Appendix E. Simi Valley Double Track and Platform Project Jurisdictional Delineation Report

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METROLINK

Jurisdictional Delineation Report

Simi Valley Double Track and Platform Project

February 2021

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Acronyms

CDFW	California Department of Fish and Wildlife
CP	control point
CWA	Clean Water Act
JD	jurisdictional determination
JSA	jurisdictional study area
MP	mile post
OHWM	ordinary high water mark
Project	Rancho Cucamonga Siding Extension Project
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
SCRRA	Southern California Regional Rail Authority
SWRCB	State Water Resources Control Board
UPRR	Union Pacific Railroad
U.S.	United States
USACE	United States Army Corps of Engineers
USGS	United States Geological Survey
VCL	Ventura County Line

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1 Introduction

This jurisdictional delineation report was prepared by HDR to summarize the extent of United States (U.S.) Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) jurisdiction pursuant to Sections 404 and 401 of the Clean Water Act (CWA) and Section 1600 et seq. of the California Fish and Game Code, respectively, within the Simi Valley Double Track and Platform Project (Project) jurisdictional study area (JSA).

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2 Project Description

2.1 Project Overview

The Southern California Regional Rail Authority (SCRRA) is proposing the Simi Valley Double Track and Platform Project to improve safety at the Simi Valley Station and to increase operational capacity on Metrolink's Ventura County Line (VCL). The Project includes at-grade crossing improvements and the construction of new rail infrastructure. The Project would occur primarily within existing railroad right-of-way (ROW) owned by SCRRA and Union Pacific Railroad (UPRR) from Sequoia Avenue east to the Arroyo Simi Railroad Bridge just south of Stearns Street in the City of Simi Valley, California. The Project would add 2.20 miles of main track and increase the passenger capacity at the Simi Valley Station by adding an additional platform and pedestrian undercrossing. In addition, an existing signal at Sycamore Drive would be relocated, and a new signal would be installed approximately 2,000 feet west of Erringer Road.

The objectives of the Project are to improve safety by adding pedestrian safety features and improve reliability by allowing more efficient train operations; allow for an hourly bidirectional service, a half-hourly regional train to dispatch in the peak direction, and an hourly express train in the peak direction along Metrolink's VCL, which operates on the Ventura Subdivision between Moorpark and Los Angeles Union Station; and include at-grade crossing improvements at Sequoia Avenue, Tapo Canyon Road, Tapo Street, East Los Angeles Avenue, and Hidden Ranch Drive in support of the city's future application with the Federal Railroad Administration for quiet zone status along the alignment.

2.2 Goals and Objectives

The Project includes the following objectives:

- Objective 1: Improve safety and reliability of the existing rail system
- Objective 2: Increase operational capacity of the existing VCL passenger rail system and increase passenger capacity at the Simi Valley Station
- Objective 3: Implement infrastructural improvements that will support the city's future applications to the Federal Railroad Administration for quiet zone status along the alignment

2.3 Project Location

For the purposes of the environmental impact report, SCRRA defined a Project study area, which comprises the Project's physical footprint along the approximately 2.20-mile segment of SCRRA's Ventura Subdivision with a 500-foot buffer. The Project study area begins at its western terminus at Sequoia Avenue and ends east of Hidden Ranch Drive, just west of the Arroyo Simi Railroad Bridge, within the City of Simi Valley. Figure 2-1 shows the regional location of the Project. Figure 2-2 shows the Project's location in southern Simi Valley, the extent of the proposed improvements, and the Project study area. The Project study area is part of the Simi Land Grant on the United States Geological Survey (USGS) *Simi Valley East, California* 7.5-minute series topographical quadrangle. As shown on Figure 2-2, the Project is located between Mile Post (MP) 436.20 and MP 438.40.

2.4 Project Components

As shown on Figure 2-3 (Sheet 1 through 9), the Project would include construction of a new side platform (south of the existing platform) and pedestrian underpass at the existing Simi Valley Station, the construction of a second main track along a 2.20-mile stretch of Metrolink's existing Ventura Subdivision from MP 436.20 to MP 438.40, and the implementation of two new control points (CP) at MP 436.30 (CP Sequoia) and MP 438.40 (CP Arroyo) (Figure 2-3). New intermediate signals would be installed at MP 433.96, MP 435.13, and MP 437.30. Additionally, Project improvements would include supplemental safety measures at the existing grade crossings at Sequoia Avenue, Tapo Canyon Street, Tapo Street, East Los Angeles Avenue, and Hidden Ranch Drive, which would support future applications by the city to the Federal Railroad Administration for quiet zone status along the alignment.[1] Existing wet and dry utilities (above and below grade) within the Project study area would also be protected in place or relocated pending final engineering design and final placement of the proposed infrastructure.

2.4.1 Physical Improvements

The Project would include multiple improvements to the existing Simi Valley Station, including construction of a second platform, a supporting pedestrian undercrossing (or underpass), and passenger emergency egress to enhance passenger safety. The existing platform would also be reconfigured to remove the curvature within the existing platform to the north side of the main line tracks. In conjunction with these station improvements, SCRRA proposes the installation of approximately 2.20 miles of new main track within existing rail ROW, new railroad signals and positive train control towers, and related supplemental safety measures at existing at-grade crossings. These improvements are described in more detail below.

Track and Civil

SCRRA proposes the construction of an approximately 2.20-mile segment of second mainline track, from Barnes Street in the west to Hidden Ranch Road in the east, to enhance operational capacity on Metrolink's VCL. The track improvements are described in further detail below:

- Approximately 900 feet of the main track would be reprofiled east of CP Sequoia.
- West of Tapo Street (to Barnes Street), a new second track would be placed within SCRRA ROW. The new track would be constructed north of the existing main line track and would connect to the existing track east of Tapo Street to form Main Track 1.
- Approximately 900 feet of existing track between East Los Angeles Avenue and Tapo Street would be shifted to accommodate the new tracks tying into the existing track. In addition, an existing UPRR spur track between East Los Angeles Avenue and Tapo Street, within SCRRA ROW, would be shifted to accommodate the second track on the north side.

[1] Upon completion of the Project, the City of Simi Valley would be required to complete the Quiet Zone Creation Process in accordance with the regulations, policies, and procedures established by the Federal Railroad Administration in its Train Horn Final Rule, as amended on August 17, 2006 (49 Code of Federal Regulations Part 222).

- Approximately 1,400 feet of existing track would be shifted between East Los Angeles Avenue to Simi Valley Station to accommodate the installation of a second track south of the existing track, within UPRR ROW. These two main tracks are shown and labeled as MT-1 and MT-2 on Figure 2-3 (Sheets 3 through 6). The new track on the south side of the ROW would connect to the existing track just east of Tapo Street, such that the new track east of Tapo Street and existing track west of Tapo Street form Main Track 2.

At the Simi Valley Station, the existing and proposed station platforms would be shifted eastward to maintain approximately 19-foot track centers for 150 feet beyond the platforms to accommodate the inter-track fence. The 19-foot track spacing through station limits would avoid placing track curvature within Hidden Ranch Drive, avoid the need to obtain more ROW through the station, and maintain clearance from the Arroyo Simi Bike Path. The 780-foot length of the existing platform would be maintained, and the new platform would be a minimum of 680 feet. The existing track alignment would be maintained at four of the at-grade crossings (Sequoia Avenue, Tapo Canyon Street, Tapo Street, and East Los Angeles Avenue), but the track alignment would be shifted approximately 6 inches south at the Hidden Ranch Drive crossing to eliminate curvature between the platform and the crossing.

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Figure 2-1. Regional Location

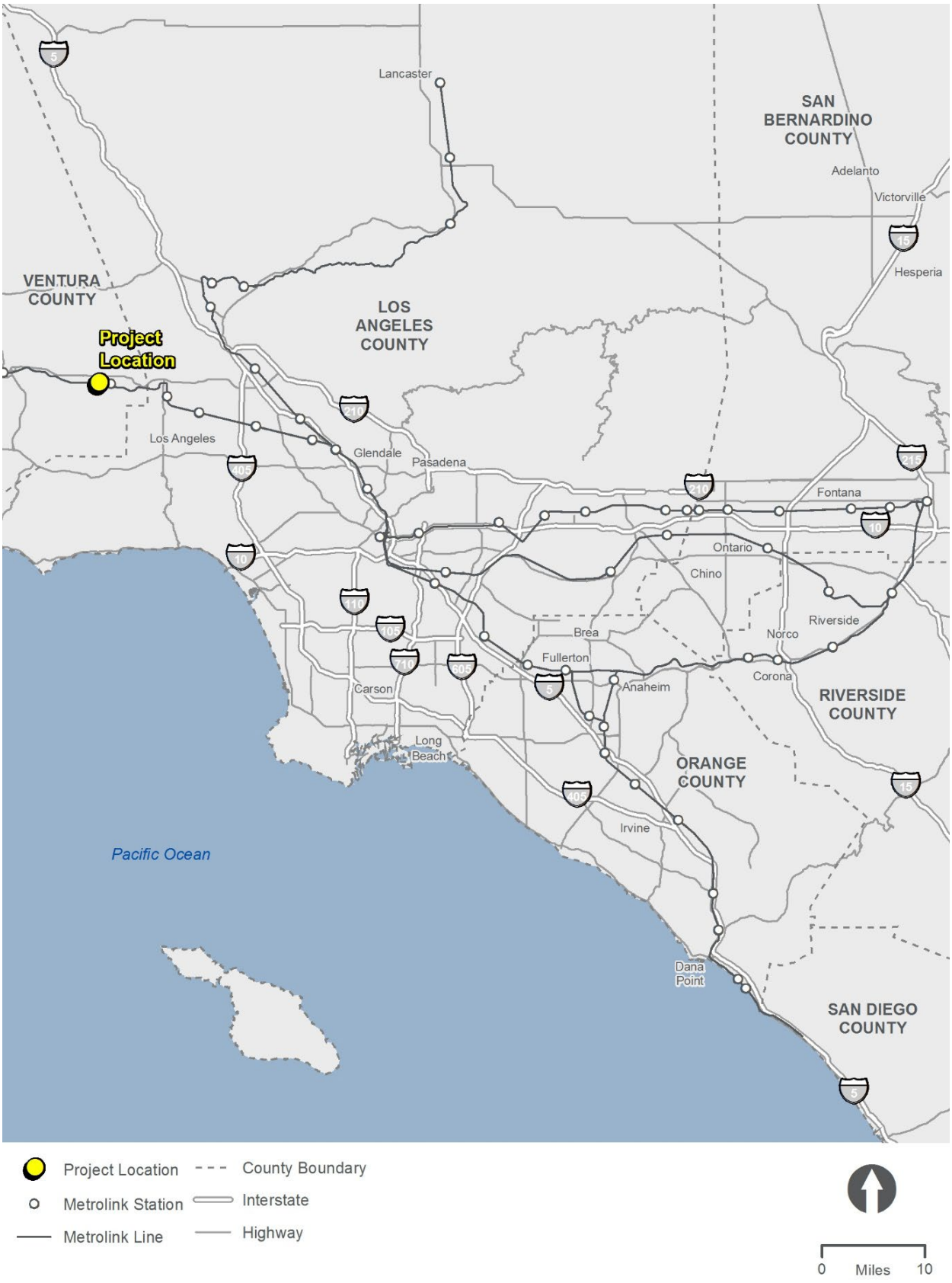

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Figure 2-2. Project Location

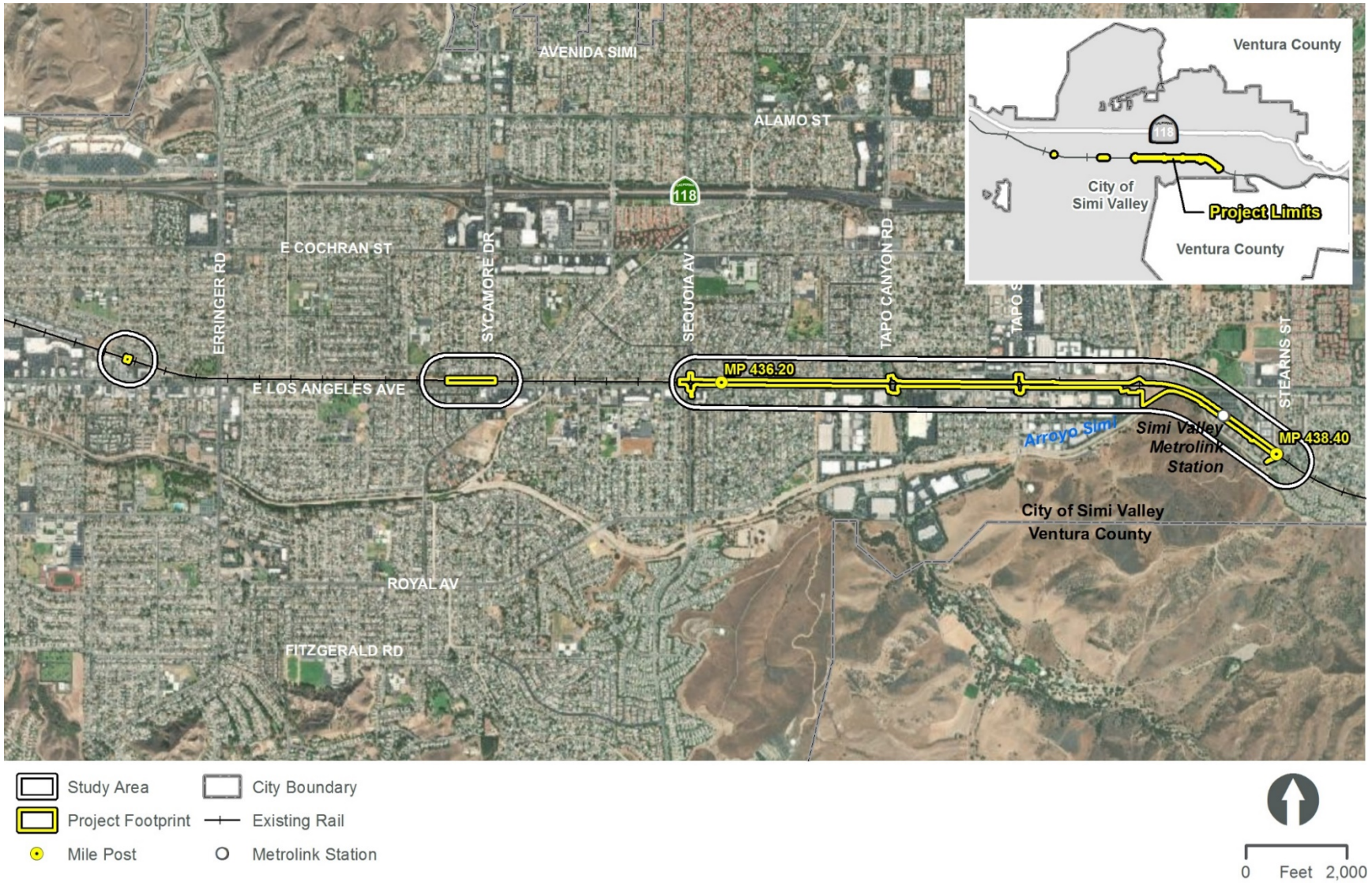

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Figure 2-3. Project Detail Map

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Figure 2-3. Project Detail Map

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Figure 2-3. Project Detail Map

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Figure 2-3. Project Detail Map

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Figure 2-3. Project Detail Map

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Figure 2-3. Project Detail Map

(Sheet 6 of 9)

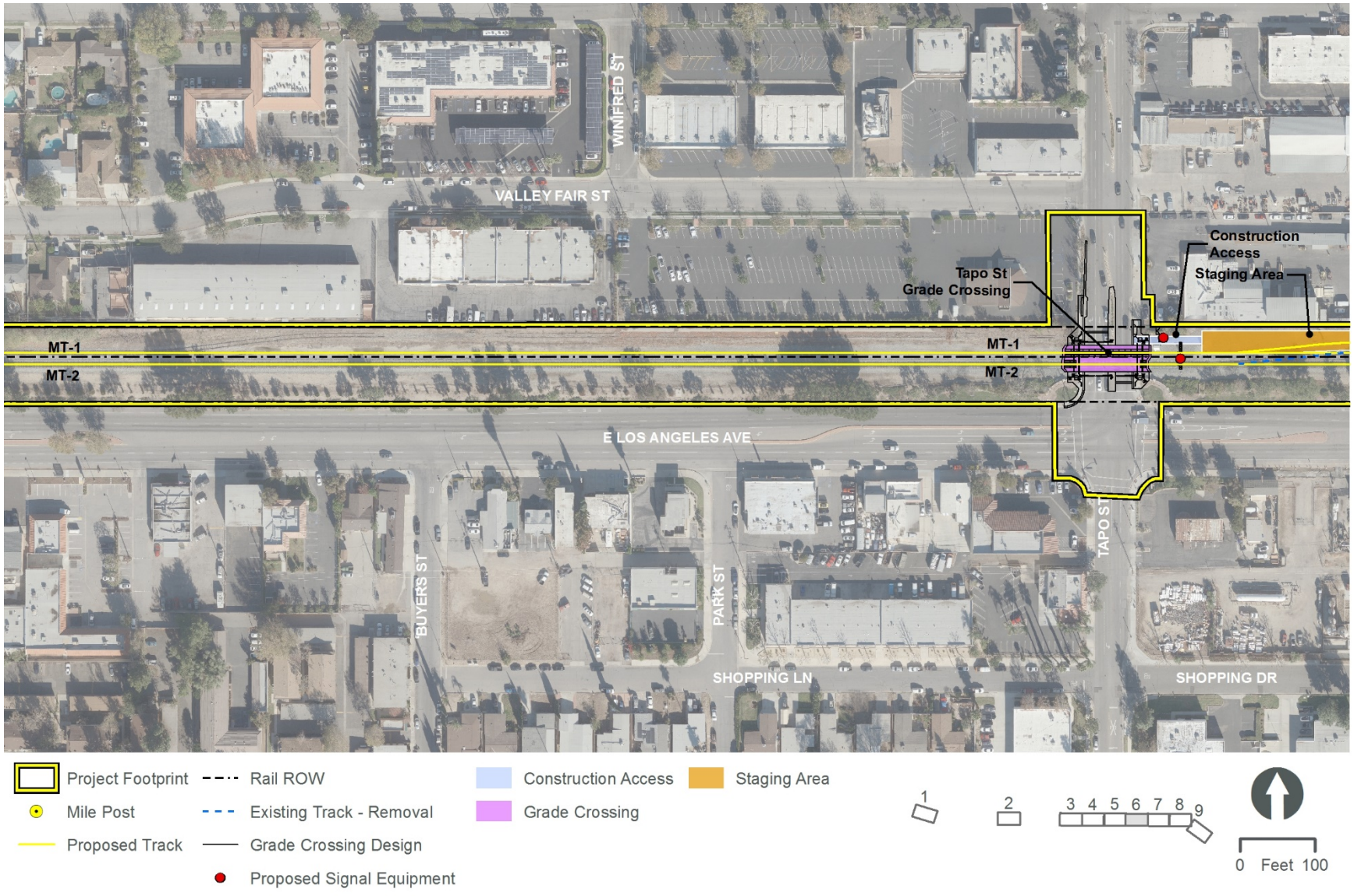

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Figure 2-3. Project Detail Map

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Figure 2-3. Project Detail Map

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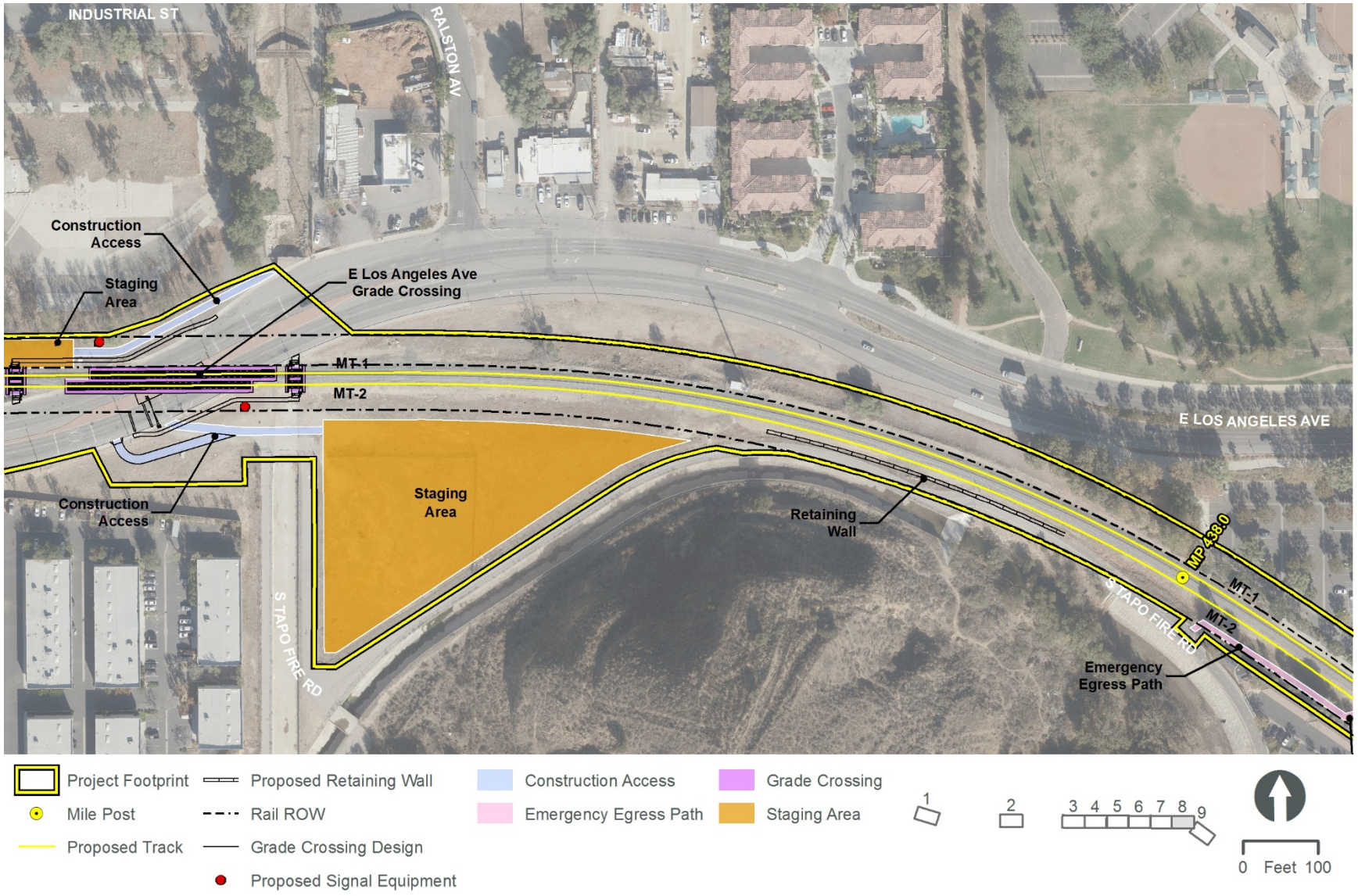

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Figure 2-3. Project Detail Map

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At-Grade Crossings

The Project would include improvements and related supplemental safety measures at existing at-grade crossings within the Project study area to facilitate future quiet zone implementation. These at-grade crossing improvements would generally include the accommodation of the second mainline track and related ancillary improvements, except for at the Sequoia at-grade crossing, where a second track would not be constructed. These improvements would include sidewalk and pavement reconstruction; installation of pedestrian gates and warning signals; roadway restriping; pedestrian channelization; construction, of or modification to, a raised roadway median; and installation/modification of the roadway gates. Each at-grade crossing is further described below.

- **Sequoia Avenue.** The improvements at Sequoia Avenue include those described above, except a second mainline track crossing would not be constructed. A new railroad signal house would also be installed at this location.
- **Tapo Canyon Street.** In addition to the improvements described above, a new signal house would also be constructed at Tapo Canyon Street.
- **Tapo Street.** In addition to the improvements described above, a new signal house would also be constructed at Tapo Street.
- **East Los Angeles Avenue.** In addition to the improvements described above, a new signal house would also be constructed at East Los Angeles Avenue. Additionally, the existing access roads leading from the Arroyo Simi Bike Path would be modified to accommodate the proposed pedestrian improvements and the existing retaining wall located in the southeast quadrant would be reconstructed.
- **Hidden Ranch Drive.** In addition to the improvements described above, a new signal house would also be constructed at Hidden Ranch Drive.

Railroad Signals and Communications

The track improvements would require new track panels, signals, and warning devices at the existing at-grade crossings. At Sequoia Avenue, Tapo Canyon Road, and Tapo Street, the presignals on the southwest quadrants would be located outside of the exit gates to improve visibility for southbound traffic approaching the tracks. Additional safety improvements would include adding flashers to the warning devices for vehicles turning onto Tapo Canyon Road from East Los Angeles Avenue. Maintenance access to the new signal houses would also be added.

The Project would include two new CPs. At the western limit of the new track, CP Sequoia would be installed approximately 0.20 mile east of Sequoia Avenue. CP Arroyo would be installed directly west of Arroyo Simi. The existing signal at Tapo Street would be modified to accommodate the second track. In order to account for the proximity to the new CP Sequoia, the existing signal at Sycamore Drive would be relocated approximately 700 feet west. To reduce headway times to CP Strathern, an additional signal would be added approximately 2,000 feet west of Erringer Road.

At each new signal site, the following improvements would be installed:

- 6-foot by 8-foot signal house with a security fence
- Wayside signal
- 40-foot positive train control tower antenna tower

- 200-amp Southern California Edison power meter pedestal
- Underground railroad fiber optic cable with vault

Simi Valley Station Enhancements

The existing Simi Valley Station consists of one side platform on the north side of the main line track with custom passenger canopies, a ticket vending machine, and an at-grade parking lot north of the platform. The existing path of travel to the station extends south from a bus stop at the platform entrance and from the adjacent parking lot. Station access would remain unchanged under the Project.

The Project would change the existing platform configuration by demolishing approximately 250 feet of the curved portion of the platform on the west end of the station. To maintain the 780-foot length of the existing platform, the remaining platform would be extended approximately 95 feet to the west and 155 feet to the east, so that the entire length of the platform is along tangent track (i.e., where the track is not curved). At the east end of the station, a pedestrian underpass would be installed with ramp and stair access. The new underpass would provide access to a new, second platform on the south side of the main line tracks, which would be a minimum of 680 feet long.

The Project would match the existing platform amenities (canopies, seating, signage, and lighting), and would include aesthetic treatments to the ramps, stairs, and underpass walls and ceiling. The Project would implement crime prevention through environmental design principles, which would include natural surveillance, natural access control, territorial reinforcement, and maintenance. The proposed station improvements would also meet National Fire Protection Association standards by providing passengers egress capabilities to vacate the platform within 4 minutes and to reach a point of safety within 6 minutes.

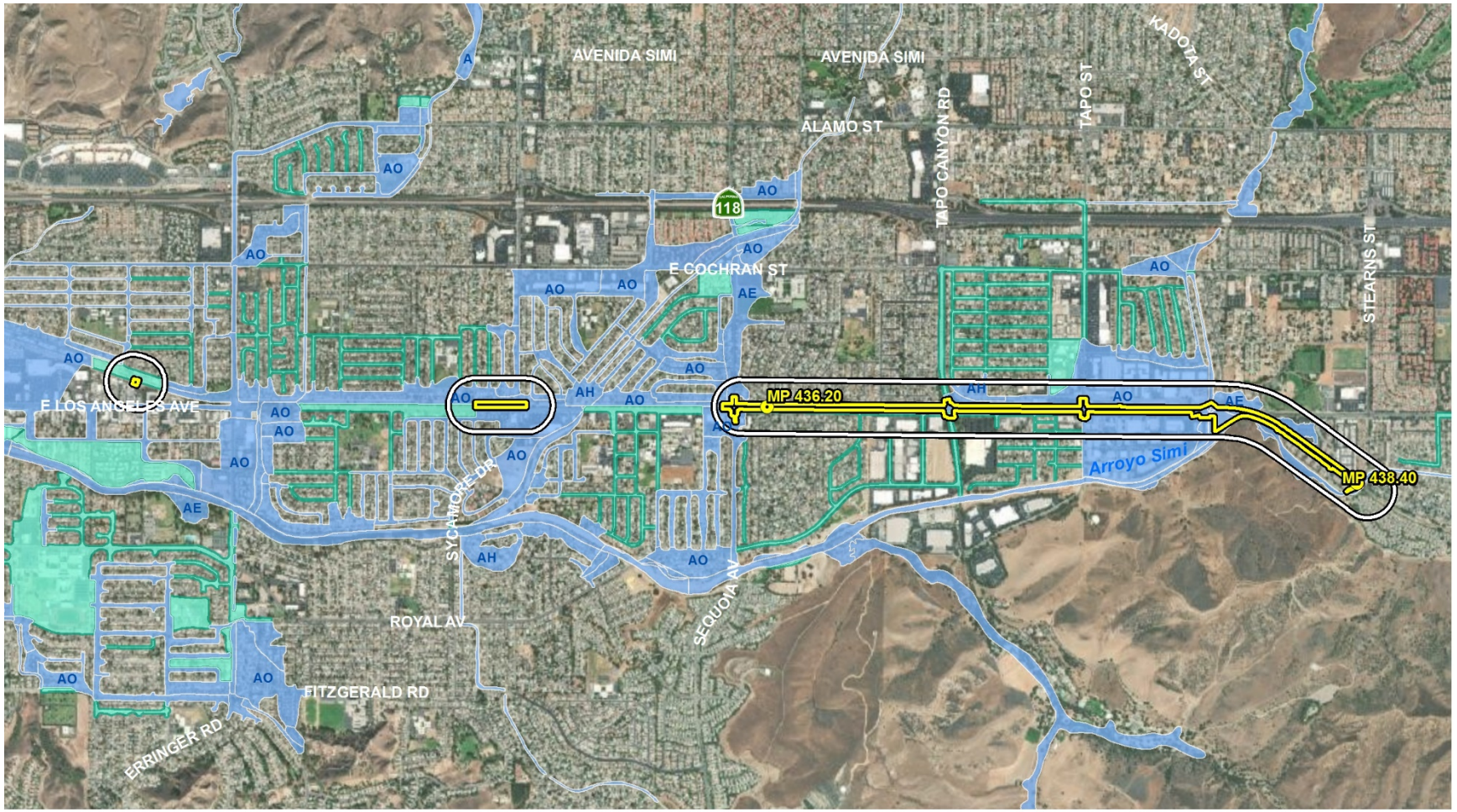
Drainage Improvements

The Project would include the following drainage improvements:

- Underdrains at the at-grade crossings where ditches are infeasible, and between the tracks at the platforms with the subgrade sloping toward the underdrain
- Trackside ditches between at-grade crossings
- Storm drain extensions or encasements where existing drainage systems intersect the proposed track infrastructure
- A new pump station at the low point of the pedestrian underpass at Simi Valley Station

Portions of the Project study area overlap with areas mapped by the Federal Emergency Management Agency as having a 1 percent annual chance of flood hazard with a potential for shallow flooding (Figure 2-4). The proposed drainage improvements would be coordinated with the City of Simi Valley to provide the new track infrastructure with adequate flood protection and to maintain existing drainage patterns to the extent practical throughout the Project study area.

Figure 2-4. Federal Emergency Management Agency Flood Hazard Map



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Structures

The Project would construct a new pedestrian underpass, stairs, and ramps at the Simi Valley Station. The design of the pedestrian underpass would be in accordance with the most recent SCRRA design criteria manual. The proposed structure type is a precast concrete box structure, composed of sections, selected to minimize construction track windows (i.e., minimize impacts on train schedules). The internal dimensions of the proposed structure would be 14 feet wide by 9 feet, 10 inches high. The depth of cover (i.e., amount of fill between the structure and the tracks) would be minimized to facilitate construction and maintenance of the structure, as well as to reduce the length of approach ramps and the number of stairs needed to reach the station platform. The design of the approach ramp retaining wall would be in accordance with the most recent SCRRA design criteria manual.

Utilities

Utilities within the Project study area include gas lines, electrical power lines, communications/fiber optic lines, and municipal water and sewer pipes. The Project would result in multiple utility conflicts, and impacted utilities would either be protected in place, extended, or relocated. Specifically, the Project may require relocation or casing extensions for the following utilities:

- Crimson Pipeline gasoline pipeline (6- to 12-inch pipeline) at East Los Angeles Avenue and Topo Canyon Road
- Southern California Edison electrical transmission and distribution (above and below ground) lines at Sequoia Avenue, East Los Angeles Avenue, Goddard Avenue, and Hidden Ranch Drive
- City of Simi Valley sewer and potable water lines at Sequoia Avenue, East Los Angeles Avenue, Tapo Canyon Road, and Hidden Ranch Drive
- Southern California Gas natural gas lines at Sequoia Avenue, East Los Angeles Avenue, Tapo Street, Arroyo lane, and Hidden Ranch Drive
- Golden State Water Company potable water lines at Sequoia Street, Goddard Avenue, Hietter Avenue, Tapo Street, and East Los Angeles Avenue
- Fiber optic cables parallel to the ROW owned by the following communications companies:
    - Lumen Technologies (formerly CenturyLink)
    - Verizon
    - AT&T
    - Sprint
    - Wilshire Communication
    - Charter Communications

Potholing would be implemented in conjunction with final design to verify the locations of all existing utilities within the Project study area and to determine which utilities would be protected in place and which utilities would require relocation or abandonment.

Right-of-Way

The majority of proposed improvements (including the proposed pedestrian underpass at the Simi Valley Station) would be constructed within the railroad ROW (Figure 2-3, Sheet 1 through 9).The northern 40 feet of ROW are owned by SCRRA, while the southern 60 feet are owned by UPRR. The ramp and stair access from the undercrossing to the new platform would extend south of the existing UPRR ROW and require acquisition of a portion of the adjacent multifamily parcel.

Roadway improvements would generally be located outside of the railroad ROW and within the City of Simi Valley's roadway ROW. Improvements at Hidden Ranch Drive would require acquisition of portions of two adjacent multifamily parcels at the southern and western corners of the crossing. Additionally, potential sidewalk crossing improvements that would extend into unimproved areas of private properties near Hidden Ranch Drive would require temporary construction easements in order to access the proposed CP Arroyo area.

To connect with the Arroyo Simi Bike Path, the egress path from the new platform may also extend south of the ROW onto the Ventura County Flood Control District's property, or it could extend further west to connect to the bike path within UPRR ROW. Final ROW needs would be confirmed during final design.

2.4.2 Construction

Project construction would begin as early as April 2022 and last for approximately 19 months. The work would be accomplished over four phases, beginning with construction of the pedestrian underpass and new platform at the station, and ending with reconstruction of 250 feet of the existing station platform. Construction may involve multiple crews working simultaneously and would include equipment such as track stabilizers, excavators, front-end loaders, rubber-tired dozers, cranes, haul trucks, and water trucks.

Construction would generally proceed in the following four phases over the 19-month construction schedule:

- Phase 1:
    - A number of third-party utility lines would be relocated in order to make way for the improvements of the Project. These utilities include fiber optic lines that run parallel to the Project study area, as well as many crossing utilities, such as water, gas, electric, and others. The relocations are due to the addition of a second main track, added second platform, inadequate depth underneath the rail, or insufficient casing length that spans the entire railroad ROW.
- Phase 2:
    - Construct structures, including the pedestrian underpass and new platform at Simi Valley Station and the retaining wall near the Arroyo Simi Bike Path
    - Construct track work, including the new main track (Main Track 1) outside of grade crossing limits and new turnouts, while maintaining service on the existing track
    - Construct signal houses, signal foundations, grade crossing warning devices and associated conduits

- Phase 3:
  - Construct track and roadway improvements at the at-grade crossings
  - Transfer rail service onto the newly constructed Main Track 1; take the existing track out of service for the second main track (Main Track 2) improvements
  - Finish installing signals at new CP Sequoia and CP Arroyo
- Phase 4:
  - Construct Main Track 2 track and upgrade existing from timber to concrete ties
  - Activate Main Track 2 track into service
  - Remove and reconstruct 250 feet of the existing Simi Valley Station platform and finish upgrading any remaining timber ties to concrete ties

Material and equipment imports and construction personnel would access the Project study area via walking points from the nearest fence access or staging area. Potential construction access points and staging areas have been identified within the ROW and are shown on Figure 2-3 (Sheets 3, 6, 7, 8, and 9). An additional staging area outside the ROW was identified between East Los Angeles Avenue and Arroyo Simi, as shown on Figure 2-3. The final construction staging area locations would be confirmed during design development.

Construction activities would be scheduled during time frames that allow for exclusive track occupancy by construction crews to minimize effects on Metrolink operations. To the greatest extent possible, construction activities would be scheduled during the daytime; however, nighttime work would be required to maximize construction work windows. The Project would also include weekend work when Metrolink service is reduced.

Prior to construction, coordination would be needed with regard to the bike trail and potential temporary construction closures. Dewatering is expected to be necessary during construction of the pedestrian underpass at the station and would be completed in accordance with applicable regulations.

2.4.3 Operation

The Project would improve safety and reliability on the VCL and at the Simi Valley Station and adds capacity to accommodate growth of Metrolink commuter train operations through the Project study area. The Project would install safety improvements at four grade crossings and create a new 2.20-mile double track segment through southern Simi Valley, which would reduce the distance of single-track territory through the Project study area. Passenger trains running along the Ventura Subdivision on the Metrolink VCL would be able to use this double track segment to pass uninterrupted through the Project study area rather than idling at the nearest location with two tracks, waiting for trains in the opposite direction to cross the single-track segment.

Project operation is projected to start in 2025. The Project would also provide faster, more frequent, and more reliable service by increasing on-time performance. As the population of Southern California increases, it is likely that additional passenger rail service would be added to the Metrolink VCL in the future to ease traffic congestion on freeways and local streets.

With Project implementation, as well as completion of the other VCL projects, Metrolink service would increase, providing up to 48 revenue trains per day on the VCL (Table 2-1).

Table 2-1. 2019 Schedules and Proposed Service Schedules: Ventura County Line

Schedule	Existing Service (2019)			Proposed Service (2025)		
	To Los Angeles[a]	From Los Angeles[a]	All	To Los Angeles[a]	From Los Angeles[a]	All
Weekday	16	17	33	24	24	48
Saturday	0	0	0	1[b]	1[b]	2[b]
Sunday	0	0	0	0	0	0

Notes:

[a] VCL trains to or from Los Angeles originate or terminate in Ventura, Moorpark, Chatsworth, or Burbank. Future service includes trains originating and terminating in Van Nuys.

[b] VCL Saturday service would operate between April and October only.

VCL=Ventura County Line

2.5 Jurisdictional Study Area

The Project is located on a 2.20-mile segment of the SCRRA VCL between MP 436.20 and MP 438.40. The Project alignment begins at its western terminus at Sequoia Avenue and ends south of Stearns Street at the Arroyo Simi Railroad Bridge, within the City of Simi Valley. The JSA is smaller than the overall Project study area and consists of the Project footprint, which includes Metrolink ROW within the Project's MP limits, as well as all temporary construction easements. The Project JSA is located in an area of Simi Land Grant on the USGS *Simi Valley East, California* 7.5-minute series topographical quadrangle. Figure 2-1 shows the regional location of the Project. Figure 2-2 shows the Project's location in southern Simi Valley, the extent of the proposed improvements, and the Project footprint (i.e., JSA).

3 Regulatory Setting

3.1 United States Army Corps of Engineers

3.1.1 Section 404 of the Clean Water Act

Pursuant to Section 404 of the CWA, USACE regulates the discharge (temporary or permanent) of dredged or fill material into waters of the U.S., including wetlands. A discharge of fill material includes, but is not limited to, grading, placing riprap for erosion control, pouring concrete, and stockpiling excavated material into waters of the U.S. Activities that generally do not involve a regulated discharge (if performed specifically in a manner to avoid discharges) include driving pilings, performing certain drainage channel maintenance activities, constructing temporary mining and farm/forest roads, and excavating without stockpiling.

As of June 22, 2020, the term waters of the U.S. is defined in the USACE regulations at 33 Code of Federal Regulations Part 328.3(a) as:

a. Jurisdictional waters. For purposes of the CWA, 33 U.S.C. 1251 et seq. and its implementing regulations, subject to the exclusions in paragraph (b) of this section, the term waters of the U.S. means:
    1. The territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters which are subject to the ebb and flow of the tide;
    2. Tributaries;
    3. Lakes and ponds, and impoundments of jurisdictional waters; and
    4. Adjacent wetlands.
b. Nonjurisdictional waters. The following are not waters of the U.S.:
    1. Waters or water features that are not identified in paragraph (a)(1), (2), (3), or (4) of this section;
    2. Groundwater, including groundwater drained through subsurface drainage systems;
    3. Ephemeral features, including ephemeral streams, swales, gullies, rills, and pools;
    4. Diffuse stormwater runoff and directional sheet flow over upland;
    5. Ditches that are not waters identified in paragraph (a)(1) or (2) of this section, and those portions of ditches constructed in waters identified in paragraph (a)(4) of this section that do not satisfy the conditions of paragraph (c)(1) of this section;
    6. Prior converted cropland;
    7. Artificially irrigated areas, including fields flooded for agricultural production, that would revert to upland should application of irrigation water to that area cease;
    8. Artificial lakes and ponds, including water storage reservoirs and farm, irrigation, stock watering, and log cleaning ponds, constructed or excavated in upland or in nonjurisdictional waters, so long as those artificial lakes and ponds are not impoundments of jurisdictional waters that meet the conditions of paragraph (c)(6) of this section;

9. Water-filled depressions constructed or excavated in upland or in nonjurisdictional waters incidental to mining or construction activity, and pits excavated in upland or in nonjurisdictional waters for the purpose of obtaining fill, sand, or gravel;
10. Stormwater control features constructed or excavated in upland or in nonjurisdictional waters to convey, treat, infiltrate, or store stormwater runoff;
11. Groundwater recharge, water reuse, and wastewater recycling structures, including detention, retention, and infiltration basins and ponds, constructed or excavated in upland or in nonjurisdictional waters; and
12. Waste treatment systems.

The term ephemeral means surface water flowing or pooling only in direct response to precipitation (e.g., rain or snow fall). The term intermittent means surface water flowing continuously during certain times of the year and more than in direct response to precipitation (e.g., seasonally when the groundwater table is elevated or when snowpack melts). The term perennial means surface water flowing continuously year-round. Per USACE Regulatory Guidance Letter 08-02, applicants can elect to request and obtain an approved jurisdictional determination (JD), he or she can also decline to request an approved JD, and instead obtain a USACE individual or general permit authorization based on either a preliminary JD, or, in appropriate circumstances (such as authorizations by nonreporting nationwide general permits), no JD whatsoever. By definition, a preliminary JD can only be used to determine that wetlands or other water bodies that exist on a particular site may be jurisdictional waters of the U.S. A preliminary JD by definition cannot be used to determine either that there are no wetlands or other water bodies on a site at all (i.e., that there are no aquatic resources on the site and the entire site is comprised of uplands), or that there are no jurisdictional wetlands or other water bodies on a site, or that only a portion of the wetlands or waterbodies on a site are jurisdictional. The use of a preliminary JD may expedite the permitting process when compared to the approved JD process which requires the JD to be coordinated with U.S. Environmental Protection Agency.

The limits of USACE jurisdiction in nontidal waters extends to the ordinary high water mark (OHWM), which is defined at 33 Code of Federal Regulations 328.3(e) as:

> *…that line on the shore established by the fluctuations of water and indicated by physical characteristics such as [a] clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.*

Per the Regulatory Program CWA Guidance to Implement the U.S. Supreme Court Decision for the Rapanos and Carabell Cases (USACE 2008a), USACE typically does not assert jurisdiction over nontidal drainage and irrigation ditches that are excavated on dry land, drain adjacent upland areas, and do not convey relatively permanent flow.

Wetlands

The term wetlands (a subset of waters of the U.S.) is defined at 33 Code of Federal Regulations 328.3(b) as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support...a prevalence of vegetation typically adapted for life in saturated soil conditions.” In 1987, USACE published a manual to guide its field personnel in determining jurisdictional wetland boundaries followed by the Arid West Supplement in 2008 (USACE 2008b). The methodology set forth in the *Regional Supplement to the Corps of Engineers Wetland Delineation*

Manual: Arid West Region generally requires that in order to be considered a wetland, the vegetation, soils, and hydrology of an area exhibit at least minimal hydric characteristics. While the manual provides great detail in methodology and allows for varying special conditions, a wetland should normally meet each of the following three criteria:

1. The plant community must be determined to be hydrophytic based on: (1) the dominance test applied using the 50/20 rule[2]; or (2) where the vegetation fails the dominance test and wetland hydrology and hydric soils are present, vegetation is determined to be hydrophytic using the Prevalence Index test[3] based upon the indicator status (i.e., rated as facultative or wetter in the 2016 National List of Plant Species that Occur in Wetlands [Lichvar et al. 2016, USACE 2020]).
2. Soils must exhibit physical and/or chemical characteristics indicative of permanent or periodic saturation (e.g., redoximorphic features with a matrix of low chroma indicating a relatively consistent fluctuation between aerobic and anaerobic conditions).
3. Hydrologic characteristics must indicate that the ground is saturated to within 12 inches of the surface for a sufficient period to cause: (1) the formation of hydric soils; and (2) establishment of a hydrophytic plant community. A positive test for wetland hydrology is based on the presence of one primary or two secondary indicators.

3.2 Regional Water Quality Control Board

In California, the State Water Resources Control Board (SWRCB) and nine RWQCBs regulate activities within state and federal waters under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. The SWRCB is responsible for setting statewide policy, coordinating and supporting RWQCB efforts, and reviewing petitions that contest RWQCB actions. Each RWQCB is semi-autonomous and has the authority to set water quality standards, issue Section 401 certifications and waste discharge requirements, and take enforcement action for projects occurring within its boundary. However, when a project crosses multiple RWQCB jurisdictional boundaries, the SWRCB becomes the regulating agency that issues project permits.

3.2.1 Section 401 of the Clean Water Act

Section 401 specifies that certification from the state is required for any applicant requesting a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities that may result in any discharge into waters of the U.S. A federal permit or license cannot be issued that may result in a discharge to waters of the U.S. unless certification under Section 401 of the CWA is granted or waived by the U.S. Environmental Protection Agency, state, or tribe where the discharge would originate (SWRCB 2014). The Project JSA is within the boundaries of the Los Angeles (Region 4) RWQCB, which would have the authority to grant, grant with conditions, deny, or waive water quality certification for the Project.

[2] If a particular species accounts for more than 50 percent of the total coverage of vegetation in the stratum, or for at least 20 percent of the total coverage in the stratum which the species was found, that species is defined as dominant.

[3] A Prevalence Index is calculated using wetland indicator status and relative abundance for each vascular plant species present.

Under Section 401, all activities regulated at the federal level by USACE are also regulated at the state level. Therefore, state jurisdiction usually includes all waters or tributaries to waters that are determined to be waters of the U.S. and, similar to waters of the U.S., are typically delineated at the OHWM.

3.2.2 Porter-Cologne Water Quality Control Act

RWQCB also regulates discharge of waste to waters of the state, pursuant to California's Porter-Cologne Water Quality Control Act, enacted in 1969, which provides the legal basis for water quality regulation within California. Under this act, waters of the state are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state” (Water Code section 13050(e)). Should RWQCB determine that discharge of pollutants (including fill) is proposed to waters that meet the definition of waters of the state but not waters of the U.S., waste discharge requirements may be required.

3.2.3 State Water Resources Control Board’s 2019 Wetland and Riparian Area Protection Policy

The SWRCB adopted a statewide definition of rules to protect wetlands and other environmentally sensitive waterways throughout the state on April 2, 2019. These rules define what SWRCB considers a wetland and include a framework for determining if a feature that meets the SWRCB wetland definition is a water of the state, subject to regulation. Second, the rules clarify requirements for permit applications to discharge dredged or fill material to any water of the state.

The SWRCB (2019) defines an area as wetland as follows:

> *An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area’s vegetation is dominated by hydrophytes or the area lacks vegetation.*

SWRCB considers the following wetlands (as determined using methodology in the USACE *Wetland Delineation Manual* (Environmental Laboratory 1987) as waters of the state:

1. Natural wetlands
2. Wetlands created by modification of a surface water of the state
3. Artificial wetlands that meet any of the following criteria:
    a. Approved by an agency as compensatory mitigation for impacts on other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration
    b. Specifically identified in a water quality control plan as a wetland or other water of the state
    c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape

d. Greater than or equal to 1 acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not waters of the state unless they also satisfy the criteria set forth in 2, 3a, or 3b):
    i. Industrial or municipal wastewater treatment or disposal
    ii. Settling of sediment
    iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program
    iv. Treatment of surface waters
    v. Agricultural crop irrigation or stock watering
    vi. Fire suppression
    vii. Industrial processing or cooling
    viii. Active surface mining – even if the site is managed for interim wetlands functions and values
    ix. Log storage
    x. Treatment, storage, or distribution of recycled water
    xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits)
    xii. Fields flooded for rice growing

All artificial wetlands that are less than 1 acre in size and do not satisfy the criteria set forth in numbers 2, 3.a, 3.b, or 3.c are not waters of the state. If an aquatic feature meets the wetland definition, the burden is on the applicant to demonstrate that the wetland is not a water of the state.

3.3 California Department of Fish and Wildlife

3.3.1 California Fish and Game Code Section 1600 et seq.

The State of California regulates water resources under Section 1600 et seq. of the California Fish and Game Code. Section 1602 states:

> *An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.*

CDFW jurisdiction includes ephemeral, intermittent, and perennial watercourses and extends to the top of the bank of a stream or lake if unvegetated, or to the limit of the adjacent riparian habitat located contiguous to the watercourse if the stream or lake is vegetated.

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4 Methodology

4.1 Literature Review

The following literature and materials were reviewed both prior to conducting delineation fieldwork and in the process of determining jurisdictional status of features identified in the field:

- Current and historical aerial photographs (Google Earth 2020; Historic Aerials 2020)
- U.S. Department of Agriculture Natural Resources Conservation Service soil mapping data (U.S. Department of Agriculture Natural Resources Conservation Service 2020)
- USGS *Simi Valley East, California* 7.5-minute topographical map to determine the current or historical presence of any blue line drainages or other mapped water features (USGS 1966)
- National Hydrography Dataset (USGS 2020)
- U.S. Fish and Wildlife Service National Wetlands Inventory data to identify areas mapped as wetland features (U.S. Fish and Wildlife Service 2020)

4.2 Field Investigation

A field survey of the JSA was conducted on April 21, 2020. After two new signal locations were added to the Project footprint west of the existing at-grade crossings at Sycamore Drive and Erringer Road, a site visit was conducted on January 20, 2021, to survey the new areas for jurisdictional resources. All potential drainage features within the JSA were investigated on foot, recorded on aerial photographs, and digitized using geographic information systems. Notes describing drainage type, substrate type, flow regime, presence or absence of vegetation, and any other pertinent details regarding apparent hydrology were taken at each feature.

Plant species observed were identified by visual characteristics and morphology in the field. Taxonomic nomenclature for plants follows the *Jepson Manual: Vascular Plants of California*, second edition (Baldwin et al. 2012) and the Jepson eflora (Jepson Flora Project 2020). Vegetation communities were characterized using *A Manual of California Vegetation*, second edition (Sawyer and Keeler-Wolf 2009).

Representative photographs of the JSA and assessed features are provided in Appendix A.

4.2.1 United States Army Corps of Engineers

USACE jurisdiction was delineated according to the methods outlined in the *USACE Wetland Delineation Manual* (Environmental Laboratory 1987), the *Regional Supplement to the USACE Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE 2008b), and *A Field Guide to the Identification of the Ordinary High Water Mark in the Arid West Region of the Western United States* (USACE 2008c).

Features were investigated for evidence of an OHWM or other jurisdictional indicators, such as presence of hydrophytic vegetation. Three wetland sampling points were assessed within the JSA in areas exhibiting potential wetland conditions, notably potentially hydrophytic vegetation. Wetland indicator status of plant species was determined by using the *2016 Arid West Regional Wetland Plant List* (Lichvar et al. 2016). Soils were analyzed using the *Natural Resources Conservation Service Field Indicators of Hydric Soils in the U.S., Version 8.2* and List of California Hydric Soils (United States

Department of Agriculture Natural Resources Conservation Service 2018) and Munsell Soil Color Chart (Munsell 2013).

4.2.2 Regional Water Quality Control Board

RWQCB jurisdiction, for the purposes of CWA Section 401 Certification, is identical to USACE jurisdiction. In addition, the JSA was evaluated for isolated features that would not be subject to federal jurisdiction but would be potentially regulated under the Porter-Cologne Water Quality Control Act.

4.2.3 California Department of Fish and Wildlife

The JSA was surveyed for features that exhibit streambed and stream banks and/or riparian vegetation and would, therefore, be subject to CDFW jurisdiction. Any such features would be mapped from top of bank to top of bank or to the extent of riparian vegetation, whichever is greater. Constructed, ephemeral features that were excavated in uplands and only drained upland areas into adjacent streets or storm drains were mapped but were not considered jurisdictional.

4.2.4 Vegetation

Plant species observed were identified by visual characteristics and morphology in the field. Taxonomic nomenclature for plants follows the *Jepson Manual: Vascular Plants of California*, second edition (Baldwin et al. 2012) and the Jepson eFlora (Jepson Flora Project 2020). Vegetation communities were characterized using *A Manual of California Vegetation*, second edition (Sawyer and Keeler-Wolf 2009).

5 Results

5.1 Environmental Setting

The JSA is located in southeast Ventura County, in the City of Simi Valley, a highly urbanized area of the county. The JSA is adjacent to the northwestern perimeter of the San Fernando Valley and is bordered by the Santa Susana Mountains to the north and the Simi Hills to the east and south. The JSA and surrounding areas are developed, and most natural vegetation and drainage features have been removed.

5.1.1 Climate

Simi Valley has a warm and temperate climate with hot, dry summers and with rain occurring primarily in the winter months. The average precipitation for Simi Valley is 17.6 inches per year and most of the rainfall occurs in January and February (U.S. Climate Data 2020).

5.1.2 Soils

The following soil associations are mapped by the United States Department of Agriculture Soils Survey within the JSA (Figure 5-1) (United States Department of Agriculture Natural Resources Conservation Service 2020):

- **Metz Series**: The Metz series consists of deep, well drained soils formed in alluvial material derived from mostly sedimentary rocks. Metz soils are on floodplains and alluvial fans with slopes of 0 to 15 percent. Metz loamy fine sand (0 to 2 percent slopes) is mapped within the JSA.
- **Mocho Series**: The Mocho series consists of very deep, well drained soils that formed in alluvium derived mostly from sandstone and shale rock sources. Mocho soils commonly occur on alluvial fans and have slopes of 0 to 9 percent. Three Mocho series soils are mapped within the JSA: Mocho clay loam (0 to 2 percent slopes), Mocho loam (0 to 2 percent slopes), and Mocho loam (2 to 9 percent slopes).
- **Pico Series**: The Pico series consists of deep, well drained soils that formed in alluvium from mostly sedimentary rocks. Pico soils commonly occur on floodplains and alluvial fans and have slopes of 0 to 9 percent. Pico sandy loam (0 to 2 percent slopes) is mapped within the JSA.
- **Riverwash:** Riverwash consists of very recent depositions of gravel, sand, and silt alluvium along major streams and their tributaries. Gravel bars make up the majority of these areas. During floods, alluvial areas are subject to repeated deposition, erosion, and shifting of transported material. Riverwash is the only soil type that has a hydric rating that is mapped within the JSA.
- **Soper Series:** The Soper series consists of moderately deep, well drained soils that formed in material weathered from conglomerate and sandstone. Soper soils are on hills and uplands and have slopes of 15 to 50 percent. Soper gravelly loam (30 to 50 percent slopes) is mapped within the JSA.

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Figure 5-1. United States Geological Survey Mapped Soils

(Sheet 1 of 2)

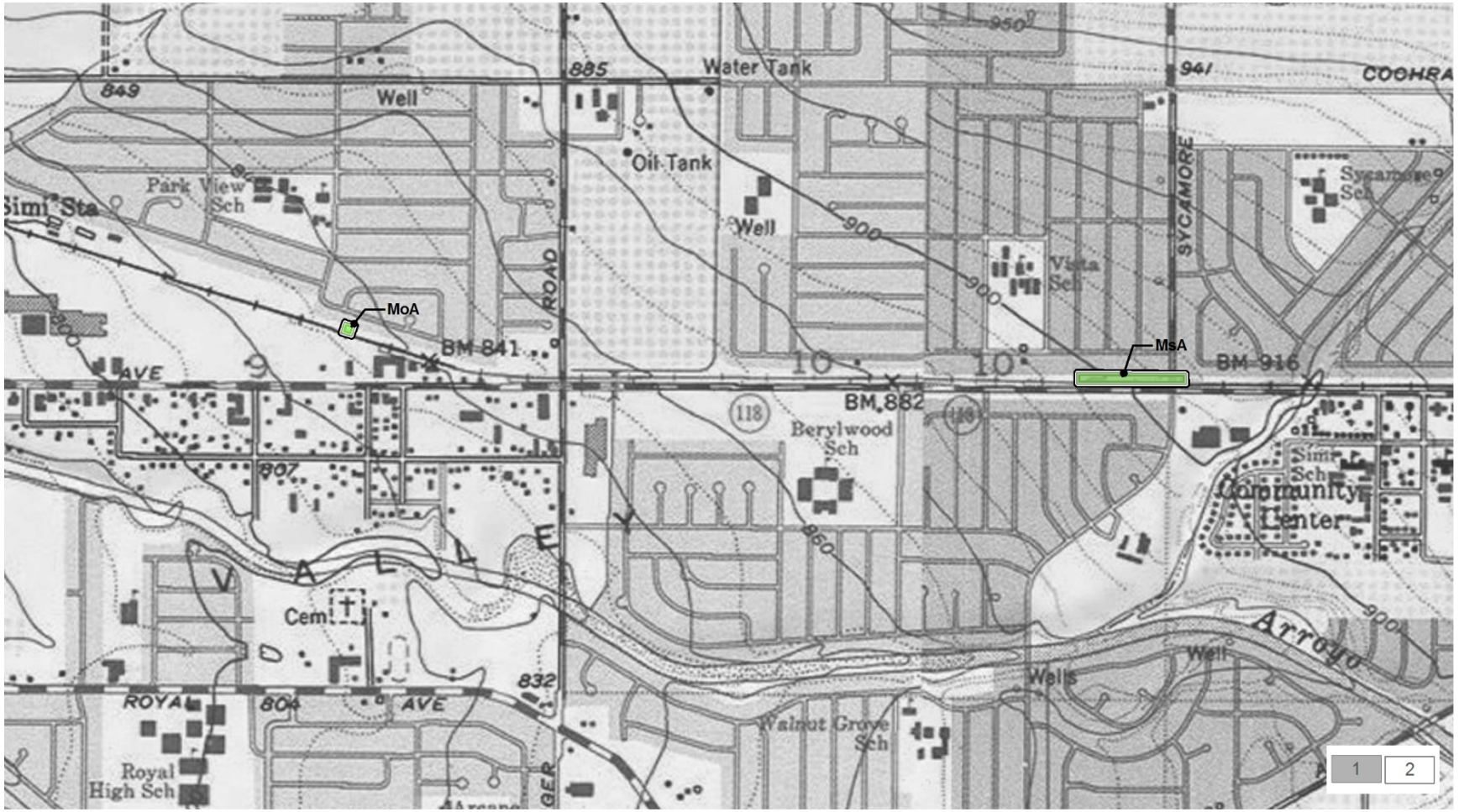

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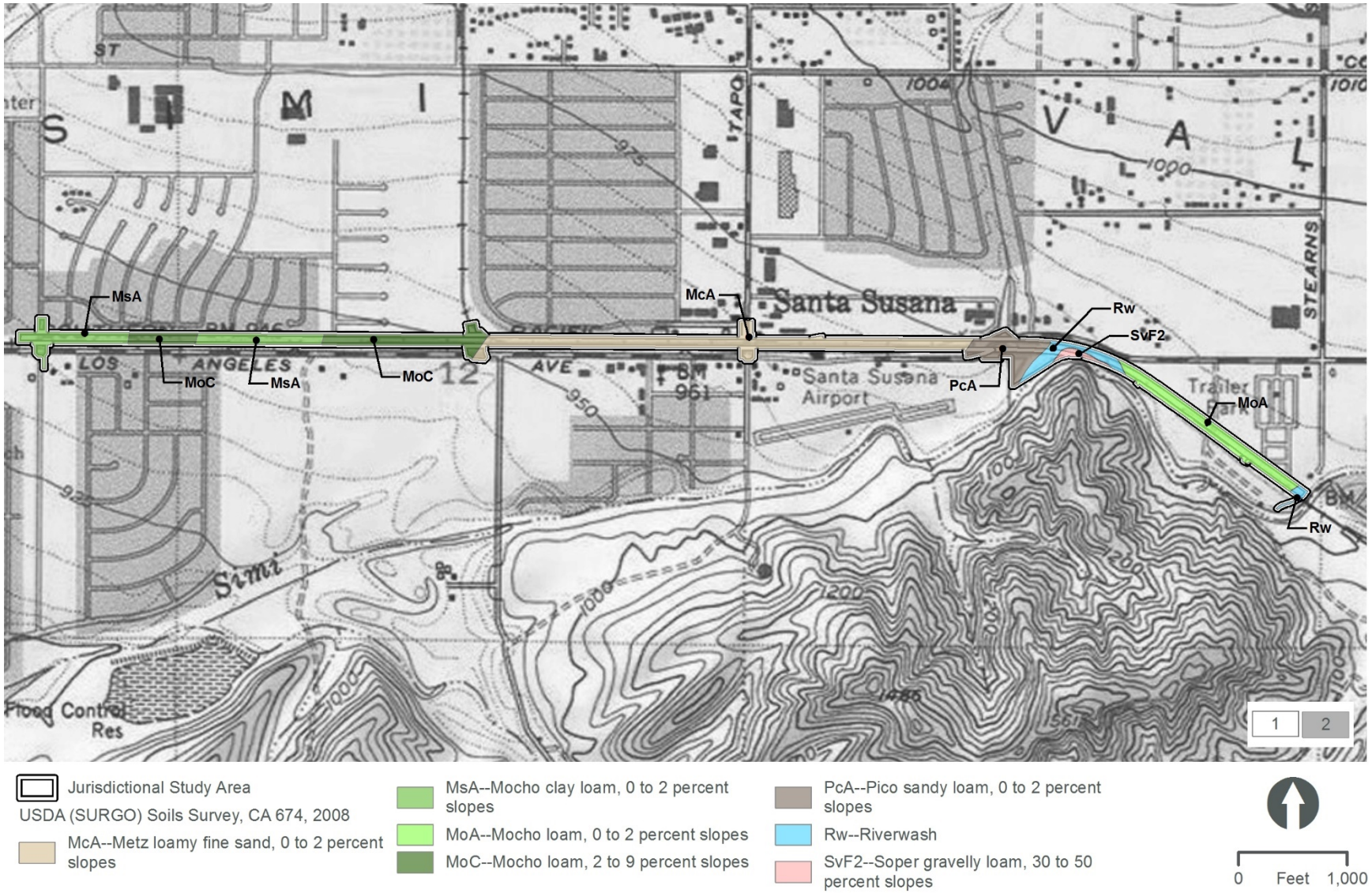
Figure 5-2. United States Geological Survey Mapped Soils
(Sheet 2 of 2)



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5.1.3 Hydrology

Simi Valley is located within the Calleguas Creek Watershed. This watershed encompasses approximately 343 square miles, predominantly in southern Ventura County, and is generally 30 miles long and 14 miles wide. The northern boundary is formed by South Mountain and Oak Ridge, northeast and east boundary is formed by the Santa Susana Mountains, and the southern boundary is formed by the Simi Hills and Santa Monica Mountains (SWRCB 2020).

The Watershed includes the Conejo Creek, Arroyo Santa Rosa, Arroyo Simi, Arroyo Las Posas, and Calleguas Creek, as well as Revolon Slough and Mugu Lagoon (Calleguas Municipal Water District 2004). Approximately 50 percent of the Watershed is undeveloped open space, 25 percent is agricultural, and the remaining 25 percent is urban land use (Watersheds Coalition of Ventura County 2006). The upper reach of the Watershed includes Simi Valley and Las Posas Valley. The main surface water bodies are the Arroyo Simi, Arroyo Las Posas and the uppermost reach of the Calleguas Creek. The groundwater bodies include the Las Posas Basin, one of the major aquifers within the Fox Canyon Aquifer System, and the South Las Posas Basin and the Simi Valley Basin, both unconfined groundwater basins.

The Watershed has relatively few surface water features. There are no natural lakes and no major rivers. The surface waters are primarily arroyos and creeks that have historically carried storm flows and post-storm flows from the upper watershed down to the alluvial valleys and the southeastern portion of the Oxnard Plain (Larry Walker Associates 2004). The major drainage course through the City of Simi Valley is the Arroyo Simi. This major channel drains from the extreme limits of the Watershed in the east and northeast, then westerly through the Las Posas Valley (as Arroyo Las Posas) to the Oxnard Plain (as Calleguas Creek), and finally into the Pacific Ocean through Mugu Lagoon (Ventura County Watershed Protection District 2003). In the eastern half of the valley, the Arroyo Simi traverses close to the base of the hills on the southern edge of the valley, while in the western half it traverses diagonally across the valley to the northwest, reaching the center of the valley, from which it discharges downstream toward Moorpark (City of Simi Valley 1990). Tributaries to Arroyo Simi from the Santa Susana Mountains on the north are, from west to east, Alamos Canyon, Brea Canyon, North Simi Drain, Dry Canyon, Tapo Canyon, Chivo Canyon, and Las Llajas Canyon. Canyons draining the Simi Hills from the south are Sycamore Canyon, Bus Canyon, Erringer Road Drain, Runkle Canyon, Meier Canyon, and Black Canyon in the Santa Susana area (Ventura County Watershed Protection District 2003).

The main hydrologic features within the vicinity of the JSA, as shown on the National Wetland Inventory (Figure 5-3), are Arroyo Simi and Las Llajas Canyon channel, which is tributary to Arroyo Simi. Las Llajas Canyon channel passes beneath East Los Angeles Avenue and the rail ROW via a concrete box culvert. Arroyo Simi lies outside of the JSA.

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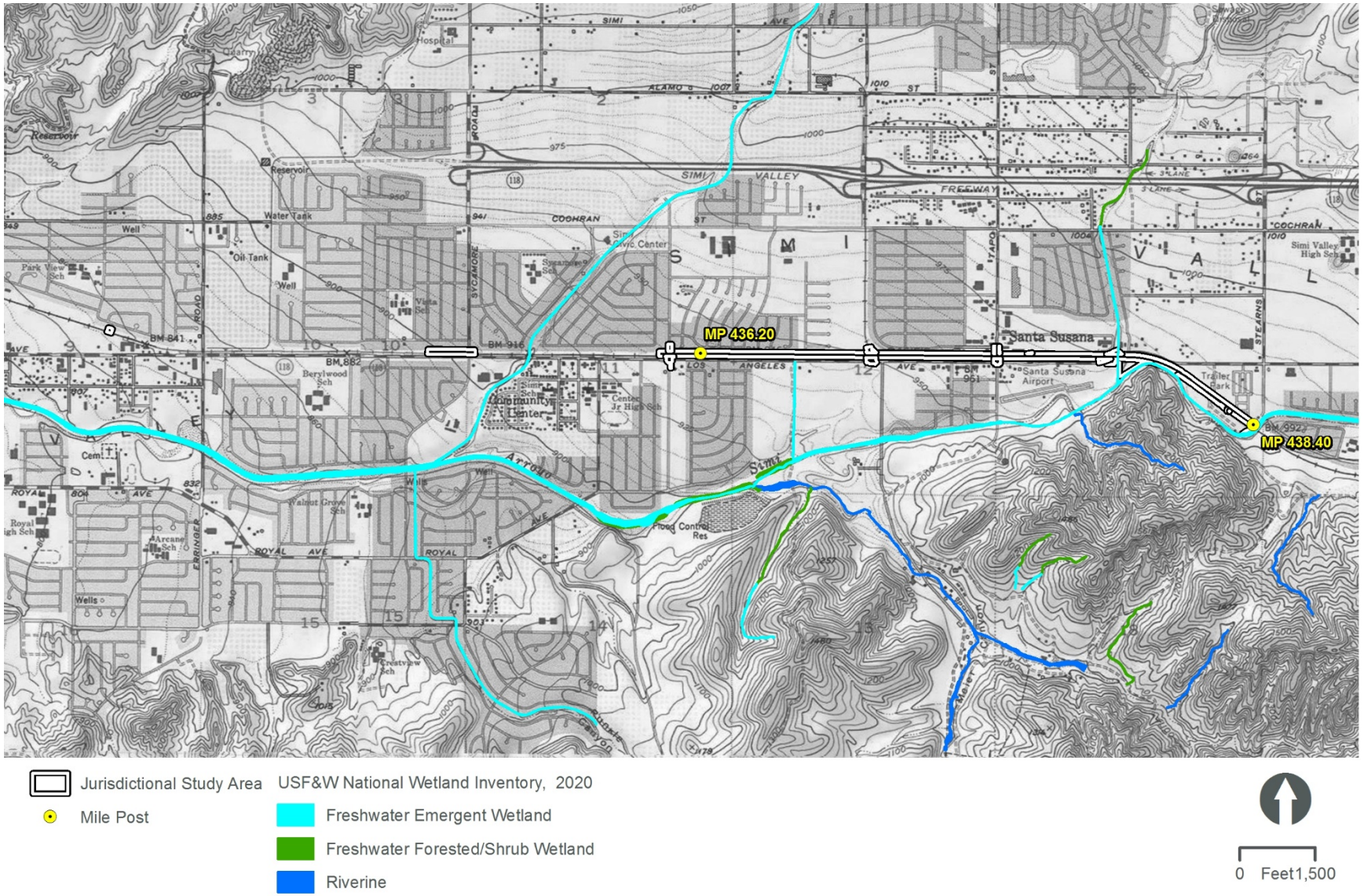
Figure 5-3. National Wetland Inventory



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5.1.4 Vegetation and Land Cover Types

The majority of the JSA is developed or disturbed with small amounts of associated ornamental or ruderal vegetation. For the most part, plant species within the JSA consist of nonnative species, such as nonnative grasses (e.g., foxtail chess [*Bromus madritensis*]) and ornamental trees (e.g., pepper tree [*Schinus molle*]). Vegetation community or land cover types within the JSA are shown from west to east on Figure 5-4 (Sheets 1 through 7) and are described below.

Urban/Developed

Urban/developed land refers to areas that have been manipulated by grading and compacting soils to build infrastructure, such as roads, buildings, parks, fields, etc. These areas have no biological function or value, except that they may provide habitat for nesting birds.

Within the JSA, paved roads, associated landscaping, and portions of the Metrolink ROW were mapped as urban/developed. The JSA contains approximately 32.32 acres of urban/developed land cover.

Nonnative Ornamental

Areas with ornamental vegetation are typically found near development, along streets, and in parks. This vegetation usually consists of irrigated plants and trees that are not native but may include native species that are intentionally planted.

Within the JSA, a small stand of nonnative ornamental pepper trees (*Schinus molle*), covering approximately 0.31 acre, is located on the northeast corner of East Los Angeles Avenue and Tapo Canyon Road.

Disturbed

Disturbed areas are where natural communities have been impacted to the extent that they no longer function naturally. These areas have been previously physically disturbed but continue to retain a soil substrate. Disturbed areas consist of predominantly nonnative weedy and ruderal species. This is not a natural community and generally does not provide habitat for wildlife or special-status species, though exceptions occur. Examples of disturbed habitat include areas that have been graded for development or cleared for fuel management, staging areas, off-road vehicle trails, and abandoned home or business lots.

Within the JSA, stabilized streambanks along Arroyo Simi and vacant lots that would serve as staging areas for the Project constitute disturbed land cover and amount to approximately 3.77 acres.

Native Ornamental

The JSA contains small areas of mature, native coast live oak (*Quercus agrifolia*) and western sycamore (*Platanus racemosa*) trees that are surrounded by development and serve as ornamental trees. Mature native trees, especially oak trees, may be protected by state regulations and local ordinances and are therefore identified separately from nonnative ornamental trees.

Within the JSA, native trees that serve as ornamental trees occur along the rail ROW and cover approximately 0.29 acre.

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Figure 5-4. Vegetation within the Jurisdictional Study Area
(Sheet 1 of 7)

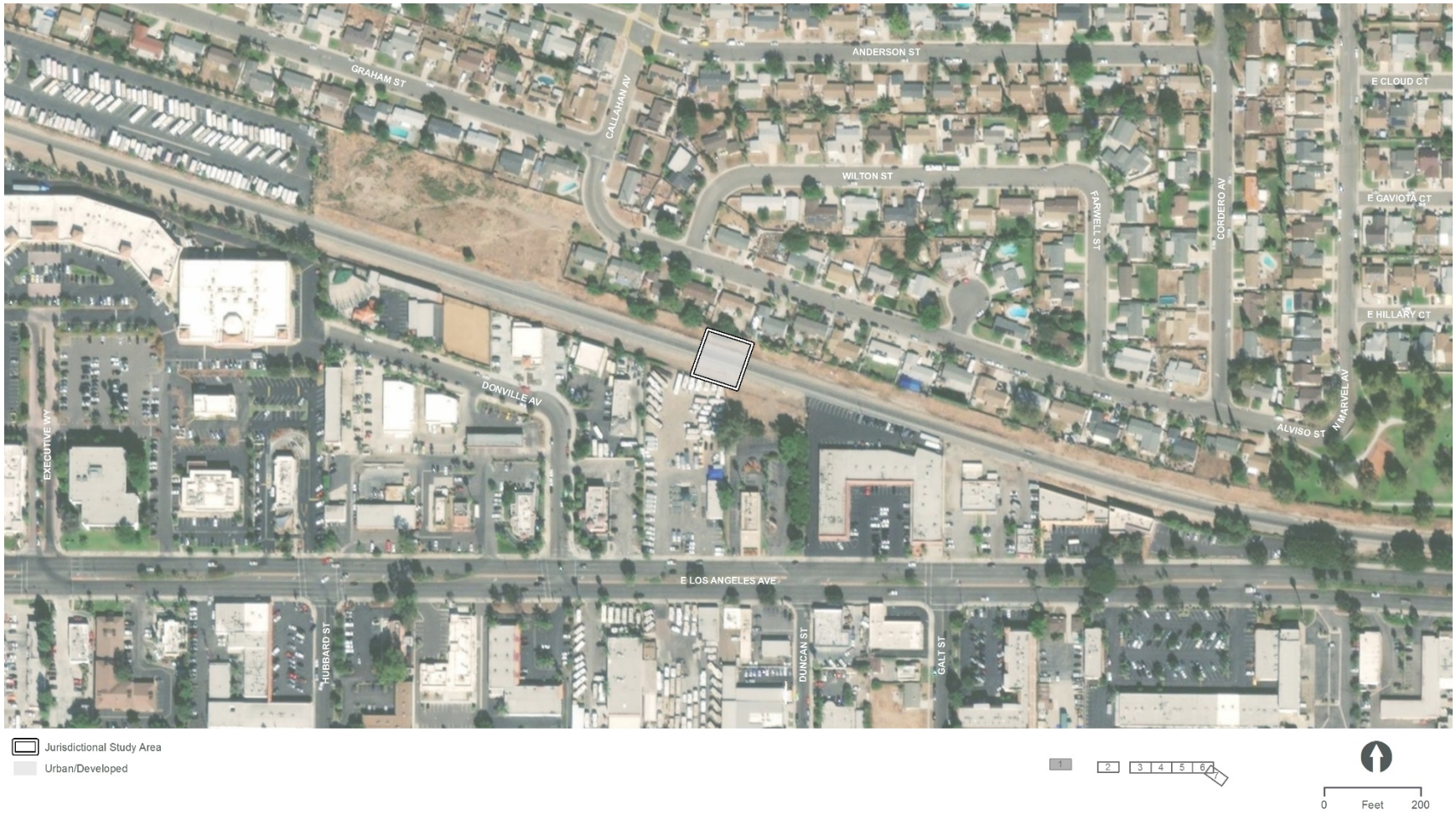

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Figure 5-3. Vegetation within the Jurisdictional Study Area
(Sheet 2 of 7)

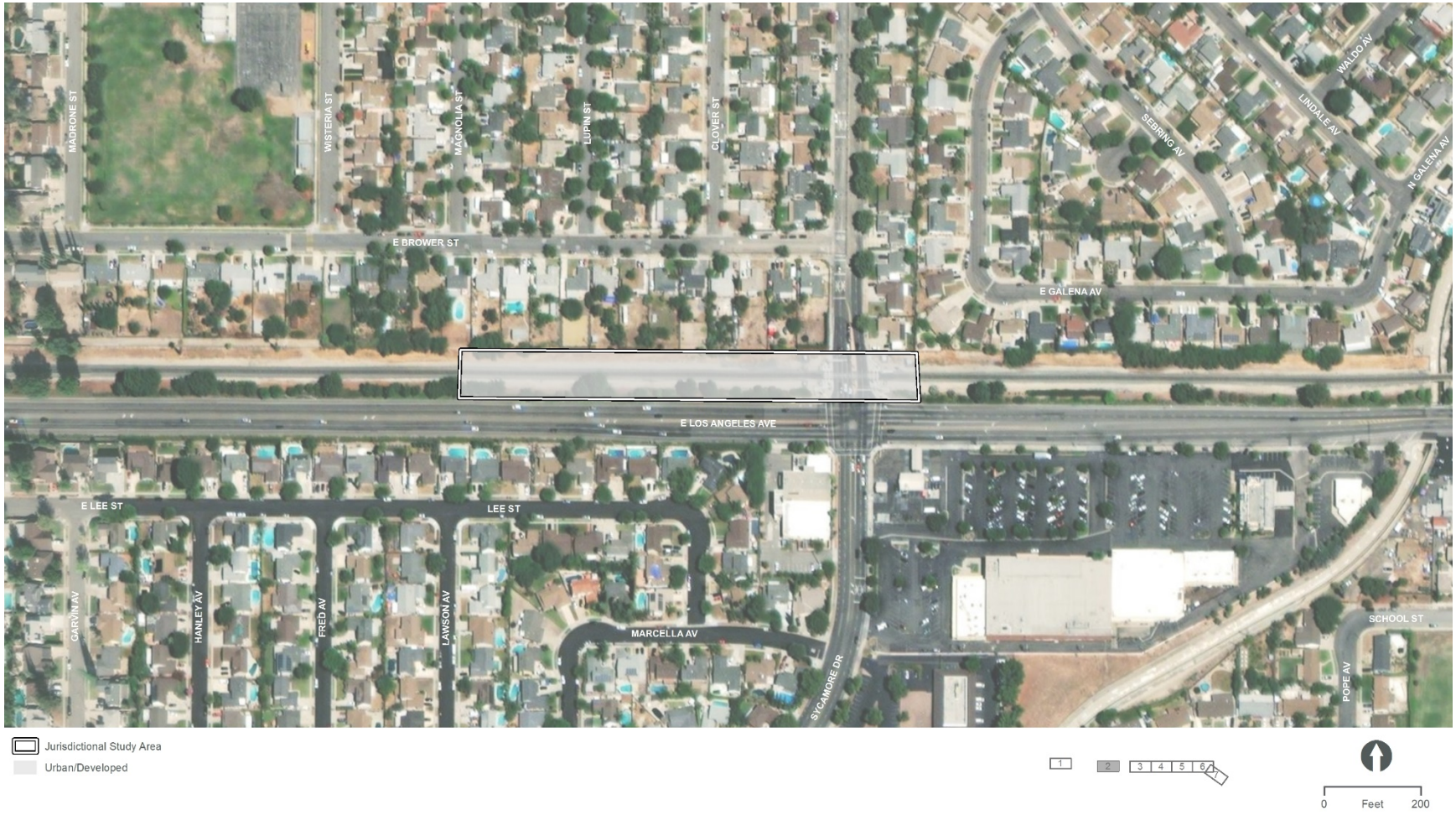

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Figure 5-3. Vegetation within the Jurisdictional Study Area
(Sheet 3 of 7)

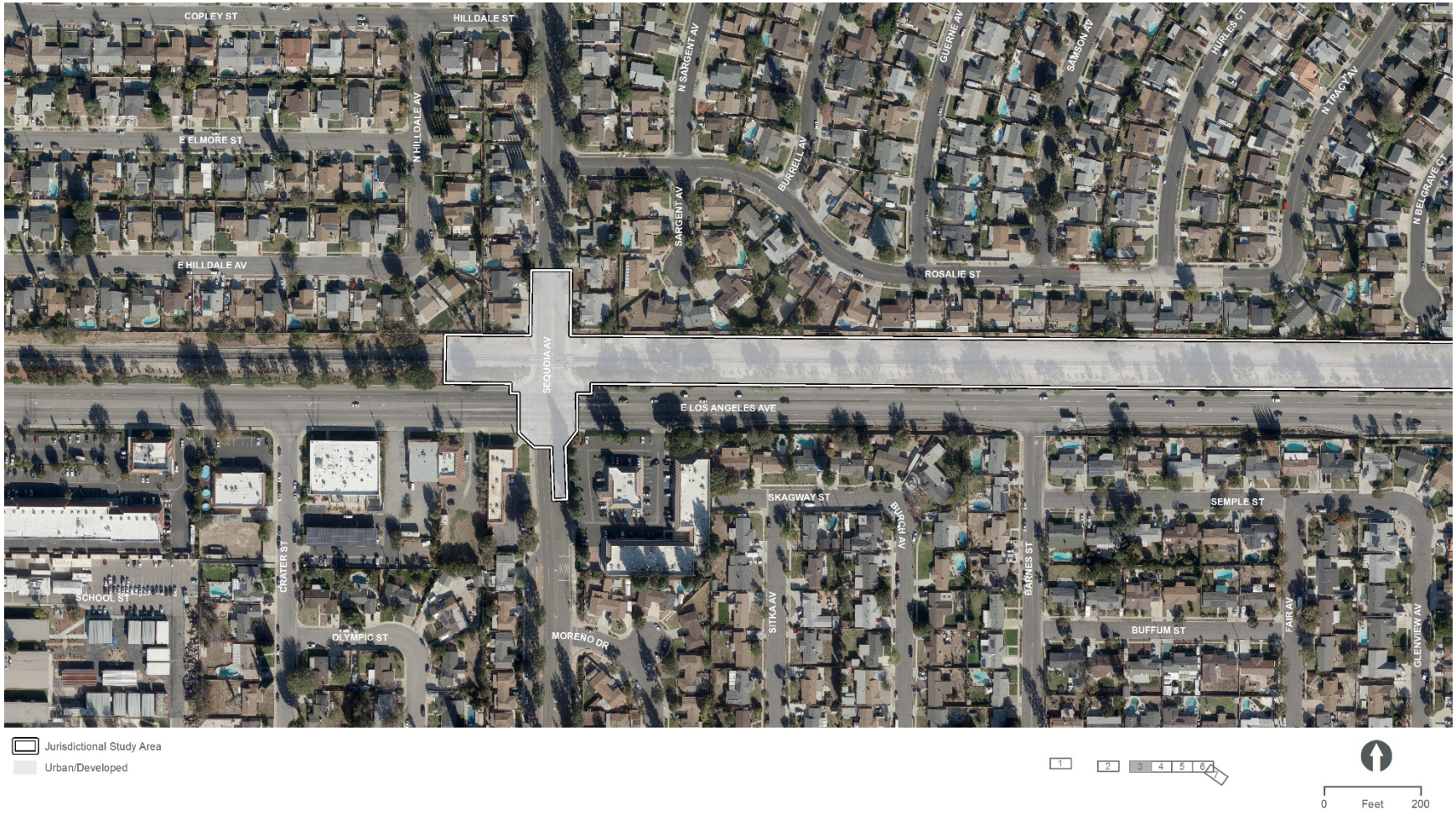

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Figure 5-3. Vegetation within the Jurisdictional Study Area
(Sheet 4 of 7)

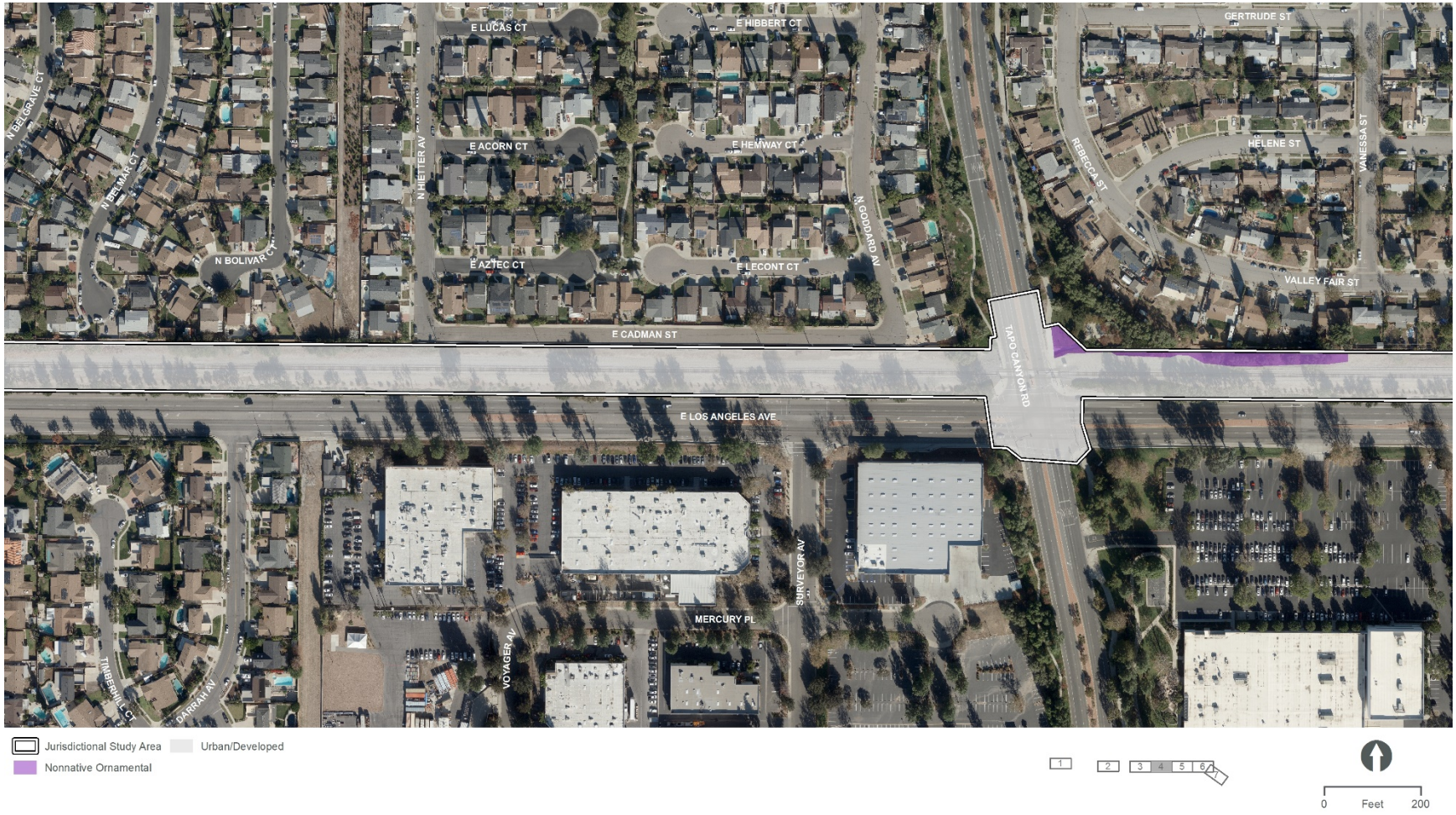

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Figure 5-3. Vegetation within the Jurisdictional Study Area

(Sheet 5 of 7)

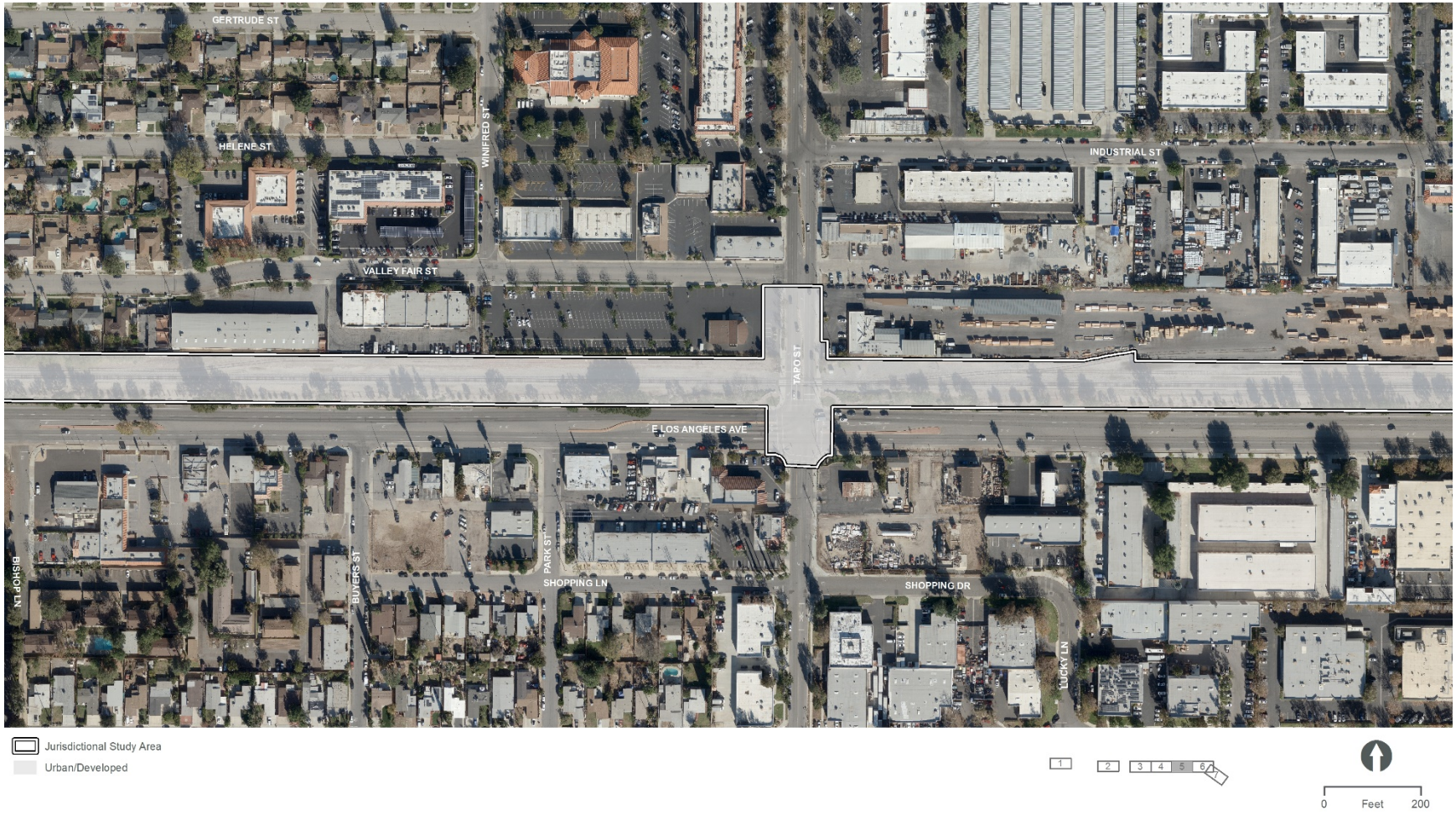

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Figure 5-3. Vegetation within the Jurisdictional Study Area
(Sheet 6 of 7)

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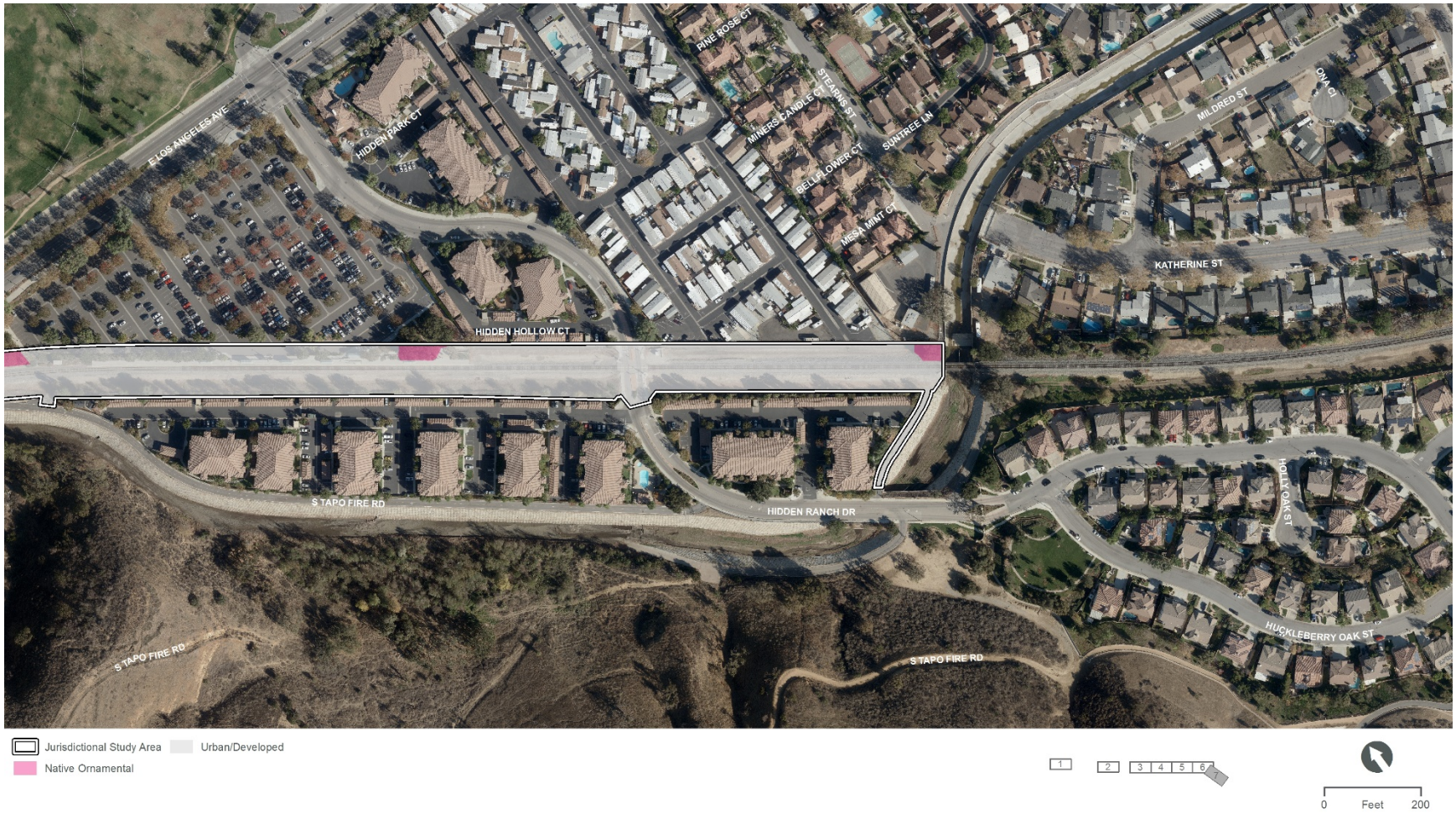
Figure 5-3. Vegetation within the Jurisdictional Study Area
(Sheet 7 of 7)



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5.2 Field Assessment Results

The only jurisdictional aquatic resources located within the immediate vicinity of the JSA are Arroyo Simi, which is located just outside of the JSA (Appendix A, Photograph 20), and Las Llajas Canyon channel, which is tributary to Arroyo Simi and passes beneath the rail ROW and East Los Angeles Avenue via a concrete box culvert (Appendix A, Photograph 17).

5.2.1 United States Army Corps of Engineers

Several storm drain outlets, multiple culverts, and all topographic low points within the JSA were examined for indicators of wetland hydrology or vegetation and indicators of OHWM. None of the features exhibited an OHWM.

A relatively large ponded area was observed near the Simi Valley Station, south of the railroad and west of the existing station platform. The depression remained inundated for approximately 4 weeks but exhibited little vegetative cover. Where vegetation was present, it consisted of dead upland bromes or newly recruited hydrophytes. Hydric soil indicators were not present, suggesting that the ponding may not reflect normal circumstances and would no longer occur following regular maintenance activities (Appendix A, Photograph 18, and Appendix B, Wetland Determination Data Form – Sampling Point 1). Standing water was also observed east of the Hidden Ranch Drive crossing and south of the rail at a small culvert passing beneath the Hidden Ranch Drive parallel to the rail. Although the depression supported a predominance of hydrophytes, it did not exhibit hydric soils (Appendix A, Photograph 19, and Appendix B, Wetland Determination Data Form – Sampling Point [i.e., soil pit] 2). Figure 5-5 depicts all features investigated within the JSA. Representative photographs are provided in Appendix A. Wetland Determination Data Forms are provided in Appendix B.

As depicted on Figure 5-5 (Sheets 3 and 4) and Appendix A (Photographs 3 and 7), an intermittent series of swales occur along the northern edge of the ROW between Sequoia Avenue and approximately 230 feet east of the culvert at MP 436.56. These low areas likely retain surface runoff from the adjacent residential community, which is discharged to the site through a series of short storm drains and wall scuppers. As visible in Appendix A (Photographs 5 through 11), indicators of OHWM, including change in soil characteristics, presence of litter and debris, destruction of terrestrial vegetation, ripples, sediment deposition and flow lines were not observed even though the site visit was made within two weeks after a significant rain event and during an average rain year. A soil pit in one of these typical swales that exhibited 100-percent cover of curly dock (*Rumex crispus*, facultative species[4]) exhibited no hydric soil indicators or indicators of wetland hydrology (Appendix A, Photograph 7, and Appendix B, Wetland Determination Data Form - Sampling Point 3).

Isolated, standing water was observed at one storm drain outlet (Figure 5-5, Sheet 3, and Appendix A, Photograph 4). The area at the outlet contains southern cattail (*Typha domingensis*, obligate species), dallis grass (*Paspalum dilatum*, facultative species), Washington fan palm (*Washingtonia robusta*, facultative wetland [FACW]), and ornamental fig (*Ficus* sp., upland species). Based on the presence of mucky soils, this outlet supports approximately 36 square feet of wetland. However the outlet drains only adjacent residential development and long duration inundation is most likely a result of over-irrigation.

[4] FAC=Facultative species are equally likely to occur in wetland as nonwetland, OBL=obligate species almost always occur in wetland, FACW=facultative wetland species are slightly more likely to occur in wetlands than uplands, UPL=upland species almost never occur in wetlands.

Very fine sediment was observed on the concrete apron of the outlet of the culvert at MP 436.56 (Appendix A, Photograph 10), however based on the topography at the outlet and the absence of indicators at the culvert inlet (Appendix A, Photographs 8 and 9), the sediment appears to be deposited by local sheet flow collecting on the apron rather than storm flows from higher in the watershed. Based on aerial photography and USGS topographic mapping from 1947 through 1977 (Historic Aerials 2020) both the culvert MP 436.46 and the culvert at MP 436.56 may have historically passed irrigation drainage southward from the adjacent agricultural uses to the north. Since that time, urban development has resulted in the diversion of surface flows to underground storm drain systems, the culvert at MP 436.46 was abandoned and only local sheet flow from Rosalie Street, Belmar, Belgrave and Bolivar Courts, and Cadman Street appear to still be discharged to the railroad ROW where it infiltrates the soil.

Similarly, as depicted on Figure 5-5 (Sheet 6) and Appendix A (Photographs 12 through 15), the culvert at MP 436.96 exhibited no indicators of an OHWM entering the culvert and only signs of 6-inch wide sheet flow extending south of the outlet.

There were no potentially jurisdictional aquatic resource features observed in the two westernmost signal location areas surveyed on January 20, 2021.

Figure 5-5. Jurisdictional Delineation Map
(Sheet 1 of 11)

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Figure 5-4. Jurisdictional Delineation Map
(Sheet 2 of 11)

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Figure 5-4. Jurisdictional Delineation Map

(Sheet 3 of 11)

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Figure 5-4. Jurisdictional Delineation Map

(Sheet 4 of 11)

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Figure 5-4. Jurisdictional Delineation Map

(Sheet 5 of 11)

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Figure 5-4. Jurisdictional Delineation Map

(Sheet 6 of 11)

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Figure 5-4. Jurisdictional Delineation Map

(Sheet 7 of 11)

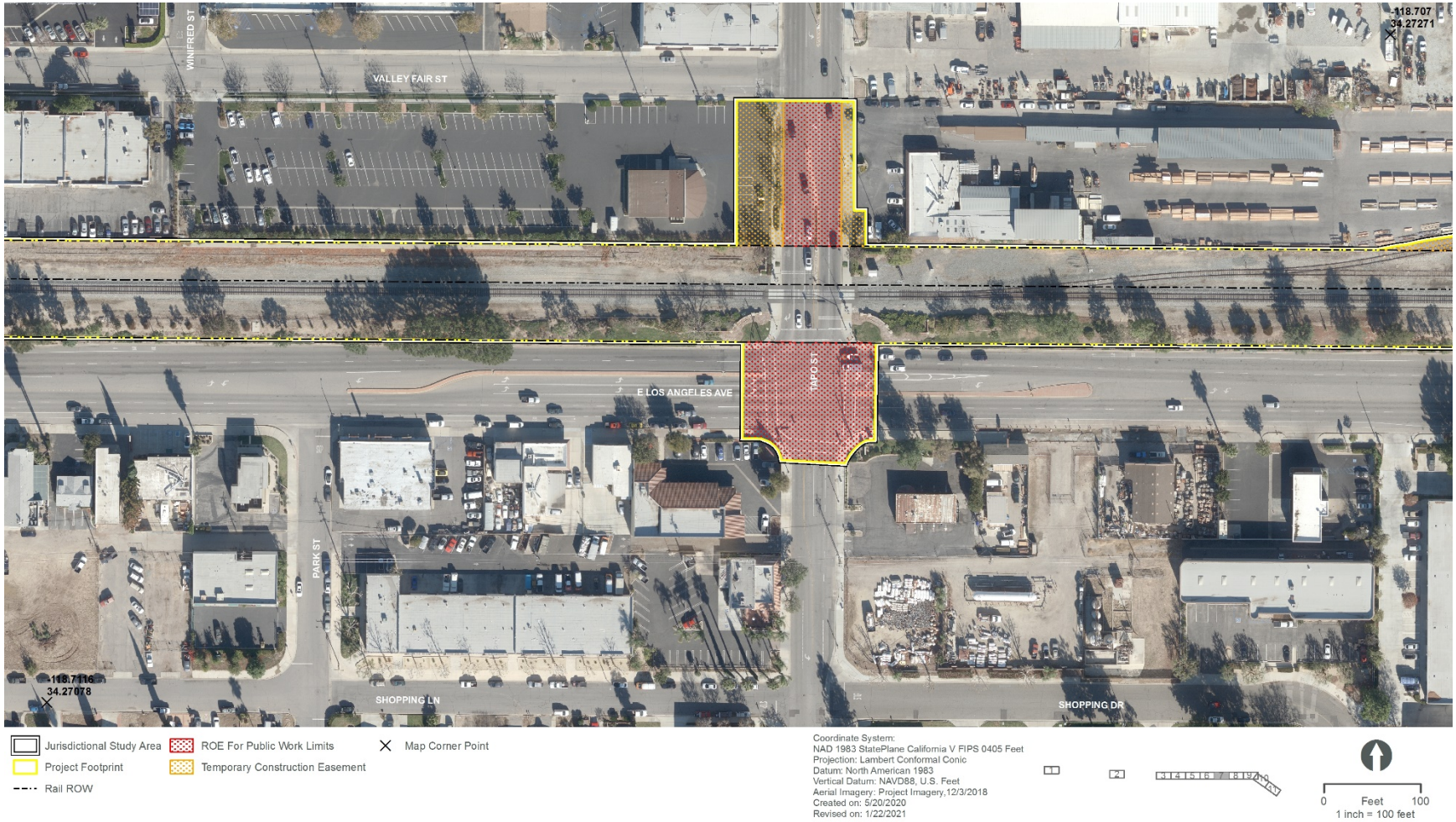

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Figure 5-4. Jurisdictional Delineation Map

(Sheet 8 of 11)

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Figure 5-4. Jurisdictional Delineation Map
(Sheet 9 of 11)

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Figure 5-4. Jurisdictional Delineation Map
(Sheet 10 of 11)

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Figure 5-4. Jurisdictional Delineation Map
(Sheet 11 of 11)

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5.2.2 Regional Water Quality Control Board

As described in Section 5.2.1, none of the features examined exhibited indicators of an OHWM that would make them potentially subject to RWQCB jurisdiction pursuant to Section 401 of the CWA or Porter Cologne Act. The small patch of wetland observed within the ROW between Sequoia Avenue and the abandoned culvert at MP 436.46 is not subject to regulation because it is an artificial wetland that is less than one acre in size, it is subject to ongoing maintenance within the ROW, and it does not meet any of the criteria for waters of the state.

5.2.3 California Department of Fish and Wildlife

Features within the JSA were evaluated for CDFW jurisdiction by searching for indicators of streambed and banks and steam function. Ditches or swales that collected flows only from adjacent roadways or rail ROW and connected directly to the underground storm drain system were not considered subject to CDFW jurisdiction. None of the features exhibited indicators that would make them potentially subject to CDFW jurisdiction under Section 1600 et seq. of the California Fish and Game Code.

The only jurisdictional aquatic resources located within the immediate vicinity of the JSA are Arroyo Simi and Las Llajas Canyon channel, which are located just outside of the JSA.

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6 Conclusions

The JSA is in a highly urbanized area, and any historic drainages that may have traversed the railroad in the past no longer do so. As a result, no indicators of OHWM or streambed and banks were identified within the JSA.

Findings presented in this jurisdictional delineation report are preliminary and subject to verification by USACE, RWQCB, and CDFW.

6.1 United States Army Corps of Engineers Jurisdiction

There are no wetland or nonwetland waters of the U.S. that would be subject to USACE jurisdiction under Section 404 of the CWA within the JSA.

6.2 Regional Water Quality Control Board Jurisdiction

There are no waters of the state that would be subject to RWQCB jurisdiction under Section 401 of the CWA or the Porter Cologne Act within the JSA.

6.3 California Department of Fish and Wildlife Jurisdiction

There are no features that exhibit streambed and stream banks and/or riparian vegetation that would be subject to CDFW jurisdiction under Section 1600 et seq. of the California Fish and Game Code within the JSA.

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7 References

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Appendix A. Representative Photographs

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Photograph 1: Off-Site Ditch Constructed in Uplands looking northeast. Ditch drains residential neighborhood to north of Project (4/21/2020).

Photograph 2: Existing rail line looking southwest towards the intersections of Sequoia Avenue and Los Angeles Avenue (4/21/2020).

Photograph 3: Existing rail line looking east (4/21/2020).

Photograph 4: Standing water observed at storm drain outlet. Vegetated with cattail (*Typha domingensis*, OBL), dallis grass (*Paspalum dilatum*, FAC) and ornamental (*Ficus* sp.). Culvert drains abutting residential development (4/21/2020).

Photograph 5: 24-inch Culvert passing beneath the rail. No OHWM, bed or bank present (4/21/2020).

Photograph 6: Culvert outlet from residential neighborhood to the north. No OHWM, bed or bank present (4/21/2020).

Photograph 7: Soil Pit 3. Swale vegetated with curly dock (*Rumex crispus*). No indicators of wetland hydrology or hydric soils, no OHWM, bed or bank present (4/21/2020).

Photograph 8: Inlet of existing double culvert MP 436.56 passing beneath the rail looking southeast. No OHWM, bed or bank present. Based on historic topographic maps, this location did not support a defined drainage (4/21/2020).

Photograph 9: Close-up view of culvert MP 436.56 inlet. No OHWM, bed or bank present (4/21/2020).

Photograph 10: Outlet of existing double culvert MP 436.56 passing beneath the rail looking north. No OHWM, bed or bank present (4/21/2020).

Photograph 11: Swale leading from culvert MP 436.56 to storm drain inlet at Los Angeles Ave. No OHWM. Slight historic incision visible for approximately 5 feet (4/21/2020).

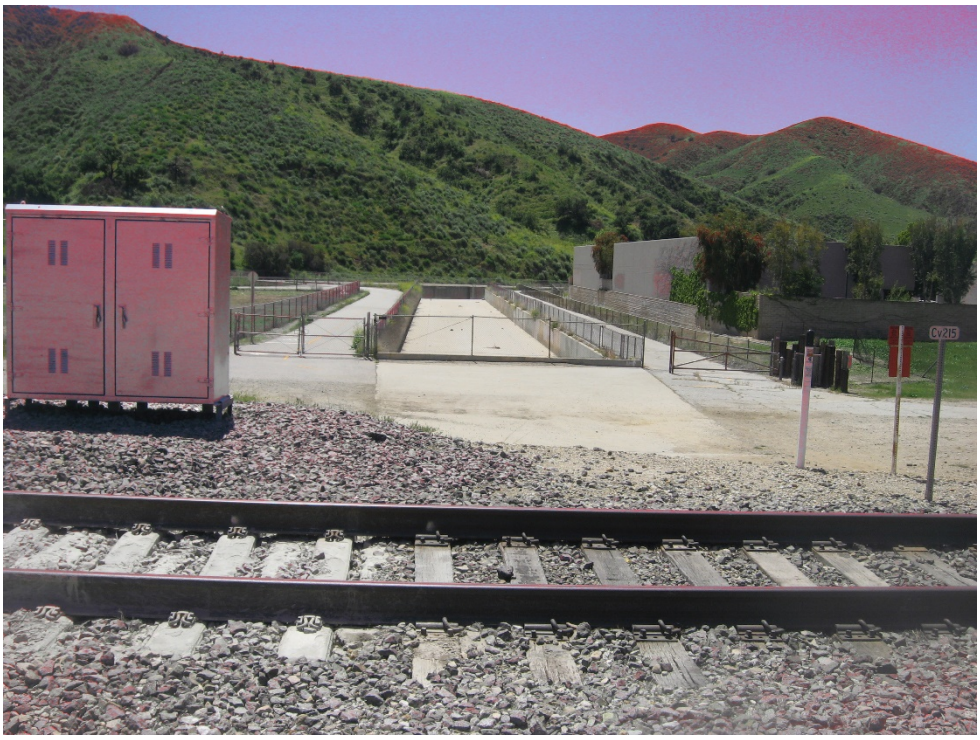
Photograph 12: Existing culvert MP 436.96 passing beneath rail looking upslope (northwest). No OHWM, bed or bank present (4/21/2020).

Photograph 13: Inlet of existing culvert MP 436.96 passing beneath the rail looking south. No OHWM, bed or bank present. Based on historic topographic maps, this location did not support a defined drainage (4/21/2020).

Photograph 14: Outlet of existing culvert MP 436.96 passing beneath the rail looking northeast. No OHWM, bed or bank present (4/21/2020).

Photograph 15: Swale leading from culvert MP 436.96 to storm drain inlet at Los Angeles Avenue. No OHWM, bed or bank (4/21/2020).

Photograph 16: Rail Right-of-Way looking east (4/21/2020).



Photograph 17: Rail Right-of-Way looking south at Las Llajas Canyon channel (4/21/2020).

Photograph 18: Sampling Point 1, shallow depression south of the rail at the station. Based on the mix of recently recruited hydrophytic vegetation and upland herbs, this inundation appears recent and may indicate drainage is blocked (4/21/2020).

Photograph 19: Sampling Point 2, shallow depression at rail crossing east of station (4/21/2020).

Photograph 20: Arroyo Simi Bridge looking northeast (4/21/2020).

Appendix B. Wetland Determination Data Forms

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WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SCORE Simi Valley City/County: Simi Valley / Ventura Sampling Date: 4/21/2020
Applicant/Owner: Southern California Regional Rail Authority (SCRRA) State: CA Sampling Point: 1
Investigator(s): Eich, I., Martinelli, E. Section, Township, Range: ~~Simi Land Grant~~ S 7 T3N R19W
Landform (hillslope, terrace, etc.): Railroad Trackside Ditch Local relief (concave, convex, none): Concave Slope (%): 0
Subregion (LRR): Mediterranean CA (LRR C) Lat: 34.270909 Long: -118.696773 Datum: NAD83
Soil Map Unit Name: Mocho loam NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? No Are "Normal Circumstances" present? Yes ✓ No _____
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:
Does not meet hydric soil parameter.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 10 ft. Radius)			
1. N/A			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 ft. Radius)			
1. Baccharis salicifolia	25	Yes	FAC
2. Salix sp.	25	Yes	FACW
3.			
4.			
5.			
	50 = Total Cover		
Herb Stratum (Plot size: 10 ft. Radius)			
1. Bromus madritensis	30	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	30 = Total Cover		
Woody Vine Stratum (Plot size: 10 ft. Radius)			
1. N/A			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust 0

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	25	x 2 =	50
FAC species	25	x 3 =	75
FACU species	0	x 4 =	0
UPL species	30	x 5 =	150
Column Totals:	80 (A)		275 (B)

Prevalence Index = B/A = 3.44

Hydrophytic Vegetation Indicators:
✓ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:
Mulefat and willow appear to have sprouted this year in the ponded area. They were not mature. Area appears to usually be dominated by nonnative brome (Bromus madritensis).

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12"	10YR 3/2	100	N/A				Silty clay	
12"	10YR 3/2	100	N/A				Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Clay

Depth (inches): 12"

Hydric Soil Present? Yes ____ No ✓

Remarks:

Soil had a brownish hue throughout the sample, dark

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✓ No ____ Depth (inches): ____

Water Table Present? Yes ____ No ✓ Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ✓ No ____ Depth (inches): 0-12"

Wetland Hydrology Present? Yes ✓ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Saturation (A3) from surface due to clay layer at 12" depth, Area does not appear to typically pond. Ponding may have occurred this year due to abundant rainfall or perhaps a blocked drainage pipe (if present).

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SCORE Simi Valley City/County: Simi Valley/Ventura Sampling Date: 4/21/2020

Applicant/Owner: Southern California Regional Rail Authority (SCRRA) State: CA Sampling Point: 2

Investigator(s): Eich, I., Martinelli, E. Section, Township, Range: ~~Simi Land Grant~~ S 7 T3N R19W

Landform (hillslope, terrace, etc.): Railroad Trackside Ditch Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR): Mediterranean CA (LRR C) Lat: 34.2769019 Long: -118.693560 Datum: NAD 83

Soil Map Unit Name: Mocho loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? No Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10 ft. Radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
	0 = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 ft. Radius)			
1. N/A			
2.			
3.			
4.			
5.			
	0 = Total Cover		
Herb Stratum (Plot size: 10 ft. Radius)			
1. Cyperus eragrostis	20	Yes	FACW
2. Conium maculatum	13	Yes	FACW
3. Tamarix sp.	2	NO	FAC
4.			
5.			
6.			
7.			
8.			
	35 = Total Cover		
Woody Vine Stratum (Plot size: 10 ft. Radius)			
1. N/A			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 65 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	33	x 2 =	66
FAC species	2	x 3 =	6
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	35 (A)		72 (B)

Prevalence Index = B/A = 2.06

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-1"	10YR 3/3	100					Mucky Peat	
1-8"	10YR 3/3	100	10YR 6/6	<1%	C	M	Clay Loam	
8-12"	10YR 3/3	100					Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✓ No ___ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Area appears to pond for short duration after rain events.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SCORE Simi Valley Double Track City/County: Simi Valley, Los Angeles Sampling Date: 4/11/20

Applicant/Owner: Metrolink State: CA Sampling Point: 3

Investigator(s): I. Eich and E. Martinelli Section, Township, Range: Section 11 T3N R19W

Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): <1%

Subregion (LRR): C Lat: 34.272080° Long: -118.723641° Datum:

Soil Map Unit Name: Mocha loam 2 to 9 % NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No ☐	**Is the Sampled Area within a Wetland?** Yes ☐ No ✔
Hydric Soil Present?	Yes ☐	No ✔	
Wetland Hydrology Present?	Yes ☐	No ✔	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 10'x2')			
1. Rumex crispus	100	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

☐ Prevalence Index is ≤3.0[1]

☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No ☐

Remarks:

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR3/2	100	--				loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ **No** ✔

Remarks:

does not meet

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): _____

Water Table Present? Yes ___ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes ___ **No** ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

no indicators