

# Chapter 1 Proposed Project

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## 1.1 Introduction

The California Department of Transportation (Caltrans or Department), in collaboration with stakeholders, proposes to construct improvements consisting of managed lanes, pedestrian/bicycle facilities, and intelligent transportation system (ITS) elements along Interstate 80 (I-80) and U.S. Route 50 (US-50) from Kidwell Road near the eastern Solano County boundary (near Dixon), through Yolo County to West El Camino Avenue near the I-80/Interstate 5 (I-5) interchange, and to the US-50/I-5 interchange in Sacramento County (Figure 1.1-1).

Caltrans, as assigned by the Federal Highway Administration (FHWA), is the lead agency under the National Environmental Policy Act (NEPA) for the Caltrans EA 03-3H900 Yolo 80 Corridor Improvements Project (project). Caltrans is also the lead agency under the California Environmental Quality Act (CEQA).

The project is programmed in the State Transportation Improvement Program, Regional Surface Transportation Program, Congestion Management and Air Quality Improvement Program, and California Transportation Commission Trade Corridor Enhancement Program.

### 1.1.1 Project Background

#### 1.1.1.1 Corridor Overview

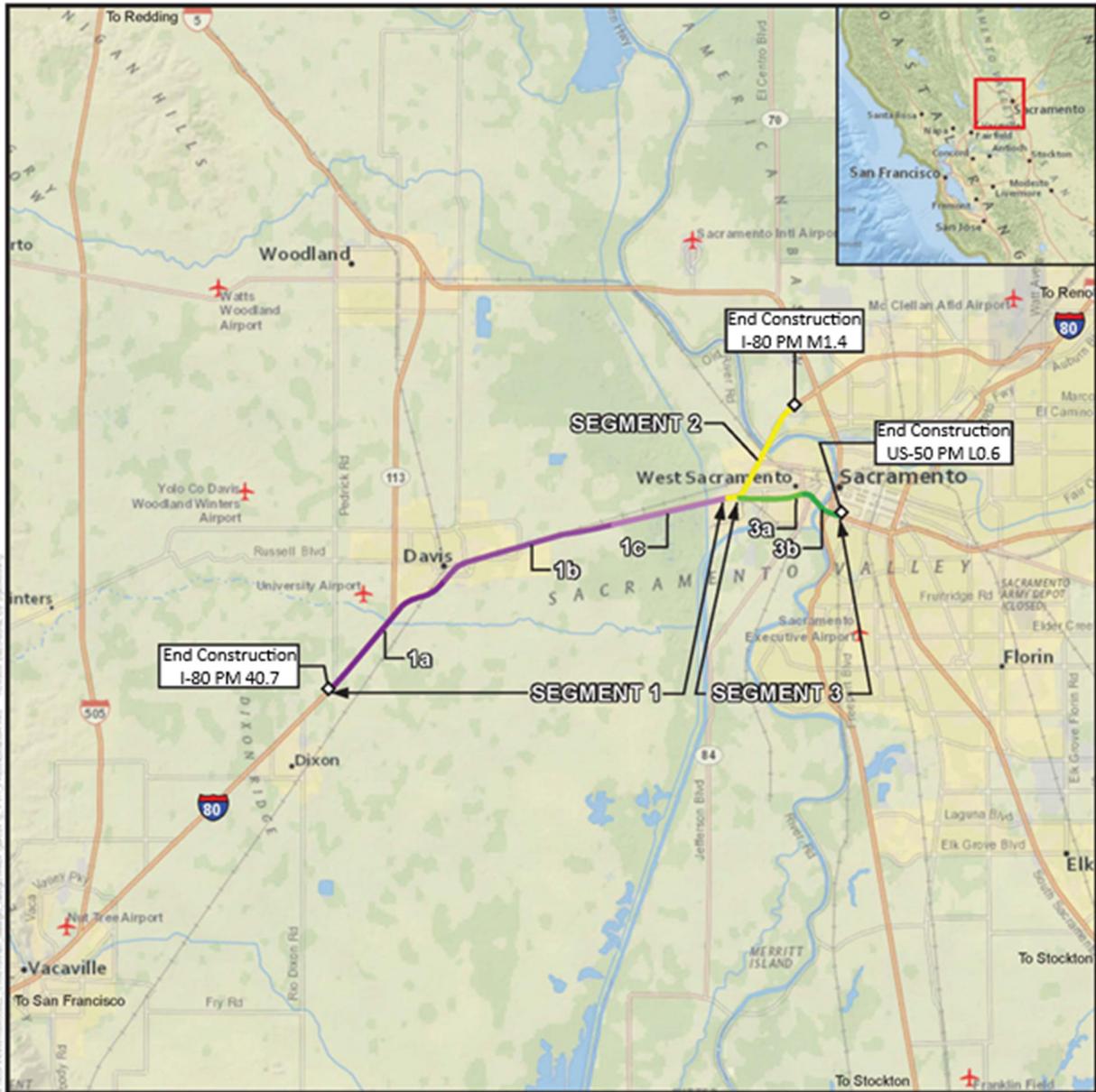
The project is in Solano, Yolo, and Sacramento Counties on the I-80 corridor between Kidwell Road and the Solano/Yolo County line, between the Solano/Yolo County line and the Yolo/Sacramento County line, and between the Yolo/Sacramento County line and West El Camino Avenue<sup>1</sup>. In addition, the project is located on the US-50 corridor between the I-80/I-50 interchange and the Yolo/Sacramento County line and between the Yolo/Sacramento County line and the US-50/I-5 interchange. The total project length is approximately 20.8 miles.

#### Interstate 80

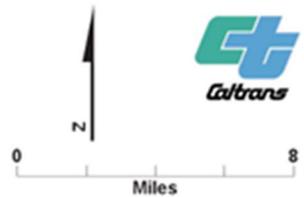
I-80 is a critical link to regional and interregional traffic as the only freeway connection between the San Francisco Bay Area and the Sacramento Metropolitan region. The route also links the Bay Area with recreational destinations in the Sierra Nevada and Northern California via Interstate 505 to I-5 north.

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<sup>1</sup> The project is located in Solano, Yolo, and Sacramento counties on the I-80 corridor between PM 40.7 and PM 44.7 in Solano County, between PM 0.00 and PM 11.72 in Yolo County, and between PM 0.00 and PM 1.36 in Sacramento County; and US-50 between PM 0.00 and PM 3.12 in Yolo County and between PM 0.00 and PM 0.617 in Sacramento County.



- Legend**
- Segment 1a (Sol 80 PM 40.7 to PM R44.7)
  - Segment 1b (Yol 80 PM 0.0 to PM 5.8)
  - Segment 1c (Yol 80 PM 5.8 to PM R9.6)
  - Segment 2 (Yol 80 PM R9.6 to PM R11.72 & Sac 80 PM M0.0 to PM M1.4)
  - Segment 3a (Yol 50 PM 0.0 to PM 3.12)
  - Segment 3b (Sac 50 PM L0.0 to PM L0.6)



**Figure 1.1-1  
Project Location and Vicinity**

**Yolo 80 Corridor Improvements Project  
Solano, Yolo, and Sacramento Counties, California**

04-SOL-80-40.7/R44.7;  
 03-YOL-80-0.00/R11.72; 03-YOL-50-0.00/3.12;  
 03-SAC-50-0.00/L0.617; 03-SAC-80-M0.00/M1.36  
 EA 03-3H900/EFIS 0318000085

In Solano County within the project limits, I-80 varies from three to four eastbound and westbound lanes with a standard shoulder, separated by a 20- to 35-foot-wide paved and/or unpaved center median with a guardrail or concrete barrier. In Yolo County within the project limits, I-80 is a six-lane freeway with three lanes in the eastbound and westbound directions.

I-80 has variable 10- to 15-foot-wide outside shoulders in each direction. The corridor travels through the cities of Davis and West Sacramento. County Road (CR) 32A is located north of I-80 and east of the Mace Boulevard interchange and acts as a frontage road to the Yolo Bypass where I-80 becomes a causeway.

In Sacramento County within the project limits, I-80 is a six-lane freeway with three eastbound and three westbound lanes separated by a variable 35- to 60-foot paved center median with concrete and/or guardrail center median barriers. Travel lanes are roughly 12 feet wide, and each direction of travel has variable 10- to 15-foot-wide paved outside shoulders.

Primary providers of bus and rail transit include Amtrak, Fairfield/Suisun Transit, Solano Express Bus, Yolobus, Unitrans, Sacramento Regional Transit, and Greyhound Bus. Bicycle and pedestrian accessibility are provided via the surrounding arterial network.

Within the Sacramento region, I-80 serves local and commute traffic, traffic to and from the Bay Area, recreational traffic to and from the Lake Tahoe Basin, and is a primary corridor for goods movement. Within the corridor, the Yolo Bypass Wildlife Area and floodplain limits east–west linkages, funneling many modes and forms of transportation into the narrow I-80 corridor between the cities of Davis and West Sacramento. I-80/US-50 is also an essential part of the goods movement system, connecting major ports from the Bay Area/Sacramento region to the eastern United States.

I-80 provides direct linkages between agricultural and manufacturing industries in the Central Valley, the Bay Area, and major ports (e.g., Oakland, Richmond, Stockton, West Sacramento). Freight trucks travel through and throughout the region 24 hours a day, seven days a week, transporting large quantities of goods. The tonnage of goods expected to travel via the I-80 corridor is expected to increase over time.

The segment of I-80 within the project limits is a primary access route to the Sacramento International Airport and other large distribution centers.

### **U.S. Route 50**

US-50 serves as a primary connection to I-80 for east–west travel in Solano, Yolo, and Sacramento Counties and provides north–south connections to I-5 and State Route (SR) 99 in Sacramento County.

In Yolo County within the project limits, US-50 is an eight-lane highway between post mile (PM) 0.0 and PM 2.2, where it then reduces to a six-lane highway to approximately the Sacramento County line. Each direction of travel splits the total number of lanes evenly (either three or four) in each direction of travel. The travel directions are separated by an approximately 30-foot-wide

paved center median with a concrete center median barrier. Each travel lane is roughly 12 feet wide in each direction and has an approximately 10-foot-wide outside shoulder.

In Sacramento County, within the project limits, US-50 is an eight-lane highway with four eastbound and four westbound lanes along elevated and separated viaduct structures that cross the Sacramento River and extend east to the end of the project limits.

### **1.1.1.2 State/Regional Planning**

#### **State**

Solutions for Congested Corridor Program (SCCP), Congested Corridor Plans (CCPs) represent a cooperative commitment to developing a corridor management vision for state-owned and operated facilities. According to the California Transportation Commission (CTC), the purpose of the SCCP is to provide funding to achieve a balanced set of transportation, environmental, and community access improvements to reduce congestion throughout the state. Accordingly, the I-80 East CCP identifies the future conditions of the corridor as an 8- to 12-lane freeway with high-occupancy vehicle (HOV)/high-occupancy toll (HOT) lanes.

#### **Regional**

The Sacramento Area Council of Governments (SACOG) Metropolitan Transportation Improvement Program/Sustainable Communities Strategy (MTIP/SCS) 2020 update prioritizes multiple transportation options to connect people with places. As a result, the plan forecasts less time spent in congestion, cleaner air, fewer greenhouse gas (GHG) emissions per capita, a modernized, more productive transit system, and more ways for residents to choose walking or cycling for some of their daily trips. SACOG considers managed lanes to be a critical component of the regional strategy to raise revenue sufficient to build and maintain the region's transportation system, provide mobility benefits to residents, manage traffic and congestion, and help to achieve the state mandated GHG reduction targets. The full scope of the Yolo County portion of the project is included in the 2020 MTIP/SCS and is identified as requiring capital improvements in the Corridor System Management Plans, the Sacramento Region Managed Lane Network Vision, and the I-5 Transit Corridor Report.

The Solano County portion of the project is in the Solano County Metropolitan Transportation Commission (MTC) area. The 2017 Solano County Regional Transportation Plan (RTP) does not include managed lanes between the Kidwell Road interchange and the Yolo County line. Accordingly, Caltrans continues to coordinate with Caltrans District 4 and Solano County MTC to include the Solano County portion of the project in their RTP update.

## 1.2 Purpose and Need

### 1.2.1 Purpose

The purpose of the proposed project is to:

- Ease congestion and improve overall freight and person throughput<sup>2</sup>
- Improve freeway operation on the mainline, ramps, and at system interchanges
- Support reliable transport of goods and services throughout the region
- Improve modality<sup>3</sup> and travel time reliability
- Provide expedited traveler information and monitoring systems

### 1.2.2 Need

The proposed project is needed for the following reasons:

- Recurring congestion during the morning and afternoon peak periods exceeds current design capacity limiting person throughput.
- Operational inefficiencies lead to the formation of bottlenecks due to short weaving and merging areas and lane drops.
- Inefficient movement of goods and services impedes regional and interstate economic sustainability.
- The corridor users rely heavily on single-occupancy vehicles with limited multi-modal options such as transit, carpool, bicycle, and pedestrian facilities, resulting in unreliable travel times.
- Lack of real-time traveler information and coordinated traffic communication systems impedes timely response to roadway incidents resulting in secondary collisions and increased non-recurring congestion.

#### 1.2.2.1 Roadway Deficiencies

The I-80/US-50 corridor experiences heavy congestion during commute periods due to high vehicular demand. The corridor has infrastructure deficiencies, such as short weaving and merging areas, lane drops that create bottlenecks, incomplete ramp metering and auxiliary lane systems, and inadequate ITS elements. The corridor also experiences heavy recreational traffic, leading to heavy congestion on weekends and holidays.

The Yolo Bypass Causeway is the only direct route connecting the Davis area to West Sacramento and beyond. Heavy congestion and stop-and-go traffic have contributed to increased vehicle emissions, travel costs, emergency response times, and reduced travel time

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<sup>2</sup> Throughput is the number of people moving efficiently through a region.

<sup>3</sup> Modality is the variety in modes of transportation. This includes access and multiple options for the movement of people and goods. Examples include access to transit, carpool, bicycle, and pedestrian facilities.

reliability. The congestion has been created by multiple factors, including high traffic volumes, short weaving and merging areas, lane drops, limited sight distances, and incomplete bus and carpool lanes, ramp metering, and auxiliary lane networks.

Motorists traveling on I-80/US-50 experience delays throughout the day, with congestion at its maximum during the afternoon peak period. Data analysis shows that in the eastbound direction, the peak hour occurs during the 4:00 p.m. to 5:00 p.m. hour, with the peak period starting from 3:00 p.m. and lasting to 7:00 p.m. through Davis, and travel being impacted by bottlenecks at Richards Boulevard and Mace Boulevard. Significant morning delays on westbound I-80 occur between 8:00 a.m. to 10:00 a.m., with a severe bottleneck forming at the I-80/US-50 interchange when travel demand volumes are at their peak because of commute-related trips. Westbound US-50 frequently experiences congestion due to queue spillback of traffic at the I-80/US-50 interchange bottleneck. Peak congestion on eastbound US-50 within the project limits occurs during the afternoon peak period, from 4:00 p.m. to 6:00 p.m. The I-80/US-50 corridor primarily operates at Level of Service (LOS)<sup>4</sup> F during the morning and afternoon peak hours within the project limits. The LOS F conditions are anticipated to worsen due to the projected traffic growth in the area.

The existing Yolo 80 bikeway on the north side of the existing Yolo Causeway is underutilized by bicycle riders due to lack of connectivity. Currently, there are three entrance and exit points to the Yolo 80 bikeway. The configuration of the eastern terminus requires that east/west bicycle and pedestrian traffic traverse around the back of two gas stations to avoid several driveways of ingress and egress for automobile and commercial truck traffic. Bicycle and pedestrian traffic must then cross four lanes of traffic to proceed eastbound on West Capitol Avenue.

### 1.2.3 Independent Utility and Logical Termini

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

- 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 be 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

Logical termini for project development are defined as follows: (1) rational end points for a transportation improvement, and (2) rational end points for a review of the environmental impacts (FHWA 1993). The points at which the project begins and ends are logical in their placement, and environmental impacts studied within and/or adjacent to the project are broad enough to encompass the project. The project limits were proposed to close the gap of HOV lanes on I-80 from the Yolo/Solano County line to the existing HOV lane on I-80 at West El

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<sup>4</sup> LOS is a measure used to describe quality of motor vehicle traffic service such as delay and congestion.

Camino Avenue, and on US-50 with the existing managed lane project in construction from the US-50/I-5 interchange to US-50 at Watt Avenue (EA 03-0H08U). This project would not require the completion of other projects to be a functioning and a stand-alone project; therefore, the project has independent utility. The project does not conflict with other reasonably foreseeable transportation projects in these segments of I-80 or US-50.

## 1.3 Project Description

This section describes the proposed action and the project alternatives developed to meet the purpose and need of the project while avoiding or minimizing environmental impacts. Caltrans proposes to make improvements on I-80 and US-50 from Kidwell Road near the eastern Solano County boundary (near Dixon), through Yolo County, and to West El Camino Avenue on I-80 and on US-50 to I-5 in Sacramento County.<sup>5</sup> The project would add managed lanes on I-80 and US-50 by a combination of lane conversion, restriping, and shoulder and median reconstruction with a concrete barrier. Drainage modifications would be required due to median reconstruction in the locations to which sheet flow currently drains. Existing ITS elements and infrastructure would be modified, and new ITS elements would be added, including ramp meters, fiber-optic conduit and cables, and overhead signs.

### 1.3.1 Project Alternatives

This section describes alternatives developed to meet the project's purpose and need. No Build Alternative 1 is described in Section 1.3.1.6. Build Alternatives 2a, 3a, 4a, 5a, and 6a propose the same geometric footprint, but would incorporate different managed lane types (Figure 1.3-1). Build Alternatives 2b, 3b, 4b, 5b, and 6b propose the same geometric footprint, include an I-80 managed lane direct connector (to provide a direct connection of the HOV 2+ managed lane by flying over US-50 at the I-80/US-50 Interchange) but would incorporate different managed lane types (Figure 1.3-2). Build Alternatives 7a and 7b would not construct new lanes but would repurpose an existing lane instead; however, Build Alternative 7b would include the I-80 managed lane direct connector (Figures 1.3-1 and 1.3-2, respectively, located at the end of this chapter.)

- Build Alternative 2a: Add a high-occupancy vehicle lane in each direction for use by vehicles with two or more riders (HOV 2+).
- Build Alternative 2b: Add a high-occupancy vehicle lane in each direction for use by vehicles with two or more riders (HOV 2+) and build an I-80 managed lane direct connector.
- Build Alternative 3a: Add a high-occupancy toll lane in each direction for free use by vehicles with two or more riders (HOT 2+). Single-occupied vehicles would pay a fee for lane usage.

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<sup>5</sup> I-80 corridor between PM 40.7 and PM 44.7 in Solano County, between PM 0.00 and PM 11.72 in Yolo County, and between PM 0.00 and PM 1.36 in Sacramento County; and US-50 between PM 0.00 and PM 3.12 in Yolo County and between PM 0.00 and PM 0.617 in Sacramento County.

- Build Alternative 3b: Add a high-occupancy toll lane in each direction for free use by vehicles with two or more riders (HOT 2+) and build an I-80 managed lane direct connector. Single-occupied vehicles would pay a fee for lane usage.
- Build Alternative 4a: Add a high-occupancy toll lane in each direction for free use by vehicles with three or more riders (HOT 3+). Vehicles with less than three riders would pay a fee for lane usage.
- Build Alternative 4b: Add a high-occupancy toll lane in each direction for free use by vehicles with three or more riders (HOT 3+) and build an I-80 managed lane direct connector. Vehicles with less than three riders would pay a fee for lane usage.
- Build Alternative 5a: Add an express lane in each direction (i.e., everyone would pay a fee to use the lane, regardless of the number of riders).
- Build Alternative 5b: Add an express lane in each direction (i.e., everyone would pay a fee to use the lane, regardless of number of riders), and build an I-80 managed lane direct connector.
- Build Alternative 6a: Add a transit-only lane in each direction.
- Build Alternative 6b: Add a transit-only lane in each direction and build an I-80 managed lane direct connector.
- Build Alternative 7a: Repurpose the current number one general-purpose lane for use by vehicles with two or more riders (HOV 2+); no new lanes would be constructed.
- Build Alternative 7b: Repurpose the current number one general-purpose lane for use by vehicles with two or more riders (HOV 2+); no new lanes would be constructed. Build an I-80 managed lane direct connector.

This project contains several Standard Measures, which are employed on most, if not all, Caltrans projects. They were not developed in response to any specific environmental impact resulting from the project. These measures are addressed in more detail in the Environmental Consequences sections found in Chapter 2 and included as Appendix E.

If a HOT lane alternative is chosen as the preferred alternative (Build Alternatives 4A, 4B, 5A, 5B, 6A, or 6B), then additional advanced HOT lane signs will need to be placed from I-80/EI Camino Avenue to I-80/Truxel Road and between US-50/I-5 and US-50/SR-99 (Sac 80 PM M1.4/3.64 and SAC 50 PM L0.60/R0.20).

The Build Alternatives consist of the following three geographic segments:

- **Segment 1:** Segment 1 stretches from Kidwell Road in Eastern Solano County through Davis to the Eastern end of the Yolo Causeway east of Enterprise Boulevard in West Sacramento. Segment 1 consists of three sub-segments:
  - *Segment 1a* is from Kidwell Road to Solano County/Yolo County Line.

- *Segment 1b* is from the Solano/Yolo County Line to the west end of the Yolo Causeway.
- *Segment 1c* is from the start of the Yolo Causeway to east of Enterprise Boulevard.
- **Segment 2:** Segment 2 starts just east of Enterprise Boulevard and continues north on I-80 to West El Camino Avenue.
- **Segment 3:** Segment 3 starts at the I-80/US-50 Separation and continues east along US-50 to I-5 near downtown Sacramento. Segment 3 consists of two sub-segments:
  - *Segment 3a* is the I-80/US-50 Separation to Jefferson Boulevard Undercrossing.
  - *Segment 3b* is the Jefferson Boulevard Undercrossing to just east of I-5.

### 1.3.1.1 Common Design Features of the Build Alternatives

Common design features and standardized measures are shared among the Build Alternatives.

#### Managed Lanes

Managed lanes are highway facilities, or a set of lanes, where operational strategies are implemented to manage overall traffic congestion or in response to changing conditions (FHWA 2008). Managed lanes can include pricing, vehicle eligibility, or access control concepts. The lanes have flexibility to be used by different types of vehicles, depending on the need, and can be actively managed to accommodate peak travel demands. Managed lanes would be designated using a striping pattern to distinguish between the mixed-flow lanes as further described in Section 1.3.1.2, Unique Features of the Build Alternatives.

#### Intelligent Transportation System/Transportation Management Systems

Each of the Build Alternatives would include placement of ramp meters and other ITS/Transportation Management Systems (TMS) such as closed-circuit television (CCTV) and changeable message signs. Several maintenance pullouts are proposed adjacent to I-80 on-ramps to accommodate an electrical cabinet for proposed ramp meters or other ITS/TMS infrastructure.

Table 1.3-1 includes a summary of proposed ITS elements. Proposed ITS elements would be installed on a new pole foundation; some existing ITS infrastructure in these locations would be abandoned or replaced. Accordingly, it is assumed that each ITS pole foundation would have up to a 6-foot radius permanent footprint with up to 10-foot radius temporary area for construction.

**Table 1.3-1. Intelligent Transportation System Improvements for All Build Alternatives**

No.	Improvement	Freeway	Post Mile	Direction	Location
1	Closed captioning television	I-80	41.776	EB	Kidwell Road
2	Changeable message signs	I-80	41.817	EB	Kidwell Road
3	Emergency management system	I-80	41.983	WB	Kidwell Road
4	Emergency management system	I-80	42.081	WB	Kidwell Road
5	Closed captioning television	I-80	42.669	WB	Junction I-80/SR-113
6	Transportation management system	I-80	42.669	WB	Junction I-80/SR-113
7	Ramp meter	I-80	43.259	EB	SB SR-113 to EB I-80 freeway to freeway connector ramp
8	Ramp meter	I-80	43.636	EB	Old Davis Road to EB I-80 slip on-ramp
9	Changeable message signs	I-80	44.557	WB	Just west of Richards Boulevard
10	Automatic vehicle classification	I-80	0.002	WB	Solano/Yolo County Line
11	Closed captioning television	I-80	0.235	WB	Richards Boulevard
12	Ramp meter	I-80	0.369	EB	Richards Boulevard
13	Changeable message signs	I-80	0.776	WB	Olive Drive
14	Closed captioning television	I-80	0.793	WB	Olive Drive
15	Transportation management system	I-80	1.25	EB	East of Pole Line Road
16	Transportation management system	I-80	1.997	EB	I-80 WB at Mace Boulevard
17	Ramp meter	I-80	2.506	WB	Mace Boulevard to WB I-80 slip on-ramp
18	Traffic signal	I-80	2.593	EB	Yolo I-80 EB at Chiles Road
19	Ramp meter	I-80	2.604	EB	SB Mace Boulevard to EB I-80 loop on-ramp
20	Traffic signal	I-80	2.662	WB	Yolo I-80 WB at Mace Boulevard
21	Closed captioning television	I-80	2.7	EB	Mace Boulevard
22	Ramp meter	I-80	2.762	EB	NB Mace Boulevard to EB I-80 slip on-ramp
23	Transportation management system	I-80	3.502	EB	East of Mace Boulevard
24	Transportation management system	I-80	3.986	EB	West of CR-105D
25	Closed captioning television	I-80	4.313	EB	Chiles Road (100 feet west of existing changeable message sign)
26	Changeable message signs	I-80	4.361	WB	Chiles Road
27	Changeable message signs	I-80	4.365	EB	Chiles Road
28	Transportation management system	I-80	4.484	EB	East of CR-105D
29	Closed captioning television	I-80	0.366	MEDIAN	Bryte Bend Bridge
30	Changeable message signs	I-80	0.606	WB	West El Camino Avenue
31	Closed captioning television	I-80	1.358	WB	West El Camino Avenue
32	Ramp meter	I-50	2.614	EB	Jefferson Boulevard
33	Ramp meter	I-50	2.869	EB	South River Road

Key:  
 EB = eastbound; NB = northbound; SB = southbound; WB = westbound

## Structure Modifications

As summarized in Table 1.3-2, Build Alternatives would add improvements to existing structures to accommodate proposed managed lanes. The Yolo Causeway would not be structurally modified.

**Table 1.3-2. Structure Modifications**

Structure Name	Structure Number	Route	Post Mile	Alternative	Structure Work
South Fork Putah Creek	23-0054 R	Sol 80	42.36	All Build Alternatives	Place fiber-optic conduit
Old Davis Road Undercrossing	23-0155R	Sol 80	R43.5	All Build Alternatives	Place fiber-optic conduit
South Davis Overhead	23-0156R	Sol 80	R43.93	All Build Alternatives	Place fiber-optic conduit
Putah Creek Pedestrian Undercrossing	22-0194	Yol 80	0.01	All Build Alternatives	Place fiber-optic conduit
Richards Boulevard Overcrossing RW NO. 3	TBD	Yol 80	0/0.60	All Build Alternatives	Retaining wall at abutment along eastbound I-80 off-ramp to Richards Boulevard
I-80 Managed Lane Direct Connector	TBD	Yol 80	9.5/10.0	Build Alternatives 2b, 3b, 4b, 5b, 6b, 7b	Proposed managed lane connector retaining wall #1; Proposed managed lane connector retaining wall #2. For Alternative 2B to 7B, The Enterprise Blvd Undercrossing would need to be widened approximately 10 feet on each side due to proposed Director Connect. On the WB, RW #3 would be needed to support roadway widening between Enterprise Blvd Undercrossing and W Capitol loop on-ramp. On the EB, outside roadway widening will need to be supported at east of Enterprise Blvd. RW #4 with SW is proposed to be built at location of existing SW by remove portion of existing SW and replace with new SW on RW# 4."

Source: Caltrans Draft Project Report (July 2021)

## Ramp Modifications

Within Segment 2, eastbound ramp modifications would be constructed at I-80 eastbound on-ramp from Richards Boulevard to accommodate realignment within the right-of-way. In addition,

ramp modifications would occur at the westbound I-80 off-ramp to CR-32A/Chiles Road to accommodate additional bicycle/pedestrian pathway within the right-of-way.

### **Bicycle/Pedestrian Facilities**

The Build Alternatives would replace the existing bicycle pathway pavement behind the gas station located north of West Capitol Avenue from PM 9.15 to PM 9.35. The existing bicycle pathway would be rerouted during repaving activities for up to two months, but repaving activities may occur at nighttime to minimize access disruption. To maintain access, bicycles traveling westbound would be redirected along West Capitol Avenue. Bicycles traveling eastbound would be redirected along a short segment of sidewalk on West Capitol Avenue and use the crosswalk at the West Capitol Avenue/westbound I-80 off-ramp intersection<sup>6</sup>. Bicyclists would then continue eastbound along West Capitol Avenue using the existing bicycle lane. Caltrans would add crosswalk pavement marking across the westbound I-80 off-ramp to West Capitol Avenue and near the existing West Capitol Avenue crosswalk. In addition, Caltrans would add advanced warning signs to alert the motorists traveling on the westbound I-80 off-ramp to West Capitol Avenue before reaching the proposed crosswalk. Caltrans would place signage as part of the traffic management plan to note the access updates and identify the bicycle/pedestrian detours.

The Build Alternatives would also replace the existing bicycle pathway pavement from PM 9.1 to the Yolo Causeway bridge deck approach at approximately PM 8.9. While the existing Class I bicycle pathway is closed, a temporary bicycle pathway with K-rail barrier would be placed along the I-80 westbound on-ramp from West Capitol Avenue. Up to 100 linear feet of existing barrier near PM 8.9 would be removed and realigned to allow bicycles to rejoin the existing Class I bicycle pathway along Yolo Causeway. The existing Class I bicycle pathway along the Yolo Causeway would not require closure during construction activities.

The Build Alternatives would extend the westernmost limit of the existing Class I bicycle pathway from I-80 along Yolo Causeway to connect to CR-32A. The pathway extension would be adjacent to the westbound I-80 off-ramp to CR-32A and about 12 feet wide. The area surrounding the pathway extension would be graded to comply with the Americans with Disabilities Act of 1990 (ADA) regulations. A concrete barrier would separate the pathway extension from westbound off-ramp vehicular traffic. Once construction of the pathway extension along westbound I-80 off-ramp is complete, the Build Alternatives would conduct pavement rehabilitation on the western Yolo Causeway levee, from the Yolo Causeway bridge to from CR-32A to Levee Road. During pavement rehabilitation activities, Levee Road would be closed. Bicycles would be redirected along the newly constructed pathway extension on westbound I-80 off-ramp to access the existing Class I bicycle pathway along Yolo Causeway, which would be built prior to rehabilitation activities on Levee Road. These proposed components are depicted in Figure 1.3-1 and Figure 1.3-2.

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<sup>6</sup> City of West Sacramento Municipal Code 10.32.020 states that bicycles are permitted on the public sidewalk but shall yield to any pedestrian.

## **Park-and-Ride Facility**

Within Segment 2 of each build alternative, a Park-and-Ride Facility (also known as a Mobility Hub) would be built on the east side of Enterprise Boulevard in a 4.5-acre lot and would provide about 300 parking spaces. Users of the Park-and-Ride Facility would have the option to park their cars for the day and connect to several county and regional transit services. The facility would be located partially within the existing Caltrans right-of-way and partially outside the existing Caltrans right-of-way. Landscaping and nighttime lighting are proposed at the Park-and-Ride Facility.

## **Signage**

The Build Alternatives would include roadside signs and overhead changeable message signs (CMS) (i.e., symbolic or text messages) that would guide and warn motorists and regulate the flow of traffic. Some of the signs would have hours of operation that restrict certain classes of vehicles during peak periods. Other signs would have information for motorists of the conditions or hazards that they are approaching.

Roadside signs would include regulatory and warning signs, route shields, and guide signs. These signs would be on wood or metal posts. Wood posts would be approximately 6-inches by 6-inches while metal posts would be approximately 2.5-inches by 2.5-inches. Roadside signs would be mounted on the freeway concrete median barrier or placed adjacent to the edge of the travel way up to 30 feet. However, placement of roadway signs would avoid environmentally sensitive areas.

Overhead signs would be mounted on versatile truss structures spanning above the travel lanes. The total height of the overhead sign structure (including the sign) would depend on the type of sign being mounted but would not likely exceed 40 feet in height. Overhead sign structures would have a concrete foundation of up to 6.5 feet diameter and would either be supported on a cast-in-drilled-hole pile foundation or supported by a structure.

## **Lighting**

Street lighting would be added near CR-32A at the proposed bicycle pathway extension adjacent to the westbound off-ramp. Within Segment 2, bridge deck lighting with Type 21 Barrier-Rail-Mounted Lighting Standards would be constructed. Additional street lighting would be added to the Bryte Bend Bridge (I-80 Sacramento River Bridge Overhead), but it may also be added at proposed auxiliary lane locations if determined necessary during the design phase. Nighttime lighting would be installed at the Park-and-Ride Facility. During construction, temporary nighttime lighting would be in used in construction areas. Signage would use reflective lettering.

## **Road Cut/Fill**

Some locations would require full structural section reconstruction, and other locations would require cut or fill of the embankment due to road widening.

## **Grinding**

Cold planing, the process of removing part of the surface of a paved area, would be required throughout the project limits. Cold planing would be required for ramp conforms at all ramps and may be required at other locations along the travel way wherever hot mix asphalt is currently in place. A mill (cold planing) and fill operation may be proposed to repair roadway surface scarring that occurs during temporary restriping associated with some stage construction operations.

## **Site Preparation**

Site preparation would include delineating construction work areas, installing environmentally sensitive area fencing around sensitive habitats and cultural resource areas, installing wildlife exclusion fencing around staging areas, installing best management practices in accordance with the project's Stormwater Pollution Prevention Plan, and removing vegetation, as summarized in Appendix E.

## **Utilities**

Build Alternatives 2a, 3a, 4a, 5a, 6a, and 7a would not result in potential conflicts with existing utilities that are present along the I-80/US-50 corridor utility companies would require verification of facilities and involvement in construction plans. Accordingly, prior to construction, an estimated 15 test hole sites would be drilled at eight separate locations for natural gas lines running transversely underneath I-80, the Yolo Causeway, and West Capitol Avenue in Sacramento where the new managed lane would be constructed with retaining walls and columns. Positive findings would verify whether the gas line would require relocation or how to redesign the project components to avoid conflicts with existing utilities.

Under all Build Alternatives, removal of an existing overhead sign near Westacre Park, within Caltrans right-of-way, would require an overhead electrical distribution line to be temporarily de-energized. Under Build Alternatives 2b, 3b, 4b, 5b, 6b, and 7b, up to four 115-kilovolt overhead utility towers may be relocated or tower height increased near the new I-80 managed lane direct connector at the I-80/US-50 separation in West Sacramento.

## **Fiber-Optic Cable**

The Build Alternatives would install a fiber-optic cable and associated fiber-optic splice boxes within the roadbed at the eastbound outside shoulder of I-80 from west of Kidwell Road in Solano County at PM 40.7 to PM 4.35 in Yolo County. Cut and cover or trenching would be the primary construction method and would require excavation of up to 42 inches deep to install within a 12-foot buffer surrounding the running line. Fiber-optic cable may also be placed via directional borings to avoid conflicts with existing utilities.

## **Right-of-Way and Temporary Construction Easements**

As depicted on Figures 1.3-1 and 1.3-2, the Build Alternatives would require Caltrans to acquire two private fee parcels to construct the proposed Park-and-Ride Facility at Enterprise Boulevard (2.8 acres). Five temporary construction easements (TCEs) would be required along the project

alignment totaling 12.24 acres. No displacement of any residences or businesses would be required.

### **Staging Areas**

As depicted on Figures 1.3-1 and 1.3-2, staging areas would be located at the I-80/West El Camino Avenue interchange, South River Road, I-80/Richards Boulevard interchange, the I-80 and SR-113 interchange, West Capitol Avenue, and along Kidwell Road. These areas total 53.31 acres and would be used for equipment maintenance and storage of equipment, construction materials, fuels, lubricants, solvents, and other possible contaminants during construction.

### **Traffic Management during Construction**

Various Transportation Management Plan (TMP) elements such as portable CMS and the California Highway Patrol Construction Zone Enhanced Enforcement Program would be used to minimize delays for the traveling public. Flaggers would be used to divert traffic. Prior to construction, a detailed TMP would be prepared.

Ramp closures are anticipated at all ramp locations adjacent to proposed widening or proposed mainline paving. Traffic would be detoured to the next interchange. Caltrans would also place signage as part of the TMP to note the access updates and identify the bicycle/pedestrian detours. Caltrans would install a crosswalk at the westbound I-80 off-ramp across right turn movement to West Capitol Avenue and a temporary flashing beacon upstream.

Build Alternatives 2b, 3b, 4b, 5b, 6b, and 7b may require a temporary, full closure on westbound US-50 for construction of the direct connector structure. Full closures would occur during the hours of the lowest volume of traffic (e.g., nighttime), although they could also occur during daytime and/or during a continuous 24- or 48-hour operation, as needed to accommodate construction. The anticipated closure would occur for up to three nights to install falsework and then three additional nights to remove falsework for construction of the direct connector structure. The primary detour for westbound US-50 traffic would be to use northbound I-5 to westbound I-80. Local traffic would use other interchanges in the area.

### **Vegetation and Tree Removal**

Vegetation clearing would be required and would be confined to the area within the project footprint, including construction access routes. Vegetation removal and clearing would be completed with hand tools where possible. Chainsaws, grinders, and excavators would be used for vegetation that cannot be removed by hand. All vegetation would be removed within proposed cut and fill lines as well as within temporary impact lines where ITS components would be constructed. Within areas of temporary impact, vegetation removal would be avoided to the extent possible.

### **Construction Equipment**

The equipment used for the proposed work of the Build Alternatives would be similar among the Build Alternatives. Center median work would use excavators, scrapers, motor graders, loaders,

backhoes, pavers, concrete barrier slip form pavers, truck-mounted cranes, 18-wheel trucks, dump trucks, and water trucks. Reconstruction and modification of ramps/gores/shoulder embankments would use excavators, motor graders, loaders, backhoes, pavers, 18-wheel trucks, dump trucks, and water trucks. Road surfacing work, including placement for sensors in the road surface, would use core drillers, trailers containing and dispersing sealant, and water trucks.

Construction of the I-80 managed lane direct connector under Build Alternatives 2b, 3b, 4b, 5b, 6b, and 7b would require pile driving to install the footings to a depth of up to 40 feet. Equipment would also include a crane (for pile driving), excavator, dozer, loader, manlift, articulated 4x4 forklift, truck, dump truck, trailer unit air compressor, and water truck. This construction equipment would also be used for structural sign mounts along with a truck-mounted crane for all Build Alternatives. A truck-mounted auger would be used for installing roadside signs.

### **Ground Disturbance**

The depth of ground disturbance would vary throughout the project limits. At locations where CMS, sign structures, or piles would be installed, disturbance could be up to 30 feet deep. As described, construction of the I-80 managed lane direct connector under Build Alternatives 2b, 3b, 4b, 5b, 6b, and 7b would require pile driving to install the footings to a depth of up to 40 feet. At locations of culverts, depth of ground disturbance could vary from 3 feet to 10 feet (i.e., the estimated depth to the bottom of a culvert or inlet). At locations of linear electrical facilities such as fiber-optic and conduit installations, the ideal depth is typically 4 feet, assuming 42 inches of cover; however, depth could be increased to avoid conflicts with existing or proposed drainage or existing utilities.

### **Site Cleanup and Post-Construction Activities**

All construction materials and debris would be removed from the construction work areas and recycled or properly disposed of off-site. Caltrans would restore all areas temporarily disturbed by project activities, such as staging areas and access roads, to near or better than preconstruction conditions in accordance with applicable permits and Caltrans requirements.

### **1.3.1.2 Unique Features of the Build Alternatives**

The Build Alternatives are depicted on Figure 1.3-1 and Figure 1.3-2. More detailed engineering figures and detailed maps showing the locations of proposed right-of-way acquisitions are included in Appendix I.

#### **Build Alternatives 2a and 2b: HOV 2+ Managed Lane**

##### ***Lane Configuration – Build Alternatives 2a and 2b***

Build Alternatives 2a and 2b would begin at the Solano/Yolo County Line west of Davis to West El Camino Avenue on I-80 and end at I-5 on US-50 in Sacramento County. Build Alternatives 2a and 2b would include an HOV 2+ managed lane in the eastbound and westbound direction. This would be accomplished by constructing the median from the Solano/Yolo County line to west of

the Yolo Causeway and continuing eastward by restriping to West El Camino Avenue on I-80 and to I-5 on US-50 in Sacramento County.

Build Alternative 2b would involve construction of an I-80 managed lane direct connector and construction activities planned for Build Alternative 2a. The I-80 managed lane direct connector would provide a direct connection of the HOV 2+ managed lane by flying over US-50 at the I-80/US-50 Interchange as depicted in Figure 1.3-2. The connector would include a retaining wall on either side and would travel underneath the existing eastbound connector from I-80 to US-50. The proposed managed lane direct connector would be constructed of columns and include concrete barrier type 842 railings.

**Segment 1 (Kidwell Road, Solano County to Enterprise Boulevard, West Sacramento)**

Segments 1a, 1b, and 1c would be restriped with 6-inch thermoplastic traffic stripes for three mixed-flow lanes and one managed lane in each direction, westbound and eastbound.

Within Segment 1b, from just west of the Solano/Yolo County Line to the west end of the Yolo Causeway, the project would involve replacement of the existing inside shoulders and construction of the eastbound and westbound median from around Richards Boulevard to 1.5 miles east of Mace Boulevard to accommodate managed lanes in the eastbound and westbound directions. The new shoulders and construction areas would be asphalt concrete material. The median barriers would be upgraded from a metal beam guard rail to a reinforced concrete barrier.

**Segment 2 (Enterprise Boulevard to West El Camino Avenue, West Sacramento)**

Within Segment 2, the Bryte Bend Bridge would be restriped to accommodate the HOV 2+ managed lane in each direction. Reducing lane and shoulder widths would accommodate a fourth lane on the Bryte Bend Bridge. The bridge striping would change from three lanes (two 12-foot lanes and one 11.5-foot lane) to four lanes (four 11-foot lanes) with 1-foot inside and 2.5-foot outside shoulders.

**Segment 3 (I-80/US-50 to Jefferson Boulevard Undercrossing, and Jefferson Boulevard to I-5/US-50 Interchange, West Sacramento)**

Within Segment 3a, from I-80/US-50 Separation to Jefferson Boulevard Undercrossing, the pavement would be restriped to convert one mixed-flow lane in each direction to managed lanes.

Within Segment 3b, from the Jefferson Boulevard Undercrossing to just east of I-5, the Jefferson Boulevard Undercrossing (Br. No. 22-0106 L/R), and the Sacramento River viaduct (Br. No. 24-0014 R/L) between Jefferson Boulevard and the I-5/US-50 interchange would be restriped to add an additional managed lane in each direction.

***Lane Access – Build Alternatives 2a and 2b***

An HOV lane is a type of managed lane that allows qualified users, who meet the minimum number of passengers, to use the managed lane. The number of vehicle occupants required to

qualify can vary depending on location. Under Build Alternatives 2a and 2b, vehicles with two or more occupants would be permitted to access the HOV lane, and all other vehicles would be prohibited from using those lanes. The HOV lanes would be designated using a striping pattern and a diamond marking to distinguish them from mixed-flow lanes and would operate only during peak commute hours.

### **Signage – Build Alternatives 2a and 2b**

Approximately 45 overhead signs would be replaced or proposed within the project area. Several existing overhead signs would be removed and not replaced. In addition, 311 roadside signs would be replaced, and 221 roadside signs are proposed within the median or the shoulder. Proposed signage would be the same for Build Alternatives 2a and 2b. Overhead and roadside signs are described in more detail in Section 1.3.1.1, Common Design Features of the Build Alternatives and shown on Figure 1.3-1 and Figure 1.3-2.

### **Drainage/Culverts – Build Alternatives 2a and 2b**

Anticipated work includes extending existing culverts through existing unpaved medians, extending existing culverts at locations where construction may occur outside the existing edge of pavement lining, and possibly abandoning existing culverts where median construction would occur in crowned sections of the roadway. New drainage inlets and culverts are proposed to be replaced or repaired to accommodate areas where existing shoulders are being narrowed, to accommodate additional runoff due to the increased pavement area, or to perpetuate existing drainage patterns. The linings of one pipe would occur using cast-in-place-pipe lining (CIPP). CIPP is a method to repair pipes without needing to trench by inserting a liner inside the existing culvert pipe.

Build Alternative 2a and Build Alternative 2b would construct 5 new culverts and replace or improve 21 existing culverts. As described, many of the proposed drainage features would be located within the construction footprint of the median for the new HOV 2+ managed lane. In addition, proposed culverts would traverse beneath the freeway to convey drainage to a new outlet. In these instances, the freeway would be trenched using an excavator and the barrel would be installed. Once the barrel is installed, the trench would be backfilled and compacted back to preconstruction conditions. Trenching across the freeway travel lanes would occur in segments during low peak (nighttime) traffic hours to maintain access. Construction of each new or replaced culvert would occur over approximately two nights; however, construction of several culverts could occur concurrently as further described in the construction schedule. It is assumed each of these culvert repair or replacement areas would have a 20-foot by 20-foot temporary construction impact footprint, not to exceed the roadway right-of-way. Proposed drainage features for the I-80 managed lane direct connector, under Build Alternative 2b, would occur within the construction footprint of the I-80 managed lane direct connector.

### **Construction Schedule – Build Alternatives 2a and 2b**

Construction of Build Alternative 2a is anticipated to take approximately 443 construction working days over 22 months. Construction of Build Alternative 2b is anticipated to take approximately 732 construction working days over 36 months. Construction would potentially

commence in Spring 2025. Due to high daytime traffic volumes, nighttime work would be expected. Both daytime and nighttime work should be anticipated throughout the project duration.

### **Build Alternatives 3a and 3b: HOT 2+ Managed Lane**

Build Alternatives 3a and 3b would be the same as Build Alternatives 2a and 2b, respectively, but would include an HOT 2+ managed lane instead of an HOV 2+ lane. Build Alternative 3b would involve construction of the I-80 managed lane direct connector and construction activities planned for Build Alternative 3a.

The HOT managed lane would allow vehicles with a minimum two-person occupancy to use the lane for free, while single-occupied vehicles would pay for the lane usage. All other project components would be the same as Build Alternatives 2a and 2b, respectively, except signage locations.

Approximately 79 overhead signs would be replaced or proposed within the project area. Several existing overhead signs would be removed and not replaced. In addition, 311 roadside signs would be replaced, and 373 roadside signs are proposed within the median or the shoulder. Overhead and roadside signs are described in more detail in Section 1.3.1.1, Common Design Features of the Build Alternatives and shown on Figure 1.3-1 and Figure 1.3-2.

### **Build Alternatives 4a and 4b: HOT 3+ Managed Lane**

Build Alternatives 4a and 4b would be the same as Build Alternatives 2a and 2b, respectively, but would include an HOT 3+ managed lane instead of an HOV 2+ lane. Build Alternative 4b would involve construction of the I-80 managed lane direct connector and construction activities planned for Build Alternative 4a.

The HOT managed lane would allow vehicles with a minimum three-person occupancy to use the lane for free. Vehicles with less than three riders would pay for the lane usage. Vehicles with two passengers may pay reduced or full tolls to travel within the HOT lane. All other project components would be the same as Build Alternatives 2a and 2b, respectively, except signage locations.

Proposed signage for Build Alternatives 4a and 4b would be the same as Build Alternatives 3a and 3b, respectively. Overhead and roadside signs are described in more detail in Section 1.3.1.1, Common Design Features of the Build Alternatives and shown on Figure 1.3-1 and Figure 1.3-2.

### **Build Alternatives 5a and 5b: Express Managed Lane**

Build Alternatives 5a and 5b would be the same as Build Alternatives 2a and 2b, respectively, but would include an express lane instead of an HOV 2+ lane. Build Alternative 5b would involve construction of the I-80 managed lane direct connector in addition to the construction activities planned for Build Alternative 5a. An express lane is a managed lane that allows vehicles of any occupancy to access a dedicated lane once a toll is paid. All other project

components would be the same as Build Alternatives 2a and 2b, respectively, except signage locations.

Proposed signage for Build Alternatives 5a and 5b would be the same as Build Alternatives 3a and 3b, respectively. Overhead and roadside signs are described in more detail in Section 1.3.1.1, Common Design Features of the Build Alternatives and shown on Figure 1.3-1 and Figure 1.3-2.

### **Build Alternatives 6a and 6b: Transit-Only Managed Lane**

Build Alternatives 6a and 6b would be the same as Build Alternatives 2a and 2b, respectively, but would include transit-only managed lanes instead of HOV 2+ lanes. Build Alternative 6b would involve construction of the I-80 managed lane direct connector in addition to the construction activities planned for Build Alternative 6a. A transit-only lane is a managed lane that allows only approved public transit vehicles, such as bus services, to access a dedicated lane. All other project components would be the same as Build Alternatives 2a and 2b, including the proposed signage for Build Alternatives 6a and 6b, respectively. Overhead and roadside signs are described in more detail in Section 1.3.1.1, Common Design Features of the Build Alternatives and shown on Figure 1.3-1 and Figure 1.3-2.

### **Build Alternatives 7a and 7b: Repurpose Lanes to HOV 2+ Managed Lane**

Build Alternatives 7a and 7b would repurpose the current number one general-purpose lanes to HOV 2+ managed lanes. No new lanes would be constructed. Build Alternative 7b would involve construction of the I-80 managed lane direct connector in addition to the construction activities planned for Build Alternative 7a.

#### ***Lane Configuration—Build Alternatives 7a and 7b***

Build Alternatives 7a and 7b would maintain the existing median pavement delineation, unpaved median, and add an HOV 2+ lane by repurposing an existing mixed-flow lane (lane number one). As a result, Build Alternatives 7a and 7b would not shift the edge of travel way into the median or require barrier beam removal within the median.

#### ***Lane Access—Build Alternatives 7a and 7b***

Vehicles with two or more occupants would be permitted to access the HOV 2+ lane, and all other vehicles would be prohibited from using them. The HOV 2+ lanes would be designated using a striping pattern and a diamond marking to distinguish them from mixed-flow lanes. HOV 2+ lanes would only operate during peak commute hours.

#### ***Signage – Build Alternatives 7a and 7b***

Proposed signage for Build Alternatives 7a and 7b would be the same for Build Alternatives 2a and 2b, respectively. Overhead and roadside signs are described in more detail in Section 1.3.1.1, Common Design Features of the Build Alternatives and shown on Figure 1.3-1 and Figure 1.3-2.

### **Drainage/Culverts – Build Alternatives 7a and 7b**

Build Alternatives 7a and 7b would repurpose the current number one general-purpose lanes to HOV 2+ managed lanes. Therefore, culvert construction associated with Build Alternative 7a would only be related to replacements or improvements to 18 existing culverts. Build Alternative 7b would construct 5 new culverts associated with the I-80 managed lane direct connector. Construction methods would be the same as Build Alternative 2a and 2b, respectively. The lining of one pipe would also occur using CIPP. As stated earlier, CIPP is a method to repair pipes without needing to trench by inserting a liner inside the existing culvert pipe.

### **Construction Schedule – Build Alternatives 7a and 7b**

Construction of Build Alternative 7a is anticipated to take approximately 180 construction working days over 10 months. Construction of Build Alternative 7b is anticipated to take 732 construction working days over 36 months to complete. Construction would potentially commence in Spring 2025. Due to high daytime traffic volumes, nighttime work would be expected. Both daytime and nighttime work should be anticipated throughout the project duration.

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

System management strategies increase the efficiency of existing facilities; they are actions that increase the number of vehicle trips a facility can carry without increasing the number of through lanes. Examples of Transportation System Management (TSM) strategies include the following: ramp metering, auxiliary lanes, turning lanes, reversible lanes, and traffic signal coordination. TSM also promotes automobile, public, and private transit, ridesharing programs, and bicycle and pedestrian improvements as elements of a unified urban transportation system. Modal alternatives integrate multiple forms of transportation modes, such as pedestrian, bicycle, automobile, rail, and mass transit. Although TSM measures alone could not satisfy the purpose and need of the project, the TSM strategies that have been incorporated into the Build Alternatives include the Park-and-Ride Facility at Enterprise Avenue (all Build Alternatives), the proposed bicycle path improvements (all Build Alternatives), and the ITS elements included in Table 1.3-1.

Transportation Demand Management (TDM) focuses on regional means of reducing the number of vehicle trips and miles traveled and increasing vehicle occupancy. It facilitates higher vehicle occupancy or reduces traffic congestion by expanding the traveler's transportation options in terms of travel method, travel time, travel route, travel costs, and the quality and convenience of the travel experience. A typical activity would be providing funds to regional agencies that are actively promoting ridesharing, maintaining rideshare databases, and providing limited rideshare services to employers and individuals. Increased vehicle occupancy reduces traffic volumes during peak commuting periods; however, without the construction of the improvements described above, successful implementation of a TDM alternative would not substantially improve the safety and operation of the freeway. A TDM alternative by itself would not satisfy the purpose of the project.

#### **1.3.1.4 Reversible Lanes**

Effective January 1, 2017, Assembly Bill 2542 amended the California Streets and Highways Code to require that Caltrans or a regional transportation planning agency demonstrate that reversible lanes were considered when submitting a capacity-increasing project or a major street or highway lane realignment project to the CTC for approval (California Streets and Highways Code, Section 100.015). Caltrans considered reversible lanes during project initiation but determined that they would not be compatible with the proposed Build Alternatives.

#### **1.3.1.5 Access to Navigable Rivers**

California Streets and Highways Code Section 84.5 states that during the design hearing process relating to state highway projects that include the construction by Caltrans of a new bridge across a navigable river, there shall be included full consideration of and a report on the feasibility of providing a means of public access to the navigable river for public recreational purposes. The project would involve improvements of the existing Bryte Bend Bridge over Sacramento River. The Sacramento River is a navigable river; however, the bridge exists, and the project would not construct a new bridge over the Sacramento River. Public access to the Sacramento River for public recreational purposes is discussed in Section 2.1.3, Parks and Recreational Facilities.

#### **1.3.1.6 No Build Alternative 1**

No Build Alternative 1 would maintain the existing conditions, and no work would be conducted to relieve current traffic congestion to improve traffic flow, mobility, and travel time reliability while at the same time reducing vehicle emissions and travel costs. No Build Alternative 1 would not provide a transportation facility that functions for all users, including bicyclists, pedestrians, local transit services, and freight. Recurring travel demand would continue to exceed the highway's current design capacity, resulting in severe traffic congestion and impaired mobility. Additionally, the transportation network would not include adequate facilities for all modes of transportation.

No Build Alternative 1 assumes programmed and planned improvements to the current corridor. While there are numerous planned or programmed transportation projects within the region that can impact future travel patterns, this section focuses only on those future baseline improvements that directly impact the project area. The baseline improvement projects within the project area are listed in Table 1.3-3 and described in further detail in Section 2.4.

**Table 1.3-3. List of Reasonably Foreseeable Future Actions**

Project ID	Project Name	Jurisdiction	Location	Project Description	Status
<b>Transportation Projects</b>					
T-1	Yolo Pavement Rehabilitation Project 03-4F650	Caltrans District 3	Yolo 80 PM 4.3/R11.4 and Yolo 50 PM 0.0/2.5	This project proposes constructing the median on the I-80 West Capitol Avenue Undercrossing and the I-80 Reed Avenue UC bridges to accommodate stage construction. Additionally, the 03-4F650 project proposes improvements for critical bridge locations within the corridor to upgrade deck surfaces, approach slabs, and slope paving. The proposed median improvement occurs throughout most of the project to accommodate for stage construction. The median concrete barrier will remain in place at other locations, and the median restriped as part of the 3H900 project to provide managed lanes, with one managed lane in each direction. The project proposes new fiber-optic lines throughout, along with some ramp metering and upgrades to other existing roadway features. These fiber-optic lines will improve the ITS monitoring capability within the corridor.	Planned construction March 2023 to December 2027.
T-2	Sac River Bridge Over Head Bryte Bend Bridge Rehabilitation 03-0F250	Caltrans District 3	Yolo 80 PM R11.1/R11.7 and Sac 80 PM M0.0/M0.5: In Yolo and Sacramento Counties and near West Sacramento from 0.1 mile west of Reed Avenue UC to 0.1 mile east of Bryte Bend Bridge.	This project rehabilitated the Sacramento River Bridge and Overhead (BOH), Br.# 22-0026 L/R, on I-80 at the Yolo/Sacramento County Line in West Sacramento about three miles west of I-5. The project included replacing the bridge rail, replacing the deck drain system, building barrier pedestals for future electroliers, and installing conduits.	Construction completed January 2023.
T-3	US-50 ICM Infrastructure 03-3H330	Caltrans District 3	US-50 in El Dorado County from the El Dorado County/ Sacramento County line to Stateline Avenue in the City of South Lake Tahoe.	This project is on US-50 in and near the cities of Sacramento, Rancho Cordova, and Folsom, from the Yolo/Sacramento County line to Folsom Boulevard; and in Yolo County in West Sacramento along US-50, from the I-80/US-50 interchange to the Yolo/Sacramento County line (PM 0.0 to 3.156), and on I-80 from Enterprise Boulevard to US-50 (PM 9.2 to R9.552). Installation of TMS field elements.	Planned construction September 2021 to December 2023.

Project ID	Project Name	Jurisdiction	Location	Project Description	Status
T-4	Sac 50 Design-Build 03-0H08U	Caltrans District 3	Sacramento, Sacramento River bridge, Airport Boulevard, SR-99, I-80, US-50	In Sacramento County on US-50 from PM L0.20 to PM R6.10, from the I-5 Junction to Watt Avenue. The project proposes to construct managed lanes and rehabilitate the pavement.	Construction anticipated to be complete in December 2024.
T-5	Richards Boulevard / Olive Drive Circulation Improvements 03-0H360	City of Davis	Sol 80 PM 44.5/44.7 and Yolo 80 PM 0.0/0.5	Davis, in cooperation with Caltrans, has completed a Project Study Report-Project Development Support and will be circulating Draft Project Report/Environmental Document in Early 2022 that evaluates the safety and operational functions of the interchange at Richards Boulevard and I-80. The Davis project proposes to reconfigure the westbound I-80 on-ramp and off-ramp to a tight diamond; construct additional turn lanes to the eastbound I-80 on-ramp; eliminate the westbound I-80 slip off-ramp to Olive Drive; construct a two-way shared use path on the west side of Richards Boulevard that will pass under the westbound I-80 on-ramp from Richards Boulevard and cross over I-80.	Planned construction December 2023 to June 2025.
T-6	US-50 Metal Beam Guardrail Upgrade 03-1H870	Yolo County	US-50 from PM 0.0 to 3.0 and on I-80 from PM 9.0 to R10.7	The project replaced the guardrail and placed vegetation control.	Construction completed December 2021.
T-7	Sac/Placer 80 Fiber- Optics 03-0H540	Sacramento County	Sac PM M0.3/18.0 & Placer 80 PM 0.0/0.7	Installed fiber-optic conduit, cable and pull boxes, replaced sign panels, transition railing, modified ramp metering systems. limited proposed fiber-optic conduits and pull boxes along the I-80 median and eastbound I-80 outside shoulder, along westbound I-80 diagonal and loop on-ramps from West El Camino Ave, along eastbound I-80 off-ramp to West El Camino Ave and eastbound I-80 loop on-ramp from West El Camino Ave.	Construction completed August 2022.
T-8	Yolo 80 Olive Drive Bike/Ped Connection 03-4H260	City of Davis	PM 0.841/0.851	Bike/Ped structure from Olive Drive to Pole Line Road overcrossing bridge. Closure of eastbound I-80 off-ramp to Olive Drive.	Planned construction January 2021 to June 2023.
T-9	Yolo 80 Davis 80 Rehabilitation Project 03-2J260	City of Davis	PM 0.0/4.40	Remove portion of pavement and replace with RHMA-G and RHMA-O for I-80 mainline and Mace Blvd ramps. Upgrade Mace Blvd drainage facilities, metal beam guard rail, cross walks, ADA ramps, and pedestrian push buttons. Install HOV ramp metering systems at Mace Blvd eastbound on-ramps to I-80. Project Initiation Document was signed December 2022.	Planned construction May 2027 to May 2028.

Project ID	Project Name	Jurisdiction	Location	Project Description	Status
T-10	Sac 5/50 Interchange Painting 03-1H100	City of Sacramento	Sacramento River Viaduct (Pioneer Bridge) to 4th Street; also, on I-5 from 0.2 mile south of Broadway to S Street (PM 22.15 to PM 22.91).	Painting at interchange on Sacramento River Viaduct and on I-5.	Construction was completed February 2023.
T-11	Sycamore Trail Pedestrian Overcrossing 03-3H840	City of West Sacramento	City of West Sacramento	City of West Sacramento plans to construct a trail and pedestrian crossing over US-50 that will extend south from the newly developed pedestrian and bicycle trail at Joseph “Joey” Lopes Park to Westmore Oaks Elementary School. The project site is between Evergreen Avenue and Stone Boulevard along the Sacramento Regional County Sanitation District lower northwest interceptor sewer easement. The width of the overcrossing would be either 16 or 22 feet.	Planned construction March 2023 to April 2024.
T-12	Yolo Rail Relocation	City of Davis, along with City of West Sacramento, City of Woodland and Yolo County	City of Davis, City of West Sacramento, City of Woodland, and Yolo County	The Yolo Rail Realignment Project proposes to relocate the existing rail access from the Union Pacific Railroad mainline current alignment along the eastern edge of West Sacramento to a new location west of the I-80/US-50 split. The project will allow for the West Sacramento riverfront to fully realize its redevelopment potential, alleviate significant traffic impact from the existing freight rail alignment, and provide for the opportunity to expand freight rail service to West Sacramento’s industrial areas with minimum community impact.  It has been proposed to combine a new railroad overhead under I-80 as part of the combined projects 03-4F650 and 03-3H900 between the Yolo Causeway and Enterprise Boulevard to tie into existing tracks leading to/from the Port of West Sacramento.	Planning phase
T-13	County Road 32A Crossing	Yolo County	CR-32A is located north of I-80 and east of the Mace Boulevard interchange	CR-32A to improve bike path connectivity between CR-105 (just east of Davis) and the western terminus of the proposed new Class I bicycle/pedestrian facility of the Managed Lanes Project (03-3H900) that will connect with CR-32A, just west of the westbound CR-32A Off-Ramp. The County recently completed a Project Study Report and is seeking funding for this project.	Planning Phase

Project ID	Project Name	Jurisdiction	Location	Project Description	Status
T-14	Bridge Preventive Maintenance on Route 505 at Horse Creek Bridge and on Route 80 at McCune Creek Bridge	Caltrans District 4 SHOPP Projects	Vacaville (Solano I-505 and I-80)	In and near Vallejo, Dixon, and Vacaville, at I-80/SR-29 Separation Bridge (No. 23-008), McCune Creek Bridge (No. 23-0084L/R) and Horse Creek Bridge (No. 23-0077L). Bridge preventive maintenance.	Environmental analysis completed in December 2020.
T-15	SOL SR 37, 80 & 780 RRFB 0P760; SOL-Var. 2020 SHOPP	Caltrans District 4 SHOPP Projects	Solano County, Various post markers	Install rectangular rapid flashing beacons in Solano County on various routes (Routes 37, 80, and 780) at various locations.	Construction anticipated to begin in 2022/2023
T-16	SOL-VAR; 2020 SHOPP	Caltrans District 4 SHOPP Projects	Solano County, Various post markers	Install best management practices (stormwater mitigation) at Routes 37, 80, 780, 101, and 121.	Construction anticipated to begin 2023/2024
T-17	I-5 Corridor Improvement Project 03-4H580	Caltrans D3	SAC 5 22.4-34.4	Caltrans proposes to make improvements on I-5 between PM 22.4 and 34.4 in Sacramento County. The proposed action would address mobility on I-5 from the I-5/SR-50 Interchange (south of downtown Sacramento) to the Yolo County line, including Airport Boulevard, providing a vital link to Sacramento International Airport (SMF). This mobility improvement would be accomplished with northbound and southbound managed lane strategies. The project would help relieve current traffic congestion, which would result in improved traffic flow, mobility, travel time, and reliability. In addition, the project would improve transit access and reduce vehicle emissions and travel costs. Ramps, shoulders and gores would be reconstructed at various locations in the project area. Some widening of or replacement of existing structures in the project area would be required. Drainage modifications would be required due to median reconstruction where sheet flow currently drains. Addition of (or modification of existing) intelligent transportation system elements and infrastructure including ramp meters, fiber-optic conduit and cables, and overhead signs would be part of the scope of work. Utility relocation is expected.	Project Approval and Environmental Document Phase, anticipated to be complete late 2023

Project ID	Project Name	Jurisdiction	Location	Project Description	Status
<b>Bicycle and Pedestrian Facility Projects</b>					
BP-1	Mace Boulevard Corridor Project	City of Davis	City of Davis	Addition of green bicycle lane conflict markings where each westbound freeway ramp intersects with Mace Boulevard. Provision of bicycle intersection crossing markings at the signalized intersection of the I-80 westbound ramps and Mace Boulevard and addition of green bike lane conflict markings where each eastbound freeway ramp intersects with Mace Boulevard.	Planning phase; community meeting to be held on January 20, 2022.
BP-3	Jefferson Boulevard interchange area	City of West Sacramento	City of West Sacramento	Addition of Class II bicycle lanes. The pavement on Jefferson under the US-50 interchange structure was not widened for bicycle lanes. The pavement was recently rehabilitated as part of the West Capitol Avenue Safety Enhancement and Road Rehabilitation project.	Project construction complete.
BP-4	S. River Road interchange area	City of West Sacramento	City of West Sacramento	The widening of 5 <sup>th</sup> Street for Class II bicycle lanes through the US-50 interchange area will be constructed as part of the Riverfront Street Extension / Fifth Street Widening project.	Construction to begin soon.
<b>I-80 Corridor Major Developments/General Plans/Specific Plans</b>					
D-1	Olive Drive	City of Davis	City of Davis	The project would develop existing single-family homes into high density multi-family apartments.	Environmental documents approved in November 2019
D-2	University Mall/ University Commons Redevelopment Project	City of Davis	City of Davis	Transit-oriented infill project, commercial.	Final City Council Approval granted on August 25 <sup>th</sup> , 2020
D-3	UC Davis West Village Expansion	UC Davis	City of Davis	200-acre mixed-use neighborhood integrating student, faculty, and staff housing and educational and research facilities, all centered on a civic village square.	Under construction, anticipated completion in fall of 2021
D-4	West Sacramento Corporation Yard Relocation Project	City of West Sacramento	City of West Sacramento	West Sacramento proposes to construct a new Municipal Corporation Yard Facility at 4300 West Capitol Avenue, a parcel which the city anticipates purchasing from the Port of West Sacramento.	Phase I of the project is complete.

Project ID	Project Name	Jurisdiction	Location	Project Description	Status
D-5	West Capitol Avenue– Road Rehabilitation and Safety Enhancement Project	City of West Sacramento	City of West Sacramento	West Capitol Avenue is envisioned as the West Sacramento’s downtown: a central core with a vibrant main street that takes advantage of its prime location; providing an attractive setting for a variety of land uses including the Civic Center, Community Center, Transit Hub; and providing residential, commercial, and urban parks that are accessible via multiple modes of transportation. The primary goals are to repair deteriorating pavement; complete scalloped street sections; install drainage improvements, sidewalks, access ramps, signal modifications, separated/buffered bike lanes, street lighting, high-visibility crosswalks for safer pedestrian crossings; and reduce unnecessary vehicular travel lanes.	Construction is complete.
D-6	Upper Westside Specific Plan	Sacramento County	Sacramento County	The project will be a transportation-oriented development due to its location and proximity to transportation infrastructure and major employment regions in the region. It will also incorporate many “complete streets” aspects such as pedestrian- and bicycle-friendly infrastructure, transit services, and some compact housing to encourage alternative modes of transportation within the area. The project area is currently zoned for agricultural use, but a general plan amendment is underway to alter the land use designations for the Upper Westside Plan area.	Application accepted on February 26th, 2019. Environmental analysis in progress.
D-7	The Core Natomas 300-unit Apartments	City of Sacramento	City of Sacramento	This project provides a 300-unit apartment complex with 506 parking spaces (including 203 garage types), two accesses (orchard and via planned cul-de-sac).	Construction completed in 2020.
D-8	River Oaks Phase 2– 591 Single Family	City of Sacramento	City of Sacramento	This project provides 591 single family lots on 83.3 acres of vacant land within the River Oaks planned unit development.	Planning phase; environmental documents submitted in 2018.

Project ID	Project Name	Jurisdiction	Location	Project Description	Status
D-9	Bell Avenue Warehouses Project	City of Sacramento	City of Sacramento	The proposed project would include development of the project site with two warehouse structures totaling approximately 339,549 sf as well as various other site improvements related to internal vehicle circulation, stormwater management, and landscaping. The warehouse on the eastern parcel would be about 259,749 sf and contain two depressed loading docks on the western face of the building. The warehouse on the western parcel would be about 79,800 square feet and contain two depressed loading docks on the building's western face. On-site parking would be provided by 277 proposed parking spaces.	Planning phase; environmental documents submitted in February 2020.
D-10	Rivers Oaks Marketplace	City of Sacramento	City of Sacramento	There is a plan amendment for four new commercial structures on a 3.91-acre parcel in the C-2-PUD (General Commercial-Park El Camino) Zone. This requires a Commission-level review for site plan and design review, conditional use permits, a tentative map, and a planned unit development Schematic Plan Amendment.	Project construction would last about 16 months, starting in April 2022 and concluding in July 2022. Construction would proceed in a single phase.
D-11	Parke Bridge Phase 4	City of Sacramento	City of Sacramento	The project proposes to construct 108 new detached, single-unit dwellings with four house plans on approximately 22 acres in the Parke Bridge planned unit development.	Subdivision is currently under development
D-12	Bretton Woods	City of Davis	City of Davis	Davis is annexing land from Yolo County and rezoning land from agricultural intensive to medium density residential, high density residential, residential greenspace overlay, urban agriculture transition area, and mixed-use. This will pave the way for 325 single family homes, 260 of which are for senior citizens, and an additional 150 are affordable senior apartments. The project also includes an approximately 3-acre activity and wellness center. The project is on a site north of Covell Boulevard and west of SR-113, at the intersection of Shasta Drive and West Covell Boulevard.	Currently undergoing planning review of the subdivision phases.

Project ID	Project Name	Jurisdiction	Location	Project Description	Status
D-13	UC Davis Long Range Development Plan	University of California, Davis	Sacramento, located off US-50 near the SR-99/I-80 Business interchange	The 2020 LRDP Update proposes general types of campus development and land uses to support projected campus population growth and enable expanded and new program initiatives. The proposed Aggie Square Phase I project consists of approximately 1,384,500-gross square feet of building space for education, research, residential and commercial uses, and parking structure space.	Planning phase; environmental documents submitted in November 2020.
D-14	Woodland Research & Technology Park Specific Plan	City of Woodland	City of Woodland	Woodland is pursuing a specific plan detailing a commercial mixed-use town center with 2.15 million square feet of non-residential building space for approximately 6,100 employees and 1,600 housing units. The project is in the southern portion of Woodland's planning area, adjacent to the existing city limits, bound by Farmers Central Road to the north, CR-101 to the east, SR-113 to the west, and CR-25A to the south.	Environmental analysis in progress.
D-15	The Promenade - 2023 (Formerly NISHI Housing Site)	City of Davis	City Davis	The City of Davis is processing a planning application for The Promenade, previously known as Nishi Student Apartments. The project creates a new neighborhood adjacent to the UC Davis campus and close to downtown Davis. It is located on 46.9 acres with 2,200 beds across 700 units, with a mix of studio, 2-bedroom and 4-bedroom floorplans ranging in size from 480 to 1,565 square feet.	Planning phase in progress.

Key:

- Ave = Avenue
- Blvd = Boulevard
- CCTV = closed-circuit television
- CMS = changeable message signs
- CR = County Road
- I-80 = Interstate 80
- LRDP = long range development plan
- OC = overcrossing
- sf = square feet
- SHOPP = State Highway Operation and Protection Program
- SR = State Route
- TCE = temporary construction easement
- TMS = transportation management system
- UC Davis = University of California, Davis

## 1.4 Comparison of Alternatives

After the public circulation period, all comments were considered; and Caltrans identified a preferred alternative and made the final determination of the project's effect on the environment.

### 1.4.1 Identification of a Preferred Alternative

Build Alternative 4B (HOT 3+ with managed lane connector ramp) is the preferred alternative for meeting the project's purpose and need. Alternative 4B would best ease congestion and improve freeway operations to support reliable transport of goods/service throughout the region, improve freeway operation on the mainline ramps and at system interchanges, improve modality and travel time reliability, and lastly provide expediated traveler information and monitoring systems.

While Build Alternatives 2–6 offer similar results in terms of impacts on the environment and vehicle miles traveled, Build Alternative 4B provides the highest benefit with respect to revenue generation while still meeting the project's purpose and need to reduce congestion and improve mobility across the corridor. Further, Build Alternative 4B is consistent with local government transportation goals and the project's partner agency's (Yolo Transportation District) declaration of HOT 3+ with connector ramp as their preferred alternative.

## 1.5 Alternatives Considered but Eliminated from Further Discussion Prior to Draft EIR/EA

The following alternatives were considered during the Project Initiation Document (PID) phase, documented in the Project Study Report-Project Development Support (PSR-PDS) and were considered and eliminated by the Project Development Team in the Project Approval and Environmental Document phase.

### 1.5.1 Alternative 1A

This alternative proposed to construct approximately 21 miles of managed lanes in both directions from the Kidwell Road overcrossing in Solano County to the US-50/I-5 and I-80/West El Camino Avenue interchanges in Sacramento County to alleviate bottlenecks and address an increase in travel demand. The managed lanes in Solano County under Alternative 1A would have converted an existing general-purpose lane to a managed lane. This alternative also proposed to construct a new separate bicycle/pedestrian structure adjacent to and north of the existing Yolo Causeway structure. The proposed separate bicycle/pedestrian structure, as proposed in the PID document with a 12-foot width, lacked access in case of emergency and regular maintenance.

The Solano County portion of the project is in the Solano County MTC area and Caltrans District 4. The 2017 Solano County RTP does not include managed lanes between the Kidwell Road interchange and the Yolo County line. Caltrans District 4 has indicated that they will coordinate with these organizations and Solano Transportation Authority to amend the Solano County

bus/carpool lane section of the MTC's Management Transportation Plan (MTP) and possibly add an HOV lane in Solano County on a different and future District 4 project.

The proposed separate Yolo Causeway bike bridge was determined not to be a viable alternative due to a low benefit-to-cost ratio. The current bicycle usage is generally low and environmental studies previously conducted by Caltrans have revealed that there would be impacts to the existing plants and wildlife due to the construction of a separate bicycle bridge. Accordingly, this alternative was also rejected due to the anticipated environmental impacts and environmental mitigation required.

### **1.5.2 Alternative 1B**

This alternative is similar to Alternative 1A except the bicycle and pedestrian access across the Yolo Bypass would have occurred by either widening the existing Yolo Causeway structures or attaching a lightweight structure to them. This option would be more expensive than the structure in Alternative 1A due to the need to seismically retrofit the existing Yolo Causeway. This alternative would have less environmental impact in the Yolo Bypass wetland area and would address the safety, security, and emergency access concerns. Additional earthwork would be needed on the westbound side of I-80 in the berm area within the Yolo Bypass between the two causeway structures, which would impact existing environmental features.

Alternative 1B was rejected because it would require widening each side of the existing Yolo Causeway structures. Seismic upgrades to the existing Yolo Causeway structures would have been more expensive than building a new independent and separate structure.

### **1.5.3 Alternative 1C**

This alternative proposed a managed lane in each direction and a new I-80 HOV connector ramp/bridge at the I-80/US-50 interchange to provide direct connectivity between the proposed managed lanes on I-80. Outside widening was proposed from Yolo I-80 PM 0.0 to the Yolo Causeway, and adjacent to the I-80/US-50 interchange for the I-80 managed lane connector.

This alternative is the same as Alternative 1A except riders would use the existing Yolo Causeway bicycle/pedestrian facility and the Yolo Causeway would be restriped with managed lanes in each direction.

Alternative 1C was rejected for the same reasons as Alternative 1A in that the 2017 Solano County RTP does not include managed lanes between the Kidwell Road interchange and the Yolo County line. In addition, there would be right-of-way costs and environmental impacts with the proposed outside widening of the corridor.

### **1.5.4 Alternative 1D**

This alternative proposed widening into the median in Solano County to add managed lanes. It was different from Alternative 1A in that it proposed converting an existing general-purpose lane into a managed lane.

This was rejected for the same reason as Alternative 1A. It is included in the MTC listing but is not supported by Caltrans District 4 at this time.

### **1.5.5 Alternative 2**

This alternative proposed an interim eastbound reversible lane from just west of the Yolo County line to Enterprise Boulevard. It would convert mixed-flow lanes to managed lanes on US-50 to the I-5 interchange.

Reversible Lanes were evaluated using the 2018 High Occupancy Vehicle Guidelines referenced in section 2 of the Interim Guidance on AB 2542 Reversible Lane Requirement. Section 2.1 of the 2018 High Occupancy Vehicle Guidelines states that:

*“When a metropolitan area largely consists of a central business district with weekday commuter traffic from outlying areas, often referred to as a “radial” geographical area, the traffic demands on each corridor normally would indicate definite directional peaks during the morning and afternoon commute periods. If traffic in the off-peak direction is light (35 percent or less of the total freeway traffic during the peak periods) and is forecast to remain light during the design life of the project, then a reversible HOV operation may be appropriate.”*

The existing and projected “off-peak” directional split of the total freeway transportation is less than 35 percent, with almost equal directional splits in some segments of the project area during the PM peak period. Therefore, based on existing guidance, transportation data, and projected traffic growth, a reversible HOV lane would not be an appropriate alternative to consider for this project.

### **1.5.6 Alternative 4**

This alternative proposed an interim project to stripe managed lanes on the I-80/Bryte Bend bridge. This alternative was rejected because it would not meet the purpose and need of providing adequate operational improvements for the entire corridor.

### **1.5.7 Alternative 5**

This alternative is similar to Alternative 1A, except managed lanes would be exclusively for transit vehicles.

This alternative was rejected due to the anticipated difficult merging required to get from the freeway on-ramps adjacent to the outside shoulders and then transit drivers would have to merge to the median transit lane, then merge to the outside lane again to exit the ramps to bus stops.

This alternative is a modified version of Alternative 6 but has a larger impact area like the Alternative 1A footprint. Alternative 6 is based on the smaller general impact area or similar to Alternative 3 footprint.

It was determined that this alternative was not a viable alternative, but possible Part Time Lane Use or Bus on Shoulder options may be studied further in the design phase.

### 1.5.8 Alternative 6

This alternative is similar to Alternative 1A except that it proposed to construct two managed lanes in each direction. This is a modified version of Alternative 5, and it was eliminated from further discussion because it would have a bigger environmental footprint and require extensive right-of-way acquisition. This alternative would require replacing or widening all the bridges throughout the I-80 and US-50 Corridor. It is anticipated that there would be merging and weaving issues for traffic merging onto and out of the two managed lanes. This alternative was rejected due to the extensive right-of-way and environmental impacts.

## 1.6 Permits and Approvals Needed

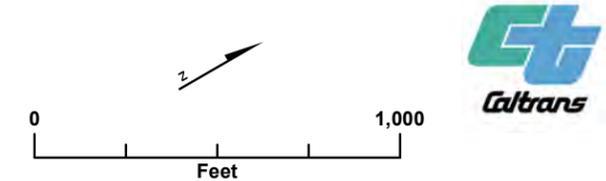
Table 1.6-1 details the permits, licenses, agreements, and certifications required for project construction.

**Table 1.6-1. Permits and Approvals**

Agency	Permits, Licenses, Agreements, and Certifications	Status
United States Fish and Wildlife Service	Biological Opinion	Issued April 12, 2024
United States Army Corps of Engineers	Section 404 Permit/Section 408	Issued during the final design phase
California Department of Fish and Wildlife	1602 Agreement for Streambed Alteration	Issued during the final design phase
Central Valley Regional Water Quality Control Board	Section 401 Certification	Issued during the final design phase
Central Valley Regional Water Quality Control Board	Construction General Permit	Issued during the final design phase
California Department of Fish and Wildlife (CDFW)	Incidental Take Permit	If needed, issued during the final design phase
Central Valley Flood Protection Control Board	Encroachment Permit	Issued during the final design phase
Federal Highway Administration	Air Quality Conformity Determination	FHWA determined project not a POAQC on October 18, 2021; reaffirmed by IAC 4/26/2024
State Historic Preservation Officer	Concurrence on Eligibility Determinations/Finding of Effect	SHPO concurred with the findings on January 12, 2022



- R/W
  - ▭ ESL
  - Post Mile
  - Intelligent Transportation System Improvement
  - Intelligent Transportation System Improvement Disturbance Area
  - Staging Area
  - County Line
- Signage and Read Point Locations**
- All Alternatives
  - Alternatives 3a, 4a, and 5a only
  - ⊕ Read Point (Alternatives 3a, 4a, and 5a only)



**Figure 1.3-1**  
**Project Design: Build Alternatives**  
**2a, 3a, 4a, 5a, 6a, 7a**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California

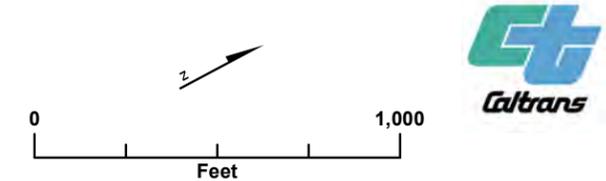
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 2. Data Sources: CalTrans, Stantec, 2021  
 3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

**Note:** The project design components depicted in this figure are preliminary. Proposed surface treatments such as striping are not included.

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- RW
  - ▭ ESL
  - Post Mile
  - County Line
- Signage and Read Point Locations**
- Alternatives 3a, 4a, and 5a only
  - ⊕ Read Point (Alternatives 3a, 4a, and 5a only)



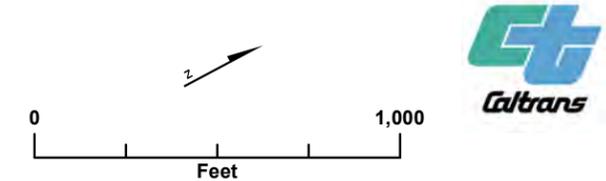
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**Project Design: Build Alternatives**  
**2a, 3a, 4a, 5a, 6a, 7a**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California

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- R/W
  - ▭ ESL
  - Post Mile
  - Culvert Work Area
  - ▨ Temporary Construction Easement
- Signage and Read Point Locations**
- Alternatives 2a, 6a, and 7a only
  - Alternatives 3a, 4a, and 5a only
  - ⊕ Read Point (Alternatives 3a, 4a, and 5a only)

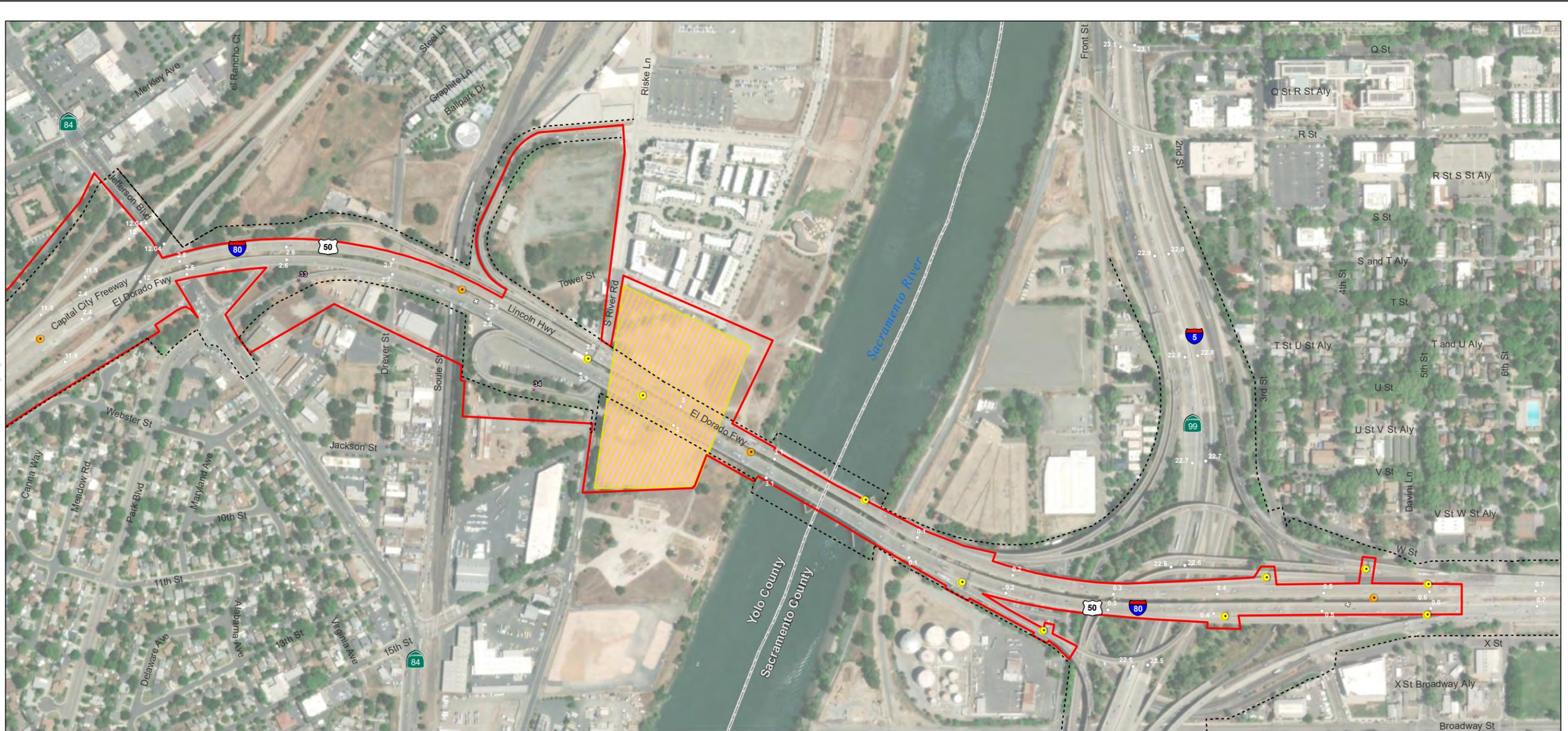


**Figure 1.3-1**  
**Project Design: Build Alternatives**  
**2a, 3a, 4a, 5a, 6a, 7a**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California  
 Sheet 3 of 16

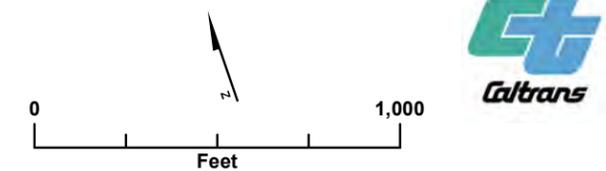
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- RW
  - ▭ ESL
  - Post Mile
  - ▭ Intelligent Transportation System Improvement
  - ▭ Intelligent Transportation System Improvement Disturbance Area
  - ▭ Staging Area
  - ▨ Temporary Construction Easement
  - County Line
- Signage and Read Point Locations**
- All Alternatives
  - Alternatives 3a, 4a, and 5a only
  - ⊕ Read Point (Alternatives 3a, 4a, and 5a only)

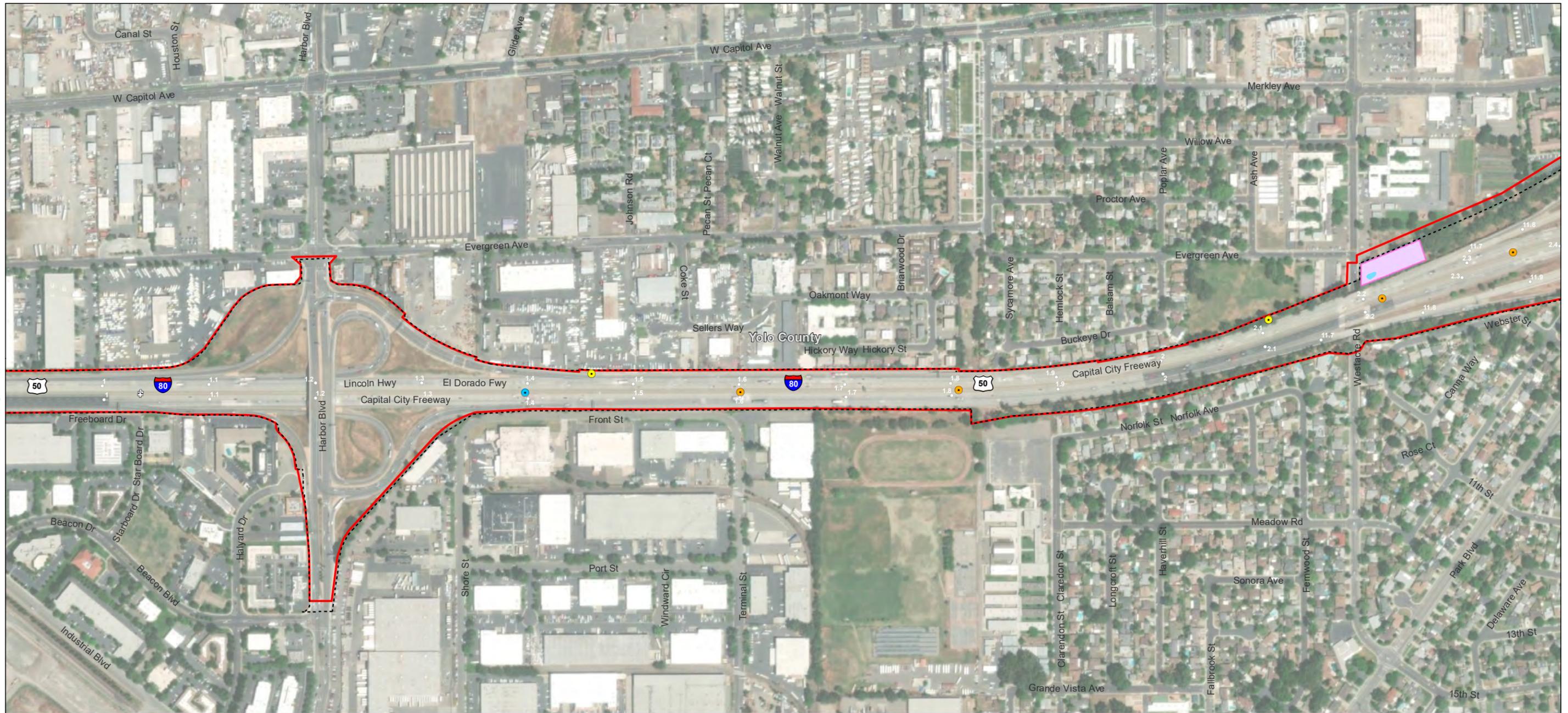


**Figure 1.3-1**  
**Project Design: Build Alternatives**  
**2a, 3a, 4a, 5a, 6a, 7a**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California  
 Sheet 4 of 16

**Note:** The project design components depicted in this figure are preliminary. Proposed surface treatments such as striping are not included.

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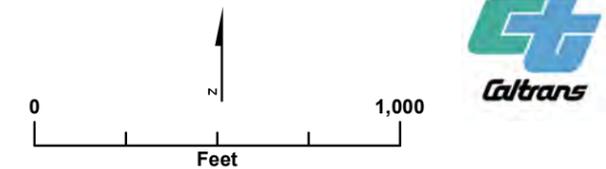
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 2. Data Sources: CalTrans, Stantec, 2021  
 3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



- RW
  - ▭ ESL
  - Post Mile
  - ▭ Trash Rack
- Signage and Read Point Locations**
- All Alternatives
  - Alternatives 2a, 6a, and 7a only
  - Alternatives 3a, 4a, and 5a only
  - ⊕ Read Point (Alternatives 3a, 4a, and 5a only)
- Culverts and Drainage**
- All Alternatives

**Notes**

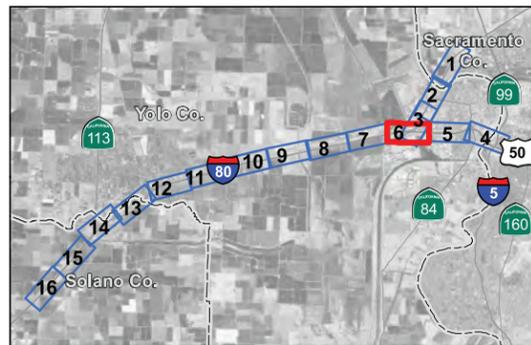
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**Figure 1.3-1**  
**Project Design: Build Alternatives**  
**2a, 3a, 4a, 5a, 6a, 7a**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California  
 Sheet 5 of 16

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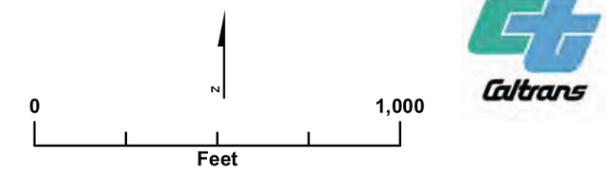
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- R/W
  - ESL
  - Post Mile
  - Proposed Park & Ride Lot
  - Permanent Easement
  - Temporary Disturbance
  - Culvert Work Area
  - Temporary Construction Easement
  - Existing Class I Bikeway
  - Temporary Bike Detour
  - Temporary Bike Detour (eastbound only)
- Bike path work is expected to occur at night. However, if work occurs during daytime hours, a temporary bike detour will be provided.

- Signage and Read Point Locations**
- Alternatives 2a, 6a, and 7a only
  - Alternatives 3a, 4a, and 5a only
  - ⊕ Read Point (Alternatives 3a, 4a, and 5a only)



**Figure 1.3-1**  
**Project Design: Build Alternatives**  
**2a, 3a, 4a, 5a, 6a, 7a**  
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 EA 03-3H900  
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 Sheet 6 of 16

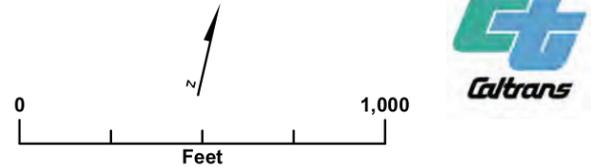
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- R/W
  - ▭ ESL
  - Post Mile
  - ▨ Temporary Disturbance
  - Existing Class I Bikeway
  - - - - Temporary Bike Detour
  - ▭ Yolo Bypass Wildlife Area
- Signage and Read Point Locations**
- Alternatives 2a, 6a, and 7a only
  - Alternatives 3a, 4a, and 5a only
  - ⊕ Read Point (Alternatives 3a, 4a, and 5a only)

Bike path work is expected to occur at night. However, if work occurs during daytime hours, a temporary bike detour will be provided.

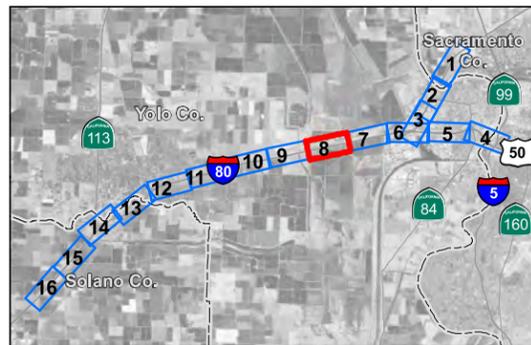


**Figure 1.3-1**  
**Project Design: Build Alternatives**  
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 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California

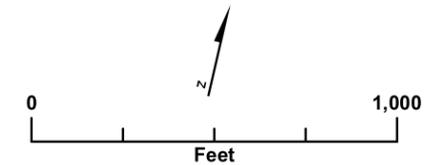
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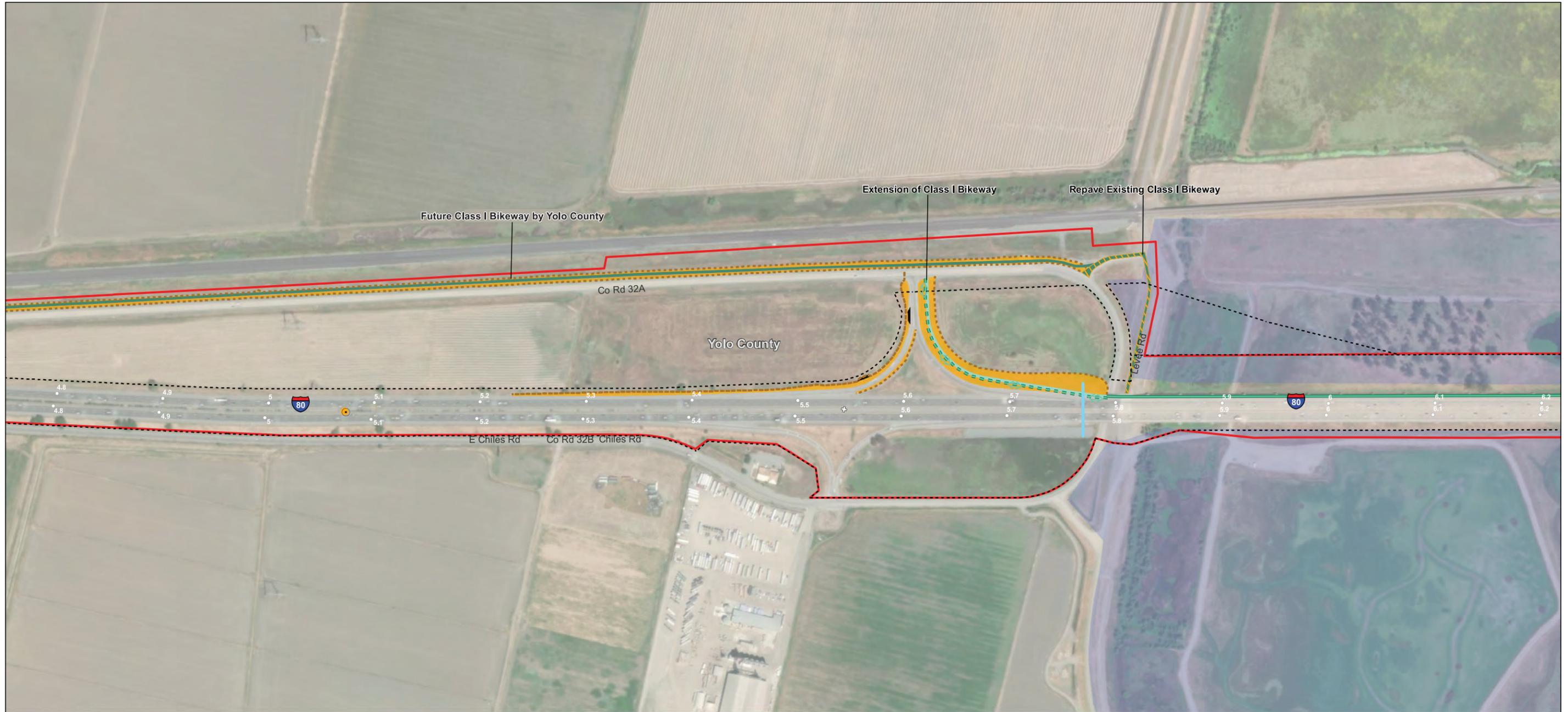
- R/W
  - █ ESL
  - Post Mile
  - █ Existing Class I Bikeway
  - █ Yolo Bypass Wildlife Area
- Signage and Read Point Locations**
- Alternatives 3a, 4a, and 5a only
  - ⊕ Read Point (Alternatives 3a, 4a, and 5a only)



**Figure 1.3-1**  
**Project Design: Build Alternatives**  
**2a, 3a, 4a, 5a, 6a, 7a**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California

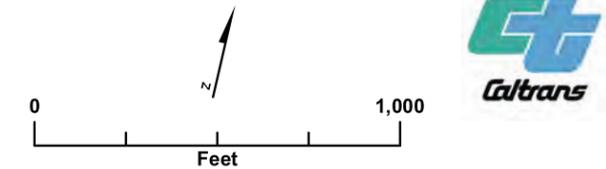
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 2. Data Sources: CalTrans, Stantec, 2021  
 3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

**Note:** The project design components depicted in this figure are preliminary. Proposed surface treatments such as striping are not included.



**Notes**  
 1. Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet  
 2. Data Sources: CalTrans, Stantec, 2021  
 3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

- R/W
- ESL
- Post Mile
- Temporary Disturbance
- Cut-Fill
- Cut-Fill Disturbance Area
- Existing Class I Bikeway
- Extension of Class I and Class II Bikeway
- Extension of Class I Bikeway
- Temporary Bike Detour
- Yolo Bypass Wildlife Area
- Pullout
- Signage and Read Point Locations**
- Alternatives 3a, 4a, and 5a only
- ⊕ Read Point (Alternatives 3a, 4a, and 5a only)
- Culverts and Drainage**
- All Alternatives



**Figure 1.3-1**  
**Project Design: Build Alternatives**  
**2a, 3a, 4a, 5a, 6a, 7a**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California

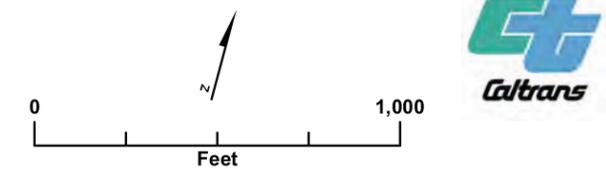
**Note:** The project design components depicted in this figure are preliminary. Proposed surface treatments such as striping are not included.

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**Notes**  
 1. Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet  
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 3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

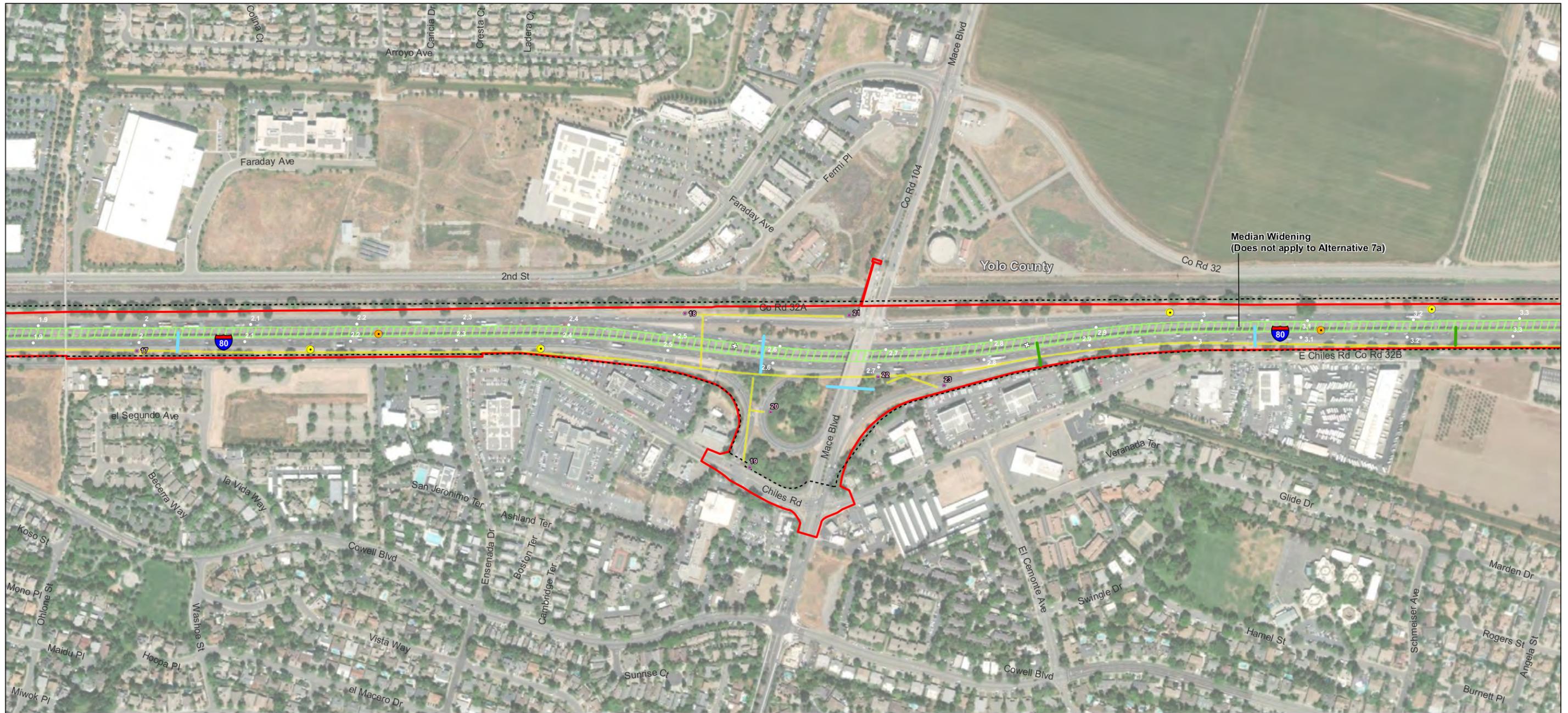
- R/W
- ESL
- Post Mile
- Intelligent Transportation System Improvement
- Intelligent Transportation System Improvement Disturbance Area
- Fiber Optic Cable
- Fiber Optic Cable Disturbance Area
- Cut-Fill
- Cut-Fill Disturbance Area
- Widening - Median (Does not apply to Alternative 7a)
- Extension of Class I and Class II Bikeway
- Yolo Bypass Wildlife Area
- Signage and Read Point Locations**
- ⊕ Read Point (Alternatives 3a, 4a, and 5a only)
- Culverts and Drainage**
- All Alternatives
- Alternatives 2a-6a



**Figure 1.3-1**  
**Project Design: Build Alternatives 2a, 3a, 4a, 5a, 6a, 7a**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California

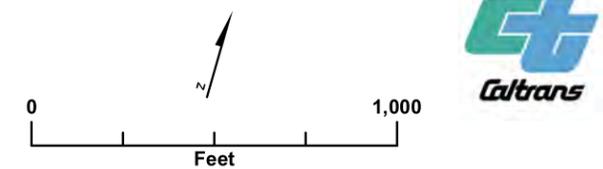
**Note:** The project design components depicted in this figure are preliminary. Proposed surface treatments such as striping are not included.

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- R/W
  - ▭ ESL
  - Post Mile
  - ▭ Intelligent Transportation System Improvement
  - ▭ Intelligent Transportation System Improvement Disturbance Area
  - ▭ Fiber Optic Cable
  - ▭ Fiber Optic Cable Disturbance Area
  - ▨ Widening - Median (Does not apply to Alternative 7a)
- Signage and Read Point Locations**
- All Alternatives
  - Alternatives 3a, 4a, and 5a only
  - ⊕ Read Point (Alternatives 3a, 4a, and 5a only)

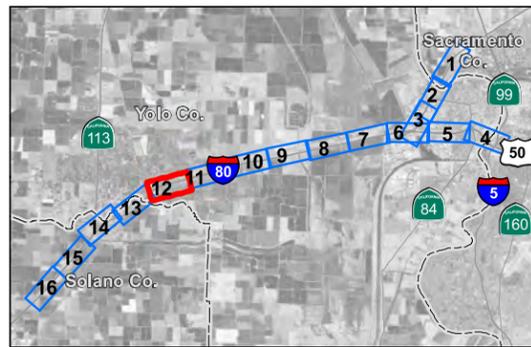
- Culverts and Drainage**
- ▬ All Alternatives
  - ▬ Alternatives 2a-6a



**Figure 1.3-1**  
**Project Design: Build Alternatives**  
**2a, 3a, 4a, 5a, 6a, 7a**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California

**Notes**  
 1. Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet  
 2. Data Sources: CalTrans, Stantec, 2021  
 3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

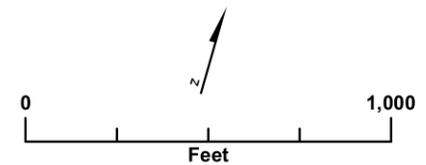
**Note:** The project design components depicted in this figure are preliminary. Proposed surface treatments such as striping are not included.



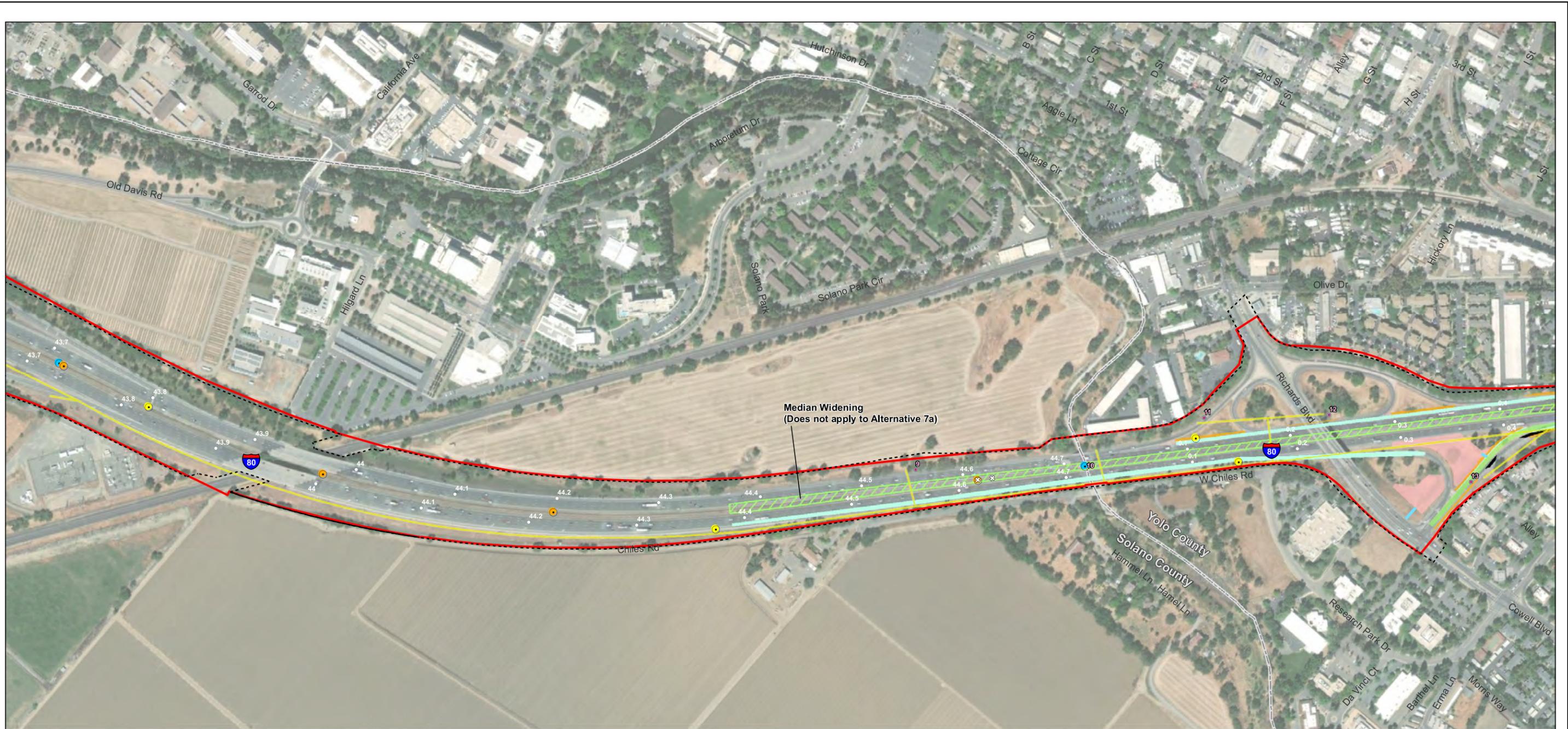
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 2. Data Sources: CalTrans, Stantec, 2021  
 3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

- RW
- ESL
- Post Mile
- Intelligent Transportation System Improvement
- Intelligent Transportation System Improvement Disturbance Area
- Fiber Optic Cable
- Fiber Optic Cable Disturbance Area
- Cut-Fill Disturbance Area
- Staging Area
- Widening - Outside Lanes/Shoulder
- Widening - Median (Does not apply to Alternative 7a)
- Realigned Richards Blvd On-ramp
- Pullout
- Signage and Read Point Locations**
- All Alternatives
- Alternatives 3a, 4a, and 5a only
- ⊕ Read Point (Alternatives 3a, 4a, and 5a only)
- Culverts and Drainage**
- All Alternatives

**Note:** The project design components depicted in this figure are preliminary. Proposed surface treatments such as striping are not included.



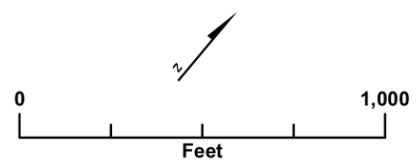
**Figure 1.3-1**  
**Project Design: Build Alternatives 2a, 3a, 4a, 5a, 6a, 7a**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California  
 Sheet 12 of 16



**Notes**  
 1. Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet  
 2. Data Sources: CalTrans, Stantec, 2021  
 3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

- R/W
- ESL
- Post Mile
- Intelligent Transportation System Improvement
- Intelligent Transportation System Improvement Disturbance Area
- Fiber Optic Cable
- Fiber Optic Cable Disturbance Area
- Cut-Fill Disturbance Area
- Staging Area
- Widening - Outside Lanes/Shoulder
- Widening - Median (Does not apply to Alternative 7a)
- Realigned Richards Blvd On-ramp
- Pullout
- County Line
- Signage and Read Point Locations**
- All Alternatives
- Alternatives 2a, 6a, and 7a only
- Alternatives 3a, 4a, and 5a only
- ⊕ Read Point (Alternatives 3a, 4a, and 5a only)
- Culverts and Drainage**
- All Alternatives

**Note:** The project design components depicted in this figure are preliminary. Proposed surface treatments such as striping are not included.



**Figure 1.3-1**  
**Project Design: Build Alternatives 2a, 3a, 4a, 5a, 6a, 7a**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California  
 Sheet 13 of 16

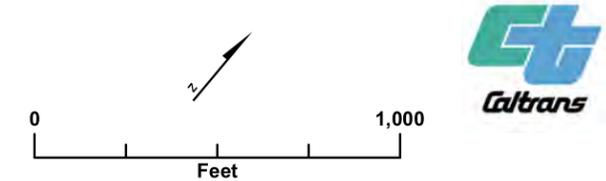
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**Notes**  
 1. Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet  
 2. Data Sources: CalTrans, Stantec, 2021  
 3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

- R/W
  - ESL
  - Post Mile
  - Intelligent Transportation System Improvement
  - Intelligent Transportation System Improvement Disturbance Area
  - Fiber Optic Cable
  - Fiber Optic Cable Disturbance Area
  - Staging Area
  - Pullout
  - County Line
- Signage and Read Point Locations**
- All Alternatives

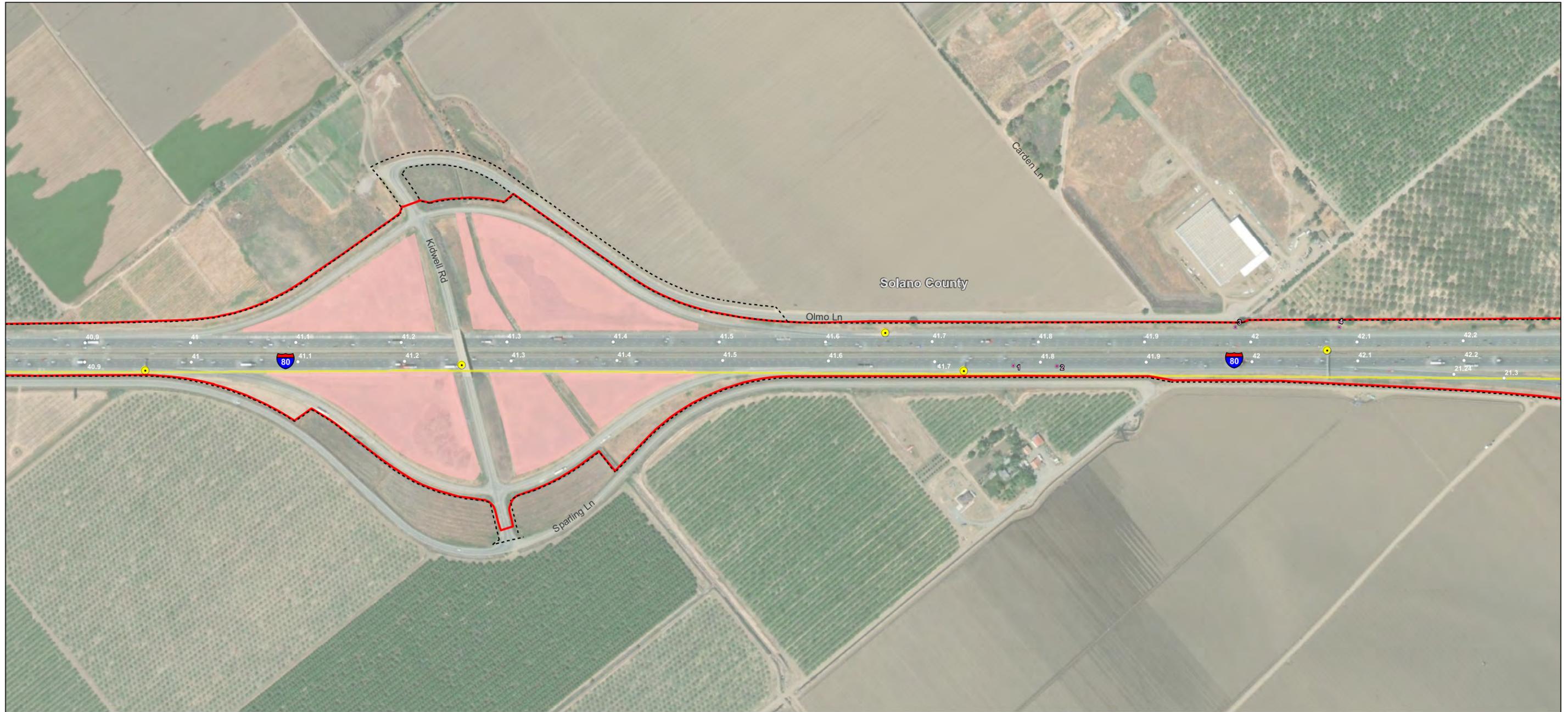
- Alternatives 2a, 6a, and 7a only
- Alternatives 3a, 4a, and 5a only



**Figure 1.3-1**  
**Project Design: Build Alternatives**  
**2a, 3a, 4a, 5a, 6a, 7a**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California  
 Sheet 14 of 16

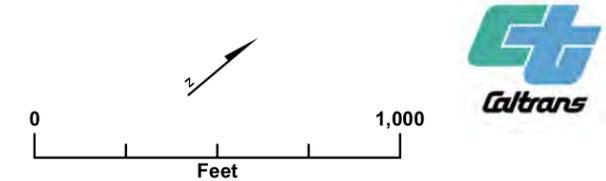
**Note:** The project design components depicted in this figure are preliminary. Proposed surface treatments such as striping are not included.

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- R/W
- ▭ ESL
- Post Mile
- ▭ Intelligent Transportation System Improvement
- ▭ Intelligent Transportation System Improvement Disturbance Area
- Fiber Optic Cable
- ▭ Fiber Optic Cable Disturbance Area
- ▭ Staging Area
- Signage and Read Point Locations**
- All Alternatives

**Notes**  
 1. Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet  
 2. Data Sources: CalTrans, Stantec, 2021  
 3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



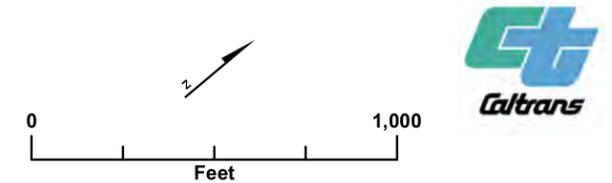
**Figure 1.3-1**  
**Project Design: Build Alternatives**  
**2a, 3a, 4a, 5a, 6a, 7a**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California

**Note:** The project design components depicted in this figure are preliminary. Proposed surface treatments such as striping are not included.

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- R/W
- ▭ ESL
- Post Mile
- Fiber Optic Cable
- ▭ Fiber Optic Cable Disturbance Area



**Figure 1.3-1**  
**Project Design: Build Alternatives**  
**2a, 3a, 4a, 5a, 6a, 7a**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California

**Notes**  
 1. Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet  
 2. Data Sources: CalTrans, Stantec, 2021  
 3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

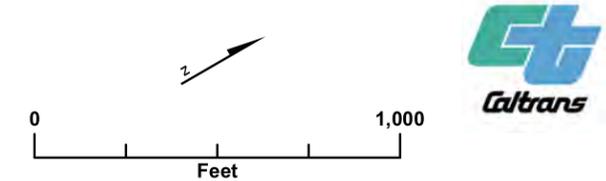
**Note:** The project design components depicted in this figure are preliminary. Proposed surface treatments such as striping are not included.

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**Notes**  
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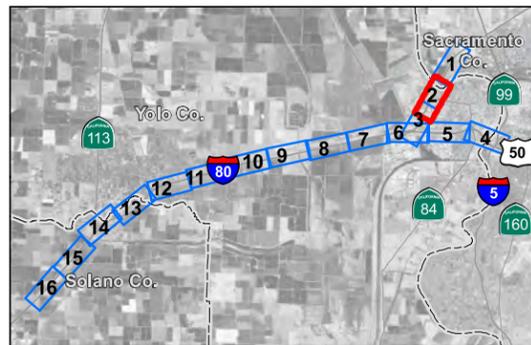
- RW
- ▭ ESL
- Post Mile
- Intelligent Transportation System Improvement
- Intelligent Transportation System Improvement Disturbance Area
- Staging Area
- County Line
- Signage and Read Point Locations**
- All Alternatives
- Alternatives 3b, 4b, and 5b only
- ⊕ Read Point (Alternatives 3b, 4b, and 5b only)



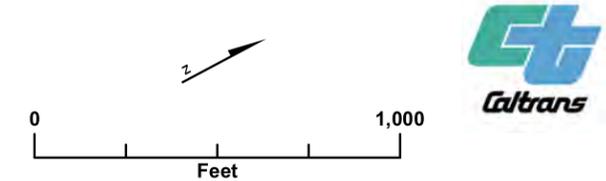
**Figure 1.3-2**  
**Project Design: Build Alternatives**  
**2b, 3b, 4b, 5b, 6b, 7b**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California  
 Sheet 1 of 16

**Note:** The project design components depicted in this figure are preliminary. Proposed surface treatments such as striping are not included.

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- RW
  - ▭ ESL
  - Post Mile
  - County Line
- Signage and Read Point Locations**
- Alternatives 3b, 4b, and 5b only
  - ⊕ Read Point (Alternatives 3b, 4b, and 5b only)



**Figure 1.3-2**  
**Project Design: Build Alternatives**  
**2b, 3b, 4b, 5b, 6b, 7b**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California  
 Sheet 2 of 16

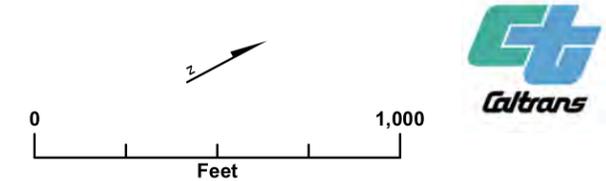
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 3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

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- R/W
  - ▭ ESL
  - Post Mile
  - Culvert Work Area
  - ⋯ Cut-Fill
  - ▨ Temporary Construction Easement
  - I-80 Connector Structure
  - ▩ Cut-Fill Disturbance Area
- Signage and Read Point Locations**
- Alternatives 2b, 6b, and 7b only
  - Alternatives 3b, 4b, and 5b only
  - ⊕ Read Point (Alternatives 3b, 4b, and 5b only)

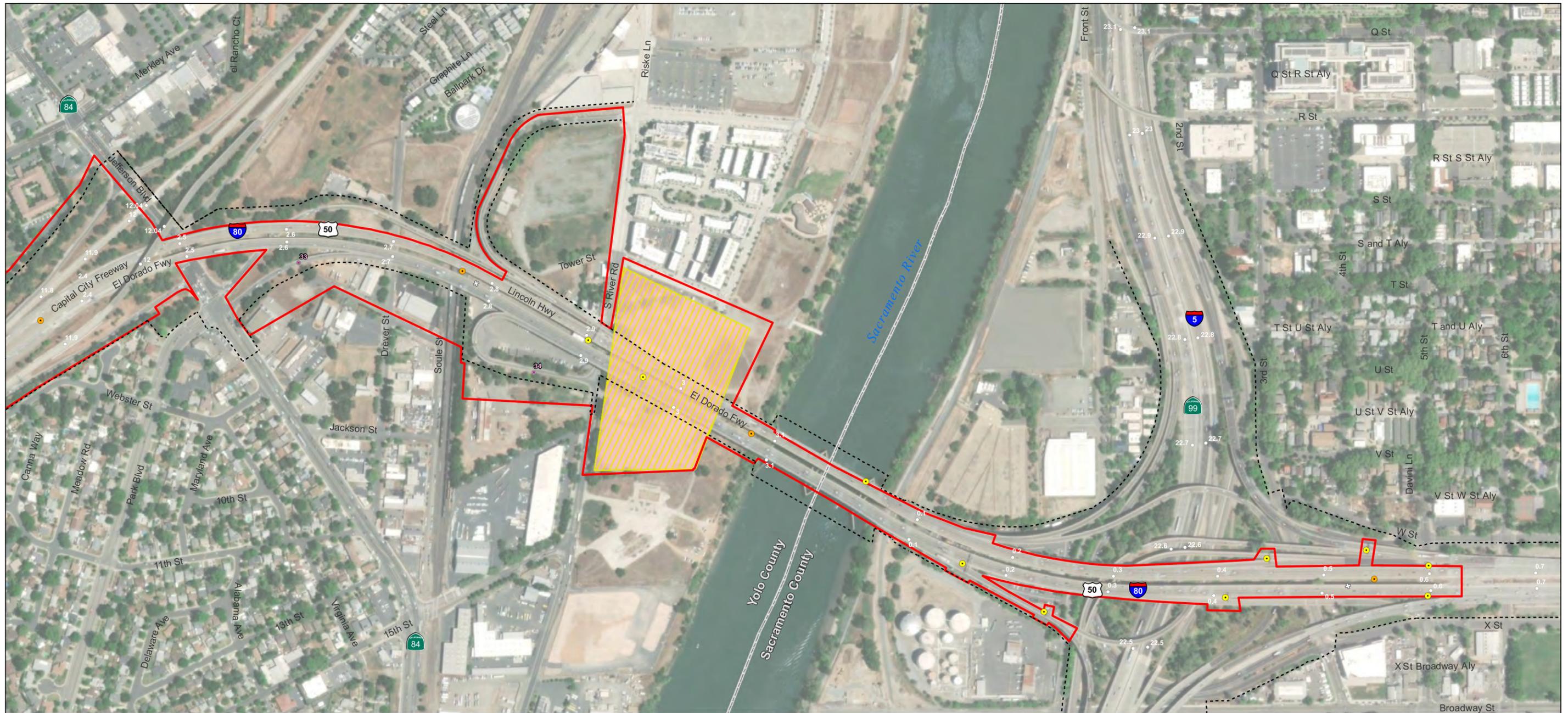


**Figure 1.3-2**  
**Project Design: Build Alternatives**  
**2b, 3b, 4b, 5b, 6b, 7b**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California

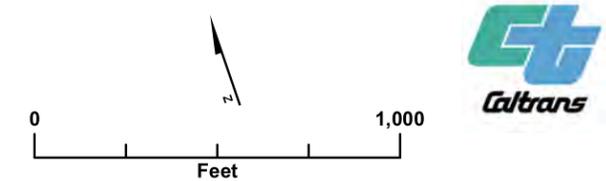
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- RW
  - ▭ ESL
  - Post Mile
  - ▭ Intelligent Transportation System Improvement
  - ▭ Intelligent Transportation System Improvement Disturbance Area
  - ▭ Staging Area
  - ▨ Temporary Construction Easement
  - County Line
- Signage and Read Point Locations**
- All Alternatives
  - Alternatives 3b, 4b, and 5b only
  - ⊕ Read Point (Alternatives 3b, 4b, and 5b only)

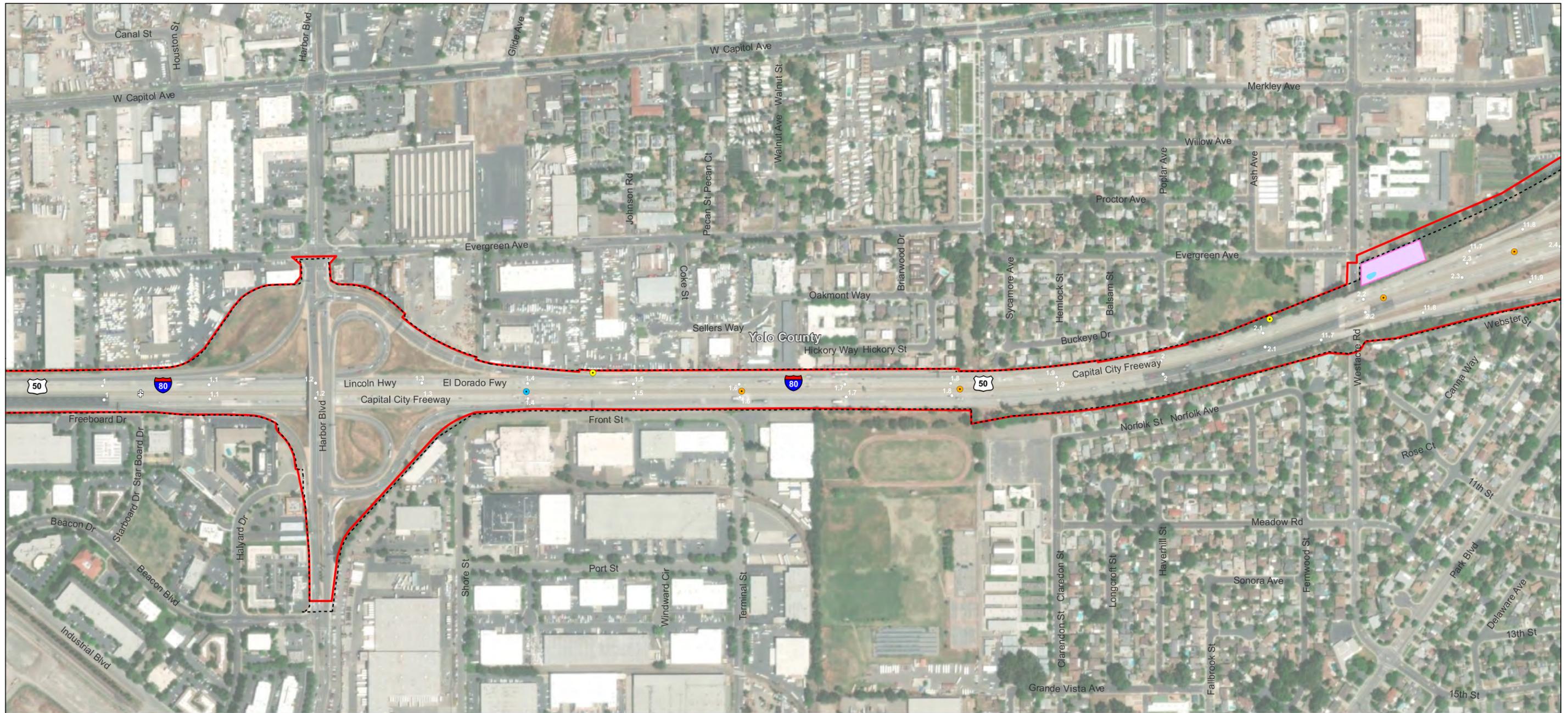


**Figure 1.3-2**  
**Project Design: Build Alternatives**  
**2b, 3b, 4b, 5b, 6b, 7b**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California  
 Sheet 4 of 16

**Notes**  
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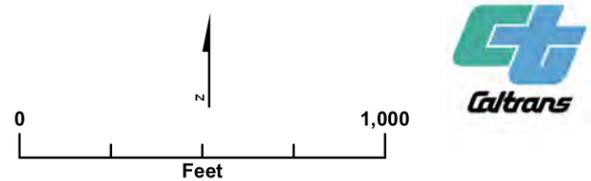
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- RW
  - ▭ ESL
  - Post Mile
  - ▭ Trash Rack
- Signage and Read Point Locations**
- All Alternatives
  - Alternatives 2b, 6b, and 7b only
  - Alternatives 3b, 4b, and 5b only
  - ⊕ Read Point (Alternatives 3b, 4b, and 5b only)
- Culverts and Drainage**
- All Alternatives

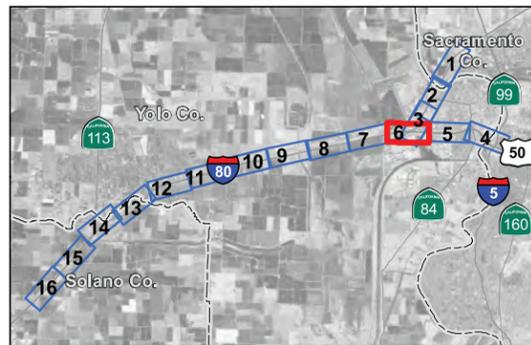
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 3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

**Note:** The project design components depicted in this figure are preliminary. Proposed surface treatments such as striping are not included.



**Figure 1.3-2**  
**Project Design: Build Alternatives 2b, 3b, 4b, 5b, 6b, 7b**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California  
 Sheet 5 of 16

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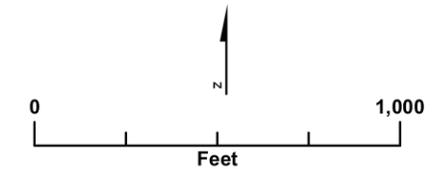


**Notes**  
 1. Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet  
 2. Data Sources: CalTrans, Stantec, 2021  
 3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

- R/W
  - ESL
  - Post Mile
  - Proposed Park & Ride Lot
  - Permanent Easement
  - Temporary Disturbance
  - Culvert Work Area
  - Cut-Fill
  - Temporary Construction Easement
  - I-80 Connector Structure
  - Cut-Fill Disturbance Area
- Signage and Read Point Locations**
- Alternatives 2b, 6b, and 7b only
  - Alternatives 3b, 4b, and 5b only
  - ⊕ Read Point (Alternatives 3b, 4b, and 5b only)

Bike path work is expected to occur at night. However, if work occurs during daytime hours, a temporary bike detour will be provided.

**Note:** The project design components depicted in this figure are preliminary. Proposed surface treatments such as striping are not included.



**Figure 1.3-2**  
**Project Design: Build Alternatives 2b, 3b, 4b, 5b, 6b, 7b**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California  
 Sheet 6 of 16

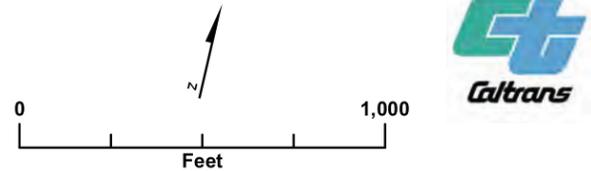
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- R/W
- ▭ ESL
- Post Mile
- ▨ Temporary Disturbance
- Existing Class I Bikeway
- - - - Temporary Bike Detour
- ▭ Yolo Bypass Wildlife Area

- Signage and Read Point Locations**
- Alternatives 2b, 6b, and 7b only
  - Alternatives 3b, 4b, and 5b only
  - ⊕ Read Point (Alternatives 3b, 4b, and 5b only)

Bike path work is expected to occur at night. However, if work occurs during daytime hours, a temporary bike detour will be provided.



**Figure 1.3-2**  
**Project Design: Build Alternatives 2b, 3b, 4b, 5b, 6b, 7b**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California

**Notes**  
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 2. Data Sources: CalTrans, Stantec, 2021  
 3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

**Note:** The project design components depicted in this figure are preliminary. Proposed surface treatments such as striping are not included.

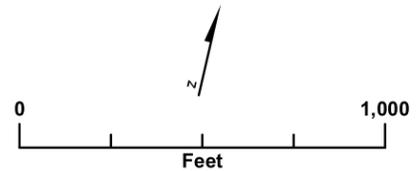
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Existing Class I Bikeway

Yolo County

- R/W
  - ESL
  - Post Mile
  - Existing Class I Bikeway
  - Yolo Bypass Wildlife Area
- Signage and Read Point Locations**
- Alternatives 3b, 4b, and 5b only
  - ⊕ Read Point (Alternatives 3b, 4b, and 5b only)

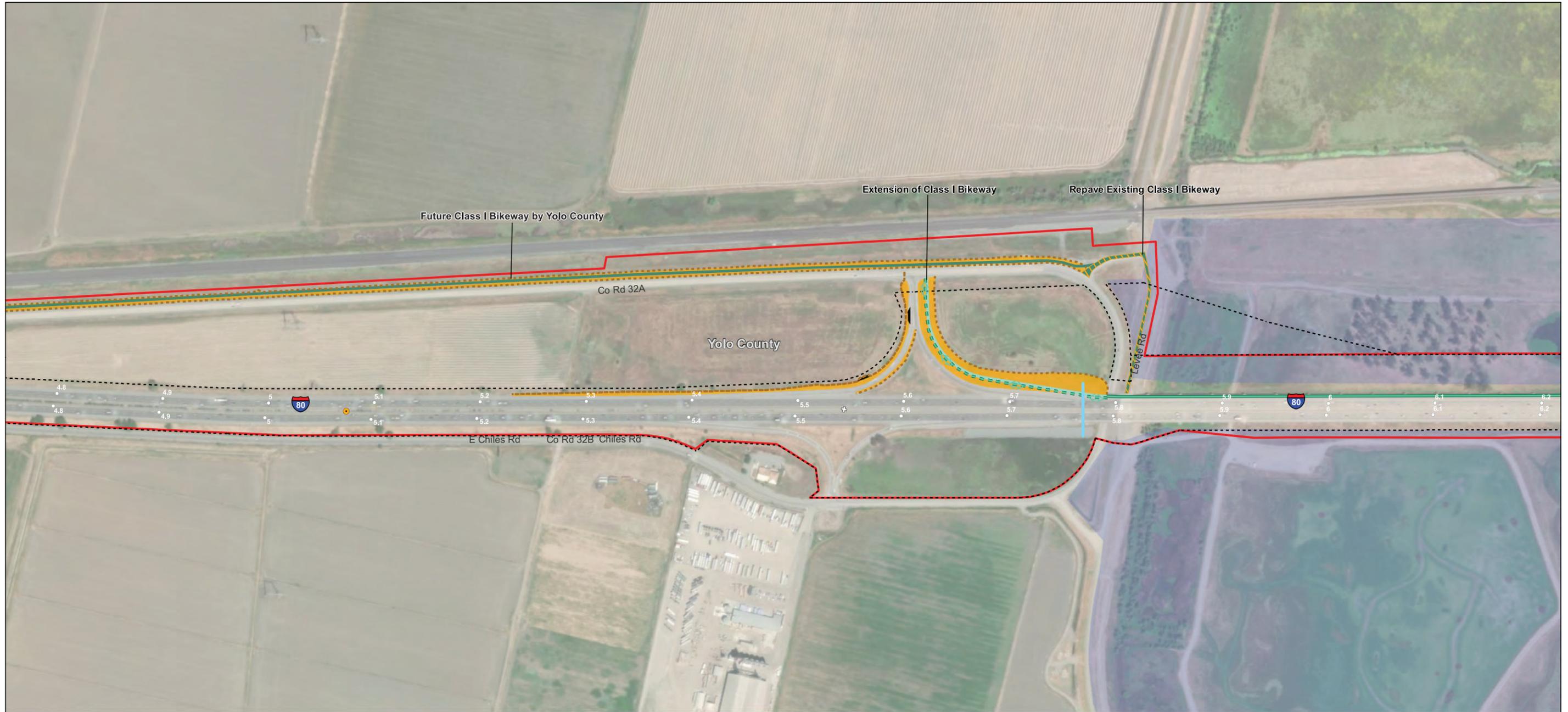


**Figure 1.3-2**  
**Project Design: Build Alternatives**  
**2b, 3b, 4b, 5b, 6b, 7b**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California

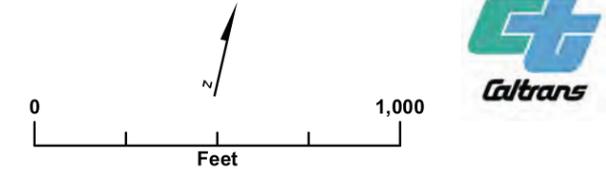
**Notes**  
 1. Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet  
 2. Data Sources: CalTrans, Stantec, 2021  
 3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

**Note:** The project design components depicted in this figure are preliminary. Proposed surface treatments such as striping are not included.

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- R/W
- ESL
- Post Mile
- Temporary Disturbance
- Cut-Fill
- Cut-Fill Disturbance Area
- Existing Class I Bikeway
- Extension of Class I and Class II Bikeway
- Extension of Class I Bikeway
- Temporary Bike Detour
- Yolo Bypass Wildlife Area
- █ Pullout
- Signage and Read Point Locations**
- Alternatives 3b, 4b, and 5b only
- ⊕ Read Point (Alternatives 3b, 4b, and 5b only)
- Culverts and Drainage**
- All Alternatives



**Figure 1.3-2**  
**Project Design: Build Alternatives**  
**2b, 3b, 4b, 5b, 6b, 7b**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California

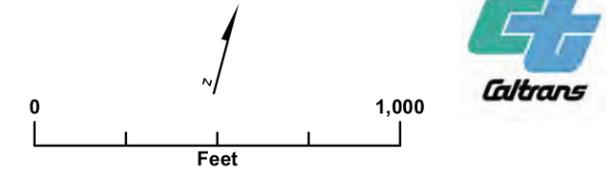
**Notes**  
 1. Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet  
 2. Data Sources: CalTrans, Stantec, 2021  
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- R/W
- ESL
- Post Mile
- Intelligent Transportation System Improvement
- Intelligent Transportation System Improvement Disturbance Area
- Fiber Optic Cable
- Fiber Optic Cable Disturbance Area
- Cut-Fill
- Cut-Fill Disturbance Area
- Widening - Median (Does not apply to Alternative 7b)
- Extension of Class I and Class II Bikeway
- Yolo Bypass Wildlife Area
- Signage and Read Point Locations**
- ⊕ Read Point (Alternatives 3b, 4b, and 5b only)
- Culverts and Drainage**
- All Alternatives
- Alternatives 2b-6b

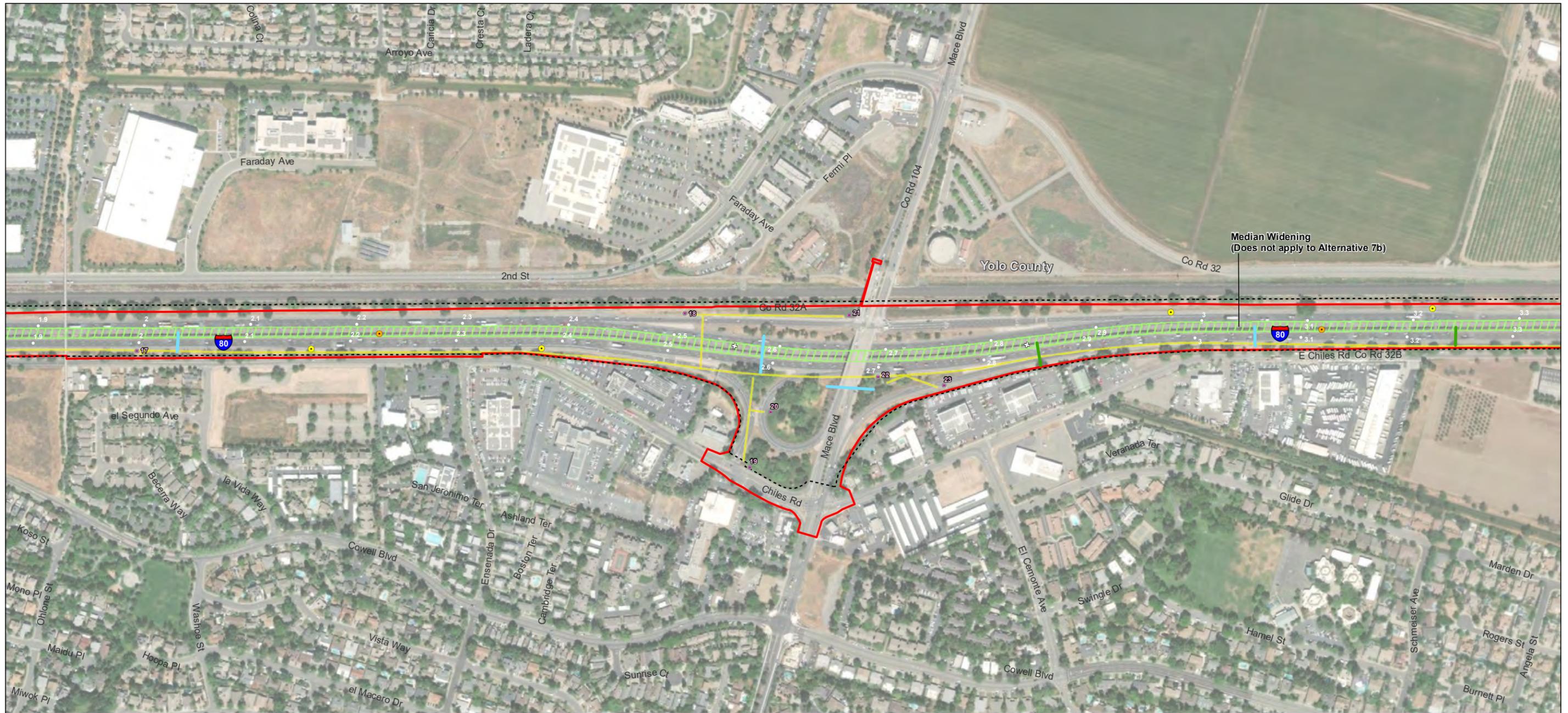


**Figure 1.3-2**  
**Project Design: Build Alternatives**  
**2b, 3b, 4b, 5b, 6b, 7b**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California

**Notes**  
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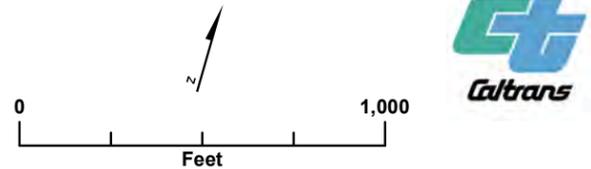
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- R/W
  - ESL
  - Post Mile
  - Intelligent Transportation System Improvement
  - Intelligent Transportation System Improvement Disturbance Area
  - Fiber Optic Cable
  - Fiber Optic Cable Disturbance Area
  - ▨ Widening - Median (Does not apply to Alternative 7b)
- Signage and Read Point Locations**
- All Alternatives
  - Alternatives 3b, 4b, and 5b only
  - ⊕ Read Point (Alternatives 3b, 4b, and 5b only)

- Culverts and Drainage**
- All Alternatives
  - Alternatives 2b-6b

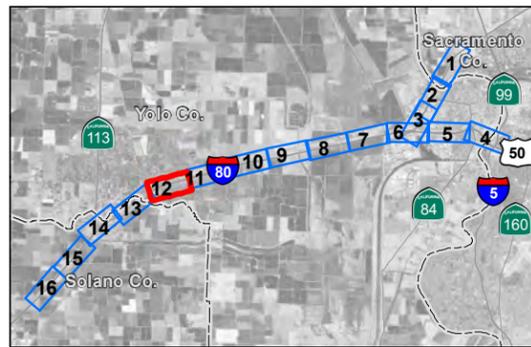


**Figure 1.3-2**  
**Project Design: Build Alternatives**  
**2b, 3b, 4b, 5b, 6b, 7b**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California

**Notes**

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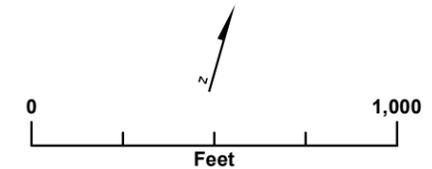
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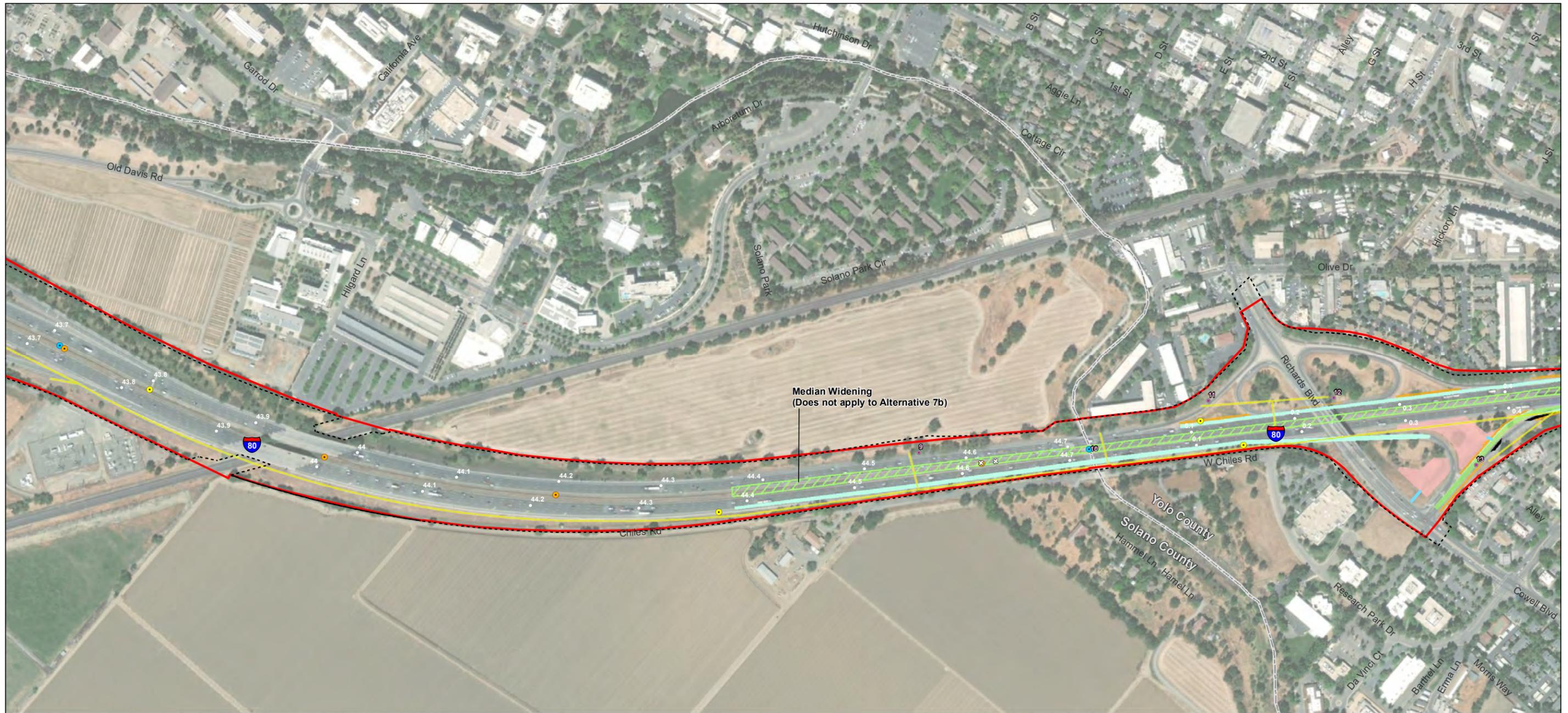
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 1. Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet  
 2. Data Sources: CalTrans, Stantec, 2021  
 3. Background: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

- R/W
- ESL
- Post Mile
- Intelligent Transportation System Improvement
- Intelligent Transportation System Improvement Disturbance Area
- Fiber Optic Cable
- Fiber Optic Cable Disturbance Area
- Cut-Fill Disturbance Area
- Staging Area
- Widening - Outside Lanes/Shoulder
- Widening - Median (Does not apply to Alternative 7b)
- Realigned Richards Blvd On-ramp
- Pullout
- Signage and Read Point Locations**
- All Alternatives
- Alternatives 3b, 4b, and 5b only
- ⊕ Read Point (Alternatives 3b, 4b, and 5b only)
- Culverts and Drainage**
- All Alternatives

**Note:** The project design components depicted in this figure are preliminary. Proposed surface treatments such as striping are not included.



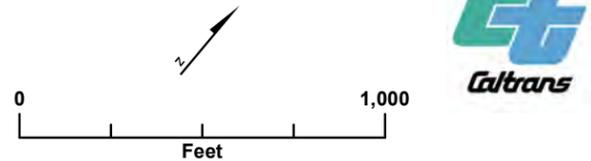
**Figure 1.3-2**  
**Project Design: Build Alternatives 2b, 3b, 4b, 5b, 6b, 7b**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California  
 Sheet 12 of 16



**Notes**  
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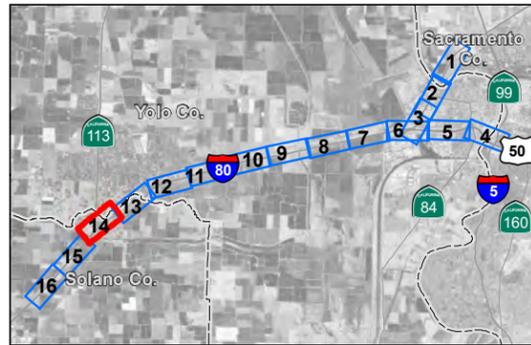
- RW
  - ESL
  - Post Mile
  - Intelligent Transportation System Improvement
  - Intelligent Transportation System Improvement Disturbance Area
  - Fiber Optic Cable
  - Fiber Optic Cable Disturbance Area
  - Cut-Fill Disturbance Area
  - Staging Area
  - Widening - Outside Lanes/Shoulder
  - Widening - Median (Does not apply to Alternative 7b)
  - Realigned Richards Blvd On-ramp
  - Pullout
  - County Line
- Signage and Read Point Locations**
- All Alternatives
  - Alternatives 2b, 6b, and 7b only
  - Alternatives 3b, 4b, and 5b only
  - ⊕ Read Point (Alternatives 3b, 4b, and 5b only)
- Culverts and Drainage**
- All Alternatives

**Note:** The project design components depicted in this figure are preliminary. Proposed surface treatments such as striping are not included.



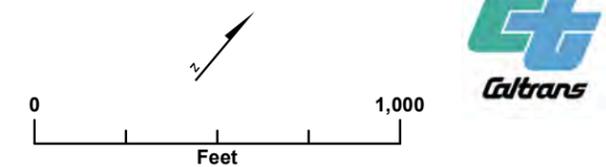
**Figure 1.3-2**  
**Project Design: Build Alternatives 2b, 3b, 4b, 5b, 6b, 7b**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California  
 Sheet 13 of 16

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- R/W
  - ESL
  - Post Mile
  - Intelligent Transportation System Improvement
  - Intelligent Transportation System Improvement Disturbance Area
  - Fiber Optic Cable
  - Fiber Optic Cable Disturbance Area
  - Staging Area
  - Pullout
  - County Line
- Signage and Read Point Locations**
- All Alternatives

- Alternatives 2b, 6b, and 7b only
- Alternatives 3b, 4b, and 5b only

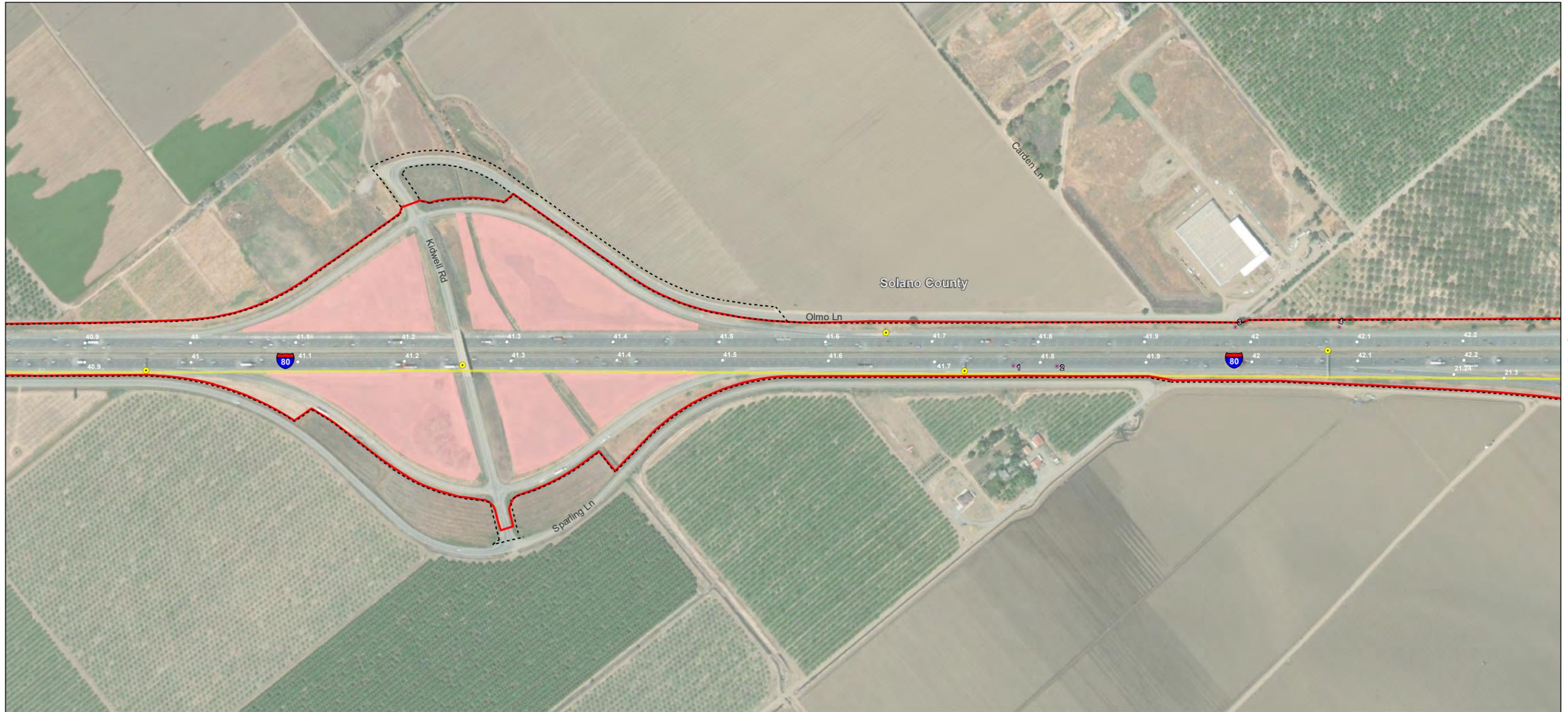


**Figure 1.3-2**  
**Project Design: Build Alternatives**  
**2b, 3b, 4b, 5b, 6b, 7b**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California

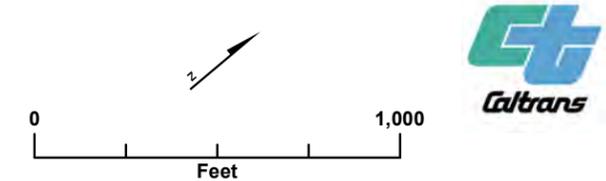
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- R/W
- ▭ ESL
- Post Mile
- ▭ Intelligent Transportation System Improvement
- ▭ Intelligent Transportation System Improvement Disturbance Area
- Fiber Optic Cable
- ▭ Fiber Optic Cable Disturbance Area
- ▭ Staging Area
- Signage and Read Point Locations**
- All Alternatives



**Figure 1.3-2**  
**Project Design: Build Alternatives**  
**2b, 3b, 4b, 5b, 6b, 7b**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
 Solano, Yolo, and Sacramento Counties, California

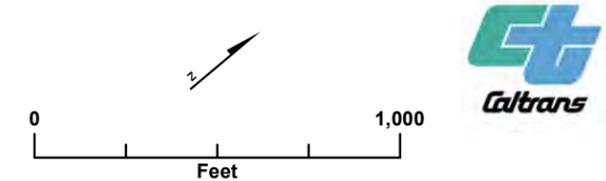
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- R/W
- ▭ ESL
- Post Mile
- Fiber Optic Cable
- ▭ Fiber Optic Cable Disturbance Area



**Figure 1.3-2**  
**Project Design: Build Alternatives**  
**2b, 3b, 4b, 5b, 6b, 7b**  
 Yolo 80 Corridor Improvement Project  
 EA 03-3H900  
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