

Attachment 1

FTA REGION 9

SUPPORTING INFORMATION FOR PROBABLE CATEGORICAL EXCLUSION

Project Title: Folsom Light Rail Modernization Double Track Project

Project Sponsor's Name and Address: Sacramento Regional Transit District
1400 29th Street, Sacramento, CA 95816

A. DETAILED PROJECT DESCRIPTION

The Sacramento Regional Transit District (SacRT) proposes to improve its light rail service to Folsom along its existing Gold Line. The improvements would allow light rail trains to operate every 15 minutes from the Sunrise Station to the Historic Folsom Station, rather than the current 30 minutes. The improvements are part of the "Folsom Light Rail Modernization Project" that collectively includes new low-floor light rail vehicles, modification to station platforms to accommodate the new vehicles, and addition of new passing tracks and signalization.

Current service between the Sunrise Station and the eastern terminus of the Gold Line at the Historic Folsom Station (at Leidesdorff Street and Folsom Boulevard) is impeded because only a single track provides service between these stations. To remedy this operational constraint, the proposed action includes:

- **Light Rail Trackwork** - "double tracking" (or installing a passing track) in two locations in the vicinity of the Glenn/Robert G Holderness Station (hereafter referred to as the Glenn Station) in the City of Folsom and in the vicinity of the Hazel Station in the City of Rancho Cordova and unincorporated Sacramento County (hereafter referred to as the "Folsom Project Segment" and the "Rancho Cordova Project Segment," respectively). The new tracks would maintain a 14-foot separation from the centerline of the existing light rail tracks. The alignment of the new tracks relative to the existing tracks is based on available right-of-way, minimizing disruption to existing operation-related equipment, minimizing removal of mature trees, and avoiding impacts on the nearby Folsom Parkway Rail Trail. To avoid encroachment into the trail, a 300-foot-long retaining wall would be constructed to separate the rail corridor from the trail at its closest point (north of Glenn Drive). Existing overhead contact system support poles would be used as much as possible, but some would need to be relocated. The new pole locations would be within the existing rail right-of-way.
- **Stations** - adding new loading platforms at the Glenn and Hazel Stations and modifying the existing platforms to accommodate new low-floor vehicles that are being acquired by SacRT. The new platforms would be 8 inches above the top of the tracks, approximately 15 feet wide and 338 feet long. They would be designed to comply with the Americans with Disabilities Act and include amenity and station features in accordance with SacRT's Station Design Criteria (e.g., fare vending machines, canopies, seating, light fixtures, security features, information kiosks). To accommodate existing SacRT light rail vehicles, the new loading platforms would be fitted with a temporary mini-high platform. This mini-high platform would be removed when SacRT has fully transitioned to low-floor vehicles.

- **Signaling** - updating the signal system that controls train movements so that trains would be able to operate inbound and outbound between the Sunrise and Historic Folsom Stations with little or no delay. The proposed action would include additional track circuits that would detect when the train passes through an at-grade street crossing and immediately send a signal to the control cabinet to raise the gates. This feature would eliminate the long, single-track circuits and the delays at upstream and downstream crossings. In addition, at specific stations, SacRT proposes to install on-board “call” activators to lower the crossing gates only when the train is ready to leave the station. With these activators, the gates would start to lower only when the train is ready to leave, thus reducing the gate downtime, depending on how long the train is stopped at the station. Along the Gold Line between the Sunrise Station and the Historic Folsom Station, SacRT has estimated the additional delay at each of the 14 street crossings would be a maximum of 14 seconds per train crossing. With 38 more scheduled trains operating along the Gold Line between the Sunrise and Historic Folsom Stations, the total delay on a typical weekday would be less than 9 minutes.
- **Freight Line Realignment** - shifting an existing freight line and spur line serving a local business. Union Pacific Railroad (UPRR) has the right to run freight trains on the line and the freight easement obligates them to maintain the tracks they use (SacRT maintains the signals), but UPRR owns neither the tracks nor the land underneath the tracks. The freight easement runs from the UPRR mainline (between University/65th Street and Power Inn Stations) and Aerojet (at Hazel Station). UPRR typically runs 1-2 trains per week on this line. The realignment of the freight tracks would occur along an approximately 3,300-foot stretch parallel to and south of the light rail tracks in Rancho Cordova. The new alignment would be designed to maintain a 20-foot separation between the centerlines of the light rail and freight tracks. To minimize the need for acquisition of private property to the south, an approximately 960-foot-long retaining wall would be constructed between the widened rail right-of-way and the adjacent property to the south. As part of this realignment, a new approximately 1,140-foot-long freight siding would be installed to the south of the freight line, to facilitate freight movements, and an existing spur line to a local business would be realigned.

Grant awards to SacRT in 2018, totaling approximately \$129 million, are providing funds to enhance light rail service. The funding is from a variety of sources, including the State of California’s Transit and Intercity Rail Capital Improvement Program and the Solutions for Congested Corridors Program Service improvements, federal funds from the Surface Transportation Program/Congestion Mitigation and Air Quality Improvement Program that were allocated to SacRT by the Sacramento Area Council of Governments, Caltrans funds resulting from a legal settlement with the Environmental Council of Sacramento, and California Proposition 1A, the High-Speed Rail Act (2008). These funds are being directed in part to the Gold Line to enable 15-minute service frequencies, to be achieved by “double tracking” or installing a passing track and updating the signal system that controls train movements so that trains will be able to operate inbound and outbound between the Sunrise and Historic Folsom stations with little or no delay. The double tracking does not have to be constructed along the entire corridor between the stations. A properly-located section of double track, along with the appropriate signal modifications and minor adjustments to the operating schedule, would provide the means to achieve the 15-minute service frequency.

SacRT has completed the California Environmental Quality Act (CEQA) process. The CEQA document, an Initial Study/Mitigated Negative Declaration, was adopted by the SacRT Board on January 13, 2020. The CEQA document is incorporated by reference and contains several relevant appendices including the plans and profiles; air and noise modeling assumptions and results, and additional background information regarding biological resources in the project vicinity.

The proposed project is eligible for a NEPA Categorical Exclusion pursuant to 23 CFR Part 771.118(d)(8), as documented in this report. This categorical exclusion is used for the modernization of transit structures and facilities that involve land outside the existing right-of-way. The proposed project,

as described above, involves new passing tracks, two new station platforms, modifications to two existing station platforms, upgraded signaling systems, and realignment of a segment of a freight line. Virtually all of these upgrades to SacRT light rail operations occur within the existing rail right-of-way. However, the proposed improvements will require a sliver of land acquisition outside the rail right-of-way in a portion of the corridor where a passing track and the freight line realignment are both planned. These types of improvements to the SacRT Gold Line are consistent with the 23 CFR Part 771.118(d)(8).

B. LOCATION

The proposed action would be within the Sacramento–Placerville Transportation Corridor Joint Powers Authority’s right-of-way (see Figure 1) that is used for SacRT Gold Line light rail service. The right-of-way runs along Folsom Boulevard through the cities of Folsom and Rancho Cordova, and through unincorporated Sacramento County. SacRT has identified two potential locations for the passing tracks, at the eastern end of the Gold Line between the Sunrise and Historic Folsom Stations: (1) an approximately 0.6-mile segment between Parkshore Drive and Bidwell Street in Folsom (see Figure 2); and (2) an approximately 1.2-mile segment between Marketplace Lane and Aerojet Road in Rancho Cordova and unincorporated Sacramento County (see Figure 3).

C. METROPOLITAN PLANNING AND AIR QUALITY CONFORMITY

The current Regional Transportation Plan is the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) adopted on November 18, 2019 by the Sacramento Area Council of Governments (SACOG), the Sacramento regional Metropolitan Planning Organization. The proposed action is included in the 2020 MTP/SCS Appendix A, project list, as ID REG18047, programmed for 2020-2025. The adopted MTP/SCS also included an air conformity analysis that reported that the proposed plan and program do not impede the ability of the region to meet and attain air quality standards for certain criteria pollutants and associated precursors. This demonstration of the plan’s conformance with the State Implementation Plan was completed pursuant to the Clean Air Act Section 176(c) (42 USC Section 7506(c)) and U.S. Environmental Protection Agency transportation conformity regulations (40 CFR Part 93 Subpart A). With its determination of conformity adopted by the SACOG Board, SACOG will submit the conformity analysis to FTA and the Federal Highway Administration for final approval.

D. LAND USE AND ZONING

The Folsom and Rancho Cordova project segments lie primarily within the existing Sacramento–Placerville Transportation Corridor Joint Powers Authority (SPTCJPA) rail right-of-way, except for a portion of the Folsom Boulevard/Glenn Drive intersection in Folsom where the passing track and new station platform would require minor modifications in the public right-of-way, and a small sliver (approximately 0.2 acre for land acquisition and approximately 0.07 acre for temporary construction easements) of a large property (approximately 78 acres) used for industrial/manufacturing activities (Aerojet) in Rancho Cordova and unincorporated Sacramento County where the realigned freight line and freight siding would be constructed.

Land use and zoning designations in the Folsom project segment consist of light industrial development, and a small area zoned for apartment housing. The west side of Folsom Boulevard is zoned as an Open Space Conservation District (City of Folsom 2018a, 2018b). The zoning for the rail right-of-way itself reflects the zoning of the adjacent land use, M-1 (SP 93-2) – Light Industrial/Specific Plan – Silverbrook or R-4 (SP-93-2) – General Apartment/Specific Plan – Silverbrook (Sacramento County 2019). As shown in Figure 2, existing land uses to the east consist of roadways; office, industrial, and manufacturing; and an off-street Class I pedestrian/bicycle trail (the trail is within the same parcel as the light rail service). The Folsom Lake State Recreation Area parallels the west side of Folsom Boulevard.

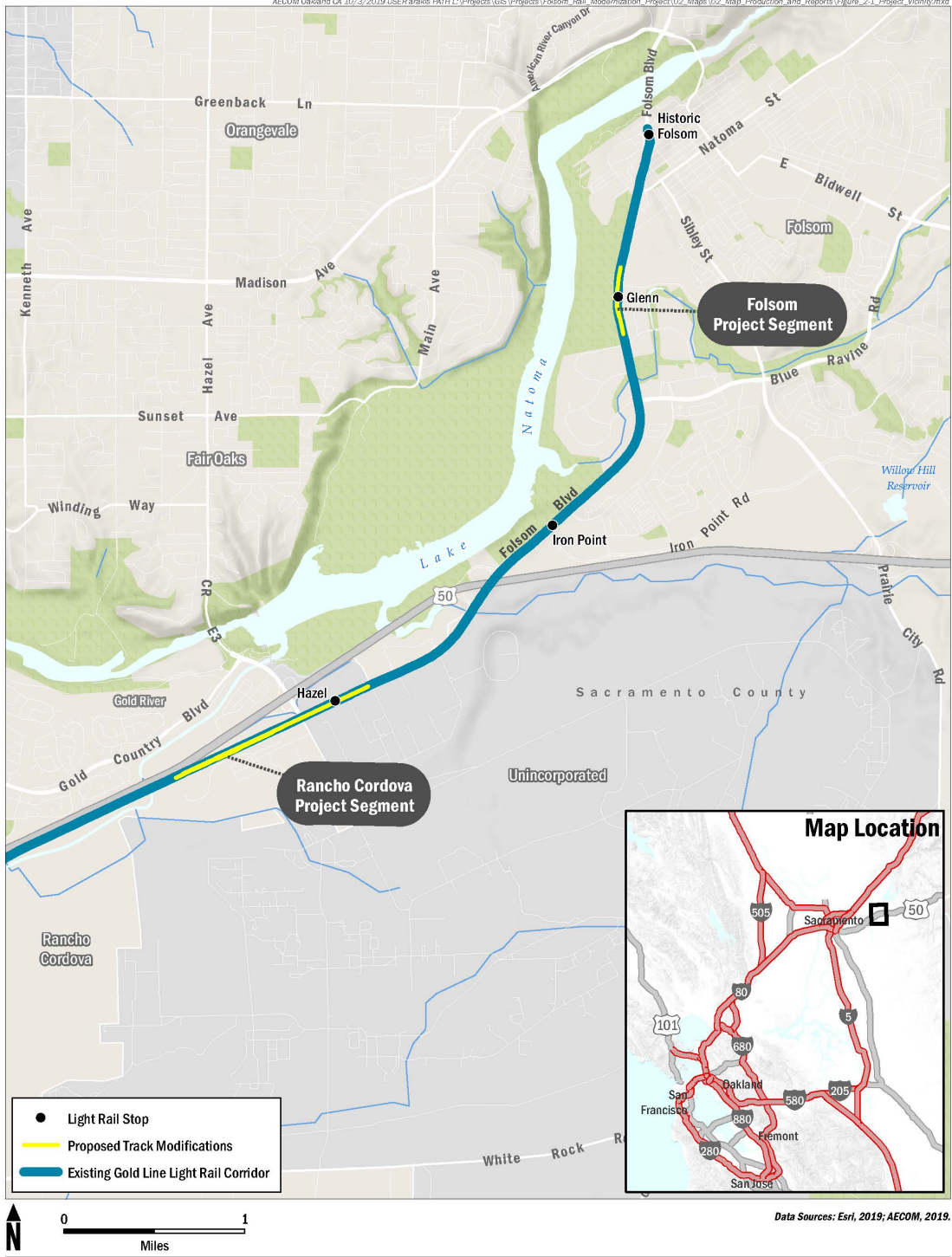
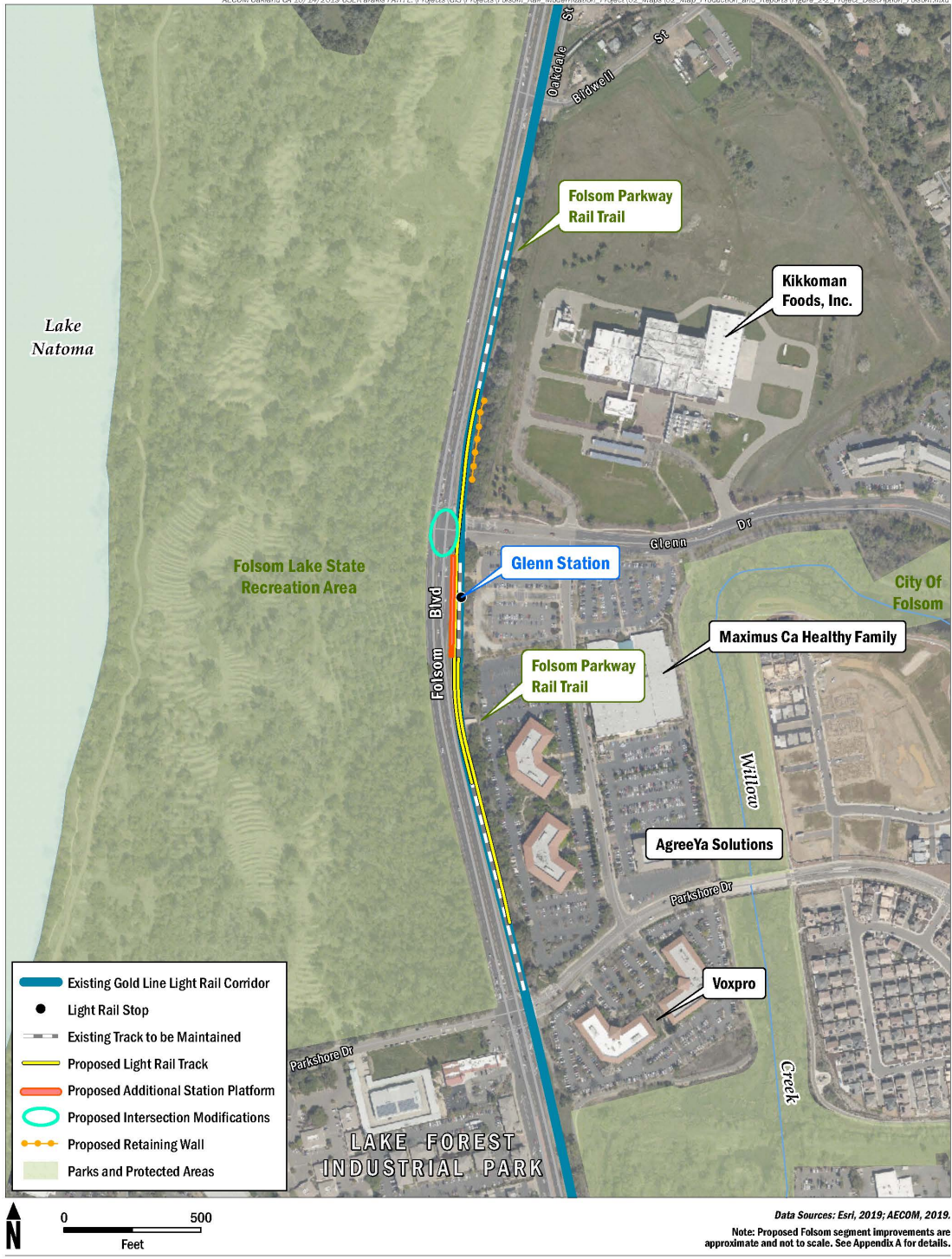
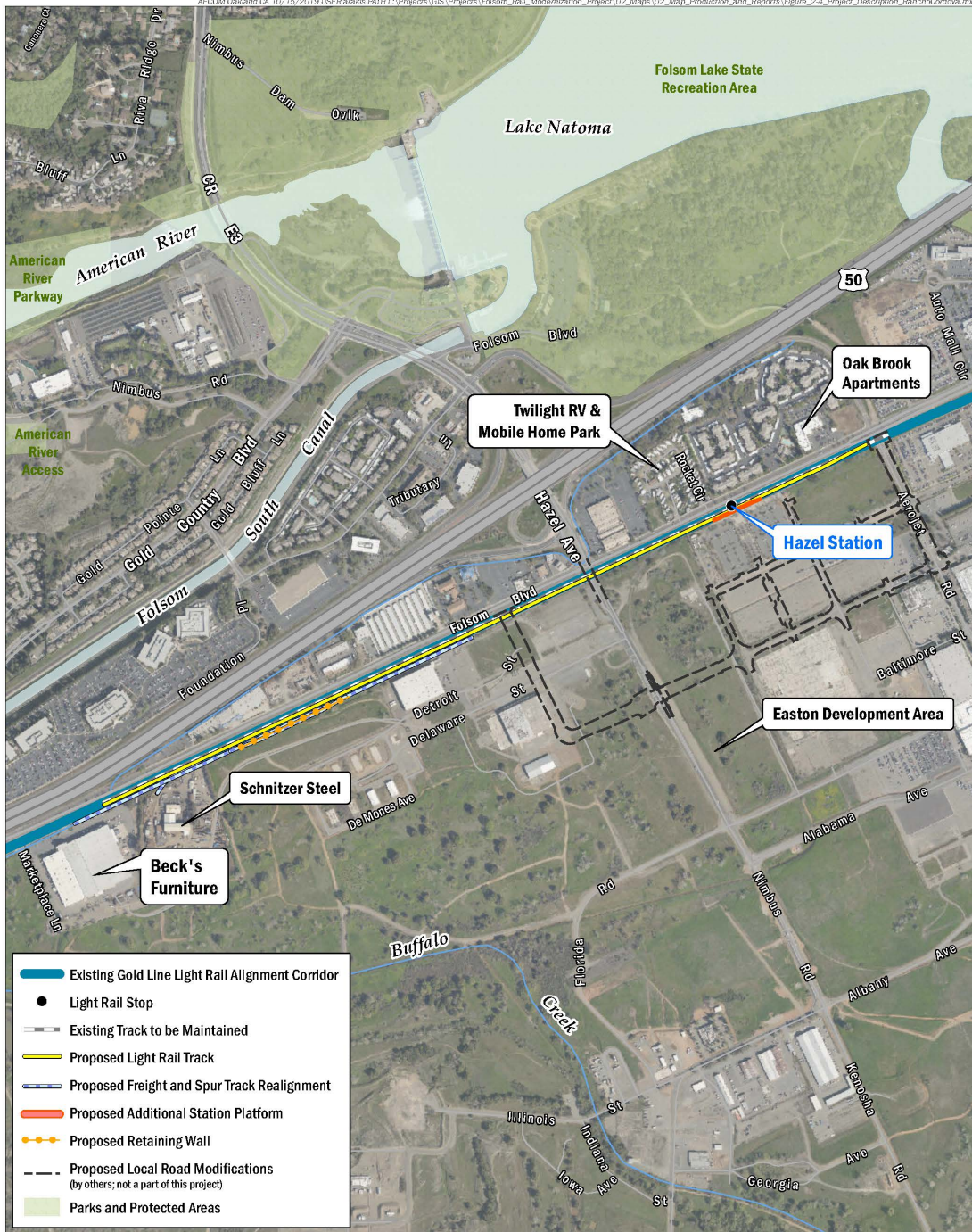


FIGURE 1
 Project Vicinity



AECOM
 Sacramento Regional Transit District
 Folsom Light Rail Modernization Double Tracking Project
 SACRAMENTO COUNTY, CA

FIGURE 2
 Proposed Folsom Segment Improvements



Data Sources: Esri, 2019; AECOM, 2019.
 Note: Proposed Rancho Cordova segment improvements are approximate and not to scale. See Appendix A for details.

AECOM
 Sacramento Regional Transit District
 Folsom Light Rail Modernization Double Tracking Project
 SACRAMENTO COUNTY, CA

FIGURE 3
 Proposed Rancho Cordova Segment Improvements

Land uses and zoning designations in the Rancho Cordova project segment consist of commercial, industrial/manufacturing, and planned transit-oriented development (Sacramento County 2017; City of Rancho Cordova 2018, 2019). The rail right-of-way itself is zoned Transportation Corridor in the portion within Rancho Cordova and Special Planning Area in the portion in Sacramento County (Sacramento County 2019). As shown in Figure 3, existing land uses consist of rail lines and roadways; commercial and industrial/manufacturing; and an apartment complex and mobile home/RV park. Along the south side of the segment, Easton Development Company, the land development subsidiary of the property owner, Aerojet Rocketdyne Holdings, Inc., is master planning approximately 6,100 acres in five distinct planning areas that are primarily now associated with the Aerojet facilities. The two planning areas adjacent to the Gold Line are described below (Easton Development Company 2019).

- Easton Place – a transit-oriented urban village consisting of about 180 acres. Development has been approved by Sacramento County and would be served by the Hazel Station along the urban village’s northern edge. The new tracks and platform in this project segment would occur north of the approved development.
- Westborough – a community covering approximately 1,665 acres west of Easton Place. Entitlement is underway with Rancho Cordova and includes about 5,400 residential units, 400 acres of mixed use commercial, and 350 acres of open space. The proposed uses along the Gold Line corridor immediately to the north would be a major employment center consisting of mixed use commercial uses and offices. The proposed action would realign the tracks and require a sliver of land (less than 0.2 acre in fee acquisition plus an additional area of approximately 0.07 acre for temporary construction easements) along the planned development’s northern frontage but would not alter the planned land uses.

The proposed action would improve an existing operating light rail line and continue use of the SPTCJPA for rail service; would not alter applicable zoning or planned land use designations in Folsom, Rancho Cordova, or unincorporated Sacramento County; would not interfere with existing or planned future land uses; and would be consistent with the SACOG 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy (SACOG 2019), which seeks to improve mobility and reduce travel demand by prioritizing compact and transit-oriented development, along transit corridors such as the Gold Line.

E. PRIME AND UNIQUE FARMLANDS

The proposed action would be constructed and operated almost entirely within an existing rail right-of-way, would not be located in or near agricultural land, and would not result in the conversion of prime or unique farmlands into a transportation use.

F. TRAFFIC AND PARKING IMPACTS

With implementation of the proposed improvements, SacRT would be able to operate more trains on the Gold Line between Sunrise and Historic Folsom Stations (see Figure 4). The proposed action would improve transit mobility for riders, connect major employment and commercial districts, and provide fast, convenient, and reliable transit service for Folsom and Rancho Cordova. The proposed action would improve mobility and systemwide operating efficiency and would increase the attractiveness of non-motorized travel modes, thus reducing automobile (i.e., motorized) travel, which would be beneficial in reducing greenhouse gas emissions and improving air quality. Because the proposed action would improve transit service by increasing the use of light rail service in the project area (from 38 trains per day to 76 trains per day), it would be consistent with and supportive of local circulation and mobility plans and the “Complete Streets” plans along Folsom Boulevard, as well as with the priorities and strategies of the regional plan, as articulated in the SACOG MTP/SCS. The enhancement of light rail service to Folsom is included in the adopted 2020 MTP/SCS.

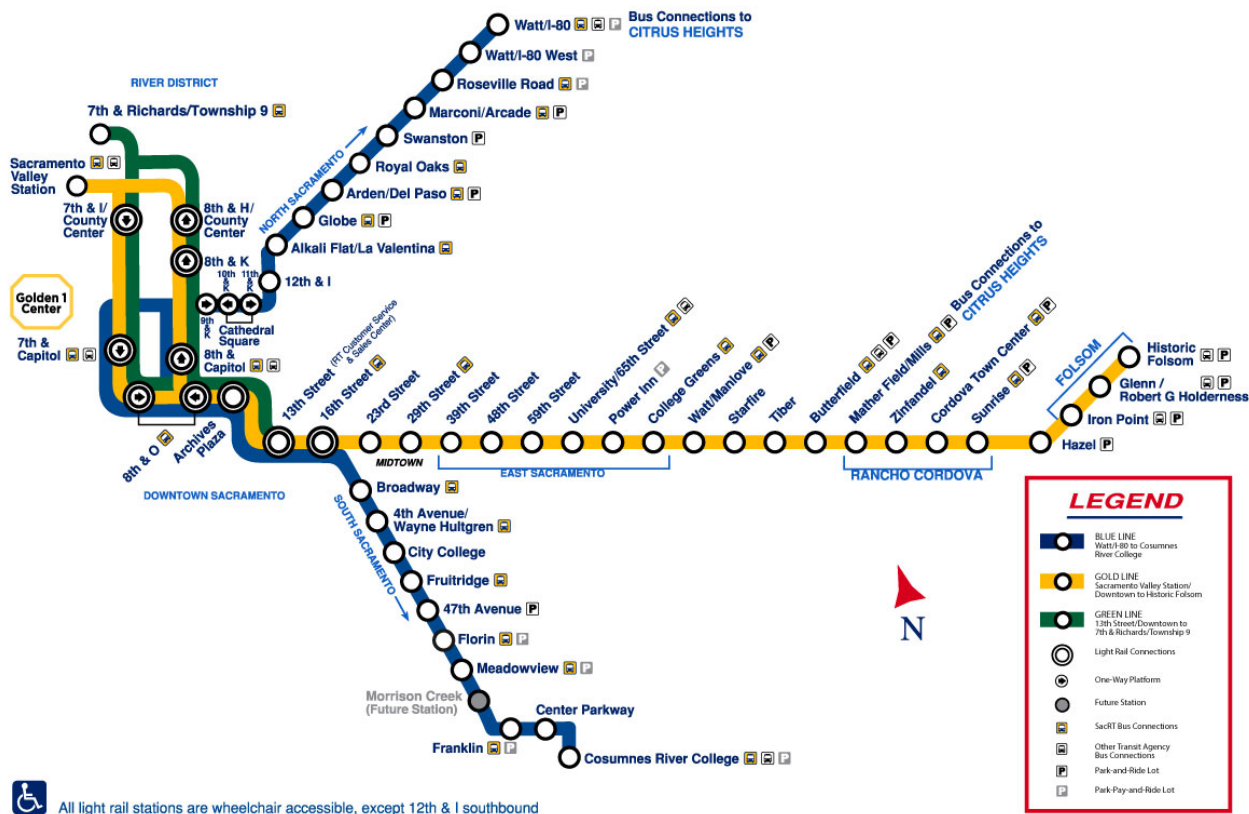


FIGURE 4
Sacramento Regional Transit Light Rail System

The proposed improvements in the Folsom project segment include minor modifications to the intersection at Folsom Boulevard and Glenn Drive. The addition of a passing track and the loading platform immediately south of this intersection would require narrowing the adjacent, northbound right-turn traffic lane from Folsom Boulevard onto Glenn Drive, relocation of the signals, and reconstruction of the curb and sidewalk. The reduction in the turn lane width would not impede turning movements by large trucks, and the signal relocation and curb and sidewalk reconstruction would be designed in accordance with the Folsom design specifications. During the design of the intersection modifications in 2018 and 2019, SacRT met and discussed the proposed revisions with the City of Folsom Public Works staff and received verbal concurrence that the proposal was acceptable. Traffic mitigation measures were also reviewed with City staff prior to their inclusion in the adopted the CEQA Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program (see below).

The additional train service would result in more frequent crossings of the streets between Sunrise and Historic Folsom Stations, which would result in increased delays for motorists, pedestrians, and bicyclists seeking to cross the light rail tracks and Folsom Boulevard. Existing delays at the street crossings of the single-track segment of the Gold Line vary from approximately 1 minute to 3 minutes. Doubling the number of trains at the 14 crossings between Mercantile Road in Rancho Cordova and Sutter Street in Folsom would increase the delays experienced by travelers waiting to cross the light rail tracks but would not result in a doubling of the length of time that they are delayed. The proposed action would include additional track circuits that would detect when the trains pass through the crossings and immediately would send a signal to raise the gates. This feature would eliminate the long, single-track circuits and the delays at upstream and downstream crossings. As a result, SacRT

has estimated the additional delay would be a maximum of 14 seconds per train crossing. With 38 more scheduled trains operating along the Gold Line, the total delay on a typical weekday would be less than 9 minutes. During the critical AM/PM commute peak hour, the additional two trains that would cross a street would result in an incremental delay of approximately 30 seconds over existing conditions.

Because the cities and the County are making improvements to Folsom Boulevard, which may affect signal timing and phasing, SacRT has acknowledged in its CEQA environmental document that the additional delays at the intersections could exceed local thresholds. To address this effect, SacRT has adopted the following mitigation measure as part of its CEQA environmental document and has incorporated it into the project.

Mitigation Measure TR-1: Adjust traffic and train signaling to reduce intersection delays to acceptable levels

SacRT must coordinate with the City of Folsom, City of Rancho Cordova, and Sacramento County during final design to synchronize and implement train and automobile traffic controllers to maintain acceptable LOS at the street crossings of the Gold Line light rail tracks and Folsom Boulevard. Specifically, the signal adjustments must be made so that either: (1) intersection LOS does not deteriorate to LOS E or worse if operating acceptably (LOS D or better), or (2) if already operating at an unacceptable LOS (LOS E or F), to reduce the additional delay resulting from light rail operations at signalized intersections so that the additional delay is less than 5 seconds. Implementation of this mitigation measure must occur during final design, and signal operations must be adjusted if necessary during implementation and testing, before starting revenue service. SacRT will continue to coordinate regularly with local agency staff during system testing to assess rail crossing pre-emption impacts and make periodic adjustments to minimize impacts to the coordinated traffic signal systems along the Folsom Boulevard corridor.

The proposed action would be implemented almost entirely within the existing rail right-of-way. Therefore, it would not affect on-street or off-street parking. Parking at businesses along the corridor could be affected, depending on where the construction contractor provides construction personnel parking, but there would be space available at the existing park-and-ride lots at the Glenn and Hazel Stations. Neither of these facilities would be affected post-construction, since they are outside the rail right-of-way. In addition, both park-and-ride lots have more than adequate space if demand increases for motorists desiring to park at the lots. The Glenn Station has 165 spaces and the Hazel Station has 432 spaces. Mode of access and demand at the Glenn Station is not expected to change substantially. By contrast, walk-ons are projected to account for increased percentages of future boardings at the Hazel Station because of the planned higher-intensity, mixed-use, transit-oriented communities around this station.

Because of the temporary disruption to traffic flow, roadway wear and tear, the removal or reduction of lanes, the presence of construction equipment in the public right-of-way, and the localized increase in traffic congestion, drivers would be presented with unexpected driving conditions and obstacles, which could result in an increased occurrence of automobile or haul-truck accidents. The impact from the increased traffic hazard risk created by project construction could be adverse. To address this effect, SacRT has adopted the following mitigation measure as part of its CEQA environmental document and has incorporated it into the project.

Mitigation Measure TR-2: Prepare and implement a traffic control plan

Before the start of project construction, the SacRT and/or its contractor must prepare and implement a traffic control plan, to minimize construction-related traffic safety hazards on public roads, sidewalks, bicycle facilities, and non-motorized pathways, and ensure adequate access for emergency responders. The SacRT and/or its contractor must coordinate development and implementation of this plan with the City of Folsom, City of Rancho Cordova, and Sacramento

County, and solicit their input on practices and procedures to enhance safety and minimize hazards. The traffic control plan must, at minimum, identify and include:

- number of truck trips, time, and day of street closures;
- time of day of arrival and departure of trucks;
- limitations on size and type of trucks;
- provision of staging areas, with a limitation on the number of trucks that can be waiting;
- a truck circulation pattern and identification of haul routes;
- manual traffic control when necessary;
- a driveway access plan so that safe vehicular, pedestrian, and bicycle movements are maintained (e.g., steel plates, minimum distances of open trenches, and private vehicle pick up and drop off areas);
- safe and efficient access routes for emergency vehicles;
- establishment of manual traffic control when necessary;
- requirements for construction workers to park personal vehicles at approved staging areas and take only necessary project vehicles to the work sites;
- in coordination with the Public Information Officers of the local agencies, develop a plan for notifications and a process for communication with affected residents, businesses, and landowners about construction activities, schedule, and duration before the start of construction (Public notification must include posting of notices and signage of construction activities at visible locations in the project area. Notifications must be distributed to residents, businesses, and landowners to describe the construction schedule, the exact location and duration of activities on each street [e.g., which roads/lanes and access points/driveways will be blocked on which days and for how long], suggestions for alternative routes, and contact information for questions and complaints. This same information must be posted on the SacRT website for the project.);
- posting warning signs before the start of construction activities, alerting bicyclists and pedestrians to any closures or temporary modifications of non-motorized facilities (This information must be shared with local agencies and active transportation organizations to ensure widespread notification of interruption to pedestrian, bicycle, and other non-motorized vehicular pathways.);
- pedestrian and bicycle safety measures (e.g., buffers, vertical delineation, signage), subject to review and approval by the cities and the County traffic departments, including possible detour routes;
- notification of police and fire personnel, ambulance service providers, other emergency responders, and recreational facility managers of the timing, location, and duration of construction activities, and the locations of detours and lane closures, where applicable;
- maintenance of access for emergency vehicles in and/or adjacent to roadways affected by construction activities at all times; and
- video/photo documentation of preconstruction conditions and repair and restoration of affected roadway rights-of-way to preconstruction conditions after construction is completed, other than permanent changes called for in the construction plans and specifications.

A copy of the construction traffic management plan must be submitted to local emergency response agencies, and these agencies are to be notified at least 14 days before the start of construction that will partially or fully obstruct roadways.

G. AESTHETICS AND VISUAL QUALITY

There are no State-designated scenic highways in the project vicinity. However, Folsom Boulevard from Aerojet Road to Greenback Lane (which includes the Folsom project segment) is a locally designated scenic corridor, per the Folsom General Plan 2035 (City of Folsom 2014) and Section 17.59.040 of the City of Folsom Zoning Ordinance. Rancho Cordova and Sacramento County do not identify Folsom Boulevard as a scenic corridor; however, both public agencies seek to convert Folsom Boulevard from an automobile-oriented corridor to a compact, mixed use transit rail corridor, including public realm improvements such as landscaped medians, sidewalks, and new lighting.

The proposed action would construct new rail facilities primarily within an existing rail right-of-way that is adjacent to Folsom Boulevard. The rail facilities, including passing tracks, station boarding platforms (along with associated pedestrian shelters and signage) at existing stations, instrument houses, a rail spur line, and minor roadway improvements at the Folsom Boulevard/Glenn Drive intersection, would be visually similar to and consistent with the existing rail and roadway facilities. Furthermore, most of the new facilities, except new platform canopies and overhead contact system support poles, would be constructed either at grade or only slightly above grade and, therefore, would not introduce new taller structures that could contrast with the existing built environment. The new platforms, pedestrian shelters, and signage at the existing stations would be visually similar to and blend in with the existing station facilities and the surrounding land uses and would not cast shadows on adjacent land uses.

The proposed improvements would require the removal and trimming of trees within the right-of-way; however, because the proposed action was designed to avoid trees as much as possible, an estimated four trees in the 0.6-mile Folsom project segment and 12 trees in the 1.2-mile Rancho Cordova project segment would be removed, because they are within either the permanent or temporary footprint delineated for the project. Additional trees within 20 feet of the project footprint (40 in the Folsom project segment and 37 in the Rancho Cordova project segment) could be removed or trimmed. This loss of trees would alter the visual setting, but the overall visual quality and character in both project segments would not be adversely affected. In the Folsom project segment, where the tree cover is denser both to the east along the rail corridor and to the west along Folsom Boulevard, the removal of four trees would not be noticeable because of the existing number and density of trees in this segment.

The proposed passing tracks would not require lighting. The Glenn and Hazel Stations are equipped with lighting, and the new lighting for the proposed platforms at these stations would be installed according to SacRT design criteria for public safety, would be similar to the existing station lighting, and would not substantially increase illumination or glare. Consistent with SacRT design guidelines for light rail facilities, the lighting will minimize glare and light trespass into the adjacent neighborhoods.

In summary, the proposed action would operate almost entirely within an existing rail right-of-way; would not introduce new visual elements into the setting that contrast with the existing visual character; and would not remove substantial numbers of trees that contribute to the visual quality of the corridor. Therefore, the proposed action would not adversely affect the existing visual character or quality of the project segments and their surroundings.

H. AIR QUALITY

The proposed project segments are in the Sacramento Valley Air Basin, under the jurisdiction of the Sacramento Metropolitan Air Quality Management District (SMAQMD). The SMAQMD is designated as a nonattainment area for ozone and PM_{2.5}, and as an attainment or unclassified area for all other pollutants. The applicable air quality plan in the project region includes the Sacramento Regional Ozone Attainment and Reasonable Further Progress Plan, developed by the SMAQMD and the other air districts that make up the Sacramento Federal Ozone Nonattainment Area. The Sacramento Regional Ozone Attainment and Reasonable Further Progress Plan was approved by the California Air Resources Board on November 16, 2017, and it outlines how the region will demonstrate attainment of

the 2008 8-hour ozone NAAQS and become a part of the State Implementation Plan. In addition, the Triennial Report and Air Quality Plan was last revised in May 2015, and it describes the historical trends in ambient air quality levels, provides updates to the emission inventories, and evaluates implementation of stationary and mobile source control measures in reducing air pollutant emissions (SMAQMD 2015). To meet the schedule for developing, adopting, and implementing the air pollution control measures contained in the Triennial Report and Air Quality Plan, the SMAQMD prepared the 2016 Annual Progress Report in March 2017 (SMAQMD 2017). The SMAQMD also has developed maintenance plans for CO, PM₁₀, and PM_{2.5} (SMAQMD 2004, 2010, 2013).

Criteria Pollutants

Project construction would generate temporary emissions of criteria air pollutants. Reactive organic gases, oxides of nitrogen (NO_x), CO, and SO₂ emissions are associated primarily with mobile equipment exhaust, including off-road construction equipment and on-road motor vehicles. Fugitive dust emissions (PM₁₀ and PM_{2.5}) are associated primarily with site preparation and vary as a function of parameters such as soil silt content, soil moisture, wind speed, acreage of disturbance area, and miles traveled by construction vehicles. Table 1 shows the daily and annual emissions associated with the proposed action. The maximum daily and annual construction emissions of NO_x, PM₁₀, and PM_{2.5} would not exceed the recommended thresholds of significance, as defined by SMAQMD, and therefore would not contribute to exceedances of ambient air quality standards. In addition, if the peak days of construction at each segment were to overlap, the emissions level still would remain below the thresholds of significance.

These thresholds are designed to identify those projects that would result in significant levels of air pollution and assist the region in attaining the applicable State and federal ambient air quality standards. Projects that would not exceed the thresholds of significance would not contribute a considerable amount of criteria air pollutant emissions to the region's emissions profile, and would not impede attainment and maintenance of ambient air quality standards. The emissions presented in Table 1 include SMAQMD's best available control technology (best management practices) that were adopted by the SacRT Board and included as part of the project.

Table 1
Folsom Light Rail Modernization Double Track Project
Daily and Annual Project Construction Emissions

Segment	NO _x	PM ₁₀	PM _{2.5}
Folsom Segment (pounds/day)	38.30	3.46	1.97
Rancho Cordova Segment (pounds/day)	40.65	3.38	2.05
Daily Threshold of Significance (pounds/day) ¹	85	80	82
Folsom Segment (tons) ²	6.27	0.32	0.29
Rancho Cordova Segment (tons) ²	7.41	0.40	0.34
Annual Threshold of Significance (tons/year)	--	14.6	15
<i>Significant Impact?</i>	No	No	No

Notes:

1, 3. Source: SMAQMD 2019

2. The emissions shown in tons are conservatively presented for the entire duration of construction, which is anticipated to last 24 months.

NO_x = nitrogen oxides;

PM₁₀ = particulate matter less than 10 microns in diameter;

PM_{2.5} = particulate matter less than 2.5 microns in diameter

Mitigation Measure AQ-1. Implement basic construction emission control practices (Best Management Practices)

The SacRT must include the following construction measures in construction contract specifications and procedures to limit and reduce air emissions from construction sites:

- Control fugitive dust as required by Sacramento Metropolitan Air Quality Management District (SMAQMD) Rule 403 and enforced by SMAQMD staff.
- Water all exposed surfaces two times daily. Exposed surfaces include soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover all haul trucks transporting soil, sand, or other loose material off-site.
- Cover or maintain at least 2 feet of freeboard space on haul trucks transporting soil, sand, or other loose material on site. Cover any haul trucks that will be traveling along freeways or major roadways.
- Use wet power vacuum street sweepers to remove any visible trackout mud or dirt visible on adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Limit vehicle speeds on unpaved roads to 15 miles per hour.
- Complete paving all roadways, driveways, and sidewalks as soon as possible. In addition, lay building pads as soon as possible after grading, unless seeding or soil binders are used.
- Minimize idling times either by shutting equipment off when not in use or by reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure under Title 13, California Code of Regulations Section 2485). Provide clear signage that posts this requirement for workers at the entrances to the project sites.
- Provide current certificate(s) of compliance with ARB's In-Use Off-Road Diesel-Fueled Fleets Regulation (Title 13, California Code of Regulations Sections 2449 and 2449.1).
- Maintain all construction equipment in proper working condition, according to the manufacturer's specifications. Have all equipment checked by a certified mechanic and determined to be running in proper condition before use.

Because the proposed action would improve existing light rail service by installing new passing tracks and making modifications to platforms, emissions associated with project operations are not anticipated to increase above existing conditions. Furthermore, the proposed action would make improvements to the Gold Line's frequency, speed, reliability, and safety, potentially reducing vehicle trip emissions from passengers who otherwise would drive.

CO Hotspots

As described above under Item F, Traffic and Parking Impacts, to accommodate the 15-minute headways under the improved service of the proposed action, approximately 38 additional trains per day are anticipated to be added, doubling the current number of scheduled runs between Sunrise and Historic Folsom Stations. Doubling the number of trains, however, would not substantially increase traffic delays and, hence, idling times and CO emissions, because the proposed action also would include modernization of the line's signaling system. The proposed signal improvements would eliminate the existing long, single-track circuits and delays at upstream and downstream crossings. During the AM/PM peak hour, which is the time of day that CO hotspots are more likely to occur because of greater vehicle traffic and intersection delay, two additional trains are expected to cross the 14 intersections between Sunrise and Historic Folsom Stations. Based on information provided by SacRT, the additional delay that would be expected during the peak travel time under a worst-case scenario would be less than 30 seconds, which would have a minor effect and would not violate either

the 1-hour period (35 parts per million [ppm]) or the 8-hour period (9 ppm) National Ambient Air Quality Standard for CO. In addition, the proposed action would make improvements to the Gold Line's frequency, speed, reliability, and safety; thereby potentially reducing vehicle trip emissions from passengers who otherwise would drive.

I. HISTORIC AND CULTURAL RESOURCES

Information in this Cultural Resources section is abstracted from the Section 106 technical memorandum, attached as Appendix A.

Records Search

A records search was completed on July 12, 2019, at the North Central Information Center (NCIC) of the California Historical Resources Information System at Sacramento State University (NCIC File No. SAC-19-131). Site records and previous studies were accessed for the project area and for a 0.25-mile radius on the Buffalo Creek and Folsom USGS 7.5-minute topographic quadrangles. The National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Office of Historic Preservation Historic Properties Directory (OHP HPD) data files, and historical maps also were reviewed.

Area of Potential Effects

The proposed horizontal Area of Potential Effects (APE) includes all areas of the project where ground-disturbing activities associated with project implementation could result in direct impacts to archaeological resources or to historic-age (50 years and older) buildings, structures, or objects. Ground disturbance for construction activities would result from installation of at-grade tracks, loading platforms, parking lots, new foundations for support poles for the overhead contact system, and other operational facilities, such as those for train signaling and communications. The proposed APE also includes properties and resources, beyond the direct effects area, that may be indirectly affected by implementation of the project. The APE for indirect impacts generally extends one parcel past the project footprint to include nearby properties.

The proposed vertical APE includes all ground disturbance below the existing ground surface. Up to 3 feet typically would be graded and excavated before the rail bed is built up for the passing tracks and freight lines, although excavations of up to 5 feet could be necessary where highly compressible soils, such as peat or soft clay, are present and could not be remediated by other means because of construction or cost constraints. This vertical disturbance would apply throughout the direct effects portion of the horizontal APE except at the following sites:

- In the two locations, where the proposed passing tracks would cross existing streets (Glenn Drive and Nimbus Road/Hazel Avenue, the existing pavement would be removed and excavations up to a depth of 2.5 feet below the existing ground surface would be needed for the pre-cast track sections.
- Where new foundations are needed for poles to support the overhead contact system, excavations would be 3 feet in diameter and up to 30 feet below the existing ground surface.
- At the two locations where new loading platform shelters would be constructed, excavations would be up to 10 feet below the existing ground surface.
- In the two locations where retaining walls are proposed (one in Folsom, between Glenn Drive and Bidwell Street, and one in Rancho Cordova along the Aerojet property), excavations for the foundations would be up to a depth of 2 feet below the existing ground surface.

Resources in the Project Area

The NCIC research, combined with AECOM's investigations, identified six historic-age built environment resources and no archeological resources within or proximate to the APE, as described below.

- *Nimbus Winery and Sacramento County Fire Station #63.* These two extant historic-age built environment resources are along the north side of Folsom Boulevard near the Rancho Cordova project segment. The Nimbus Winery (12401 Folsom Boulevard, P-34-1667) is a highly modified building originally constructed in 1888. The Sacramento County Fire Station #63 (12395 Folsom Boulevard) was built in 1956. The State Historic Preservation Officer (SHPO) determined that the winery was not eligible for listing in the NRHP, and the State Historical Resource Commission determined the fire station was not eligible for listing in the CRHR and thus also ineligible for inclusion in the NRHP.
- *Aerojet.* Aerojet achieved national prominence in the late 1950s to 1960s for its contributions to the aeronautical industry, particularly in rocket fuel innovation and rocket manufacture. Several of the company's leaders and researchers also achieved national attention during this time. The area south of Folsom Boulevard and the proposed action corridor was a secondary and supporting area of the facility, and the buildings were used for shipping and storage warehouses, offices, and intermittent manufacturing activities (ECORP 2008:6). Important activities at the Aerojet facility were undertaken east of Nimbus Road/Hazel Avenue, within the administrative core and the testing facilities far outside the project APE and, thus, the proposed action would have no adverse effects to the Aerojet facility, regardless of whether it is a historic district.¹
- *Schnitzer Steel Property.* The historic-age Schnitzer Steel property at 12000 Folsom Boulevard in Rancho Cordova (Assessor Parcel Number 069-0040-080-0000) has not been inventoried or evaluated previously. This property was developed in 1956 as the Nimbus plant of Air Products, Incorporated. Aerojet General Corporation provided the land to the government for construction of the Nimbus plant. The plant produced liquid oxygen and liquid nitrogen for use in the Sacramento installations of Aerojet General Corporation and Douglas Aircraft Company, which manufactured rockets and rocket propellants for the Air Force (Sacramento Bee 1956 Feb 6, Feb 24). The plant continued to produce liquid oxygen and nitrogen under government contract until fall 1968 when production ceased and plant was offered for sale by the federal government in May 1969 (Sacramento Bee 1964 Jan 8, 1969 Mar 27). By 1973, Schnitzer Steel Products of California had opened a recycling scrap facility at the former Nimbus plant location. This facility continues to recycle scrap metal and cars, and Schnitzer Steel is a global company that owns facilities for metal recycling, auto recycling, steel manufacturing, and pick-and-pull automotive parts (Schnitzer Steel 2019). The conversion of the property from liquid nitrogen and oxygen to scrap recycling included removal of plant facilities, construction of new buildings, and later addition of a freight siding by Schnitzer Steel Products following the opening of the recycling scrap facility in 1973.

Four of the original five plant buildings still appear to be extant on the parcel, but the equipment that produced the liquid nitrogen and oxygen have been removed. The original plant site also was expanded along the east and southeast corner, to its present-day 7 acres (Historicaerials.com 2019). Although the development of the property is associated with Aerojet, the facility was secondary to research and development and produced fuel for testing. The significant activities at the Aerojet facility were undertaken east of the property, within the administrative core, and south in the testing facilities outside the project area. The former

¹ The archival research and database search conducted at the NCIC indicate no recordation of the Aerojet facility as a historic district; however, there are CEQA reports that intimate possible eligibility. Regardless, the analysis above indicates the proposed action would have no adverse effects on this property.

Aerojet Nimbus Plant and current Schnitzer Steel property at 12000 Folsom Boulevard do not appear to meet NRHP criteria as historic properties and lack historic integrity to any potential period of significance.

- *Sacramento Valley Railroad*. The Folsom segment of the SVRR was recorded in 1998 (P-34-000455/CA-SAC-428H). At that time, the segment was in poor condition, with removal of rails, ties, and the original berm (Peak & Associates 1998). The 20-mile segment of the former SVRR from downtown Sacramento to Folsom subsequently was determined eligible for listing in the NRHP with SHPO concurrence in September 1993 and is considered a historic property under Section 106 (Jones & Stokes 1993:C-30).
- *American River Placer Mining District*. The American River Placer Mining District (also known as the Folsom Mining District) is “an extensive conglomerate of historic mining features.” This historic district has been recorded and studied in a largely piecemeal fashion and later subsumed under a single State trinomial designation: CA-SAC-308H [P-34-000335]” (City of Folsom 2018a:10-8). The district encompasses an area where “more than one billion cubic yards of earth were dredged” for gold between 1860 and 1960 (Nadolski 2007:9). The district has been recommended as eligible for listing in the NRHP under Criteria A, C, and D, and in the CRHR under Criteria 1, 3, and 4, although the district contains non-contributing elements where features have lost integrity through leveling and aggregate mining (Lindstrom 1995; Nadolski 2007:12). Although the APE is within the mapped boundaries of the district, no features associated with the district exist in the project area.

Native American Consultation

On June 13, 2019, AECOM requested a Sacred Lands File search and a list of Native American tribes with potential interest in the proposed action from the Native American Heritage Commission (NAHC), pursuant to AB 52. On June 24, 2019 (in a letter dated June 21, 2019), the NAHC responded that the Sacred Lands File search was negative.

On August 5, 2019, SacRT notified the following eight tribes identified by the NAHC (those that are asterisked are federally recognized tribes [U.S. Department of Health and Human Services 2019]) of the proposed action:

- Buena Vista Rancheria of Me-Wuk Indians*
- Colfax-Todds Valley Consolidated Tribe
- Lone Band of Miwok Indians*
- Nashville Enterprise Miwok–Maidu–Nishinam Tribe
- Shingle Springs Band of Miwok Indians*
- Tsi Akim Maidu
- United Auburn Indian Community of the Auburn Rancheria*
- Wilton Rancheria*

To date, two responses have been received. The United Auburn Indian Community of the Auburn Rancheria has responded to indicate that the project would not likely affect cultural resources of importance to the tribe, and to request receipt of the environmental documents (Starkey 2019). The Shingle Springs Band of Miwok Indians responded to request initiation of formal consultation, including a meeting. They requested copies of all environmental documents prior to the meeting (Fonseca 2019).

Archival research conducted at the NCIC indicated that the project area does not contain any previously recorded Native American sites, prehistoric-period archaeological sites, historic-period cemeteries, or human skeletal remains.

Effects on Cultural Resources and Traditional Cultural Properties

Based on the review of historic resources, effects determination pursuant to Section 106 of the National Historic Preservation Act is applicable for the Sacramento Valley Railroad and the American River Placer Mining District. The other historic-age built environment resources identified above are not considered eligible for listing in the NRHP. Although archeological resources, human remains, and traditional cultural properties were not identified in the NCIC database search or AECOM's pedestrian survey, the potential cannot be completely discounted that human remains may exist in the project area.

- *Sacramento Valley Railroad.* The integrity of location for the rail property is that of the right-of-way, not the actual location of the tracks, which are not in their original alignment for more than half of the approximately 20-mile line from Folsom to Sacramento. The small segments of rail line proposed to be relocated within the existing right-of-way for the proposed action (0.6 mile in Folsom and 1.2 miles in Rancho Cordova) would continue to operate within the original right-of-way. The elements of the line that retain the integrity of location and design would not be adversely affected. All other elements of historic integrity—including materials, workmanship, feeling, association, and setting—no longer exist. As a result, the impact on this historic resource would be not adverse.
- *American River Placer Mining District.* Because no features associated with the district are in the project segments or the project area, this potential historic property would not be adversely affected by the project. No other previously recorded archaeological resources are in the project area, and the project area has been modified by development, including the construction of the existing rail line. Therefore, the impact on this NRHP-eligible resource would be not adverse.
- *Native American sites, Prehistoric-Period Archaeological Sites, Historic-Period Cemeteries, or Human Skeletal Remains.* No tribal cultural resources that are listed or eligible for listing in the CRHR or local register of historical resources were identified during background research at the NCIC or NAHC. However, records maintained by the NCIC and NAHC are not exhaustive, and negative results do not preclude the presence of tribal cultural resources in the project area. Although negligible, it is possible that during excavation for the project, previously undiscovered archeological materials or tribal cultural properties could be inadvertently exposed. The inadvertent exposure of a previously unknown archeological resource or tribal cultural property could be an adverse effect because the disturbance would permanently alter the integrity of the deposit where exposed. Similarly, although there are no known cemeteries or previously identified archeological resources known to contain human remains, including Native Americans, in the area of potential effects, project implementation could result in the inadvertent discovery of previously unknown human remains, including those interred outside of formal cemeteries.

The mitigation measures listed below have been adopted by SacRT Board as part of the Initial Study/Mitigated Negative Declaration prepared for the project under CEQA, and therefore will be implemented as part of the proposed action. Some modifications have been made to the measures below from the CEQA-adopted Mitigated Negative Declaration to clarify better the procedures to follow if unanticipated historic, archeological, tribal cultural resources, or human remains are encountered during construction. Mitigation Measure CUL-1 and Mitigation Measure CUL-2 require SacRT to halt construction in the event historic-age built environment or unique archaeological resources are uncovered, evaluate the significance of the resources, and follow recordation, data recovery, and/or salvage measures as specified by state and federal guidelines and regulations. Mitigation Measure CUL-3 requires SacRT to halt construction in the event that human remains or associated funerary objects are uncovered, and to comply with State guidelines and regulations regarding the treatment of human remains.

Mitigation Measure CUL-1: Treatment of unanticipated historic-age built environment resource discoveries, including halting construction, evaluating the resource, and appropriate recordation and recovery if the resource is significant

If historic-age built environment buildings, structures, or objects are encountered during construction, work must be temporarily halted in the vicinity of the discovered materials and workers must avoid altering the materials and their context until a qualified professional architectural historian has recorded, evaluated, and determined the significance of the resource. If the resource is determined to be significant, the qualified architectural historian will prepare a mitigation plan in consultation with the SacRT and FTA.

Mitigation Measure CUL-2: Treatment of unanticipated discovery of tribal cultural and archaeological resources, including halting construction, evaluating the resource, and appropriate recordation and recovery if the resource is unique

Upon discovery of any archaeological resources, cease construction activities in the immediate vicinity of the find until the find can be assessed. All archaeological resources unearthed by project construction activities shall be evaluated by the qualified archaeologist. If the resources are Native American in origin, there shall be consultation with the Wilton Rancheria Tribe and Shingles Springs Band of Miwok Indians regarding the treatment and curation of these resources. Work may continue on other parts of the project while evaluation and, if necessary, mitigation takes place. If a resource is determined by the qualified archaeologist to constitute a "historical resource" or "unique archaeological resource", time allotment and funding sufficient to allow for implementation of avoidance measures, or appropriate mitigation, must be available.

Mitigation Measure CUL 3: Implement procedures to address unanticipated discovery of human remains and associated funerary objects

Native American human remains are defined in Public Resources Code (PRC) 5097.98(d)(1) as an inhumation or cremation, and in any state of decomposition or skeletal completeness. Funerary objects, called associated grave goods in PRC 5097.98, are also to be treated according to this statute. Health and Safety Code 7050.5 dictates that any discoveries of human skeletal material shall be immediately reported to the County Coroner and excavation halted until the coroner has determined the nature of the remains. If the Sacramento County coroner recognizes the human remains to be those of a Native American or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission (NAHC) and PRC 5097.98 shall be followed.

PRC Section 21083.2(b) addresses unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any historic archaeological material that is not Native American in origin shall be curated at a public, non-profit institution with a research interest in the materials, such as the Archaeological Curation Facility at Sacramento State University or the David A. Fredrickson Archaeological Collections Facility at Sonoma State University, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they shall be offered to a local school or historical society in the area for educational purposes.

SHPO Consultation

Pursuant to Section 106 requirements, FTA consulted with the SHPO. A letter from FTA was sent to SHPO requesting review of FTA's preliminary determination that the proposed action would have no

adverse effects to historic properties. SHPO concurrence with this determination was received on January 23, 2020, a copy of which is included in Appendix A.

J. NOISE

Noise and vibration sensitive receivers in the project corridor were identified using the FTA transit noise and vibration impact assessment manual’s definitions of noise-sensitive land uses (FTA 2018). Existing noise-sensitive receivers include single-family and multifamily residences, a mobile home/RV park, offices, and recreational facilities, including trails. Sensitive receivers were analyzed as “clusters.” Some clusters were individual properties and others were groups of properties.

Noise measurements were conducted to characterize the ambient noise in the project area. Table 2 summarizes the existing noise measurements. LT-01 was selected to describe ambient conditions near the multifamily residences across from Hazel Station. LT-02 was selected to characterize noise levels near office space, residences, and the Folsom Parkway Rail Trail in the Folsom project segment, south of Glenn Station. LT-03 was used in the SacRT Glenn Station park-and-ride lot to characterize noise exposure near the Folsom Parkway Rail Trail, a public seating area used by recreationists on the trail and SacRT passengers, and the Folsom Lake State Recreation Area across Folsom Boulevard to the west.

**Table 2
Existing Noise Measurements in the
Folsom Light Rail Modernization Double Track Project Corridor**

Site	Location	Date		Duration	Start Time	Daytime		Nighttime		L _{dn} (dBA)
		From	To			L _{eq}	L _{max}	L _{eq}	L _{max}	
LT-01	Oak Brook Apartments, 12499 Folsom Blvd., Sacramento County (Rancho Cordova Project Segment)	Tuesday, August 20, 2019	Wednesday, August 21, 2019	24 hours	20:00	52.8	73.3	47.8	61.6	55.4
LT-02	Oak Villas Pond, 229 Pacific Oak Ct, Folsom (Folsom Project Segment)			24 hours	21:00	57.9	73.9	52.1	66.7	59.9
LT-03	Glenn Station Park-and-Ride Lot, Folsom (Folsom Project Segment)			24 hours	21:00	61.6	77.5	57.2	72.4	64.6

Notes:

dBA = A-weighted decibels

L_{dn} = day-night noise level

L_{eq} = equivalent sound level

Source: Data compiled by AECOM in 2019

Construction Noise

Construction and operational impacts were based on FTA general assessment criteria. For construction impacts, Table 3 was used and compared to the potential noise exposure from the construction equipment identified for various construction phases, as defined by SacRT. Table 4 shows the construction noise impacts from the proposed action. There are existing residential uses within the nighttime impact distances defined using FTA assessment criteria for a moderate or severe impact during the rail and platform work. However, construction related to site work and installation of the light

rail track, overhead contact system, and signals would not result in potentially adverse effects to the existing uses because the uses are beyond the impact distances defined using FTA assessment criteria for a moderate or severe impact.

Table 3
FTA Construction Noise General Assessment Criteria

Land Use	8-hour L_{eq} , dBA	
	Day	Night
Residential	90	80
Commercial	100	100
Industrial	100	100

Notes:

L_{eq} = equivalent sound level; dBA = A-weighted decibel; dB = decibels

Source: FTA 2018

Table 4
Folsom Light Rail Modernization Double Track Project Construction Noise Impacts

Construction Activity and Equipment	Noise Level at 50 feet (L_{eq} , dBA)	Threshold (dBA)	Approximate Noise Impact Distance (feet)	
		FTA	Based on FTA Threshold	Are uses within the Impact Distance?
Site Work	85	Residential: 90 (Daytime) 80 (Nighttime) Commercial: 100 (Daytime) 100 (Nighttime)	Residential: 27 (Daytime) 85 (Nighttime) Commercial: 9	No uses within the impact distances; No Impact
Grader	81		Residential: 44 (Daytime) 138 (Nighttime) Commercial: 14	There are existing residential uses within the nighttime impact distances; Potential Impact
Excavator	77			
Compactor	76			
Auger/Bore Drill Rig	77			
Backhoe	74			
Rail Work and Platform Work	89			
Dozer	88			
Grader	85			
Tamper	85			
Aligner	84			
Swinger	83			
Welders	85			
Crane	85			
Wheel Loader	74			
Paver	84			
Concrete Pump	75			
Ballast Regulator	75			
Rail grinder	83			
OCS and signals; finishing work	82	Residential: 20 (Daytime) 65 (Nighttime) Commercial: 6	Residential: 20 (Daytime) 65 (Nighttime) Commercial: 6	No uses within the impact distances; No Impact
Generator	78			
Crane	73			
Concrete Pump	74			
Wheel Loader	75			
Air Compressor	74			
Welder	78			

Notes:

L_{eq} = equivalent sound level; dBA = A-weighted decibel; OCS = Overhead Contact System

Source: FHWA and DOT 2006; FTA 2018

Although the construction noise would not exceed FTA assessment criteria in Table 3, there is a possibility that construction noise, especially during the nighttime hours, could exceed the FTA nighttime construction criteria. As a result of this potential impact, SacRT adopted the following mitigation measure, which is incorporated into the project.

Mitigation Measure NOI-1: Prepare and implement a construction noise control plan

The SacRT must include a requirement in the project construction specifications and documents to prepare a noise control plan that incorporates, at a minimum, the following best practices to reduce the impact of temporary construction-related noise on nearby noise-sensitive receptors:

- Install temporary construction site sound barriers near noise sources.
- Use moveable sound barriers at the source of the construction activity.
- Locate stationary construction equipment as far as possible from noise-sensitive sites.
- Re-route construction-related truck traffic along roadways so as to cause the least disturbance to residents.
- Use low noise emission equipment.
- Implement noise-deadening measures for truck loading and operations.
- Line or cover storage bins, conveyors, and chutes with sound-deadening material.
- Use acoustic enclosures, shields, or shrouds for equipment and facilities.
- Use high-grade engine exhaust silencers and engine-casing sound insulation.
- Use specialty equipment, such as vehicles with enclosed engines and/or high-performance mufflers.
- Minimize the use of generators to power equipment.
- Limit unnecessary idling of equipment.
- Monitor and maintain equipment to meet noise limits.
- Establish an active community liaison program to keep residents, offices, and other noise-sensitive uses informed about construction, and provide a procedure for addressing complaints.

Because the nighttime work, if needed, could be completed over a weekend, the duration of noise exposure would be confined and the number of sensitive receivers that would be affected would be limited to those residents with direct line of sight to the construction. The mobile home and RV park in the Rancho Cordova project segment across from the Hazel Station construction area is surrounded by a masonry wall that would screen most residents from construction noise, except those near the park's two driveways (approximately six RVs/mobile home parks would have direct line of sight within the impact distance of 140 feet). The adjacent Oak Brook Apartments is a 300-unit complex, but fewer than 20 units that front onto Folsom Boulevard could be exposed to the nighttime construction noise. The nighttime work is anticipated primarily to allow SacRT to connect the existing overhead contact system to the new line when light rail service is not operating. The "tie-in" locations where the new lines would be connected and energized are near the Schnitzer Steel facility to the west and near Aerojet Road to the east, with the closest residential receptors approximately 300 feet from the Oak Brook Apartments. Because of the limited exposure (one weekend), the relatively few affected residents, the proposed coordination with local agencies and property owners, and the incorporation of the above measure as part of the project, construction noise impacts would not be adverse.

Operational Noise

For operational impacts, the anticipated increase in noise from train passbys and various warning devices was compared to the existing ambient conditions, and moderate and or severe impacts were determined based on Figure 5. The existing noise level and the project calculated noise level were combined to compute the noise exposure at the receiving locations. Table 5 summarizes the results. As shown, moderate noise impacts would occur in the residential areas of the Rancho Cordova project segment; receptors in the Folsom project segment would not experience substantial noise impacts (below the moderate threshold).

K. VIBRATION

Construction Vibration

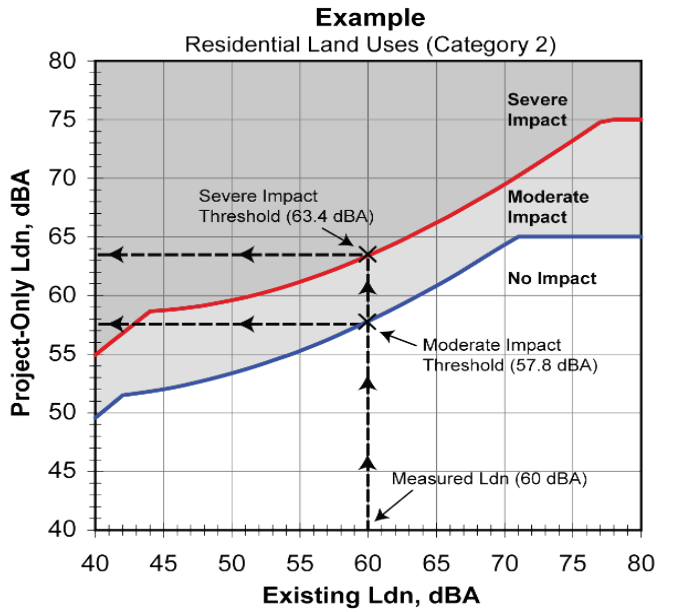
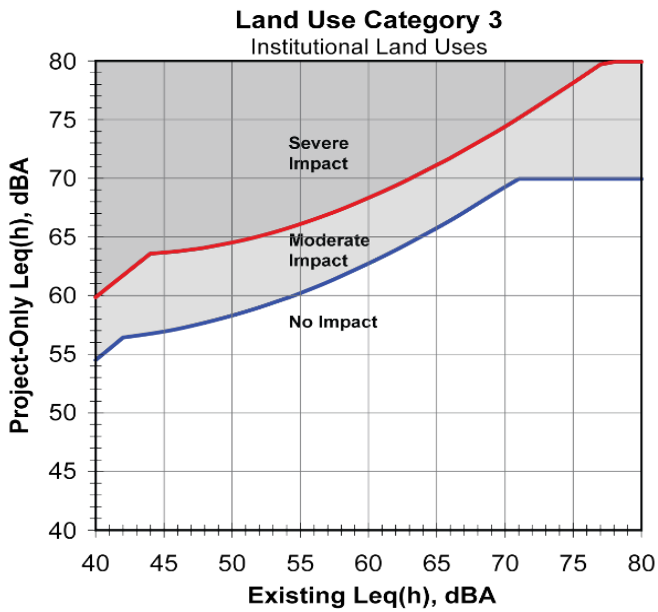
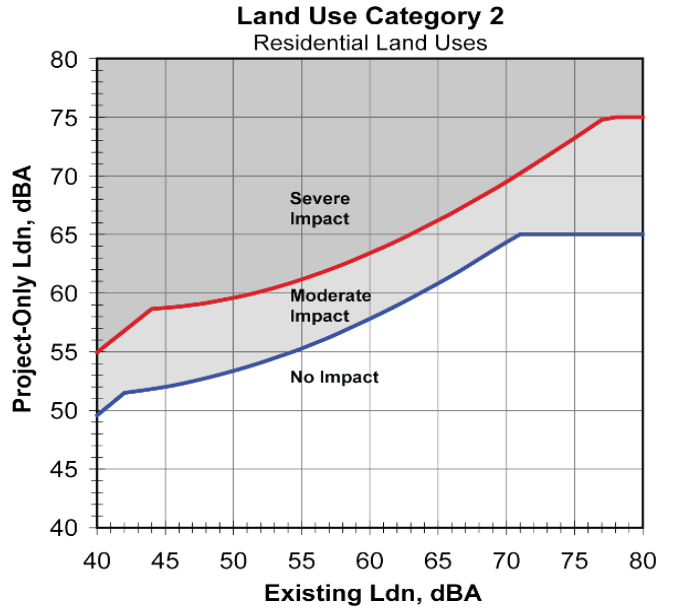
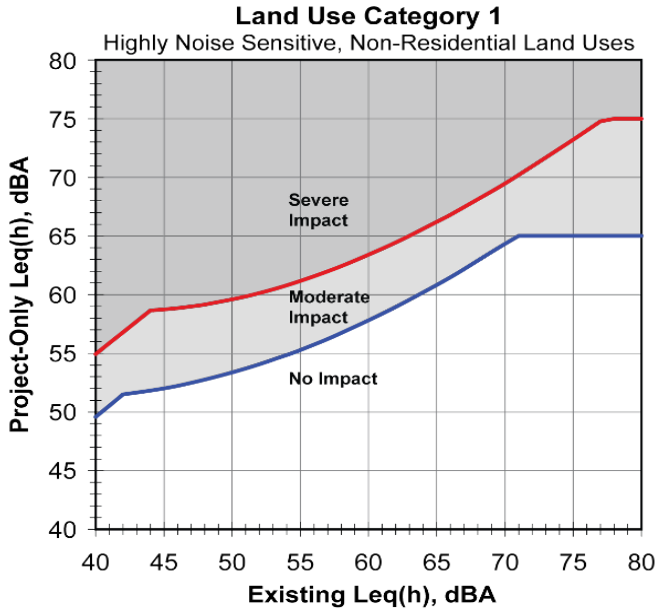
Construction vibration impacts were based on FTA general assessment criteria for land use and building categories in the project corridor:

- Groundborne vibration for occasional and frequent events (in VdB)
 - Residences and buildings where people normally sleep (Category 2): 75 and 72 Vdb
 - Institutional land uses with primarily daytime use (Category 3): 78 and 75 Vdb
- Construction vibration damage criteria (in PPV, inches per second)
 - Reinforced concrete, steel, or timber (Category I): 0.5
 - Engineered concrete and masonry (Category II): 0.3
 - Non-engineered timber and masonry buildings (Category III): 0.2

For the first set of criteria, which are used to evaluate human annoyance, the closest vibration sensitive uses (residential uses) to project construction are approximately 150 feet away (Oak Brook Apartments and the RV/mobile park residential uses in the Rancho Cordova project segment). The resulting construction vibration level at these locations would be 64 to 71 VdB, below the threshold for human annoyance from occasional and frequent vibration events.

For the second set of criteria, which are used to evaluate structural damage, project construction could generate vibration levels at 25 feet, as high as 0.2 PPV (94 VdB) from compactors during site work and 0.09 PPV (87 VdB) from bulldozers during rail and platform work. The nearest vibration-sensitive structure is an engineered concrete and masonry building approximately 90 feet from project construction. The resulting vibration of approximately 0.031 PPV (77 VdB) at this distance would be below the threshold for structural damage.

Figure 5 FTA Impact Criteria for Noise



**Table 5
Folsom Light Rail Modernization Double Track Project
Operational Noise Impacts**

Site	Land Use	Noise Level (L_{dn}/L_{eq} dBA)			FTA Noise Level Criteria		
		Existing	Project	Existing + Project	Moderate Impact ²	Severe Impact ²	Impact ²
LT-01	Residential	55.4	59.8	61.2	55.3	61.2	Moderate Impact
LT-02	Office/Trails	59.9	56.9	61.7	62.2	67.9	None
LT-03	Office/Trails	64.6	56.9	65.2	60.2	65.6	None

Notes:

CEQA = California Environmental Quality Act; dBA = A-weighted decibels; FTA = Federal Transit Administration; L_{eq} = equivalent sound level; LTS = less than significant

1. L_{dn} is used for Category 2 (residential) land use and L_{eq} is used for Category 3 (institutional) land use.

2. Based on Figure 3.13-6.

Source: Data compiled by AECOM in 2019

Operational Vibration

Vibration caused by trains is caused by the wheels rolling on the rails, and the level of vibration received at the building is a function of the type of trains, their speeds, track system, structure, support and condition, distance from the tracks, geological condition, and the receiving structure. The estimated vibration levels for the relevant land use categories in the project corridor are shown in Table 6. Based on FTA assessment criteria, the proposed action would not result in operational vibration impacts.

**Table 6
Folsom Light Rail Modernization Double Track Project
Operational Vibration Impacts**

Land Use Category	Distance to Near Track (feet)	Vibration Levels (VdB)		Impacts
		Project Operation	FTA Criteria	
Category 2: Residences and buildings where people normally sleep	140	64.3*	72 VdB	None
Category 3: Institutional land uses with primarily daytime use	140	64.3	75 VdB	None

Notes:

* Calculated using FTA's Equation 6-2 and Figure 6-4.

Source: FTA 2018; data compiled by AECOM in 2019

L. ACQUISITIONS & RELOCATIONS REQUIRED

The proposed action would be constructed and operated almost entirely within the existing SPTCJPA right-of-way. Temporary construction easements may be needed outside the right-of-way for construction staging, materials storage, parking for construction personnel, and access to the construction sites. In keeping with standard practices, SacRT leaves identification of temporary construction easements to its contractors. Nevertheless, a temporary construction area has been included for the environmental analysis and generally extends 5 feet beyond the area delineated for the permanent right-of-way.

Permanent land acquisition is required at two locations along the corridor, none of which involves displacement of existing uses:

- In the Folsom project segment, the intersection of Folsom Boulevard and Glenn Drive would need to be modified to accommodate the passing track and loading platform. The addition of these project components would require use of public right-of-way (a right-turn lane for northbound Folsom Boulevard traffic onto eastbound Glenn Drive) for a short stretch. This widened rail right-of-way would narrow the right-turn lane, but still be sufficient to accommodate vehicular traffic, including the large trucks that currently make this turn to access businesses east of Folsom Boulevard.
- In the Rancho Cordova project segment, a sliver of Aerojet Rocketdyne Holdings, Inc. would be acquired to accommodate the realignment of the freight line and freight siding immediately to the north. The estimated land acquisition would be approximately 8,400 square feet (approximately 0.2 acre) in fee acquisition and up to an additional 3,200 square feet for temporary construction easements (approximately 0.07 acre), along the northern edge of the 77.7-acre parcel (Assessor's Parcel Number 072-0231-125-0000). This area is not developed and would not involve any displacement.

In addition to the above two areas, the spur track that provides a connection between the freight line and the Schnitzer Steel metals recycling yard would need to be realigned to tie into the realigned freight line. There would be no required land acquisition, since the realigned spur would continue to be under Schnitzer Steel ownership; however, approximately 6,650 square feet would be needed temporarily to construct the realigned spur which would require permission from Schnitzer Steel.

M. HAZARDOUS MATERIALS

AECOM performed a search of publicly available databases, maintained under Public Resources Code (PRC) Section 65962.5 (i.e., the "Cortese List"), to determine whether any known hazardous materials are present within 0.25 mile of the project segments. The Hazardous Waste and Substances Site List (the EnviroStor database) is maintained by the California Department of Toxic Substances Control (DTSC) as part of the requirements of PRC Section 65962.5 (DTSC 2019). The State Water Resources Control Board (SWRCB) maintains the GeoTracker database, an information management system for groundwater (SWRCB 2019). Data on leaking underground storage tanks (USTs) and other types of soil and groundwater contamination, along with associated cleanup activities, are part of the information that the SWRCB must maintain under PRC Section 65962.5. In addition, the U.S. Environmental Protection Agency (EPA) maintains an informational database for Superfund sites.²

Based on the above databases, there are no active cases within 0.75 mile of the Folsom project segment. There is a gasoline station with an underground storage tank 0.75 mile away, but no reports that this land use is releasing hazardous materials. As a result, there are no recognized environmental conditions that could pose a health and safety risk associated with hazardous materials.

The Rancho Cordova project segment is within the Aerojet Superfund site (U.S. Environmental Protection Agency [EPA] 2019a). Soil and groundwater in the project vicinity have been contaminated from chemicals that were used in former rocket manufacturing and testing. Groundwater is being remediated via a groundwater extraction and treatment (GET) system, which will continue to operate for the foreseeable future. Project-related construction activities would extend up to 4 feet below the ground surface, except for new support poles for the overhead contact system that would extend up to

² The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 created the Superfund hazardous substance cleanup program (CERCLA, Public Law [PL] 96-510, enacted December 11, 1980). It was enlarged and reauthorized by the Superfund Amendments and Reauthorization Act of 1986 (SARA, PL 99-499). EPA compiles a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories, known as the National Priorities List. These locations are commonly referred to as "Superfund sites."

30 feet below the ground surface. Therefore, construction for Rancho Cordova project segment components is not expected to encounter contaminated groundwater, which is approximately 50 feet below the ground surface.

Nevertheless, volatile organic compounds can volatilize off groundwater and could migrate upward into the Rancho Cordova project segment, particularly at the western end of the segment, which is within the designated Groundwater Perimeter Operable Unit (Operable Unit 5) of the Aerojet Superfund site. These vapors could affect construction workers, creating short-term dizziness, nausea, and breathing difficulties. In addition, project construction activities could come in contact with contaminated soils and interfere with ongoing soil vapor extraction activities. These remediation activities within Area 49000 of the Superfund site include soil vapor extraction shallow wells and network lines using above-ground piping. Therefore, disturbance of soils in the project footprint or interference with the soil vapor extraction activities or equipment could result in adverse effects on construction workers and for cleanup of Area 49000 in the Rancho Cordova project segment.

The mitigation measures listed below have been adopted by the SacRT Board as part of the Initial Study/Mitigated Negative Declaration prepared for the project under CEQA, and therefore will be implemented as part of the proposed action. Mitigation Measure HAZ-1 would require SacRT to perform its due diligence to identify and characterize the environmental contamination that exists on the property to be acquired, even though extensive investigations have been undertaken since it lies within the Aerojet Superfund site. Mitigation Measure HAZ-2 would characterize the environmental contamination with the project footprint within the rail corridor and help inform measures to protect construction workers. Mitigation Measure HAZ-3 would require preparation of a Health and Safety Plan to identify the steps and actions necessary to ensure worker health. Mitigation Measure HAZ-4 would require proper handling and disposal of excavated materials and soils, and Mitigation Measure HAZ-5 would avoid interference with ongoing and planned remediation activities related to clean-up of the Aerojet facility.

Mitigation Measure HAZ-1: Undertake a Phase I environmental site assessment on the property to be acquired within the Aerojet Superfund site

To perform its due diligence for the acquisition of the sliver of land that currently is owned by Aerojet, the SacRT must retain a qualified environmental professional to prepare a Phase I environmental site assessment during final design, in accordance with ASTM E1527-13. The assessment must include, among other investigations, a review of the extensive documentation already prepared by Aerojet in response to requirements of U.S. Environmental Protection Agency (EPA), Department of Toxic Substance Control (DTSC), and the Central Valley Regional Water Quality Control Board (RWQCB) that define and characterize the known contamination and the type of and schedule for the remediation efforts. In addition, per the ASTM E1527-13 standards, the Phase I assessment must include an evaluation of the potential impacts from vapor migration that can adversely affect the health and safety of project construction workers. The Phase I assessment will be essential to establish the responsibility and liability for known environmental contamination and cleanup on the property to be acquired. A Phase II environmental site assessment may be recommended to further investigate the contamination, but because the site already is part of a Superfund site, the extent and characterization of the contamination has been identified, and remedies are underway, a Phase II is not expected to be necessary for the SacRT to complete its environmental due diligence for the acquisition.

Mitigation Measure HAZ-2: Undertake a Limited Phase II environmental site assessment within the ground disturbance area in the rail right-of-way adjacent to the Aerojet Superfund site to identify the extent and characterization of contamination in the unsaturated (vadose) zone, generally between the ground surface and the underlying water table, to define the potential health risks for project construction workers

The SacRT must retain a qualified environmental professional to prepare a limited Phase II environmental site assessment, to assess the environmental contamination of the surficial and subsurficial soil and any encountered groundwater in the areas where ground disturbance and excavation will occur adjacent to the Aerojet Superfund site in the Rancho Cordova project segment. The Phase II assessment must comply with ASTM E1903 standards and include sufficient sampling to identify types of chemicals and potential hazards to construction workers, and to assist in determining soil re-use or disposal requirements during construction. The Phase II assessment will be a "limited" assessment, in that it will focus on soils to the depth of ground disturbance (i.e., generally 4 feet below ground surface where only track improvements are proposed; 10 feet where footings for passenger shelters are proposed at the loading platform; and 30 feet where foundations for the Overhead Contact System support poles are proposed). Although not expected, if groundwater is encountered, the Phase II assessment must include sampling to identify the chemicals and concentrations in the groundwater. The results from the Phase II assessment must be provided to project contractors, to inform preparation of a site-specific health and safety plan (HASP), in accordance with Mitigation Measure HAZ-3, and recommendations from the Phase II assessment regarding soil re-use or disposal must be incorporated into contractor specifications.

Mitigation Measure HAZ-3: Prepare and implement a site-specific Health and Safety Plan (HASP) to minimize impacts on public health, worker health, and the environment from project construction activities in ground disturbance areas in the Rancho Cordova project segment

Based on the Phase II assessment that is completed under Mitigation Measure HAZ-2, and on information from Aerojet and the regulatory agencies for the property to be acquired for the proposed project, the SacRT must prepare and implement a site-specific HASP for the Rancho Cordova project segment. The HASP must be prepared in accordance with State and federal OSHA regulations (29 CFR Section 1910.120) and approved by a certified industrial hygienist. Copies of the HASP must be made available to construction workers for review during their orientation training and/or during regular health and safety meetings. The HASP must identify chemicals of concern, potential hazards, personal protective equipment and devices, decontamination procedures, the need for personal or area monitoring, and emergency response procedures. The HASP must be amended, as necessary, if new information becomes available that can affect implementation of the plan.

Mitigation Measure HAZ-4: Incorporate standards for the proper handling, transport, and disposal of excavated soils and materials into the proposed project's construction specifications

The SacRT must incorporate contract specifications and procedures to be followed by the contractor for the safe handling, transport, and disposal of the excavated soils and materials, consistent with federal and State requirements, including the Resources Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act, the Emergency Planning and Community Right-to-Know Act, the Hazardous Materials Transportation Act of 1976, the Clean Water Act, the Occupational Safety and Health Act, Title 22, California Code of Regulations, and the Hazardous Waste Control Law. The following specifications must be included:

- Construction workers in the Rancho Cordova project segment who will be involved with ground disturbance must be trained in Hazardous Waste Operations and Emergency

Response (HAZWOPER), if the types of contaminants and their concentrations warrant this training based on the results of the limited Phase II environmental site assessment, completed under Mitigation Measure HAZ-1, and on the HASP, completed under Mitigation Measure HAZ-3.

- Soil and materials removal must be performed by a licensed engineering contractor with a Class A license and hazardous substance removal certification. A California-licensed engineer must provide field oversight on behalf of the SacRT, to document the origin and destination of all removed materials. If necessary, removed materials must be stockpiled temporarily and covered with plastic sheeting, pending relocation, segregation, or off-site hauling.
- If excess materials are hauled off-site, waste profiling of the material must be completed and documented. Materials classified as nonhazardous waste must be transported under a bill of lading. Materials classified as non-RCRA hazardous waste must be transported under a hazardous waste manifest. All materials must be disposed at an appropriately licensed landfill or facility.
- Trucking operations must comply with Caltrans requirements and any other applicable regulations, and all trucks must be licensed and permitted to carry the appropriate waste classification. The tracking of dirt by trucks leaving the project site must be minimized by cleaning the wheels on exit, and by cleaning the loading zone and exit area as needed.
- If materials require dewatering before being hauled off-site, a dewatering plan must be prepared, specifying methods of water collection, transport, treatment, and discharge of all water produced by dewatering.

Mitigation Measure HAZ-5: Schedule project construction activities and site light rail facilities to avoid interference with the soil vapor extraction activities in the Rancho Cordova project segment

The SacRT must provide Aerojet, EPA, DTSC, and the Central Valley RWQCB with available information on the location, nature, and duration of construction activities as well as the preliminary engineering plans for the Rancho Cordova project segment during final design, to avoid disturbance to or interference of current or planned remediation activities in Operable Unit 5, including Area 49000. After sharing the available information, the SacRT, Aerojet, and the regulatory agencies must coordinate to ensure that project improvements do not interfere or adversely affect the remediation activities and treatment. Avoidance can be achieved through a variety of strategies, such as adjusting the schedule for project construction or remediation activities; shifting the location of Overhead Contact System support poles and wayside facilities to avoid treatment facilities; and protecting in-place monitoring wells, groundwater extraction and treatment facilities, and soil vapor extraction equipment. The SacRT must incorporate the agreed on measures in the construction specifications and documents that will govern the contractor's work in the Rancho Cordova project segment.

N. COMMUNITY DISRUPTION AND ENVIRONMENTAL JUSTICE

The proposed action would be constructed and operated with an existing rail right-of-way. The right-of-way is adjacent to Folsom Boulevard, a major thoroughfare, through the project area. The rail right-of-way and the SacRT Gold Line already serve as physical boundaries for land uses on either side of the rail line. The proposed improvements would introduce new light rail facilities (e.g., tracks, station platforms, lighting, instrument houses, and overhead contact system support poles) that are identical to facilities already present within the rail right-of-way. The proposed action would not result in closure of any existing streets and would not conflict with existing uses that border the Gold Line corridor. Rather, the proposed improvements would complement and be consistent with local efforts by Folsom, Rancho Cordova, and Sacramento County to create a transit-oriented, complete streets corridor along Folsom

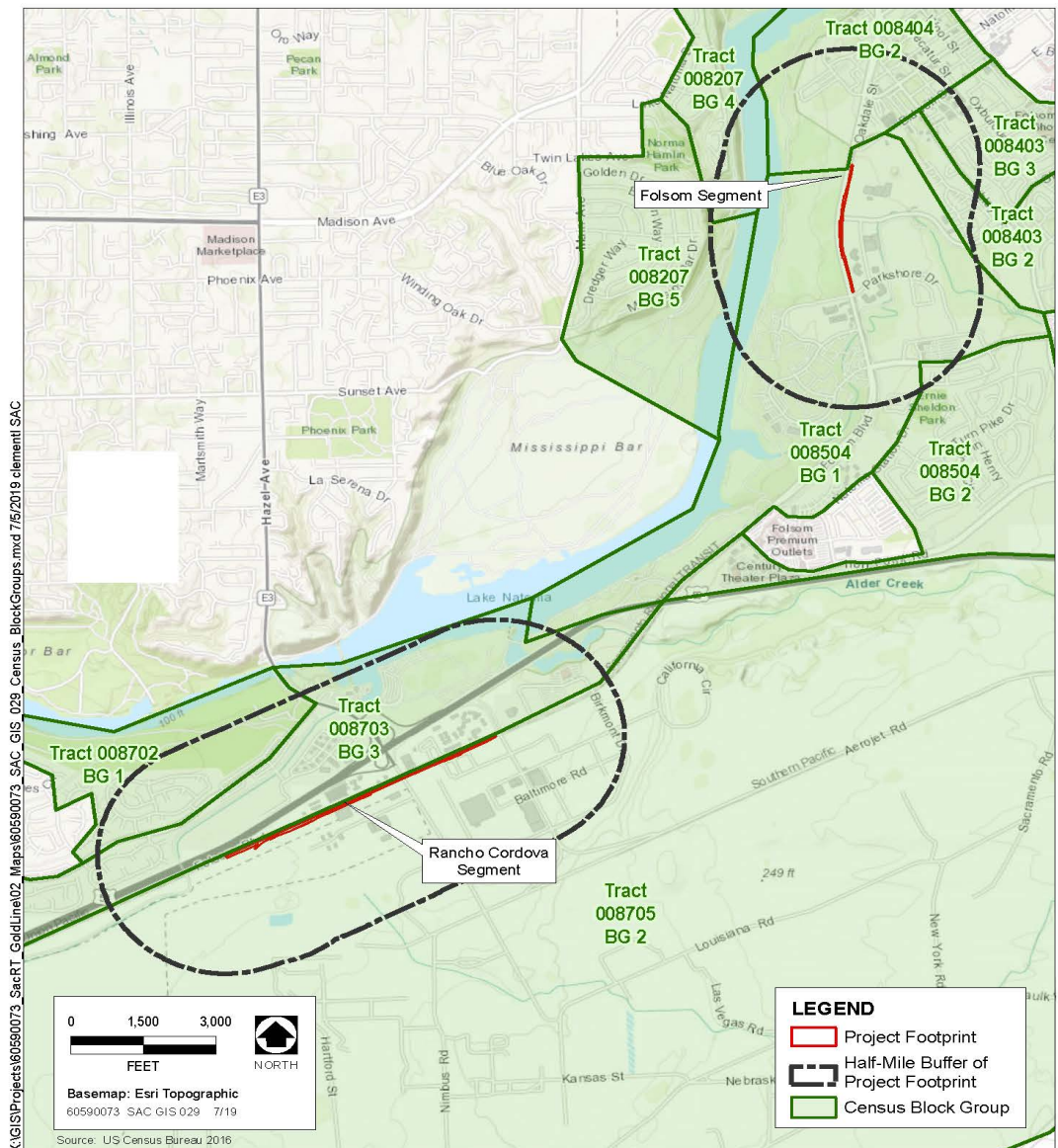
Boulevard. As a result, the proposed action would not physically divide a community or adversely affect community character.

Table 7 evaluates if communities within the study area meet the definitions of minority and low-income communities based on the demographic profiles for minority and low-income populations obtained from the U.S. Census Bureau 2013-2017 American Community Survey.³ For the purposes of this analysis, minority communities are present where the minority population is greater than the percent of the total minority population of the cities of Folsom or Rancho Cordova. Low-income communities are present where there is a higher percentage of low-income communities (i.e., below 150 percent of the federally identified poverty level) than Folsom or Rancho Cordova. Figure 6 shows the proposed improvements relative to the locations of the study area census tract block groups.

**Table 7
Determination of Minority and Low-Income Communities in the
Folsom Light Rail Modernization Double Track Project Study Area**

Census Tract and Block Group	Percent Minority ¹	Percent of Population below 150% of Poverty Line ²	Meets Minority and/or Low-Income Definitions for Environmental Justice
Folsom Project Segment^{3, 4}			
City of Folsom	30.3	7.9	N/A
Census Tract 82.07 Block Group 4	4.8	5.6	No
Census Tract 82.07 Block Group 5	3.4	3.0	No
Census Tract 84.03 Block Group 2	30.2	1.4	No
Census Tract 84.03 Block Group 3	19.1	9.7	Yes (low income)
Census Tract 84.04 Block Group 2	8.1	13.7	Yes (low income)
Census Tract 85.04 Block Group 1	24.5	5.0	No
Census Tract 85.04 Block Group 2	28.4	2.3	No
Rancho Cordova Project Segment^{5, 6}			
City of Rancho Cordova	37.6	26.3	N/A
Census Tract 87.02 Block Group 1	16.2	0.0	No
Census Tract 87.03 Block Group 3	23.6	0.0	No
Census Tract 87.05 Block Group 2	49.3	5.9	Yes (minority)
¹ Minority persons include individuals who are Black or African American, Alaska Native and American Indian, Asian, Native Hawaiian and other Pacific Islander, and some other race alone or in combination with two or more races. ² "Low Income" is defined by the FTA's 2012 Environmental Justice Circular by income as those with incomes below 150 percent of the poverty line as defined by the U.S. Department of Health and Human Services. ³ If the percent minority in a census tract block group exceeds the average percent minority for the City of Folsom at 30.3 percent, the census tract block group is identified as an environmental justice community. ⁴ If the percent low-income in a census tract block group exceeds the average percent low-income for the City of Folsom at 7.9 percent, the census tract block group is identified as an environmental justice community. ⁵ If the percent minority in a census tract block group exceeds the average percent minority for the City of Rancho Cordova at 37.6 percent, the census tract block group is identified as an environmental justice community. ⁶ If the percent low-income in a census tract block group exceeds the average percent low-income for the City of Rancho Cordova at 26.3 percent, the census tract block group is identified as an environmental justice community. Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates; data compiled by AECOM in 2019			

³ This analysis considers the study area to include all census tract block groups within 0.5 mile of the Folsom project segment and 0.5 mile from the Rancho Cordova project segment (see Figure 5). A 0.5-mile study is commonly used in transit studies and assessments to capture potential land use changes and circulation effects and it also represents a reasonable walking distance to a station.



AECOM
 Sacramento Regional Transit District
 Folsom Light Rail Modernization Double Tracking Project
 SACRAMENTO COUNTY, CA

FIGURE 6
 Census Block Groups within 0.5 Mile
 of Both Segments

As shown on Table 7, no census tract block groups within the Folsom project segment consist of minority populations that are greater than the percent of minority populations for the City of Folsom (30.3 percent). Census tract 84.03 block group 3 and census tract 84.04 block group 2 have a higher percentage of low-income communities (19.1 percent and 8.1 percent, respectively) than the City of Folsom (7.9 percent).

There are no census tract block groups along the Rancho Cordova project segment that have a higher percentage of low-income communities than the City of Rancho Cordova (26.3 percent). As shown on Table 7, census tract 87.05 block group 2 consists of minority populations (49.3 percent) that are greater than the percent of minority populations for the City of Rancho Cordova (37.6 percent). Figure 6 shows the proposed improvements relative to the location of this census tract block groups. Within the study area, census tract 87.05 block group 2 consists of vacant parcels, commercial and industrial uses, and Aerojet facilities. Therefore, the Rancho Cordova project segment does not include minority populations that could be affected by the project and implementation of the proposed action would not result in disproportionate adverse effects on environmental justice communities in the Rancho Cordova project segment.

As stated above, census tract 84.03 block group 3 and census tract 84.04 block group 2 are considered environmental justice communities. Many public transportation projects involve adverse effects, such as short-term construction effects, and also have positive benefits, such as increased transportation options, improved connectivity, or overall improvement in air quality. The proposed action would have short-term effects, as described in Section F, Traffic and Parking Impacts, Section H, Air Quality, and Section J, Noise. These short-term construction-related impacts would be similar in nature and magnitude in both environmental justice and non-environmental justice communities. Therefore, the proposed action would not result in appreciably more severe impacts on environmental justice populations compared to non-environmental justice populations along the Folsom project segment.

Short-term construction-related effects could be adverse but would be avoided or minimized because of the mitigation measures listed in Section F, Section H, and Section J. These mitigation measures have been adopted by the SacRT Board as part of the Initial Study/Mitigated Negative Declaration prepared for the project under CEQA, and therefore will be implemented as part of the proposed action. The same type, level, and quality of mitigation during construction would be applied in both environmental justice and non-environmental justice communities. Because there would be no adverse effect after application of the mitigation measures, there would be no disproportionately high and adverse effect to environmental justice populations along the Folsom project segment.

O. SECTION 4(f) USE

Publicly-owned parks, recreational areas, wildlife/waterfowl refuges, and historic properties eligible for or currently listed in the National Register of Historic Places (NRHP) within the defined areas of study were evaluated to determine if they qualify for protection under Section 4(f), and if so, whether implementation of the proposed action would result in use of these resources as defined by Section 4(f). Recreation areas, including publicly owned parks, open space, and recreational areas within the vicinity of the project segments are shown in Figure 7 and Figure 8. There are no wildlife or waterfowl refuges in the project area, although a South Sacramento Habitat Conservation Plan is underway to create an interconnected preserve system, including eight preserve planning units. The northeastern boundary of the preserve area will be approximately 530 feet west of the Rancho Cordova project segment. Because the preserve area is not yet established, it is not discussed further in this section. Historic resources within the APE for the project segments are described in Item I, Historical and Cultural Resources and shown in in Figure 7 and Figure 8. The potential Section 4(f) resources and their proximity to the project segments are listed in Table 8.

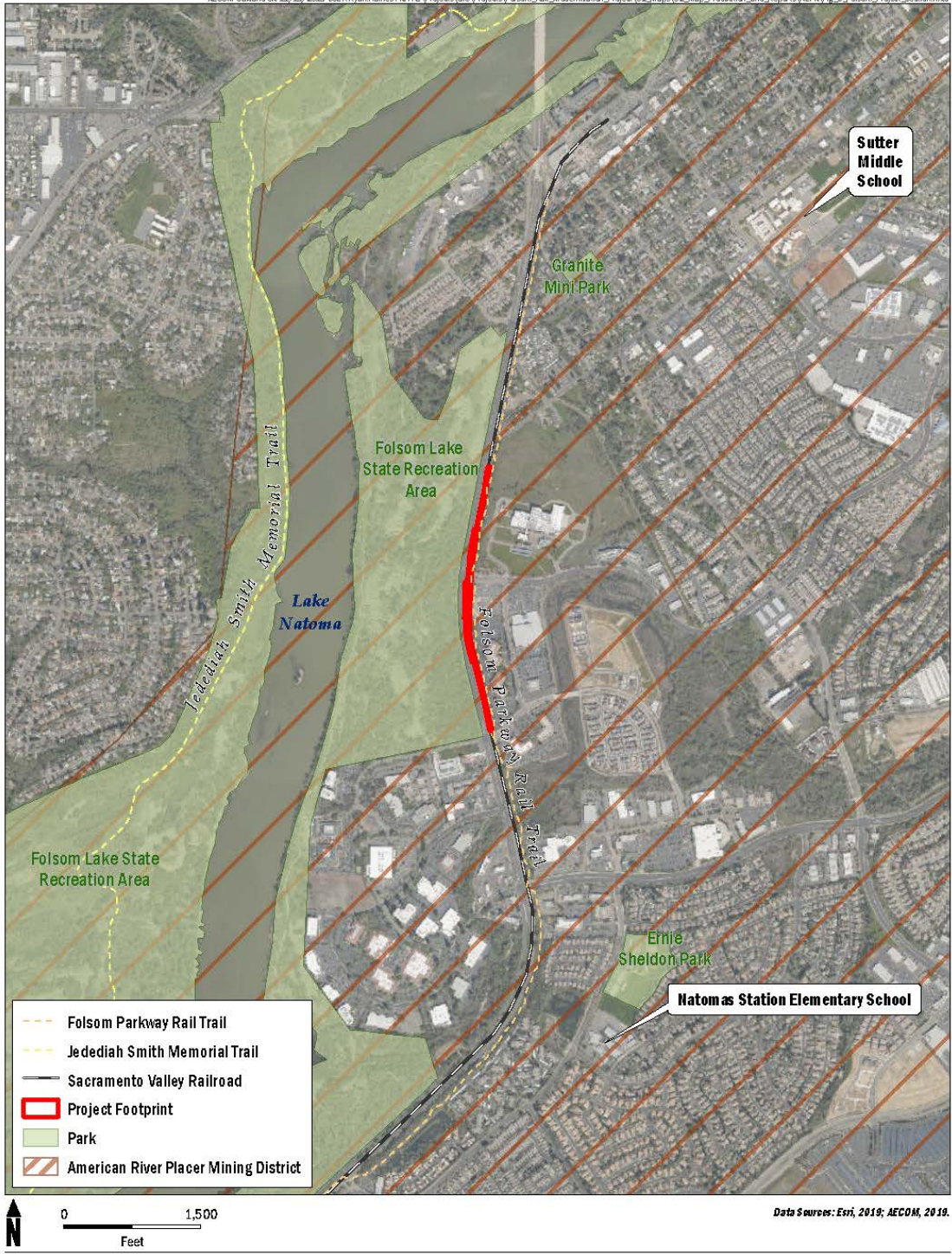
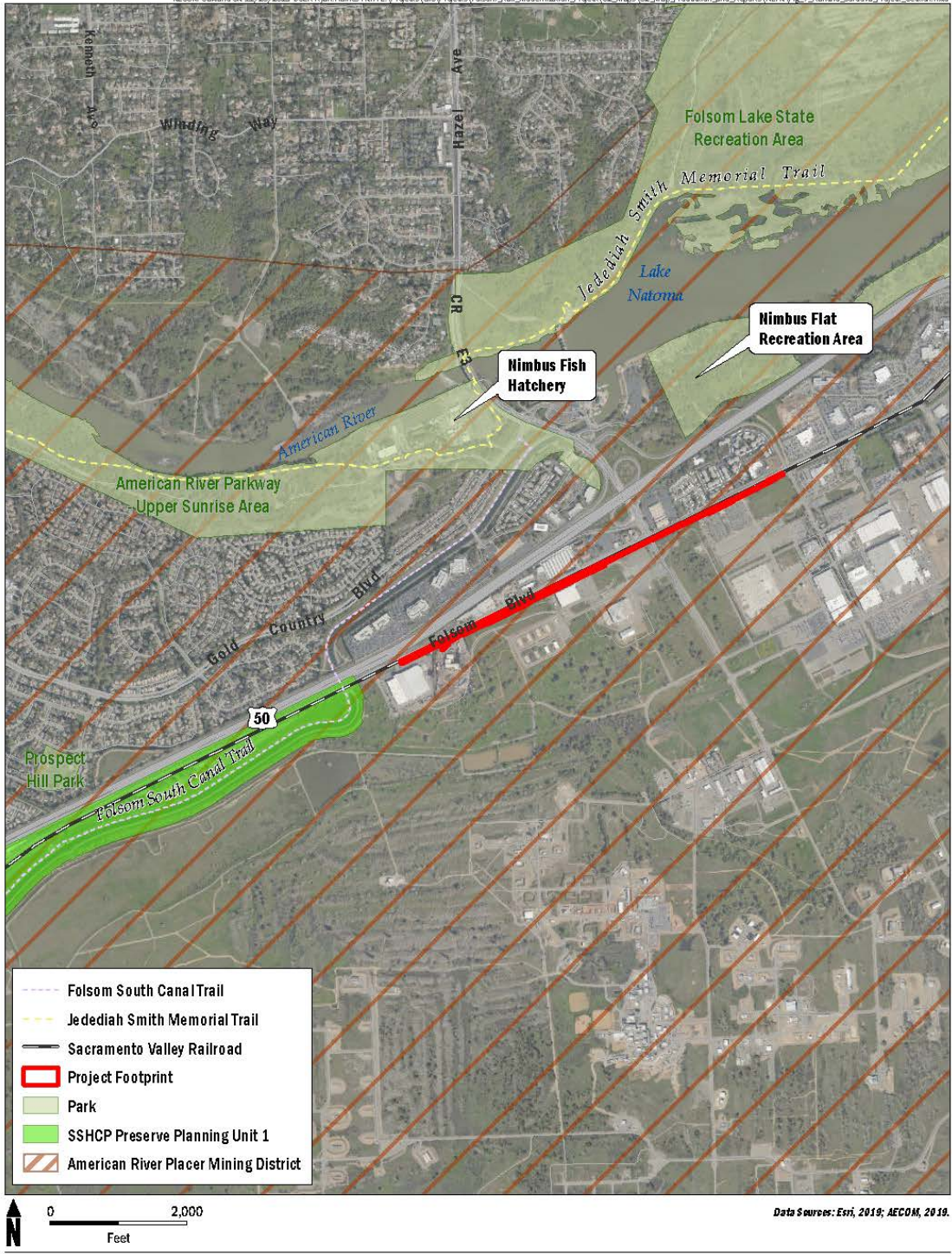


FIGURE 7
Folsom Project Segment Section 4(f) Resources



AECOM
 Sacramento Regional Transit District
 Folsom Light Rail Modernization Double Tracking Project
 SACRAMENTO COUNTY, CA

FIGURE 8
 Rancho Cordova Project Segment Section 4(f) Resources

Table 8
Section 4(f) Resources within or near the
Folsom Light Rail Modernization Double Track Project

Resource	Agency with Jurisdiction	Distance to Project Segment (approximate)
Folsom Parkway Rail Trail	City of Folsom	Within Folsom project segment footprint
Granite Mini Park	City of Folsom	1,800 feet northeast of Folsom project segment footprint
Ernie Sheldon Youth Sports Complex	City of Folsom	1 mile southeast of Folsom project segment footprint
Jedediah Smith Memorial Trail	Sacramento County	1,100 feet west of Folsom project segment footprint
Lake Natoma	California Department of Parks and Recreation	1,250 feet west of Folsom project segment footprint
Folsom Lake State Recreation Area	California Department of Parks and Recreation	130 feet west of Folsom project segment footprint
Folsom South Canal Recreational Trail	California Department of Parks and Recreation	1,300 feet south of Rancho Cordova project segment footprint
Prospect Hill Community Park	City of Rancho Cordova	0.85 mile southwest of Rancho Cordova project segment footprint
Upper Sunrise portion of the American River Parkway Regional Park	Sacramento County	1,800 feet northwest of Rancho Cordova project segment footprint
Nimbus Fish Hatchery	CDFW	0.90 mile northwest of Rancho Cordova project segment footprint
Nimbus Dam Recreation Area	California Department of Parks and Recreation	1,200 feet northwest of Rancho Cordova project segment footprint
Lower American River	California Resources Agency	0.75 mile northwest of Rancho Cordova project segment footprint
Natomas Station Elementary School	Folsom Cordova Unified School District ¹	0.50 mile south of Folsom project segment footprint
Sutter Middle School	Folsom Cordova Unified School District ¹	0.65 mile northeast of Folsom project segment footprint
Sacramento Valley Railroad	State Historic Preservation Officer	Within Folsom and Rancho Cordova project segment footprints
American River Placer Mining District	State Historic Preservation Officer	Resource boundaries overlap Folsom and Rancho Cordova project segment footprints

¹. Email communication with Maureen Ferry, District Facilities Coordinator, regarding recreation facilities at the school site. Recreational facilities are open to the public during non-school hours.

Source: Data compiled by AECOM in 2019

Recreational Resources

Although the Folsom Parkway Rail Trail is within the project footprint of the Folsom project segment, the trail occupies an existing transportation facility right-of-way within the project corridor. Public use of the trail would be maintained, and the proposed action would not alter access to the trail. Therefore, per 23 CFR Section 774.13(f), the Folsom Parkway Rail Trail is exempt from the requirements of Section 4(f). In addition, the portion of the trail north of Glenn Drive, where the trail alignment is closest to the light rail tracks, was designed by City staff with SacRT staff. South of Glenn Drive, past the Glenn Station, the trail was constructed prior to the station but was modified jointly with SacRT when the station was designed (Konopka 2019). None of the remaining recreational resources are within the project segments. Neither construction nor operation of the proposed action would result in the temporary or permanent acquisition of right-of-way from any of these resources nor would the project result in a temporary or permanent change in public access to these resources. Therefore, the proposed action would not result in direct Section 4(f) use of these recreational resources.

Recreation resources within the defined areas of study, but greater than 500 feet from the project segment, were determined to be of sufficient distance from the project footprint that potential proximity impacts would not substantially impair the activities, features, or attributes of the properties that qualify them for protection under Section 4(f) and no constructive use would occur.

Construction of the proposed action could result in temporary noise increases to users of recreational areas. As described in Item J, Noise, incorporation of mitigation measures would ensure that the proposed action would not result in adverse construction noise impacts. While the proposed action could result in moderate noise impacts, the anticipated recreational activities at the identified recreational areas greater than 500 feet are not noise sensitive; therefore, the temporary construction-related increase in noise would not adversely affect the protected activities, features or attributes of the properties that qualify for protection under Section 4(f).

As described in Item G, Aesthetics and Visual Quality, the proposed action would operate almost entirely within an existing rail right-of-way and would not introduce new visual elements into the setting that contrast with the existing visual character. Additionally, the proposed action would not result in the removal of a substantial numbers of trees such that the overall visual quality and character in both project segments would be adversely affected. Therefore, the proposed action would not affect the visual setting of the recreational resources within the study area.

One Section 4(f) recreation resource is within 500 feet of the Folsom project segment: Folsom Lake State Recreation Area. Although the Folsom Lake State Recreation Area is within 500 feet, the majority of the recreational features, including campgrounds, picnic sites, and multi-use trails are located at a greater distance from the project segment. The Folsom Lake State Recreation Area is adjacent to Folsom Boulevard, a noise-generating transportation corridor immediately west of this project segment. As a result, potential construction-related noise increases would not be inconsistent with user expectations (i.e., recreationists are not enjoying the recreation area for its quietude) and would not be expected to adversely affect the protected activities, features, or attributes that qualify the resource for protection under Section 4(f). In addition, access to this resource would not be affected during construction and operation.

Because proximity impacts from construction and operation would not be adverse, the proposed action would not substantially impair the activities, features, or attributes that qualify the Folsom Lake State Recreation Area for protection under Section 4(f) and no direct use or constructive use would occur.

Historic Resources

The study area for historical properties is the APE which includes all ground-disturbing activities associated with project implementation that could result in direct impacts to archaeological resources or

to historic-period buildings, structures, or objects. There are two historic resources within the APE: Sacramento Valley Railroad and American River Placer Mining District. The proposed action would not require the acquisition of temporary or permanent right-of-way from either of these historic resources. Therefore, there would be no direct use under Section 4(f).

SHPO provided concurrence in September 1993 that the Sacramento Valley Railroad is eligible for listing in the NRHP. The SHPO has previously determined that changes to the rail alignment within the original right-of-way would not result in an adverse effect on historic properties, because it would not disturb, destroy, or otherwise adversely affect the elements of the rail line that contribute to its significance. The elements of the line that retain the integrity of location and design would not be adversely affected. All other elements of historic integrity—including materials, workmanship, feeling, association, and setting—no longer exist. Therefore, a preliminary determination of no adverse effect was presented for SHPO concurrence, and the SHPO concurred in its January 23, 2020 letter (see Appendix A). In addition, because the proposed action includes improvements to rail transit lines that are in use or were historically in use, per 23 CFR Section 774.13(a), the Sacramento Valley Railroad is exempt from the requirements of Section 4(f). There would be no constructive use under Section 4(f).

As described in Item I, Historic and Cultural Resources, no features associated with the American River Placer Mining District are in the area of direct impact within the APE. Because no features associated with the American River Placer Mining District are in the project segments or the project area, the project would not disturb, harm, or otherwise substantially impair the historic attributes of this NRHP-eligible resource. Therefore, a preliminary finding of no adverse effect was presented for SHPO concurrence, and the SHPO concurred in its January 23, 2020 letter (see Appendix A). The proposed action would not result in a substantial impairment of the features and attributes that qualify the historic properties for protection under Section 4(f) and no use or constructive use would occur.

P. SECTION 6(f)

The proposed action would not involve land acquisition of any property used for outdoor recreation. Therefore, possible use of such facilities funded with Land and Water Conservation Fund grants would not occur, and Section 6(f) would not apply.

Q. SEISMIC AND SOILS

No known faults are in the vicinity of either project segment. The nearest active faults are approximately 55 miles to the north, east, and west, near Lake Oroville, Lake Tahoe, and the Coast Ranges, respectively (Jennings and Bryant 2010).

Most of the project would be constructed either in artificial fill or dredge tailings (NRCS 2018) within an existing rail right-of-way. The exact nature of the artificial fill material is unknown, and therefore it could be unstable or expansive, although there is considerable information and documentation of the soil conditions when the Gold Line was originally designed and constructed (revenue service commenced in 2005). When foundation loads are placed on dredge tailings, they could shift, causing subsidence and settlement. The proposed facilities would be designed similarly to the existing line and in accordance with a variety of different standards and recommended practices that govern rail projects, including most notably the American Railroad Engineering and Maintenance-of-Way Association (AREMA) manual which SacRT cites in its design criteria. The engineering geologists and geotechnical engineers who would design the project improvements would use these guidelines and best practices, which include provisions to reduce hazards from unstable and expansive soils.

As a result of the experience with prior construction in the corridor and compliance with industry standards and best practices, construction and operation of the proposed action would not be exposed to unusual seismic or soil conditions.

R. IMPACTS ON WETLANDS

Based on a review of the U.S. Fish and Wildlife Service's (USFWS) National Wetland Inventory data (USFWS 2019a), current and historic Google Earth satellite images of the project segments, and field visits by AECOM biologists, natural aquatic features are not present in the project segments. No project activities are proposed within a water body/water course; therefore, project-related activities would cause no direct fill or indirect temporary or permanent loss of State or federally protected wetlands. Equipment mobilization and staging areas for vegetation removal activities would be on existing access roads and uplands (i.e., annual grassland and ruderal areas), so that these activities would not directly affect any State or federally protected wetlands.

S. FLOODPLAIN IMPACTS

Neither of the project segments are in a Federal Emergency Management Agency (FEMA) 100-year flood hazard zone (1 percent annual exceedance probability) (FEMA 2016). Therefore, the proposed action would not increase flooding hazards and would not change floodplain elevations or floodways.

T. IMPACTS ON WATER QUALITY, NAVIGABLE WATERWAYS, & COASTAL ZONES

No project features or activities are proposed within a water body/water course, near a coastal zone (project location is over 100 miles from the California coastal zone), or in the vicinity of an EPA-designated sole source aquifer (EPA 2019b). The proposed action would not alter or create a new direct connection to a surface water body. Lake Natoma is approximately 0.5 mile west of the Folsom project segment and approximately 0.75 mile northwest of the Rancho Cordova project segment. Willow Creek flows westward underneath Folsom Boulevard approximately 800 feet south of the southern end of the Folsom segment. The Folsom South Canal is approximately 1,300 feet south of the Rancho Cordova project segment. Willow Creek and the Folsom South Canal drain into the Lower American River, and Lake Natoma is part of the Lower American River.

The existing Glenn and Hazel Stations—where new boarding platforms, passing tracks, and pedestrian shelters and signage are proposed—have existing stormwater drainage systems that eventually discharge into Lake Natoma and the Lower American River. The proposed improvements within the rail corridor would include additional drainage ditches or underground pipes to convey stormwater from the right-of-way. Drainage ditches and overland sheet flow along the existing tracks and the proposed drainage features eventually discharge to Lake Natoma and the Lower American River. Lake Natoma and the Lower American River are Clean Water Act (CWA) 303(d)-listed water bodies.

Long-term operation of the additional station platforms at Glenn Station in Folsom and Hazel Station in Rancho Cordova would create minor amounts of additional stormwater runoff from the addition of new impervious surfaces (approximately 10,140 square feet for the new platforms and pedestrian connections). However, both stations already have stormwater drainage systems in place, and the runoff from the two additional platforms would be designed for conveyance into the existing systems. The proposed action would comply with the provisions of the State Water Resources Control Board's (SWRCB) National Pollutant Discharge and Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order 2009-009-DWQ, as amended by Order 2012-0006-DWQ) (Construction General Permit) (SWRCB 2012). The Construction General Permit regulates stormwater discharges for construction activities under the federal CWA, and applies to all land-disturbing construction activities that would disturb 1 acre or more.

SacRT would also comply with the Central Valley Regional Water Quality Control Board (RWQCB) requirements to obtain Waste Discharge Requirements (WDRs) and would comply with the provisions therein. SacRT would comply with the MS4 permits issued by the Central Valley RWQCB (2016) to Sacramento County, Folsom, and Rancho Cordova. The MS4 permits require project applicants to incorporate low impact development (LID) source control, site design, stormwater treatment, and

hydromodification management measures in order to reduce the volume, control the rate, and reduce pollutants in stormwater runoff.

Therefore, SacRT would eliminate or reduce non-stormwater discharges to storm sewer systems and other waters; implement permanent post-construction Best Management Practices (BMPs) that would remain in service to protect water quality throughout the life of the project; implement construction and operational design features and BMPs specifically intended to reduce the potential for downstream hydromodification; and implement BMPs designed to prevent accidental spills of hazardous materials during the construction phase to the maximum extent practicable, along with procedures for immediate cleanup if any releases occur.

U. IMPACTS ON ECOLOGICALLY-SENSITIVE AREAS AND ENDANGERED SPECIES

Permits from regulatory agencies with jurisdiction over ecologically-sensitive areas and endangered species (e.g., the U.S. Army Corps for wetlands, the National Marine Fisheries Service for aquatic species and Essential Fish Habitat, the U.S. Fish and Wildlife Service for listed special-status species) would not be required, because these sensitive areas and species are either not present in the project corridor or would be avoided. There is suitable habitat for the federally threatened valley elderberry longhorn beetle and federally protected migratory birds that has been specifically addressed by SacRT in its adopted Initial Study/Mitigated Negative Declaration and in FTA's consultation with the U.S. Fish and Wildlife Service (as described further below).

Habitats and Protected Species

There are no wetlands, riparian habitat, or other sensitive natural communities within the project segments. Land cover/habitat within the project limits are either urban, ruderal, or annual grassland, based on field reconnaissance by AECOM biologists. There are no natural surface water bodies within the project segments. See Items R, Impacts on Wetlands, and T, Impacts on Water Quality, Navigable Waterways, & Coastal Zones, above for a discussion of effects on wetlands and nearby water bodies. Appendix B.2 contains supplemental information regarding survey methods and findings.

No special-status plant species were observed in the project segments or within the biological study area during the reconnaissance-level survey. No suitable habitat for special-status plants is present within or adjacent to the two project segments.

In contrast, five special-status wildlife species could occur in the Rancho Cordova project segment, two of which (Swainson's hawk and white-tailed kite) also may occur in the Folsom project segment. (Based on AECOM field reconnaissance conducted in 2019; USFWS 2019b; California Native Plant Society [CNPS] 2019; and California Department of Fish and Wildlife [CDFW] 2019.) Suitable habitats for special-status species in the project segments consist of the following:

- blue elderberry shrubs in the Rancho Cordova segment, which are the host plant for the federally threatened valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*);
- large and/or dense-topped trees adjacent to grasslands in both project segments, which could provide suitable nesting substrate and foraging habitat for Swainson's hawk (*Buteo swainsoni*), a state threatened species, and/or white-tailed kite (*Elanus leucocephalus*), a state fully protected species;
- a mixture of annual grassland and shrubs in the southeastern extent of the Rancho Cordova segment, which could support nesting grasshopper sparrow (*Ammodramus savannarum*), a state species of special concern; and

- ground-squirrel burrows in low-growing vegetation and parking areas near the Hazel Station in the Rancho Cordova segment, which could support nesting or wintering burrowing owl (*Athene cuniculara*), a state species of special concern.

There are nine records of VELB within 5 miles of the Rancho Cordova project segment, documented via exit holes and the presence of adult beetles, with the nearest record approximately 0.5 mile west, between Folsom Boulevard and U.S. 50 in highway frontage ruderal habitat similar to that present in the Rancho Cordova project segment (CDFW 2019). To address the presence in this project segment and potential to affect VELB, the U.S. Fish and Wildlife Service requested on May 7, 2020 that FTA initiate formal consultation and prepare a Biological Assessment. FTA requested initiation of formal consultation with the submittal of the Biological Assessment, in accordance with requirements set forth under Section 7 of the Endangered Species Act (ESA) (16 U.S. Code 1536[c]). to the U.S. Fish and Wildlife Service on July 10, 2020. The U.S. Fish and Wildlife Service Biological Opinion issued on September 14, 2020 is attached as Appendix B.1 and the Biological Assessment (without its appendices) are attached as Appendix B.2 to this document.

The Biological Assessment reported the results of specific surveys undertaken in May 2020 for the proposed action. The surveys identified 48 elderberry shrubs, the host habitat for the VELB, and five with exit holes, within the defined “Action Area,” which includes the project disturbance area plus a surrounding 165-foot additional study area that is based on U.S. Fish and Wildlife Service guidance for VELB analysis. The location of these shrubs relative to project components is summarized below and the direct and indirect effects are presented in Table 9. Specifically, the identified elderberry shrubs and their driplines were overlaid on the design plans showing the project improvements, the project disturbance area, and the survey study areas (a 20-foot buffer and a 165-foot buffer beyond the disturbance area). Based on this review of the 48 elderberry shrubs,

- 4 are rooted in the permanent right-of-way of the Proposed Action,
- 6 are rooted in the temporary construction easement (two of which had VELB exit holes),
- 15 have canopies that encroach into the project disturbance area but are not rooted within this area (two of which had VELB exit holes), and
- the remaining 23 have neither roots nor canopies within the project disturbance area (one of which had VELB exit holes).

Direct effects (i.e., tree removal or trimming) would be associated with the rail trackwork and construction of a retaining wall and drainage ditch at the edge of permanent right-of-way. Construction activities that would generate dust and erosion and could result in soil compaction, grading around roots, and accidental releases of hazardous materials. Other potential indirect effects of the Proposed Action include increased noise, artificial lights, and human activity in the Action Area.

Table 9
Effects on VELB in the
Folsom Light Rail Modernization Double Track Project Action Area

Potential Effect	Number of Elderberry Shrubs	Location Relative to Project Disturbance Area
Avoided	18	20 -165 feet south
Indirect	3	Within 20 feet south
Indirect	2	Canopy within 20 feet south
Direct - Removed	4	Rooted inside permanent right-of-way
Direct - Trimmed	21	Canopy inside

Source: Data compiled by AECOM in 2020

In addition to VELB, the numerous shrubs, trees, ruderal areas, and structures in both the Folsom and Rancho Cordova project segments could provide suitable nesting substrate for migratory birds. Project-related disruption or destruction of migratory bird nests would be a violation of the Migratory Bird Treaty Act and Section 3503 of the California Fish and Game Code. Disruption or destruction of active raptor nests would be a violation of the California Fish and Game Code Section 3503.5. A total of 93 trees (44 trees in the Folsom segment and 49 trees in the Rancho Cordova segment) are rooted within or adjacent to (i.e., within 20 feet of) the project footprint that may be indirectly affected by trimming or directly affected by removal, potentially resulting in removal or destruction of nests and/or nesting birds and raptors. During project construction, temporary increases in noise levels from equipment mobilization, trenching, grading, and earth-moving, as well as increased levels of human movement, could disrupt the nesting and foraging behavior of birds and raptors within the project footprint, causing adults to abandon nests or neglect young chicks. Therefore, direct and indirect effects of the proposed action would be adverse but would be avoided, minimized, and compensated for because of the mitigation measures adopted pursuant to CEQA and incorporated as part of the proposed action by the SacRT Board, as well as the additional conservation measures contained in the Biological Assessment and the September 14, 2020 Biological Opinion from the U.S. Fish and Wildlife Service.

The mitigation measures listed below have been adopted by SacRT Board as part of the Initial Study/Mitigated Negative Declaration prepared for the project under CEQA, and therefore will be implemented as part of the proposed action. Mitigation Measures BIO-1, BIO-2, and BIO-3 would require preconstruction surveys to identify whether active nests are present and to delineate no-construction buffer zones to avoid effects on nesting raptors and/or other birds. Mitigation Measure BIO-4 would avoid and minimize direct and indirect effects on the VELB by requiring preconstruction surveys for VELB exit holes, implementing restrictions on removal or trimming of elderberry shrubs, and requiring compensatory mitigation (if necessary). In addition, the adopted CEQA mitigation measures are supplemented by specific conservation measures itemized in the Biological Opinion (see Appendix B.1) and reproduced below.

Mitigation Measure BIO-1: Conduct preconstruction surveys for migratory birds and raptors

Trees and vegetation must only be removed outside the nesting season, September 1 through January 31. If construction occurs between February 1 and September 15, SacRT must conduct preconstruction surveys for active nests of migratory nesting birds and raptors, including special-status species (i.e., grasshopper sparrow and white-tailed kite), within 14 days before the start of any construction-related activities. Preconstruction surveys for Swainson's hawk will be carried out separately, in accordance with Mitigation Measure BIO-2, over a longer survey period in the months before the start of project-related construction.

If active nests are found, SacRT must consult with a qualified biologist to establish avoidance buffers around nests that will be sufficient so that breeding will not be likely to be disrupted or adversely affected by project activities. An avoidance buffer will consist of an area where project-related activities (i.e., vegetation removal, earth moving, and construction) will not occur. Typical avoidance buffers during the nesting season will be a radius of 100 feet for nesting passerine birds and 500 feet for nesting raptors, unless a qualified biologist determines that smaller buffers will be sufficient to avoid impacts on nesting raptors and/or other birds. Factors to be considered for determining buffer size will include the presence of existing buffers provided by vegetation, topography, and infrastructure; nest height; locations of foraging territory; and baseline levels of noise and human activity. The buffer zone must be delineated by highly visible temporary construction fencing. A qualified biologist must monitor active nests during construction, so that the species is not harmed or harassed by the noise or activity resulting from project-related activities. The buffers must be maintained until a qualified biologist has determined that the young have fledged and are no longer reliant on the nest or parental care for survival.

Mitigation Measure BIO-2: Avoid impacts on nesting Swainson's hawk through preconstruction surveys and buffer zones around active nests

SacRT must implement the following measures to avoid and minimize impacts on Swainson's hawk:

- Trees must not be removed during the breeding season for nesting raptors (March 1 through September 15), unless a survey by a qualified biologist verifies that no active nests are in the trees.
- For staging and construction activities that begin between March 1 and September 15, SacRT must retain a qualified biologist to conduct preconstruction surveys for Swainson's hawk and identify active nests on and within 0.25 mile of the project area. The surveys will be timed in accordance with the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk Technical Advisory Committee 2000). To meet the minimum level of protection for the species, the surveys will be completed for at least the two survey periods immediately before the project's implementation. Appropriate survey periods will include:
 - Between January and March 20, before Swainson's hawk returns from migration, an optional survey of the project segments may be conducted to determine potential nest locations.
 - Between March 20 and April 5, old nests, staging birds, and competing species will be observed. The hawks are expected to be in their territories during survey hours from sunrise to 10 a.m. and from 4 p.m. to sunset.
 - Between April 5 and April 20, both males and females are expected to be actively nest-building, visiting their selected site frequently. Territorial and courtship displays and copulation will be increased. The birds will tend to vocalize often, and their nest locations will be identified most easily.
 - Between June 10 and July 30 (post-fledging), from sunrise to noon and from 4 p.m. to sunset, young birds are expected to be active and visible. Both adult parents will make numerous trips to the nest and often will soar above, or will perch near or on the nest tree, allowing easy observation.

If no active nests are found, a letter report documenting the survey methods and results must be submitted to CDFW and no further mitigation will be required.

- If an active nest is found, impacts on nesting Swainson's hawks must be avoided by establishing appropriate buffers around active nest sites, identified during preconstruction Swainson's hawk surveys. CDFW guidelines recommend implementation of a 0.25-mile-wide buffer for Swainson's hawk, but the size of the buffer may be adjusted if a qualified biologist and SacRT, in consultation with CDFW, determine that such an adjustment would not be likely to adversely affect the nest. Project construction activities will not begin within the buffer areas until a qualified biologist has determined, in coordination with CDFW, that the young have fledged, the nest is no longer active, or reducing the buffer will not be likely to result in nest abandonment. Nest monitoring by a qualified biologist during and after construction or staging activities will be required if the activity has the potential to adversely affect a nest.

Mitigation Measure BIO-3: Avoid impacts on burrowing owl in the Rancho Cordova project segment through preconstruction surveys and buffer zones around occupied burrows

SacRT must implement the following measures to reduce impacts on breeding or wintering burrowing owl in the Rancho Cordova project segment:

- SacRT must retain a qualified biologist to conduct focused surveys for burrowing owls in areas of suitable habitat. The surveys must be conducted before the start of construction activities and in accordance with Appendix D of CDFW's Staff Report on Burrowing Owl Mitigation (CDFG 2012). If no occupied burrows are found, a letter report documenting the survey methods and results will be submitted to CDFW, and no further mitigation will be required.
- If a burrow that is occupied by a burrowing owl is found, SacRT must consult with CDFW regarding protection buffers to be established around the occupied burrow and maintained throughout construction. Recommended buffers will range from a radius of 150 to 1,500 feet, depending on site conditions and burrowing owl use of the burrow. Exclusion of burrowing owls from any occupied burrows is not expected to be necessary because the staging areas may be adjusted to minimize disturbance. No exclusion of burrowing owls will be permitted during the breeding season (February 1 through August 31).

Mitigation Measure BIO-4: Avoid impacts on Valley Elderberry Longhorn Beetle (VELB) in the Rancho Cordova project segment through preconstruction surveys for VELB exit holes, restrictions on removal or trimming of elderberry shrubs, and compensatory mitigation if necessary

Before the start of project construction, SacRT must retain a qualified biologist to conduct a survey for VELB exit holes in the Rancho Cordova project segment and prepare a VELB survey report for SacRT, to be submitted to USFWS for review and consultation before project construction. The VELB survey report must include the following:

- the location of elderberry shrubs in the project segment and within 165 feet (50 meters) of the project footprint;
- the number of elderberry shrubs that will be directly affected by the project;
- a map that delineates the area that will be directly affected and the elderberry shrub locations within 165 feet (50 meters) of the project footprint;
- information regarding the quality of individual elderberry shrubs and the continuity of riparian habitat outside the project area;
- a determination of the presence of exit holes in elderberry stems, and whether or not these stems will be affected by the project;
- an evaluation of the surrounding habitat and known VELB occurrences within 2,625 feet (800 meters) of the project segment; and
- a description of surrounding land uses, including land uses that may be incompatible with VELB use or a potential barrier to VELB dispersal.

To avoid and minimize impacts on VELB and/or its habitat, SacRT must coordinate with USFWS to determine project-specific conservation measures. At minimum, SacRT must implement the following measures, which may be amended in consultation with USFWS:

- To the greatest extent feasible, damaging or removing elderberry shrubs must be avoided. Construction activities that may damage or kill an elderberry shrub (e.g., trenching, paving) may need an avoidance area of at least 20 feet (6 meters) from the dripline, depending on the type of activity. All areas to be avoided during construction activities must be fenced and/or flagged as close to construction limits as feasible.
- As much as feasible, all activities that occur within 165 feet (50 meters) of an elderberry shrub must be conducted outside the VELB flight season (March–July).
- Any trimming of elderberry shrubs must occur only between November and February. Trimming must avoid removal of any branches or stems that are greater than or equal to 1

inch in diameter. Measures to address regular and/or large-scale maintenance (trimming) will be established in consultation with USFWS.

If adverse impacts on VELB are expected because of the project, SacRT must consult with USFWS to determine the appropriate type and amount of compensatory mitigation. Because the project segment is in a non-riparian area, compensation typically will be appropriate for occupied shrubs (USFWS 2017). Appropriate compensatory mitigation can include purchasing credits at a USFWS-approved conservation bank, providing on-site mitigation, or establishing and/or protecting habitat for VELB. At minimum, impacts on individual shrubs in nonriparian areas will be replaced through a purchase of 1 credit at a USFWS-approved bank for each shrub that will be trimmed, if exit holes are found in any shrub on or within 165 feet (50 meters) of the project area. If the occupied shrub will be completely removed by the activity, the entire shrub will be transplanted to a USFWS-approved location, in addition to a credit purchase (USFWS 2017).

The July 2020 Biological Assessment fulfills portions of Mitigation Measure BIO-4, specifically to prepare the VELB survey report, and identifies specific measures, based on the U.S. Fish and Wildlife Service Framework, to avoid or minimize effects on VELB, including compensatory mitigation measures. The full measures are presented in Appendix B.1 and are summarized below.

- **Conservation Measure VELB-1: Avoidance Areas** - Prior to the staging and initiation of construction activities, a qualified biologist will establish an avoidance area of at least 6 meters (20 feet) from the dripline of elderberry shrubs that are to be avoided. These avoidance areas will not be disturbed during or after construction or during operation of the project. Activities that may damage or kill an elderberry shrub (e.g. grading, soil stockpiling) will not occur within avoidance areas. Additionally, fencing will be installed around all elderberry shrubs to be avoided by the proposed project. For the five elderberry shrubs that are within 20 feet of the rail right-of-way, fencing will need to be placed less than 20 feet from the dripline, but will be placed as far from the dripline as possible without entering the right-of-way. Installation of construction avoidance fencing to demarcate the avoidance areas will be dependent upon permission to enter the Aerojet property to install this fencing.
- **Conservation Measure VELB-2: Restrictions On Vegetation Removal and Elderberry Trimming Activities** - To the greatest extent feasible, all activities within 165 feet of elderberry shrubs will occur outside the beetle's flight season (March – July). Timing of vegetation removal will be limited to September – January, and may be further restricted to avoid interference with Aerojet's soil vapor extraction activities. Any trimming of elderberry shrubs must occur only between November and February when the shrubs are dormant. Trimming must avoid removal of any branches or stems that are greater than or equal to 1 inch in diameter. Any future measures to address regular and/or large-scale maintenance (trimming) will be established in consultation with the Service.
- **Conservation Measure VELB-3: Worker Education** - Prior to construction, a qualified biologist will provide training for all contractors, work crews, and any onsite personnel on the status of the beetle, its host plant and habitat, the need to avoid damaging the elderberry shrubs, the locations of avoidance areas, and the possible penalties for noncompliance.
- **Conservation Measure VELB-4: Dust and Erosion Control** - To protect beetle habitat and reduce potential effects of dust on emerging and adult beetles during the flight season, Best Management Practices (BMPs) will be implemented to reduce erosion and dust.
- **Conservation Measure VELB-5: Artificial Lighting Control** - To reduce potential effects of artificial nighttime lighting on emerging and adult beetles during the flight season, artificial nighttime lighting for connection of the new overhead lines with the existing overhead contact system in the rail ROW will occur over a maximum of three nights and will only occur at the east

and west termini of the proposed project. Lights will be shielded, directed within the boundaries of the work area, and away from adjacent habitat.

- **Transplanting and Credit Purchase** – The applicant (SacRT) will compensate for adverse effects to any beetles inhabiting the 4 elderberry shrubs to be transplanted and 21 elderberry shrubs to be trimmed by purchasing credits at a 1:1 ratio. Therefore, the applicant will purchase 25 credits from a Service-approved beetle conservation bank. Credits will be purchased prior to any ground-disturbing activities. The four elderberry shrubs to be transplanted will be transplanted at a Service-approved beetle conservation bank in accordance with the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus)* Service 2017). Transplanting will occur during the dormancy period for the elderberry shrubs (November – February), and the applicant will plant additional elderberry seedlings at a 3:1 ratio (for a total of 12 elderberry seedlings planted) at the Service-approved conservation bank.

Protected Trees

Temporary effects related to project staging and laydown areas, and permanent effects related to installation of project components potentially would result in direct or indirect effects on up to 91 trees (44 trees in the Folsom project segment and 49 trees in the Rancho Cordova project segment) that were mapped by AECOM biologists within 20 feet of the project boundaries. Direct effects would include major trimming of limbs and/or tree removal, while indirect effects may result from activities within the dripline that could require trimming of smaller limbs or may cause changes in soil texture and quality (e.g., grading and compaction), leading to a potential decline in tree health. The number of trees that are rooted within the project footprints (permanent and temporary) and potentially could be removed would include four native oak trees in the Folsom project segment and 12 trees (six native trees and six non-native landscape trees) in the Rancho Cordova project segment. Tree species that were mapped as part of the biological survey and their locations in relation to the project footprint are shown in Table 9.

Many of the trees within or adjacent to the project footprint are California native oaks, other native trees, or large landscape trees, all of which are protected by local ordinances. Activities that may result in effects on protected trees in the cities of Folsom and Rancho Cordova are governed by the Folsom Tree Preservation Ordinance (Folsom Municipal Code 2019) and the Rancho Cordova Tree Preservation and Protection Ordinance (Rancho Cordova Municipal Code 2019), respectively. Therefore, this effect could be adverse but would be avoided or minimized because of the mitigation measure, below, adopted pursuant to CEQA and incorporated as part of the proposed action by the SacRT Board.

**Table 9
Trees Mapped Within and Outside (within 20 feet) the Project Segment Footprints**

Tree Species	Total Number of Trees Mapped	
	Within Footprint	Outside Footprint (within 20 feet)
Folsom Project Segment		
Black Locust*	0	5
Black Walnut	0	2
Black Willow	0	1
Blue Oak	1	0
Interior Live Oak	3	29
Valley Oak	0	3
Total	4	40
Rancho Cordova Project Segment		
Black Walnut	1	0
Black Willow	0	1
Crepe Myrtle*	0	1
Fremont Cottonwood	0	2
Eucalyptus species*	4	17
Interior Live Oak	2	3
London Plane*	2	5
Pear Tree*	0	1
Privet*	0	3
Unknown species*	0	3
Valley Oak	3	1
Total	12	37

Note:

*Trees denoted with an asterisk are not native to California.

Source: Data compiled by AECOM in 2019

Mitigation Measure BIO-5: Conduct a preconstruction arborist survey and implement a tree replacement plan

Before project construction, SacRT must retain a certified arborist to conduct an arborist survey at the Folsom and Rancho Cordova project segments and prepare an Arborist Survey Report for each segment. To meet the requirements of both the Folsom Tree Preservation Ordinance and the Rancho Cordova Tree Preservation and Protection Ordinance, the Arborist Survey Report must include the following information:

- species identification and sub-meter accuracy locations of each tree within and near the project footprint;
- trunk diameters, measured at standard height;
- approximate tree heights;
- approximate tree dripline radii;
- a brief statement for the reasons for removal or major trimming of trees;
- identification of suitable measures to protect trees for preservation;
- evaluation of areas in which to plant replacement trees; and
- a site plan showing the accurate location, number of trees affected, species, trunk diameters, approximate heights, and approximate driplines of any trees to be removed.

In accordance with Chapter 12.16 of the Folsom Municipal Code (2019), before vegetation removal or clearing activities in the Folsom project segment, SacRT must provide the following information:

- Justification statement
- Arborist's Survey Report
- Site Map
- Tree locations
- Protected zone of protected trees
- Preservation Program
- Arborist's Survey Report

In accordance with Chapter 19.12 of the Rancho Cordova Municipal Code (2019), before project implementation in the Rancho Cordova project segment, SacRT must provide the following information:

- Statement for the reasons for removal or major trimming, written by a certified arborist
- Consent of the owner of the record of the land on which the proposed activity is to occur
- A tree inventory, including a Site Plan
- Tree Replacement Plan

Based on the information in these submittals, SacRT must meet with the cities to establish suitable tree plantings or payment of in-lieu fees. If tree plantings are selected as the preferred method of mitigation, then details regarding the location and size of the replacement trees must be incorporated into the construction specifications and plans.

Wildlife Corridors

Wildlife movement corridors in the region typically are associated with rivers and creeks supporting riparian vegetation, which do not occur in the project site and are available elsewhere, including the neighboring Lower American River, Lake Natoma, and Folsom Lake State Recreation Area. Project construction temporarily could impede wildlife use of the project site, although the project area is already used for light rail service and project construction would not be likely to further interfere with any existing wildlife migration through or along the project area. If such interference were to occur, the project effects would be localized, temporary, and have minor effects, if any, on wildlife movements.

Essential Fish Habitat

There is no fish habitat within the project segments. As stated previously, existing stormwater drainage systems at the Glenn and Hazel Stations, as well as local drainage ditches and overland sheet flow in the project segments, eventually discharge to the Lower American River, which provides essential fish habitat for Chinook salmon (*Oncorhynchus tshawytscha*). However, as discussed in detail in Item T, Impacts on Water Quality, Navigable Waterways, & Coastal Zones above, SacRT would implement a SWPPP and associated BMPs as required under the NPDES Construction General Permit. Compliance with the permit conditions, which is required by law, would result in control of pollutants (including downstream sediment transport) during the project's construction and operational phases, such that

degradation of downstream essential fish habitat would not occur. Therefore, potential effects on essential fish habitat would be not adverse.

V. IMPACTS ON SAFETY AND SECURITY

Safety and security measures are included as part of the proposed action and would avoid the potential for increased hazards for passengers and others traveling in the vicinity of the project limits.

Light Rail Passengers and Operations

Pedestrian, bicycle, and motorist warning devices, including gates, flashing lights, and bells, already operate at the at-grade railroad crossings. The addition of a passing track would enable SacRT to increase number of trains operating along the Gold Line. These same warning devices would continue to function and provide safety for pedestrians, bicyclists, and motorists. Modifications to the street, sidewalk, and curb at the Folsom Boulevard/Glenn Drive intersection would be designed in accordance with the City of Folsom design specifications, including maintenance of adequate turning lanes, sight distances, and signal timing.

The new platforms at the Glenn and Hazel Stations would comply with the Americans with Disabilities Act and SacRT station design criteria and safety standards. According to SacRT's Station Design Criteria, the new platforms would include light fixtures and security features, including surveillance cameras and speakers, similar to those already provided at the existing Glenn and Hazel Stations. In addition, at the Glenn Station, a barrier with a steel handrail mounted on the top, would be installed along west side of the new platform to separate vehicular traffic along Folsom Boulevard and light rail passengers at the new platform. The barrier would extend along the station access walkway and the street side of the sidewalk, to protect motorists, pedestrians, and the warning device west of the new track.

The project improvements would also install new "gate position indicators" (i.e., LED signals mounted on a crossing mast or in the vicinity of a crossing gate), which would alert train operators if there are crossing equipment malfunctions ahead and enable them to implement safety measures and reduce lengthy delays.

Safety for Others Traveling Nearby

A retaining wall is proposed north of Glenn Drive, where the light rail tracks would be near the Folsom Parkway Rail Trail, and would protect recreationists on the trail from Gold Line operations.

A minimum 20-foot separation would be maintained between the centerlines of the light rail and freight tracks to provide a safe spatial buffer, or distance, for trains to pass.

W. IMPACTS CAUSED BY CONSTRUCTION

Construction Plan

Construction of the passing tracks is expected to take approximately 25 months, after final design and selection of a contractor. Service with the new passing tracks would be operational by 2025. After completion of final design, acquisition of any required real estate, and selection of a construction contractor, the general construction sequence would be as follows:

1. Demolition of existing structures, including portions of the existing street curb, gutter, and sidewalk, and any structures that lie within the permanent "footprint," the land area required for future light rail operations, stations, and other ancillary facilities.

2. If necessary, relocation of aboveground utilities, including traffic signals, SacRT overhead contact system support poles, and other overhead utilities for electrical transmission and communications, and potentially relocation of underground utilities in various segments along the track alignment. Based on initial field visits, no overhead utilities appear to require relocation and existing underground facilities are only at street crossings, where they are at a depth not expected to be affected by construction. These utilities would be protected in place.
3. Installation of underground utilities, including all electrical systems needed for traffic control systems at street crossings. This would include installation of foundations for poles supporting the overhead contact wires; each pole (approximately 3 feet in diameter) would require a shaft up to 30 feet deep that would be backfilled with concrete. Poles typically would be 150 feet apart, depending on the alignment (closer spacing would be required, if the alignment is curved).
4. Grading to create proper site elevations along the corridor. Generally, track bed preparation would require excavation to a depth of approximately 36 inches before the rail bed is built up. Excavation may be deeper in localized areas where unsuitable material is removed and replaced to support the track section. Installation of trackwork would be included.
5. Installation of asphalt and concrete works, including curb, gutter, sidewalk, and pedestrian crossings. This would include all necessary paving for the new light rail station platforms at the Glenn and Hazel Stations.
6. Installation of aboveground electrical utilities to support the light rail operations, including power poles and overhead contact wires.
7. Completion of all architectural features for passenger service on the new light rail station platforms.

These construction activities would apply to both passing tracks, but SacRT would be expected to phase some of the construction activities, depending on the availability of funding. If funds are not sufficient to install both passing tracks, the passing track in Folsom would be constructed first.

Construction would take place in the following three phases over the approximately 25-month construction duration:

- Phase 1 would last approximately 8 months and would include utility relocations, clearing and grubbing the project site, and installing new duct banks for traction power and signaling; along with installing foundations for OCS poles where needed, train control signal cases, and grade crossing warning devices. It also would include any new drainage facilities (open ditches and underground pipes).
- Phase 2 would last approximately 14 months and would include construction of the new station platforms and new track, relocation of OCS poles where needed, installation of signal equipment and grade crossing warning devices, and construction of sidewalk improvements. Toward the end of Phase 2, the pedestrian circulation to the park-and-ride lot, the temporary mini-high shelters, and the main shelter would be installed. Decorative and centerline fencing would be installed as well as station furniture and signage to complete this phase.
- Phase 3 would last approximately 3 months, during which the contractor would conduct operational tests, install artwork, clean up the project site, and perform finishing work.

The majority of the construction equipment would be needed throughout Stage 1 and most of Stage 2, and would include graders, back hoes, medium-size cranes, dump trucks, excavators, augers, pavers, tampers, concrete trucks, and rail grinding machines.

Construction typically would occur between 7 a.m. and 4 p.m. on weekdays. Off-service hours or night work would be required for all construction within 10 feet of the nearest rail and within 10 feet of the OCS. It is estimated that the night work could be completed over a weekend, starting on a Friday night and finishing before revenue service Monday morning. When light rail service would need to be halted during part of Phase 2 when the OCS installation and the train signaling are completed, a bus bridge or temporary bus service to replace interrupted light rail service would be put in place.

Staging areas have not been identified because it would be the contractor's responsibility typically to identify and obtain approval for these areas. Undeveloped lands, private parking lots, and the two station park-and-ride lots are adjacent to the alignment that could be used for construction staging areas. The outside eastbound lane of Folsom Boulevard would require temporary closures from time to time; however, no extended closure of this lane is anticipated.

Construction Impacts

Construction-related effects are identified throughout the topic areas analyses discussed above under Items C through U. Potentially adverse construction effects that would be avoided because SacRT has incorporated the mitigation measures from the CEQA Initial Study/Mitigated Negative Declaration into the proposed action are:

- Traffic
- Air quality emissions
- Inadvertent discovery of cultural resources or traditional cultural properties
- Noise
- Exposure to hazardous materials and interference with ongoing remediation activities at the Aerojet Superfund site
- Disturbance to the federally threatened Valley Elderberry Longhorn Beetle
- Disturbance to nesting birds and raptors protected by the Migratory Bird Treaty Act

X. SUPPORTING TECHNICAL STUDIES OR MEMORANDA

Supporting documents that were prepared in conjunction with this document are contained in the appendices. They include:

- Appendix A: Section 106 of the National Historic Preservation Act Compliance
- Appendix B: Section 7 of the Endangered Species Act Consultation with the U.S. Fish and Wildlife Service and Biological Resources Supplement

In addition to the above appendices, a CEQA Initial Study/Mitigated Negative Declaration was adopted by the SacRT Board of Directors on January 13, 2020. That document is incorporated by reference and is available for review at the project website: <https://www.sacrt.com/apps/modernization/>

Y. PUBLIC OUTREACH AND AGENCY COORDINATION

Project Website

SacRT has created and maintained a website to keep the local communities and the general public apprised of the proposed action: <https://www.sacrt.com/apps/modernization/> The site contains general

information about the proposed action; engineering and environmental documents, drawings prepared, and maps; and contact information for further information.

Public Scoping Meetings

Two public meetings were held in an open house format to inform the public about the project and to solicit ideas about the proposed improvements and the potential effects:

- Folsom Community Center
R.G. Smith Room
52 Natoma Street
Folsom
April 17, 2019, from 6:30 to 8:30pm
- Rancho Cordova City Hall
American River North Meeting Room
2729 prospect Park Drive
Rancho Cordova
June 20, 2019, from 6:30 to 8:30pm

Notices with information about the meeting dates, times, and locations were sent to all property owners within 1,000 feet (on either side) of the project components, as well as to environmental advocacy groups, religious centers and cultural organizations, governmental officials and agencies, and bicycle advocacy groups.

Both meetings were attended by an equal number of participants. A total of five written comments were received, in addition to the question-and-answer exchanges during the meetings. Comments focused on the potential impacts on the adjacent bicycle/pedestrian trail, trees, and local traffic.

Public Meetings

Following release of the draft CEQA document (Initial Study/Proposed Mitigated Negative Declaration), a public meeting was held during the SacRT Board regularly scheduled meeting on December 9, 2019. The purpose of the meeting was to receive comments on draft environmental document and SacRT's intent to adopt the Mitigated Negative Declaration. The comments mirrored those received during the public scoping meetings and concerned traffic impacts and loss of trees.

Responses to comments on the draft CEQA document were prepared and the SacRT Board adopted the Mitigated Negative Declaration and the Mitigation Monitoring and Reporting Program at its meeting on January 13, 2020.

Agency Coordination

In preparing this NEPA documentation to support a Categorical Exclusion, the following agencies have been consulted:

Local Agencies

- City of Folsom
- City of Rancho Cordova
- Sacramento County
- Sacramento-Placerville Transportation Corridor – Joint Powers Authority

State and Federal Agencies

- State Office of Historic Preservation
- U.S. Fish and Wildlife Service

Native American Tribes

- Native American Heritage Commission
- Buena Vista Rancheria of Me-Wuk Indians
- Colfax-Todds Valley Consolidated Tribe
- Lone Band of Miwok Indians
- Nashville Enterprise Miwok–Maidu–Nishinam Tribe
- Shingle Springs Band of Miwok Indians
- Tsi Akim Maidu
- United Auburn Indian Community of the Auburn Rancheria
- Wilton Rancheria

Z. MODAL CATEGORICAL EXCLUSIONS AND RELATED NEPA DOCUMENTS

A Categorical Exclusion or other NEPA document has not been prepared for the proposed action by another federal lead agency. Accordingly, the concept for a single NEPA document pursuant to 23 CFR Sections 771.105 or 23 USC Section 139(d)(8) is not relevant for the proposed action.

The action described above meets the criteria for a NEPA categorical exclusion (CE) in accordance with 23 CFR Part 771.118(d)(8).

Rod Jeung (AECOM) on behalf of SacRT

September 14, 2020

Applicant's Environmental Reviewer

Date

References

- California Department of Fish and Wildlife (CDFW). 2012 (March 7). *Staff Report on Burrowing Owl Mitigation*.
- . 2019. *California Natural Diversity Database (CNDDDB)*. Maps and Data, Rarefind 5 Version 5.2.14. Available: <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>. Accessed June 2019.
- California Native Plant Society (CNPS). 2019. *Inventory of Rare and Endangered Plants of California*. Online edition, v8-03 0.39, Rare Plant Program. Available: <http://www.rareplants.cnps.org>. Accessed June 2019.
- Central Valley Regional Water Quality Control Board (RWQCB). 2016. National Pollutant Discharge Elimination System Permit and Waste Discharge Requirements General Permit for Discharges from Municipal Separate Storm Sewer Systems: City of Folsom, City of Rancho Cordova, County of Sacramento. Available: https://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/. Accessed April 18, 2019.
- City of Folsom. 2018a (August). *Folsom General Plan 2035*. Available: https://www.folsom.ca.us/community/planning/general_plan/2035_general_plan.asp. Accessed August 19, 2019.
- . 2018b (May). *Zoning Map*. Available: <https://assist.folsom.ca.us/civicax/filebank/blobdload.aspx?blobid=33316>. Accessed August 19, 2019.
- City of Rancho Cordova. 2006 (June). *Rancho Cordova General Plan—Cultural and Historic Resources Element*. Available: <https://www.cityofranhocordova.org/i-want-to-/learn-about/general-plan>. Accessed July 18, 2019.
- . 2018 (December). *Rancho Cordova General Plan*. Adopted June 2006, updated December 2018. Available: <https://www.cityofranhocordova.org/government/planning/general-plan#a4>. Accessed June 24, 2019.
- . 2019. *Zoning Map*. Available: <https://www.cityofranhocordova.org/government/planning/most-used-documents/maps>. Accessed June 24, 2019.
- Easton Development Company. 2019. *The Boroughs*. Available: <https://easton-ca.com/the-boroughs/>. Accessed October 10, 2019.
- ECORP. 2008 (November). *Evaluation of Structures Associated with the Aerojet Complex, Glenborough at Easton*. Addendum Report.
- Federal Emergency Management Agency (FEMA). 2016. *Flood Insurance Rate Maps*. Available: <https://msc.fema.gov/portal/search#searchresultsanchor>. Accessed April 17, 2019.
- Fonseca, Daniel. 2019 (December 6). Letter from Daniel Fonseca, Cultural Resource Director, Tribal Historic Preservation Officer, and Most Likely Descendant for the Shingle Springs Band of Miwok, to SacRT, re Cultural Resources [for the Folsom Light Rail Modernization Double Track Project in Sacramento County].

- Gutierrez, C. I. 2011. *Preliminary Geologic Map of the Sacramento 30' x 60' Quadrangle, California*. California Geological Survey. Sacramento, CA.
- Helley, E. J., and D. S. Harwood. 1985. *Geologic Map of the Late Cenozoic Deposits of the Sacramento Valley and Northern Sierran Foothills, California*. U.S. Geological Survey. Map MF-1790. Reston, VA.
- Hilton, R. P., D. C. Dailey, and H. G. McDonald. 2000 (April). A Late Pleistocene Biota from the Arco Arena Site, Sacramento, California. *PaleoBios Abstracts* 20(1).
- Historicaerials.com. 2019. *12000 Folsom Boulevard, Rancho Cordova, CA*. Aerial imagery from various years, 1952–2015. Available: <https://www.historicaerials.com/viewer>. Accessed July 18, 2019.
- Jefferson, G. T. 1991a. *Technical Report No. 5: A Catalogue of Late Quaternary Vertebrates from California—Part One, Nonmarine Lower Vertebrate and Avian Taxa*. Natural History Museum of Los Angeles County, CA.
- . 1991b. *Technical Report No. 7: A Catalogue of Late Quaternary Vertebrates from California—Part Two: Mammals*. Natural History Museum of Los Angeles County, CA.
- Jennings, C. W., and W.A. Bryant. 2010. *2010 Fault Activity Map of California*. Available: <http://maps.conservation.ca.gov/cgs/fam/>. Accessed April 10, 2019.
- Jones & Stokes Associates. 1993. *Archaeological and Architectural Inventory and Determination of Eligibility and Effect of the Butterfield to Mather Field Light Rail Extension and Brighton Bridge Double Tracking Project*. Prepared for Sacramento Regional Transit District.
- Kolber, M. 2004 (July 27). *Mammoth Coup: Discovery of Huge Fossil Near Elk Grove Is a Big Deal for Northern California*. Article in the Sacramento Bee.
- Konopka, Jim. 2019. (December 13). Email from Jim Konopka, former City of Folsom Senior Park Planner, Trails, to current Brett Bollinger, Senior Park Planner, Trails re Folsom Trails/SacRT, and forwarded to Rod Jeung, AECOM Project Manager for the Folsom Light Rail Modernization Double Track Project.
- Lindstrom, S. 1995. *Folsom Dredging Significance Statement*. Submitted to Jones & Stokes, Sacramento, CA. White paper (P-34-000335) on file at the NCIC, Sacramento.
- Meyer, J., and J. Rosenthal. 2008. *A Geoarchaeological Overview and Assessment of Caltrans District 3: Cultural Resources Inventory of Caltrans District 3 Rural Conventional Highways*. Far Western Anthropological Research Group, Inc., Davis, CA.
- Nadolski, J. 2007. *Historic Property Survey Report/Archaeological Survey Report for the Rancho Cordova Parkway Interchange*. Report (S-12346) on file at the North Central Information Center, Sacramento.
- North Central Information Center (NCIC). 2019 (July 12). *Folsom Light Rail Modernization Project Records Search Results*. NCIC File No. SAC-19-131.
- Office of Historic Preservation (OHP). 1999 (July 26). Letter to Federal Transit Administration re Downtown Sacramento Amtrak and Folsom Corridor Double Tracking Project. Reference FTA970129A.

- _____. 2012 (April). Sacramento County Directory of Properties in the Historic Property Data File. On file at the NCIC.
- Past Forward Inc. and ECORP. 2007. *Evaluation of Structures Associated with the Aerojet Complex, Glenborough at Easton, Sacramento County, California*. Report 8821. On file at the NCIC, Sacramento, CA.
- Peak & Associates. 1998. *DPR 523 Linear Feature Record, P-34-455/Trinomial CA-SAC-428H, Sacramento Valley RR*. On file at the NCIC, Sacramento, CA.
- Sacramento Area Council of Governments (SACOG). 2019 (November). *Metropolitan Transportation Plan/Sustainable Communities Strategy*. Available: <https://www.sacog.org/2020-metropolitan-transportation-plansustainable-communities-strategy-update>. Accessed July 8, 2020.
- Sacramento Bee
- _____. 1956 Feb 6. "Plant Will Be Built At Nimbus." Page 1.
- _____. 1956 Feb 24. "Douglas Aircraft Seeks Site near Sacramento for Defense Work Plant." Page 1.
- _____. 1960 Feb 4. "Nimbus Unit of Air Products Cites Tonnage." Page 28.
- _____. 1964 Jan 8. "Air Product Firm Plans Branch in San Joaquin." Page 31.
- _____. 1969 Mar 27. "U.S. Plans Sale of Fuel-Making Plant at Nimbus." Page 1.
- _____. 1973 Sep 9. "New Location for Recycling Scrap." Advertisement. Page 71.
- Sacramento County. 2017 (December). *Sacramento County General Plan of 2005–2030*. Planning and Development Department. Adopted 2005, amended 2017. Available: <http://www.per.saccounty.net/PlansandProjectsIn-Progress/Pages/GeneralPlan.aspx>. Accessed August 23, 2019.
- Sacramento County Assessor's Office. 2019. *Assessor's Parcel Viewer*. Available: <http://assessorparcelviewer.saccounty.net/JSViewer/assessor.html>. Accessed on October 10, 2019.
- Schnitzer Steel. 2019. *Company History*. Available: http://www.schnitzersteel.com/company_history.aspx. Accessed June 2019.
- Shiple, W. F. 1978. Native Languages of California. In *California*, edited by R. F. Heizer, pp. 80–90. *Handbook of North American Indians*, Volume 8, W. C. Sturtevant, general editor. Washington, DC: Smithsonian Institution.
- Society of Vertebrate Paleontology (SVP). 1996. Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources—Standard Guidelines. *Society of Vertebrate Paleontology News Bulletin* 163:22–27.
- Starkey, Anna, M.A., RPA. 2019 (October 16). Email communications from Anna Starkey, Cultural Regulatory Specialist, Tribal Historic Preservation Department, UAIC, to Jennifer Redmond, AECOM archeologist re Native American consultation for the Folsom Light Rail Modernization Project.

- State Water Resources Control Board (SWRCB). 2012. National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated With Construction and Land Disturbance Activities, Order No. 2012-006-DWQ. Available: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2012/wqo2012_0006_dwq.pdf. Accessed April 2, 2019.
- . 2017. *2014 and 2016 California Integrated Report*. Available: https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml. Accessed April 2, 2019.
- Swainson's Hawk Technical Advisory Committee. 2000 (May 31). *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley*.
- University of California, Berkeley Museum of Paleontology (UCMP). 2019. *Paleontological Collections Database*. Available: <https://ucmpdb.berkeley.edu/about.shtml>. Accessed April 11, 2019.
- U.S. Department of Health and Human Services, Indian Health Service. 2019. *List of Federally-Recognized Tribes in California*. Available: <https://www.govinfo.gov/content/pkg/FR-2019-02-01/pdf/2019-00897.pdf>. Accessed on October 10, 2019.
- U.S. Environmental Protection Agency (EPA). 2019a. *Superfund Site: Aerojet General Corp. Rancho Cordova*. Available: <https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0901718>. Accessed April 10, 2019.
- . 2019b. *Sole Source Aquifers*. Available: <https://www.epa.gov/dwssa/map-sole-source-aquifer-locations>. Accessed October 3, 2019
- U.S. Fish and Wildlife Service (USFWS). 2017. Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*). Sacramento, CA.
- . 2019a (May 5). *National Wetlands Inventory*. Wetlands Mapper data desktop/mobile view. Available: <https://www.fws.gov/wetlands/data/Mapper.html>. Accessed June 2019.
- . 2019b. Information for Planning and Consultation (IpaC). Powered by ECOS – the Environmental Conservation Online System. Available: <https://ecos.fws.gov/ipac/>. Accessed August 2019.
- U.S. Natural Resources Conservation Service (NRCS). 2018 (September). *Web Soil Survey*. Available: <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>. Accessed April 12, 2019.
- Wilson, N. L., and A. H. Towne. 1978. Nisenan. In *California*, edited by R. F. Heizer, pp. 387–397. *Handbook of North American Indians*, Volume 8, W. C. Sturtevant, general editor. Washington, DC: Smithsonian Institution.

**Appendix A: National Historic Preservation Act
Section 106 Compliance**



U.S. Department
of Transportation
**Federal Transit
Administration**

REGION IX
Arizona, California,
Hawaii, Nevada, Guam
American Samoa,
Northern Mariana Islands

90 7th Street
Suite 15-300
San Francisco, CA 94103-6701
415-734-9490

888 South Figueroa Street
Suite 440
Los Angeles, CA 90017-5467
213-202-3950

Ms. Julianne Polanco
State Historic Preservation Officer
Office of Historic Preservation
Department of Parks & Recreation
1725 23rd Street, Suite 100
Sacramento, CA 95816

DEC 23 2019

Attn: Ms. Natalie Lindquist

RE: Section 106 Consultation for the Folsom
Light Rail Modernization Double Track Project

Dear Ms. Polanco:

The Federal Transit Administration (FTA), in cooperation with the Sacramento Regional Transit District (SacRT), is seeking concurrence from the California State Historic Preservation Officer (SHPO) pursuant to Section 106 of the National Historic Preservation Act (NHPA) for the Folsom Light Rail Modernization Double Track Project (Project). The FTA is the lead federal agency pursuant to 36 CFR Part 800.2(a)(2) under Section 106 of the National Historic Preservation Act (NHPA), and its implementing regulations (36 CFR Part 800). FTA is initiating Section 106 consultation for this Project. In accordance with 36 CFR 800.5, FTA requests your concurrence that the undertaking would not result in any adverse effects to historic properties.

Description of Undertaking

The Project undertaking would be within the Sacramento–Placerville Transportation Corridor Joint Powers Authority’s right-of-way, which is currently used by SacRT for its Gold Line light rail service through the Cities of Folsom and Rancho Cordova through un-incorporated Sacramento County. SacRT has identified two potential locations for a second set of light rail tracks, at the eastern end of the Gold Line between the Sunrise and Historic Folsom stations: (1) an approximately 0.6-mile segment between Parkshore Drive and Bidwell Street in Folsom; and (2) an approximately 1.2-mile segment between Marketplace Lane and Aerojet Road in Rancho Cordova and un-incorporated Sacramento County. These two locations are hereafter referred to as the “Folsom Project Segment” and the “Rancho Cordova Project Segment,” respectively. See Figure 1 in Enclosure for Project Vicinity Map.

The undertaking includes four components:

Light Rail Trackwork. “Double tracking” (or installing a passing track) would be constructed in two locations in the vicinity of the Glenn/Robert G Holderness Station in the City of Folsom and in the vicinity of the Hazel Station in unincorporated Sacramento County, just east of the Rancho Cordova city limits. The new tracks would maintain a 14-foot separation from the centerline of the existing light rail tracks. The alignment of the new tracks relative to the existing tracks is based on available right-of-way, minimizing disruption to existing operation-related equipment, minimizing removal of mature trees, and avoiding impacts on the nearby Folsom Parkway Rail Trail (in the Folsom Project Segment). To avoid encroachment into the trail, a 300-foot-long retaining wall would be constructed to separate the rail corridor from the trail at its closest point (north of Glenn Drive). Existing overhead contact system support poles would be used as much as possible, but some would need to be relocated. The new pole locations would be within the existing rail right-of-way.

Stations. The undertaking would add new loading platforms at the Glenn/Robert G Holderness and Hazel Stations and modify the existing platforms to accommodate new low-floor vehicles that are being acquired by SacRT. The new platforms would be 8 inches above the top of the tracks, approximately 15 feet wide and 338 feet long. They would be designed to comply with the Americans with Disabilities Act (ADA) and include amenity and station features in accordance with SacRT’s Station Design Criteria (e.g., fare vending machines, canopies, seating, light fixtures, security features, information kiosks). To accommodate existing SacRT light rail vehicles, the new platforms would be fitted with a mini-high platform that would be removed when the new vehicle fleet becomes operational.

Signaling. The undertaking would update the signal system that controls train movements so that trains would be able to operate inbound and outbound between the Sunrise and Historic Folsom stations with little or no delay. The proposed improvements also include additional track circuits that would detect when the train passes through an at-grade street crossing and immediately send a signal to the control cabinet to raise the gates.

Freight Line Realignment. In the Rancho Cordova Project Segment, the addition of the passing tracks would require shifting an existing freight line, freight line siding, and spur line serving a local business (Schnitzer Steel [12000 Folsom Boulevard]). Union Pacific Railroad (UPRR) has the right to run freight trains on the line and the freight easement obligates them to maintain the tracks they use (SacRT maintains the signals), but UPRR owns neither the tracks nor the land underneath the tracks. The freight easement runs from the UPRR mainline (between University/65th Street and Power Inn stations) and Aerojet (at Hazel Station). The realignment of the freight tracks would occur along an approximately 3,300-foot stretch parallel to and south of the light rail tracks in Rancho Cordova. The new alignment would be designed to maintain a 20-foot separation between the centerlines of the light rail and freight tracks. To minimize the need for acquisition of private property to the south, a retaining wall would be constructed between the widened rail right-of-way and the adjacent property to the south.

Area of Potential Effects (APE)

For the undertaking, the APE includes the project footprint, or area of direct impact (ADI), and the parcels adjacent to the ADI (Figures 2A and 2B in Enclosure). The APE includes areas that have the potential to be affected directly or indirectly by construction and operation of the double tracking project. The APE for the undertaking is justified by the magnitude and scale of the project, which proposes improvements to existing rail infrastructure largely within the existing railroad right-of-way. Where improvements would extend outside the existing railroad right-of-way, the entire legal parcel boundary of the parcel with historic-age built environment is included in the APE. Potential indirect effects from vertical improvements such as new station/platforms have also been taken into account in the APE development for potential affects to historic properties.

The proposed vertical APE includes all ground disturbance in the ADI below the existing ground surface. Up to 3 feet typically would be graded and excavated before the rail bed is built up, although excavations of up to 5 feet could be necessary where highly compressible soils, such as peat or soft clay, are present and could not be remediated by other means because of construction or cost constraints. This vertical disturbance would apply throughout the ADI except at the following sites:

- In the two locations, where the proposed passing tracks would cross existing streets (Glenn Drive and Nimbus Road/Hazel Avenue), the existing pavement would be removed and excavations up to a depth of 2.5 feet below the existing ground surface would be needed for the pre-cast track sections.
- Where new foundations are needed for poles to support the overhead contact system, excavations would be 3 feet in diameter and up to 30 feet below the existing ground surface.
- At the two locations where new loading platform shelters would be construction, excavations would be up to 10 feet below the existing ground surface.
- In the two locations where retaining walls are proposed (one in Folsom, between Glenn Drive and Bidwell Street, and one in Rancho Cordova along the Aerojet property), excavations for the foundations would be up to a depth of 2 feet below the existing ground surface.

Identification of Historic Properties and Affected Historic Properties

Archival materials at the North Central Information Center (NCIC) of the California Historical Resources Information System at Sacramento State University and the Sacred Lands File (SLF) with the Native American Heritage Commission (NAHC) were reviewed to identify cultural resources. On June 24, 2019 (in a letter dated June 21, 2019), the NAHC responded that the SLF search was negative.

The records search at the NCIC and OHP directory, in addition to the 2001 Final Environmental Impact Statement/ Environmental Impact Report (EIS/EIR) for the Downtown/Sacramento-Folsom Corridor Project, and review of other sources of information were used to identify known historic properties located in the APE. Background search revealed eleven studies were previously conducted in the APE; four of these studies were conducted after the publication of the 2001 EIS/EIR for the Downtown/Sacramento-Folsom Corridor Project which included the current APE. Each of the studies included a pedestrian survey. Background research revealed

two previously recorded historic properties are located in the APE: American River Placer Mining District (P-34-000335) and a 20-mile segment of the Sacramento Valley Railroad (P-34-000455). There are described in further detail below.

A pedestrian survey of the project area was conducted by an AECOM archaeologist on July 2, 2019. The survey consisted of walking parallel to the SacRT tracks, where sufficient space existed between the track bed and private property. Survey transects were 3 meters or less. Visibility in the project area was generally poor (50 percent or less), with the ground surface obscured by vegetation, gravel, and paving. Where possible, vegetation was scraped away to better view the ground surface, and rodent burrow back dirt piles were inspected closely for indicators of archaeological deposits. Archival research indicated that the APE does not contain any previously recorded Native American sites, prehistoric-period archaeological sites, historic-period cemeteries, or human skeletal remains. However, records maintained by the NCIC and NAHC are not exhaustive, and negative results do not preclude the presence of tribal cultural resources in the APE.

Based on a review of the previous recordation and an evaluation of the properties on file at the NCIC, combined with a reconnaissance-level survey on May 2, 2019 and background research on previously unrecorded historic-age resources that may potentially be affected by the project, an architectural historian who meets the Secretary of the Interiors' Professional Qualification Standards for history and architectural history has concluded that no new historic properties were identified in the APE.

Archaeological Resources

One historic-period archaeological resource was previously recorded in the ADI. This resource is the American River Placer Mining District (P-34-000335), a large district that encompasses both project segments (Figure 3 in Enclosure). The American River Placer Mining District (also known as the Folsom Mining District) is "an extensive conglomerate of historic mining features. This historic district has been recorded and studied in a largely piecemeal fashion and later subsumed under a single State trinomial designation: CA-SAC-308H [P-34-000335]. The district measures 10 miles long by 7 miles wide and encompasses an area where "more than one billion cubic yards of earth were dredged" for gold between 1860 and 1960.

Elements of the district include expansive dredge tailings piles (reflecting different dredging technologies), ponds, adits, remnants of hydraulic mining, and refuse deposits. The district has been recommended as eligible for listing in the NRHP under Criteria A, C, and D, and in the California Register of Historical Resources under Criteria 1, 3, and 4, although the district contains non-contributing elements where features have lost integrity through leveling and aggregate mining (Lindstrom 1995; Nadolski 2007:12). Although the ADI is within the mapped boundaries of the district, no features associated with the district exist in the ADI.

No other previously-recorded archaeological resources were identified in the ADI during the background research or the pedestrian survey, and the ADI has been modified by development, including the construction of the existing rail line. Soils in the Folsom Project Segment are mapped as dredge tailings, although any tailings that may have been present in the ADI have been leveled and removed. Based on soils types mapped in the immediate vicinity (i.e., Natomas

series soils), it is likely the underlying soils in the Folsom Project Segment are also too old to contain buried archaeological resources. Although the undertaking includes ground-disturbing work to a depth of 30 feet, it is unlikely any resources would be present at this depth.

Historic-Period Built Environment Resources

The approximately 20-mile segment of the former Sacramento Valley Railroad (SVRR) from downtown Sacramento to Folsom (P-34-000455), which traverses both project segments in the APE, was determined eligible for listing in the NRHP with State Historic Preservation Officer (SHPO) concurrence in September 1993 (Figure 3 in Enclosure).

Native American Consultation

On June 13, 2019, AECOM requested a Sacred Lands File (SLF) search and a list of Native American tribes with potential interest from the Native American Heritage Commission (NAHC). On June 24, 2019 (in a letter dated June 21, 2019), the NAHC responded that the SLF search was negative.

On August 5, 2019, SacRT notified the following eight tribes (those that are asterisked are federally recognized tribes [U.S. Department of Health and Human Services 2019]) of the undertaking:

- Buena Vista Rancheria of Me-Wuk Indians*
- Colfax-Todds Valley Consolidated Tribe
- Ione Band of Miwok Indians*
- Nashville Enterprise Miwok–Maidu–Nishinam Tribe
- Shingle Springs Band of Miwok Indians*
- Tsi Akim Maidu
- United Auburn Indian Community of the Auburn Rancheria (UAIC)*
- Wilton Rancheria*

To date, two responses have been received. UAIC (a federally recognized tribe) has responded to indicate that the project would not likely affect cultural resources of importance to the tribe, and to request receipt of the environmental documents. The Shingle Springs Band of Miwok Indians (a federally recognized tribe) responded to request initiation of formal consultation, including a meeting. Both tribes requested copies of all environmental documents prior to the meeting. The FTA as the federal lead agency is required to consult with federally-recognized tribes on federal undertakings pursuant to 36 CFR Part 800.

Determination of Effects

Using information gathered during the records search, field survey, and preparation of a technical report, FTA concludes there are two resources in the APE that are considered historic properties, in accordance with 36 CFR Part 800.16(l)(1). To determine whether the undertaking would affect historic properties, the criteria of adverse effect were applied. The project description, as well as a field visit and background research, was used to assess potential effects.

American River Placer Mining District (P-34-000335). The APE is in the mapped boundary of the American River Placer Mining District (P-34-000335), which is the only archaeological historic property in the APE, although no features associated with the district are in the ADI for the undertaking. Because there are no features of the district in the ADI, the undertaking would


not result in a potential adverse effect to this NRHP-eligible archaeological resource. No other archaeological resources were identified during the background research or pedestrian survey and no tribal cultural resources have been identified to date in the APE. Therefore, the undertaking, would have no adverse effects to known archaeological resources within the ADI portion of the APE.

Sacramento Valley Railroad (SVRR) (P-34-000455). The 20-mile segment of SVRR (P-34-000455) is the only built-environment historic property in the APE. The integrity of location for the rail property is that of the right-of-way, not the actual location of the tracks, which are not in their original alignment for more than half of the line from Folsom to Sacramento. The small segments of rail line proposed to be relocated within the existing right-of-way for the undertaking (0.6 mile in Folsom and 1.2 miles in Rancho Cordova and unincorporated Sacramento County) would continue to operate within the original right-of-way. The elements of the line that retain the integrity of location and design would not be adversely affected. All other elements of historic integrity—including materials, workmanship, feeling, association, and setting—no longer exist. In summary, the undertaking would not adversely affect the historic property.

Conclusion

Because the undertaking would not diminish the characteristics of the historic properties in the APE that qualify the two discussed properties for inclusion in the NRHP, a finding of No Adverse Effect consistent with (36 CFR 800.5(b)) is recommended by the FTA. FTA requests the State Historic Preservation Officer's (SHPO) concurrence on FTA's finding of No Adverse Effect on historic properties for this undertaking, pursuant to 36 CFR 800.5(b). FTA requests the SHPO's response within 30 days of receipt of this letter, as specified in 36 CFR 800.5(c). Thank you for your assistance in this undertaking. If you have any questions about the project, please contact Ms. Lucinda Eagle at (415) 734-4576.

Sincerely,


for Ray Tellis
Regional Administrator

Attachments:

- Folsom Light Rail Modernization Double Track Project National Historic Preservation Act, Section 106 Historic Properties Technical Memorandum, prepared by AECOM, dated November 2019
- Figure 1, Project Vicinity Map
- Figure 2A, APE Map (Folsom Segment)
- Figure 2B, APE Map (Rancho Cordova Segment)
- Figure 3, Map of Historic Properties in APE

**FOLSOM LIGHT RAIL MODERNIZATION
DOUBLE TRACK PROJECT**

**NATIONAL HISTORIC PRESERVATION ACT SECTION 106
HISTORIC PROPERTIES TECHNICAL MEMORANDUM**

TO: Lucinda Eagle and Candice Hughes (FTA, Region 9)
Darryl Abansado and Sangita Arya (SacRT)

FROM: Chandra Miller, Architectural Historian, and Jennifer Redmond, Archaeologist,
AECOM

DATE: December 18, 2019

RE: Sacramento Regional Transit District's Folsom Light Rail Modernization
Double Track Project

LOCATION & SETTING

The proposed project would be located along Folsom Boulevard through the cities of Folsom and Rancho Cordova, and through unincorporated Sacramento County, within the Sacramento–Placerville Transportation Corridor Joint Powers Authority's right-of-way (Figure 1), which is currently used by Sacramento Regional Transit (SacRT) for its Gold Line light rail service. SacRT has identified two potential locations for a second set of light rail tracks, at the eastern end of the Gold Line between the Sunrise and Historic Folsom stations: (1) an approximately 0.6-mile segment between Parkshore Drive and Bidwell Street in Folsom; and (2) an approximately 1.2-mile segment between Marketplace Lane and Aerojet Road in Rancho Cordova and unincorporated Sacramento County. The project area is in the southern reaches of the Sacramento Valley in central California and is south and east of the American River, approximately 15 to 18 miles upstream from its confluence with the Sacramento River in the city of Sacramento. The project would be in urbanized areas of Sacramento's suburbs.

INTRODUCTION

The Sacramento Regional Transit District (SacRT) proposes to improve its light rail service to Folsom along its existing Gold Line. The improvements would allow light rail trains to operate every 15 minutes from the Sunrise Station to the Historic Folsom Station, rather than the current 30 minutes. The improvements are part of the "Folsom Light Rail Modernization Project" that collectively includes new low-floor light rail vehicles, modification to station platforms to accommodate the new vehicles, and addition of new passing tracks and signalization.

Current service between the Sunrise Station and the eastern terminus of the Gold Line at the Historic Folsom Station (at Leidesdorff Street and Folsom Boulevard) is impeded because only a single track provides service between these stations

DESCRIPTION OF UNDERTAKING

SacRT has received grant awards to complete this project, including awards from the Federal Transit Administration for the proposed project (undertaking). Federal funding triggers Section 106 of the National Historic Preservation Act (NHPA), because the FTA considers the agency's funding to be an undertaking as defined in 36 CFR Part 800. The undertaking includes four components at two locations.

- **Light Rail Trackwork.** “Double tracking” (or installing a passing track) would be constructed in two locations in the vicinity of the Glenn/Robert G Holderness Station in the City of Folsom and in the vicinity of the Hazel Station in unincorporated Sacramento County, just east of the City of Rancho Cordova city limits (hereafter referred to as the “Folsom Project Segment” and the “Rancho Cordova Project Segment,” respectively). The new tracks would maintain a 14-foot separation from the centerline of the existing light rail tracks. The alignment of the new tracks relative to the existing tracks is based on available right-of-way, minimizing disruption to existing operation-related equipment, minimizing removal of mature trees, and avoiding impacts on the nearby Folsom Parkway Rail Trail (which is in the Folsom Project Segment only). To avoid encroachment into the trail, a 300-foot-long retaining wall would be constructed to separate the rail corridor from the trail at its closest point (north of Glenn Drive). Existing overhead contact system support poles would be used as much as possible, but some would need to be relocated. The new pole locations would be within the existing rail right-of-way.
- **Stations.** The undertaking would add new loading platforms at the Glenn/Robert G Holderness and Hazel Stations and modifying the existing platforms to accommodate new low-floor vehicles that are being acquired by SacRT. The new platforms would be 8 inches above the top of the tracks, approximately 15 feet wide and 338 feet long. They would be designed to comply with the Americans with Disabilities Act (ADA) and include amenity and station features in accordance with SacRT's Station Design Criteria (e.g., fare vending machines, canopies, seating, light fixtures, security features, information kiosks). To accommodate existing SacRT light rail vehicles, the stations would be fitted with a mini-high platform that would be removed when the new vehicle fleet becomes operational.
- **Signaling.** The undertaking would update the signal system that controls train movements so that trains would be able to operate inbound and outbound between the Sunrise and Historic Folsom stations with little or no delay. The proposed project would include additional track circuits that would detect when the train passes through an at-grade street crossing and immediately send a signal to the control cabinet to raise the gates. This feature would eliminate the long, single-track circuits and the delays at upstream and downstream crossings. In addition, at specific stations, SacRT proposes to install on-board “call” activators to lower the crossing gates only when the train is ready to leave the station. With these activators, the gates would start to lower only when the train is ready to leave, thus reducing the gate downtime, depending on how long the train is stopped at the station. Along the Gold Line between the Sunrise Station and the Historic Folsom Station, SacRT has estimated the additional delay at each of the 14 street crossings would be a maximum of 14 seconds per train crossing. With 38

more scheduled trains operating along the Gold Line, the total delay on a typical weekday would be less than 9 minutes.

- **Freight Line Realignment.** In the Rancho Cordova Project Segment, the addition of the passing tracks would require shifting an existing freight line, freight line siding, and spur line serving a local business (Schnitzer Steel (12000 Folsom Boulevard) in the Rancho Cordova Project Segment). Union Pacific Railroad (UPRR) has the right to run freight trains on the line and the freight easement obligates them to maintain the tracks they use (SacRT maintains the signals), but UPRR owns neither the tracks nor the land underneath the tracks. The freight easement runs from the UPRR mainline (between University/65th Street and Power Inn stations) and Aerojet (at Hazel Station). UPRR typically runs 1-2 trains per week on this line. The realignment of the freight tracks would occur along an approximately 3,300-foot stretch parallel to and south of the light rail tracks in Rancho Cordova. The new alignment would be designed to maintain a 20-foot separation between the centerlines of the light rail and freight tracks. In addition, a freight siding would be constructed to provide operational flexibility for freight service in this stretch. To minimize the need for acquisition of private property to the south, a retaining wall would be constructed between the widened rail right-of-way and the adjacent property.

Staging areas have not been identified because typically it would be the contractor's responsibility to permit and obtain approval. Undeveloped lands, private parking lots, and the two park-and-ride lots adjacent to the alignment may be used for construction staging and laydown areas. The outside eastbound lane of Folsom Boulevard would require temporary closures.

AREA OF POTENTIAL EFFECTS

The area of potential effects (APE), as defined in 36 CFR 800.16(d), is:

the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.

For the current undertaking, the APE includes the project footprint, or area of direct impact (ADI), and the parcels adjacent to the ADI (Figures 2A and 2B). The APE includes areas that have the potential to be affected by construction and operation of the double tracking project. The APE for the proposed project is justified by the magnitude and scale of the project, which proposes improvements to existing rail infrastructure largely within the existing railroad right-of-way. When improvements extend outside of the existing railroad right-of-way, the entire legal parcel boundary of the parcel with historic-age built environment is included. Potential indirect effects from vertical improvements such as new station/platforms have also been taken into account into the APE development for potential affects to historic-age resources.

The proposed vertical APE includes all ground disturbance in the ADI below the existing ground surface. Up to 3 feet typically would be graded and excavated before the rail bed is built up, although excavations of up to 5 feet could be necessary where highly compressible soils, such as peat or soft clay, are present and could not be remediated by other means

because of construction or cost constraints. This vertical disturbance would apply throughout the ADI except at the following sites:

- In the two locations, where the proposed passing tracks would cross existing streets (Glenn Drive and Nimbus Road/Hazel Avenue), the existing pavement would be removed and excavations up to a depth of 2.5 feet below the existing ground surface would be needed for the pre-cast track sections.
- Where new foundations are needed for poles to support the overhead contact system, excavations would be 3 feet in diameter and up to 30 feet below the existing ground surface.
- At the two locations where new loading platform shelters would be construction, excavations would be up to 10 feet below the existing ground surface.
- In the two locations where retaining walls are proposed (one in Folsom, between Glenn Drive and Bidwell Street, and one in Rancho Cordova along the Aerojet property), excavations for the foundations would be up to a depth of 2 feet below the existing ground surface.

DESCRIPTION OF HISTORIC PROPERTIES

Data Collection and Review

A records search was completed on July 12, 2019, at the North Central Information Center (NCIC) of the California Historical Resources Information System at Sacramento State University (NCIC File No. SAC-19-131). Site records and previous studies were accessed for the project area and for a 0.25-mile radius on the *Buffalo Creek* and *Folsom* USGS 7.5-minute topographic quadrangles. The National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Office of Historic Preservation Historic Properties Directory (OHP HPD) data files, city and county planning documents, and historical maps and aerial photography also were reviewed. Eleven studies previously were conducted of the APE; four of these studies were conducted after the publication of the 2001 Final Environmental Impact Statement/ Environmental Impact Report (EIS/EIR) for the Downtown/Sacramento-Folsom Corridor Project (FTA and SacRT 2000), which included the current APE. Each of the studies included a pedestrian survey.

A pedestrian survey of the project area was conducted by an AECOM archaeologist on July 2, 2019. The survey consisted of walking parallel to the SacRT tracks, where sufficient space existed between the track bed and private property. Survey transects were 3 meters or less. Visibility in the project area was generally poor (50 percent or less), with the ground surface obscured by vegetation, gravel, and paving. Where possible, vegetation was scraped away to better view the ground surface, and rodent burrow back dirt piles were inspected closely for indicators of archaeological deposits.

Project Setting and Context

The APE is in the southern reaches of the Sacramento Valley in central California and is south and east of the American River, approximately 15 to 18 miles upstream from its confluence with the Sacramento River in the city of Sacramento. The APE is within dredge tailings,

artificially deposited in the nineteenth and twentieth centuries (Wagner et al. 1981). The dredge tailings primarily overlie Pleistocene-age Modesto–Riverbank Formations (Meyer and Rosenthal 2008:83; Wagner et al. 1981).

Prehistory

The APE is adjacent to one of the most intensively archaeologically studied areas in California: the Sacramento and San Joaquin valleys and the adjoining Sacramento–San Joaquin River Delta. The temporal sequence for the region has been refined several times since the 1930s and, most recently, was summarized by Rosenthal et al. 2007. People have resided in the Sacramento area for at least 10,000 years, although evidence from the earliest occupation of the Central Valley (13,500 to 10,500 before present [BP]) is assumed to be present but buried under many feet of sediment. Artifacts dating to this period, consisting of basally thinned and fluted projectile points, are sparse (Rosenthal et al. 2007:151).

Paleo-Indian Period (13,500 to 10,500 BP). This period represents highly mobile populations who frequented the shores of late Pleistocene lakes and sloughs. Artifacts are sparse and include basally thinned and fluted projectile points. While a few Paleo-Indian sites have been recorded in the southern San Joaquin Valley, evidence of this time period has been virtually absent from the Sacramento Valley (Rosenthal et al. 2007:151).

Lower Archaic Period (10,500 to 2,500 BP). Similar to the Paleo-Indian Period, Lower Archaic Period sites are largely restricted to the southern San Joaquin Valley. Wide-stemmed projectile points, chipped stone crescents, large bladelet flakes and unifacial tools, are the most prominent artifacts associated with the Lower Archaic on the valley floor, but handstones and millingsstones have been found in contemporaneous sites in the foothills. Thus, the populations at this point began to rely more on seasonal plant exploitation to supplement the hunting of game (Rosenthal et al. 2007:151-152).

Middle Archaic/Windmill Pattern (4,950 to 2,450 BP). The artifact assemblage characteristic of this cultural manifestation includes a variety of flaked stone, ground stone, baked clay, and shell items reflecting exploitation of diverse subsistence resources and acquisition of materials from distant geographic areas through trade. The burial pattern of Windmill cemeteries and grave plots is unique in that virtually all the interments are ventrally extended, with the head oriented to the west. The primary exception to this burial pattern is that aged females were buried in a flexed position. Social stratification can be inferred from the burial practices of Windmill peoples. Males appear to generally have higher status than females, as evidenced in their deeper and artifactually richer graves. Social status may have been at least partially inherited, for some female, child, and infant burials contained elaborate grave associations, while others lacked such wealth (Moratto 1984:201-207).

Upper Archaic/Berkeley Pattern (2,450 to 1,450 BP). The Berkeley Pattern represents a gradual shift in adaptation and material culture that appears to have originated within the San Francisco Bay region. The subsistence practices of Berkeley peoples differ from that of the Windmill population in that the utilization of acorns for food seems to have increased dramatically. The reliance on acorns is evidenced in the increase in mortars and pestles recovered from Berkeley Pattern sites. Other differences in material culture include the occurrence of an extensive bone tool kit, unique knapping techniques, and certain types of shell beads and pendants within Berkeley Pattern sites. Burial practices of Berkeley peoples

also differed from those of Windmill Pattern sites. No longer were interments oriented towards the west; instead, Berkeley Pattern burials are flexed with variable orientation (Moratto 1984:207-211).

Emergent Period /Augustine Pattern (1,450 to 70 BP). The Augustine Pattern reflects local innovation in technology, as well as the incorporation of new developments with traits of the Berkeley Pattern. The artifact assemblages of Augustine Pattern sites indicate an increased reliance on acorns. Many burials continue to be flexed, however, cremation becomes the mortuary practice for high status burials. Extensive trade networks developed to accommodate the resource and social needs of the burgeoning populations (Moratto 1984:211-214).

Ethnography

The APE lies within the ethnographic territory of the Nisenan, who primarily occupied lands east of the Sacramento River. The Nisenan were one of three Maiduan speaking tribelets (i.e., Maidu, Konkow, Nisenan) who inhabited the northeastern half of the Sacramento Valley and adjoining western slopes of the Sierra Nevada (Shipley 1978:82–85). The Nisenan were the southernmost of the three groups. Ethnographic village sites along the American River in Nisenan territory include *Ekwo* (on Sunrise Boulevard), *Shiba* (on Hazel Avenue), and *Yodok* (at Folsom) (Wilson and Towne 1978:388). These villages were on the north side of the river; no known ethnographic villages are in the APE.

Nisenan villages varied considerably in size, with a large village containing from 40 to 50 domed earthen houses and more than 500 people. A typical settlement in the lowland areas of Nisenan territory would be situated on natural rises along the major rivers and streams (Kroeber 1925:395; Wilson and Towne 1978:388). The Nisenan were organized like many California Indian communities; a certain territory was identified as belonging to a group, and that group recognized themselves as a unit (i.e., tribelet). Several affiliated villages may have existed in the tribelet territory. Each village, and often a group of allied villages, had a headman, whose duty was to advise the members of the community. No larger levels of political organization occurred beyond these village affiliations (Kroeber 1925:396–398; Wilson and Towne 1978:393).

Historic Period

The Nisenan were affected little by the early Spanish and Mexican incursions into California's interior. They were, however, greatly affected by a malaria epidemic that ravaged parts of California during the 1830s, believed to have been spread by fur trappers. The disease often killed entire villages, and 75 percent of the population is estimated to have died because of the epidemic (Wilson and Towne 1978:396). The Nisenan who survived the epidemic were among the California groups most affected by the Gold Rush of 1849. In 1948, John Marshall discovered gold at Coloma, in Nisenan territory. Soon afterwards, fortune seekers descended on the Nisenan and adjoining territories and, within a short time span, Nisenan lands were overrun (Wilson and Towne 1978:396). Descendants of the Nisenan who survived those harsh times are thriving today as part of the greater Sacramento community.

During the Mexican Period, multiple land grants were issued in Sacramento County, one of which included much of today's cities of Rancho Cordova and Folsom. The APE was part of the Rancho Río de Los Americanos, awarded by Governor Manuel Micheltorena to William Leidesdorff in 1844. The 35,521-acre rancho extended from the eastern border of John

Sutter's New Helvetia, along the south bank of the American River in the present-day city of Sacramento, to the eastern end of present-day Folsom. After Leidesdorff's death in 1848, the rancho was purchased by Joseph L. Folsom in 1849. In 1855, the grid for the town of Folsom was plotted on the rancho and the town was named after him; however, most of the rancho remained undeveloped at this time (Hoover et al. 2002:304).

Gold was discovered in 1848 on the American River at Sutter's Mill near Coloma in what is now El Dorado County. During the Gold Rush era, Folsom Boulevard was originally a wagon and stagecoach route connecting Sutter's Mill in Coloma to Sutter's Fort in Sacramento. In 1856, the Sacramento Valley Railroad (SVRR, now UPRR) completed a rail corridor connecting Sacramento to Placerville via the city of Folsom, and shortly thereafter Folsom Boulevard was constructed parallel to the railroad tracks. The SVRR was California's first passenger railroad and had Theodore Judah as the Chief Engineer. The APE is within the right-of-way for the SVRR/UPRR.

Identification of Historic Properties

Cultural resources include, but are not exclusively, archaeological and historic-period built environment resources. The NHPA establishes a national policy of historical preservation and requires that the effects of federal undertakings on significant cultural resources be determined. If a cultural resource is determined eligible for listing in the National Register of Historic Places (NRHP), Section 106 of the NHPA and its implementing regulations (36 CFR Part 800) require that effects of the proposed project to that resource be assessed.

To be eligible for the NRHP, properties must be 50 years old (unless they have special significance) and have national, state, or local significance in American history, architecture, archaeology, engineering, or culture. They also must possess integrity of location, design, setting, materials, workmanship, feeling, and association, and meet at least one of four criteria for evaluation listed in 36 CFR § 60.4:

- Criterion A: be associated with events that have made a significant contribution to the broad patterns of our history
- Criterion B: be associated with the lives of persons significant in our past
- Criterion C: have distinctive characteristics of type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction
- Criterion D: have yielded, or may be likely to yield, information important in prehistory or history

The following sections identify and evaluate cultural resources identified within the APE.

Archaeological Resources

One historic-period archaeological resource was previously recorded in the ADI. This resource is the American River Placer Mining District (P-34-000335), a large district that encompasses both project segments (Figure 3). The American River Placer Mining District (also known as the Folsom Mining District) is "an extensive conglomerate of historic mining features." This historic district has been recorded and studied in a largely piecemeal fashion and later

subsumed under a single State trinomial designation: CA-SAC-308H [P-34-000335]" (City of Folsom 2018:10-8). The district measures 10 miles long by 7 miles wide and encompasses an area where "more than one billion cubic yards of earth were dredged" for gold between 1860 and 1960 (Nadolski 2007:9).

Elements of the district include expansive dredge tailings piles (reflecting different dredging technologies), ponds, adits, remnants of hydraulic mining, and refuse deposits. The district has been recommended as eligible for listing in the NRHP under Criteria A, C, and D, and in the California Register of Historical Resources under Criteria 1, 3, and 4, although the district contains non-contributing elements where features have lost integrity through leveling and aggregate mining (Lindstrom 1995; Nadolski 2007:12). Although the ADI is within the mapped boundaries of the district, no features associated with the district exist in the ADI and the ADI would therefore comprise a non-contributing element to the district.

No other previously-recorded archaeological resources were identified in the ADI during the background research or the pedestrian survey, and the ADI has been modified by development, including the construction of the existing rail line.

The soils that are mapped in the ADI reflect the high level of prior disturbance (U.S. Department of Agricultural 2019). In the Rancho Cordova segment, soils are mapped as "Urban Land" and "Urban Land-Natomas Complex," indicating cutting and filling of the landscape. In addition, Natomas series soils are well-developed soils, dating to the Middle Pleistocene (450,000 and 100,000 years old), making them too old to contain buried archaeological resources (Meyer and Rosenthal 2008:85). Any prehistoric archaeological resources that might have been present prior to development would have been on the surface of these old, well-developed soils; if present, they would have likely been disturbed or destroyed during cutting and filling episodes.

Soils in the Folsom project segment are mapped as dredge tailings, although any tailings that may have been present in the ADI have been leveled and removed. Based on soils types mapped in the immediate vicinity (i.e., Natomas series soils), it is likely the underlying soils in the Folsom segment are also too old to contain buried archaeological resources. Although the undertaking includes ground disturbing work to a depth of 30 feet, it is unlikely any resources would be present at this depth.

Despite previous disturbances, the potential for the accidental discovery of archaeological resources during project construction cannot be discounted entirely, especially if the construction impacts that extend below imported fill encounter intact soils that were on the surface prior to large-scale historic-period or modern ground disturbance.

Historic-Period Built Environment Resources

The records search at the NCIC and OHP directory, in addition to the EIS/EIR for the Downtown/Sacramento-Folsom Corridor Project (FTA and SacRT 2000), and review of other sources of information were used to determine the built environment historic properties located in the APE. The approximately 20-mile segment of the former SVRR from downtown Sacramento to Folsom (P-34-000455), which traverses both project segments, was determined eligible for listing in the NRHP with State Historic Preservation Officer (SHPO) concurrence in September 1993 (Figure 3).

The proposed project would shift an existing freight track within the rail right-of-way to the south and realign an existing spur track that serves the historic-age Schnitzer Steel property at 12000 Folsom Boulevard in Rancho Cordova (see Figure 2). This property initially was developed in 1956 as the Nimbus plant of Air Products, Inc. that produced liquid oxygen and liquid nitrogen for use in the Sacramento installations of Aerojet General Corporation and Douglas Aircraft Company, which manufactured rockets and rocket propellants for the Air Force (AECOM 2019). The facility was one of five that produced propellants for the military by 1960. The plant was closed in 1968 and in 1973 Schnitzer Steel Products of California purchased the property and opened a recycling scrap facility at the former Nimbus plant location. The conversion of the property from liquid nitrogen and oxygen to scrap recycling included removal of plant facilities, construction of new buildings, and later a freight siding was constructed on the parcel. Four of the original five plant buildings still appear to be extant on the parcel, but the equipment that produced the liquid nitrogen and oxygen have been removed. This facility continues to recycle scrap metal and cars. Although the development of the property is associated with Aerojet, the facility was secondary to research and development and produced fuel for testing. The significant activities at the Aerojet facility were undertaken east of the property, within the administrative core, and south in the testing facilities outside of the APE. The former Aerojet Nimbus Plant and current Schnitzer Steel property at 12000 Folsom Boulevard does not appear to meet NRHP criteria as a historic property under Section 106 of the NHPA based on lack of significance and lack of historic integrity to any potential period of significance.

Based on a review of the previous recordation and an evaluation of the properties on file at the NCIC, combined with a reconnaissance-level survey on May 2, 2019 and background research on previously unrecorded historic-age resources that may potentially be affected by the project, an architectural historian who meets the Secretary of the Interiors' Professional Qualification Standards for history and architectural history has concluded that no other historic properties were identified in the APE (AECOM 2019).

NATIVE AMERICAN CONSULTATION

On June 13, 2019, AECOM requested a Sacred Lands File (SLF) search and a list of Native American tribes with potential interest in the proposed action, pursuant to AB 52 from the Native American Heritage Commission (NAHC). On June 24, 2019 (in a letter dated June 21, 2019), the NAHC responded that the SLF search was negative.

On August 5, 2019, SacRT notified the following eight tribes (those that are asterisked are federally recognized tribes [U.S. Department of Health and Human Services 2019]) of the proposed action:

- Buena Vista Rancheria of Me-Wuk Indians*
- Colfax-Todds Valley Consolidated Tribe
- Lone Band of Miwok Indians*
- Nashville Enterprise Miwok–Maidu–Nishinam Tribe
- Shingle Springs Band of Miwok Indians*
- Tsi Akim Maidu

- United Auburn Indian Community of the Auburn Rancheria (UAIC)*
- Wilton Rancheria*

To date, two responses have been received. UAIC has responded to indicate that the project would not likely affect cultural resources of importance to the tribe and to request receipt of the environmental documents (Starkey 2019). The Shingle Springs Band of Miwok Indians responded to request initiation of formal consultation, including a meeting. They requested copies of all environmental documents prior to the meeting (Fonseca 2019).

Archival research indicated that the APE does not contain any previously recorded Native American sites, prehistoric-period archaeological sites, historic-period cemeteries, or human skeletal remains. However, records maintained by the NCIC and NAHC are not exhaustive, and negative results do not preclude the presence of tribal cultural resources in the APE.

The FTA is required to consult with federally-recognized tribes on federal undertakings pursuant to 36 CFR Part 800. To date, the results of these consultation efforts are not available.

APPLICATION OF CRITERIA OF ADVERSE EFFECT

Archaeological Resources

The APE is in the mapped boundary of the American River Placer Mining District (P-34-000335), although no features associated with the district are in the ADI. Because there are no features of the district in the ADI, the undertaking would not result in a potential adverse effect to this NRHP-eligible archaeological site. No other archaeological resources were identified during the background research or pedestrian survey and no tribal cultural resources have been identified to date in the APE.

The APE has been modified by development, including the construction of the existing rail line. In addition, mapped soils types in the ADI reflect the high level of previous disturbance. The Rancho Cordova segment is mapped partially as “Urban Land” (i.e., land subject to artificial cutting and filling) and the Folsom segment is mapped as dredge tailings. Aside from these heavily modified types of soils, the APE also contains Natomas series soils, which are far too old to contain buried archaeological resources (Meyer and Rosenthal 2008:85).

Therefore, the undertaking would have no effects to known archaeological resources within the ADI portion of the APE.

Historic-Period Built Environment Resources

The 20-mile segment of SVRR (P-34-000455) is the only built-environment historic property in the APE. The integrity of location for the rail property is that of the right-of-way, not the actual location of the tracks, which are not in their original alignment for more than half of the approximately 20-mile line from Folsom to Sacramento. The small segments of rail line proposed to be relocated within the existing right-of-way for the proposed project (0.6 mile in Folsom and 1.2 miles in Rancho Cordova and unincorporated Sacramento County) would continue to operate within the original right-of-way. The elements of the line that retain the integrity of location and design would not be adversely affected. All other elements of historic

integrity—including materials, workmanship, feeling, association, and setting—no longer exist. In summary, the proposed project would not adversely affect the SVRR historic property.

CONCLUSION

Because the project would not diminish the characteristics of the historic properties in the APE that qualify said properties for inclusion in the NRHP, a finding of “no adverse effect” consistent with (36 CFR 800.5(b)) is recommended.

If previously unidentified cultural materials are unearthed during construction, work must be halted in that area until a qualified archaeologist can assess the significance of the find. Additional archaeological surveys will be needed if project limits are extended beyond the present survey limits. If human remains are encountered during construction, all work in that area must halt and the Sacramento County Coroner must be contacted pursuant to California Public Resources Code Sections 5097.94, 5097.98, and 5097.99.

REFERENCES

- AECOM. 2019. Chapters 3.5 Cultural Resources and 3.18 Tribal Cultural Resources. *Draft Folsom Light Rail Modernization Double Track Project Draft Initial Study/Mitigated Negative Declaration* (AECOM 2019)
- City of Folsom. 2018 (March). *Folsom General Plan–2035*. Adopted August 2018. Available: https://www.folsom.ca.us/community/planning/general_plan/default.asp. Accessed August 8, 2019.
- Federal Transit Administration (FTA) and Sacramento Regional Transit District (SacRT). 2000 (March). *Final Environmental Impact Statement/Environmental Impact Report, Downtown Sacramento–Folsom Corridor*.
- Fonseca, Daniel. 2019. Letter from Daniel Fonseca, Cultural Resource Director, Tribal Historic Preservation Officer, and Most Likely Descendant for the Shingle Springs Band of Miwok, to SacRT, re Cultural Resources [for the Folsom Light Rail Modernization Double Track Project in Sacramento County].
- Hoover, M. B., H. E. Rensch, E. G. Rensch, and W. N. Abeloe. 2002. *Historic Spots in California*. Revised by D. E. Kyle. Fifth edition. Stanford University Press.
- Kroeber, Alfred L. 1925. *Handbook of the Indians of California*. Bulletin of American Ethnology Bulletin 78. Smithsonian Institution, Washington, D.C. Reprinted 1976 by Dover, New York.
- Lindstrom, S. 1995. *Folsom Dredging Significance Statement*. Submitted to Jones & Stokes, Sacramento, CA. White paper (P-34-000335) on file at the NCIC, Sacramento.
- Meyer, J., and J. Rosenthal. 2008. A Geoarchaeological Overview and Assessment of Caltrans District 3: Cultural Resources Inventory of Caltrans District 3 Rural Conventional Highways. Far Western Anthropological Research Group, Inc., Davis, CA.
- Moratto, Michael J. 1984. *California Archaeology*. Academic Press, Orlando, Florida.

- Nadolski, J. 2007. Historic Property Survey Report/Archaeological Survey Report for the Rancho Cordova Parkway Interchange. Report (S-12346) on file at the North Central Information Center, Sacramento.
- Rosenthal, Jeffrey S., Gregory G. White, and Mark Q. Sutton. 2007. The Central Valley: A View from the Catbird's Seat. In *California Prehistory*, Terry L. Jones and Kathryn A. Klar, editors, pp. 147-163. Alta Mira Press, Lanham, Maryland.
- Shibley, W. F. 1978. Native Languages of California. In *California*, edited by R. F. Heizer, pp. 80–90. *Handbook of North American Indians*, Volume 8, W. C. Sturtevant, general editor. Washington, DC: Smithsonian Institution.
- Starkey, Anna, M.A., RPA. 2019 (October 16). Email communications from Anna Starkey, Cultural Regulatory Specialist, Tribal Historic Preservation Department, UAIC, to Jennifer Redmond, AECOM archeologist re Native American consultation for the Folsom Light Rail Modernization Project.
- U.S. Department of Agriculture. 2019. Web Soil Survey. Available: <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm> Accessed August 9, 2019.
- U.S. Department of Health and Human Services, Indian Health Service. 2019. List of Federally-Recognized Tribes in California. Available: <https://www.govinfo.gov/content/pkg/FR-2019-02-01/pdf/2019-00897.pdf>. Accessed on October 10, 2019.
- Wagner, D. L., C. W. Jennings, T. L. Bedrosian, and E. J. Bortugno. 1981. Geologic Map of the Sacramento Quadrangle, 1:250,000. Prepared for the California Division of Mines and Geology, Sacramento.
- Wilson, N. L., and A. H. Towne. 1978. Nisenan. In *California*, edited by R. F. Heizer, pp. 387–397. *Handbook of North American Indians*, Volume 8, W. C. Sturtevant, general editor. Washington, DC: Smithsonian Institution.

PREPARER'S QUALIFICATIONS

Chandra Miller has an M.A. in Public History (Cultural Resource Management concentration) and a B.A. in History. She meets the Secretary of the Interior's Professional Qualifications Standards (36 CFR Part 61) for Architectural History and History. She has over 11 years of experience in cultural resources management throughout California. Her experience includes archival research, field survey, contextual development, evaluation, and assessments of effects. Ms. Miller has worked on various federal, state, and local projects including disaster recovery, infrastructure, and urban development projects to determine site significance under California Environmental Quality Act (CEQA), NEPA, and Section 106 of the NHPA.

Jennifer Redmond has an M.A. in Cultural Resources Management and is a Registered Professional Archaeologist (RPA #989151). She meets the Secretary of the Interior's Professional Qualifications Standards (36 CFR Part 61) for Archeology and History. She has over 12 years of experience in cultural resources management and archaeology throughout California and the Midwest. Her experience includes archival research; field survey, monitoring, excavation, and data collection; archaeological resource evaluation; and project management. Ms. Redmond has worked on various federal, state, and local projects including

disaster recovery, infrastructure, and urban development projects to determine site significance under CEQA/NEPA and Section 106 of the NHPA.

This page left blank intentionally.

FIGURES

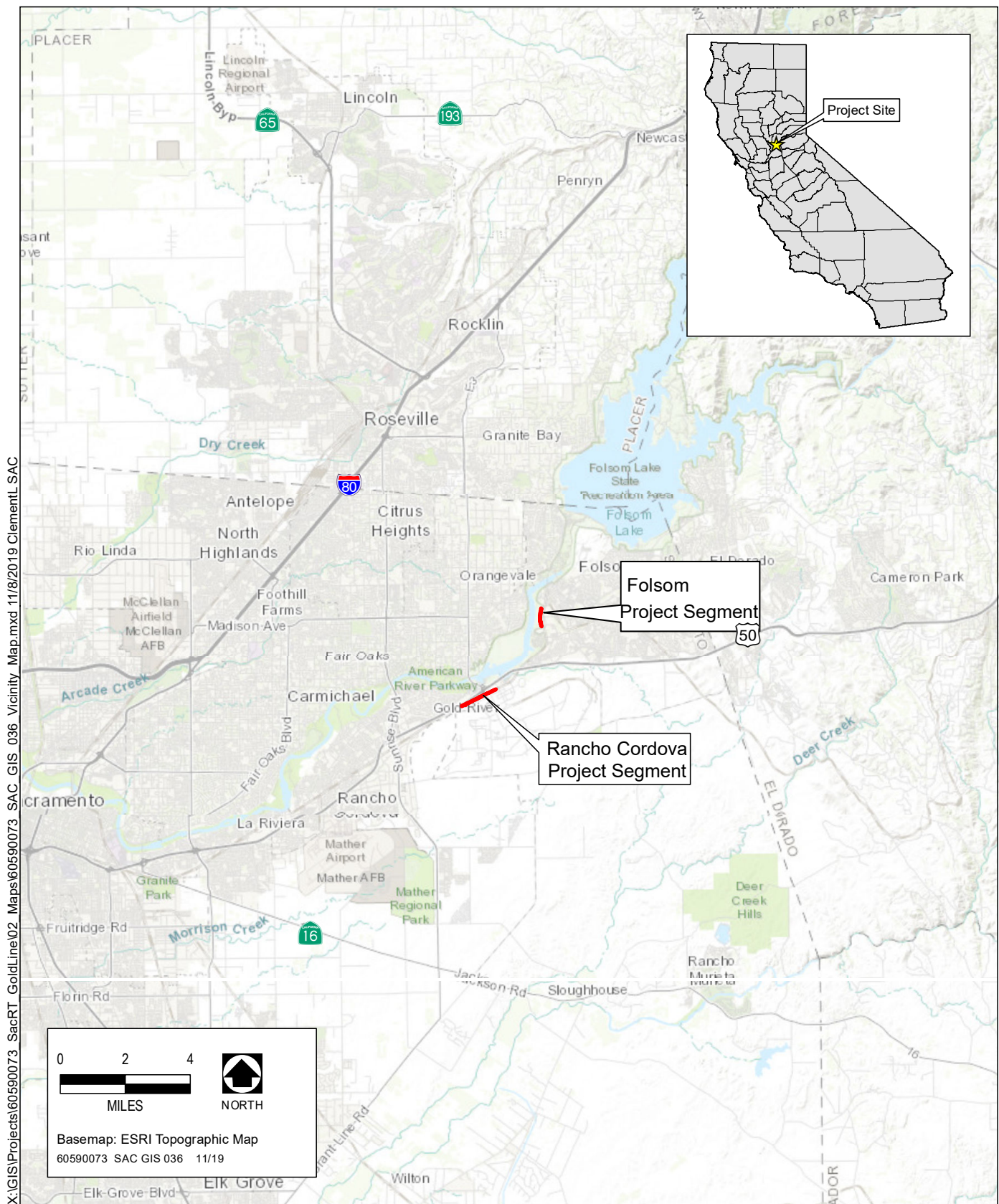
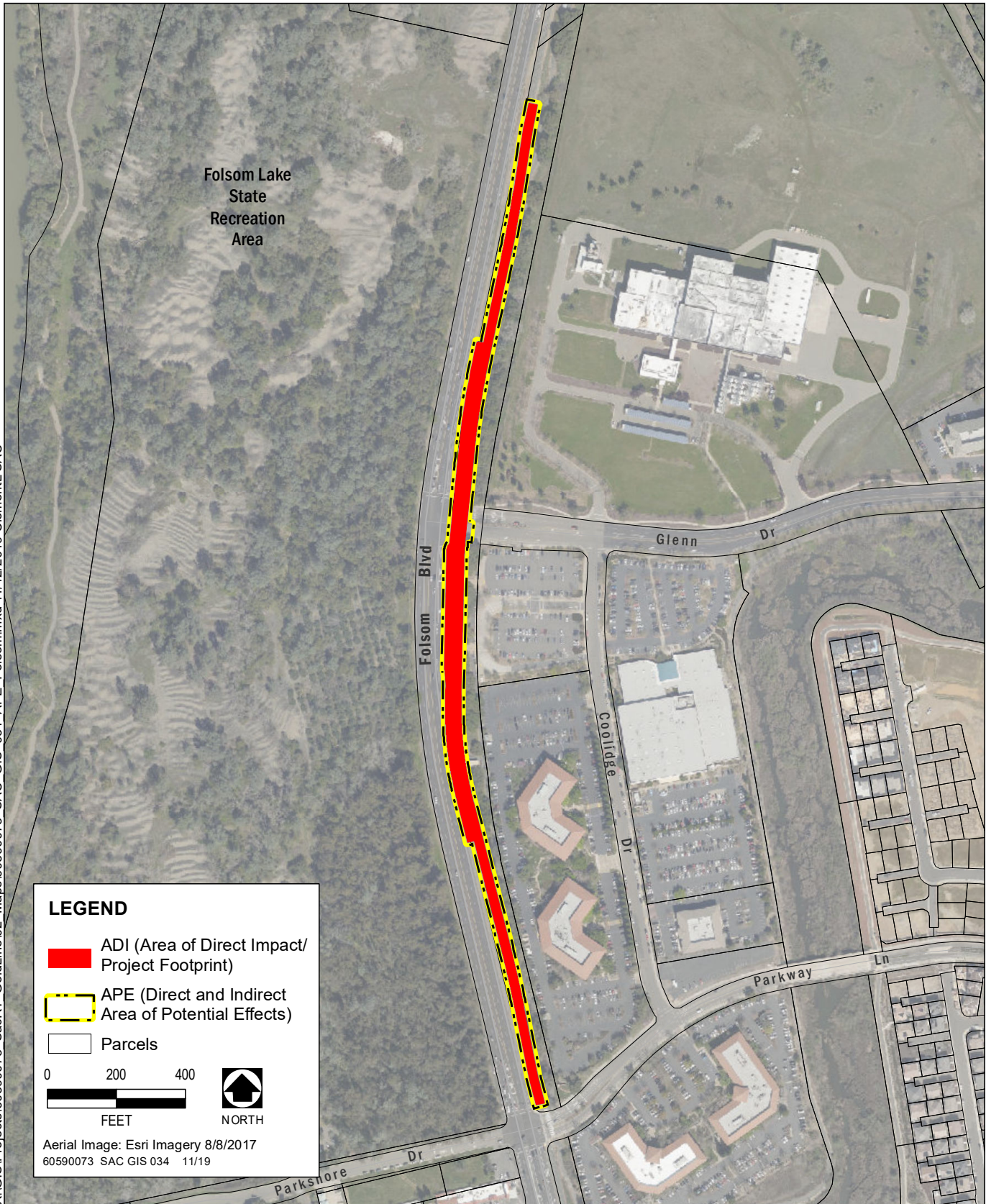


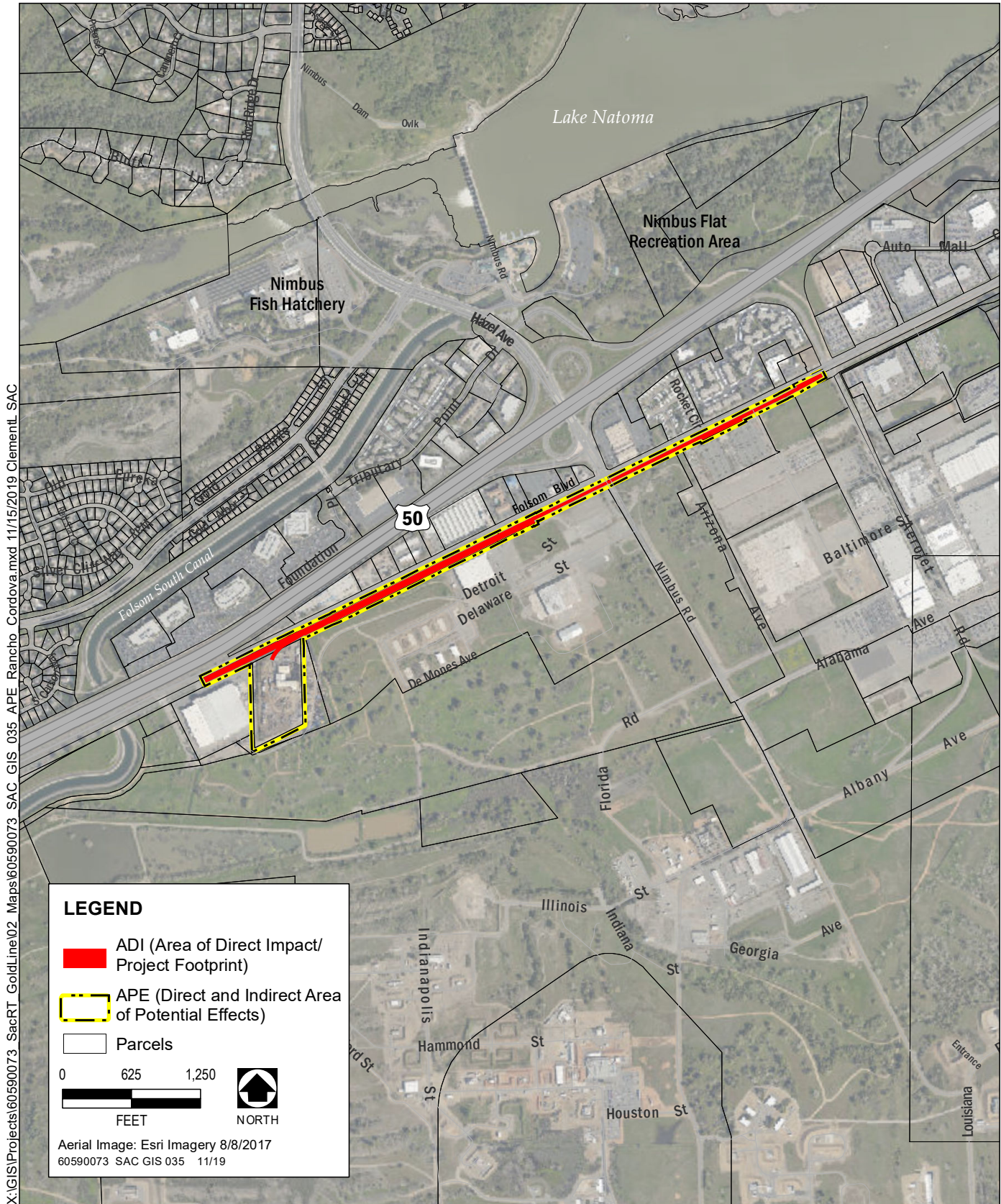
Figure 1: Project Vicinity Map

X:\GIS\Projects\60590073_SacRT_GoldLine\02_Maps\60590073_SAC_GIS_034_APE_Folsom.mxd 11/12/2019 ClementL SAC



Source: Sacramento County 2018

Figure 2A: Area of Potential Effects (Folsom Project Segment)

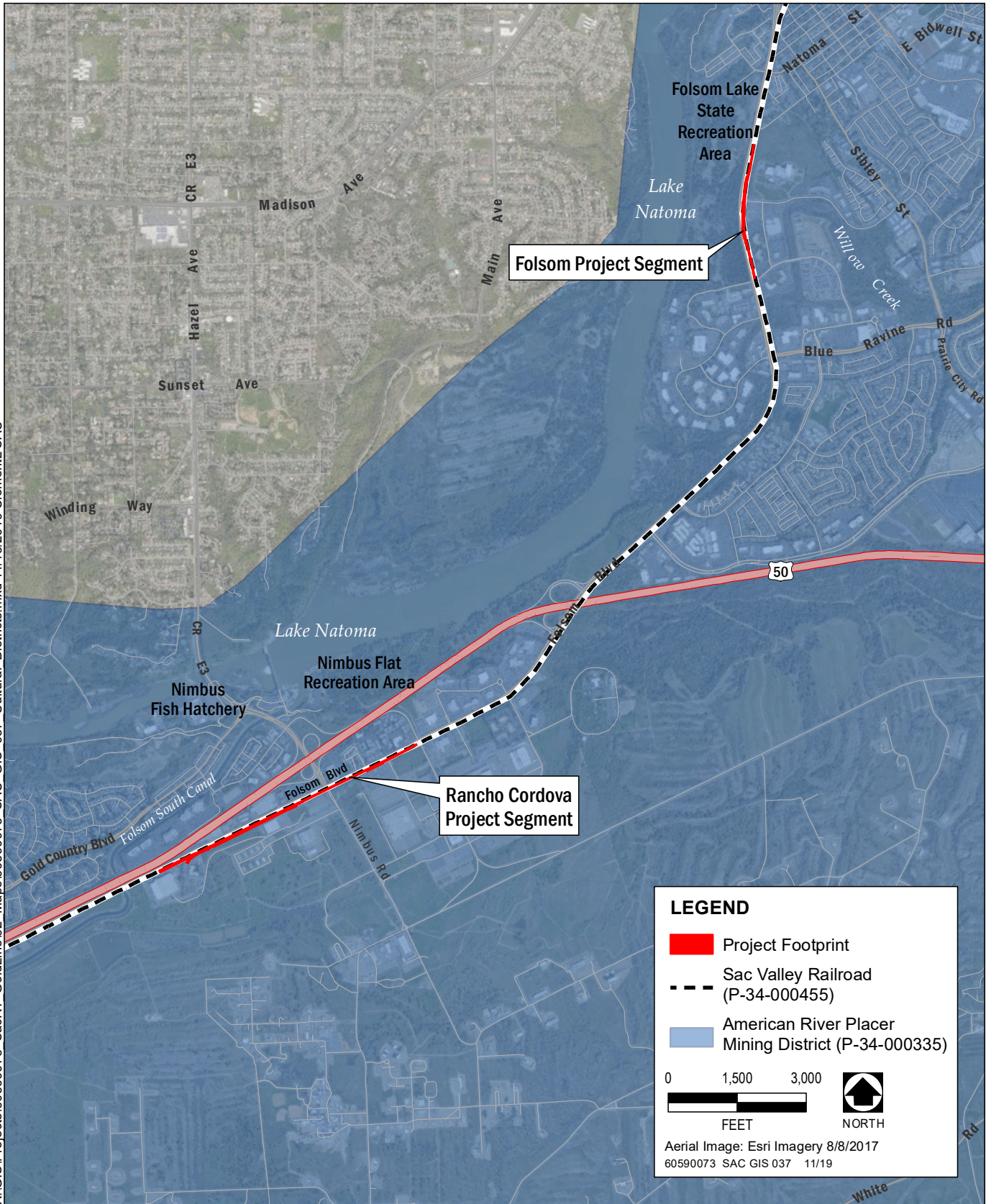


X:\GIS\Projects\60590073_SacRT_GoldLine\02_Maps\60590073_SAC GIS 035 APE Rancho Cordova.mxd 11/15/2019 ClementL SAC

Source: Sacramento County 2018

Figure 2B: Area of Potential Effects (Rancho Cordova Project Segment)

X:\GIS\Projects\60590073_SacRT_GoldLine\02_Maps\60590073_SAC_GIS_037_Cultural_Districts.mxd 11/15/2019 ClementL SAC



Source: NCIC 2019

Figure 3: Historic Properties in the APE

Appendix B Endangered Species Act

Section 7 Compliance

**Appendix B.1 Endangered Species Act
Section 7 Compliance**

USFWS Biological Opinion



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Suite W-2605
Sacramento, California 95825-1846
SFWO_mail@fws.gov



In Reply Refer to:
08ESMF00-2020-F-0799-3

September 14, 2020

Ray Tellis
Regional Administrator
Federal Transit Administration, Region 9
San Francisco Federal Building
90 7th Street, Suite 15-300
San Francisco, California 94103
Ray.Tellis@dot.gov

Subject: Formal Consultation on the Sacramento Regional Transit District Folsom Double Track Project, Sacramento County, California

Dear Ray Tellis:

This letter is in response to the Federal Transit Administration's (FTA) July 10, 2020, request for initiation of formal consultation with the U.S. Fish and Wildlife Service (Service) on the proposed Folsom Double Track Project (proposed project) in Sacramento County, California. Your request and the accompanying biological assessment was received by the Service on July 10, 2020. At issue are the proposed project's effects on the federally threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (beetle). Critical habitat has been designated for the beetle, however, the proposed project does not occur within any designated critical habitat. This response is provided under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act), and in accordance with the implementing regulations pertaining to interagency cooperation (50 CFR 402).

The federal action on which we are consulting is the issuance of a categorical exclusion under the National Environmental Policy Act by the FTA to the Sacramento Regional Transit District (SacRT) (applicant) for the proposed project. Pursuant to 50 CFR 402.12(j), you submitted a biological assessment for our review and requested concurrence with the findings presented therein. These findings conclude that the proposed project may affect, and is likely to adversely affect the beetle.

In considering your request, we based our evaluation on the following:

- 1) Your July 10, 2020, letter requesting initiation of formal consultation;
- 2) The July 10, 2020, *Folsom Light Rail Modernization Double Track Project Rancho Cordova Segment Biological Assessment* (biological assessment) prepared by AECOM (consultant);

- 3) The December 14, 2019, *Technical Summary: Folsom Light Rail Modernization Double Track Project Potential to Affect Federally-Listed Species* (technical summary) prepared by the consultant;
- 4) Your March 30, 2020, letter containing additional information;
- 5) Telephone and video conference correspondence between the Service, the FTA, the applicant, and the consultant; and,
- 6) Other information available to the Service.

Consultation History

January 13, 2020: The Service received an email from the FTA alerting us of the proposed project and providing the technical summary.

January 16, 2020: The Service had a telephone call with the FTA to confirm that FTA was requesting initiation of formal consultation and that the Service would review the technical summary and send a letter requesting additional information. The FTA sent a follow-up email with a table of information from the elderberry (*Sambucus* spp.) shrub surveys.

February 24, 2020: The Service sent a letter requesting additional information to the FTA.

April 2, 2020: The Service received a letter from the FTA responding to the February 24, 2020, letter.

May 7, 2020: The Service sent a second letter requesting additional information to the FTA regarding questions that were not fully addressed by the FTA's response letter.

May 12, 2020: The Service had a telephone call with the FTA to discuss our second letter. We explained that consultation cannot begin until we fully understand how the proposed project will affect the beetle; the FTA said they would request that information from SacRT and then initiate consultation.

July 10, 2020: The Service received a letter from the FTA requesting initiation of formal consultation and the accompanying biological assessment. This is the date that all necessary information was received and formal consultation began.

August 19, 2020: The Service participated in a video conference call with the FTA, SacRT, and the consultant. We clarified that beetle credits will be purchase from a conservation bank before construction begins and updated the language of the fencing conservation measure to include the elderberry shrubs to be avoided within 20 feet of the project footprint.

BIOLOGICAL OPINION

Description of the Proposed Action

The proposed project is the improvement of the SacRT's Gold Line light rail track that connects downtown Sacramento and the City of Folsom. This includes the addition of passing tracks, second platforms, and upgraded train signaling in specific segments of the corridor. There are two distinct segments: the 0.6-mile eastern stretch in the City of Folsom is referred to as the Folsom Segment, and the 1.2-mile western segment in Rancho Cordova and unincorporated Sacramento County is identified as the Rancho Cordova Segment. There is no potential for federally-listed species to occur within the Folsom Segment, so this biological opinion will only address the Rancho Cordova Segment.

The Rancho Cordova Segment runs adjacent to Folsom Boulevard, along the south side of the road, through the eastern edge of the City of Rancho Cordova and into unincorporated Sacramento County, including the Hazel Station light rail station. The 1.2-mile segment is approximately bounded by Aerojet Road on the east and the entrance to the Beck's Furniture Store and the Schnitzer Steel recycling center near Marketplace Lane on the west. There are currently two tracks that converge into one track near the western boundary that provides light rail service eastward to the City of Folsom. There is also an additional track on the southern side of the light rail track(s) that provides freight service to the neighboring properties to the south, which includes two spur tracks that connect to the Schnitzer Steel property and the Aerojet property. All construction will occur within the rail right-of-way (ROW) along the 1.2-mile Rancho Cordova Segment, which is bounded by Folsom Boulevard to the north and the Aerojet property to the south and totals approximately 4.8 acres.

The proposed project will add a second light rail track (passing track) and a second loading platform at the Hazel Station. In addition, the existing freight track will be realigned and a new freight siding installed to accommodate the light rail improvements. The passing track will be installed as an extension of the existing outbound light rail track and will be 14 feet from the single light rail track that is closest to Folsom Boulevard. The new tracks will be constructed on cross ties placed on compacted ballast rock that is approximately 4 feet high. The existing freight track will be reconstructed to the south to maintain a required 20-foot separation between the centerlines of the light rail and freight tracks. Just east of the Schnitzer Steel property, a new freight rail siding will also be installed, separated 14 feet from the freight mainline. The approximately 1,150-foot-long siding will be located south of the relocated freight line.

This four-track configuration (two light rail tracks and two freight tracks) will continue for approximately 1,150 feet, at which point the track configuration will revert to three tracks (two light rail tracks and one freight track; the freight siding will not extend further to the east). This will require acquisition of approximately 0.2 acre of private property along the south side of the rail ROW (and will be the new permanent ROW). A retaining wall, approximately 955 feet long, will be constructed along the boundary of the expanded permanent rail ROW and a temporary construction easement (TCE) of approximately 2 feet to the south of the permanent ROW will provide access for installation of the retaining wall. East of the retaining wall, an open ditch will be constructed for drainage. The purpose of the TCE is to allow for proper installation of the retaining wall and drainage ditch, and backfill of excavated soil. Construction of the retaining wall and ditch will be staged entirely from the existing ROW to the north, with all equipment movement and materials storage restricted to this area.

The two light rail tracks will continue to the northeast in their current alignments and configurations. The Nimbus Road grade crossing will be modified slightly to install a pre-cast track section that is required for the proposed passing track. After passing Nimbus Road, as the tracks approach the Hazel Station, the alignment of the outbound track will be adjusted to conform to the existing freight track at the station. Between the station and a point before Aerojet Road, the double tracks will merge onto the existing single track to continue to the next station at Iron Point in Folsom.

The proposed project is expected to take approximately 25 months, and therefore some construction activities will occur during the beetle's flight season (March – July). The general sequence of construction will be demolition of existing structures, relocation of aboveground utilities, installation of underground utilities, grading, installation of the retaining wall, realignment of the existing freight track and installation of freight siding, installation of overhead contact system poles, installation of asphalt and concrete works, and completion of the new Hazel Station platform. Most of the construction equipment will be needed for the first 18-22 months. Staging areas for the construction equipment will be limited to existing disturbed areas within the ROW.

There are 48 elderberry shrubs (*Sambucus* spp.), the sole host plant for the beetle, within 165 feet of the proposed project. Of these, four elderberry shrubs are rooted within the ROW and will need to be removed. These four elderberry shrubs will be transplanted to a Service-approved beetle conservation bank. Additionally, 21 elderberry shrubs have canopies whose dripline extends into the ROW. These 21 elderberry shrubs will be trimmed back to accommodate installation of project infrastructure.

Conservation Measures

The following is a summary of the proposed conservation measures, as outlined in the biological assessment, to minimize effects to the beetle. The conservation measures proposed below are considered part of the proposed action evaluated by the Service in this biological opinion.

- 1) Avoidance Areas--Prior to the staging and initiation of construction activities, a qualified biologist will establish an avoidance area of at least 20 feet from the dripline of elderberry shrubs that are to be avoided. These avoidance areas will not be disturbed during or after construction or during operation of the project. Activities that may damage or kill an elderberry shrub (e.g., grading, soil stockpiling) will not occur within avoidance areas. Avoidance fencing will be installed around all elderberry shrubs to be avoided by the proposed project. For the five elderberry shrubs that are within 20 feet of the rail ROW, fencing will need to be placed less than 20 feet from the dripline, but will be placed as far from the dripline as possible without entering the ROW. Installation of construction avoidance fencing to demarcate the avoidance areas will be dependent upon permission to enter the Aerojet property to install this fencing.
- 2) Restrictions on Vegetation Removal and Elderberry Trimming--To the greatest extent feasible, all activities within 165 feet of elderberry shrubs will occur outside the beetle's flight season (March – July). Timing of vegetation removal activities will be limited to September – January, and may be further restricted to avoid interference with Aerojet's soil vapor extraction activities. Any trimming of elderberry shrubs must occur only between November and February when the shrubs are dormant. Trimming must avoid removal of any branches or stems that are greater than or equal to 1 inch in diameter. Any

future measures to address regular and/or large-scale maintenance (trimming) will be established in consultation with the Service.

- 3) Worker Education--Prior to construction, a qualified biologist will provide training for all contractors, work crews, and any onsite personnel on the status of the beetle, its host plant and habitat, the need to avoid damaging the elderberry shrubs, the locations of avoidance areas, and the possible penalties for noncompliance.
- 4) Dust and Erosion Control--To protect beetle habitat and reduce potential effects of dust on emerging and adult beetles during the flight season, Best Management Practices (BMPs) will be implemented to reduce erosion and dust.
- 5) Artificial Lighting Control--To reduce potential effects of artificial nighttime lighting on emerging and adult beetles during the flight season, artificial nighttime lighting for connection of new overhead lines with the existing overhead contact system in the rail ROW will occur over a maximum of three nights and will only occur at the east and west termini of the proposed project. Lights will be shielded, directed within the boundaries of the work area, and away from adjacent habitat.
- 6) Transplanting and Credit Purchase--The applicant will compensate for adverse effects to any beetles inhabiting the 4 elderberry shrubs to be transplanted and 21 elderberry shrubs to be trimmed by purchasing credits at a 1:1 ratio. Therefore, the applicant will purchase 25 credits from a Service-approved beetle conservation bank. Credits will be purchased prior to any ground disturbing activities. The four elderberry shrubs to be transplanted will be transplanted at a Service-approved beetle conservation bank in accordance with the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus)* (Service 2017). Transplanting will occur during the dormancy period for the elderberry shrubs (November – February), and the applicant will plant additional elderberry seedlings at a 3:1 ratio (for a total of 12 elderberry seedlings planted) at the Service-approved conservation bank.

Action Area

The action area is defined in 50 CFR § 402.02, as “all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action.” For the proposed project, the 55.8-acre action area encompasses the 4.8-acre proposed project, including the ROW and the TCE, and a 165-foot buffer around these areas to account for noise, dust, and vibration associated with construction activities.

Analytical Framework for the Jeopardy Determination

Section 7(a)(2) of the Act requires that federal agencies ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species. “Jeopardize the continued existence of” means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 CFR § 402.02).

The jeopardy analysis in this biological opinion considers the effects of the proposed federal action, and any cumulative effects, on the rangewide survival and recovery of the listed species.

It relies on four components: (1) the *Status of the Species*, which describes the current rangewide condition of the species, the factors responsible for that condition, and its survival and recovery needs; (2) the *Environmental Baseline*, which analyzes the current condition of the species in the action area without the consequences to the listed species caused by the proposed action, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the species; (3) the *Effects of the Action*, which determines all consequences to listed species that are caused by the proposed federal action; and (4) the *Cumulative Effects*, which evaluates the effects of future, non-federal activities in the action area on the species. The *Effects of the Action* and *Cumulative Effects* are added to the *Environmental Baseline* and in light of the status of the species, the Service formulates its opinion as to whether the proposed action is likely to jeopardize the continued existence of the listed species.

Status of the Species

For the most recent comprehensive assessment of the beetle's rangewide status, please refer to the *Withdrawal of the Proposed Rule to Remove the Valley Elderberry Longhorn Beetle from the Federal List of Endangered and Threatened Wildlife* (Service 2014). Threats discussed in the withdrawal continue to act on the beetle, with loss of riparian habitat being the most significant effect. While there continue to be losses of beetle habitat throughout its range, to date no project has proposed a level of effect for which the Service has issued a biological opinion of jeopardy for the beetle.

Environmental Baseline

Environmental baseline refers to the condition of the listed species or its designated critical habitat in the action area, without the consequences to the listed species or designated critical habitat caused by the proposed action. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process. The consequences to listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency's discretion to modify are part of the environmental baseline.

The action area is located in an urban, highly disturbed landscape approximately 0.5 mile south of the American River. Elevations within the action area range from 135 to 150 feet above sea level. Surrounding land uses include various industrial, commercial, and transit facilities. The habitat types within the action area consist of 39.8 acres of developed landscapes (roads, rail lines, parking lots, etc.), 4.5 acres of ruderal vegetation, and 11.4 acres of annual grassland. The nearest riparian habitat is along the American River, which is separated from the action area by commercial development and the US-50 highway.

The elderberry shrub is the sole host plant for the beetle. The consultant conducted reconnaissance-level surveys of the action area in April 2019 and conducted a beetle habitat assessment and exit hole survey on May 28 and 29, 2020 following guidance from the *Framework For Assessing Impacts to the Valley Elderberry Longhorn Beetle* (Service 2017) (beetle framework). The surveys identified 48 elderberry shrubs within the action area, all within non-riparian habitat. Two of these elderberries were observed to have beetle exit holes in live stems, and four had older exit holes in dead stems. Regarding the location of the elderberry shrubs with respect to the proposed project, 4 of the elderberries are rooted within the rail ROW,

21 have driplines that extend into the ROW, 5 have driplines within 20 feet of the ROW but that do not extend into the ROW, and the remaining 18 are more than 20 feet from the ROW.

There are seven recorded occurrences of the beetle within 3 miles of the action area (CNDDDB 2020). Two of these occurrences are within 800 meters of the action area: one occurrence 350 meters to the north along the south bank of the American River in riparian habitat, and one occurrence 750 meters to the west in ruderal, fence-line habitat along the highway similar to the habitat in the action area. Because the proposed project is within the range of the beetle, suitable habitat for the beetle exists within the action area, exit holes were observed on several elderberry shrubs, and the beetle is known to occur nearby, the Service has determined that it is reasonably likely that the beetle is present in one or more elderberry shrubs in the action area.

Effects of the Action

Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action.

Four elderberry shrubs are rooted within the ROW and will be transplanted to a Service-approved beetle conservation bank. All four of these shrubs are located along the southern edge of the ROW near the Schnitzer Steel property where the freight track will be moved farther south and the retaining wall will be installed. No exit holes were observed on these four shrubs. The transplanting may result in the harm or death of an unknown number of individual beetle larvae inhabiting the stems of the elderberry shrubs. The likelihood of injury or death of beetle larvae, if present within the elderberry stems, will be minimized with implementation of the conservation measures, but injury or death may still occur. The elderberry shrubs may experience stress due to changes in soil, hydrology, microclimate, or associated vegetation, or damage during the transplantation process, which may lead to death of any beetle larvae inhabiting the stems. Occasionally, stems are trimmed during transplanting activities in order to facilitate transport and enhance the survival of the transplanted shrub. Additionally, stems containing beetle larvae may be broken, crushed, or otherwise damaged during transplantation activities. If the stems that are trimmed or otherwise damaged are greater than 1 inch in diameter, then the beetle's life cycle may be interrupted, or the larvae inhabiting the stems may die during or following transplantation. Because only four shrubs will be transplanted during their dormant phase, the effects to the shrubs will likely be reduced. However, research suggests that one of the four shrubs may not survive the first year following relocation. Holyoak et al. (2010) examined the effectiveness of elderberry shrub transplantation and found the survival rate of elderberry shrubs to be 72.8% in the first year following shrub relocation.

The 21 elderberry shrubs with driplines that extend into the ROW will be trimmed following the guidelines in the beetle framework. Because only stems less than 1 inch in diameter will be removed, no beetles within these 21 shrubs are expected to be harmed directly by the trimming. However, the trimming may reduce the fitness of the shrub itself, and this stress may lead to the death of any beetle larvae inhabiting the stems. The likelihood of injury or death of beetle larvae, if present within the elderberry stems, will be minimized by following the guidelines in the beetle framework, but injury or death may still occur.

The remaining 23 shrubs are not expected to be adversely affected by the proposed project because they will be avoided and fenced off to separate them from construction activities. Compared to the baseline levels of disturbance from dust, noise, vibration, and lights from the light rail, Folsom Boulevard, and surrounding urban landscape, any effects to the beetle from these sources due to construction activities are expected to be minor in scale and do not rise to a level where take will occur, and are therefore insignificant for the purposes of this consultation.

Some construction activities will occur during the beetle's flight season (March – July), causing potential for collisions with emerging or adult beetles. The potential for collisions will be slightly higher than the baseline levels from light rail and vehicle traffic due to the presence of construction equipment. The likelihood of injury or death of beetles due to collisions with construction equipment will be minimized with implementation of the conservation measures, but injury or death may still occur.

As noted previously in the Description of the Proposed Action section, the project proponent has also proposed a set of conservation measures, including the commitment to provide compensatory habitat as a condition of the action. This compensatory habitat is intended to minimize the effect on the species of the proposed project's anticipated incidental take, resulting from the permanent loss of habitat described above. The compensatory habitat proposed will be in the form of preservation of existing beetle habitat at a Service-approved beetle conservation bank.

This component of the action will have the effect of protecting and managing lands for the species' conservation in perpetuity. The compensatory lands will provide suitable habitat for breeding, feeding, or sheltering commensurate with or better than habitat lost as a result of the proposed project. Providing this compensatory habitat as part of a relatively large, contiguous block of conserved land may contribute to other recovery efforts for the species.

Cumulative Effects

Cumulative effects include the effects of future State, Tribal, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. During this consultation, the Service did not identify any future non-federal actions that are reasonably certain to occur in the action area of the proposed project.

Conclusion

After reviewing the current status of the beetle, the environmental baseline for the action area, the effects of the proposed project, and the cumulative effects, it is the Service's biological opinion that the Folsom Double Track Project, as proposed, is not likely to jeopardize the continued existence of the beetle. The Service reached this conclusion because the project-related effects to the species, when added to the environmental baseline and analyzed in consideration of all potential cumulative effects, will not rise to the level of precluding recovery or reducing the likelihood of survival of the species based on the following:

- 1) The 4 elderberry shrubs to be transplanted and the 21 elderberry shrubs to be trimmed represent a very small portion of habitat available throughout the full range of the beetle; and,

- 2) The compensatory habitat proposed will ensure that habitat for the species will be protected and managed in perpetuity.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harass is defined by Service regulations at 50 CFR 17.3 as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Harm is defined by the same regulations as an act which actually kills or injures wildlife. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by the FTA so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, for the exemption in section 7(o)(2) to apply. The FTA has a continuing duty to regulate the activity covered by this incidental take statement. If the FTA (1) fails to assume and implement the terms and conditions or (2) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the FTA must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR §402.14(i)(3)].

Amount or Extent of Take

The Service anticipates that incidental take of the valley elderberry longhorn beetle will be difficult to detect due to the fact that it is not possible to know how many larvae inhabit elderberry shrubs within the action area, including the 4 elderberry shrubs to be transplanted and the 21 elderberry shrubs to be trimmed. The transplantation of the four elderberry shrubs may result in the harm and mortality of all larvae inhabiting the stems. The Service anticipates that one of the four relocated elderberry shrubs may not survive its first year following relocation, and that the remaining three shrubs may experience damage to stems either accidentally or from targeted trimming during the transplantation process. The Service anticipates that, though unlikely, any valley elderberry longhorn beetle larvae inhabiting the stems of any of the 21 shrubs to be trimmed may be harmed or killed by disturbance or stress to the shrub. The Service anticipates that any valley elderberry longhorn beetles encountered during collisions with construction equipment during the flight season may also be harmed or killed. Therefore, the Service is authorizing incidental take to the proposed action as the harm or death of all valley elderberry longhorn beetle larvae within 1 of the transplanted shrubs, any valley elderberry longhorn beetle larvae in stems greater than 1 inch that may be trimmed or damaged on the 3 other transplanted shrubs and the 21 shrubs to be trimmed, and any valley elderberry longhorn beetles encountered during collisions with construction equipment during the flight season.

Upon implementation of the following reasonable and prudent measures, incidental take of the valley elderberry longhorn beetle associated with the Folsom Double Track Project will become exempt from the prohibitions described in section 9 of the Act. No other forms of take are exempted under this opinion.

Effect of the Take

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the species.

Reasonable and Prudent Measures

All necessary and appropriate measures to avoid or minimize effects on the beetle resulting from implementation of this project have been incorporated into the project's proposed conservation measures. Therefore, the Service believes the following reasonable and prudent measure is necessary and appropriate to minimize incidental take of the beetle:

- 1) All conservation measures, as described in the biological assessment and restated here in the Project Description section of this biological opinion, shall be fully implemented and adhered to. Further, this reasonable and prudent measure shall be supplemented by the terms and conditions below.

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, the FTA must ensure compliance with the following terms and conditions, which implement the reasonable and prudent measure described above. These terms and conditions are nondiscretionary.

- 1) The FTA shall include full implementation and adherence to the conservation measures as a condition of any permit or contract issued for the project.
- 2) The FTA will provide a copy of the completed bill of sale and payment receipt to the Service upon the purchase of beetle conservation credits.
- 3) In order to monitor whether the amount or extent of incidental take anticipated from implementation of the proposed project is approached or exceeded, the FTA will adhere to the following reporting requirement. Should this anticipated amount or extent of incidental take be exceeded, the FTA must immediately reinitiate formal consultation, as per 50 CFR §402.16.
 - a. For those components of the action that will result in habitat degradation or modification whereby incidental take in the form of harm is anticipated, the FTA will provide a precise accounting of the elderberry shrubs impacted to the Service after the completion of construction. This report will also include any information about changes in project implementation that result in habitat disturbance not described in the *Description of the Action* and not analyzed in this biological opinion.

REINITIATION—CLOSING STATEMENT

This concludes formal consultation on the Folsom Double Track Project. As provided in 50 CFR §402.16(a), reinitiation of consultation is required and shall be requested by the federal agency or by the Service where discretionary federal involvement or control over the action has been retained or is authorized by law, and:

- 1) If the amount or extent of taking specified in the incidental take statement is exceeded;
- 2) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered;
- 3) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion; or written concurrence, or
- 4) If a new species is listed or critical habitat designated that may be affected by the identified action.

If you have any questions regarding this biological opinion, please contact Ian Perkins-Taylor, Fish and Wildlife Biologist (ian_perkins-taylor@fws.gov), or Andy Raabe, Acting Division Manager (andrew_raabe@fws.gov), at the letterhead address or at (916) 414-6585.

Sincerely,



Ryan Olah
Acting Field Supervisor

ec:

Lucinda Eagle, Federal Transit Administration, San Francisco, California
Candice Hughes, Federal Transit Administration, San Francisco, California

LITERATURE CITED

- California Natural Diversity Database (CNDDDB). 2020. Biogeographic Data Branch, Department of Fish and Wildlife, Sacramento, California. Accessed August 24, 2020.
- Holyoak, M., T. Talley, and S. Hogle. 2010. The effectiveness of US mitigation and monitoring practices for the threatened Valley elderberry longhorn beetle. *Journal of Insect Conservation* 14:43-52.
- U.S. Fish and Wildlife Service (Service). 2014. Withdrawal of the Proposed Rule to Remove the Valley Elderberry Longhorn Beetle from the Federal List of Endangered and Threatened Wildlife. *Federal Register* 79:55874-55917. September 17, 2014.
- _____. 2017. Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle. Sacramento Fish and Wildlife Office, Sacramento, California. 28 pp.

**Appendix B.2 Endangered Species Act
Section 7 Compliance
Biological Assessment**

Final
Folsom Light Rail Modernization
Double Track Project
Rancho Cordova Segment
Biological Assessment



Federal Transit Administration
Region 9
90 7th Street
San Francisco, CA 94103

Prepared for:
Sacramento Regional
Transit District
1400 29th Street
Sacramento, CA 95812

AECOM
September 15, 2020

TABLE OF CONTENTS

Section	Page
1 INTRODUCTION	1-1
1.1 Project Overview	1-1
1.2 Proposed Action And Action Area Overview	1-1
1.3 Background	1-5
1.4 Species Considered In This Biological Assessment	1-7
2 DESCRIPTION OF THE PROPOSED ACTION.....	2-1
2.1 Introduction	2-1
2.2 Project Location	2-1
2.3 Project Site Background	2-1
2.4 Project Goals	2-2
2.5 Proposed Action	2-2
2.6 General Construction Methods, Schedule, and Equipment.....	2-3
2.7 Environmental Commitments and Mitigation Measures	2-5
2.8 Permits, Approvals, and Regulatory Requirements.....	2-6
3 ENVIRONMENTAL BASELINE	3-1
3.1 Hydrology	3-1
3.2 Land Cover.....	3-1
3.2.1 Developed.....	3-2
3.2.2 Ruderal	3-2
3.2.3 Annual Grassland.....	3-3
4 SPECIES ACCOUNT.....	4-1
4.1 Valley Elderberry Longhorn Beetle.....	4-1
4.1.1 Description	4-1
4.1.2 Distribution and Life History.....	4-1
4.1.3 Critical Habitat.....	4-1
4.1.4 Species Status in the Action Area	4-2
5 EFFECTS OF THE PROPOSED ACTION	5-1
5.1 Changes to Habitat.....	5-1
5.2 Species-Specific Analysis: Valley Elderberry Longhorn Beetle.....	5-3
5.3 Effects of Interrelated and Interdependent Actions	5-4
5.4 Cumulative Effects	5-5
6 CONCLUSIONS AND DETERMINATION.....	6-1
6.1 Conservation Measures.....	6-1
6.2 Compensation Measures	6-2
6.3 Conclusion	6-3
7 REFERENCES.....	7-1

Appendices

Appendix A Preliminary Engineering Plans for the Rancho Cordova Segment (submitted separately)

List of Figures

Figure 1. Folsom Light Rail Modernization Double Track Project Location	1-2
Figure 2. Proposed Action Vicinity	1-3
Figure 3. Proposed Action and Action Area	1-4
Figure 4. CNDDDB Occurrences within 3 Miles of the Action Area.....	1-11
Figure 5. Land Cover in the Action Area.....	3-2
Figure 6. Critical Habitat Map	4-3
Figure 7A. Elderberry Shrubs in the Action Area (Map 1 of 4).....	4-4
Figure 7B. Elderberry Shrubs in the Action Area (Map 2 of 4).....	4-5
Figure 7C. Elderberry Shrubs in the Action Area (Map 3 of 4).....	4-6
Figure 7D. Elderberry Shrubs in the Action Area (Map 4 of 4).....	4-7

List of Tables

Table 1. Special-Status Species Considered for Evaluation in the Action Area	1-7
Table 2. Regulatory Agencies and Approvals.....	2-7
Table 3. Vegetation Communities Mapped with the Action Area	3-1
Table 4. Elderberry Exit Hole Survey Results, May 2020.....	4-11
Table 5. Summary of the Proposed Action’s Potential Effects to VELB Habitat (Elderberry Shrubs).....	5-2

ACRONYMS AND ABBREVIATIONS

amsl	above mean sea level
BA	Biological Assessment
BO	Biological Opinion
BMP	best management practice
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDDB	California Department of Fish and Wildlife California Natural Diversity Database
CNPS	California Native Plant Society
CWA	Clean Water Act
DCH	Designated critical habitat
DPS	distinct population segment
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FR	Federal Register
FTA	Federal Transit Administration
ISA	International Society of Arboriculture
IPaC	Information for Planning and Conservation
LRT	light rail transit (LRT)
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
ROW	right-of-way
SacRT	Sacramento Regional Transit District
SPTCJPA	Sacramento – Placerville Transportation Corridor Joint Powers Authority
SWPPP	stormwater pollution prevention plan
USACE	US Army Corps of Engineers
USGS	US Geological Survey
USFWS	US Fish and Wildlife Service
VELB	valley elderberry longhorn beetle

This page intentionally left blank

1 INTRODUCTION

1.1 PROJECT OVERVIEW

The Sacramento Regional Transit District's (SacRT's) Folsom Light Rail Modernization Project proposes improvements along its Gold Line that connects downtown Sacramento and the City of Folsom, approximately 20 miles to the northeast. These improvements would enable light rail trains to operate every 15 minutes, rather than the current 30 minutes. The overall project includes the addition of passing tracks, second platforms, and upgraded train signaling in specific "segments," or stretches, of the corridor, as illustrated in Figure 1. As seen in Figure 1, there are two distinct segments: the 0.6-mile eastern stretch in the City of Folsom is referred to as the "Folsom Segment;" the 1.2-mile western segment in Rancho Cordova and unincorporated Sacramento County is identified as the "Rancho Cordova Segment."

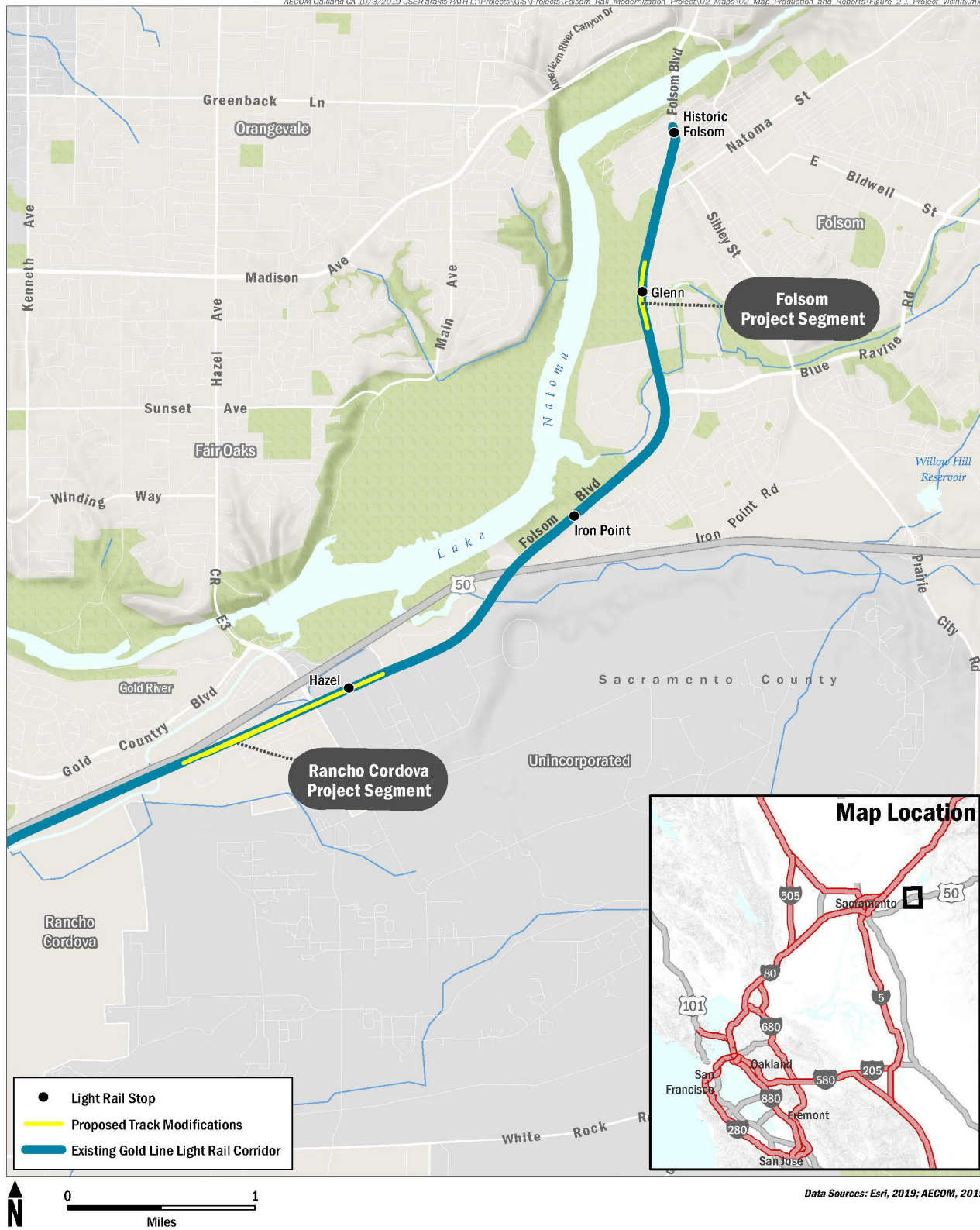
The FTA has identified the potential for special-status species to occur in the Rancho Cordova Segment, and in consultation with the U.S. Fish and Wildlife Service (Service) has prepared this Biological Assessment (BA) to evaluate the potential effects to the identified special-status species, in accordance with the Endangered Species Act. For the purpose of this BA, the Proposed Action encompasses all proposed improvements within the Rancho Cordova Segment. This effects analysis is being provided for the Proposed Action because the Proposed Action requires authorization from the Service for potential "take" incidental to the installation of project components.

The purpose of this BA is to determine to what extent the Proposed Action may affect special-status species and their critical habitat. This BA has been prepared in accordance with requirements set forth under Section 7 of the Endangered Species Act (ESA) (16 U.S. Code 1536[c]).

1.2 PROPOSED ACTION AND ACTION AREA OVERVIEW

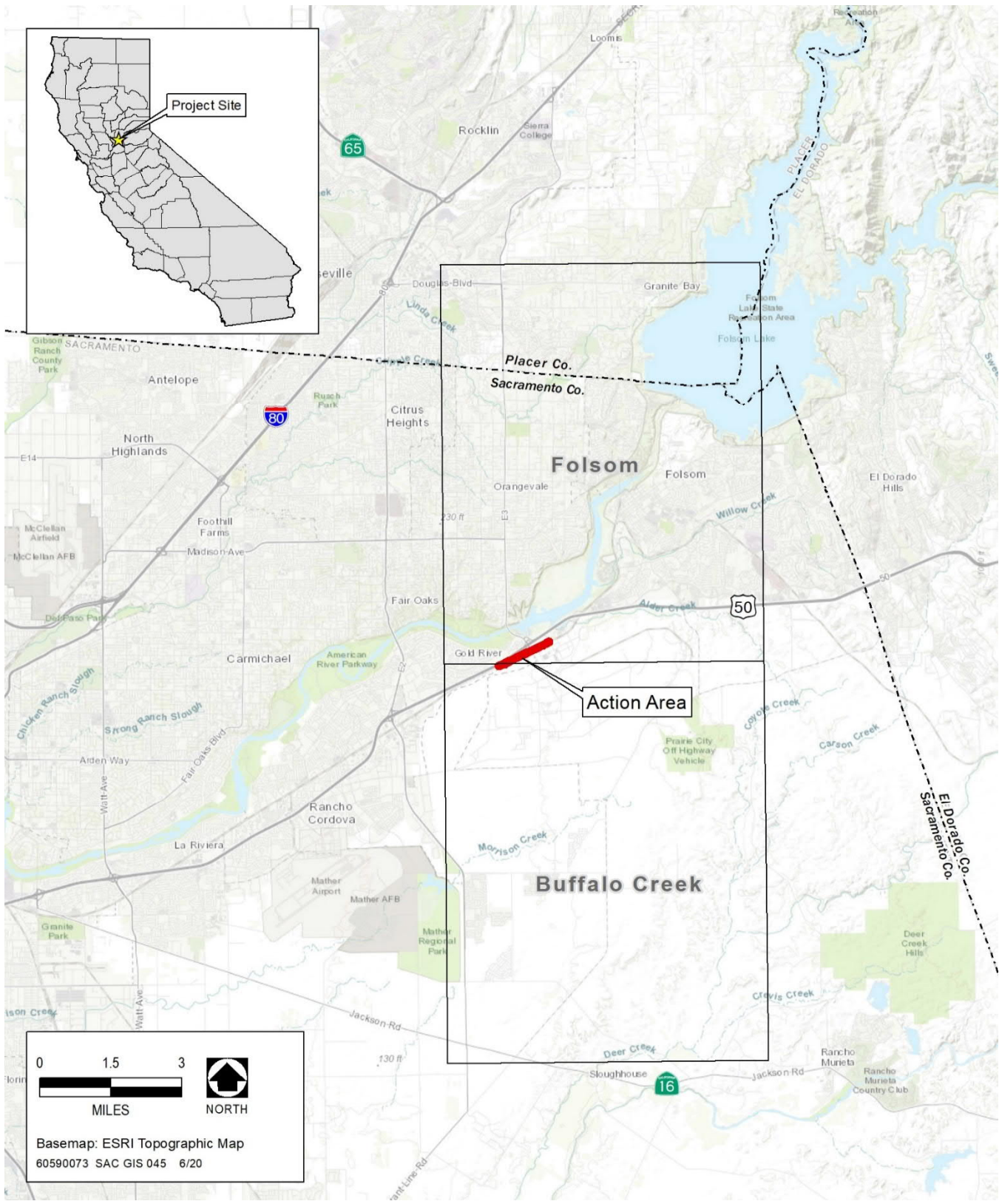
The Proposed Action is the 1.2-milelong Rancho Cordova Segment of the proposed Folsom Light Rail Modernization Double Track Project (Figure 2 and Figure 3). The Proposed Action is in the City of Rancho Cordova and unincorporated Sacramento County and includes the Hazel Station. The Proposed Action would add a second light rail track and a second loading platform at the Hazel Station. In addition, an existing freight track would be realigned and a new freight siding installed to accommodate the light rail improvements. The project area covers approximately 4.8 acres. Surrounding land uses include various industrial, commercial, and transit facilities. The Proposed Action is situated in an urban setting and is part of a highly disturbed and managed landscape with little to no remaining natural vegetation.

The Action Area is defined as all areas that would be directly or indirectly affected by the Proposed Action and encompasses the project site as well as other adjacent areas that may be indirectly affected by the Proposed Action. The Action Area includes the direct project footprint (i.e., the project disturbance area, including permanent and temporary construction) plus a 165-foot (50-meter) buffer (Figure 3).



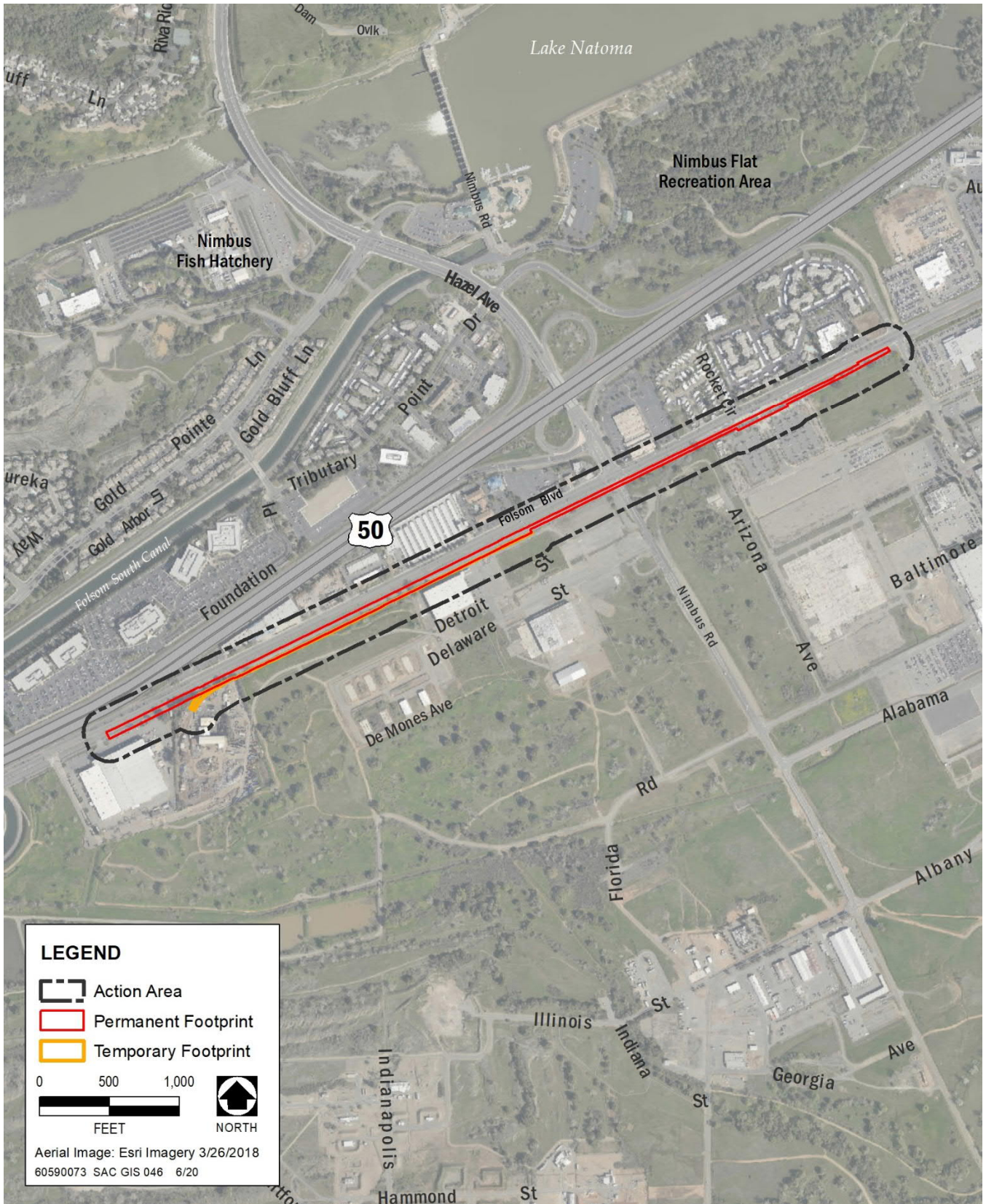
AECOM
 Sacramento Regional Transit District
 Folsom Light Rail Modernization Double Tracking Project
 SACRAMENTO COUNTY, CA

Figure 1. Folsom Light Rail Modernization Double Track Project Location



Source: Compiled by AECOM in 2020

Figure 2. Proposed Action Vicinity



Source: compiled by AECOM in 2020

Figure 3. Proposed Action and Action Area

consultation. On May 12, FTA and the Service held a teleconference regarding the initiation of a formal consultation to address comments raised from the informal consultation, as well as the preparation of a BA for the Service's review in issuing a new Biological Opinion specifically for the Proposed Action.

A summary of the comments raised during informal consultation and the outcome of FTA and Service communications follows:

1. The Service does not believe that the previous Biological Opinion issued on February 14, 2000 for the Downtown Sacramento Amtrak and Folsom Light Rail Extensions and Double Tracking Project, which overlaps the Proposed Action, adequately covers the effects on the host plant for the listed valley elderberry longhorn beetle. As a result, the Service is requesting FTA to initiate formal consultation. FTA has initiated formal consultation and is providing this BA, containing updated information on environmental conditions in the Action Area, to obtain a new Biological Opinion.
2. The Service requested clarification on the intent of the reconnaissance-level surveys and pre-construction surveys. Based on FTA's March 30 response, the elderberry survey data are sufficient for consultation.
3. The Service requested clarification on the location and number of elderberry shrubs in the project area. Based on FTA's March 30 response, including a table and figures, the Service has sufficient information for consultation.
4. The Service requested information on project construction in relation to the beetle's flight season. Based on FTA's March 30 response, the Service does not need further information but will review the BA for any adverse effects to the beetle, particularly if construction could occur during the flight season.
5. The Service needs additional information to understand the effects to elderberry shrubs outside the project footprint but within 20 feet of the proposed project. These shrubs, their driplines, and identified fencing avoidance measures would encroach into the project footprint. The effects on these shrubs and project construction activities need to be clarified. This BA contains information to clarify these questions.
6. The Service requested information about the proposed fencing intended to avoid impacts to elderberry shrubs. This BA contains information to clarify the fencing measures proposed around elderberry shrubs to be avoided.
7. The Service requested clarification on conservation measure #3 (compensatory mitigation) relative to the locations and amounts of affected elderberry shrubs. Based on FTA's March 30 response, the application of the compensatory mitigation has been explained, and this BA proposes new compensatory mitigation requirements based on the more detailed survey that has been completed.

1.3 BACKGROUND

A previous Biological Opinion (BO) (Reference No. 1-1-00-F-0009) was issued by the Service for the Downtown Sacramento Amtrak and Folsom Corridor Light Rail Transit Extensions and Double Tracking Project in Sacramento County, California (Downtown Sacramento-Folsom Corridor project) that overlaps with the Proposed Action (USFWS 2000). The Downtown Sacramento-Folsom Corridor project included extension of the light rail transit (LRT) tracks from Mather Field to downtown Folsom, including the existing single tracks that are present within the Proposed Action area.

The Final EIR/EIS for the Downtown Sacramento-Folsom Corridor project mapped elderberry shrubs along the project corridor between Sunrise Boulevard and Hazel Avenue, with approximately 5 percent of shrubs showing signs of valley elderberry longhorn beetle borer activity at the time (FTA 2000). The BO identified 47 elderberry shrubs that would be directly affected by the Downtown Sacramento-Folsom Corridor project which included the Sunrise to Folsom project segment, which overlaps with the Proposed Action's Rancho Cordova disturbance area. The BO concluded that the Downtown Sacramento-Folsom Corridor project was not likely to jeopardize the continued existence of the valley elderberry longhorn beetle and included the following conservation measures and terms and conditions:

BO Conservation Measures (USFWS 2000):

- All elderberry shrubs to be avoided within the vicinity of the proposed project would be flagged and surrounded with high-visibility fencing for the duration of construction activities.
- All contractors and construction crews would be briefed on the status of the beetle, the need to protect its host plant (elderberries), requirements to avoid damaging elderberry shrubs, and possible penalties of not complying with the identified avoidance and minimization measures.
- For impacts to elderberry shrubs that cannot be avoided during project activities, RT would act in accordance with the Service's guidelines for the beetle, dated September 19, 1996. All elderberry shrubs containing stems one inch or greater in diameter at ground level would be transplanted to a service-approved conservation bank or other conservation area. Transplanting would occur during the dormancy period for elderberry shrubs (November through the second week of February). Since less than fifty percent of the shrubs exhibited signs of use by the beetle (i.e., exit holes), RT will plant additional elderberry seedlings at a three-to-one ratio at a Service-approved conservation bank or other Service-approved conservation area.

BO Terms and Conditions (USFWS 2000):

- Confine clearing to the minimal area necessary to facilitate construction activities.
- Movement of heavy equipment to and from the project site shall be restricted to established roadways to minimize habitat disturbance.
- Work crews shall be trained by a qualified individual on the importance of avoiding elderberry shrubs throughout the action area. The FTA will provide the Service with a letter verifying that training of work crews was completed prior to the beginning of construction activities.
- To compensate for impacts to beetles inhabiting 1,248 elderberry stems requiring transplanting in conjunction with project activities associated with the Downtown Sacramento-Folsom Corridor project, 47 elderberry shrubs shall be transplanted to a Service-approved conservation bank. In addition, 250 VELB units will be dedicated in a Service-approved conservation bank.

Mitigation Measure BIO-4 of the CEQA Initial Study/Mitigated Negative Declaration for the Folsom Light Rail Modernization Double Track Project tiers off the above conservation measures from the BO and requires that SacRT compensate for effects on the beetle and/or its habitat in accordance with the recent *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle* (USFWS 2017). Mitigation Measure BIO-4 was included in the CEQA Initial Study/Mitigated Negative Declaration, which was adopted by the SacRT Board on January 13, 2020, along with the companion Mitigation Monitoring and Reporting Program (SacRT Board of Directors 2020), to avoid and minimize effects to the beetle. Section 2.7 of this BA includes a copy of Mitigation Measure BIO-4.

1.4 SPECIES CONSIDERED IN THIS BIOLOGICAL ASSESSMENT

A list of the special-status species considered for evaluation in this BA was compiled from the USFWS Information for Planning and Conservation (IPaC) Species List database (USFWS 2020a) for the Action Area, and the California Department of Fish and Wildlife California Natural Diversity Database (CNDDDB) (CDFW 2020) and California Native Plant Society (CNPS) inventory of rare and endangered plants (CNPS 2020) for USGS Folsom and Buffalo Creek 7-5 minute quadrangles and 10 surrounding quadrangles: Citrus Heights, Roseville, Rocklin, Pilot Hill, Clarksville, Folsom SE, Carbondale, Sloughouse, Elk Grove, and Carmichael (USGS 2018a-1). Table 1 summarizes the status of special-status species evaluated in this BA and Figure 4 depicts the locations of CNDDDB records of special-status species within a 3-mile radius of the Action Area.

Table 1 shows special-status species considered for evaluation in the Action Area. The only taxon that may be adversely affected by the Proposed Action is the valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). This federally-listed taxon is listed below in Table 1 and is expected to be protected by the implementation of the conservation measures provided in Section 6 of this BA.

Of the 19 federally listed taxa considered, based on the database searches and background research described above, 18 depend upon habitats that are not present in the Action Area and thus were determined to have no potential to occur within the Action Area. This includes 10 taxa (2 plants and 8 wildlife) that depend on wetland and aquatic habitats that are not present in the Action Area, and 8 species of federally listed plants associated with chaparral and cismontane woodland habitats with rocky, gabbro, or serpentine soils that do not exist in the Action Area.

Table 1. Special-Status Species Considered for Evaluation in the Action Area

Scientific Name	Common Name	Listing Status	Critical Habitat/ Recovery Plan	Potential to Occur in the Action Area
Plants				
<i>Arctostaphylos myrtifolia</i>	Ione manzanita	Threatened (64 FR 28403 28413, May 26, 1999)	None designated/No current recovery plan available for this species	No potential to occur in the Action Area; the Action Area is outside of the elevation range for this species, and no suitable habitat (chaparral or cismontane woodland) present.
<i>Calystegia stebbinsii</i>	Stebbins' morning glory	Endangered (61 FR 54346 54358, October 18, 1996)	None designated/Recovery Plan for Gabbro Soil Plants of the Central Sierra Nevada Foothills	No potential to occur in the Action Area; no suitable habitat (gabbro or serpentine soils) present.
<i>Ceanothus roderickii</i>	Pine Hill ceanothus	Endangered (61 FR 54346 54358, October 18, 1996)	None designated/Recovery Plan for Gabbro Soil Plants of the Central Sierra Nevada Foothills	No potential to occur in the Action Area; no suitable habitat (gabbro or serpentine soils) present.
<i>Eriogonum apricum</i> var. <i>apricum</i>	Ione buckwheat	Endangered (64 FR 28403, 28413, May 26, 1999)	None designated/No current recovery plan available for this species	No potential to occur in the Action Area; no suitable habitat (openings in chaparral on Ione soil) present.
<i>Eriogonum apricum</i> var. <i>prostratum</i>	Irish Hill buckwheat	Endangered (64 FR 28403, 28413, May 26, 1999)	None designated/No current recovery plan available for this species	No potential to occur in the Action Area; no suitable habitat (openings in chaparral on Ione soil) present.

Table 1. Special-Status Species Considered for Evaluation in the Action Area

Scientific Name	Common Name	Listing Status	Critical Habitat/ Recovery Plan	Potential to Occur in the Action Area
<i>Fremontodendron decumbens</i>	Pine Hill flannelbush	Endangered (61 FR 54346 54358, October 18, 1996)	None designated/Recovery Plan for Gabbro Soil Plants of the Central Sierra Nevada Foothills and Recovery Plan Amendment for Gabbro Soil Plants of the Central Sierra Nevada Foothills	No potential to occur in the Action Area; no suitable habitat (gabbro or serpentine soils) present.
<i>Galium californicum</i> ssp. <i>sierrae</i>	El Dorado bedstraw	Endangered (61 FR 54346 54358, October 18, 1996)	None designated/Recovery Plan for Gabbro Soil Plants of the Central Sierra Nevada Foothills and Recovery Plan Amendment for Gabbro Soil Plants of the Central Sierra Nevada Foothills	No potential to occur in the Action Area; no suitable habitat (gabbro soils) present.
<i>Orcuttia californica</i> var. <i>viscida</i>	Sacramento Orcutt grass	Endangered (58 FR 14338, March 26, 1997)	DCH not present in the Action Area/Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon	No potential to occur in the Action Area; no suitable habitat (vernal pools) present. There are two records of this species within 3 miles of the Action Area; both of these are from vernal pool habitat in Phoenix Field Park (CDFW 2020).
<i>Orcuttia tenuis</i>	slender Orcutt grass	Threatened (62 FR 14338, 14352, March 26, 1997)	DCH not present in the Action Area/Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon	No potential to occur in the Action Area; no suitable habitat (vernal pools) present.
<i>Packera layneae</i>	Layne's ragwort	Threatened (61 FR 54346 54358, October 18, 1996)	None designated/Recovery Plan for Gabbro Soil Plants of the Central Sierra Nevada Foothills	No potential to occur in the Action Area; no suitable habitat (rocky gabbro or serpentine soils) present.
Invertebrates				
<i>Desmocerus californicus dimorphus</i>	valley elderberry longhorn beetle	Threatened (45 FR 52803, August 8, 1980)	DCH not present in the Action Area/Revised Recovery Plan for the Valley Elderberry Longhorn Beetle	Could occur in the Action Area (CDFW 2020). Suitable habitat for the species (elderberry shrubs) present in the Action Area. There are 7 records of the species within 3 miles of the project (CDFW 2020). The nearest record is approximately 0.25 mile (364 meters) to the north of the Action Area in the Nimbus Dam Recreation Area (CDFW 2020). This record consists of riparian habitat along the south bank of the American River, where several adult VELB were recorded in elderberry clumps in April 1987 (CDFW 2020).
Crustaceans				
<i>Branchinecta conservatio</i>	conservancy fairy shrimp	Endangered (59 FR 48136, September 19, 1994)	DCH not present in the Action Area/ Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon	No potential to occur in the Action Area; no suitable habitat (vernal pools or seasonal wetlands) present.

Table 1. Special-Status Species Considered for Evaluation in the Action Area

Scientific Name	Common Name	Listing Status	Critical Habitat/ Recovery Plan	Potential to Occur in the Action Area
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	Threatened (59 FR 48136, September 19, 1994)	DCH not present in the Action Area/ Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon	No potential to occur in the Action Area; no suitable habitat (vernal pools or seasonal wetlands) present. There are four records of this species in vernal pool and seasonal wetland habitats within 3 miles of the Action Area (CDFW 2020).
<i>Lepidurus packardi</i>	vernal pool tadpole shrimp	Endangered (59 FR 48136, September 19, 1994)	DCH not present in the Action Area/ Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon	No potential to occur in the Action Area; no suitable habitat (vernal pools or seasonal wetlands) present. There are two records of this species hardpan vernal pool habitats within 3 miles of the Action Area (CDFW 2020).
Fish				
<i>Hypomesus transpacificus</i>	Delta Smelt	Threatened (58 FR 12854, 12864, March 5, 1993)	DCH not present in the Action Area/Recovery Plan for the Sacramento-San Joaquin Delta Native Fishes	No potential to occur in the Action Area; no suitable aquatic habitat present.
<i>Oncorhynchus mykiss</i>	Central Valley steelhead DPS	Threatened (62 FR 43937, Aug 18, 1997)	DCH not present in the Action Area/California Central Valley Salmon & Steelhead Recovery Plan	No potential to occur in the Action Area; no suitable aquatic habitat present. There is one record of this species within 3 miles of the Action Area, from the flowing waters of the lower American River (CDFW 2020).
Amphibians				
<i>Rana draytonii</i>	California red-legged frog	Threatened (61 FR 25813, May 23, 1996)	DCH not present in the Action Area/Recovery Plan for the California Red-legged Frog (<i>Rana aurora draytonii</i>)	No potential to occur in the Action Area; no suitable aquatic habitat present and the Action Area is outside of the species' geographic range.
<i>Ambystoma californiense</i>	California tiger salamander (Central CA DPS)	Threatened (69 FR 47212, August 4, 2004)	DCH not present in the Action Area/Recovery Plan for the Central California Distinct Population Segment of the California Tiger Salamander (<i>Ambystoma californiense</i>)	No potential to occur in the Action Area; no suitable habitat (vernal pools or seasonal wetlands/ponds) present.
Reptiles				
<i>Thamnophis gigas</i>	giant garter snake	Threatened (58 FR 54053, October 20, 1993)	None designated/Recovery Plan for the Giant Garter Snake	No potential to occur in the Action Area; no suitable aquatic or upland habitat present. No perennial marshes, sloughs, or ditches within 200 feet of Action Area. The American River, which is approximately 0.4 mile to the southwest, does not provide suitable habitat due to the presence of large predatory fish (USFWS 2017a).

Table 1. Special-Status Species Considered for Evaluation in the Action Area

Scientific Name	Common Name	Listing Status	Critical Habitat/ Recovery Plan	Potential to Occur in the Action Area
-----------------	-------------	----------------	---------------------------------	---------------------------------------

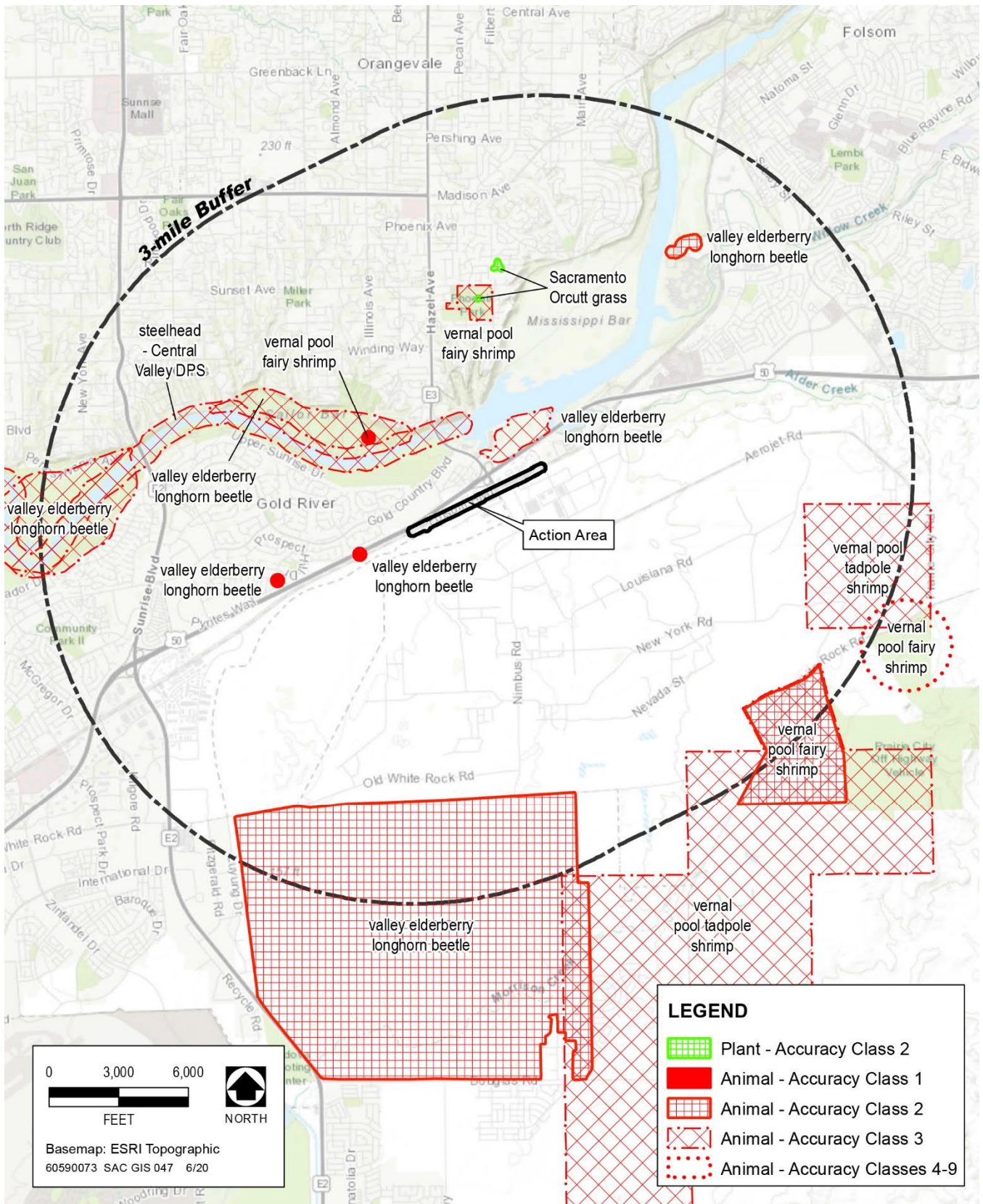
Sources: USFWS 2020; CDFW 2020; CNPS 2020

CDFW= California Department of Fish and Wildlife

DCH = Designated critical habitat

DPS = distinct population segment

FR = Federal Register



Source: CDFW 2020; compiled by AECOM in 2020

Figure 4. CNDB Occurrences within 3 Miles of the Action Area

This page intentionally left blank

2 DESCRIPTION OF THE PROPOSED ACTION

2.1 INTRODUCTION

The Sacramento Regional Transit District (SacRT) is proposing the Folsom Light Rail Modernization Project, which includes improving light rail service along the Gold Line by installing a second track, or a “passing track,” in two segments: one in the City of Rancho Cordova and unincorporated Sacramento County (the Rancho Cordova Segment) and one in the City of Folsom (the Folsom Segment). The addition of these passing tracks and related improvements would enable SacRT to operate trains every 15 minutes instead of the current 30 minutes. Among the related improvements are the installation of new passenger platforms at the Hazel Station in the Rancho Cordova Segment and at the Glenn Station in the Folsom Segment. The Proposed Action for this Biological Assessment is limited to the Rancho Cordova Segment, because biological surveys performed in 2019 did not identify elderberry shrubs in the Folsom Segment.

2.2 PROJECT LOCATION

The project site is within the USFWS Pacific Southwest Region 8 in the City of Rancho Cordova and County of Sacramento, within the jurisdiction of the USFWS Sacramento Field Office. Surrounding properties are currently used for industrial and regional transit purposes. The Proposed Action includes portions of three land parcels with land use designations that include heavy industrial; aerospace fabrication industrial; and public/utilities. Proposed project activities will take place within an approximately 1.2-mile-long stretch of the rail right-of-way (ROW) owned by the Sacramento – Placerville Transportation Corridor Joint Powers Authority (SPTCJPA), of which SacRT is a member, that generally runs from east to west along the south side of Folsom Boulevard. The Aerojet property bounds the rail ROW to the south. The main channel of the American River is approximately 0.5 mile to the north. Elevations of the Action Area range from approximately 135 feet above mean sea level (amsl) to 150 feet amsl.

The project site crosses Nimbus Road and is bounded to the east by Aerojet Drive and to the west by the Schnitzer Steel facility. The site can be accessed directly from the Hazel Station platform, the Nimbus Road Crossing, and Folsom Boulevard immediately north of the railroad tracks.

2.3 PROJECT SITE BACKGROUND

The project site is within an existing rail ROW that currently contains a single SacRT light rail track (LRT) alignment, overhead contact system (OCS) poles, and overhead wires. There are currently three tracks in the western portion of the project area adjacent to Schnitzer Steel. SacRT provides light rail service on the two northerly tracks that converge to a single track that continues eastward to the Gold Line’s terminus in the City of Folsom. A third track lies south of the two light rail tracks and provides freight service to the neighboring properties to the south. The existing freight track is operated by Union Pacific Railroad (UPRR) on a 20-foot-wide easement within the SPTCJPA ROW. The SPTCJPA members are the SacRT, the City of Folsom, Sacramento County, and El Dorado County. The freight track also includes two spur tracks that continue south of the ROW: one that is active and connects to the Schnitzer Steel facility; and another abandoned spur track that extends into the Aerojet property along Nimbus Road.

2.4 PROJECT GOALS

The Proposed Action would improve SacRT's light rail service to Folsom along its Gold Line. The improvements would allow light rail trains to operate every 15 minutes from the Sunrise Station to downtown Folsom, rather than the current 30 minutes. The improvements are part of the "Folsom Light Rail Modernization Project" that collectively includes new low-floor light rail vehicles, modification to station platforms to accommodate the new vehicles, and addition of new passing tracks and signalization.

Grant awards to SacRT in 2018, totaling approximately \$129 million, are providing funds to enhance light rail service. The funding is from a variety of sources, including the State of California's Transit and Intercity Rail Capital Improvement Program and the Solutions for Congested Corridors Program Service improvements, federal funds from the Surface Transportation Program/Congestion Mitigation and Air Quality Improvement Program that were allocated to SacRT by the Sacramento Area Council of Governments, Caltrans lawsuit settlement with the Environmental Council of Sacramento and California Proposition 1A, the High-Speed Rail Act (2008). These funds are being directed in part to the Gold Line to enable 15-minute service frequencies, to be achieved by "double tracking" or installing a passing track and updating the signal system that controls train movements so that trains will be able to operate inbound and outbound between the Sunrise and Historic Folsom stations with little or no delay.

2.5 PROPOSED ACTION

The Proposed Action would involve all construction activities related to installation of a second passing track and modifications to the Hazel Station in the Rancho Cordova Segment. The second passing track would be installed as an extension of the existing outbound LRT and would be 14 feet from the single LRT that is closest to Folsom Boulevard. The new tracks would be constructed on cross ties placed on compacted ballast rock that is approximately 4 feet high. The ballast extends from the edge of the cross ties at a slope of 2:1, so that the track width at the bottom of the ballast layer is approximately 16 feet.

The existing freight line would be reconstructed to the south to maintain a required 20-foot separation between the centerlines of the light rail and freight tracks. Just east of the Schnitzer Steel property near the western project limits, a new freight rail siding also would be installed, separated 14 feet from the freight mainline. The approximately 1,150-foot-long siding would be located south of the relocated freight line.

This four-track configuration (two light rail tracks and two freight tracks) would continue for approximately 1,150 feet, at which point the track configuration would revert to three tracks (two light rail tracks and one freight track; the freight siding would not extend further to the east) adjacent to a large warehouse/distribution building. The freight track would stop about 100 feet from the future at-grade crossing of the proposed improvements at the Hazel Avenue interchange with U.S. 50.¹ This four-track configuration would require acquisition of approximately 0.2 acre of private property along the south side of the rail ROW (and would be the new permanent ROW). A retaining wall, approximately 955 feet long, would be constructed along the boundary of the expanded permanent rail ROW and a temporary construction easement (TCE) of approximately 2 feet to the south of the permanent ROW would provide access for installation of the retaining wall. East of the retaining wall, an open

¹ The interchange improvement in Sacramento County would be bounded along Hazel Avenue by Tributary Point/westbound off-ramp intersection to the north and would extend approximately 1,000 feet south of Folsom Boulevard to a future intersection within the approved Easton Place development. Hazel Avenue would be elevated over Folsom Boulevard and the SPTCJPA rail corridor.

ditch would be constructed for drainage. The southern edge of the ditch (i.e., at the top) would be aligned with the proposed ROW line. A two-foot TCE is shown along the ditch for potential minor soil disturbance during ditch construction. The purpose of the TCE is to allow for proper installation of the retaining wall and drainage ditch, and backfill of excavated soil. Construction of the retaining wall and ditch would be staged entirely from the existing ROW to the north, with all equipment movement and materials storage restricted to this area.

The two light rail tracks would continue to the northeast in their current alignments and configurations. The Nimbus Road grade crossing would be modified slightly to install a pre-cast track section that is required for the proposed passing track. Any modifications to the street, sidewalk, or curb would be designed in accordance with the City of Rancho Cordova and Sacramento County design specifications.

After passing Nimbus Road, as the tracks approach the Hazel Station, the alignment of the outbound track would be adjusted to conform to the existing freight track at the station. Between the station and a point before Aerojet Road, the double tracks would merge onto the existing single track to continue to the next station at Iron Point in Folsom.

The Action Area includes all areas of ground disturbance, including the installation of new track and staging and laydown areas. Specific locations for potential staging areas have not yet been identified; however, work areas, access, and locations for potential staging areas would be restricted to the existing rail ROW. No equipment staging, equipment movement, or materials storage would occur in the TCE.

The total acreage of the potential disturbance area is approximately 4.8 acres, which includes the space necessary for track and service pole installation, construction of the retaining wall and instrument house, temporary staging areas for equipment, and work activities. The Proposed Action would incorporate the appropriate environmental commitments (or equivalent measures) and mitigation measures, which are identified in Section 6 of this document.

2.6 GENERAL CONSTRUCTION METHODS, SCHEDULE, AND EQUIPMENT

Construction of the passing tracks is expected to take approximately 25 months, starting in spring 2021. After completion of final design, acquisition of any required real estate, and selection of a construction contractor, the general construction sequence would be as follows:

- Demolition of existing structures, including portions of the existing street curb, gutter, and sidewalk, and any structures that lie within the permanent “footprint,” the land area required for future light rail operations, stations, and other ancillary facilities.
- If necessary, relocation of aboveground utilities, including traffic signals, SacRT overhead contact system support poles, and other overhead utilities for electrical transmission and communications, and potentially relocation of underground utilities in various segments along the track alignment. Based on initial field visits, no overhead utilities appear to require relocation and existing underground facilities are only at street crossings, where they are at a depth not expected to be affected by construction. These utilities would be protected in place. To minimize disruptions to light rail service, SacRT would connect the new overhead lines with the existing overhead contact system in the rail ROW at night. This “cutover” work would involve de-energizing, replacing, and installing new overhead electric lines. SacRT expects that

this work would be performed during a weekend and would not require more than three nights (Friday through Sunday nights).

- Installation of underground utilities, including all electrical systems needed for traffic control systems at street crossings. This would include installation of foundations for poles supporting the overhead contact wires; each pole (approximately 3 feet in diameter) would require a shaft up to 30 feet deep that would be backfilled with concrete. Poles typically would be 150 feet apart, depending on the alignment (closer spacing would be required, if the alignment is curved).
- Grading to create proper site elevations along the corridor by excavating about three feet and then building the rail bed back to conform to the height of the existing rails. In some areas, there may be a need to excavate up to 5 feet, where highly compressible soils are present. Initial grading work includes removal of the abandoned spur freight track from within the ROW west of the Hazel Station.
- Installation of a new concrete retaining wall that is 955 feet long and approximately 29.5 inches tall along the southern boundary of the freight siding. This retaining wall would be of T-Wall system construction, which is a gravity structure constructed of individual precast T-Wall units that minimize soil disturbance and encroachment into nearby vegetation, including elderberry shrubs that exist adjacent to the south side of the proposed retaining wall. Each T-Wall unit consists of a front face panel and a stem, which extends back into and engages the soil. Installation of the T-Wall would require minimal excavation to a depth of 12 inches. Access to install the retaining wall and its construction would be performed from the north side of the wall, away from the main stems of elderberry shrubs, and before any track work is performed. As explained above, a two-foot-wide TCE would be provided on the south side of the wall to allow proper installation of the retaining wall.
- Realignment of 3,299.71 feet of existing freight track 15 feet to the south in order to maintain a 20-foot separation between the centerlines of the light rail track and the freight track and installation of 1,136.88 feet of new freight siding south of the realigned freight track. In addition, new freight turnouts would be installed at either end of the freight siding to allow freight trains to move between the siding and the freight track. After excavation of the rail bed, the sub ballast is put in, and the ballast is placed on top of that, followed by the track cross ties. Rail bed construction would be completed using sub ballast and ballast material from existing permitted quarries. After the track is placed, it would be adjusted to its final alignment with special rail-mounted equipment, aligning the track and tamping the ballast.
- Installation of 10 new overhead contact system(OCS) poles: 3 along the western extent of the Rancho Cordova Segment and 7 in the eastern extent of the segment.
- Installation of asphalt and concrete works, including curb, gutter, sidewalk, and pedestrian crossings. This would include all necessary paving for the new light rail station platform at the Hazel Station.
- Completion of all architectural features for passenger service on the new light rail station platform.

The construction activities described above would take place in the following three phases over the approximately 25-month construction duration, although the actual duration of each phase would be expected to vary:

- Phase 1 would last approximately 8 months and would include utility relocations, clearing and grubbing the project site, and installing new duct banks for traction power and signaling; along with installing

foundations for OCS poles where needed, train control signal cases, and grade crossing warning devices. It also would include any new drainage facilities (open ditches and underground pipes).

- Phase 2 would last approximately 10-14 months and would include construction of the new station platform and new track, relocation of OCS poles where needed, installation of signal equipment and grade crossing warning devices at the Nimbus Road crossing, and construction of sidewalk improvements. Toward the end of Phase 2, the pedestrian connection from the new platform to the Hazel Station park-and-ride lot would be constructed.
- Phase 3 would last approximately 3-6 months, during which the contractor would conduct operational tests, clean up the project site, and perform finishing work.

Most of the construction equipment would be needed throughout Phase 1 and most of Phase 2, and would include graders, back hoes, medium-size cranes, dump trucks, excavators, augers, pavers, tampers, concrete trucks, and rail grinding machines. Specific staging and equipment for the work activities will be determined by SacRT and/or its subcontractors prior to the start of construction and will be limited to existing disturbed areas within the ROW. The construction access point is from the north side of the project along Folsom Boulevard and the Hazel Station.

2.7 ENVIRONMENTAL COMMITMENTS AND MITIGATION MEASURES

SacRT will incorporate the following environmental commitments and mitigation measures into the Proposed Action to protect sensitive resources.

Mitigation Measure BIO-4 of the CEQA Initial Study/Mitigated Negative Declaration for the Folsom Light Rail Modernization Double Track Project requires that SacRT compensate for effects on the beetle and/or its habitat in accordance with the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle* (USFWS 2017). Mitigation Measure BIO-4 was included in the CEQA Initial Study/Mitigated Negative Declaration, which was adopted by the SacRT Board on January 13, 2020, and is included below.

The survey and results presented in Section 4 of this report would fulfill the preconstruction survey requirement and this Biological Assessment would serve as the VELB survey report required by Mitigation Measure BIO-4.

Mitigation Measure BIO-4: Avoid impacts on Valley Elderberry Longhorn Beetle (VELB) in the Rancho Cordova project segment through preconstruction surveys for VELB exit holes, restrictions on removal or trimming of elderberry shrubs, and compensatory mitigation if necessary

Before the start of project construction, SacRT must retain a qualified biologist to conduct a survey for VELB exit holes in the Rancho Cordova project segment and prepare a VELB survey report for SacRT, to be submitted to USFWS for review and consultation before project construction. The VELB survey report must include the following:

- the location of elderberry shrubs in the project segment and within 165 feet (50 meters) of the project footprint;
- the number of elderberry shrubs that will be directly affected by the project;
- a map that delineates the area that will be directly affected and the elderberry shrub locations within 165 feet (50 meters) of the project footprint;

- information regarding the quality of individual elderberry shrubs and the continuity of riparian habitat outside the project area;
- a determination of the presence of exit holes in elderberry stems, and whether or not these stems will be affected by the project;
- an evaluation of the surrounding habitat and known VELB occurrences within 2,625 feet (800 meters) of the project segment; and
- a description of surrounding land uses, including land uses that may be incompatible with VELB use or a potential barrier to VELB dispersal.

To avoid and minimize impacts on VELB and/or its habitat, SacRT must coordinate with USFWS to determine project-specific conservation measures. At minimum, SacRT must implement the following measures, which may be amended in consultation with USFWS:

- To the greatest extent feasible, damaging or removing elderberry shrubs must be avoided. Construction activities that may damage or kill an elderberry shrub (e.g., trenching, grading) may need an avoidance area of at least 20 feet (6 meters) from the dripline, depending on the type of activity. All areas to be avoided during construction activities must be fenced and/or flagged as close to construction limits as feasible.
- As much as feasible, all activities that occur within 165 feet (50 meters) of an elderberry shrub must be conducted outside the VELB flight season (March–July).
- Any trimming of elderberry shrubs must occur only between November and February. Trimming must avoid removal of any branches or stems that are greater than or equal to 1 inch in diameter. Measures to address regular and/or large-scale maintenance (trimming) will be established in consultation with USFWS.

If adverse impacts on VELB are expected because of the project, SacRT must consult with USFWS to determine the appropriate type and amount of compensatory mitigation. Because the project segment is in a non-riparian area, compensation typically will be appropriate for occupied shrubs (USFWS 2017). Appropriate compensatory mitigation can include purchasing credits at a USFWS-approved conservation bank, providing on-site mitigation, or establishing and/or protecting habitat for VELB. At minimum, impacts on individual shrubs in nonriparian areas will be replaced through a purchase of 1 credit at a USFWS-approved bank for each shrub that will be trimmed, if exit holes are found in any shrub on or within 165 feet (50 meters) of the project area. If the occupied shrub will be completely removed by the activity, the entire shrub will be transplanted to a USFWS-approved location, in addition to a credit purchase (USFWS 2017).

2.8 PERMITS, APPROVALS, AND REGULATORY REQUIREMENTS

FTA has a principal responsibility for approving the National Environmental Policy Act document, ensuring that all other applicable regulations are met, and potentially providing funding for project construction. SacRT is responsible for designing, constructing, and operating the Proposed Action. Table 2 lists the agencies that also may have authority over portions of the Proposed Action.

Table 2. Regulatory Agencies and Approvals

Agency	Approval/Permit
U.S. Fish and Wildlife Service	<p>Endangered Species Act (ESA) regarding conservation of special-status fish, wildlife, and plant species listed, proposed for listing, or candidates for listing as threatened or endangered, and the habitats in which they are found. This BA is provided pursuant to ESA Section 7 for review of compliance by the Proposed Action.</p> <p>Migratory Bird Treaty Act regarding the pursuing, taking, or killing of migratory birds or any part, nest, or egg of such bird, which includes almost all bird species that are native to the United States. On January 20, 2020, SacRT adopted a mitigation measure as part of its California Environmental Quality Act Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program to perform preconstruction surveys for nesting birds and raptors to comply with the Migratory Bird Treaty Act and similar state regulations.</p>
State Historic Preservation Office	National Historic Preservation Act regarding direct and indirect effects to historic resources, including the built environment, archeological resources, and tribal cultural properties. Under Section 106 of the National Historic Preservation Act, the State Historic Preservation Officer concurred with FTA’s finding of no adverse effect on historic resources.
Officials with Jurisdiction (over Section 4(f) properties)	U.S. Department of Transportation, Section 4(f) regarding the use, temporary use, or constructive use of public parklands, recreation areas, historic resources, and wildlife and waterfowl refuges. FTA will evaluate the project’s effect on Section 4(f) properties as part of its NEPA review.
State Water Resources Control Board	Clean Water Act regarding water quality including Section 401 which requires the state to issue a certification that the activity complies with applicable water quality standards and Section 402 which regulates construction-related stormwater discharges to surface waters. See discussion below.

Source: Compiled by AECOM in 2020

Section 401 of the Clean Water Act (CWA) requires the state to issue a certification that a proposed project that may result in a discharge of pollutants into waters of the United States will not violate applicable water quality standards, effluent limitations, new source performance standards, toxic pollutant restrictions, and other water quality requirements. Section 402 of the Clean Water Act (CWA) regulates construction-related stormwater discharges to surface waters through the National Pollutant Discharge Elimination System (NPDES) program, administered by the United States Environmental Protection Agency (EPA). The EPA has delegated responsibility for implementation of portions of Section 402 to the State Water Resources Control Board (State Water Board). The General NPDES Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order 2009-009-DWQ as amended by Order 2012-0006-DWQ) (Construction General Permit) regulates stormwater discharges for construction activities under CWA Section 402 (State Water Resources Control Board 2012a). Dischargers whose projects disturb 1 or more acres of soil, or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres, are required to obtain coverage under the Construction General Permit. The Construction General Permit requires the development and implementation of a stormwater pollution prevention plan (SWPPP). The Construction General Permit also includes post-construction stormwater performance standards that address water quality and channel protection. The construction activities subject to this permit include clearing, grading, and disturbances to the ground such as stockpiling or excavation. The Proposed Action would require a Construction General Permit because it would involve disturbances to more than 1 acre of ground, including excavation and stockpiling activities.

The conservation and mitigation measures in the permits obtained for project construction would impose specific monitoring requirements as conditions of compliance. These monitoring elements would focus on the permitting requirements and mitigation measures listed in Sections 402 of the Clean Water Act and Section 7 of the ESA.

3 ENVIRONMENTAL BASELINE

An AECOM biologist conducted reconnaissance-level surveys of the Proposed Action area plus a 165-foot-wide buffer of the project components (i.e., the Action Area), where accessible, in April 2019. In accordance with Mitigation Measure BIO-4 of the CEQA Initial Study/Mitigated Negative Declaration (AECOM 2020) which required preparation of a VELB Survey Report, an AECOM biologist returned to the site on May 28 and 29, 2020 to conduct a VELB habitat assessment and exit hole survey. During the field reconnaissance survey in April 2019, vegetation community types were mapped, including the approximate locations of elderberry shrubs but the biologist did not have permission to access the southern portion of the Action Area in the Aerojet property. Access to the Aerojet property was granted for the pre-construction exit hole survey in May 2020, during which the locations of all elderberry shrubs within the entire Action Area were recorded with a sub-meter global positioning system unit, assessed for the presence of VELB exit holes, and measured for canopy radius. Weather conditions were clear and warm, with calm winds, during the exit hole survey. No adult VELB were observed in the study area during the 2019 and 2020 surveys.

3.1 HYDROLOGY

No wetlands or other waters, or indicators thereof (e.g., cracked soils, depressions, swales, wrack lines, surface hydrology, wetland vegetation) were observed in the study area. Natural hydrology within the Action Area is expected to be primarily driven by direct precipitation. The Action Area is in the California Central Valley ecoregion, which experiences a Mediterranean climate with hot, dry summers and cool, rainy winters (Griffith, et al. 2016). During normal rain years, the Action Area would be expected to receive 24.6 inches of precipitation (U.S. Climate Data 2020).

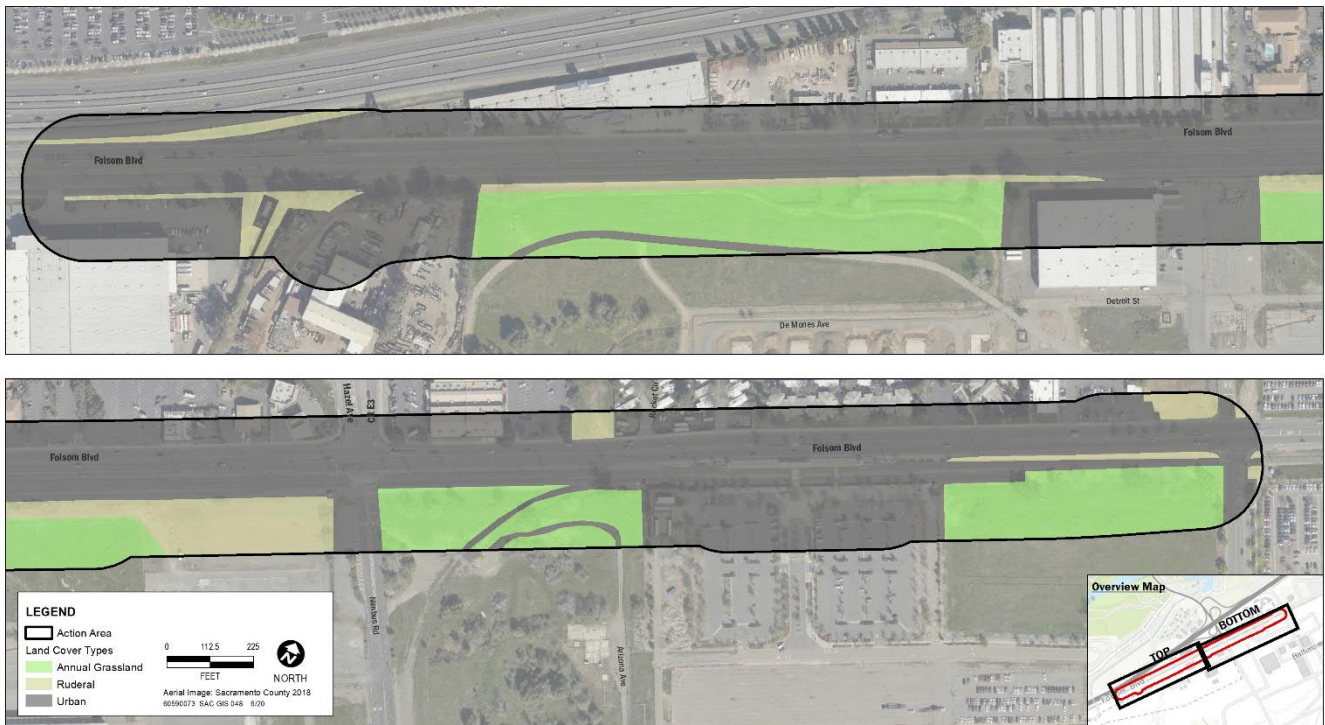
3.2 LAND COVER

There are three land cover types in the Action Area (i.e., the proposed project area and a 165-foot buffer): developed land (39.8 acres); ruderal (4.5 acres); and annual grassland (11.4 acres). The extents of land cover types within the Action Area are depicted in Figure 5. Table 3, below, summarizes the acreage of land cover types within the Action Area. The Action Area is approximately 0.5 mile south of the American River and south of Highway 50 and is surrounded by development. Vegetation communities within the Action Area are dominated by non-riparian upland species (i.e., ruderal/annual grassland).

Table 3. Vegetation Communities Mapped with the Action Area

Vegetation Community Type	Acres
Developed	39.8
Ruderal	4.5
Annual Grassland	11.4
TOTAL	55.8

Source: Compiled by AECOM in 2020



Source: compiled by AECOM in 2020

Figure 5. Land Cover in the Action Area

3.2.1 DEVELOPED

The project site is in an urban setting and is part of a highly disturbed landscape. Areas developed by humans are lacking in vegetation. In the Action Area, developed land encompasses 39.8 acres that include concrete pathways, paved roads, bike paths, parking areas, and rail lines and ballast.

3.2.2 RUDERAL

The ruderal vegetation community is dominated by introduced, non-native plant species that thrive in disturbed places. Ruderal vegetation is common throughout the Action Area in locations that previously have been filled and graded, such as the edges of railroad ballast, roads, parking lots, and pedestrian/bike pathways. The Action Area contains 4.5 acres of ruderal land dominated by nonnative annual herbs, including milk thistle (*Silybum marianum*), Italian thistle (*Carduus pycnocephalus*), Russian thistle (*Salsola tragus*), wild geranium (*Geranium dissectum*), and red stemmed filaree (*Erodium cicutarium*). Other common ruderal species include poison hemlock (*Conium maculatum*), yellow star thistle (*Centaurea solstitialis*), winter vetch (*Vicia villosa*), and field mustard (*Hirschfeldia incana*).

Scattered emergent trees and shrubs are common in the ruderal habitat along the fence line that divides the rail right of way from the Aerojet property. Species include valley oak (*Quercus lobata*), coyote brush (*Baccharis pilularis*), poison oak (*Toxicodendron diversilobum*), and blue elderberry (*Sambucus nigra*).

3.2.3 ANNUAL GRASSLAND

Outside of developed and ruderal areas, 11.4 acres of annual grassland vegetation were mapped in the southern portion of the Action Area in the Aerojet property. This vegetation community best fits the wild oats and annual brome grasslands (*Avena* spp. – *Bromus* spp.) herbaceous semi-natural alliance as described by the *Manual of California Vegetation* (CNPS 2020b), co-dominated by nonnative annual grasses ripgut brome (*Bromus diandrus*) and soft chess brome (*Bromus hordeaceus*), with other annual grasses intermixed, including wild oats (*Avena* spp.), Italian ryegrass (*Festuca perennis*), and hare wall barley (*Hordeum murinum*). Common forbs in the annual grassland vegetation include California poppy (*Eschscholzia californica*) and common bedstraw (*Galium parisiense*). Occasional emergent trees and shrubs consist of valley oak, eucalyptus (*Eucalyptus* sp.), tree-of-heaven (*Ailanthus altissima*), edible fig (*Ficus carica*), coyote brush, poison oak, and blue elderberry.

This page intentionally left blank

4 SPECIES ACCOUNT

4.1 VALLEY ELDERBERRY LONGHORN BEETLE

4.1.1 DESCRIPTION

The valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (VELB) is in the Cerambycidae family. Beetles in this family are wood-boring and characterized by long antennae and elongate, cylindrical bodies. Adult male VELB are distinguished by their red-orange elytra (wing covers) with four elongate spots. Males range from 0.5 inch to 1 inch in body length, with antennae about as long as their bodies. Adult females have dark colored elytra, measure from 0.75 inch to 1 inch long and have somewhat shorter antennae.

4.1.2 DISTRIBUTION AND LIFE HISTORY

The VELB is known from riparian and elderberry savannah habitats in the valley floor and lower foothills from southern Shasta County to Fresno County. The species is nearly always found on or close to its host plant, elderberry (*Sambucus* species). The historic distribution of the VELB closely matched the distribution of the elderberry host plant in Central Valley riparian forests and occasionally adjacent uplands (i.e., non-riparian areas). USFWS recognizes habitat for VELB as including both riparian and non-riparian areas where elderberry shrubs are present. Riparian habitat includes all areas that are either influenced by surface or subsurface water flows along streams, rivers, and canals. Non-riparian habitat includes valley oak and blue oak woodland and annual grassland habitats (USFWS 2017).

Research suggests that to serve as habitat for VELB, elderberry shrubs must have stems that are 1.0 inch or greater in diameter at ground level (USFWS 2017). Females lay eggs on the surface of elderberry foliage or bark where larvae hatch and then burrow into a stem. During the larval stage, larvae feed on the interior of the elderberry stem and create characteristic internal galleries. At the end of the larval stage, which may last up to two years, the mature larva creates an exit hole that it then plugs with wood shavings, then pupates within a chamber in the gallery tunnel where it transforms into an adult, chews through its exit hole, and emerges from the elderberry (Barr 1991; USFWS 2017). VELB exit holes are circular or slightly oval and are usually 7-10 millimeters (0.25 to 0.40 inch) in diameter (Barr 1991). Since the VELB larvae feed on live pith, the beetles will only emerge from live stems (USFWS 2019). Other distinctive characteristics of VELB exit holes are the presence of sharp edges, as compared to the ragged chew-marks of other species, and frass (wood shavings) on a new hole in the spring (USFWS 2019). The active season for adults is from March to June (i.e., the flight season), during which time adults are feeding on elderberry foliage, mating, and producing eggs.

4.1.3 CRITICAL HABITAT

Critical habitat for VELB was designated on August 8, 1980 (45 FR 52803) (USFWS 1980). Critical habitat includes specific areas containing known primary constituent elements essential for the conservation of the species. In the 1980 finding, the Service concluded that two areas in Sacramento County should be designated as Critical Habitat for the VELB, both of which encompass the densest known populations of the beetle at the time of listing: (1) the Sacramento Zone and (2) the American River Parkway Zone. The American River Parkway Zone is approximately 2 miles northwest of the Action Area, along the south bank of

the American River at River Bend Park (USFWS 2020b) (Figure 6). The Sacramento Zone is approximately 20 miles west of the Action Area, in open space oak woodland between the north side of the American River Levee and the Highway 160 overpass (USFWS 2020b).

4.1.4 SPECIES STATUS IN THE ACTION AREA

There are 7 records of VELB within 3 miles of the Action Area in the CNDDDB in a variety of riparian and non-riparian habitats (CDFW 2020). The most recent record of VELB is approximately 2.75 miles to the northwest, along the American River in the vicinity of Sacramento Bar in 2006, where VELB were reported as present in intact continuous elderberry savannah and oak riparian habitats (CDFW 2020).

The VELB Guidelines (USFWS 2017) require evaluation of surrounding habitat and known VELB occurrences within 800 meters of a project site. According to the CNDDDB, there are two known records within 800 meters of the Action Area. The nearest record of VELB is approximately 350 meters north of the Action Area in riparian and elderberry scrub habitat along the south bank of the American River in the Nimbus Dam Recreation Area (CDFW 2020). This record consists of several adult VELB and numerous exit holes observed during surveys conducted on April 23, 1987 (CDFW 2020). Based on review of historical aerial imagery, the Action Area has been separated from this American River riparian habitat by U.S. Highway 50 since the interstate was constructed in the late 1950s. The other record of VELB within 800 meters of the Action Area consists of a single VELB adult observed on April 21, 1995 on an elderberry shrub approximately 750 feet to the west (CDFW 2020). This shrub was noted as being in ruderal, fenceline habitat in the highway frontage area between Folsom Boulevard and Highway 50 (CDFW 2020), similar to the ruderal habitat in the Action Area.

Both nearby records of VELB (i.e., within 800 meters of the Action Area) described above are more than 20 years old. During biological surveys conducted for the SacRT Downtown Sacramento-Folsom Corridor project (FTA 2000), only five percent of the 47 mapped elderberry shrubs between Sunrise Boulevard and Hazel Avenue were found to have exit holes. The extensive commercial development that now exists between the Action Area and the American River along Folsom Boulevard and Highway 50 was developed between the late 1990s and early 2000s, likely resulting in fragmentation and loss of elderberry habitat surrounding the Action Area and elimination of dispersal corridors between the Action Area and nearby populations, decreasing the likelihood of successful colonization of unoccupied habitat in the Action Area since the last time it was surveyed in 2000.

There are 48 elderberries in the Action Area (Figure 7). Of these, four (4) were observed to contain old VELB exit holes (Elderberry ID #5, #16, #17, and #29) during surveys conducted in May 2020. These shrubs appeared to be quite old, with several large, dead, hollow stumps and stems that contained from 1 to 11 old VELB exit holes. These shrubs also exhibited vigorous new growth (i.e., multiple young stems ≤ 1 inch in diameter) sprouting from their bases with no VELB exit holes. Two shrubs contained VELB exit holes in living stems (Elderberry ID #5 and #11), although these lacked the presence of frass that would indicate emergence of VELB during the 2020 spring season.

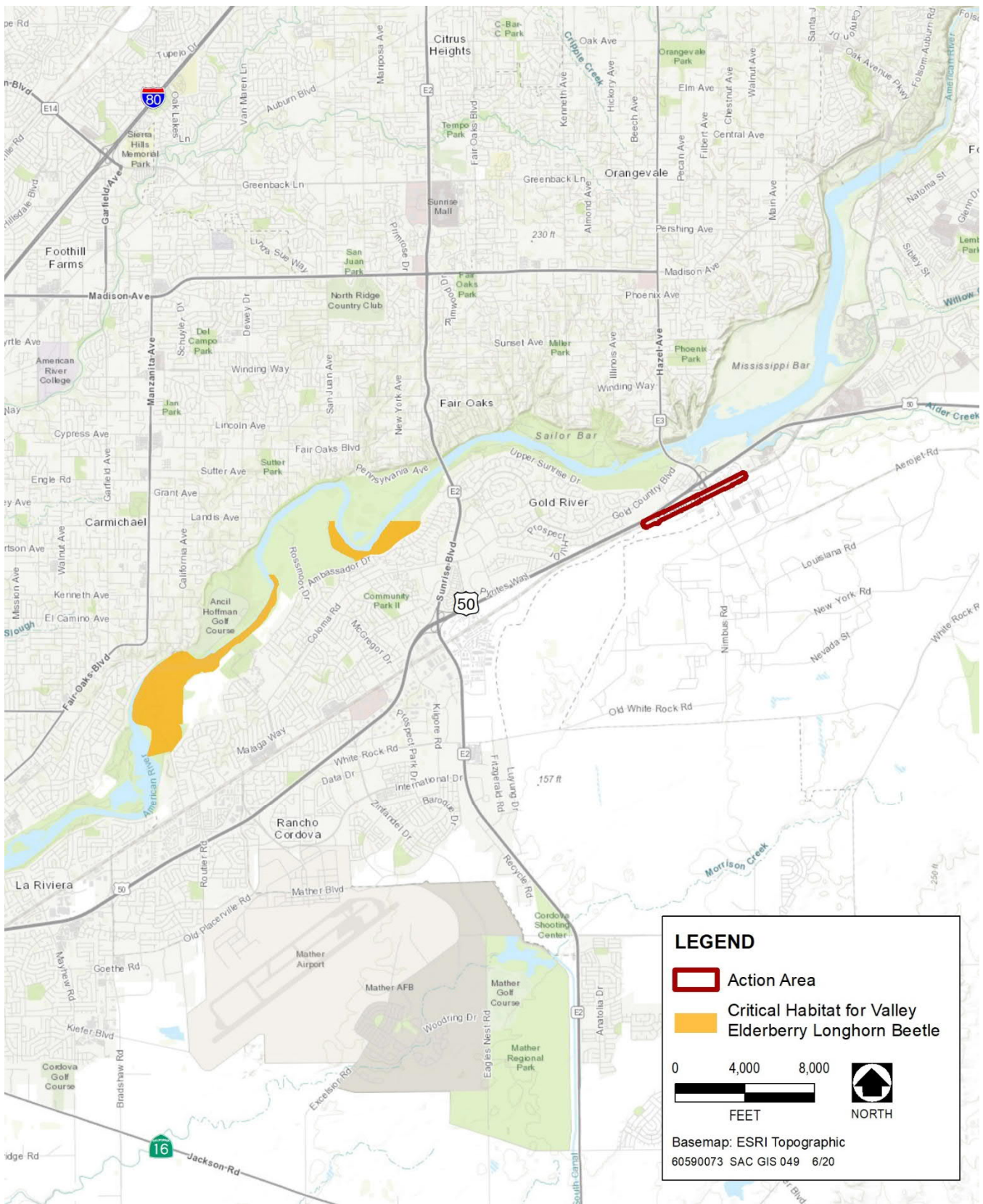
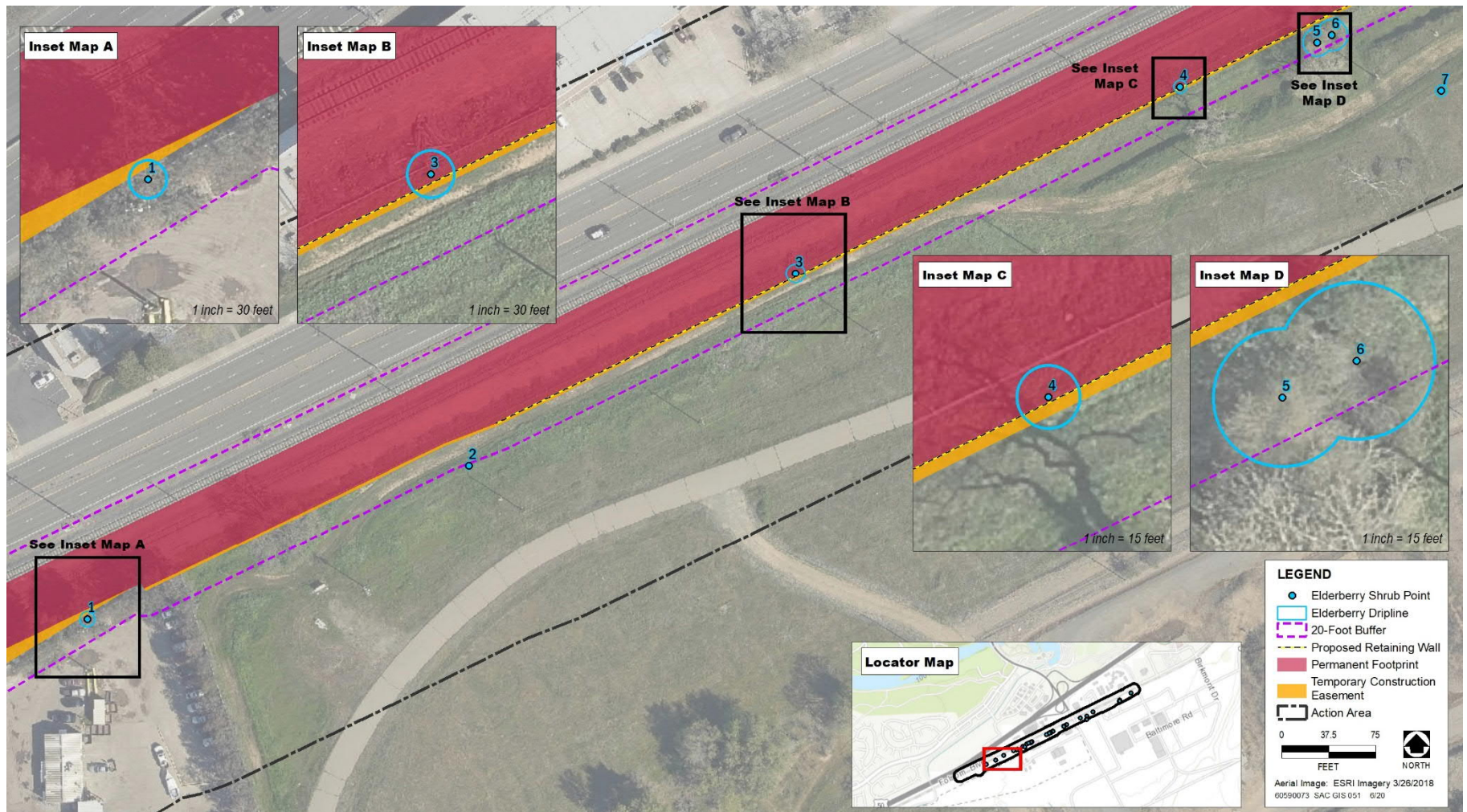


Figure 6. Critical Habitat Map



Source: compiled by AECOM in 2020

Figure 7A. Elderberry Shrubs in the Action Area (Map 1 of 4)

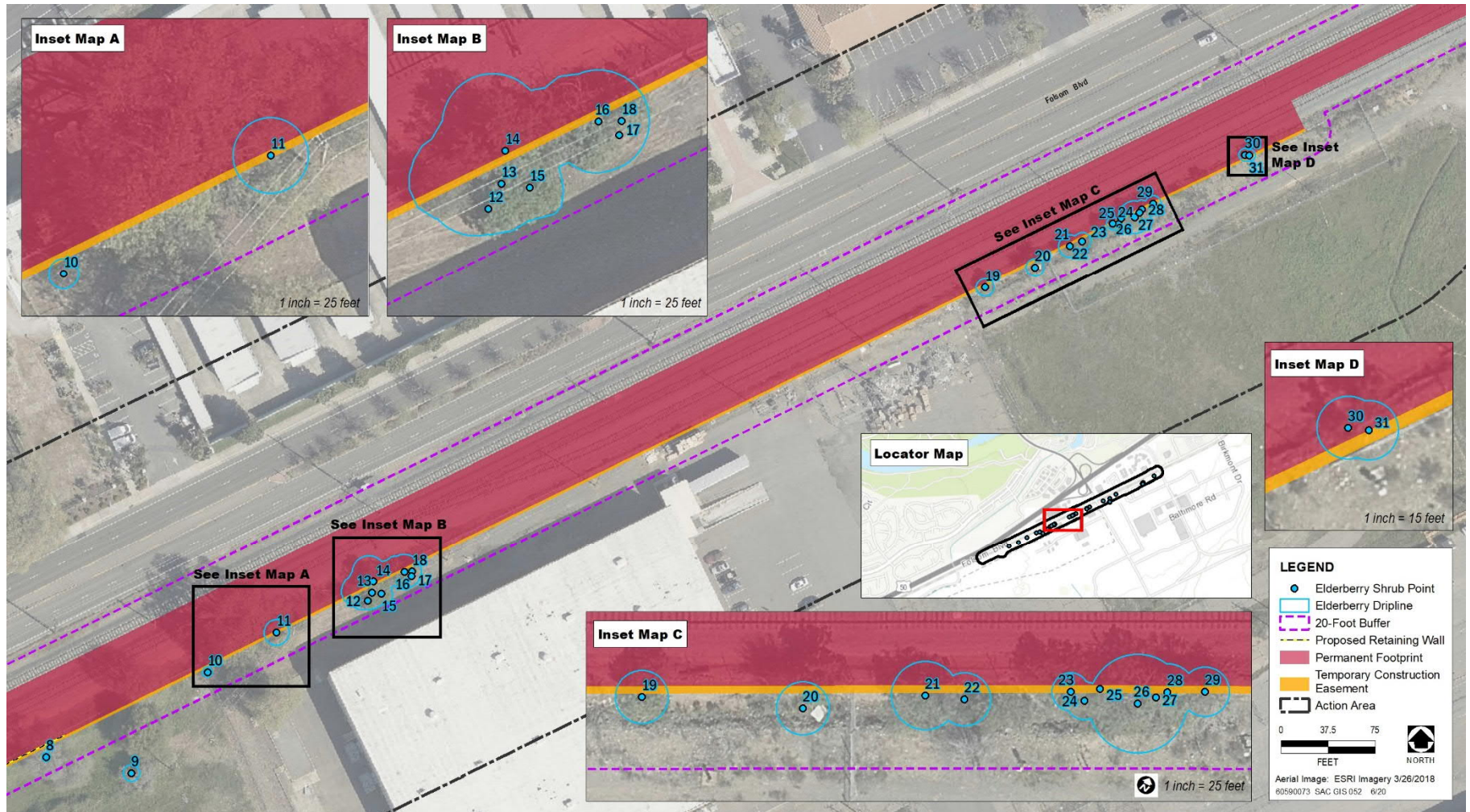


Figure 7B. Elderberry Shrubs in the Action Area (Map 2 of 4)

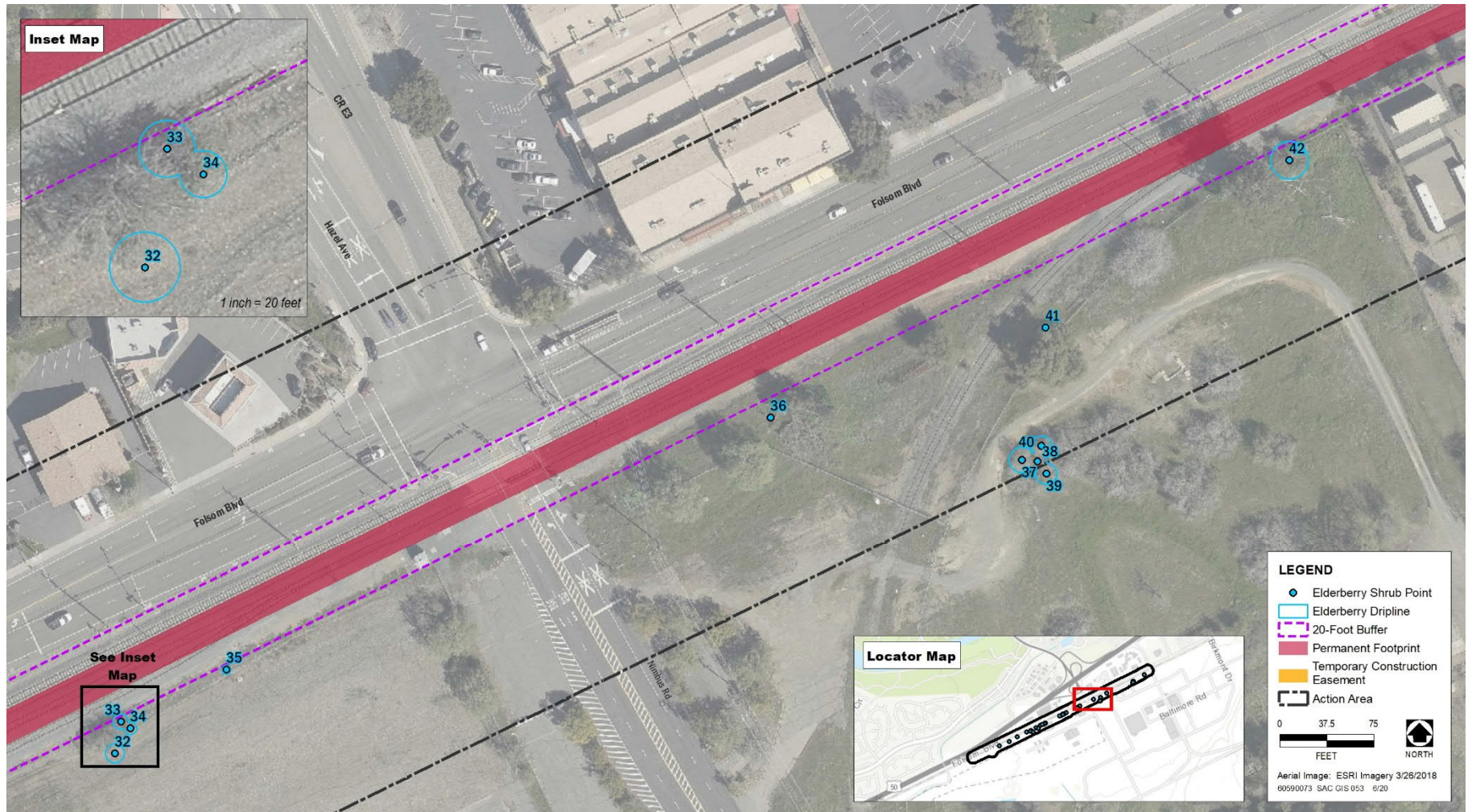


Figure 7C. Elderberry Shrubs in the Action Area (Map 3 of 4)

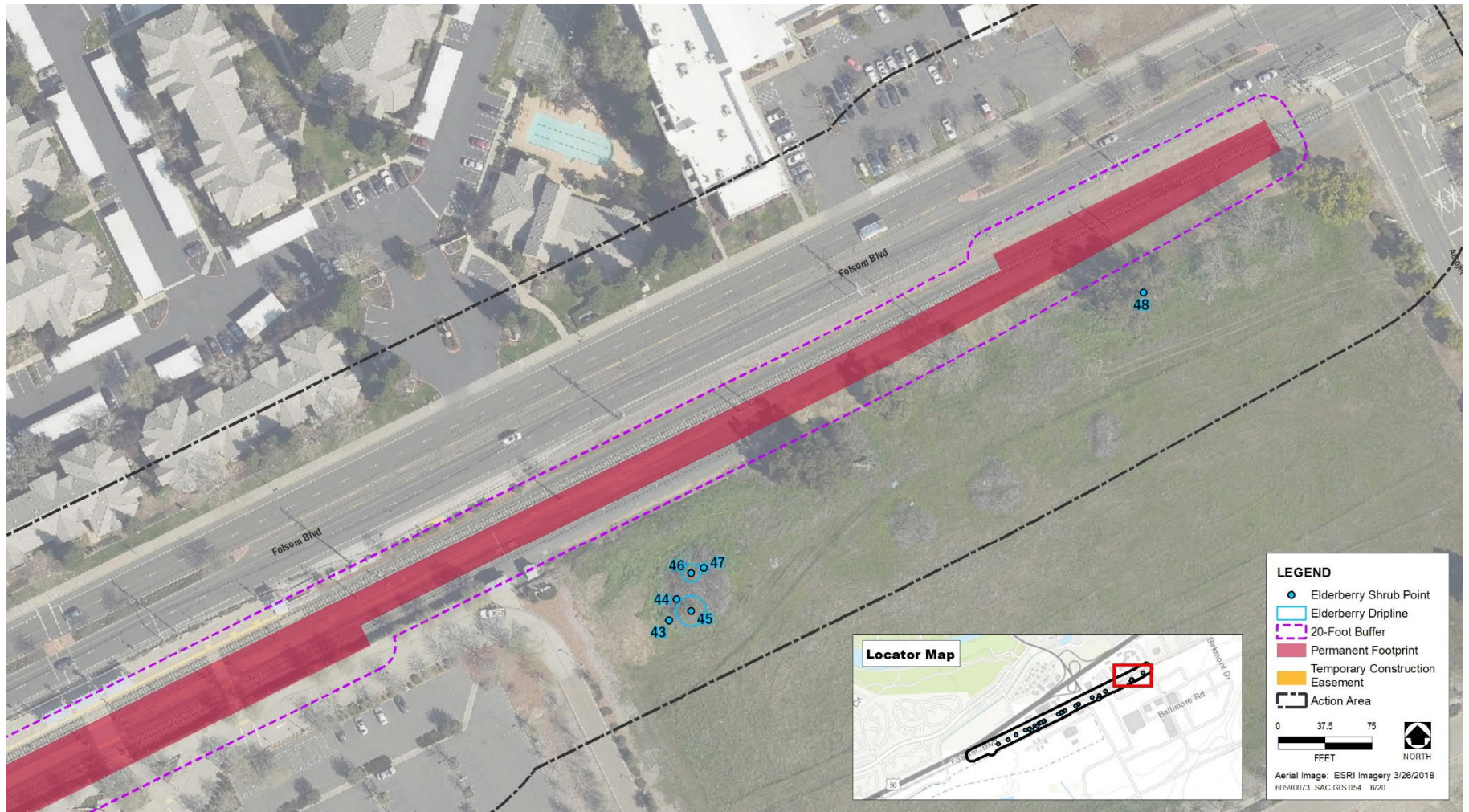


Figure 7D. Elderberry Shrubs in the Action Area (Map 4 of 4)

Even though presence of an exit hole in the shrub increases the likelihood that that shrub or nearby shrubs are occupied, the presence or absence of exit holes is not an entirely reliable method for determining the presence or absence of VELB (USFWS 2017). According to the Framework guidelines decision tree (USFWS 2017), because the Action Area is within non-riparian habitat, there are elderberry shrubs within 50 meters of the project site, and exit holes are present in elderberry stems, the Action Area is considered suitable habitat and shrubs are likely occupied by VELB.

A total of 25 elderberry shrubs have canopies that intercept the project disturbance area (Figure 7); of these, 4 are rooted inside the permanent project footprint where new infrastructure (i.e., new freight tracks and siding) is proposed to be installed (Elderberry ID #3, 4, 14, and 30), and 6 elderberry shrubs are rooted inside the temporary construction easement (Elderberry ID #11, 23, 25, 28, 29, and 31). Another 23 elderberry shrubs are rooted outside of the project disturbance area. At the time of the exit hole survey, most of these shrubs showed signs of having been previously impacted. Impacts on elderberry shrubs associated with this area include deposition of waste next to the canopy and herbicide injury to foliage (see Photos 1 and 2, below). Other elderberry shrubs in the eastern portion of the Action Area appear to have been previously trimmed and cut as part of landscape maintenance or firebreak activities (see Photo 3, below).

Photos of Elderberries South of Union Pacific Railroad Tracks and within 20 feet of the Proposed Project Disturbance Area, 2020



Photo 1. Elderberry ID #20, with piles of waste railroad ties and other debris next to the canopy and evidence of herbicide injury in the mid-canopy where it overlaps with the UPRR ballast. View looking west. May 28, 2020.



Photo 2. Elderberry ID #3, with piles of waste railroad ties and other debris next to the canopy. View looking southwest toward the Aerojet property. May 28, 2020.



Photo 3. Elderberry ID #44 with large cut stems. View looking south. May 29, 2020.

Table 4 summarizes the total number of elderberry shrubs recorded within the Action Area and the results of a pre-construction exit hole survey conducted on May 28 and 29, 2020. Figure 7 depicts the locations of elderberries mapped within the Action Area during the exit hole survey.

Table 4. Elderberry Exit Hole Survey Results, May 2020

ID Number	Location of Elderberry Shrub Relative to Project Disturbance Area		Canopy Dimensions (feet)		1 or More Stems Greater than 1 inch in Diameter (Yes/No)	VELB Exit Holes Present (Yes/No)	Number of VELB Exit Holes
	Permanent ROW	Temporary Construction Easement (TCE) ¹	Width	Height			
1	Within 20 feet south	Canopy inside	12	7	No	NO	n/a
2	Between 20 and 165 feet south	Between 20 and 165 feet south	6	6	No	NO	n/a
3	Rooted inside	Canopy inside	15	14	Yes	NO	n/a
4	Rooted inside	Canopy inside	10	12	Yes	NO	n/a
5	Within 20 feet south	Within 20 feet south	22	15	Yes	YES	5
6	Within 20 feet south	Within 20 feet south	25	15	Yes	NO	n/a
7	Between 20 and 165 feet south	Between 20 and 165 feet south	9	6.5	No	NO	n/a
8	Within 20 feet south	Within 20 feet south	7	6	No	NO	n/a
9	Between 20 and 165 feet south	Between 20 and 165 feet south	13	17	Yes	NO	n/a
10	Within 20 feet south	Canopy inside	8	9	No	NO	n/a
11	Canopy inside	Rooted inside	20	23	Yes	YES	1
12	Canopy inside	Canopy inside	28	18	Yes	NO	n/a
13	Canopy inside	Canopy inside	25	20	Yes	NO	n/a
14	Rooted inside	Canopy inside	27	21	Yes	NO	n/a
15	Canopy inside	Canopy inside	22	12	Yes	NO	n/a
16	Canopy inside	Canopy inside	10	13	Yes	YES	7
17	Canopy inside	Canopy inside	20	12	Yes	YES	1
18	Canopy inside	Canopy inside	27	16	Yes	NO	n/a
19	Canopy inside	Canopy inside	14	12	Yes	NO	n/a
20	Canopy inside	Canopy inside	14	18	Yes	NO	n/a
21	Canopy inside	Canopy inside	18	18	Yes	NO	n/a
22	Canopy inside	Canopy inside	14	16	Yes	NO	n/a
23	Canopy inside	Rooted inside	10	8	Yes	NO	n/a
24	Canopy inside	Canopy inside	10	8	Yes	NO	n/a
25	Canopy inside	Rooted inside	5	8	Yes	NO	n/a
26	Canopy inside	Canopy inside	26	14	Yes	NO	n/a
27	Canopy inside	Canopy inside	10	13	Yes	NO	n/a
28	Canopy inside	Rooted inside	15	15	Yes	NO	n/a
29	Canopy inside	Rooted inside	13	12	Yes	YES	11
30	Rooted inside	Canopy inside	10	11	Yes	NO	n/a

ID Number	Location of Elderberry Shrub Relative to Project Disturbance Area		Canopy Dimensions (feet)		1 or More Stems Greater than 1 inch in Diameter (Yes/No)	VELB Exit Holes Present (Yes/No)	Number of VELB Exit Holes
	Permanent ROW	Temporary Construction Easement (TCE) ¹	Width	Height			
31	Canopy inside	Rooted inside	9.5	12	Yes	NO	n/a
32	Between 20 and 165 feet south	Between 20 and 165 feet south	15	11	Yes	NO	n/a
33	Between 20 and 165 feet south	Between 20 and 165 feet south	12	14	Yes	NO	n/a
34	Between 20 and 165 feet south	Between 20 and 165 feet south	10	11	Yes	NO	n/a
35	Between 20 and 165 feet south	Between 20 and 165 feet south	7	8	No	NO	n/a
36	Between 20 and 165 feet south	Between 20 and 165 feet south	3.5	5.5	No	NO	n/a
37	Between 20 and 165 feet south	Between 20 and 165 feet south	20	25	Yes	NO	n/a
38	Between 20 and 165 feet south	Between 20 and 165 feet south	15	18	Yes	NO	n/a
39	Between 20 and 165 feet south	Between 20 and 165 feet south	17	30	Yes	NO	n/a
40	Between 20 and 165 feet south	Between 20 and 165 feet south	16	10	Yes	NO	n/a
41	Between 20 and 165 feet south	Between 20 and 165 feet south	6	5	Yes	NO	n/a
42	Between 20 and 165 feet south	Between 20 and 165 feet south	30	9	No	NO	n/a
43	Between 20 and 165 feet south	Between 20 and 165 feet south	6	6	No	NO	n/a
44	Between 20 and 165 feet south	Between 20 and 165 feet south	6	7	No	NO	n/a
45	Between 20 and 165 feet south	Between 20 and 165 feet south	24	6	No	NO	n/a
46	Between 20 and 165 feet south	Between 20 and 165 feet south	14	10	No	NO	n/a
47	Between 20 and 165 feet south	Between 20 and 165 feet south	8	7	No	NO	n/a
48	Between 20 and 165 feet south	Between 20 and 165 feet south	6	7	No	NO	n/a

¹The temporary construction easement (TCE) is a swath of land approximately 2 feet wide to the south of the permanent ROW that would provide access for installation of the 955-foot-long retaining wall and drainage ditch in the western extent of the project area.

Source: Data compiled by AECOM 2020.

5 EFFECTS OF THE PROPOSED ACTION

This section describes the potential direct, indirect, interrelated, interdependent, and cumulative effects that the Proposed Action may have on the federally listed as threatened VELB.

5.1 CHANGES TO HABITAT

Changes to habitat include activities that reduce the suitability of an area for elderberry plants or elderberry recruitment and increase fragmentation, which may have adverse impacts on the mating, foraging, and dispersal of VELB. Construction activities would be limited almost entirely to the existing rail ROW that is highly disturbed and set aside for purposes such as those proposed by this project and would not result in the fragmentation of existing continuous VELB habitat. The Proposed Action would not result in any long-term or ongoing disturbance to existing wildlife or adjacent habitats.

According to the Framework, average distances between occupied elderberry clumps range from 200 meters (656 feet) up to 800 meters (2,625 feet) (USFWS 2017). Therefore, the elderberry shrubs in the Action Area, if occupied, may represent a small subpopulation within the larger, fragmented metapopulation found along the American River to the north and other isolated shrubs to the west and south in an otherwise developed landscape. As discussed previously, the historic connection of the Action Area to continuous habitat along the American River has been interrupted by a 50-year history of development, beginning with construction of the Interstate Highway 50 in the late 1950s and continuing with commercial infill along the interstate and Folsom Boulevard that led to continued habitat fragmentation through the early 2000s. Existing barriers to dispersal between high quality riparian habitat along the American River and the Action Area includes Highway 50 and Folsom Boulevard, large buildings, and expanses of developed land with no suitable habitat. All records of the species within 3 miles of the Action Area are 15 to 30 years old. Therefore, the elderberry shrubs within the Action Area likely represent isolated habitat within the larger VELB metapopulation in the vicinity, and may host a small, discrete subpopulation with limited dispersal ability.

A total of 25 elderberry shrubs exist along the southern boundary of the project disturbance area in ruderal disturbed habitat adjacent to the ROW that would either need to be removed (4 shrubs) or trimmed (21 shrubs) to accommodate installation of project infrastructure (i.e., freight track, siding, retaining wall, and drainage ditch). The canopies of another 5 shrubs are within 20 feet of the project disturbance area and would not be trimmed but may experience indirect effects related to project activities. Another 18 shrubs have canopy driplines 20 feet or more from the project disturbance area and will be avoided.

Table 5 summarizes the potential direct and indirect effects of the proposed action on elderberry shrubs mapped within the Action Area.

Table 5. Summary of the Proposed Action's Potential Effects to VELB Habitat (Elderberry Shrubs)

Potential Effect	Elderberry ID	Location Relative to Project Disturbance Area
Avoided	2	Between 20 and 165 feet south
Avoided	7	Between 20 and 165 feet south
Avoided	9	Between 20 and 165 feet south
Avoided	32	Between 20 and 165 feet south
Avoided	34	Between 20 and 165 feet south
Avoided	36	Between 20 and 165 feet south
Avoided	37	Between 20 and 165 feet south
Avoided	38	Between 20 and 165 feet south
Avoided	39	Between 20 and 165 feet south
Avoided	40	Between 20 and 165 feet south
Avoided	41	Between 20 and 165 feet south
Avoided	43	Between 20 and 165 feet south
Avoided	44	Between 20 and 165 feet south
Avoided	45	Between 20 and 165 feet south
Avoided	46	Between 20 and 165 feet south
Avoided	47	Between 20 and 165 feet south
Avoided	48	Between 20 and 165 feet south
Avoided	35	Between 20 and 165 feet south
Total Avoided: 18		
Indirect	5	Within 20 feet south
Indirect	6	Within 20 feet south
Indirect	8	Within 20 feet south
Indirect	42	Canopy within 20 feet south
Indirect	33	Canopy within 20 feet south
Total Indirectly Affected: 5		
Remove - Direct	3	Rooted inside permanent ROW
Remove - Direct	4	Rooted inside permanent ROW
Remove - Direct	14	Rooted inside permanent ROW
Remove - Direct	30	Rooted inside permanent ROW
Total Removed: 4		
Trim - Direct	1	Canopy inside
Trim - Direct	10	Canopy inside
Trim - Direct	22	Canopy inside
Trim - Direct	11	Canopy inside
Trim - Direct	12	Canopy inside
Trim - Direct	13	Canopy inside
Trim - Direct	15	Canopy inside
Trim - Direct	16	Canopy inside

Potential Effect	Elderberry ID	Location Relative to Project Disturbance Area
Trim – Direct	17	Canopy inside
Trim – Direct	18	Canopy inside
Trim – Direct	19	Canopy inside
Trim – Direct	20	Canopy inside
Trim – Direct	21	Canopy inside
Trim – Direct	23	Canopy inside
Trim – Direct	24	Canopy inside
Trim – Direct	25	Canopy inside
Trim – Direct	26	Canopy inside
Trim – Direct	27	Canopy inside
Trim – Direct	28	Canopy inside
Trim – Direct	29	Canopy inside
Trim – Direct	31	Canopy inside
Total Trimmed: 21		
Source: AECOM 2020		

5.2 SPECIES-SPECIFIC ANALYSIS: VALLEY ELDERBERRY LONGHORN BEETLE

Construction activities, such as equipment access, grading, and installation of track would occur as early as spring 2021 and construction will take approximately 25 months, a portion of which may overlap with the VELB flight season (i.e., March through July). However, the CEQA Initial Study/Mitigated Negative Declaration for the proposed project (AECOM 2020) recommended restrictions on the timing of construction and minimizing the quantity and extent of construction activities within the VELB flight season as much as feasible, including Mitigation Measure BIO-1 to restrict vegetation removal to the period between September 1st and January 31st to avoid the bird nesting season; Mitigation Measure HAZ-5 to restrict construction timing and location in the vicinity of hazardous materials remediation activities to avoid interference with Aerojet’s soil vapor extraction activities in the Rancho Cordova project segment; and Mitigation Measure BIO-4 that restricts, to the greatest extent feasible, all activities within 165 feet of elderberry shrubs to outside the VELB flight season.

Direct effects to the beetle could occur as a result of the removal of 4 shrubs and trimming of 21 shrubs potentially occupied by VELB to accommodate project components. Potential direct effects would be reduced by implementation of Mitigation Measure BIO-4 of the CEQA Initial Study/Mitigated Negative Declaration for the proposed project (AECOM 2020), which requires any trimming of elderberry shrubs to occur only between November and February to avoid the beetle emergence period, and trimming must avoid removal of any branches or stems that are greater than or equal to 1 inch in diameter. Moreover, following the exit hole survey, the AECOM biologist met with project design engineers to modify the construction design to further reduce potential adverse indirect effects to the beetle and its habitat by reducing the width of the temporary construction easement from five feet to two feet and identifying work restriction notes to be included in the contract specifications to limit materials and equipment staging and storage to the existing ROW.

Potential indirect effects of the Proposed Action include increased noise, artificial lights, and human activity in the Action Area, as well as the creation of dust and erosion by project equipment that may affect beetle activity during its flight season, and/or lead to reduced health and vigor of the beetle's habitat. Indirect effects related to increased noise are not expected, given that the project site is within an area that is already disturbed due to the continuous passing of light rail trains and freight trains and vehicle traffic along the adjacent Folsom Boulevard. Artificial nighttime lighting for connection of the new overhead lines with the existing overhead contact system in the rail ROW, if carried out during the VELB flight season, may confuse adult beetles and disrupt normal mating and/or dispersal patterns. However, night work would occur over a maximum of three nights and will only occur at the east and west termini of the Proposed Action area (i.e., where new overhead lines would tie into the existing lines) at a distance of 200 feet and 500 feet, respectively, from the nearest elderberry shrubs, so disturbance to beetle mating or dispersal associated with increases in artificial lighting would be minimal. In addition, lights will be shielded, directed within the boundaries of the work area, and away from adjacent habitat.

Earth-moving and equipment activity within the project work area could produce fugitive dust emissions that could settle onto adjacent vegetation, resulting in the following potential indirect adverse effects to the VELB if carried out during the beetle's flight season: the prevention of beetle emergence from elderberry shrubs; a reduction in the palatability of elderberry foliage to adult beetles; and a reduction in viability of VELB eggs laid on shrub leaf and stem surfaces. Dust emissions could also lead to decreased photosynthetic activity and the reduced vigor of elderberry shrubs, resulting in adverse effects to VELB habitat. Encroachment of equipment, personnel, and/or soil stockpiles into shrub canopies could also cause soil compaction, soil erosion, and/or high grading around roots, leading to oxygen starvation and decreased vigor or death of elderberry shrubs or prevent the recruitment of new elderberry shrubs in the future. Refueling and operating construction equipment could result in accidental spills of pollutants such as hydraulic fluids, oil, and fuel. Pollutants entering the Action Area could cause mortality or impaired growth or viability of elderberry shrubs through direct exposure to these discharges and could adversely affect VELB habitat.

An erosion and sediment control plan and best management practices (BMPs), SWPPP, hazardous materials management plan, spoils disposal plan, and environmental training will be developed and implemented before and during construction activities in accordance with the Construction General Permit for the Proposed Action. These measures will minimize the potential for the exposure of VELB and its habitat to disturbance, dust, and contaminants. USFWS will be provided these plans for review 30 days prior to construction.

Designated critical habitat for the VELB (i.e., the American River Zone) is approximately 2 miles to the northwest of the Action Area. No project components are proposed to be installed within this critical habitat zone; therefore, no removal, conversion, or fragmentation of critical habitat will occur as a result of the Proposed Action.

5.3 EFFECTS OF INTERRELATED AND INTERDEPENDENT ACTIONS

Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no significant independent utility apart from the action that is under consideration (50 CFR 402.02). Interrelated and interdependent actions are activities that would not occur "but for" the Proposed Action (50 CFR 402.02). No interrelated or interdependent actions would be associated with the Proposed Action.

5.4 CUMULATIVE EFFECTS

Cumulative effects include those of future state, tribal, local, or private actions that are reasonably certain to occur in the Action Area under consideration (50 CFR 402.02). The ESA requires USFWS to evaluate the cumulative effects of a Proposed Action on listed species and designated critical habitat, and to consider cumulative effects in formulating biological opinions (USFWS and National Marine Fisheries Service [NMFS] 1998). The ESA defines cumulative effects as “those effects of future state or private actions, not involving federal activities, that are reasonably certain to occur within the Action Area” of a Proposed Action, subject to consultation (USFWS and NMFS 1998).

As described in Section 2, the purpose of the Proposed Action would be to fulfill SacRT’s obligations to serve light rail customers within an existing active rail right of way. SacRT is seeking federal funding to assist with implementing the proposed project. As a result, federal actions and approvals will require environmental review under NEPA, and future federal actions that are unrelated to the Proposed Action are not considered in this section because they require separate consultation pursuant to Section 7 of the ESA. Therefore, federal actions, including activities that would require approvals from the FTA, are not included.

This page intentionally left blank

6 CONCLUSIONS AND DETERMINATION

The installation of a second track in the Action Area would have the potential to directly and indirectly affect VELB habitat, as described in Section 5. During construction, adverse effects on VELB may occur as a result of direct habitat removal and alteration (i.e., removal and trimming of elderberry shrubs). Through implementation of the BMPs required by the Proposed Action's Construction General Permit, potential effects on VELB and its habitat resulting from indirect effects, such as fugitive dust emissions and soil erosion, would be insignificant and discountable.

The Proposed Action may adversely affect VELB through construction-related disturbances *if avoidance and minimization measures are not implemented*. The following measures are identified to reduce potential effects on VELB and its habitat in the Action Area.

6.1 CONSERVATION MEASURES

The following appropriate design and conservation measures have been developed and will be incorporated into the proposed project to reduce the impacts of the Proposed Action on the beetle and/or its habitat. These measures are based on recommendations from the Framework (USFWS 2017) and incorporate mitigation measures from the previous BO (Reference No. 1-1-00-F-0009) (Section 2.3) that was issued by the Service for the Downtown Sacramento Amtrak and Folsom Corridor Light Rail Transit Extensions and Double Tracking Project in Sacramento County, California and that overlaps with the Proposed Action (USFWS 2000), as well as the Proposed Action's adopted CEQA Initial Study/Mitigated Negative Declaration and associated Mitigation Monitoring and Reporting Program (AECOM 2020; SacRT Board of Directors 2020). Measures to reduce project-related effects on emerging and adult beetles during the VELB flight season include installation of construction avoidance areas (Conservation Measure VELB-1), restrictions on vegetation removal and elderberry trimming activities (Conservation Measure VELB-2), worker education (Conservation Measure VELB-3), and controls to minimize the creation of dust, erosion, and excess nighttime lighting (Conservation Measures VELB-4 and VELB-5).

CONSERVATION MEASURE VELB-1: AVOIDANCE AREAS

Prior to the staging and initiation of construction activities, a qualified biologist will establish an avoidance area of at least 6 meters (20 feet) from the dripline of elderberry shrubs that are to be avoided (i.e., shrubs that are rooted more than 20 feet from the project disturbance area and whose canopies do not overlap with the project disturbance area). These avoidance areas should not be disturbed during or after construction or during operation of the project. Activities that may damage or kill an elderberry shrub (e.g., grading, soil stockpiling) will not occur within avoidance areas. Installation of construction avoidance fencing to demarcate the avoidance areas would be dependent upon permission to enter the Aerojet property to install this fencing. If allowed to do so, the installation of construction avoidance fencing will be directed by a qualified biologist.

CONSERVATION MEASURE VELB-2: RESTRICTIONS ON VEGETATION REMOVAL AND ELDERBERRY TRIMMING ACTIVITIES

To reduce potential direct effects on emerging and adult beetles during the VELB flight season, vegetation removal will be implemented in accordance with Mitigation Measure BIO-1 of the CEQA Initial Study/Mitigated Negative Declaration for the Folsom Light Rail Modernization Double Track Project (AECOM 2020) to restrict

vegetation removal to the period between September 1st and January 31st to avoid the bird nesting season. Furthermore, implementation of Mitigation Measure HAZ-5 (AECOM 2020) will further restrict construction timing and location to avoid interference with Aerojet's soil vapor extraction activities in the Rancho Cordova project segment. Moreover, Mitigation Measure BIO-4 restricts, to the greatest extent feasible, all activities within 165 feet of elderberry shrubs to outside the VELB flight season.

Any trimming of elderberry shrubs must occur only between November and February. Trimming must avoid removal of any branches or stems that are greater than or equal to 1 inch in diameter. Measures to address regular and/or large-scale maintenance (trimming) will be established in consultation with USFWS.

CONSERVATION MEASURE VELB-3: WORKER EDUCATION

Prior to construction, a qualified biologist will provide training for all contractors, work crews, and any onsite personnel on the status of the VELB, its host plant and habitat, the need to avoid damaging the elderberry shrubs, the locations of avoidance areas, and the possible penalties for noncompliance.

CONSERVATION MEASURE VELB-4: DUST AND EROSION CONTROL

To protect VELB habitat and reduce potential indirect effects of dust on emerging and adult beetles during the VELB flight season, erosion and dust control will be implemented in accordance with Mitigation Measure AQ-1 of the CEQA Initial Study/Mitigated Negative Declaration for the Folsom Light Rail Modernization Double Track Project to implement basic construction emission control practices (Best Management Practices) (AECOM 2020), as well as the Proposed Action's Construction General Permit and SWPPP prior to and during all construction activities.

CONSERVATION MEASURE VELB-5: ARTIFICIAL LIGHTING CONTROL

To reduce potential indirect effects of artificial nighttime lighting on emerging and adult beetles during the VELB flight season, artificial nighttime lighting for connection of the new overhead lines with the existing overhead contact system in the rail ROW will occur over a maximum of three nights and will only occur at the east and west termini of the Proposed Action area. Lights will be shielded, directed within the boundaries of the work area, and away from adjacent habitat.

6.2 COMPENSATION MEASURES

For non-riparian areas, compensation typically will be appropriate for occupied shrubs (USFWS 2017). According to the Framework guidelines decision tree (USFWS 2017), because the Action Area is within non-riparian habitat, there are elderberry shrubs within 50 meters of the project site, and exit holes are present in elderberry stems, the Action Area is considered suitable habitat and shrubs are likely occupied by VELB. Therefore, this analysis assumes that all shrubs with stems greater than 1 inch in diameter are occupied by VELB. Appropriate compensatory mitigation can include purchasing credits at a USFWS-approved conservation bank, providing on-site mitigation, or establishing and/or protecting habitat for VELB.

The 2017 Framework requires compensation for elderberry shrubs at a 2:1 ratio if the shrub is in riparian habitat and at a 1:1 ratio for non-riparian areas. Since the proposed project is in a non-riparian area, SacRT shall purchase 1 credit at a Service-approved bank for each shrub that will be trimmed. If an occupied shrub will be completely removed by the activity, SacRT shall transplant the entire shrub to a Service-approved location, in addition to a credit purchase. The Service-adopted BO for the Downtown Sacramento-Folsom Corridor project (USFWS 2000)

included measures to transplant elderberry shrubs removed as well as the purchase of credits. Since the proposed project overlaps with the previous project BO and exit holes were documented in the Action Area during May 2020 surveys, FTA assumes that elderberry shrubs within the proposed project are occupied.

To compensate for impacts to elderberry shrubs within the permanent disturbance area, SacRT shall transplant up to four (4) elderberry shrubs to a Service-approved conservation bank. In accordance with the BO for the Downtown Sacramento-Folsom Corridor project, transplanting would occur during the dormancy period for elderberry shrubs (November through the second week of February) and SacRT will plant additional elderberry seedlings at a three-to-one ratio (for a total of up to 12 elderberry seedlings planted) at a Service-approved conservation bank or other Service-approved conservation area. In addition, SacRT will purchase 4 VELB units² that will be dedicated in a Service-approved conservation bank.

Up to twenty-one (21) elderberry shrubs have canopies that overlap with the project disturbance area and could be trimmed to accommodate installation of a retaining wall, freight track, and siding in the western half of the project area. To the greatest extent feasible, in accordance with the mitigation measures adopted in the CEQA Initial Study/Mitigated Negative Declaration for the proposed project and the terms and conditions of the adopted BO, prior to construction, SacRT must confine clearing to the minimal area necessary to facilitate construction activities and restrict movement of heavy equipment to and from the project site to established roadways to minimize habitat disturbance. SacRT must also delineate an avoidance area of at least 20 feet (6 meters) from the dripline of elderberry shrubs to be avoided. If shrubs cannot be avoided, then in accordance with Conservation Measure #3, at minimum, impacts on individual shrubs with canopies that overlap with the project work area will be replaced through a purchase of 1 credit at a Service-approved bank for each shrub that will be trimmed. If all twenty-one (21) shrubs with canopies that overlap the project disturbance area must be trimmed for installation of project infrastructure, then SacRT will purchase 21 VELB units that will be dedicated in a Service-approved conservation bank.

The compensation totals discussed above represent a conservative estimate of project impacts to VELB habitat. In accordance with the mitigation measures adopted in the CEQA Initial Study/Mitigated Negative Declaration to minimize habitat disturbance, final project design may result in fewer direct impacts to elderberry shrubs than is calculated in this analysis. Within 60 days of completion of the project, FTA will provide an accounting to the USFWS of the direct impacts (i.e., removal and trimming) of elderberry shrubs. SacRT will purchase mitigation credits at a USFWS-approved bank within the service area to compensate for any direct impacts resulting from the proposed action. The proposed compensation that SacRT would implement for impacts resulting at the Action Area is the purchase of a total of up to 25 VELB units to be dedicated in a Service-approved conservation bank, and transplanting up to four (4) elderberry shrubs to a Service-approved conservation bank plus additional elderberry seedlings at a three-to-one ratio (for a total of up to 12 elderberry seedlings planted) at a Service-approved conservation bank or other Service-approved conservation area.

6.3 CONCLUSION

In conclusion, after reviewing the current status of valley elderberry longhorn beetle, the environmental baseline for the Action Area, and the potential effects of the Proposed Action, the Proposed Action may adversely affect this taxon. However, with the implementation of the Proposed Action's environmental commitments and

² A unit is equivalent to 1,800 square feet (USFWS 2017).

conservation and compensation measures, the Proposed Action substantially would avoid and/or minimize these effects and would not jeopardize the continued existence or preclude the recovery of this species; therefore, through implementation of the environmental commitments and conservation and compensation measures provided herein, the Proposed Action *may affect, but is not likely to adversely affect* the valley elderberry longhorn beetle.

7 REFERENCES

- AECOM. 2020. *Final Initial Study/Proposed Mitigated Negative Declaration - Folsom Light Rail Modernization Double Track Project*. Prepared for Sacramento Regional Transit District. Sacramento, CA. January 2020.
- Barr, C. 1991 (November). The Distribution, Habitat, and Status of the Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus*. Sacramento, CA: U.S. Fish and Wildlife Service.
- California Department of Fish and Wildlife (CDFW). 2020. California Natural Diversity Database (CNDDDB). Available: <https://wildlife.ca.gov/Data/CNDDDB>. Accessed 09 June 2020.
- California Native Plant Society (CNPS), Rare Plant Program. 2020. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Available: <http://www.rareplants.cnps.org>. Accessed 09 June 2020.
- Griffith, G.E., J.M. Omernik, D.W. Smith, T.D. Cook, E. Tallyn, K. Moseley, and C.B. Johnson. 2016. Ecoregions of California (poster). 1:1,100,000 scale. U.S. Geological Survey Open-File Report 2016-1021.
- Sacramento Regional Transit District (SacRT) Board of Directors. 2020. Folsom Light Rail Modernization Double Track Project – Mitigation Monitoring and Reporting Program. Adopted on 13 January 2020.
- State Water Resources Control Board (State Water Board). 2012a. National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2012-006-DWQ. Available: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2012/wqo2012_0006_dwq.pdf. Accessed 06 March 2020.
- U.S. Climate Data. 2020. Climate – Folsom, California. US Climate Data 2020, Version 3.0 by Your Weather Service. Available: usclimatedata.com. Accessed 10 June 2020.
- United States Department of Transportation Federal Transit Administration (FTA). 2000. Final Environmental Impact Statement/Final Environmental Impact Report - Downtown Sacramento-Folsom Corridor Project. March 2000.
- United States Fish and Wildlife Service (USFWS). 1980 (August 8). Listing the Valley Elderberry Longhorn Beetle as a Threatened Species with Critical Habitat, Final Rule. 45 FR 52803.
- . 2000. Ref #1-1-00-F-009 - Downtown Sacramento Amtrak and Folsom Corridor Light Rail Transit Extensions and Double Tracking Project, Sacramento County, California. February 14, 2000.
- . 2017 (May). *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus)*. U.S. Fish and Wildlife Service, Sacramento, California. 28 pp.
- . 2019 (October 4). Draft Revised Recovery Plan for the Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*). Region 8, U.S. Fish and Wildlife Service, Sacramento, California.

- _____. 2020a. Information for Planning and Consultation, IPaC Official Species List for Folsom Light Rail Modernization Double Track Project. List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project. Consultation Code: 08ESMF00-2020-SLI-2116 Event Code: 08ESMF00-2020-E-06575. 09 June 2020.
- _____. 2020b. Critical Habitat for Threatened and Endangered Species, ArcGIS critical habitat mapper. Updated May 29, 2020. Available: <https://www.arcgis.com>. Accessed 10 June 2020.
- U.S. Geological Survey (USGS). 2018a. Folsom Quadrangle.
- _____. 2018b. Buffalo Creek Quadrangle.
- _____. 2018c. Citrus Heights Quadrangle.
- _____. 2018d. Roseville Quadrangle.
- _____. 2018e. Rocklin Quadrangle.
- _____. 2018f. Pilot Hill Quadrangle.
- _____. 2018g. Clarksville Quadrangle.
- _____. 2018h. Folsom SE Quadrangle.
- _____. 2018i. Carbondale Quadrangle.
- _____. 2018j. Sloughhouse Quadrangle.
- _____. 2018k. Elk Grove Quadrangle.
- _____. 2018l. Carmichael Quadrangle.