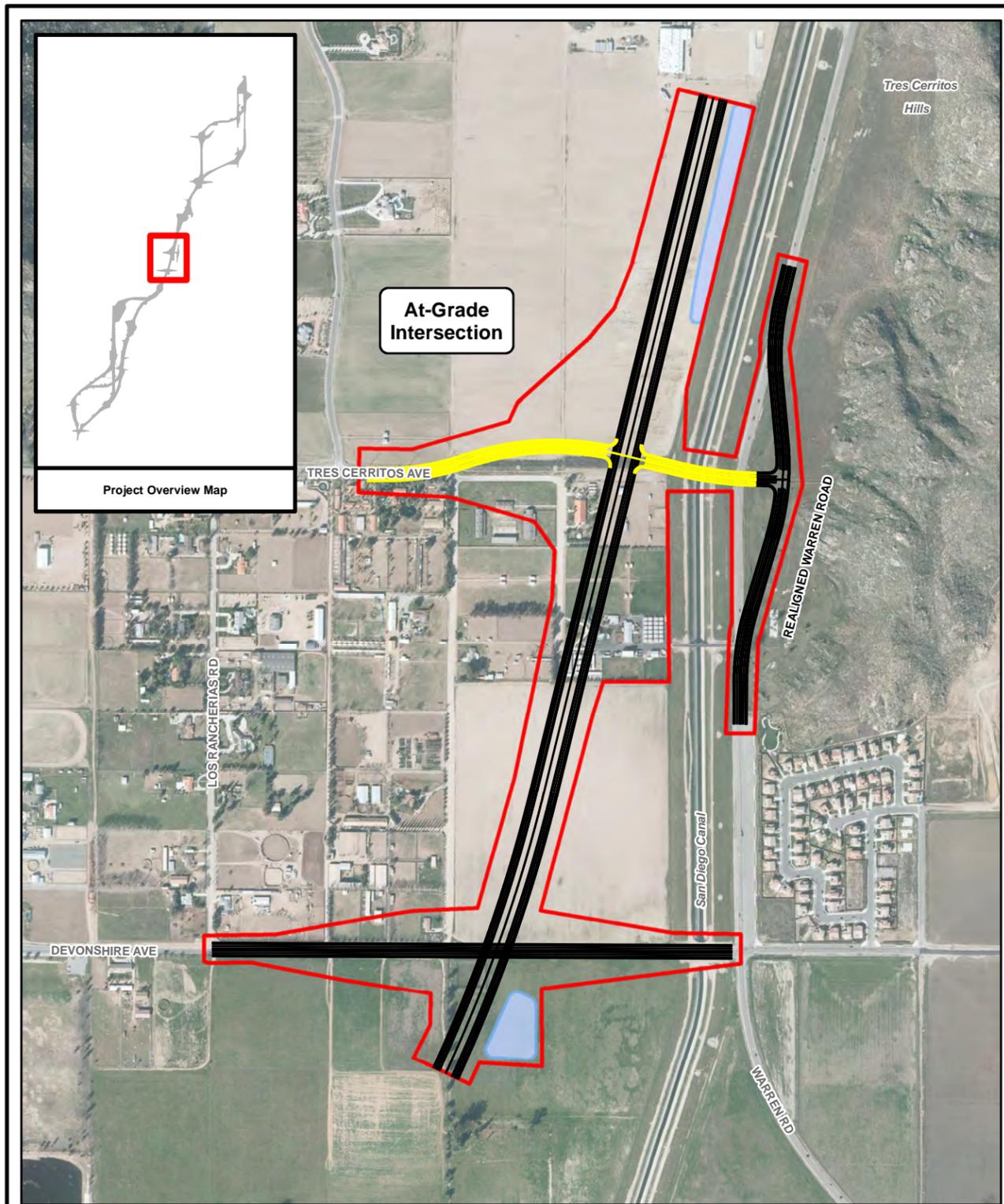
- Project Features to be Constructed prior to the 20-Year Design Horizon<sup>CH</sup>
- Opening Day Features to Remain at the 20-Year Design Horizon<sup>CH</sup>
- Project Impact Area
- Best Management Practices (BMPs)



**Figure 2.2-23 2 of 2  
Roadway Segment F  
Base Condition  
20-Year Design Horizon**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

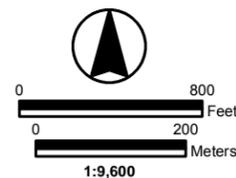
Source: Final Project Description, November 2007



Aerial Date: February 2011, Aero-Graphics, Inc

**LEGEND**

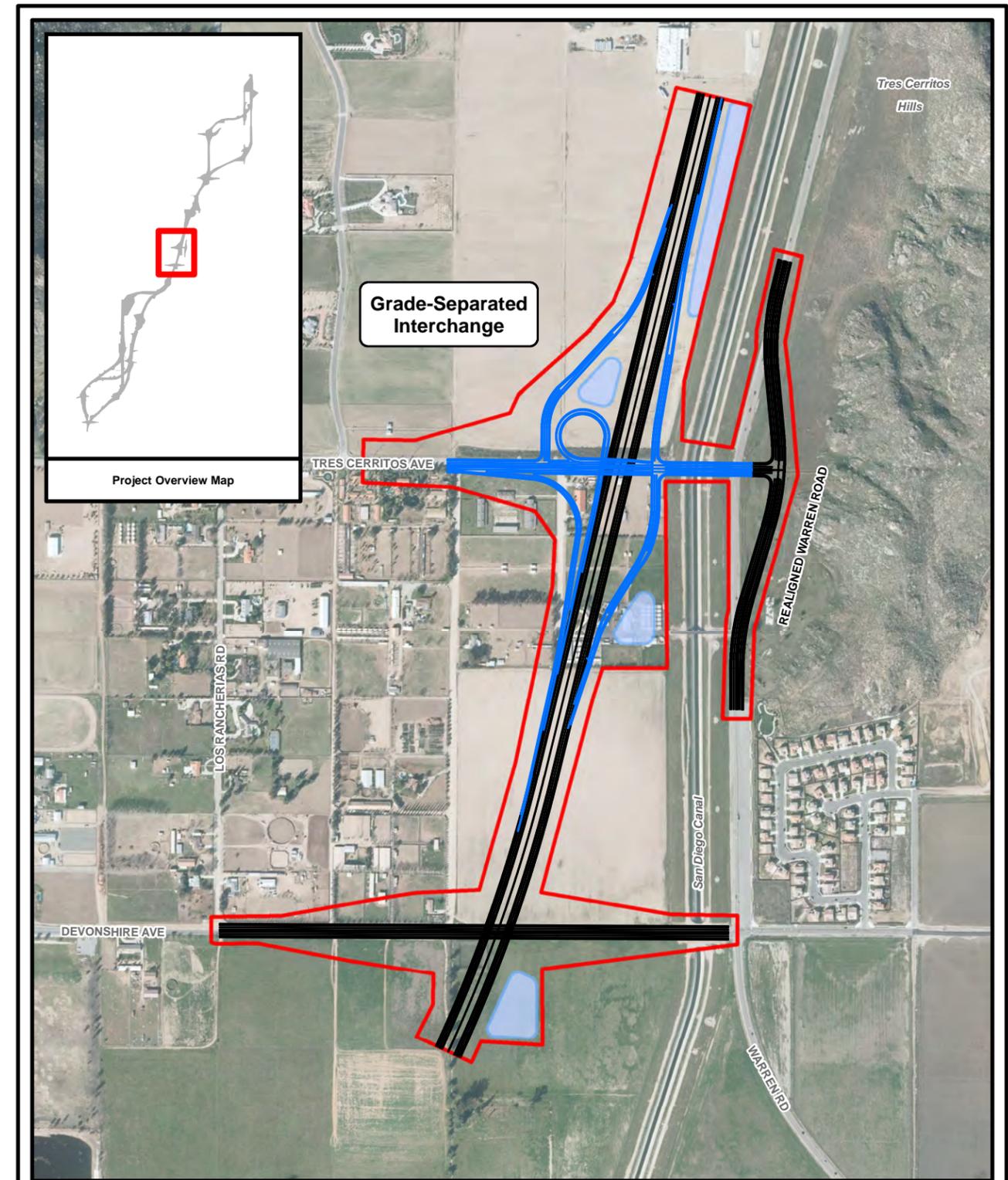
- Opening Year (2020) Features to be Removed Prior to the 20-Year Design Horizon
- Opening Year (2020) Features to Remain at the 20-Year Design Horizon
- Project Impact Area



**Figure 2.2-24 1 of 2  
Roadway Segment I  
Base Condition  
Opening Year (2020)**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

Source: Final Project Description, November 2007

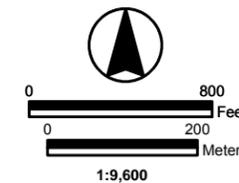


Aerial Date: February 2011, Aero-Graphics, Inc

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**LEGEND**

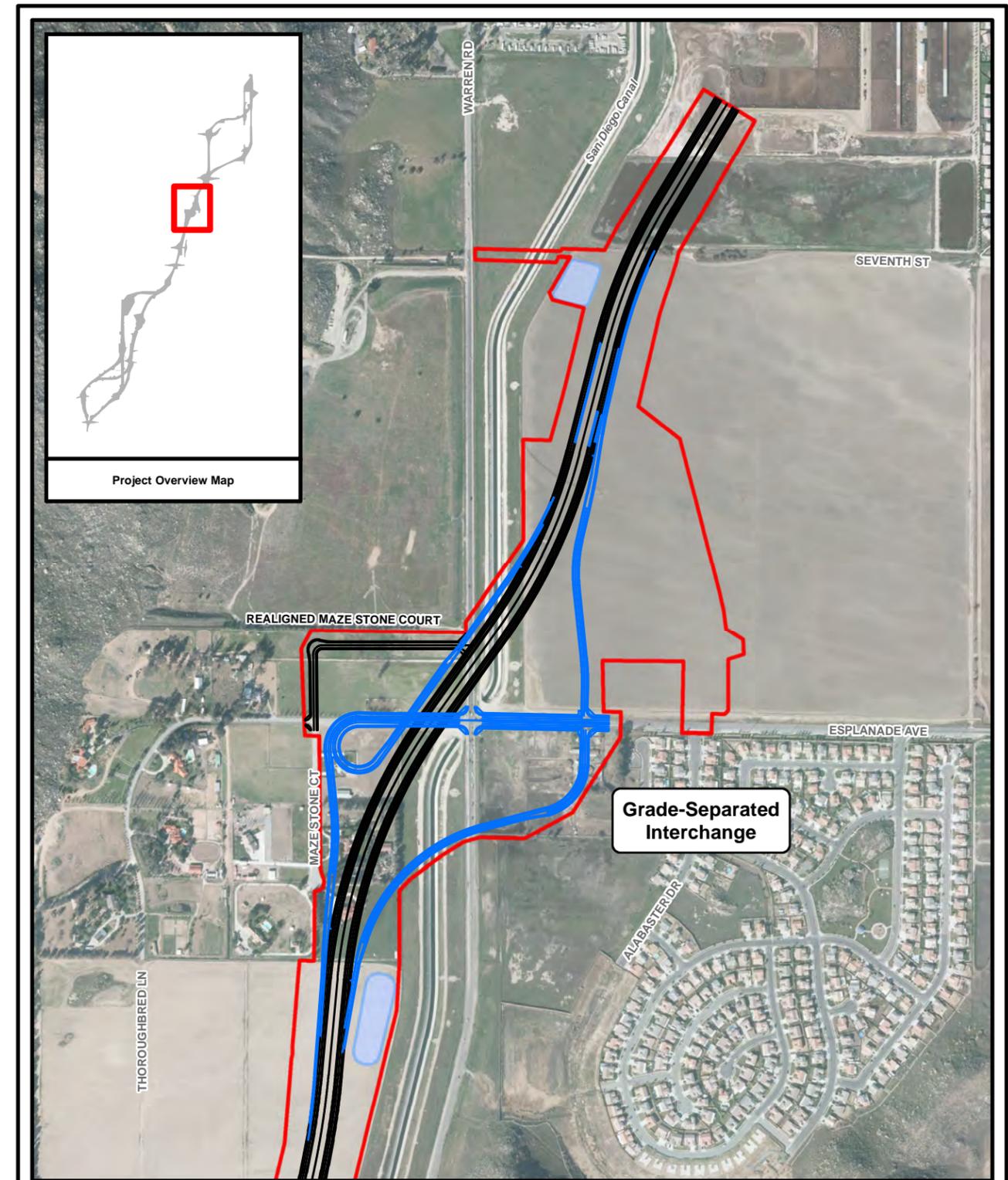
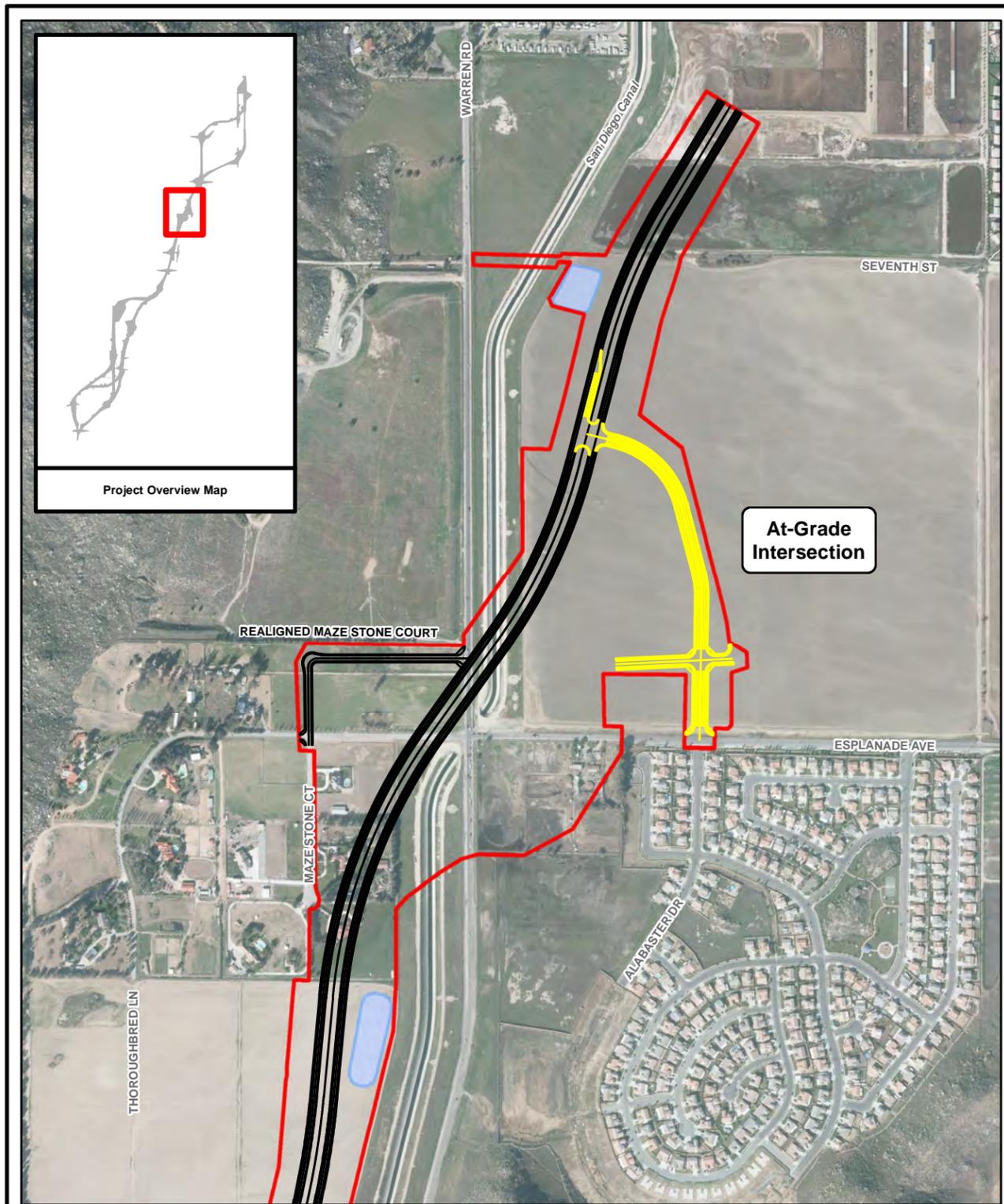
- Project Features to be Constructed prior to the 20-Year Design Horizon<sup>CH</sup>
- Opening Day Features to Remain at the 20-Year Design Horizon<sup>CH</sup>
- Project Impact Area
- Best Management Practices (BMPs)



**Figure 2.2-24 2 of 2  
Roadway Segment I  
Base Condition  
20-Year Design Horizon**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

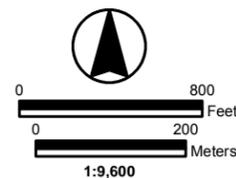
Source: Final Project Description, November 2007



Aerial Date: February 2011, Aero-Graphics, Inc

**LEGEND**

- Opening Year (2020) Features to be Removed Prior to the 20-Year Design Horizon
- Opening Year (2020) Features to Remain at the 20-Year Design Horizon
- Project Impact Area



**Figure 2.2-25a 1 of 2  
Roadway Segment J  
Base Condition  
Opening Year (2020)**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

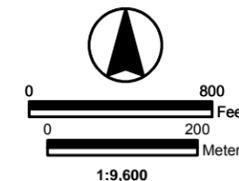
Source: Final Project Description, November 2007

Aerial Date: February 2011, Aero-Graphics, Inc

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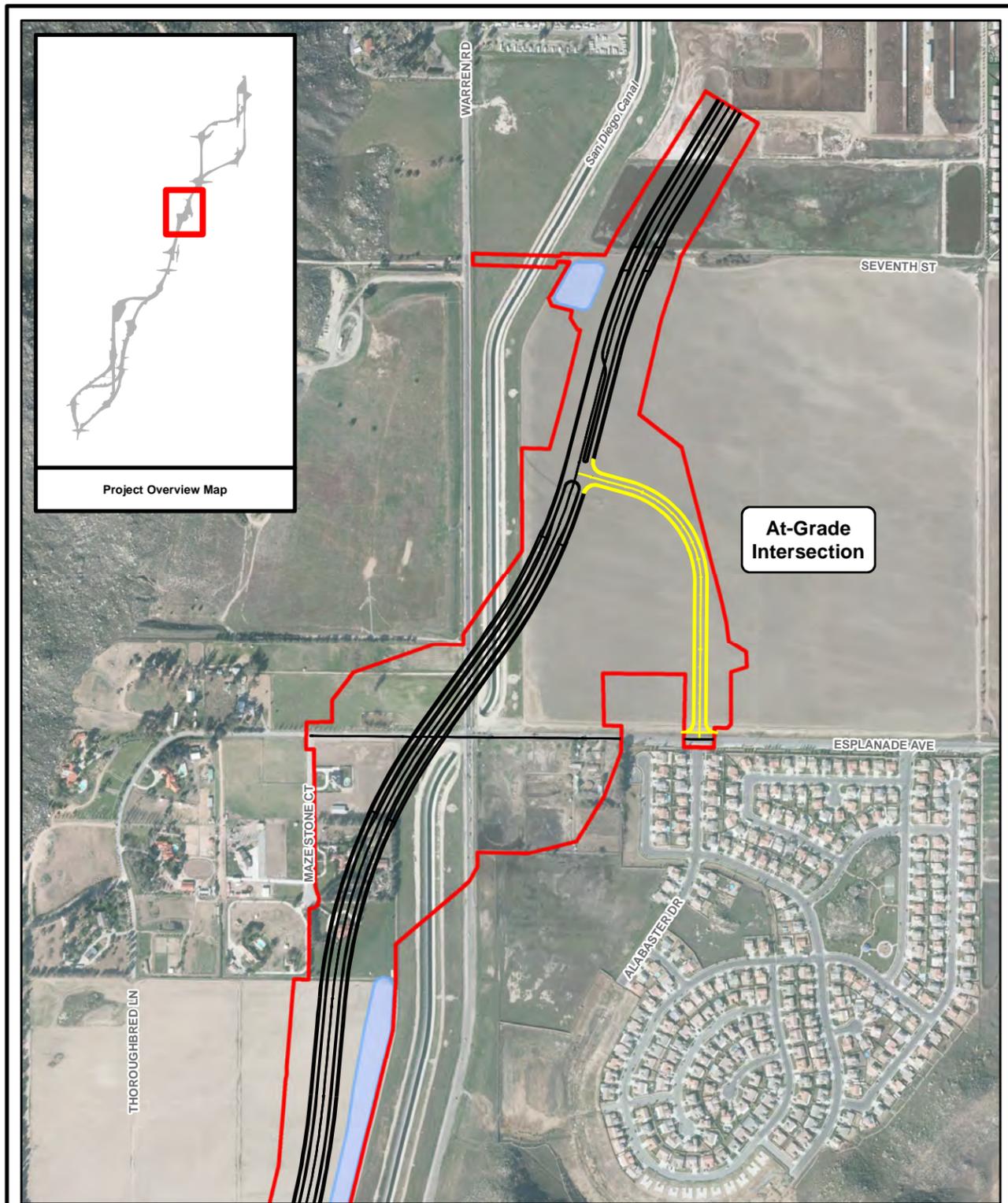
- Project Features to be Constructed prior to the 20-Year Design Horizon<sup>CH</sup>
- Opening Day Features to Remain at the 20-Year Design Horizon<sup>CH</sup>
- Project Impact Area
- Best Management Practices (BMPs)



**Figure 2.2-25a 2 of 2  
Roadway Segment J  
Base Condition  
20-Year Design Horizon**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

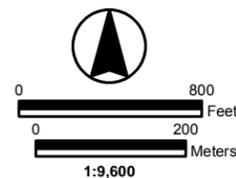
Source: Final Project Description, November 2007



Aerial Date: February 2011, Aero-Graphics, Inc

**LEGEND**

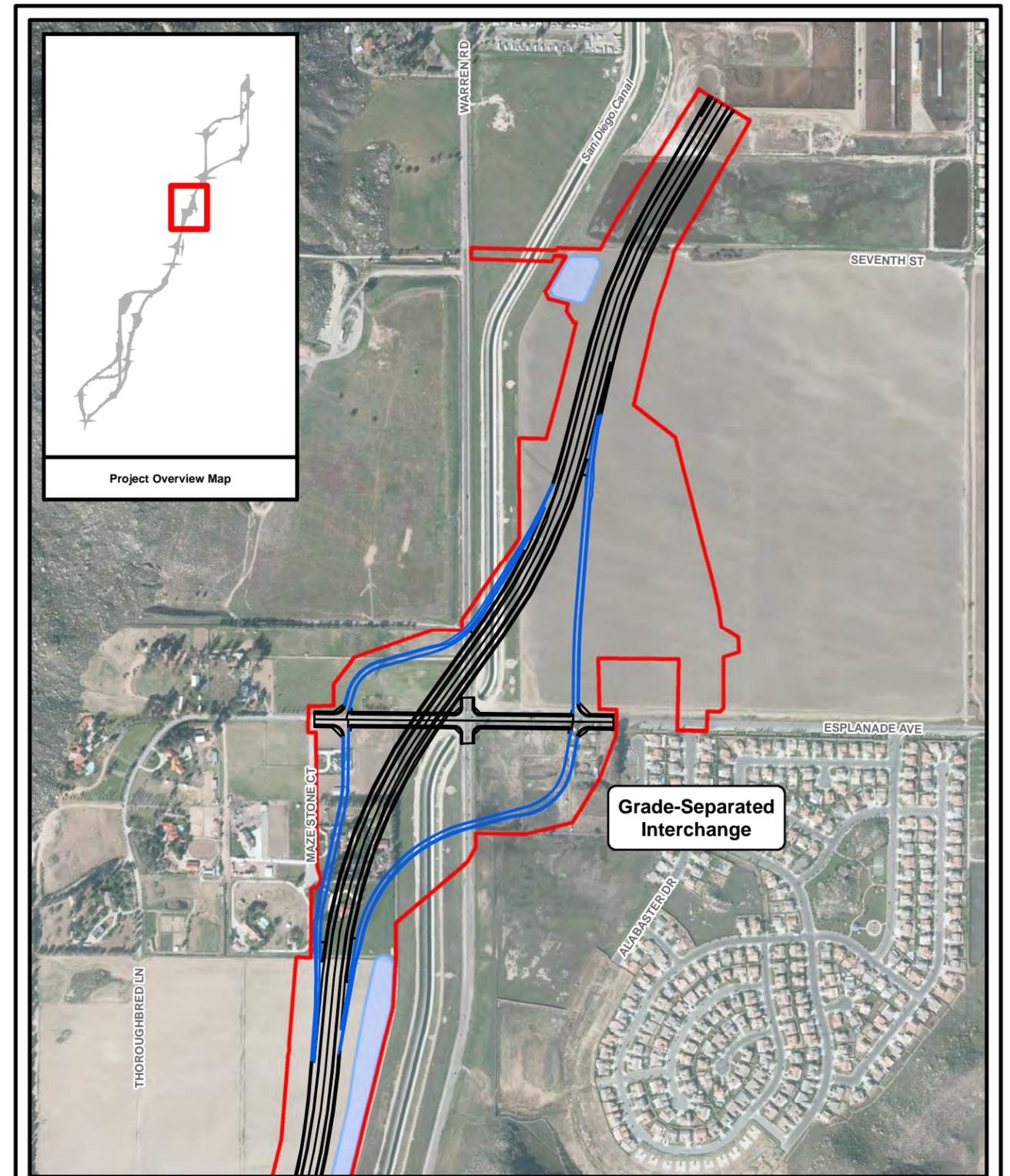
- Opening Year (2020) Features to be Removed Prior to the 20-Year Design Horizon
- Opening Year (2020) Features to Remain at the 20-Year Design Horizon
- Project Impact Area
- Best Management Practices (BMPs)



**Figure 2.2-25b 1 of 2  
Roadway Segment J,  
Build Alternative 1br  
Base Condition  
Opening Year (2020)**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

Source: Final Project Description, November 2007

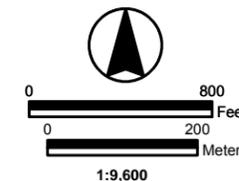


Aerial Date: February 2011, Aero-Graphics, Inc

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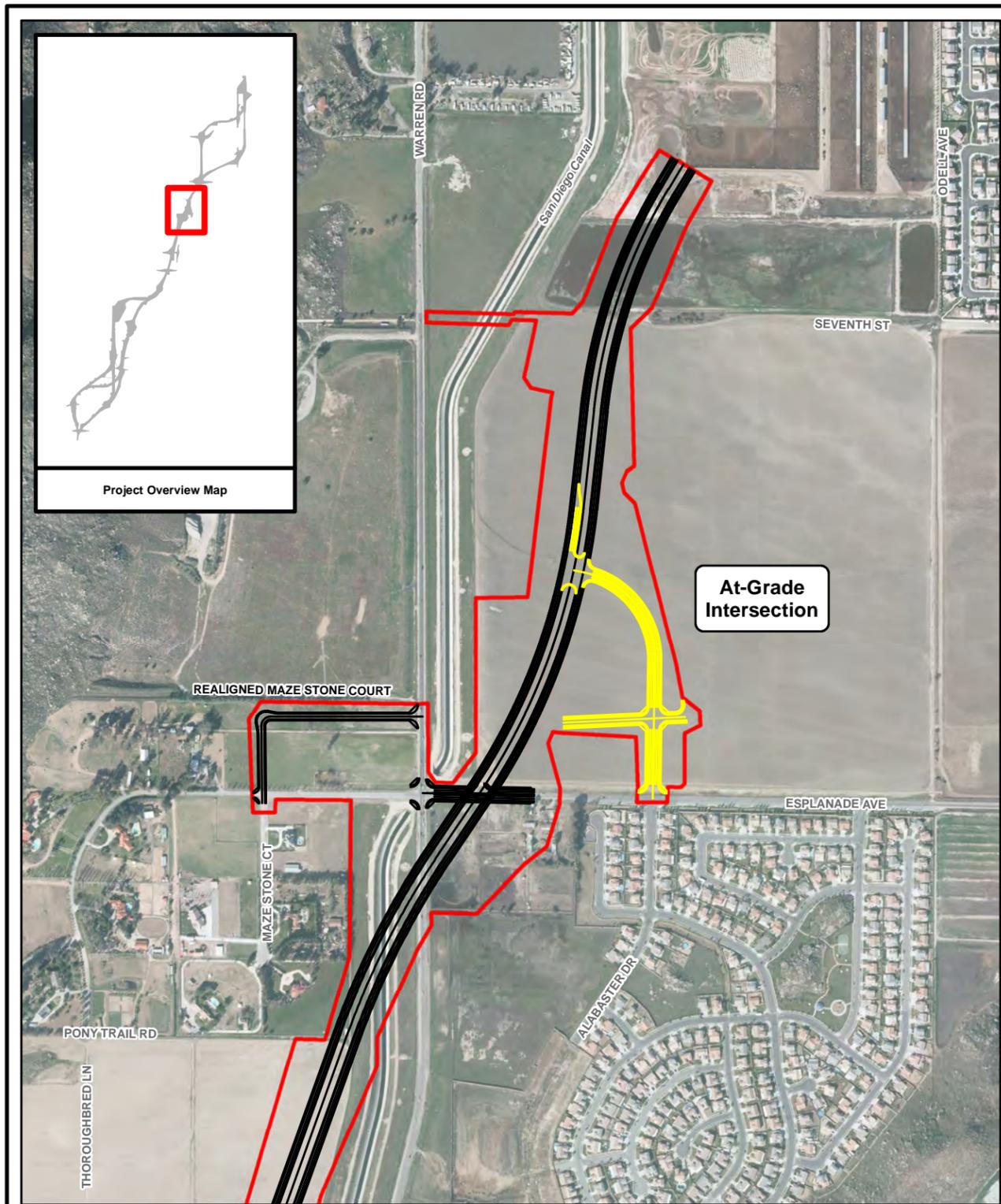
- Project Features to be Constructed prior to the 20-Year Design Horizon
- Opening Day Features to Remain at the 20-Year Design Horizon
- Project Impact Area
- Best Management Practices (BMPs)



**Figure 2.2-25b 2 of 2  
Roadway Segment J,  
Build Alternative 1br  
Base Condition  
20-Year Design Horizon**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

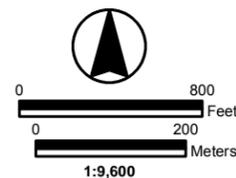
Source: Final Project Description, November 2007



Aerial Date: February 2011, Aero-Graphics, Inc

**LEGEND**

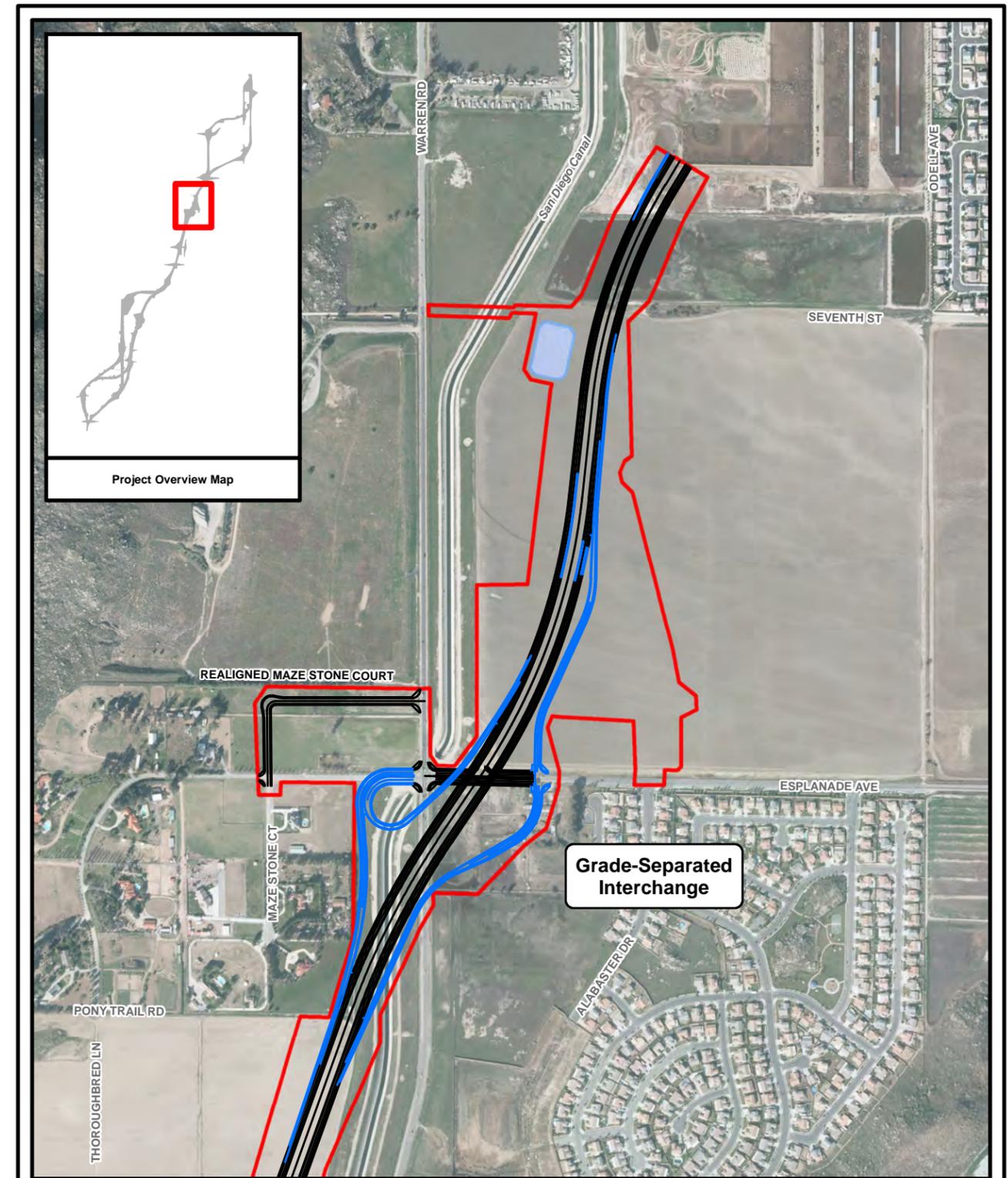
- Opening Year (2020) Features to be Removed Prior to the 20-Year Design Horizon
- Opening Year (2020) Features to Remain at the 20-Year Design Horizon
- Project Impact Area



**Figure 2.2-26 1 of 2  
Roadway Segment K  
Base Condition  
Opening Year (2020)**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

Source: Final Project Description, November 2007

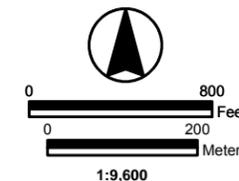


Aerial Date: February 2011, Aero-Graphics, Inc

\\GALTI\PROJ\RCTC\171146\2016\MAPFILES\EIS\CH2\OVP\_OP-PHZ\_K\_B.MXD OVP\_OP-PHZ\_K\_B.PDF 07/19/2016

**LEGEND**

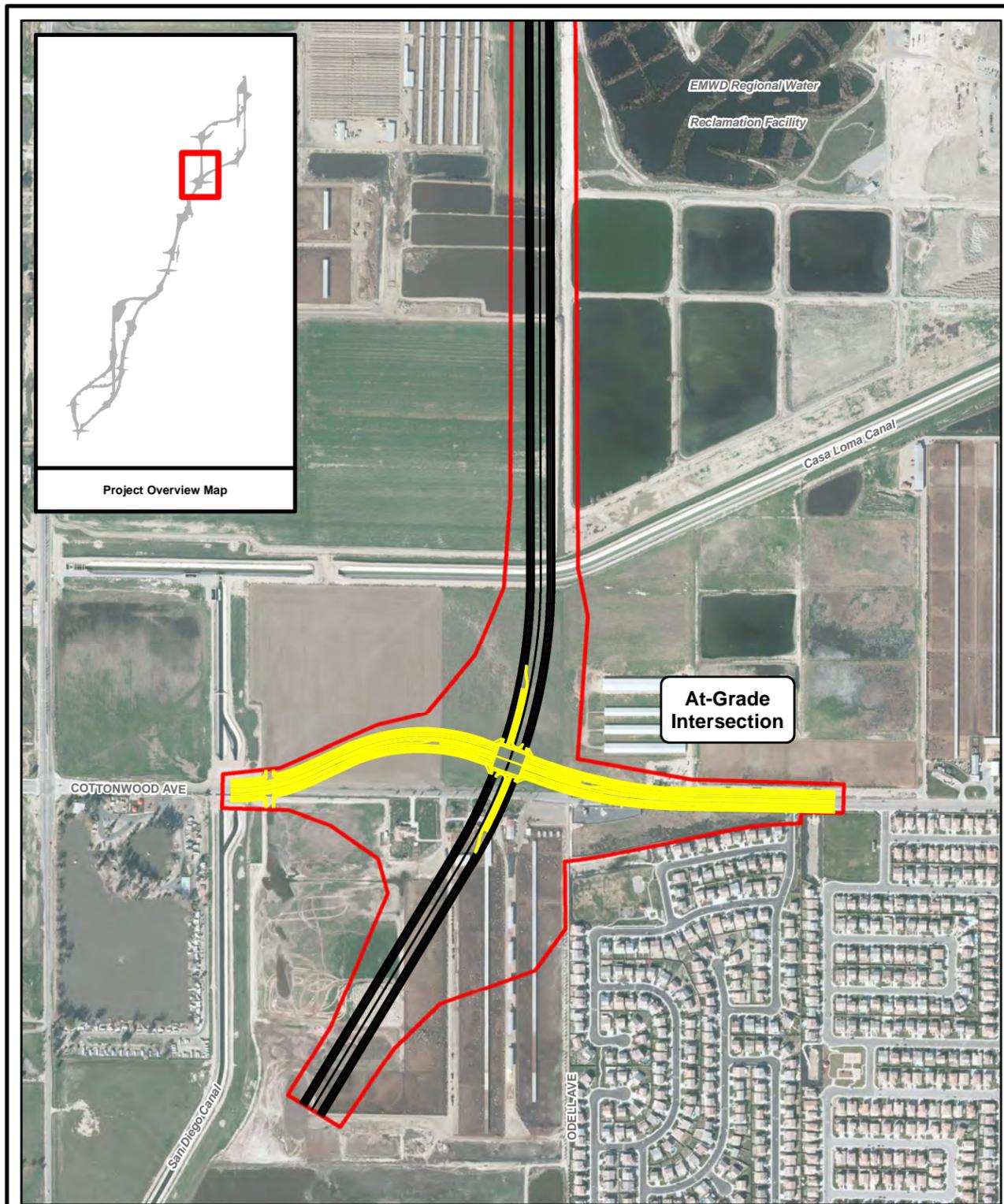
- Project Features to be Constructed prior to the 20-Year Design Horizon<sup>CH</sup>
- Opening Day Features to Remain at the 20-Year Design Horizon<sup>CH</sup>
- Project Impact Area
- Best Management Practices (BMPs)



**Figure 2.2-26 2 of 2  
Roadway Segment K  
Base Condition  
20-Year Design Horizon**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

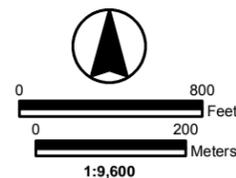
Source: Final Project Description, November 2007



Aerial Date: February 2011, Aero-Graphics, Inc

**LEGEND**

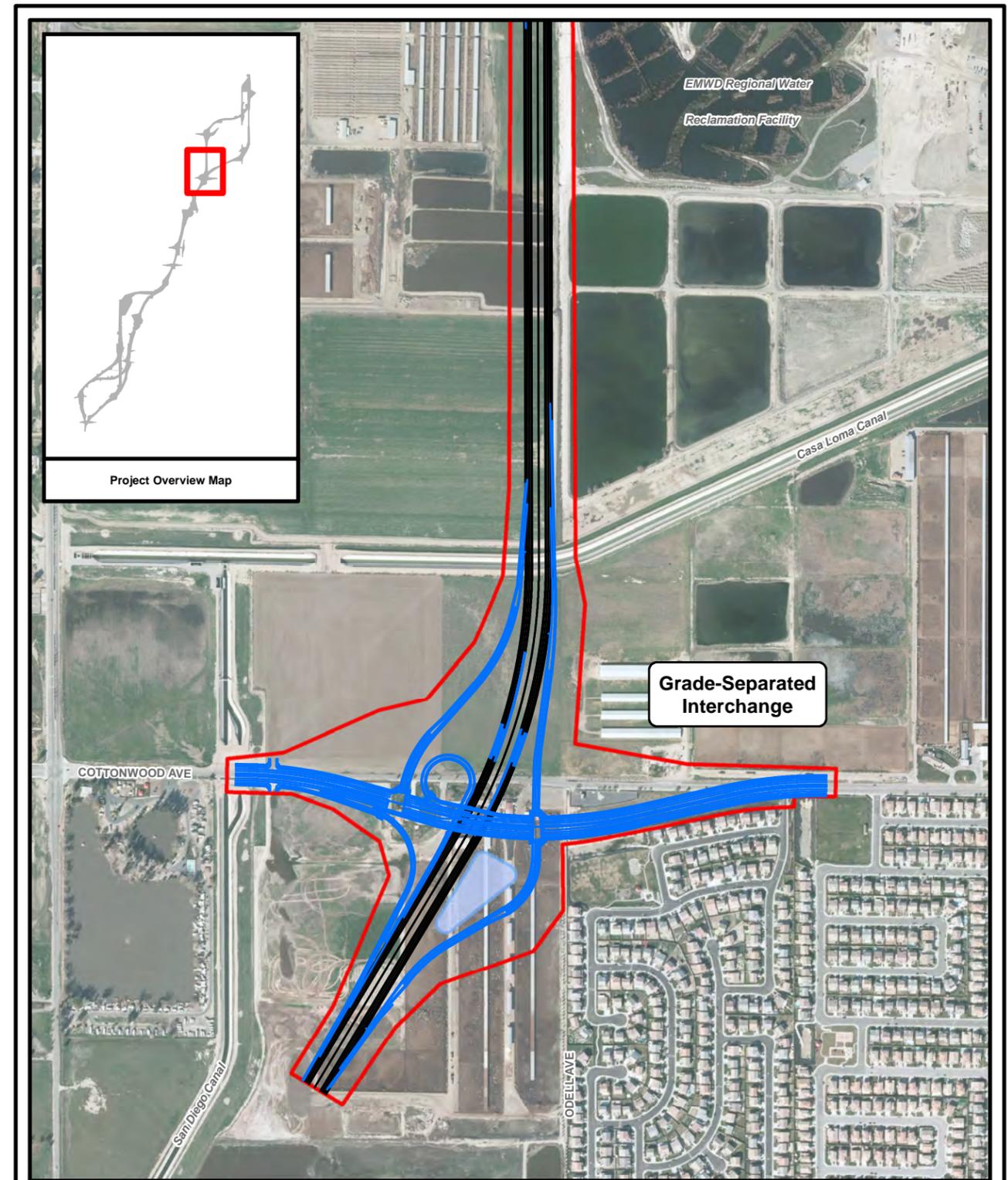
- Opening Year (2020) Features to be Removed Prior to the 20-Year Design Horizon
- Opening Year (2020) Features to Remain at the 20-Year Design Horizon
- Project Impact Area



**Figure 2.2-27a 1 of 2  
Roadway Segment L  
Base Condition  
Opening Year (2020)**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

Source: Final Project Description, November 2007

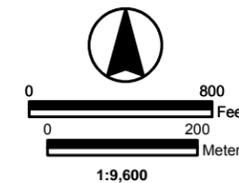


Aerial Date: February 2011, Aero-Graphics, Inc

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**LEGEND**

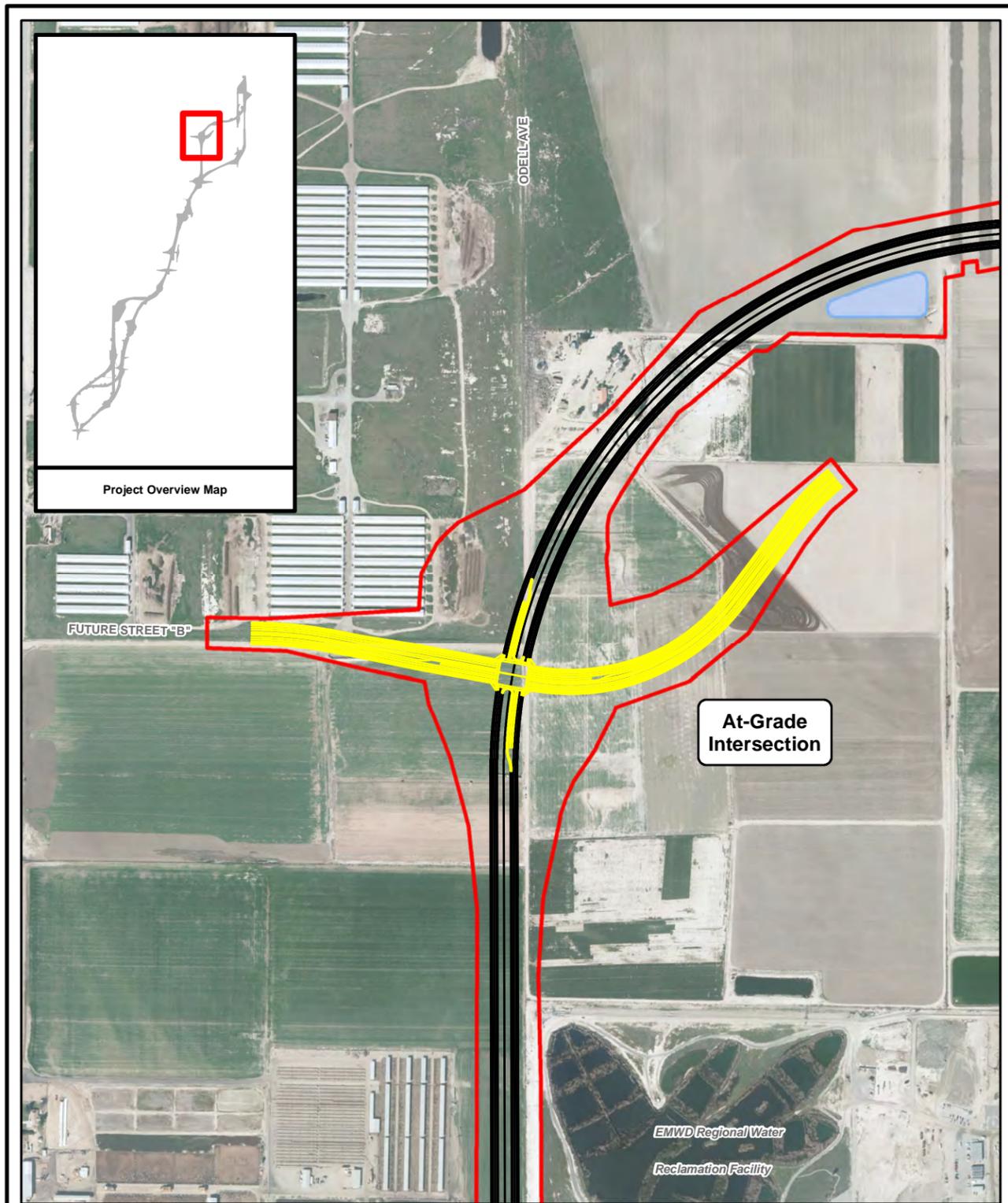
- Project Features to be Constructed prior to the 20-Year Design Horizon<sup>CH</sup>
- Opening Day Features to Remain at the 20-Year Design Horizon<sup>CH</sup>
- Project Impact Area
- Best Management Practices (BMPs)



**Figure 2.2-27a 2 of 2  
Roadway Segment L  
Base Condition  
20-Year Design Horizon**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

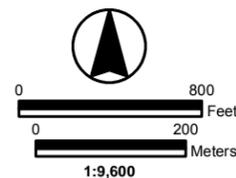
Source: Final Project Description, November 2007



Aerial Date: February 2011, Aero-Graphics, Inc

**LEGEND**

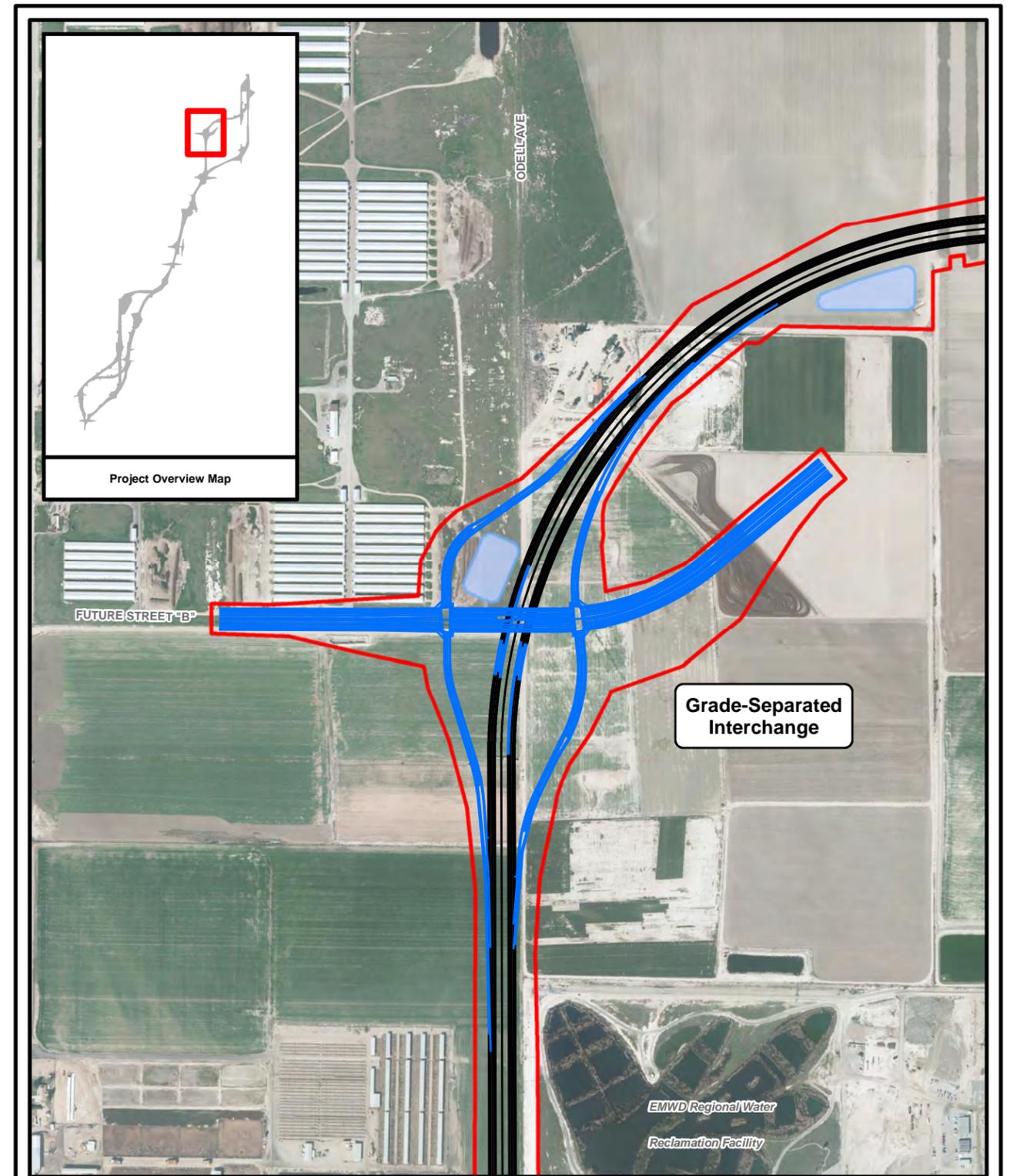
- Opening Year (2020) Features to be Removed Prior to the 20-Year Design Horizon
- Opening Year (2020) Features to Remain at the 20-Year Design Horizon
- Project Impact Area



**Figure 2.2-27b 1 of 2  
Roadway Segment L  
Base Condition  
Opening Year (2020)**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

Source: Final Project Description, November 2007

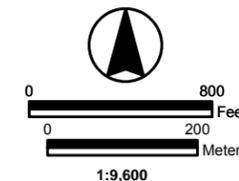


Aerial Date: February 2011, Aero-Graphics, Inc

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**LEGEND**

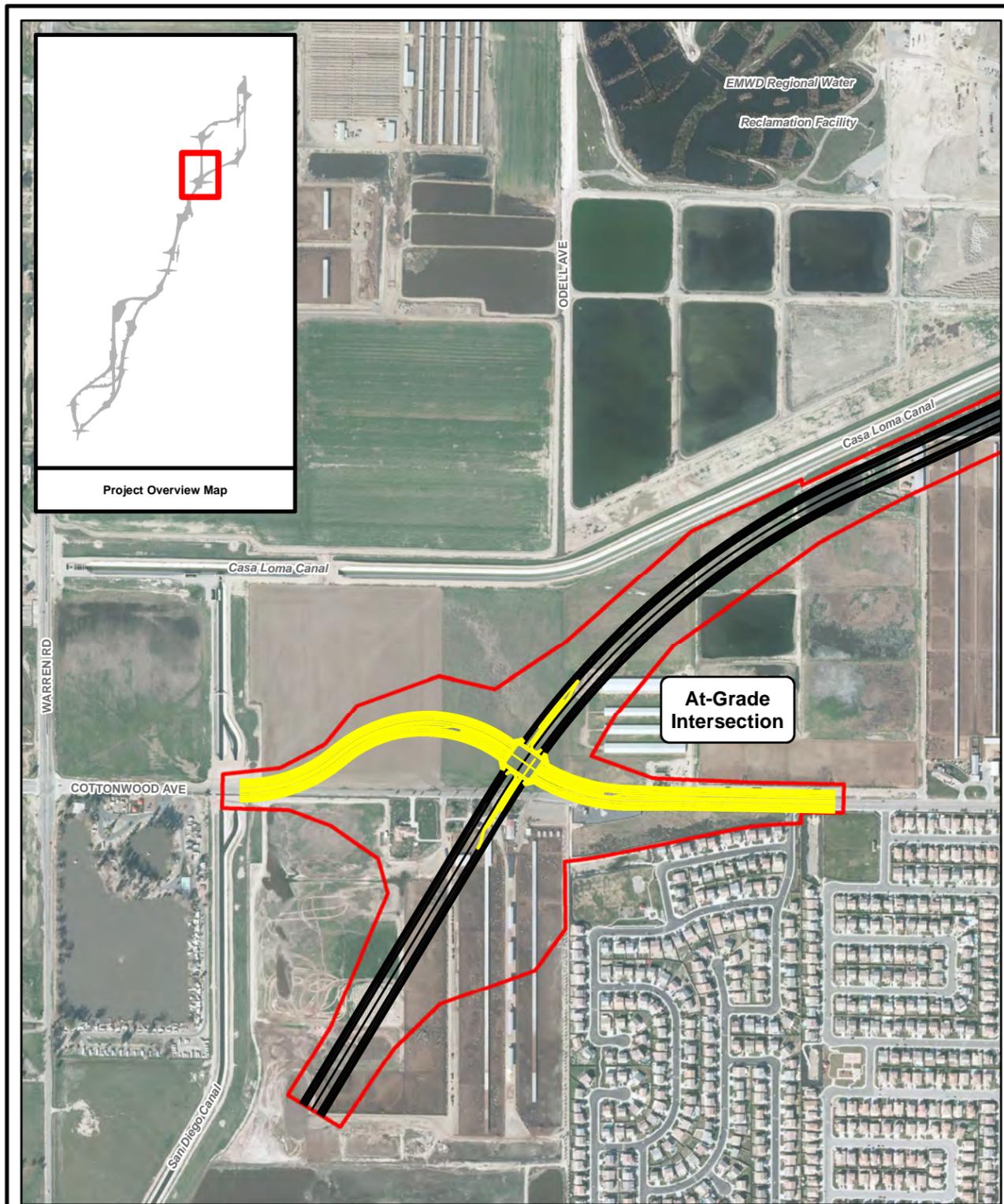
- Project Features to be Constructed prior to the 20-Year Design Horizon<sup>CH</sup>
- Opening Day Features to Remain at the 20-Year Design Horizon<sup>CH</sup>
- Project Impact Area
- Best Management Practices (BMPs)



**Figure 2.2-27b 2 of 2  
Roadway Segment L  
Base Condition  
20-Year Design Horizon**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

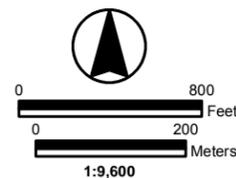
Source: Final Project Description, November 2007



Aerial Date: February 2011, Aero-Graphics, Inc

**LEGEND**

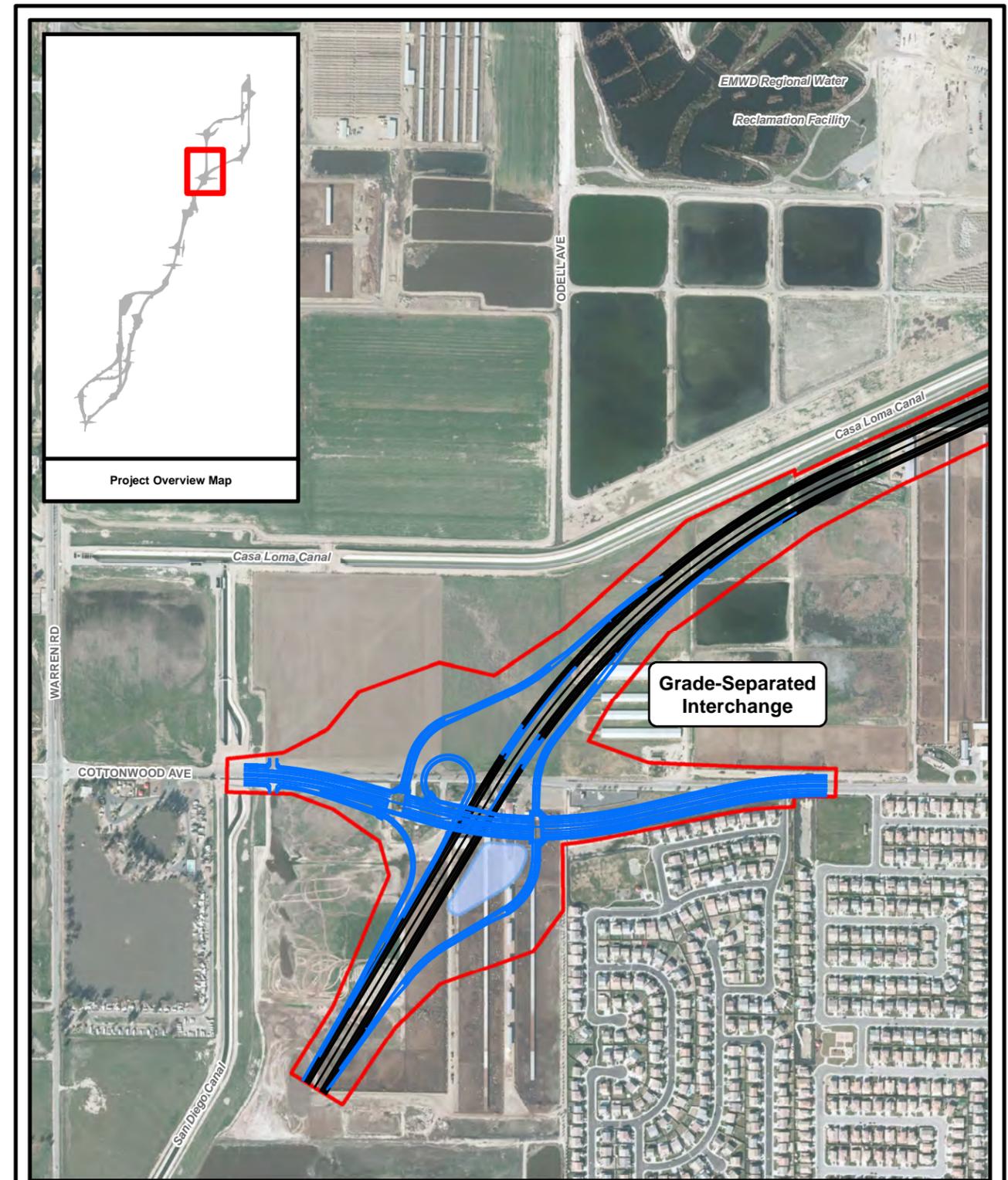
- Opening Year (2020) Features to be Removed Prior to the 20-Year Design Horizon
- Opening Year (2020) Features to Remain at the 20-Year Design Horizon
- Project Impact Area



**Figure 2.2-28a 1 of 2  
Roadway Segment M  
Base Condition  
Opening Year (2020)**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

Source: Final Project Description, November 2007

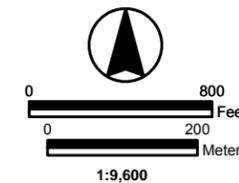


Aerial Date: February 2011, Aero-Graphics, Inc

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**LEGEND**

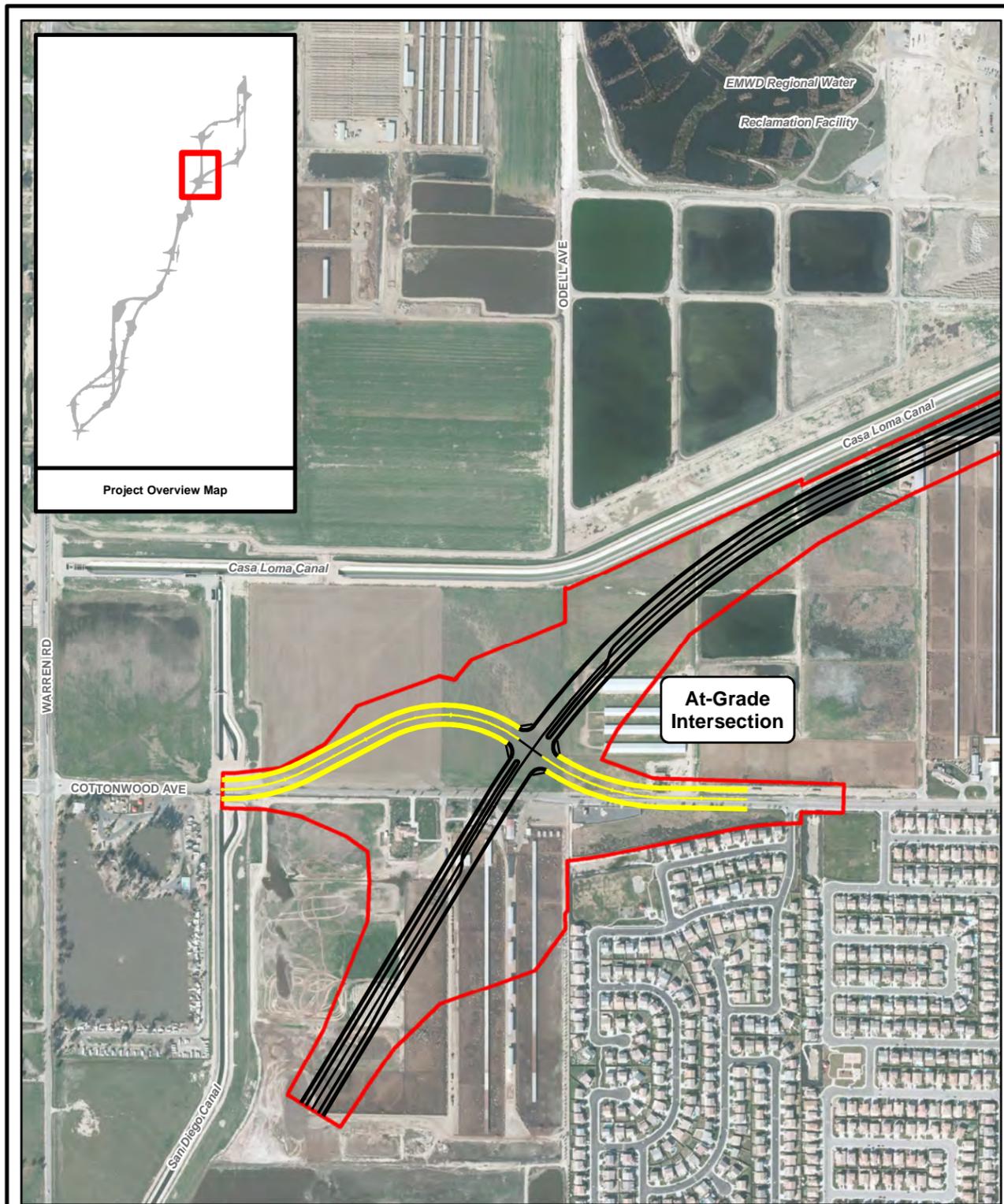
- Project Features to be Constructed prior to the 20-Year Design Horizon<sup>CH</sup>
- Opening Day Features to Remain at the 20-Year Design Horizon<sup>CH</sup>
- Project Impact Area
- Best Management Practices (BMPs)



**Figure 2.2-28a 2 of 2  
Roadway Segment M  
Base Condition  
20-Year Design Horizon**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

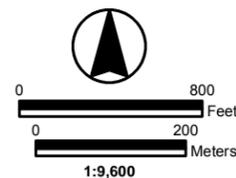
Source: Final Project Description, November 2007



Aerial Date: February 2011, Aero-Graphics, Inc

**LEGEND**

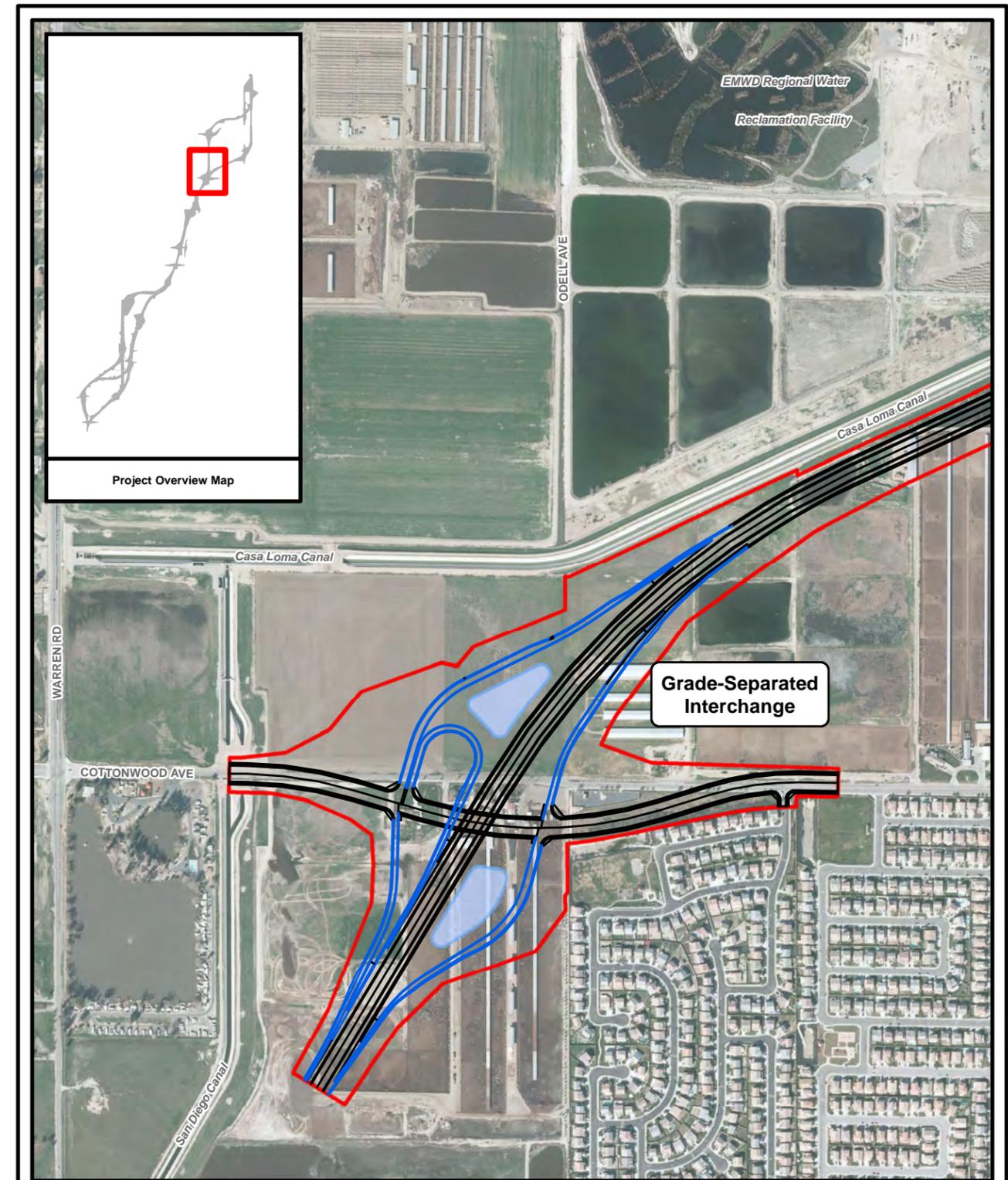
- Opening Year (2020) Features to be Removed Prior to the 20-Year Design Horizon
- Opening Year (2020) Features to Remain at the 20-Year Design Horizon
- Project Impact Area



**Figure 2.2-28b 1 of 2  
Roadway Segment M,  
Build Alternative 1br  
Base Condition  
Opening Year (2020)**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

Source: Final Project Description, November 2007

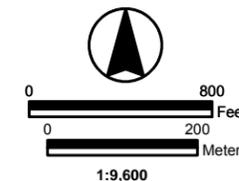


Aerial Date: February 2011, Aero-Graphics, Inc

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**LEGEND**

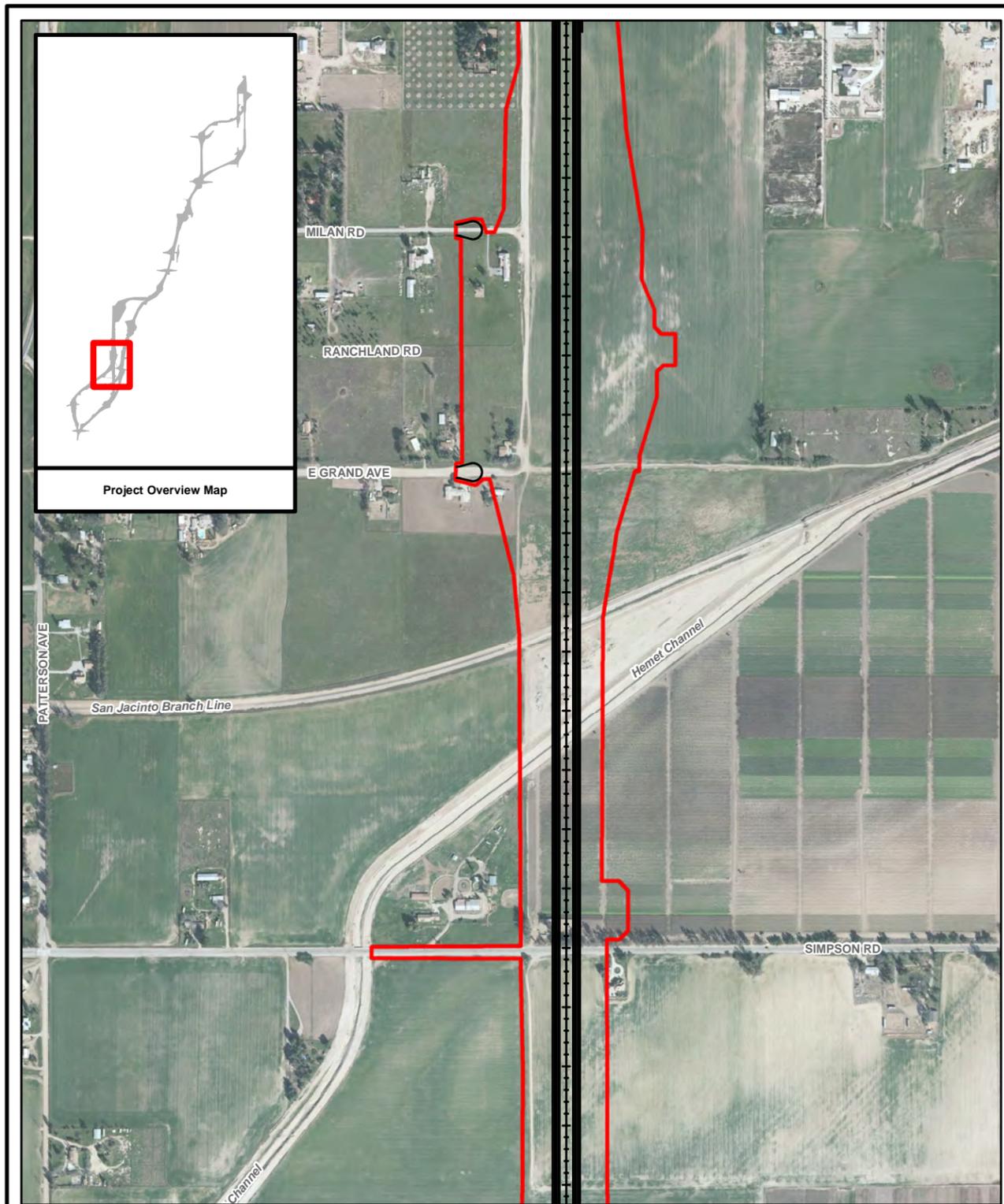
- Project Features to be Constructed prior to the 20-Year Design Horizon
- Opening Day Features to Remain at the 20-Year Design Horizon
- Project Impact Area
- Best Management Practices (BMPs)



**Figure 2.2-28b 2 of 2  
Roadway Segment M,  
Build Alternative 1br  
Base Condition  
20-Year Design Horizon**

Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

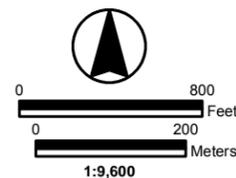
Source: Final Project Description, November 2007



Aerial Date: February 2011, Aero-Graphics, Inc

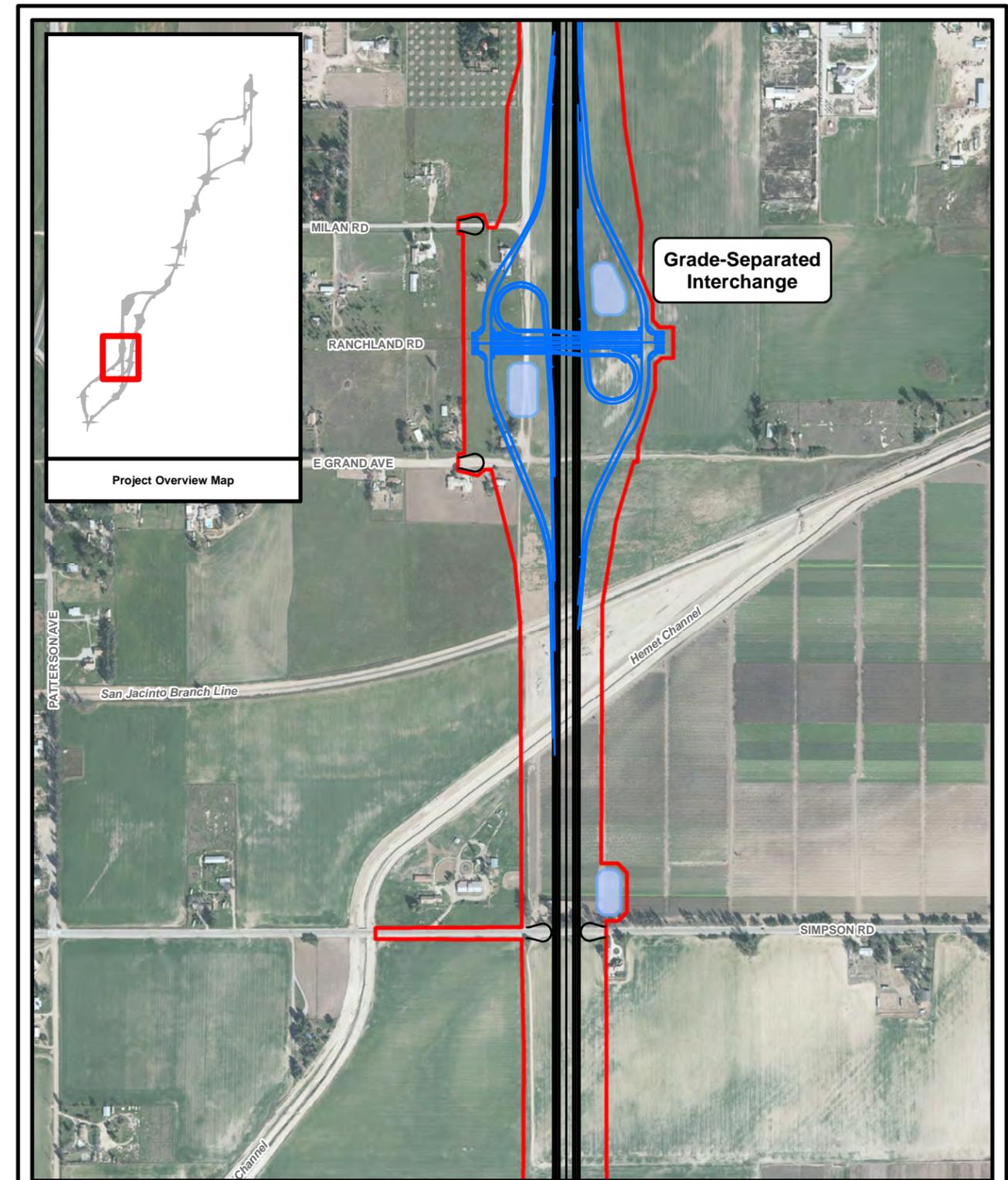
**LEGEND**

- Opening Year (2020) Features to be Removed Prior to the 20-Year Design Horizon
- Opening Year (2020) Features to Remain at the 20-Year Design Horizon
- Project Impact Area



**Figure 2.2-29 1 of 2  
Roadway Segment C  
Design Option 1b1  
Opening Year (2020)**  
Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

Source: Final Project Description, November 2007

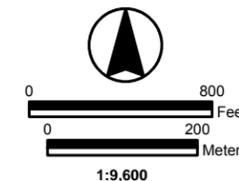


Aerial Date: February 2011, Aero-Graphics, Inc

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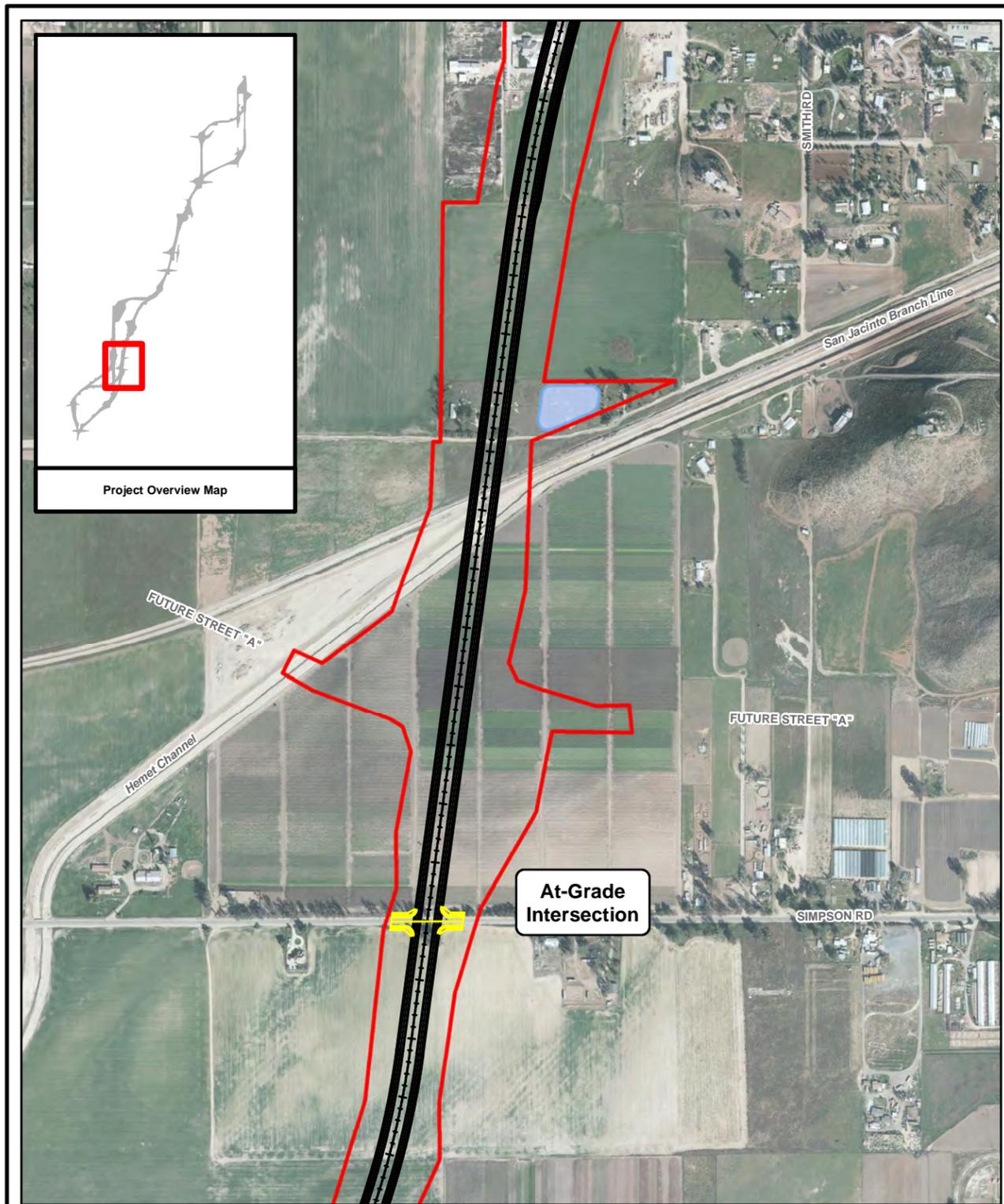
**LEGEND**

- Project Features to be Constructed prior to the 20-Year Design Horizon<sup>CH</sup>
- Opening Day Features to Remain at the 20-Year Design Horizon<sup>CH</sup>
- Project Impact Area
- Best Management Practices (BMPs)



**Figure 2.2-29 2 of 2  
Roadway Segment C  
Design Option 1b1  
20-Year Design Horizon**  
Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

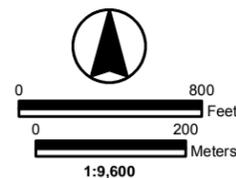
Source: Final Project Description, November 2007



Aerial Date: February 2011, Aero-Graphics, Inc

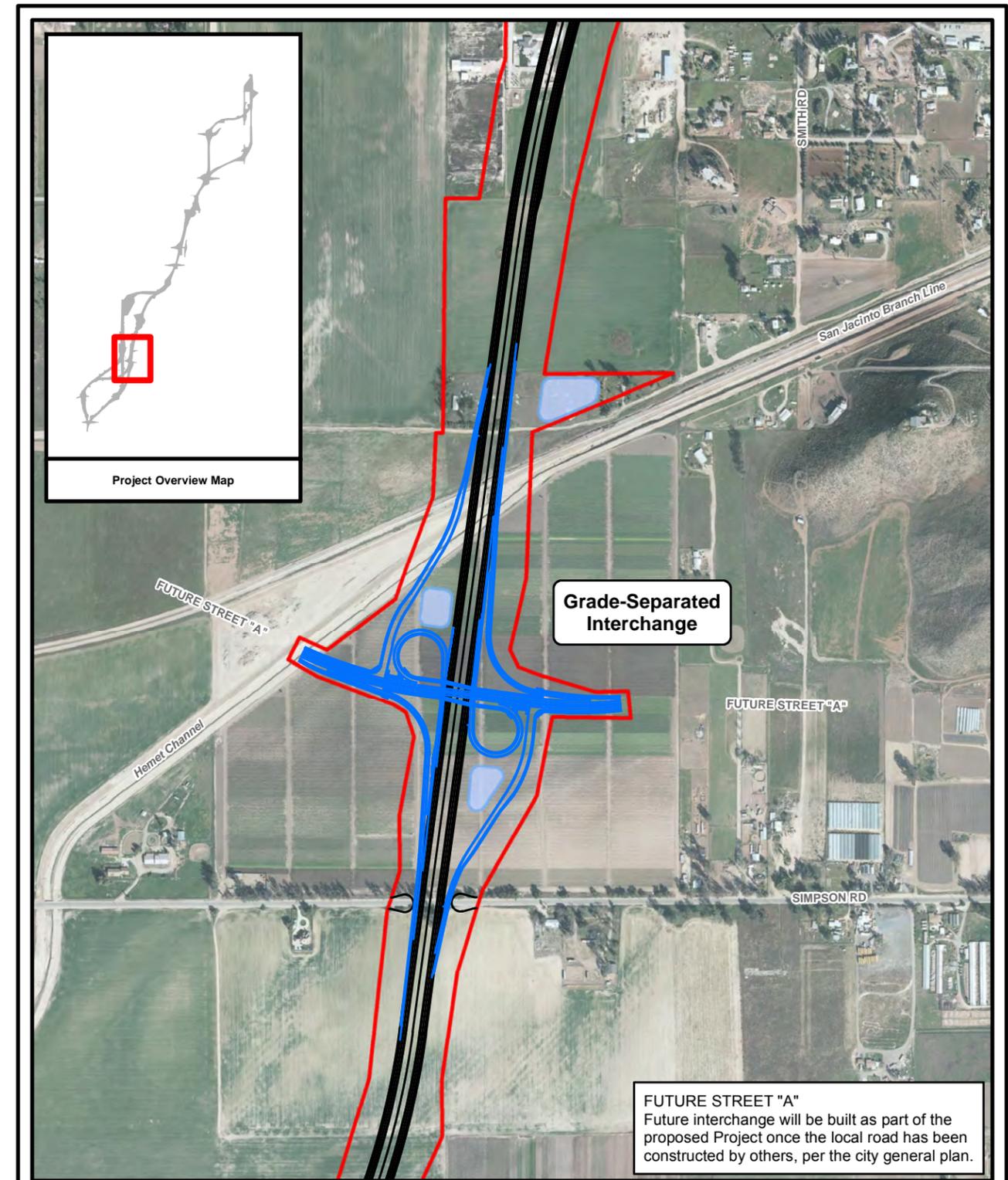
**LEGEND**

- Opening Year (2020) Features to be Removed Prior to the 20-Year Design Horizon
- Opening Year (2020) Features to Remain at the 20-Year Design Horizon
- Project Impact Area



**Figure 2.2-30 1 of 2  
Roadway Segment D  
Design Option 2b1  
Opening Year (2020)**  
Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

Source: Final Project Description, November 2007

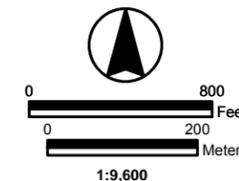


Aerial Date: February 2011, Aero-Graphics, Inc

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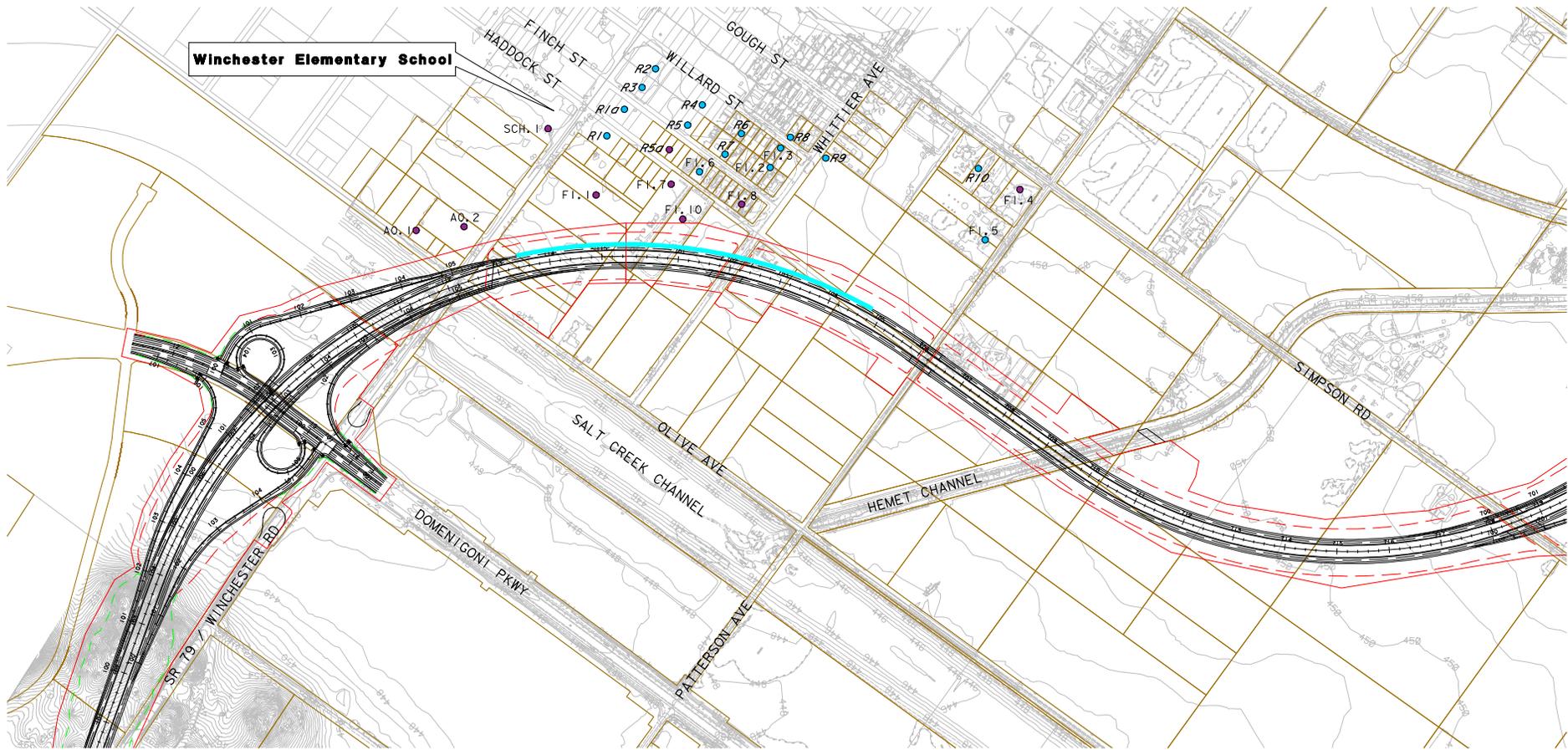
**LEGEND**

- Project Features to be Constructed prior to the 20-Year Design Horizon<sup>CH</sup>
- Opening Day Features to Remain at the 20-Year Design Horizon<sup>CH</sup>
- Project Impact Area
- Best Management Practices (BMPs)



**Figure 2.2-30 2 of 2  
Roadway Segment D  
Design Option 2b1  
20-Year Design Horizon**  
Final Environmental Impact Report/  
Environmental Impact Statement  
State Route 79 Realignment Project

Source: Final Project Description, November 2007



\*Noise Barrier 1A-E1 is also a proposed noise barrier at this interchange. (See Figure 3.2-33 Map 1)

**LEGEND:**

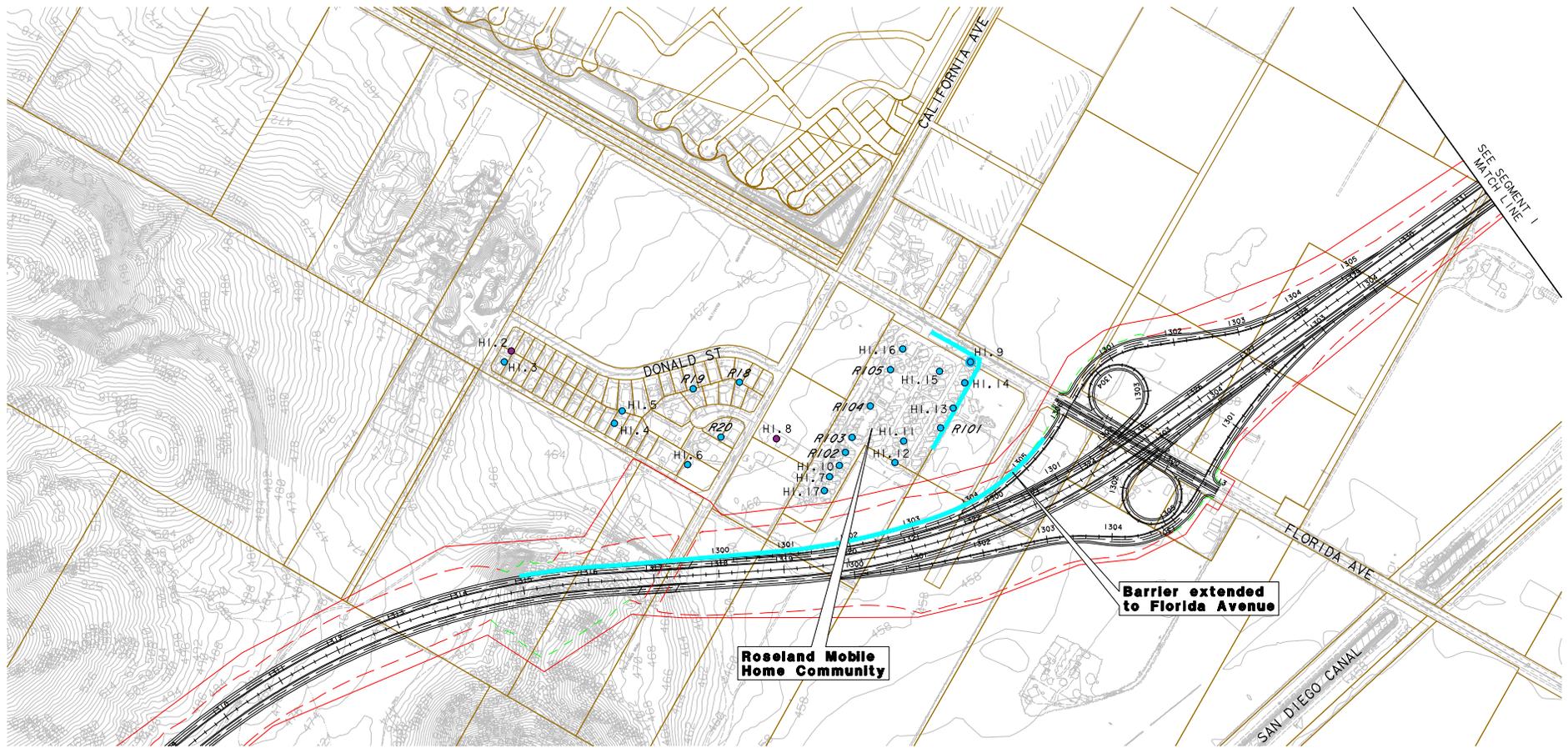
- Right-of-Way
- Parcel Boundary
- Cut
- Fill
- Reasonable and Feasible Noise Barrier\*
- Noise Receiver
- Measured & Modeled
- Modeled



Source: Noise Abatement Decision Report (July 2010)

\*Recommended barrier to provide at least a 5 dB noise reduction as required by the Caltrans Traffic Noise Analysis Protocol.

**Figure 3.2-33 Map 10**  
**Location of Recommended Noise Barriers**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project  
**Noise Barrier 2A-F1**  
**Alternative 2A**  
**Community of Winchester (Segments A and F)**



\*Noise Barrier 2B-H1 also applies to Design Option 2B1.  
 \*Noise Barriers 1A-G1 and 1B-G2 are also proposed noise barriers at this interchange. (See Figure 3.2-33 Map 2)

**LEGEND:**

- Right-of-Way
- Parcel Boundary
- - - Cut
- - - Fill
- Reasonable and Feasible Noise Barrier\*
- Noise Receiver
- Measured & Modeled
- Modeled



\*Recommended barrier to provide at least a 5 dB noise reduction as required by the Caltrans Traffic Noise Analysis Protocol.

**Figure 3.2-33 Map 11**  
**Location of Recommended Noise Barriers**  
 Final Environmental Impact Report/  
 Environmental Impact Statement  
 State Route 79 Realignment Project  
 Noise Barriers 2A-H1 and 2B-H1  
 Alternatives 2A and 2B  
 City of Hemet (Segment H)