

Initial Study

L Street Pathway to Transit Phase II

City of Antioch Project No. 7925
CCTA Project No. 31003



Prepared by

ANTIOCH
CALIFORNIA

In Consultation with



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ENVIRONMENTAL CONSULTANTS & PLANNERS

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MITIGATED NEGATIVE DECLARATION

DESCRIPTION OF THE PROJECT

Project Title: L Street Pathway to Transit Phase II, City of Antioch Project No. 7925, CCTA Project No. 31003

Project Location: The project is located along L Street, between 9th Street and Sycamore Drive in the City of Antioch.

Project Sponsor: City of Antioch, Public Works Department

Project Description: The project aims to enhance pedestrian and bicyclist infrastructure along L Street, between 9th Street and Sycamore Drive in the City of Antioch, connecting to multimodal improvements from a previous phase. The project will involve widening the roadway between 10th Street and Sycamore Drive, re-striping to accommodate multimodal facilities, and constructing retaining walls to minimize impacts to Union Pacific Railroad (UPRR) structures and the Contra Costa County Fairgrounds property.

DETERMINATION

In accordance with the City of Antioch's procedures for compliance with the California Environmental Quality Act (CEQA), the City has completed an Initial Study to determine whether the proposed project may have a significant adverse effect on the environment. On the basis of that study, the City makes the following determination:

Although the project, as proposed, could have a significant effect on the environment, there will not be a significant effect in this case because mitigation measures are included in the project which will reduce all identified potential impacts to less than significant levels, and, therefore, this **MITIGATED NEGATIVE DECLARATION (MND)** has been prepared.

CONDITIONS (MITIGATION MEASURES)

Biological Resources

MM BIO-1.1: Project activities shall be scheduled to avoid the nesting bird season. For project planning purposes, the nesting bird season in the San Francisco Bay Area for birds protected under the Migratory Bird Treaty Act (MBTA) is often identified by regulatory agencies as February 1 through August 31.

If seasonal avoidance is not possible, within three days prior to the start of work, a nesting bird survey shall be performed by a qualified biologist on the project site and within a zone of influence (i.e., 100 feet for non-raptor migratory birds and 300 feet for raptors). All nest avoidance requirements of the



MBTA and California Fish and Game Code (CFGF) shall be observed (e.g., establishing appropriate protection buffers around active nests until young have fledged). A qualified biologist shall resurvey the project site if a halt in project activities of three days or more occurs. All nests identified during pre-construction surveys shall be determined "inactive" by a qualified biologist prior to removal.

If seasonal avoidance is not possible and nesting birds are present, a qualified biologist shall establish temporary buffers around the nest. Project activities shall not occur within the buffer areas until the nest has fledged or has otherwise become inactive. The qualified biologist shall monitor all identified nesting birds within the survey area long enough to determine whether project activities will result in observable signs of disturbance. Buffers may need to be adjusted to a greater distance if needed to ensure disturbance does not occur as a result of project-related activities. Conversely, buffer size may be decreased in consultation with California Department of Fish and Wildlife (CDFW) if project-related activities do not result in disturbance.

Cultural Resources

MM CUL-1.1: In the event any significant cultural materials are encountered during construction grading or excavation, construction within a radius of 50 feet of the find would be halted, the Director of Public Works shall be notified, and a qualified archaeologist shall examine the find and make appropriate recommendations regarding the significance of the find and the appropriate treatment of the resource. Recommendations could include collection, recordation and analysis of any significant cultural materials. A report of findings documenting any data recovered during monitoring shall be submitted to the Director of Public Works.

MM CUL-1.2: Pursuant to Section 7050.5 of the Health and Safety Code, and Section 5097.94 of the Public Resources Code of the State of California, in the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site within a 50-foot radius. The Contra Costa County Coroner shall be notified and shall make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to their authority, they shall notify the Native American Heritage Commission (NAHC) who shall attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this state law, then the landowner shall reinter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance. If the Director of Public Works finds that the archaeological find is not a significant resource, work would resume only after the submittal of a preliminary archaeological report and after provisions for reburial and ongoing monitoring are accepted.

Geology and Soils

MM GEO-1.1: In the event of discovery of a paleontological resource during construction, ground-disturbing activities shall temporarily be halted within 25 feet of the find until the discovery is examined by a qualified paleontologist. Work within the sensitive area shall resume only when deemed appropriate by the qualified paleontologist. The qualified paleontologist shall determine whether the



discovery is scientifically significant, how to involve other responsible or resource agencies and stakeholders, and what methods to follow for resource recovery.

If the qualified paleontologist determines that the resource is not scientifically important, the conclusion shall be documented in a letter to the City of Antioch to demonstrate compliance with applicable statutory requirements.

If the qualified paleontologist determines that the paleontological resource is of scientific importance and there are no feasible measures to avoid disturbing this paleontological resource, the qualified paleontologist shall prepare a Paleontological Monitoring and Mitigation Plan (PMMP). The PMMP shall include measures to fully document and recover the resource of scientific importance. The qualified paleontologist shall submit the PMMP to the City for review and approval within 10 business days of the discovery. Upon approval by the City, ground-disturbing activities in the project area shall resume and be monitored as determined by the qualified paleontologist for the duration of such activities. The PMMP shall include measures for a training program for construction personnel, paleontological monitoring, fossil salvage, curation, and final reporting, as applicable.

Hazards and Hazardous Materials

MM HAZ-1.1: As part of project development, a soil investigation will be conducted to determine whether aerially-deposited lead (ADL) has affected soils that will be excavated as part of the proposed project. The investigation for ADL will be performed in accordance with Caltrans' Lead Testing Guidance Procedure. The analytical results will be compared against applicable hazardous waste criteria. Based on analytical results, the investigation will provide recommendations regarding management and disposal of affected soils in the project area including the reuse potential of ADL-affected soil during project development. The provisions of a variance granted to Caltrans by the California Department of Toxic Substances Control on September 22, 2000 (or any subsequent variance in effect when the project is constructed) regarding aerially-deposited lead will be followed.

MM HAZ-1.2: Soils beneath and adjacent to the Kinder Morgan pipe rack bridge should be tested for lead prior to construction disturbance. If lead-impacted soils are encountered, appropriate worker protection and waste management procedures shall be followed.

MM HAZ-1.3: If components of the Union Pacific Railroad overcrossing or Kinder Morgan pipe rack are disturbed during construction, an asbestos survey by a California Division of Occupational Safety and Health (Cal/OSHA)-certified consultant shall be conducted. Any identified asbestos containing materials shall be handled and disposed of in accordance with regulatory requirements.

MM HAZ-1.4: Removal of painted traffic markings shall follow Caltrans Standard Special Provision (14-11.12) for managing materials containing lead and chromium.

Noise

MM NOI-1.1: To reduce the potential for noise impacts resulting from project construction, the



following measures shall be implemented:

- All construction equipment shall conform to Section 14-8.02, Noise Control, of the latest Standard Specifications.
- Noise-generating construction activities shall be restricted to between 8:00 a.m. and 5:00 p.m. on weekdays and from 9:00 a.m. to 5:00 p.m. on weekends and holidays.
- All internal combustion engine driven equipment shall be equipped with manufacturer recommended intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Unnecessary idling of internal combustion engines within 100 feet of residences shall be strictly prohibited.
- Noise generating equipment shall be located as far as practical from sensitive receptors when sensitive receptors adjoin or are near the construction project area.
- Notify community and stakeholders in advance in accordance with Local Agency procedures.
- Locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.

MM NOI-2.1: To reduce the potential for vibration impacts resulting from project construction, the following measures shall be implemented during project construction:

- Avoid the use of vibratory rollers within 18 feet of structures. Static mode compaction shall be used when construction activities are less than 18 feet from structures.
- Avoid dropping heavy objects or equipment within 18 feet of structures.
- Avoid the use of CIDH piles, hoe rams, large bulldozers, and caisson drilling equipment within nine feet of structures.
- If vibratory rollers must be used within 18 feet, and all other equipment must be used within nine feet of structures, the following measures will be required:
 - Contractor must perform vibration monitoring, crack monitoring and photo/video documentation of the affected structures during construction. The requirements to perform vibration monitoring, crack monitoring and photo/video documentation will be included in the project's construction specifications as part of the construction contract documents.

FINDING

The City of Antioch hereby finds that the proposed project could have a significant effect on the environment; however, there would not be a significant effect in this case because mitigation measures summarized above and described in the Initial Study are included in the project which will reduce all identified potential impacts to less than significant levels.



LEAD AGENCY REPRESENTATIVE

A handwritten signature in blue ink, appearing to read "Scott Buenting", written over a horizontal line.

8/3/26

Scott Buenting, Public Works Director/City Engineer

Date

For additional information regarding the project, please contact Scott Buenting, Public Works Director/City Engineer, City of Antioch, at (925) 779-6129.

Written comments may be sent to Scott Buenting at sbuenting@antiochca.gov or via regular mail to Scott Buenting, Public Works Director/City Engineer, City of Antioch, P.O. Box 5007, Antioch, CA 94531

Section 1.0 Introduction and Purpose

1.1 Purpose of the Initial Study

The City of Antioch, as the Lead Agency, has prepared this Initial Study for the L Street Pathway to Transit Phase II Project in compliance with the California Environmental Quality Act (CEQA), the CEQA Guidelines (California Code of Regulations §15000 et. seq.) and the regulations and policies of the City of Antioch, California.

The project proposes to enhance pedestrian and bicycle infrastructure along L Street, between 9th Street and Sycamore Drive in the City of Antioch. This Initial Study evaluates the environmental impacts that might reasonably be anticipated to result from implementation of the proposed project.

1.2 Public Review Period

Publication of this Initial Study marks the beginning of a 30-day public review and comment period. During this period, the Initial Study will be available to local, state, and federal agencies and to interested organizations and individuals for review. Written comments concerning the environmental review contained in this Initial Study during the 30-day public review period should be sent to:

Scott Buening, Public Works Director/City Engineer
City of Antioch, Public Works Department
200 H Street
Antioch, CA 94509

1.3 Consideration of the Initial Study and Project

Following the conclusion of the public review period, the City of Antioch will consider the adoption of the Initial Study/Mitigated Negative Declaration (MND) for the project at a regularly scheduled meeting. The City shall consider the Initial Study/MND together with any comments received during the public review process. Upon adoption of the MND, the City may proceed with project approval actions.

1.4 Notice of Determination

If the project is approved, the City of Antioch will file a Notice of Determination (NOD), which will be available for public inspection and posted within 24 hours of receipt at the County Clerk's Office for 30 days. The filing of the NOD starts a 30-day statute of limitations on court challenges to the approval under CEQA (CEQA Guidelines Section 15075(g)).

Section 2.0 Project Information

2.1 Project Title

L Street Pathway to Transit Phase II
City of Antioch Project No. 7925, CCTA Project No. 31003

2.2 Lead Agency Contact

Scott Buenting, Public Works Director/City Engineer
City of Antioch, Public Works Department
200 H Street
Antioch, CA 94509

2.3 Project Applicant

City of Antioch, Public Works Department

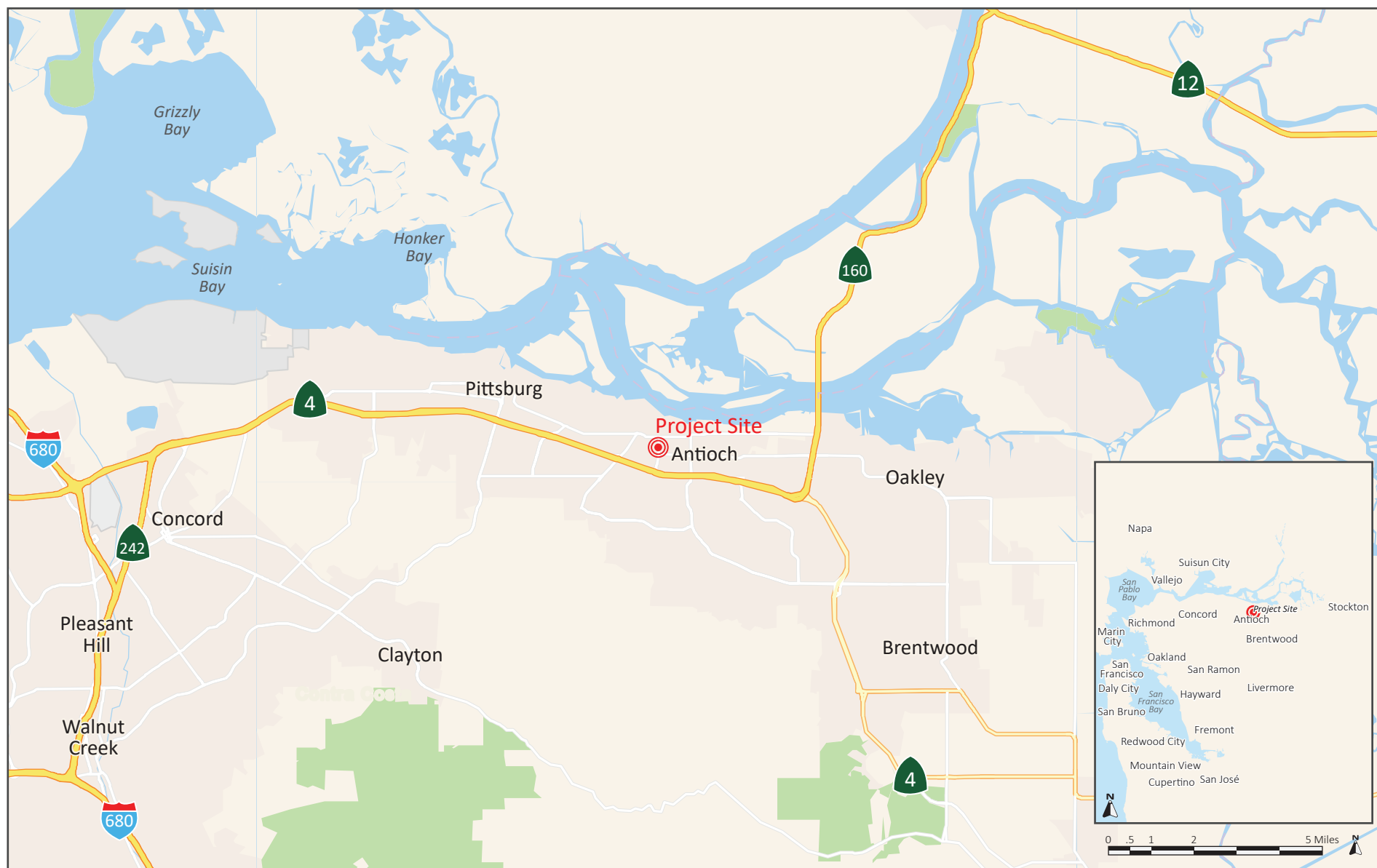
2.4 Project Location

The project is located along L Street, between 9th Street and Sycamore Drive in the City of Antioch. Regional and vicinity maps of the site are shown below in Figure 2.4- 1 and Figure 2.4- 2, respectively. An aerial photograph of the project site and the surrounding land uses is shown in Figure 2.4- 3.

2.5 Project-Related Approvals, Agreements, and Permits

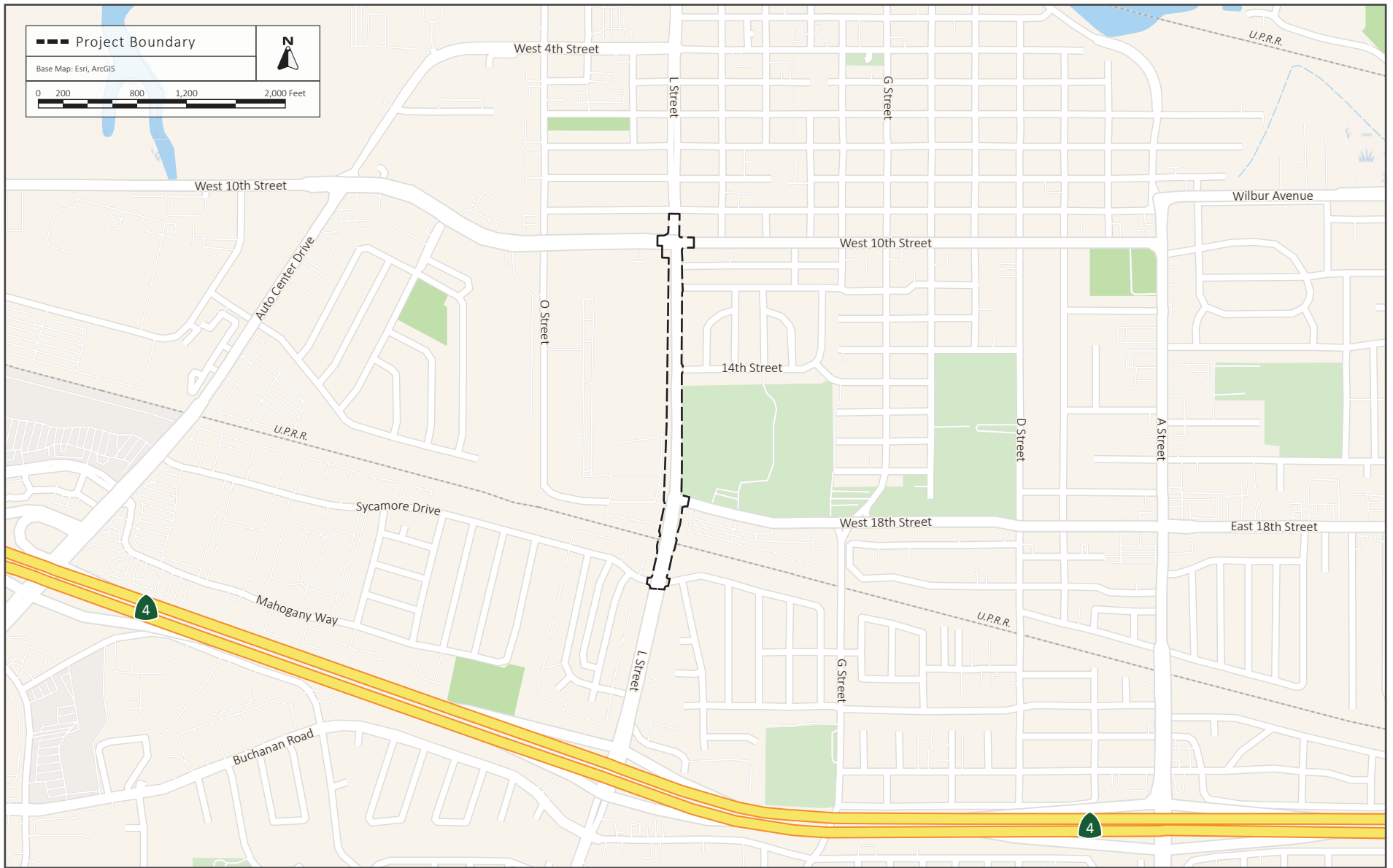
This Initial Study is intended to provide the City of Antioch, other public agencies, and the general public with the relevant environmental information needed in considering the proposed project. The City of Antioch anticipates that discretionary approvals by the City, including but not limited to the following, will be required to implement the project addressed in this Initial Study:

- Demolition permit
- Grading permit
- Tree removal permit
- Purchase agreement
- Temporary construction easements



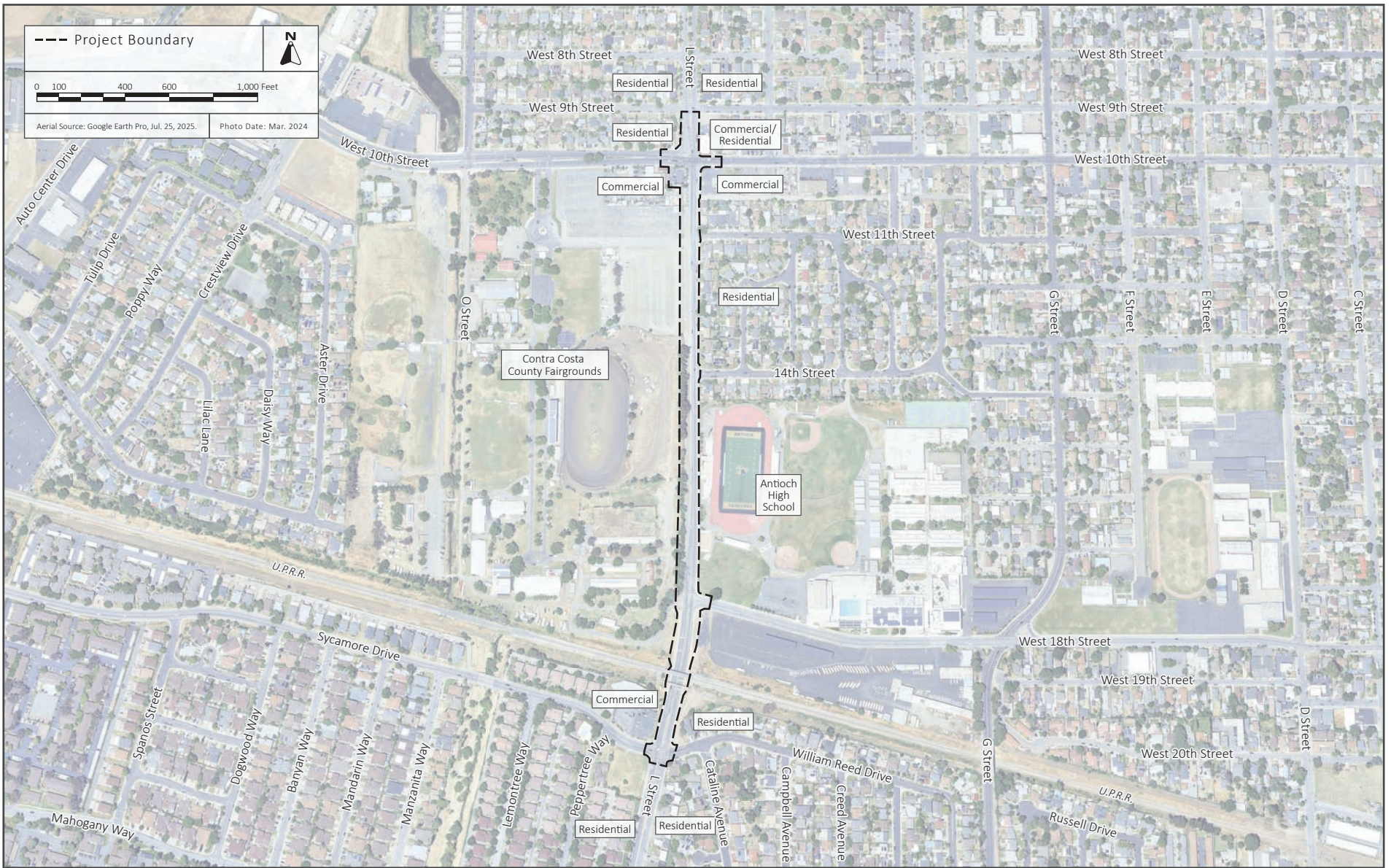
REGIONAL MAP

FIGURE 2.4-1



VICINITY MAP

FIGURE 2.4-2



AERIAL PHOTOGRAPH AND SURROUNDING LAND USES

FIGURE 2.4-3

Section 3.0 Project Description

The project aims to enhance pedestrian and bicyclist infrastructure along L Street, between 9th Street and Sycamore Drive in the City of Antioch, connecting to multimodal improvements from a previous phase. The project will involve widening the roadway between 10th Street and Sycamore Drive, re-striping to accommodate multimodal facilities, and constructing retaining walls to minimize impacts to Union Pacific Railroad (UPRR) structures and the Contra Costa County Fairgrounds property.

3.1 Roadway Improvements

The project will include roadway widening along L Street, between W. 10th Street and Sycamore Drive. The widening is required along the corridor between 10th Street to 18th Street primarily to close gaps in the sidewalk and bicycle lane network in both northbound (NB) and southbound (SB) directions, and will accommodate the addition of one SB and one NB travel lane between 10th Street and 18th Street. The additional travel lanes are being added to address an existing bottleneck between 10th Street to 18th Street (approximately 2,000 feet in length).

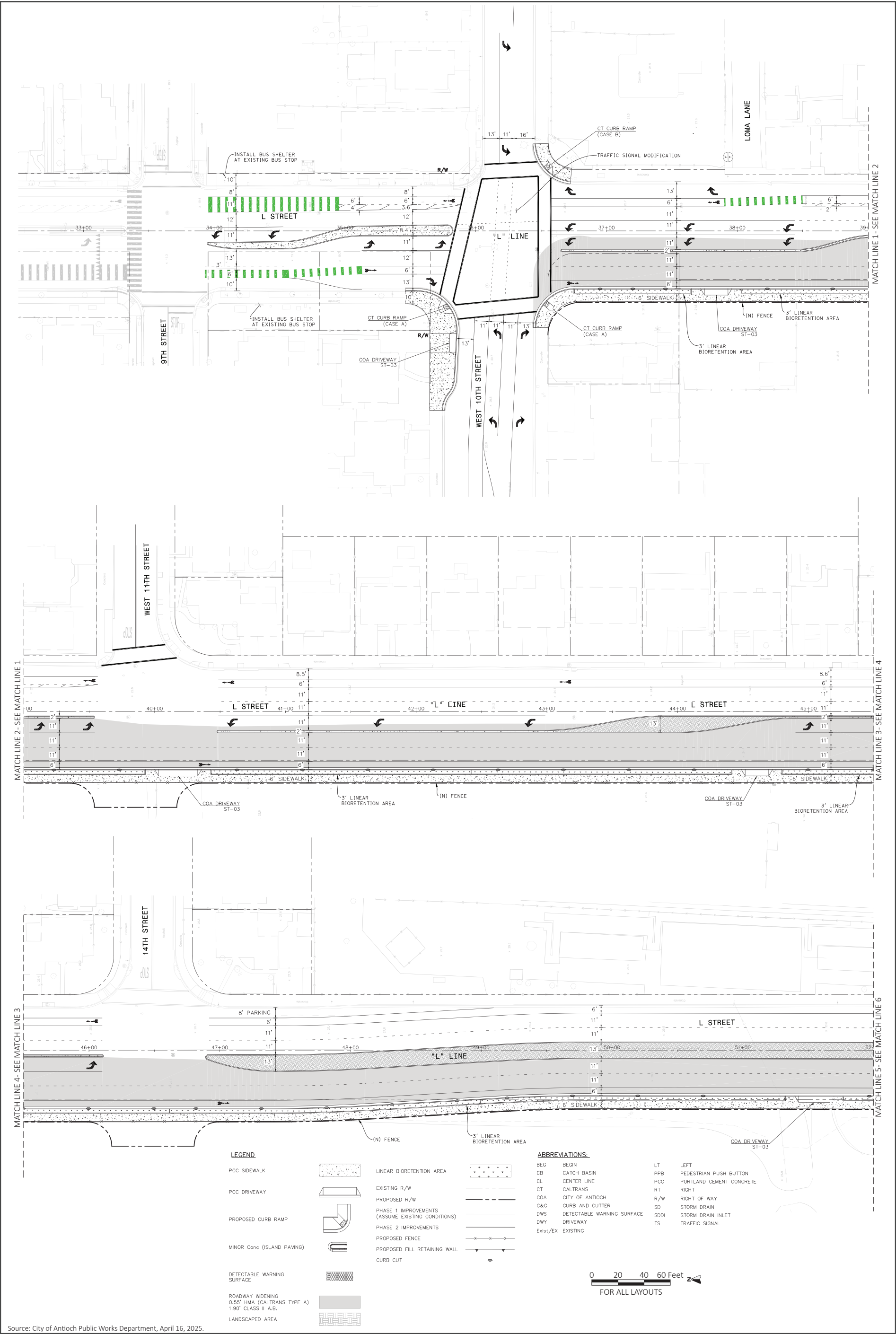
The City intends to also close pedestrian and bicycle gaps to improve access by constructing sidewalks, providing continuous bicycle facilities from 9th Street to Sycamore Drive, and installing Americans with Disabilities Act (ADA)-compliant curb ramps. Additionally, the project includes treating stormwater runoff per local Municipal Regional Permit (MRP) requirements and traffic signal modifications at the intersections of 10th Street, 18th Street, and Sycamore Drive. These improvements are intended to increase multimodal safety, corridor operations, and further provide intersection enhancements. Other improvements include new bus stops and shelters within the project area for the Tri-Delta Transit bus route serving downtown Antioch. Layout plans and cross sections of the proposed improvements are shown in Figure 3.1-1 through Figure 3.1-4.

3.2 Right-of-Way Requirements

The proposed widening will require one full right-of-way (ROW) acquisition at 1101 W. 10th Street and partial acquisition of the Contra Costa County Fairgrounds property (ranging from seven to 17 feet in width for approximately 1,500 feet in length). The proposed ROW acquisitions are shown in Figure 3.2-1 and Figure 3.2-2.

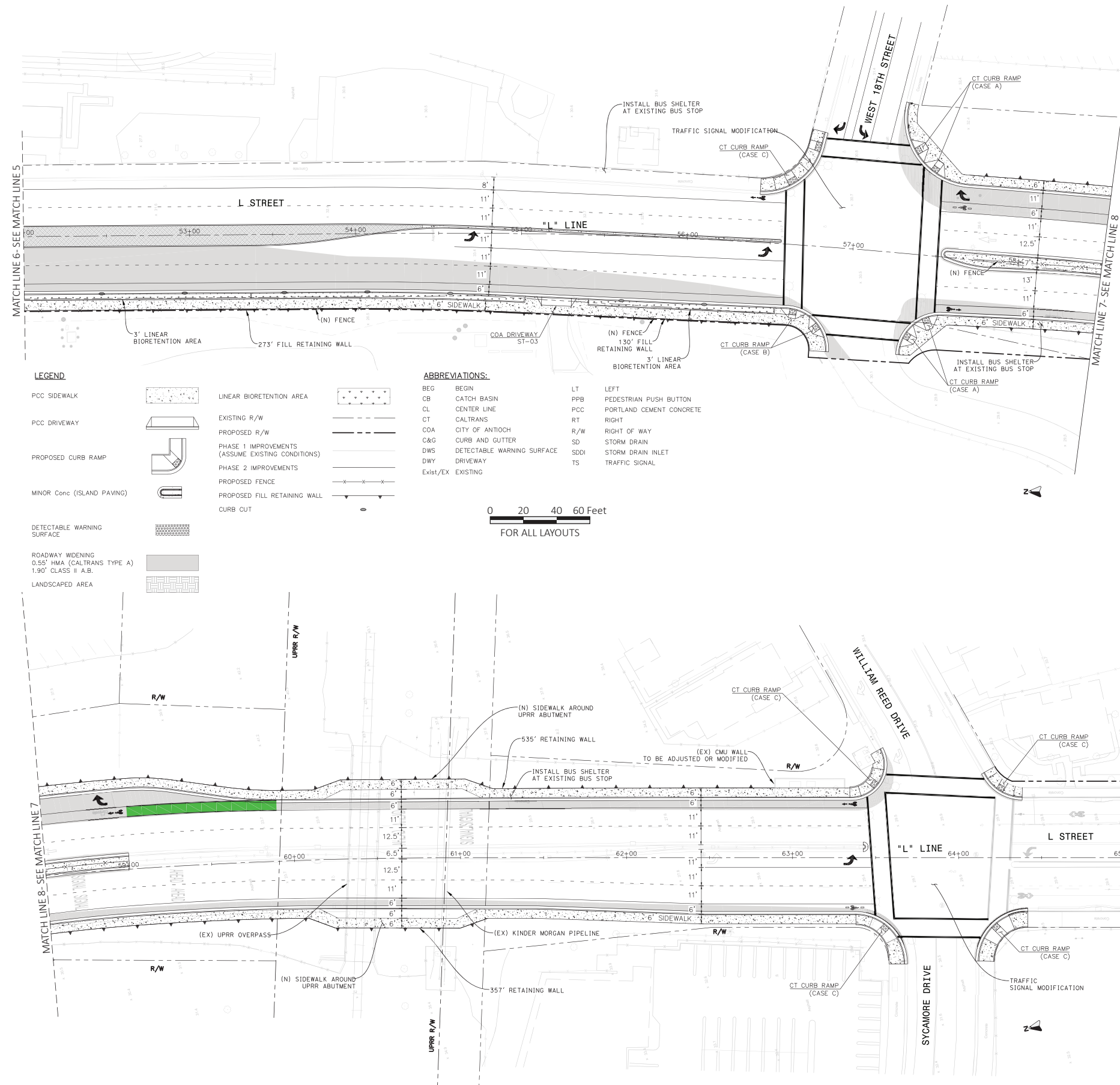
3.3 Utility Relocations

The project will require the relocation of storm drain lines, a water meter, underground electrical vaults, light poles, and electrical and telecommunication boxes. The project will also extend the storm drain main line in L Street to accommodate connections to the proposed bioretention facilities. The length of storm drain lines to be relocated would range in size from approximately two feet to 93 feet.



LAYOUT PLAN – 9TH STREET TO 14TH STREET

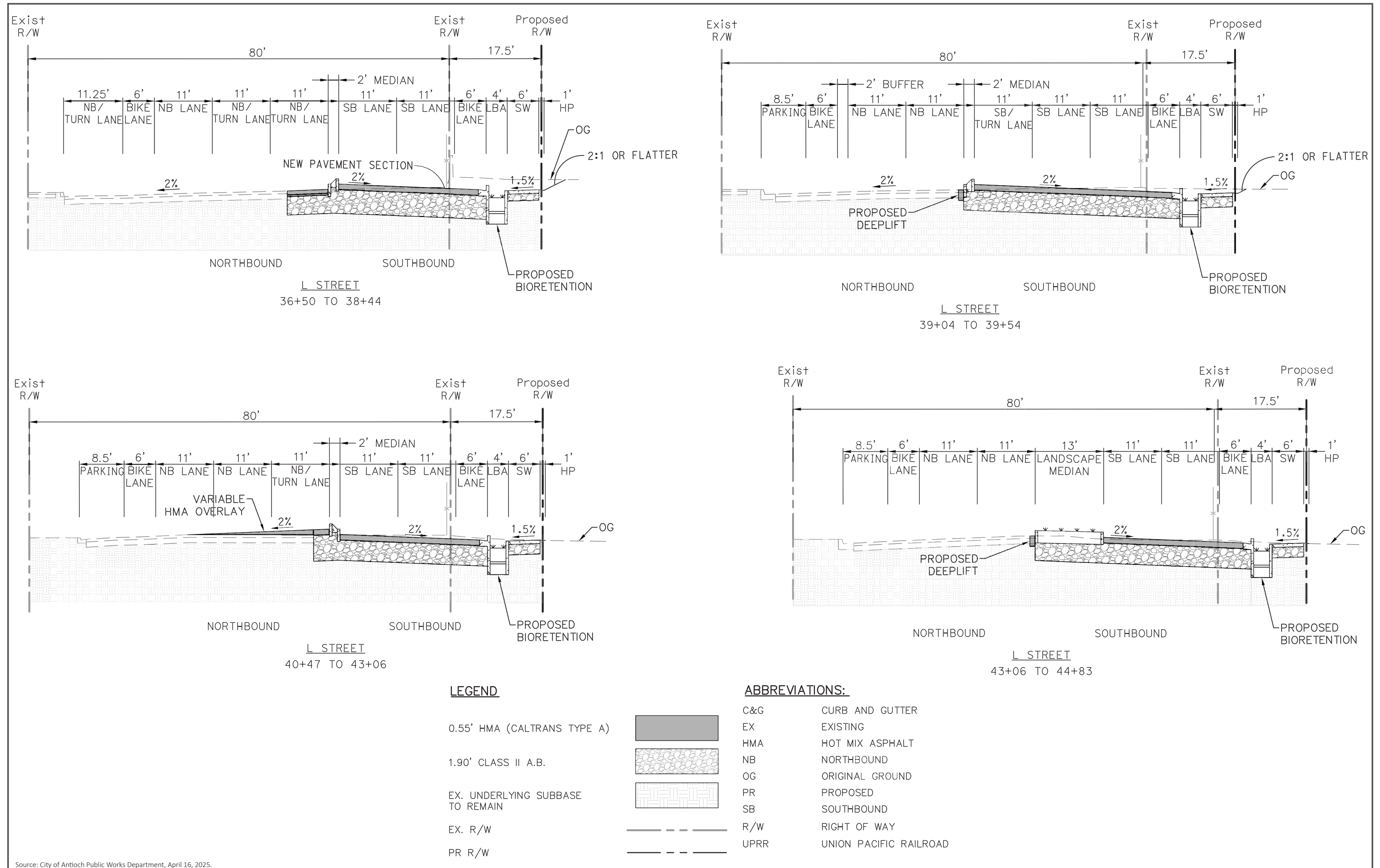
FIGURE 3.1-1



Source: City of Antioch Public Works Department, April 16, 2025.

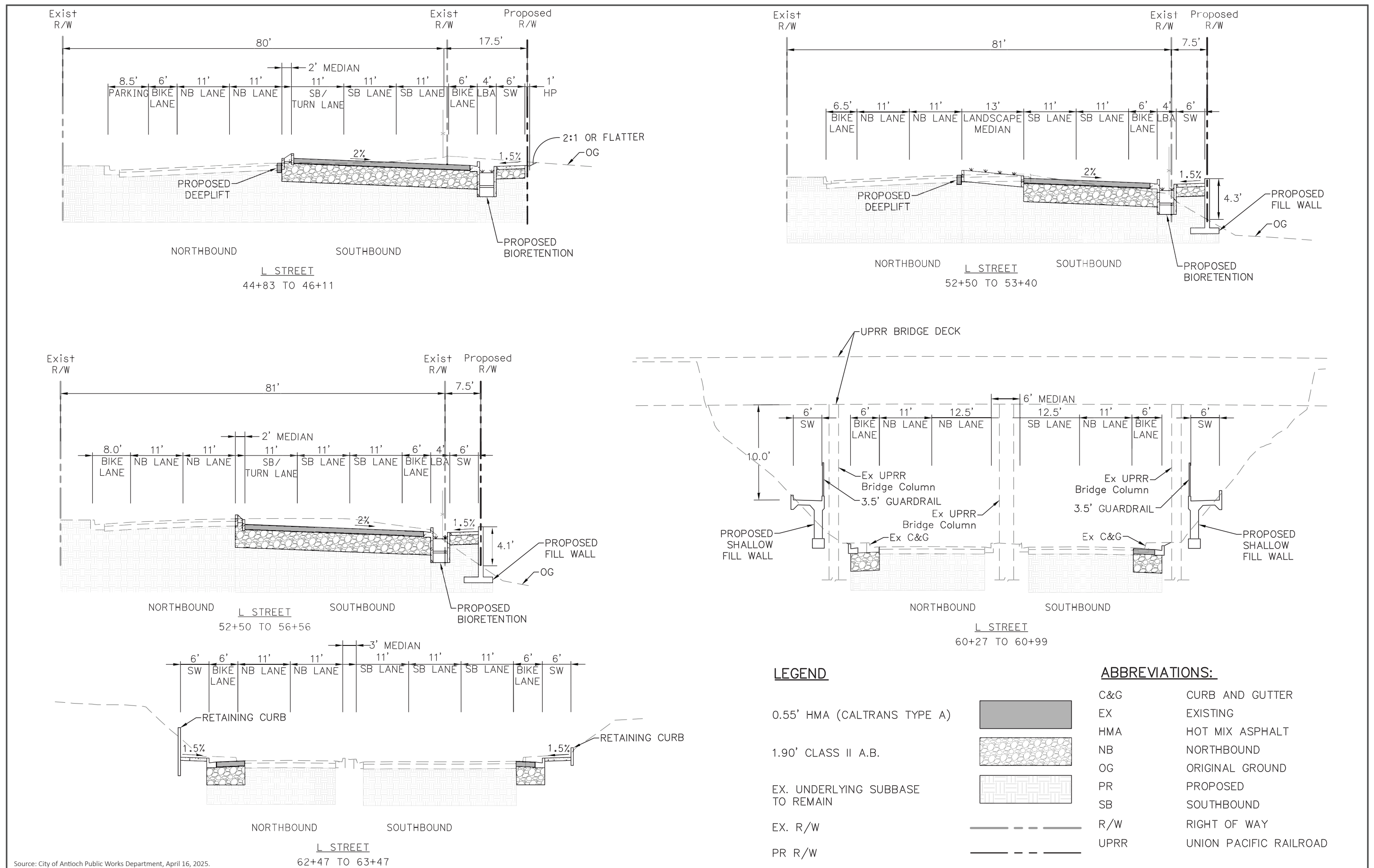
LAYOUT PLAN – 14TH STREET TO SYCAMORE DRIVE

FIGURE 3.1-2



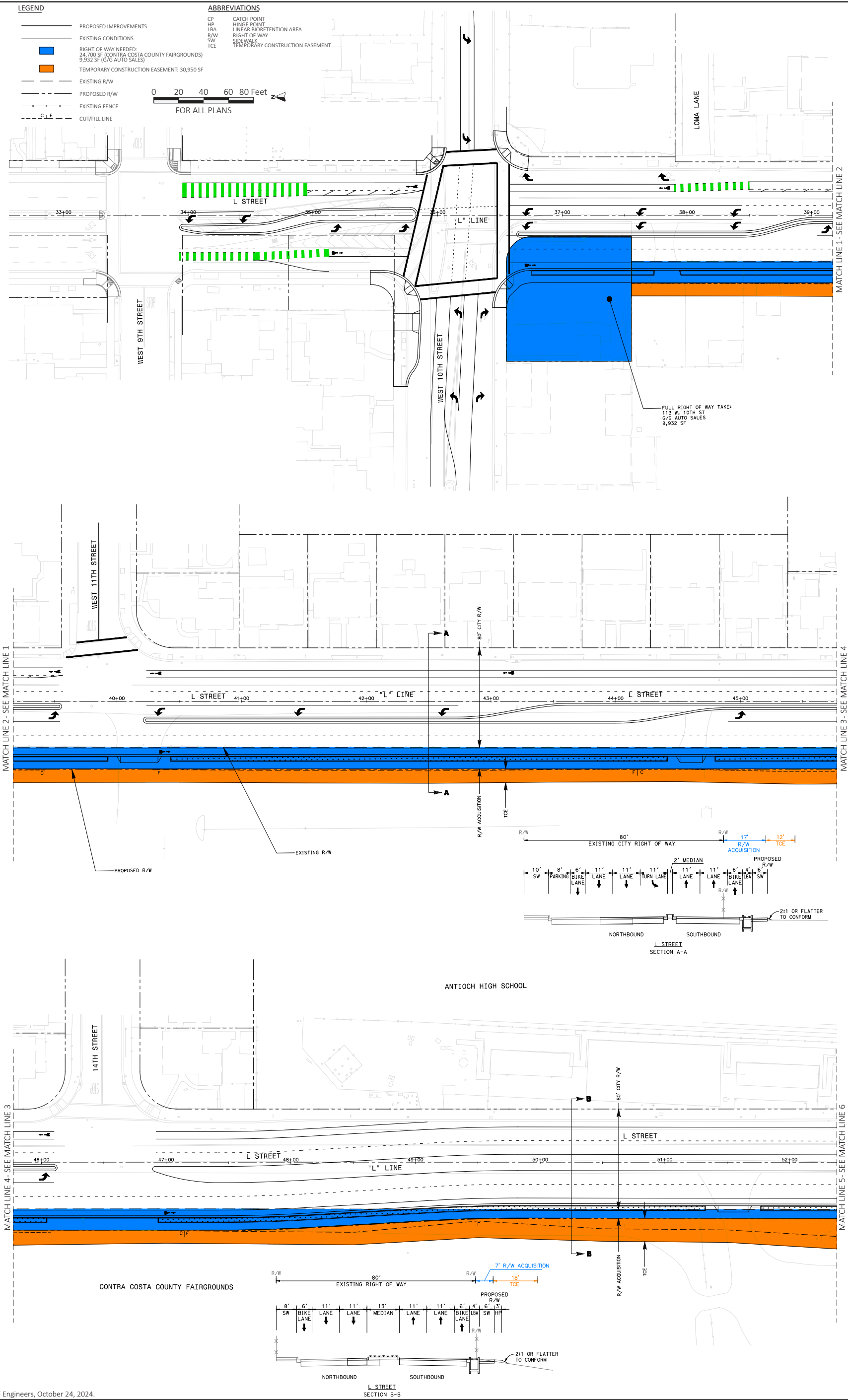
CROSS SECTIONS – 10TH STREET TO 14TH STREET

FIGURE 3.1-3



Source: City of Antioch Public Works Department, April 16, 2025.

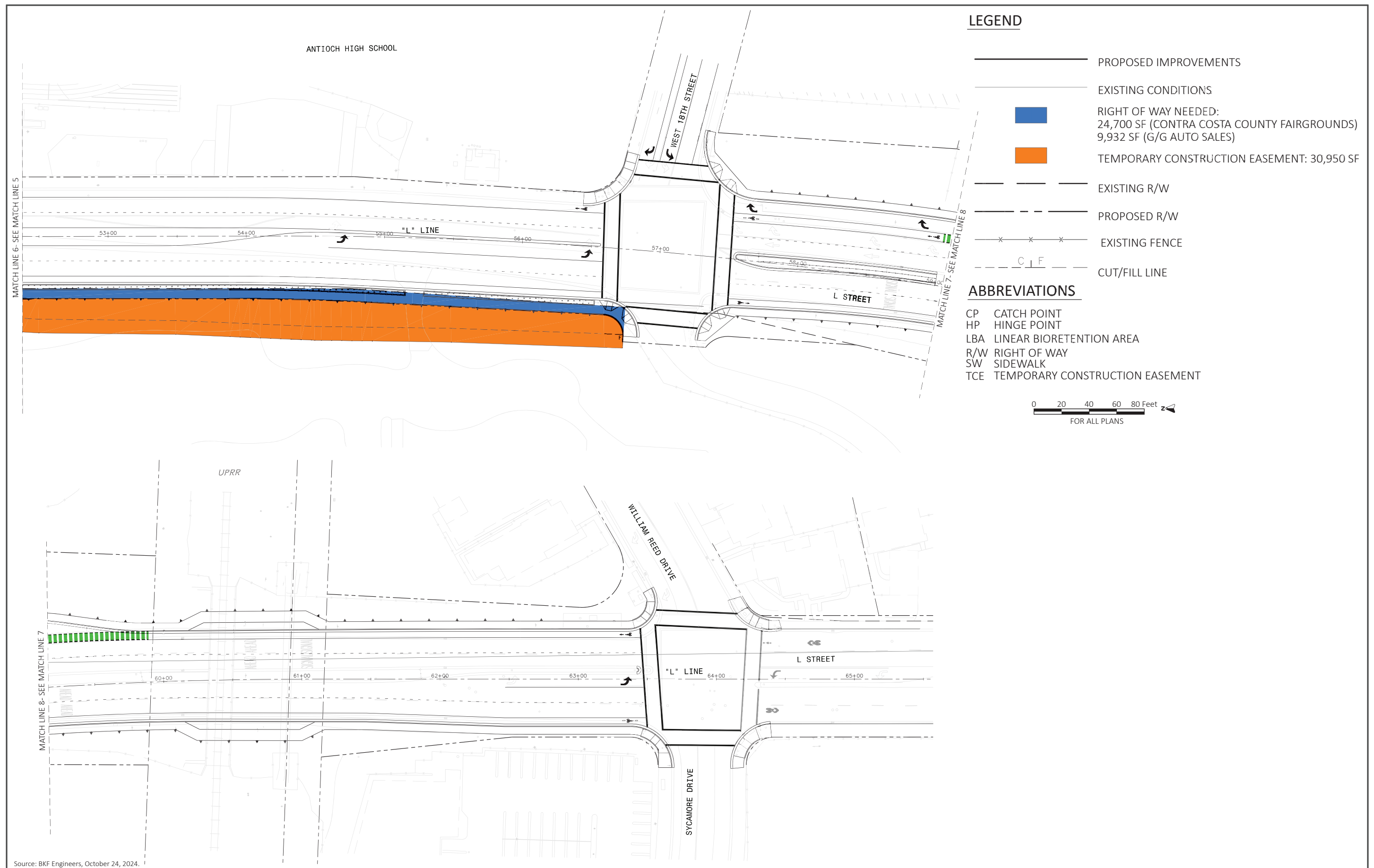
CROSS SECTIONS – 14TH STREET TO SYCAMORE DRIVE FIGURE 3.1-4



Source: BKF Engineers, October 24, 2024.

RIGHT OF WAY ACQUISITION PLAN – 9TH STREET TO 14TH STREET

FIGURE 3.2-1



RIGHT OF WAY ACQUISITION PLAN – 14TH STREET TO SYCAMORE DRIVE

FIGURE 3.2-2

3.4 Signage and Fencing

The project would relocate existing fencing along the Contra Costa County Fairgrounds property line to conform to the new parcel line. The entrance and exit gates to the fairgrounds property along L Street would also be relocated to conform to the new parcel line but would maintain access to the existing driveways. The project would relocate signs throughout the entire corridor, including signs for speed limit, bus stops, traffic light warning, regulatory and warning signs for turning and merging, and a sign marking the location of a petroleum pipe.

3.5 Retaining Walls

To accommodate the proposed roadway widening, the project would require the use of retaining walls. The project would include a 273-foot long fill wall and a 130-foot long fill wall along the Contra Costa County Fairgrounds property south of 14th Street. At the fairgrounds property, the proposed retaining wall would be approximately four feet tall with the exposed sides facing the fairgrounds. On L Street south of West 18th Street to Sycamore Drive, an approximately 436-foot long retaining wall would be constructed on the east side and an approximately 323-foot long retaining wall would be constructed on the west side along the UPRR underpass. In order to construct the proposed sidewalks along the UPRR underpass, approximately 4.5-foot tall retaining walls would be located behind the existing bridge columns and include 3.5-foot tall guardrails. Beyond the Kinder Morgan pipeline, the retaining structures along the west side would be limited to retaining curbs along the proposed sidewalks.

3.6 Vegetation and Tree Removal

The project would require clearing and grubbing of existing vegetation and tree removal. The project would remove approximately 91 existing trees, all of which would be located on the west side of L Street, between W. 10th Street and W. 18th Street. Most of the existing trees to be removed are located on private property that would be acquired as part of the project, including the parcel at 1101 W. 10th Street and the eastern edge of the Contra Costa County Fairgrounds property. Replacement trees would be planted in accordance with Article 12 of the City's Code of Ordinances.

3.7 Construction Details

Project construction is anticipated to take approximately 18 months to complete. Construction hours shall be limited to 7:00am through 6:00pm on weekdays, or 8:00am through 5:00pm where within 300 feet of an occupied dwelling, and between 9:00am to 5:00pm on weekends and holidays. The maximum excavation depth for the project will be approximately 15 feet for traffic signals, seven feet for storm drain line extensions, 4.5 feet for bioretention areas, and 2.5 feet for the roadway widening. All construction equipment staging would occur within existing City ROW. No road closures or detours are anticipated to be required during construction. The project would require approximately 150 cubic yards of soil to be exported and approximately 1,500 cubic yards of asphalt and concrete to be poured on-site.

Section 4.0 Environmental Setting, Checklist, and Impact Discussion

This section presents the discussion of impacts related to the following environmental subjects in their respective subsections:

4.1	Aesthetics	4.12	Mineral Resources
4.2	Agriculture and Forestry Resources	4.13	Noise
4.3	Air Quality	4.14	Population and Housing
4.4	Biological Resources	4.15	Public Services
4.5	Cultural Resources	4.16	Recreation
4.6	Energy	4.17	Transportation
4.7	Geology and Soils	4.18	Tribal Cultural Resources
4.8	Greenhouse Gas Emissions	4.19	Utilities and Service Systems
4.9	Hazards and Hazardous Materials	4.20	Wildfire
4.10	Hydrology and Water Quality	4.21	Mandatory Findings of Significance
4.11	Land Use and Planning		

The discussion for each environmental subject includes the following subsections:

- **Environmental Setting** – This subsection 1) provides a brief overview of relevant plans, policies, and regulations that compose the regulatory framework for the project and 2) describes the existing, physical environmental conditions at the project site and in the surrounding area, as relevant.
- **Impact Discussion** – This subsection 1) includes the recommended checklist questions from Appendix G of the CEQA Guidelines to assess impacts and 2) discusses the project’s impact on the environmental subject as related to the checklist questions. For significant impacts, feasible mitigation measures are identified. “Mitigation measures” are measures that will minimize, avoid, or eliminate a significant impact (CEQA Guidelines Section 15370). Mitigation measures are numbered to correspond to the impact they address. For example, MM BIO-1.1 refers to the first mitigation measure for the first impact in the Biological Resources section.

4.1 Aesthetics

4.1.1 Environmental Setting

4.1.1.1 *Regulatory Framework*

State

Streets and Highway Code Sections 260 through 263

The California Scenic Highway Program (Streets and Highway Code, Sections 260 through 263) is managed by the California Department of Transportation (Caltrans). The program is intended to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. There are eligible state highways in the City of Antioch, but no officially designated highways.¹

In Contra Costa County, officially designated scenic highways include State Route 24 (SR 24) from the Caldecott Tunnel to its junction with Interstate 680 (I-680) and I-680 from its junction with SR 24 to the Alameda County line.

4.1.1.2 *Existing Conditions*

The project site is in an urban area surrounded by residential and commercial buildings, Antioch High School, and the Contra Costa County Fairgrounds. The General Plan identifies the Contra Costa County Fairgrounds and Antioch High School as visual landmarks because they are focal points within the community. L Street is characterized by overhead utility lines, some trees and landscaping, and an underpass of the Amtrak rail line between Sycamore Drive and W. 18th Street. Trees along the project limits are more densely concentrated along the Contra Costa County Fairgrounds property on the west side of L Street. Neighboring views of the project site are generally limited to the parcels immediately adjacent to the existing roadway.

The City of Antioch General Plan identifies views of Mt. Diablo, the ridgelines, and the San Joaquin River as important resources. Limited views of ridgelines and Mt. Diablo can be seen along the project limits. The San Joaquin River is not visible from the project site. The General Plan does not identify L Street as an important view corridor.² State Route 4 (SR 4), from SR 160 near Antioch to SR 84 near Brentwood, is an eligible but not officially designated state scenic highway. The portion of SR 4 that is an eligible state scenic highway is approximately 3.5 miles east of the project site.³

¹ California Department of Transportation. "Scenic Highways." Accessed April 7, 2026. <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>.

² Contra Costa Transportation Authority. *Technical Memo: Visual – Antioch L Street Pathways to Transit Phase II*. April 2026.

³ Ibid.

4.1.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? ⁴ If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

a) Would the project have a substantial adverse effect on a scenic vista?

There are no scenic vistas within or adjacent to the project limits. While partial views of Mt. Diablo can be seen from the site, the project would not introduce any features that would substantially degrade already obscured views of Mt. Diablo and its foothills. Due to the topography and existing suburban development, there are no significant scenic views from the project site and the project site itself does not contribute toward a scenic vista. For these reasons, the project would not have a substantial adverse effect on a scenic vista. **(Less than Significant Impact)**

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

As discussed in Section 4.1.1.2, the project is not within or adjacent to a state scenic highway. The closest officially state designated scenic highway is SR 4 which is approximately 3.5 miles east of the project site. The project is not visible from any officially designated state scenic highway. For these reasons, the project would not substantially damage scenic resources within a state scenic highway. **(Less than Significant Impact)**

⁴ Public views are those that are experienced from publicly accessible vantage points.

-
- c) In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?
-

The project is located in an urbanized area mainly surrounded by residential and commercial development. The project would not make any changes to the Antioch High School, a General Plan designated visual landmark. The project would result in partial acquisition of the Contra Costa County Fairgrounds property and would remove approximately 83 trees from the property. The project would plant replacement trees, or pay an in lieu fee, in compliance with Article 12 of the City Code of Ordinances. Given the size of the property, the project's relatively minor impacts to the east side of the property would not affect its designation as a City visual landmark. The project would comply with applicable regulations governing scenic quality. The project would provide new landscaping, and all roadway striping and signage would be constructed in compliance with existing regulations. **(Less than Significant Impact)**

- d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?
-

The project would include roadway striping and traffic signal modifications. These potential sources of light and glare would be similar to existing conditions and would not represent a substantial new source of light and glare. For these reasons, the project would not create a new source of substantial light or glare. **(Less than Significant Impact)**

4.2 Agriculture and Forestry Resources

4.2.1 Environmental Setting

4.2.1.1 *Regulatory Framework*

State

Farmland Mapping and Monitoring Program

The California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) assesses the location, quality, and quantity of agricultural land and conversion of these lands over time. Agricultural land is rated according to soil quality and irrigation status. The best quality land is identified as Prime Farmland. In CEQA analyses, the FMMP classifications and published county maps are used, in part, to identify whether agricultural resources that could be affected are present on-site or in the project area.⁵

California Land Conservation Act

The California Land Conservation Act (Williamson Act) enables local governments to enter into contracts with private landowners to restrict parcels of land to agricultural or related open space uses. In return, landowners receive lower property tax assessments. In CEQA analyses, identification of properties that are under a Williamson Act contract is used to also identify sites that may contain agricultural resources or are zoned for agricultural uses.⁶

Fire and Resource Assessment Program

The California Department of Forestry and Fire Protection (CAL FIRE) identifies forest land, timberland, and lands zoned for timberland production that can (or do) support forestry resources.⁷ Programs such as CAL FIRE's Fire and Resource Assessment Program are used to identify whether forest land, timberland, or timberland production areas could be affected on or adjacent to a project site.⁸

⁵ California Department of Conservation. "Farmland Mapping and Monitoring Program." Accessed August 7, 2025. <http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx>.

⁶ California Department of Conservation. "Williamson Act." Accessed August 7, 2025. <http://www.conservation.ca.gov/dlrp/lca>.

⁷ Forest Land is land that can support 10 percent native tree cover and allows for management of forest resources (California Public Resources Code Section 12220(g)); Timberland is land not owned by the federal government or designated as experimental forest land that is available for, and capable of, growing trees to produce lumber and other products, including Christmas trees (California Public Resources Code Section 4526); and Timberland Production is land used for growing and harvesting timber and compatible uses (Government Code Section 51104(g)).

⁸ California Department of Forestry and Fire Protection. "Fire and Resource Assessment Program." Accessed August 7, 2025. <http://frap.fire.ca.gov/>.

4.2.1.2 Existing Conditions

The project site is located within the City of Antioch and is surrounded by Urban and Built-Up Land.⁹
The project site is not located on or adjacent to property enrolled under a Williamson Act contract.¹⁰

4.2.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d) Result in a loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒
a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				

The project site does not contain any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. **(No Impact)**

⁹ California Department of Conservation. "California Important Farmland Finder." Accessed August 7, 2025.

<https://maps.conservation.ca.gov/DLRP/CIFF/>.

¹⁰ California Department of Conservation. "California Williamson Act Enrollment Finder." Accessed August 7, 2025.

<https://maps.conservation.ca.gov/dlrp/WilliamsonAct/>.

-
- b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?
-

The project site is not currently zoned for agricultural use and is not enrolled under a Williamson Act contract. **(No Impact)**

-
- c) Would the project conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production?
-

The project site and surrounding vicinity do not contain any lands zoned as forest land, timberland, or timberland production. **(No Impact)**

-
- d) Would the project result in a loss of forest land or conversion of forest land to non-forest use?
-

The project site and surrounding vicinity do not contain any forest land. **(No Impact)**

-
- e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?
-

As previously discussed in checklist questions a) through d), the project site and surrounding vicinity do not contain any farmland or forest land. **(No Impact)**

4.3 Air Quality

The following discussion is based, in part, on an Air Quality Report prepared by Illingworth & Rodkin, Inc., dated December 2025. A copy of this report is included in Appendix A.

4.3.1 Environmental Setting

4.3.1.1 *Background Information*

Criteria Pollutants

Criteria air pollutants are pollutants that have established federal or State standards for outdoor concentrations to protect public health. Pursuant with the federal and State Clean Air Acts, the United States Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established and enforced the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS), respectively. The NAAQS and CAAQS address the following criteria air pollutants: ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), particulate matter with a diameter of 10 microns or less (PM₁₀), particulate matter with a diameter of 2.5 microns or less (PM_{2.5}), sulfur dioxide (SO₂), and lead. The CAAQS also includes visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride.

Toxic Air Contaminants

Toxic air contaminants (TACs) include airborne chemicals that are known to have short- and long-term adverse health effects. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, diesel fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway). Unlike criteria air pollutants, which have a regional impact, TACs are highly localized and regulated at the individual emissions source level.

DPM is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs. DPM is comprised of diesel exhaust which is a complex mixture of gases, vapors, and fine particles. Medium- and heavy-duty diesel trucks represent the bulk of DPM emissions from California highways. The majority of DPM is small enough to be inhaled into the lungs. Most inhaled particles are subsequently exhaled, but some deposit on the lung surface or are deposited in the deepest regions of the lungs (i.e., areas most susceptible to injury).¹¹ Chemicals in diesel exhaust, such as benzene and formaldehyde, are also TACs identified by the CARB.

An overview of the sources of criteria pollutants and TACs, as well as their associated health effects, is provided in Table 4.3-1.

¹¹ California Air Resources Board. "Overview: Diesel Exhaust and Health." Accessed August 6, 2025. <https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health>.

Table 4.3-1: Sources and Health Effects of Criteria Air Pollutants and Toxic Air Contaminants

Pollutants	Description and Sources	Primary Effects
Ozone (O ₃)	O ₃ is a secondary criteria air pollutant that is the result of a photochemical (sunlight) reaction between reactive organic gases (ROG) and nitrogen oxides (NO _x). Pollutants emitted by motor vehicles, power plants, industrial boilers, refineries, and chemical plants are the common sources for this reaction. High O ₃ levels are caused by the cumulative emissions of ROG and NO _x . These precursor or primary pollutants react under certain meteorological conditions to form high O ₃ levels. Common sources of ROG and NO _x are vehicles, industrial plants, and consumer products.	Aggravation of respiratory and cardiovascular diseases Irritation of eyes Cardiopulmonary function impairment
Nitrogen Dioxide (NO ₂)	NO ₂ is a reactive gas that combines with nitric oxide (NO) to form NO _x . NO ₂ is the byproduct of fuel combustion, with common sources of NO ₂ being emissions from cars, trucks, buses, power plants, and off-road equipment. Other sources of NO ₂ include high temperature stationary combustion and atmospheric reactions.	Aggravation of respiratory illness Reduced visibility
Carbon Monoxide (CO)	CO is a colorless, odorless, and toxic gas that is the product of incomplete combustion of carbon-containing substances (e.g., when something is burned). Common outdoor sources of CO include mobile vehicles (passenger cars and trucks) and machinery that burn fossil fuels.	Interferes with oxygen delivery to the body's organ due to binding with the hemoglobin in the blood Fatigue, headaches, confusion, and dizziness
Fine Particulate Matter (PM _{2.5}) and Coarse Particulate Matter (PM ₁₀)	Particulate Matter (PM) is any material that is emitted as liquid or solid particles or a gaseous material, such as dust, soot, aerosols, and fumes. PM ₁₀ and PM _{2.5} are both small enough particulates to be inhaled into the human lungs, and PM _{2.5} is small enough to deposit into the lungs, which poses an increased health risk compared to PM ₁₀ . Typical sources of PM include stationary combustion of solid fuels, construction activities, vehicles, industrial processes, and atmospheric chemical reactions.	Reduced lung function, especially in children Aggravation of respiratory and cardiorespiratory diseases Increased cough and chest discomfort Reduced visibility
Sulfur Dioxide (SO ₂)	SO ₂ is a pungent and colorless gaseous pollutant. SO ₂ is part of the sulfur oxides (SO _x) group and is the pollutant of greatest concern in the SO _x group. SO _x can react with other compounds in the atmosphere to form small particles. These particles contribute to pollution. SO ₂ is primarily formed from fossil fuel combustion at power plants and other industrial facilities. Sources of SO ₂ include motor vehicles, locomotives, ships, and off-road diesel equipment that are operated with fuels that contain high levels of sulfur. Industrial processes, such as natural gas and petroleum extraction, oil refining, and metal processing.	Aggravation of respiratory illness Respiratory irritation such as wheezing, shortness of breath and chest tightness Increased incidence of pulmonary symptoms and disease, decreased pulmonary function

Pollutants	Description and Sources	Primary Effects
Lead	Lead is a naturally occurring element that can be found in all parts of the environment including the air, soil, and water. As an air pollutant, lead is present in small particles. The most common historic source of lead exposure was the past use of leaded gasoline in motor vehicles. The exhaust resulting from use of leaded gasoline would release lead emissions into the air. Now, major sources of lead in the air are from ore and metals processing plants and piston-engine aircraft operating on leaded aviation fuel. Other sources are waste incinerators, utilities, and lead-acid battery manufacturers. The highest air concentrations of lead are usually found near lead smelters.	Adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems and the cardiovascular system
Toxic Air Contaminants (TACs)	TACs include certain air pollutants known to increase the risk of cancer and/or a range of other serious health effects. Sources of TACs include, but are not limited to, cars and trucks, especially diesel-fueled; industrial sources, such as chrome platers; dry cleaners and service stations; and building materials and products.	Cancer Chronic eye, lung, or skin irritation Neurological and reproductive disorders

Sensitive Receptors

Some groups of people are more affected by air pollution than others. CARB has identified the following groups who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools.

Worker Receptors

In addition to the sensitive receptors mentioned above, the Bay Area Air District (Air District) considers worker receptors when reviewing impacts from air pollution and TACs. Worker receptors are adults (16 years and older) that work indoors and/or outdoors at off-site locations zoned for commercial and industrial uses. Typical developments that include worker receptors are offices, retail shops, manufacturing uses, light industrial uses, or heavy industrial uses.¹²

¹² Bay Area Air Quality Management District. *California Environmental Quality Act Air Quality Guidelines Appendix E: Recommended Methods for Screening and Modeling Local Risks and Hazards*. Page E-14.

4.3.1.2 *Regulatory Framework*

Federal and State

Clean Air Act

At the federal level, the EPA is responsible for overseeing implementation of the Clean Air Act and its subsequent amendments. The federal Clean Air Act requires the EPA to set national ambient air quality standards for the six common criteria pollutants, discussed previously; PM, O₃, CO, SO₂, NO₂, and lead.¹³

CARB is the state agency that regulates mobile sources throughout the state and oversees implementation of the state air quality laws and regulations, including the California Clean Air Act. The EPA and the CARB have adopted ambient air quality standards establishing permissible levels of these pollutants to protect public health and the climate. Violations of ambient air quality standards are based on air pollutant monitoring data and are determined for each air pollutant. Attainment status for a pollutant means that a given air district meets the standard set by the EPA and/or CARB.

Diesel Risk Reduction Plan

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, this plan involves the application of emission control strategies to existing diesel vehicles and equipment to reduce DPM and other pollutants. Implementation of this plan, in conjunction with stringent federal and CARB-adopted emission limits for diesel fueled vehicles and equipment, including off-road equipment, will significantly reduce emissions of DPM and NO_x.

Regional

2017 Clean Air Plan

The Air District is the agency primarily responsible for assuring that the federal and state ambient air quality standards are maintained in the San Francisco Bay Area, which includes the project area. Regional air quality management districts, such as the Air District, must prepare air quality plans specifying how federal and state air quality standards will be met. The Air District's most recently adopted plan is the Bay Area 2017 Clean Air Plan. The 2017 Clean Air Plan focuses on the following two related Air District goals and how to achieve them:

- Protect air quality and health at the regional and local scale by attaining all state and national air quality standards and eliminating disparities among Bay Area communities in cancer health risk from TAC; and

¹³ NO_x is the group of nitrogen compounds (NO₂ and nitric oxide [NO]) that typically represents NO₂ emissions because NO₂ emissions contribute the majority of NO_x exhaust emissions emitted from fuel combustion.

- Protect the climate by reducing Bay Area greenhouse gas (GHG) emissions 40 percent below 1990 levels by 2040 and 80 percent below 1990 levels by 2050.¹⁴

CEQA Air Quality Guidelines

The Air District CEQA Air Quality Guidelines are intended to serve as a guide for those who prepare or evaluate air quality impact analyses for projects and plans in the San Francisco Bay Area. Jurisdictions in the San Francisco Bay Area Air Basin utilize the thresholds and methodology for assessing air quality impacts developed by the Air District within their CEQA Air Quality Guidelines. The guidelines include information on legal requirements, Air District rules, methods of analyzing impacts, and recommended mitigation measures. The latest CEQA Air Quality Guidelines are the 2022 CEQA Air Quality Guidelines adopted on April 20, 2023 by the Air District's Board of Directors.

Community Air Risk Evaluation Program

Under the Community Air Risk Evaluation (CARE) program, the Air District has identified areas with high TAC emissions, and sensitive populations that could be adversely affected by them. Air District uses this information to establish policies and programs to reduce TAC emissions and exposures. Impacted communities identified to date are located in Concord, Richmond/San Pablo, San José, eastern San Francisco, western Alameda County, Vallejo, San Rafael, and Pittsburg/Antioch. The main objectives of the program are to:

- Evaluate health risks associated with exposure to TACs from stationary and mobile sources;
- Assess potential exposures to sensitive receptors and identify impacted communities;
- Prioritize TAC reduction measures for significant sources in impacted communities; and
- Develop and implement mitigation measures to improve air quality in impacted communities.

Local

City of Antioch General Plan

The City of Antioch General Plan (General Plan) contains the following policies relevant to air quality.

Policy	Description
10.6.2-a	Require development projects to minimize the generation of particulate emissions during construction through implementation of the dust abatement actions outlined in the CEQA Handbook of the Bay Area Air Quality Management District.

¹⁴ Bay Area Air Quality Management District. *Final 2017 Clean Air Plan*. April 19, 2017. Page 12.

4.3.1.3 *Existing Conditions*

The San Francisco Bay Area (Bay Area) Air Basin is designated a nonattainment area for the federal O₃ and PM_{2.5} standards and for the state O₃, PM₁₀, and PM_{2.5} standards.^{15,16} The Bay Area is designated as an attainment area for both the NAAQS and CAAQS for CO, SO₂, and NO₂. The Air District is responsible for attaining the NAAQS and CAAQS for these pollutants within the Bay Area. As part of an effort to attain and maintain ambient air quality standards for O₃, PM₁₀, and PM_{2.5}, the Air District has established thresholds of significance for these air pollutants and their precursors that apply to both construction period and operational period impacts. Controlling the emissions of these precursor pollutants is the focus of the Air District attempts to reduce O₃ levels. The highest O₃ levels in the Bay Area occur in the eastern and southern inland valleys where temperatures are higher, there is less wind circulation, and sources of the precursor pollutants (i.e., ROG and NO_x) are prominent. In the Bay Area, most particulate matter is generated from the following activities: combustion, factories, construction, grading, demolition, agriculture, and motor vehicles. Elevated concentrations of PM₁₀ and PM_{2.5} are the result of both region-wide emissions and localized emissions.

Existing sources of air pollutants within the project vicinity include vehicle traffic along L Street and other local roadways and trains running along the UPRR line crossing over L Street. UPRR primarily uses diesel-electric locomotives, however, testing on hybrid electric-battery locomotives began in 2024 as part of UPRR's ongoing efforts of reducing GHG emissions.¹⁷ Additionally, there are two permitted stationary sources of air pollution within 1,000 feet of the project corridor. One is a diesel-powered emergency generator, and the other is a gasoline station, both of which are located east of L Street.

Sensitive receptors in the project area include residences, Antioch High School, and the Contra Costa County Fairgrounds, which is considered a park for the purposes of this air quality analysis. Sensitive receptors in the project area are shown in Figure 4.3-1.

¹⁵ Bay Area Air Quality Management District. "Air Quality Standards and Attainment Status." Last Updated January 5, 2017. Accessed August 6, 2025.

¹⁶ The area has attained both state and federal ambient air quality standards for CO. The project does not include substantial new emissions of SO₂ or lead. These criteria pollutants are not discussed further.

¹⁷ UPRR. "Union Pacific Testing First-of-its-Kind Hybrid Locomotive". Accessed July 31, 2025.
<https://www.up.com/news/service/ztr-hybrid-locomotives-it-240429>



4.3.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Note: Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the determinations.

4.3.2.1 Thresholds of Significance

As discussed in CEQA Guidelines Section 15064(b), the determination of whether a project may have a significant effect on the environment calls for judgment on the part of the lead agency and must be based to the extent possible on scientific and factual data. The City of Antioch has considered the air quality thresholds updated by the Air District in April 2023 and regards these thresholds to be based on the best information available for the San Francisco Bay Area Air Basin and conservative in terms of the assessment of health effects associated with TACs and PM_{2.5}. The Air District CEQA Air Quality thresholds for criteria air pollutants and fugitive dust used in this analysis are identified in Table 4.3-2.

Table 4.3-2: Bay Area Air District Air Quality Significance Thresholds

Criteria Air Pollutant	Construction Thresholds*	Operation Thresholds	Operation Thresholds
	Average Daily Emissions (pounds/day)	Average Daily Emissions (pounds/day)	Annual Average Emissions (tons/year)
ROG and NO _x	54	54	10
PM ₁₀	82 (exhaust)	82	15
PM _{2.5}	54 (exhaust)	54	10
CO	Not Applicable	9.0 ppm (eight-hour) or 20.0 ppm (one-hour)	

Criteria Air Pollutant	Construction Thresholds*	Operation Thresholds	Operation Thresholds
	Average Daily Emissions (pounds/day)	Average Daily Emissions (pounds/day)	Annual Average Emissions (tons/year)
Fugitive Dust	Dust Control Measures/Best Management Practices	Not Applicable	

Notes: ROG = reactive organic gases; NO_x = oxides of nitrogen; PM₁₀ = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; PM_{2.5} = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; CO = carbon monoxide

* The Air District recommends for construction projects that require less than one year to complete, lead agencies should annualize impacts over the scope of actual days that peak impacts would occur rather than over the full year. Additionally, for phased projects that results in concurrent construction and operational emissions. Construction-related exhaust emissions should be combined with operational emissions for all phases where construction and operations overlap.

Source: Bay Area Air District. *2022 California Environmental Quality Act Air Quality Guidelines*. April 2023. Pages 3-5 and 3-6.

- a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Site preparation and construction would involve cut-and-fill activities, grading, removing or improving the existing roadway, and paving roadway surfaces. During construction, short-term degradation of air quality is expected from the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other activities related to construction. Emissions from construction equipment and on-road vehicles powered by gasoline and diesel engines are also anticipated and would include CO, NO_x, ROG, directly emitted PM₁₀ and PM_{2.5}, and toxic air contaminants (TACs) such as diesel exhaust particulate matter. Construction activities in the area may temporarily increase traffic congestion and slow the speed of traffic, resulting in a temporary increase in on-road emissions. These emissions would be limited to the immediate area impacted by construction-related traffic.

Construction emissions were estimated using the latest version of the California Emissions Estimator Model (CalEEMod) which uses emission factors from EMFAC2021. The project's estimated uncontrolled construction-related emissions are summarized in Table 4.3-3 and compared with the Air District's construction thresholds of significance. The emissions are shown per project phase in pounds per day (lbs./day) and in total tons for the entire construction period. The CO₂ equivalent (CO₂e) emissions are represented in metric tons (MT) per phase.

Table 4.3-3: Uncontrolled Construction Emissions

Phase/Activity	ROG (lbs/day)	CO (lbs/day)	NO _x (lbs/day)	PM ₁₀ (lbs/day)	PM _{2.5} (lbs/day)	CO ₂ e (MT/phase)
Grubbing and Land Clearing	1.00	10.87	8.13	0.87	0.39	98
Grading and Excavation	1.01	11.23	8.35	0.88	0.38	407
Drainage, Utilities, and Sub-Grade	0.97	11.41	8.10	0.85	0.36	358
Paving	1.08	12.71	9.00	0.94	0.40	124
Average Workday Emissions* (lbs/day)	2.15	24.75	17.80	1.87	0.81	658
Air District Construction Thresholds (lbs/day)	54	n/a	54	82	54	n/a
Exceeds Threshold?	No	--	No	No	No	--
Total Construction (tons or MT)	0.43 tons	4.90 tons	3.52 tons	0.37 tons	0.16 tons	987 MT

*Based on 369 workdays

As shown in Table 4.3-3, the project's uncontrolled average workday emissions would not exceed the Air District's construction thresholds of significance for criteria air pollutant emissions. Additionally, as described below in Standard Conditions of Approval AIR-1, the project would include standard control measures that would further reduce air pollutant emissions. Therefore, project construction would not conflict with or obstruct implementation of the Clean Air Plan.

Standard Conditions of Approval

AIR-1: The project would be required to comply with the Caltrans' Standard Specifications in Section 14.9 Air Quality (2023). These specifications require implementation of BMPs required by the Air District. BMPs identified in the RTP Plan Bay Area 2050¹⁸ include the following:

- The applicant/general contractor for the project shall submit a list of all off-road equipment greater than 25 horsepower (hp) that would be operated for more than 20 hours over the entire duration of project construction, including equipment from subcontractors to the relevant air district (e.g., the Air District) for review and certification. The list shall include all information necessary to ensure the equipment meets the following requirements:
 - Equipment shall be zero emissions or have engines that meet or exceed either EPA or CARB Tier 4 off-road emission standards, or it shall have engines that are retrofitted with a CARB Level 3 Verified Diesel Emissions Control Strategy (VDECS), if one is available for the equipment being used. Equipment with engines that meet Tier 4 Interim or Tier 4 Final

¹⁸ Mitigation Measure AQ-2 in the Final EIR

emission standards automatically meet this requirement; therefore, a VDECS would not be required.

- o Idling time of diesel-powered construction equipment and trucks shall be limited to no more than two minutes. Clear signage of this idling restriction shall be provided for construction workers at all access points.
- o All construction equipment shall be maintained and properly tuned in accordance with the manufacturers' specifications.
- Portable diesel generators shall be prohibited. Grid power electricity should be used to provide power at construction sites; or propane and natural gas generators may be used when grid power electricity is not feasible.

Project Operation

Air pollutant emissions associated with the roadways in the project area were estimated for existing/baseline conditions (2020) to the forecasted conditions for No-Build and Build alternatives for the project's opening year (2030) and design year (2050). The emissions for each scenario were calculated based on VMT data provided by the project's traffic consultant, Kittelson & Associates, using the Caltrans Emission Factors (CT-EMFAC2021) program. The results are summarized in Table 4.3-4. Operation of the project would not involve other permanent sources of air pollutants, such as permitted stationary sources (e.g., diesel-powered emergency generators).

Table 4.3-4: Summary of Comparative Emissions Analysis

Scenario/ Analysis Year	CO (lbs/day)	PM_{2.5} (lbs/day)	PM₁₀ (lbs/day)	ROG (lbs/day)	NO_x (lbs/day)
Baseline (Existing Conditions) 2020	4,673	505	3,245	253	581
No-Build Alternative 2030	2,736	545	3,527	172	224
Build Alternative 2030	2,753	545	3,527	171	224
No-Build Alternative 2050	2,712	674	4,373	166	162
Build Alternative 2050	2,712	674	4,372	166	162
Air District Operation Thresholds (lbs/day)	9.0 ppm (8-hour) or 20.0 ppm (1-hour)	54	82	54	54
Change from No-Build Alternative to Build Alternative	17 (2030) 0 (2050)	0 (2030) 0 (2050)	0 (2030) 1 (2050)	1 (2030) 0 (2050)	0 (2030) 0 (2050)
Exceeds Threshold?	No	No	No	No	No

ROG, NO_x, and CO emissions will decrease in the future as older vehicles are replaced by newer vehicles with more stringent emissions and fuel economy standards. PM₁₀ and PM_{2.5} emissions will increase in the future as a function of increases in fugitive emissions sources (i.e., road dust, break wear, tire wear), which is driven by increases in VMT. When compared to the No-Build Alternative, the Build Alternative would result in approximately the same emissions (i.e., less than 0.01 percent

change in 2030 and less than a 0.02 percent change in 2050). This is because the project and No Build Alternative yield approximately the same VMT.

Project-Level Conformity

The project is in an attainment area for CO and a non-attainment area for PM_{2.5}. Thus, a project-level conformity analysis applies to the project for PM_{2.5} under 40 CFR 93.109. Hot-spot analysis for PM_{2.5} is only required for projects found to meet the definition of a project of air quality concern (POAQC) by the Metropolitan Transportation Commission's (MTC) Air Quality Conformity Task Force (AQCTF). The project was found not to be a POAQC by MTC's AQCTF on June 26, 2025. Therefore, a PM_{2.5} hot-spot analysis is not required. Therefore, the project would have a less than significant impact on the cumulative increase in criteria pollutants for which the Air Basin is in non-attainment. **(Less than Significant Impact)**

-
- b) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?
-

Per the Air District's CEQA Air Quality Guidelines, air pollution by its nature is largely a cumulative impact. No single project is sufficient in size, by itself, to result in non-attainment of ambient air quality standards. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. As discussed above, the proposed project would not, by itself, result in any air pollutant emissions exceeding the Air District's significance thresholds. The number of vehicle trips in the area will not significantly change with implementation of the project. As a result, the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the region is non-attainment. **(Less than Significant Impact)**

-
- c) Would the project expose sensitive receptors to substantial pollutant concentrations?
-

Dust Generation

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM₁₀ and PM_{2.5}. Sources of fugitive dust would include disturbed soil at the construction site and trucks carrying uncovered loads of soil. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The Air District CEQA Air Quality Guidelines consider these impacts to be less than significant if best management practices (BMPs) are implemented to reduce these emissions. These BMPs shall be implemented during all demolition, grading, and construction activities to reduce construction-related particulate emissions.

Standard Conditions of Approval:

AIR-2: The project would be required to comply with the Caltrans' Standard Specifications in Section 14.9 Air Quality (2023). These specifications require implementation of BMPs required by the Air District. The Air District's recommended BMPs for dust control include the following:

- Exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day or covered.
- Haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- Visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- Vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- Roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Chapter 13, Section 2485 of California Code of Regulations [CCR]). Clear signage explaining this rule shall be provided for construction workers at all access points.
- Construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. Equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- A publicly visible sign shall be posted with the telephone number and name of an individual working for the construction contractor who can be contacted regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Implementation of Standard Conditions of Approval AIR-2 would ensure that the project's fugitive dust impacts are less than significant.

Project Community Health Risks

In a 2018 decision (*Sierra Club v. County of Fresno*), the state Supreme Court determined CEQA requires that when a project's criteria air pollutant emissions would exceed applicable thresholds and contribute a cumulatively considerable contribution to a significant cumulative regional criteria pollutant impact, the potential for the project's emissions to affect human health in the air basin must be disclosed. State and federal ambient air quality standards are health-based standards, and exceedances of those standards result in continued unhealthy levels of air pollutants. As stated in the 2022 Air District CEQA Air Quality Guidelines, air pollution by its nature is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. In developing thresholds of significance for air pollutants, the Air District considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project has a less than significant impact for criteria pollutants, it is assumed to have no adverse health effect. As discussed under checklist question a), the project would have a less than significant impact for criteria pollutants and would implement Standard Conditions of Approval. The project, therefore, would also result in no adverse health effect. .

Implementation of the Standard Conditions of Approval AIR-1 and AIR-2 would further reduce emissions generated during project construction and thus would further reduce the potential health risk impact on nearby sensitive receptors. For these reasons, the project would not expose sensitive receptors to substantial pollutant concentrations **(Less than Significant Impact)**

-
- d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?
-

The project would not include any odor causing operations, and any odors emitted by diesel equipment during construction would be temporary and localized. **(Less than Significant Impact)**

4.4 Biological Resources

4.4.1 Environmental Setting

4.4.1.1 *Regulatory Framework*

Federal and State

Endangered Species Act

Individual plant and animal species listed as rare, threatened, or endangered under state and federal Endangered Species Acts are considered special-status species. Federal and state endangered species legislation has provided the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) with a mechanism for conserving and protecting plant and animal species of limited distribution and/or low or declining populations. Permits may be required from both the USFWS and CDFW if activities associated with a proposed project would result in the take of a species listed as threatened or endangered. To “take” a listed species, as defined by the State of California, is “to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill” these species. Take is more broadly defined by the federal Endangered Species Act to include harm of a listed species.

In addition to species listed under state and federal Endangered Species Acts, Sections 15380(b) and (c) of the CEQA Guidelines provide that all potential rare or sensitive species, or habitats capable of supporting rare species, must be considered as part of the environmental review process. These may include plant species listed by the California Native Plant Society and CDFW-listed Species of Special Concern.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) prohibits killing, capture, possession, or trade of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. Hunting and poaching are also prohibited. This includes direct and indirect acts, except for harassment and habitat modification, which are not included unless they result in direct loss of birds, nests, or eggs. The CDFW also protects migratory and nesting birds under California Fish and Game Code Sections 3503, 3503.5, and 3800. The CDFW defines taking as causing abandonment and/or loss of reproductive efforts through disturbance.

Sensitive Habitat Regulations

Wetland and riparian habitats are considered sensitive habitats under CEQA. They are also afforded protection under applicable federal, state, and local regulations, and are generally subject to regulation by the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), CDFW, and/or the USFWS under provisions of the federal Clean Water Act (e.g., Sections 303, 304, 404) and State of California Porter-Cologne Water Quality Control Act.

Fish and Game Code Section 1602

Streambeds and banks, as well as associated riparian habitat, are regulated by the CDFW per Section 1602 of the Fish and Game Code. Work within the bed or banks of a stream or the adjacent riparian habitat requires a Streambed Alteration Agreement from the CDFW.

4.4.1.2 *Existing Conditions*

The project is located within an urban area of the City of Antioch. The project site primarily consists of paved roadway surfaces, dirt and gravel roadway shoulders, and dirt and grassy areas along the Contra Costa County Fairgrounds property and along L Street south of W. 18th Street. Vegetation along the project corridor is sparse, with the exception of trees lining the fairgrounds property, limited numbers of street trees, and landscaping on private property.

There are no waterways or wetlands within or adjacent to the project corridor.¹⁹ The nearest wetland is located approximately 0.25 miles northwest of the intersection of L Street and W. 9th Street and is separated from the project corridor by residential development and O Street.

4.4.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or United States Fish and Wildlife Service (USFWS)?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS?	☐	☐	☐	☒
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒

¹⁹ USFWS. National Wetlands Inventory. Accessed July 30, 2025. <https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/>

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

-
- a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?
-

There are no known candidate, sensitive, or special-status species present within or adjacent to the project corridor. The project corridor consists largely of paved surfaces within an urban area and does not provide suitable habitat for special-status plant or wildlife species.

The mature trees along the project corridor could provide nesting habitat for birds, including migratory birds and raptors. Nesting birds are among the species protected under provisions of the Migratory Bird Treaty Act and California Fish and Game Code Sections 3503, 3503.5, and 2800.

The project will remove approximately 91 existing trees. Tree removal and other construction activities during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes abandonment and/or loss of reproductive effort is considered a taking by the CDFW. Any loss of fertile eggs, nesting raptors, or any activities resulting in nest abandonment would constitute an impact. Construction activities such as tree removal and site grading that disturb a nesting bird or raptor on-site or immediately adjacent to the construction zone would also constitute an impact.

Impact BIO-1: Construction and demolition activities, including the removal of trees, could impact migratory nesting birds. **(Significant Impact)**

Mitigation Measures: The project will be required to implement the following measures to reduce impacts to nesting birds to a less than significant level.

MM BIO-1.1: Project activities shall be scheduled to avoid the nesting bird season. For project planning purposes, the nesting bird season in the San Francisco Bay Area for birds protected under the Migratory Bird Treaty Act (MBTA) is often identified by regulatory agencies as February 1 through August 31.

If seasonal avoidance is not possible, within three days prior to the start of work, a nesting bird survey shall be performed by a qualified biologist on the project site and within a zone of influence (i.e., 100 feet for non-raptor migratory birds and 300 feet for raptors). All nest avoidance requirements of the MBTA and California Fish and Game Code (CFGF) shall be observed (e.g., establishing appropriate protection buffers around active nests until young have fledged). A qualified biologist shall resurvey the project site if a halt in project activities of three days or more occurs. All nests identified during pre-construction surveys shall be determined “inactive” by a qualified biologist prior to removal.

If seasonal avoidance is not possible and nesting birds are present, a qualified biologist shall establish temporary buffers around the nest. Project activities shall not occur within the buffer areas until the nest has fledged or has otherwise become inactive. The qualified biologist shall monitor all identified nesting birds within the survey area long enough to determine whether project activities will result in observable signs of disturbance. Buffers may need to be adjusted to a greater distance if needed to ensure disturbance does not occur as a result of project-related activities. Conversely, buffer size may be decreased in consultation with California Department of Fish and Wildlife (CDFW) if project-related activities do not result in disturbance.

Conformance to State and Federal law protecting nesting birds through implementation of MM BIO-1.1 would reduce potential impacts to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

-
- b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS?
-

There is no riparian habitat or other sensitive natural communities within or adjacent to the project corridor. **(No Impact)**

-
- c) Would the project have a substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means?
-

There are no wetlands within or adjacent to the project corridor. The nearest wetland is located approximately 0.25 miles from the project limits and is separated from the project corridor by

developed urban land. At this distance, the project would not have any direct or indirect impacts on the wetland. **(No Impact)**

- d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
-

The project corridor primarily consists of paved surfaces within an urban area. The project corridor does not serve as a direct connection of any natural habitats. The project would remove approximately 91 existing trees, which could affect migratory nesting birds if removed during the breeding season. As discussed under Checklist Question a), impacts to migratory nesting birds would be reduced to a less than significant level with incorporation of MM BIO-1.1. **(Less than Significant Impact with Mitigation Incorporated)**

- e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
-

The project would remove approximately 91 existing trees. In accordance with Article 12 of the City Code of Ordinances, each established tree removed would be replaced with two 24-inch box trees and each mature tree removed would be replaced with two 48-inch box trees. The project would plant a total of approximately 182 replacement trees, or pay an in lieu fee, in compliance with Article 12 of the City Code of Ordinances. **(Less than Significant Impact)**

- f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?
-

The project site is not located within a Habitat Conservation Plan or Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. **(No Impact)**

4.5 Cultural Resources

The following discussion is based upon an Archaeological Survey Report (ASR) prepared by Archaeological/Historical Consultants in March 2026. A copy of the ASR, which is a confidential report, is on file at the City of Antioch Public Works Department and is available upon request with appropriate credentials.

4.5.1 Environmental Setting

4.5.1.1 *Regulatory Framework*

Federal and State

National Historic Preservation Act

Federal protection is legislated by the National Historic Preservation Act of 1966 (NHPA) and the Archaeological Resource Protection Act of 1979. These laws maintain processes for determination of the effects on historical properties eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the NHPA and related regulations (36 Code of Federal Regulations [CFR] Part 800) constitute the primary federal regulatory framework guiding cultural resources investigations and require consideration of effects on properties that are listed or eligible for listing in the NRHP. Impacts to properties listed in the NRHP must be evaluated under CEQA.

Code of Federal Regulations Title 36, Part 800.5(a)

CFR Title 36, Part 800.5(a) describes procedures for evaluating a project's adverse effects on cultural resources for federal undertakings. An adverse effect is found when a federal undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Examples of adverse effects are provided in CFR Title 36, Part 800.5(a)(2) and include, but are not limited to, the following:

- Physical destruction of or damage to all or part of the property;
- Alteration of a property—including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access—that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR Part 68) and applicable guidelines;
- Removal of the property from its historic location;
- Change of the character of the property's use, or of physical features within the property's setting, that contribute to its historic significance;
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features;

- Neglect of a property that causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to a Native American tribe or native Hawaiian organization; and
- Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

California Register of Historical Resources

The California Register of Historical Resources (CRHR) is administered by the State Office of Historic Preservation and encourages protection of resources of architectural, historical, archeological, and cultural significance. The CRHR identifies historic resources for state and local planning purposes and affords protections under CEQA. Under Public Resources Code Section 5024.1(c), a resource may be eligible for listing in the CRHR if it meets any of the NRHP criteria.²⁰

Historical resources eligible for listing in the CRHR must meet the significance criteria described previously and retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if it maintains the potential to yield significant scientific or historical information or specific data.

The concept of integrity is essential to identifying the important physical characteristics of historical resources and, therefore, in evaluating adverse changes to them. Integrity is defined as “the authenticity of a historical resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance.” The processes of determining integrity are similar for both the CRHR and NRHP and use the same seven variables or aspects to define integrity that are used to evaluate a resource’s eligibility for listing. These seven characteristics include 1) location, 2) design, 3) setting, 4) materials, 5) workmanship, 6) feeling, and 7) association.

California Native American Historical, Cultural, and Sacred Sites Act

The California Native American Historical, Cultural, and Sacred Sites Act applies to both state and private lands. The act requires that upon discovery of human remains, construction or excavation activity must cease and the county coroner be notified.

Local

City of Antioch General Plan

The General Plan includes the following policies relevant to cultural resources.

²⁰ California Office of Historic Preservation. “CEQA Guidelines Section 15064.5(a)(3) and California Office of Historic Preservation Technical Assistance Series #6.” Accessed August 7, 2025.
<https://ohp.parks.ca.gov/pages/1069/files/technical%20assistance%20bulletin%206%202011%20update.pdf>.

Policy	Description
10.9.2-a	Require new development to analyze, and therefore avoid or mitigate impacts to archaeological, paleontological, and historic resources. Require surveys for projects having the potential to impact archaeological, paleontological, and historic resources. If significant resources are found to be present, provide mitigation in accordance with applicable CEQA Guidelines and provisions of the California Public Resources Code.
10.9.2-b	If avoidance and/or preservation in the location of any potentially significant cultural resource is not possible, the following measures shall be initiated for each impacted site: ○ A participant-observer from the appropriate Indian Band or Tribe shall be used during archaeological testing or excavation in the project site. ○ Prior to the issuance of a grading permit for the project, the project proponent shall develop a test-level research design detailing how the cultural resource investigation shall be executed and providing specific research questions that shall be addressed through the excavation program. In particular, the testing program shall characterize the site constituents, horizontal and vertical extent, and, if possible, period of use. The testing program shall also address the California Register and National Register eligibility of the cultural resource and make recommendations as to the suitability of the resource for listing on either Register. The research design shall be submitted to the City of Antioch for review and comment. For sites determined, through the Testing Program, to be ineligible for listing on either the California or National Register, execution of the Testing Program will suffice as mitigation of project impacts to this resource. ○ After approval of the research design and prior to the issuance of a grading permit, the project proponent shall complete the excavation program as specified in the research design. The results of this excavation program shall be presented in a technical report that follows the City's outline for Archaeological Testing. The Test Level Report shall be submitted to the City for review and comment. If cultural resources that would be affected by the project are found ineligible for listing on the California or National Register, test-level investigations will have depleted the scientific value of the sites and the project can proceed. ○ If the resource is identified as being potentially eligible for either the California or National Register, and project designs cannot be altered to avoid impacting the site, a Treatment Program to mitigate project effects shall be initiated. A Treatment Plan detailing the objectives of the Treatment Program shall be developed. The Treatment Plan shall contain specific, testable hypotheses relative to the sites under study and shall attempt to address the potential of the sites to address these research questions. The Treatment Plan shall be submitted to the City for review and comment. ○ After approval of the Treatment Plan, the Treatment Program for affected, eligible sites shall be initiated. Typically, a Treatment Program involves excavation of a statistically representative sample of the site to preserve those resource values that qualify the site as being eligible for the California or National Register. At the conclusion of the excavation or research program, a Treatment Report shall be developed. This data recovery report shall be submitted to the City for review and comment.
10.9.2-d	As a standard condition of approval for new development projects, require that if unanticipated cultural or paleontological resources are encountered during grading, alteration of earth materials in the vicinity of the find be halted until a qualified expert has evaluated the find and recorded identified cultural resources.

4.5.1.2 Existing Conditions

The public ROW on L Street between 9th Street and Sycamore Drive and the entirety of the parcels that will be affected by the project (1101 W. 10th Street and the Contra Costa County Fairgrounds) were reviewed for the presence of cultural resources. A record search for previously recorded cultural resources located on the project site and within a half-mile radius was completed.

Although no resources have been previously recorded within the current L Street ROW, one built environment resource, the Contra Costa County Fairgrounds, is located within a portion of the project footprint. There are two historic-era archaeological resources and 26 historic structures within a half-mile radius of the project site.

The Contra Costa County Fairgrounds is identified as a landmark in the General Plan.²¹ While the dirt racetrack at the Contra Costa County Fairgrounds is over 50 years old, the resource does not qualify for the NRHP or CRHR.²² Antioch High School is also identified as a landmark in the General Plan but is not listed on the NRHP or the CRHP.²³

Archaeological Sensitivity

The project itself occurs along a roadway and does not contain any historic structures. The project area is generally flat in topography. The soils underlying the site are alluvial deposits from the late Pleistocene and Holocene eras. In early historic times, the nearest seasonal freshwater was West Antioch Creek, approximately 0.2 miles from the southern project limits, and the nearest permanent source of freshwater was Kirker Creek, approximately 1.2 miles west of the project limits. Considering these factors, the site was determined to have moderate sensitivity for surface archaeological resources and a low sensitivity for buried archaeological resources.

L Street south of 10th Street is first visible on the 1908 USGS topographic map as Oil Canyon Road and was an unmaintained road until the increased traffic from the fairground, new residential neighborhoods, and upcoming opening of Antioch High School in the 1940s to 1950s necessitated improvements. The property at 1101 W. 10th Street was first a gas and service station built sometime in the early- to mid-1950s. The property has been primarily used as a car lot and auto repair business since the mid-1960s. The age of this property and the activities associated with the businesses are unlikely to have generated historic-era artifacts on-site. Given the historic use of L Street as a roadway, it is unlikely that historic-era artifact deposits are present within the current public roadway. Therefore, the project site is considered to have low sensitivity for buried historic-era archaeological sites.

²¹ City of Antioch. *General Plan*. November 24, 2003. Page 5-6.

²² Archaeological/Historical Consultants. *Archaeological Survey Report L Street Pathway To Transit Phase II*. July 8, 2025.

²³ California State Parks. *California Historical Resources*. Accessed August 7, 2025.
<https://ohp.parks.ca.gov/ListedResources/?view=county&criteria=7>.

Native American Correspondence

The Native American Heritage Commission (NAHC) was contacted for a Sacred Lands File search for the project area on January 30, 2025, and was found to be negative. The NAHC provided a contact list of 34 individuals representing 15 Native American tribal organizations to contact for more information. Consultation letters were sent on September 10, 2025 and follow-up emails were sent and phone calls were made on October 1, 2025. The following responses were received:

- The Buena Vista Rancheria of Me-Wuk Indians acknowledged receipt of the letter and declined consultation.
- The Chicken Ranch Rancheria of Me-Wuk Indians stated that they have no comments, questions, or concerns about the project.
- The Confederated Villages of Lisjan Nation requested copies of the record search results, Sacred Lands File search results, and the ASR. The requested files were provided in February 2026.
- The Muwekma Ohlone Tribe of the SF Bay Area requested a consultation meeting, which took place on October 30, 2025. During the consultation meeting, the Tribe voiced concerns about potentially sensitive areas and requested a copy of the ASR. The ASR was provided in February 2026.
- The Northern Valley Yokut/Ohlone Tribe recommended tribal monitoring for the project. A consultation meeting was offered but not scheduled. Caltrans consultation with the Tribe is ongoing to satisfy Section 106 requirements for NEPA compliance.
- The Wilton Rancheria Department of Cultural Preservation requested a consultation meeting, which took place on October 16, 2025. The Tribe asked for specific information regarding construction methods and the archaeological sensitivity assessment and expressed concerns due to the proximity of the San Francisco Bay. The Tribe requested a copy of the ASR, which was provided in February 2026.

4.5.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource as pursuant to CEQA Guidelines Section 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

-
- a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?
-

As discussed in Section 4.5.1.2, the project area does not contain any structures listed on the NRHP or CRHR. While the project is adjacent to the Contra Costa County Fairgrounds, a City visual landmark, and would acquire part of the property, the project would not substantially alter the characteristics or function of the fairgrounds property. The project would not make any changes to the Antioch High School campus, also a City visual landmark. Therefore, the project would not cause a substantial adverse change in the significance of a historical resource. **(Less than Significant Impact)**

-
- b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?
-

The project area has moderate sensitivity for surface archaeological sites and has low sensitivity for buried prehistoric and historic-era archaeological resources. The project area is mostly paved and is surrounded by development. However, the possibility remains that construction activities that involve excavation and other earthmoving activities could encounter unknown archaeological resources. Consistent with General Plan Cultural Policies 10.9.2-a and 10.9.2-d, the project would implement the following mitigation measure to reduce potential impacts to unknown archaeological resources that could exist on-site.

Impact CUL-1: Project construction activities could disturb previously undiscovered buried archaeological resources. **(Significant Impact)**

Mitigation Measures: The project will be required to implement the following measures in the event of an inadvertent discovery to reduce potential impacts to buried archaeological resources to a less than significant level.

MM CUL-1.1: In the event any significant cultural materials are encountered during construction grading or excavation, construction within a radius of 50 feet of the find would be halted, the Director of Public Works shall be notified, and a qualified archaeologist shall examine the find and make appropriate recommendations regarding the significance of the find and the appropriate treatment of the resource. Recommendations could include collection, recordation and analysis of any significant cultural materials. A report of findings documenting any data recovered during monitoring shall be submitted to the Director of Public Works.

With implementation of mitigation measure MM CUL-1.1, the project would result in less than significant impacts to unknown archaeological resources by halting work and implementing

measures to protect and preserve the cultural resources. **(Less than Significant Impact with Mitigation Incorporated)**

- c) Would the project disturb any human remains, including those interred outside of dedicated cemeteries?
-

The project is located in a developed area with substantial prior ground disturbance. Construction activities that involve excavation and other earthmoving activities, however unlikely, have the potential to disturb human remains.

Impact CUL-2: Project construction activities could disturb previously undiscovered buried human remains. **(Significant Impact)**

Mitigation Measures: The project will be required to implement the following measures in the event of an inadvertent discovery of buried human remains to reduce potential impacts to a less than significant level.

MM CUL-2.1: Pursuant to Section 7050.5 of the Health and Safety Code, and Section 5097.94 of the Public Resources Code of the State of California, in the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site within a 50-foot radius. The Contra Costa County Coroner shall be notified and shall make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to their authority, they shall notify the Native American Heritage Commission (NAHC) who shall attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this state law, then the landowner shall reinter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance. If the Director of Public Works finds that the archaeological find is not a significant resource, work would resume only after the submittal of a preliminary archaeological report and after provisions for reburial and ongoing monitoring are accepted.

With implementation of mitigation measure MM CUL-2.1, the project would have a less than significant impact on human remains if encountered by halting work within a 50-foot radius, notifying the Contra Costa County Coroner and NAHC as applicable, and reintering the remains respectfully and appropriately. **(Less than Significant Impact with Mitigation Incorporated)**

4.6 Energy

4.6.1 Environmental Setting

4.6.1.1 *Regulatory Framework*

Federal and State

Energy Star and Fuel Efficiency

At the federal level, energy standards set by the EPA apply to numerous consumer products and appliances (e.g., the EnergyStar™ program). The EPA also sets fuel efficiency standards for automobiles and other modes of transportation.

Renewables Portfolio Standard Program

In 2002, California established its Renewables Portfolio Standard Program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent of retail sales by 2010. Governor Schwarzenegger issued Executive Order (EO) S-3-05, requiring statewide emissions reductions to 80 percent below 1990 levels by 2050. In 2008, EO S-14-08 was signed into law, requiring retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. In October 2015, Governor Brown signed SB 350 to codify California's climate and clean energy goals. A key provision of SB 350 requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from renewable sources by 2030. SB 100, passed in 2018, requires 100 percent of electricity in California to be provided by 100 percent renewable and carbon-free sources by 2045.

Executive Order B-55-18 and Assembly Bill 1279

Executive Order B-55-18 was issued in September 2018. It ordered a new statewide goal of achieving carbon neutrality no later than 2045 and to maintain net negative emissions thereafter.

Assembly Bill 1279, also known as the California Climate Crisis Act, was approved on September 16, 2022, and codifies the statewide goal set by Executive Order B-55-18 of achieving net zero GHG emissions no later than the year 2045 and maintaining net negative emissions thereafter. In addition, this bill has a statewide goal of reducing anthropogenic GHG emissions by 85 percent below the 1990 levels by the year 2045. The bill requires CARB to work with relevant state agencies to ensure that updates to the scoping plan, identify and recommend measures to achieve these policy goals, and implement strategies that enable CO₂ removal solutions and carbon capture, utilization, and storage technologies in California. The bill requires CARB to submit an annual report.

Advanced Clean Cars Program

CARB adopted the Advanced Clean Cars II program in 2022 in coordination with the EPA and National Highway Traffic Safety Administration. The program combines the control of smog-causing

pollutants and GHG emissions into a single coordinated set of requirements for vehicle model years 2026 through 2035. The program promotes development of environmentally superior passenger cars and other vehicles, as well as saving the consumer money through fuel savings.²⁴

Local

City of Antioch Construction and Demolition Recycling Ordinance

The City of Antioch's Construction and Demolition Recycling Ordinance requires at a minimum a 65 percent diversion rate for construction and demolition materials, by weight, away from landfills. It is the responsibility of owners and/or builders to document compliance with the City requirements through submission of a Waste Management Plan (WMP).

4.6.1.2 *Existing Conditions*

Energy is currently consumed along the project corridor primarily in the form of fuel for vehicles traveling on L Street. Electricity is also used to power the traffic signals and streetlights.

4.6.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐
a) Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?				

Project Construction

Construction activities would last approximately 18 months and would require energy for the manufacture and transportation of construction materials, preparation of the site (i.e. demolition and grading), and the actual construction of the proposed bicycle and pedestrian improvements.

²⁴ California Air Resources Board. "Advanced Clean Cars II." Accessed July 30, 2025. <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/advanced-clean-cars-ii>

Petroleum-based fuels, such as diesel fuel and gasoline, would be the primary sources of energy for these tasks.

The overall construction schedule and process for the project is already designed to be efficient in order to avoid excess monetary costs. That is, equipment and fuel are not typically used wastefully on the site because of the added expense associated with renting the equipment, maintaining it, and fueling it. Therefore, the opportunities for efficiency gains during construction are limited. The proposed project does, however, include several measures that will improve the efficiency of the construction process. Implementation of the Air District BMPs, as described in Section 4.3 Air Quality would restrict excessive equipment use by reducing idling times and requiring signs are posted on the project site reminding workers to shut off idle equipment.

The project would also be required to comply with the City's Construction and Demolition Recycling Ordinance. As such, at least 65 percent of the construction and demolition materials would be diverted from landfills. The contractor will be required to prepare a WMP and demonstrate compliance with the City requirements by submitting documentation such as weight tags from appropriate facilities.

Project Operation

The project would not increase VMT along the project corridor because it would not introduce a new land use and would only increase roadway capacity between 10th Street and 18th Street to address an existing bottleneck. By implementing new and improved bicycle and pedestrian facilities, the project would result in a decrease in VMT along the project corridor (see Table 4.17-1). The project would not introduce any new sources of energy consumption. For these reasons, the project would not result in wasteful, inefficient, or unnecessary energy consumption. **(Less than Significant Impact)**

-
- b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?
-

For the reasons described under Checklist Question a), the project would not result in an inefficient use of energy and would result in negligible to no change in operational energy consumption. The project would comply with the City's Construction and Demolition Debris Recycling Ordinance and the Air District's BMPs during construction. Therefore, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. **(Less than Significant Impact)**

4.7 Geology and Soils

4.7.1 Environmental Setting

4.7.1.1 *Regulatory Framework*

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed following the 1971 San Fernando earthquake. The act regulates development in California near known active faults due to hazards associated with surface fault ruptures. Alquist-Priolo maps are distributed to affected cities, counties, and state agencies for their use in planning and controlling new construction. Areas within an Alquist-Priolo Earthquake Fault Zone require special studies to evaluate the potential for surface rupture to ensure that no structures intended for human occupancy are constructed across an active fault.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (SHMA) was passed in 1990 following the 1989 Loma Prieta earthquake. The SHMA directs the California Geological Survey (CGS) to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. CGS has completed seismic hazard mapping for the portions of California most susceptible to liquefaction, landslides, and ground shaking, including the central San Francisco Bay Area. The SHMA requires that agencies only approve projects in seismic hazard zones following site-specific geotechnical investigations to determine if the seismic hazard is present and identify measures to reduce earthquake-related hazards.

California Building Standards Code

The California Building Standards Code (CBSC) prescribes standards for constructing safe buildings. Part 2 of the CBSC contains the California Building Code (CBC), which contains provisions for earthquake safety based on factors including occupancy type, soil and rock profile, ground strength, and distance to seismic sources. The CBC requires that a site-specific geotechnical investigation report be prepared for most development projects to evaluate seismic and geologic conditions such as surface fault ruptures, ground shaking, liquefaction, differential settlement, lateral spreading, expansive soils, and slope stability. The CBC is updated every three years.

California Division of Occupational Safety and Health Regulations

Excavation, shoring, and trenching activities during construction are subject to occupational safety standards for stabilization by the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) under Title 8 of the California Code of Regulations and

Excavation Rules. These regulations minimize the potential for instability and collapse that could injure construction workers on the site.

Public Resources Code Section 5097.5

Paleontological resources are the fossilized remains of organisms from prehistoric environments found in geologic strata. They range from mammoth and dinosaur bones to impressions of ancient animals and plants, trace remains, and microfossils. These materials are valued for the information they yield about the history of the earth and its past ecological settings. California Public Resources Code Section 5097.5 specifies that unauthorized removal of a paleontological resource is a misdemeanor. Under the CEQA Guidelines, a project would have a significant impact on paleontological resources if it would disturb or destroy a unique paleontological resource or site or unique geologic feature.

City of Antioch General Plan

The General Plan includes the following policies relevant to geology and soils.

Policy	Description
10.9.2-c	When existing information indicates that a site proposed for development may contain paleontological resources, a paleontologist shall monitor site grading activities with the authority to halt grading to collect uncovered paleontological resources, curate any resources collected with an appropriate reposition, and file a report with the Community Development Department documenting any paleontological resources found during site grading.
11.4.2-a	Require geologic and soils reports to be prepared for proposed development sites and incorporate the findings and recommendations of these studies into project development requirements. As determined by the City of Antioch Building Division, a site-specific assessment shall be prepared to determine potential ground shaking impacts on new development. The site-specific ground shaking assessment shall incorporate up-to-date data from government and non-government sources and may be included as part of any site-specific geotechnical investigation. The site-specific ground shaking assessment shall include specific measures to reduce the significance of potential ground shaking hazards. This site-specific ground shaking assessment shall be prepared by a licensed geologist and shall be submitted to the City of Antioch Building Division for review and approval prior to the issuance of building permits. For purposes of this policy, “development” applies to new structures and existing structures or facilities that undergo expansion, remodeling, renovation, refurbishment, or other modification. This policy does not apply to accessory dwelling units or accessory buildings.
11.4.2-l	Where development is proposed within an identified or potential liquefaction hazard area (as determined by the city), adequate and appropriate measures such as (but not limited to) designing foundations in a manner that limits the effects of liquefaction, the placement of an engineered fill with low liquefaction potential, and the alternative siting of structures in areas with a lower liquefaction risk, shall be implemented to reduce potential liquefaction hazards. Any such measures shall be submitted to the City of Antioch Building Division for review prior to the approval of the building permits.

4.7.1.2 Existing Conditions

Geologic Hazards

Earthquakes

The San Francisco Bay Area is one of the most seismically active areas of North America and is influenced by the San Andreas fault system, which spans the Coast Ranges from the Pacific Ocean to the San Joaquin Valley. The closest active fault to the project site is the Davis Fault, which is 2.41 miles east of the project site.²⁵ The project site is susceptible to strong earthquake-induced ground shaking. However, the site is not located within an Alquist-Priolo Fault Zone and thus, is not susceptible to fault rupture.

Liquefaction and Lateral Spreading

Liquefaction occurs when saturated cohesionless soils are subject to a temporary but essentially total loss of shear strength under the reversing, cyclic shear stresses associated with earthquake shaking. According to the General Plan DEIR, the project area has moderate liquefaction susceptibility.²⁶

A consequence of seismic liquefaction in sloping ground areas is lateral spreading, which is the movement of ground laterally after the loss of support due to liquefaction. For this to occur, the liquefied soils must be close to a free face (e.g., an unsupported, vertical, or sloping face) such as a road cut or stream/riverbank. While the potential for liquefaction is moderate, the project area occurs along the existing roadway and is not located near a free face. Therefore, the potential for lateral spreading is low.

Landslides

The majority of the project limits are mapped as having low potential for landslides due to the relatively flat nature of the site's topography.²⁷

Expansive Soils

The expansive potential is the ability of soils with a high clay content to change volume with moisture content. The site is underlain with soils that are classified in Group C, which are soils that have a slow rate of water transmission.²⁸ Rincon clay loam is the most common soil underlying the

²⁵ United States Geologic Survey. "U.S. Quaternary Faults." Accessed August 8, 2025.

<https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf>.

²⁶ City of Antioch. *Draft General Plan Update Environmental Impact Report*. July 2003. Figure 4.5.4.

²⁷ United States Geological Survey. "U.S. Landslide Inventory and Susceptibility Map." Accessed August 11, 2025.

<https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=ae120962f459434b8c904b456c82669d>.

²⁸ United States Department of Agriculture. "Soil Map." Accessed August 11, 2025.

<https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>.

project area.²⁹ The presence of clay loam and soils with a slow rate of water transmission indicates that expansive soils are present at the project site.

Paleontological Resources

According to the General Plan EIR, numerous fossils have been collected within the City of Antioch. As of 2003, eight fossil localities were known to occur within or immediately adjacent to the General Plan planning area and another five were within a one-mile radius of the planning area. Fossils discovered in the General Plan planning area include mammoths, primitive horses, bison, rats, beaver-type creatures, and sloths.

4.7.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
- Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42)?	☐	☐	☒	☐
- Strong seismic ground shaking?	☐	☐	☒	☐
- Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
- Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that will become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in the current California Building Code, creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐

²⁹ Archaeological/ Historical Consultants. *Archaeological Survey Report L Street Pathway To Transit Phase II*. July 8, 2025. Page 30.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	☐	☒	☐	☐

-
- a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides?
-

The project site is located within the seismically active San Francisco Bay region, but it is not located within an Alquist-Priolo Fault Zone. There are no known earthquake faults crossing the project limits, therefore, the site is not subject to ground rupture. While the site is mapped within an area of moderate liquefaction potential, the project would make improvements to the existing roadway and would not introduce any new buildings or structures to the area. The project site is not located near a free face and, therefore, is not subject to lateral spreading. Additionally, the project site has low potential for landslides due to its relatively flat nature.

The project would be completed in accordance with City of Antioch and Caltrans codes and standards to reduce the risk of damage from seismic activity. For these reasons, the project would not exacerbate the risk of seismic-related geologic hazards and would not directly or indirectly cause potential substantial adverse effects including the risk of loss, injury, or death, associated with geologic hazards. **(Less than Significant Impact)**

-
- b) Would the project result in substantial soil erosion or the loss of topsoil?
-

The project site is relatively flat, lessening the chance for substantial erosion or siltation. Additionally, the project would implement best management practices during construction to prevent the loss of topsoil (described further in Section 4.10 Hydrology and Water Quality), further reducing any risk of substantial erosion or loss of topsoil to a less than significant level. **(Less than Significant Impact)**

-
- c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?
-

The project site has low potential for landslides and moderate potential for liquefaction. As discussed under checklist question a), the project would be completed in accordance with City of Antioch and Caltrans codes and standards. By adhering to these standards, the project would not result in landslides, lateral spreading, subsidence, liquefaction or collapse **(Less than Significant Impact)**

- d) Would the project be located on expansive soil, as defined in the current California Building Code, creating substantial direct or indirect risks to life or property?
-

The project is underlain by soils that have a slow rate of water transmission, indicating that expansive soils could be present. As previously discussed, the project would be completed in accordance with City of Antioch and Caltrans codes and standards and in accordance with the recommendations contained in the project's design-level geotechnical investigation to reduce the risk of damage from expansive soils. **(Less than Significant Impact)**

- e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?
-

The project would not involve the use of septic tanks or alternative wastewater disposal systems. **(No Impact)**

- f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?
-

As previously discussed, paleontological resources have been discovered within and around the City of Antioch. There is potential for buried paleontological resources to exist under the project site, which could be disturbed during earthmoving project construction activities.

Impact GEO-1: Project construction could destroy buried paleontological resources. **(Significant Impact)**

Mitigation Measures: The project will be required to implement the following measures in the event of an inadvertent discovery of a paleontological resource to reduce potential impacts to a less than significant level.

MM GEO-1.1: In the event of discovery of a paleontological resource during construction, ground-disturbing activities shall temporarily be halted within 25 feet of the find until the discovery is examined by a qualified paleontologist. Work within the sensitive area shall resume only when deemed appropriate by the qualified paleontologist. The qualified paleontologist shall determine whether the discovery is scientifically significant, how to involve other responsible or resource agencies and stakeholders, and what methods to follow for resource recovery.

If the qualified paleontologist determines that the resource is not scientifically important, the conclusion shall be documented in a letter to the City of Antioch to demonstrate compliance with applicable statutory requirements.

If the qualified paleontologist determines that the paleontological resource is of scientific importance and there are no feasible measures to avoid disturbing this paleontological resource, the qualified paleontologist shall prepare a Paleontological Monitoring and Mitigation Plan (PMMP). The PMMP shall include measures to fully document and recover the resource of scientific importance. The qualified paleontologist shall submit the PMMP to the City for review and approval within 10 business days of the discovery. Upon approval by the City, ground-disturbing activities in the project area shall resume and be monitored as determined by the qualified paleontologist for the duration of such activities. The PMMP shall include measures for a training program for construction personnel, paleontological monitoring, fossil salvage, curation, and final reporting, as applicable.

With implementation of MM GEO-1.1, the project would not directly or indirectly destroy a unique paleontological resource or unique geologic feature. **(Less than Significant Impact with Mitigation Incorporated)**

4.8 Greenhouse Gas Emissions

The following discussion is based, in part, on Air Quality Report prepared for the project by Illingworth & Rodkin, Inc. dated December 2025. A copy of this report is included in Appendix A.

4.8.1 Environmental Setting

4.8.1.1 *Background Information*

Greenhouse gases (GHG) are gases that trap heat in the atmosphere and regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. In GHG emission inventories, the weight of each gas is multiplied by its global warming potential (GWP) and is measured in units of CO₂ equivalents (CO₂e). The most common GHGs are carbon dioxide (CO₂) and water vapor but there are also several others, most importantly methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). These are released into the earth's atmosphere through a variety of natural processes and human activities (anthropogenic). Natural and anthropogenic sources of GHGs are generally as follows:

- CO₂ exchange between the atmosphere, ocean, and land surface
- CO₂, CH₄, and N₂O are emitted from wildfires and volcanic eruptions
- CO₂ and N₂O are byproducts of fossil fuel combustion
- N₂O is associated with agricultural operations such as fertilization of crops
- CH₄ is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents, but their production has been stopped by international treaty
- HFCs are now used as a substitute for CFCs in refrigeration and cooling
- PFCs and SF₆ emissions are commonly created by industries such as aluminum production and semiconductor manufacturing

An expanding body of scientific research supports the theory that global climate change is currently causing changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. Per the 2022 Scoping Plan from CARB, atmospheric concentrations of CO₂ have increased by 50 percent since the Industrial Revolution and continue to increase at a rate of two parts per million each year, which will result in increased global temperatures.³⁰ The climate within California are adversely affected by the global warming trend. Increased precipitation and sea level rise will increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health

³⁰ CARB. 2022 *Scoping Plan for Achieving Carbon Neutrality*. December 2022. Page 3.

include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes and drought; and increased levels of air pollution.

4.8.1.2 *Regulatory Framework*

State

Assembly Bill 32 and State Bill 32

Under the California Global Warming Solutions Act, known as AB 32, CARB established a statewide GHG emissions cap for 2020, adopted mandatory reporting rules for significant sources of GHGs, and adopted a comprehensive plan, known as the Climate Change Scoping Plan, identifying how emission reductions would be achieved from significant GHG sources. The first Scoping Plan was approved by CARB in 2008 and must be updated at least every five years. Since 2008, there have been two updates to the Scoping Plan.

In 2016, SB 32 was signed into law, amending the California Global Warming Solution Act. SB 32, and accompanying Executive Order B-30-15, require CARB to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. CARB updated its Climate Change Scoping Plan in December of 2017 to accelerate 2030 statewide target in terms of million metric tons of CO₂e (MMTCO₂e). Based on the emissions reductions directed by SB 32, the annual 2030 statewide target emissions level for California is 260 MMTCO₂e.

2022 Scoping Plan

On December 15, 2022, CARB approved the 2022 Scoping Plan. The 2022 Scoping Plan provides a sector-by-sector guide on how to reduce man-made (i.e., anthropogenic) GHG emissions by 85 percent below 1990 levels and achieve carbon neutrality by 2045 over a 25-year horizon.³¹ The primary focus of the 2022 Scoping Plan is to reduce the usage of fossil fuels by electricizing the transportation sector, procuring electricity from renewable resources, phasing out natural gas in land use developments, and building transit-oriented communities that encourage multimodal transportation. If implemented successfully, the 2022 Scoping Plan would not only reduce GHG emissions but also reduce smog-forming air pollution (NO_x) by 71 percent and reduce fossil fuel demand by 94 percent. The 2022 Scoping Plan also details natural carbon capture and storage process along with mechanical carbon capture programs to address the remaining 15 of anthropogenic GHG emissions that will remain post-2045. To meet these goals, CARB also includes a revised goal of reducing state GHG emissions 48 percent below 1990 levels by 2030.

Senate Bill 375 and Plan Bay Area 2050

SB 375, known as the Sustainable Communities Strategy and Climate Protection Act, was signed into law in September 2008. SB 375 builds upon AB 32 by requiring CARB to develop regional GHG reduction targets for automobile and light truck sectors for 2020 and 2035. The per capita GHG

³¹ CARB. *2022 Scoping Plan for Achieving Carbon Neutrality*. December 2022. Page 5.

emissions reduction targets for passenger vehicles in the Bay Area include a seven percent reduction by 2020 and a 15 percent reduction by 2035.

Consistent with the requirements of SB 375, the Metropolitan Transportation Commission (MTC) partnered with the Association of Bay Area Governments (ABAG), the Air District, and the Bay Conservation and Development Commission to prepare the region's Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan process. The SCS is referred to as Plan Bay Area 2050.

Plan Bay Area 2050 is a long-range plan for the nine-county San Francisco Bay Area that provides strategies that increase the availability of affordable housing, support a more equitable and efficient economy, improve the transportation network, and enhance the region's environmental resilience. Plan Bay Area 2050 promotes the development of a variety of housing types and densities within identified priority development areas (PDAs). PDAs are areas generally near existing job centers or frequent transit that are locally identified for housing and job growth.³²

Plan Bay Area 2050 includes a goal to increase the number of households that live within 0.5 mile of frequent transit by 2050. Plan Bay Area 2050 promotes strategies that support active and shared modes, combined with a transit-supportive land use patterns, which together are forecasted to lower the share of Bay Area residents that drive to work alone from 50 percent in 2015 to 33 percent in 2050, resulting in a decrease in GHG emissions. Plan Bay Area 2050 also provides a path to emissions reductions via goals to expand TDM initiatives that support and augment employers' commute programs.

SB 100

SB 100, known as The 100 Percent Clean Energy Act of 2018, was adopted on September 10, 2018. The overall goal is to have all retail electricity sold in California be procured from 100 percent renewable and zero-carbon resources by the year 2045. SB 100 also modified the renewables portfolio standard to 50 percent by 2025 and 60 percent by 2030.

Executive Order B-55-18 and Assembly Bill 1279

Executive Order B-55-18 was issued in September 2018. It ordered a new statewide goal of achieving carbon neutrality no later than 2045 and to maintain net negative emissions thereafter.

Assembly Bill 1279, also known as the California Climate Crisis Act, was approved on September 16, 2022, and codifies the statewide goal set by Executive Order B-55-18 of achieving net zero GHG emissions no later than the year 2045 and maintaining net negative emissions thereafter. In addition, this bill has a statewide goal of reducing anthropogenic GHG emissions by 85 percent below the 1990 levels by the year 2045. The bill requires CARB to work with relevant state agencies to ensure that updates to the scoping plan identify and recommend measures to achieve these

³² Association of Bay Area Governments and Metropolitan Transportation Commission. Plan Bay Area 2050. October 21, 2021. Page 20.

policy goals and implement strategies that enable CO₂ removal solutions and carbon capture, utilization, and storage technologies in California. The bill requires CARB to submit an annual report.

Advanced Clean Cars II Regulation

To continue reducing air pollutants and GHG emissions in the transportation sector, CARB adopted the Advanced Clean Cars II Regulations (Resolution 22-12) on August 25, 2022. The new regulation requires that by 2035 all new passenger cars, trucks, and SUVs sold in California will be zero-emission vehicles. This regulation bans the sale of new gasoline or diesel passenger cars, trucks, and SUVs in California from automakers. Beginning in 2026, 35 percent of new vehicle sales must be zero-emission vehicles and plug-in hybrid electric vehicles (EV) and that percentage will increase per year. By 2030, 70 percent of new vehicle sales will be zero-emissions vehicles and by the 2035 model year 100 percent of new vehicle sales will be zero-emissions. CARB will limit the use of plug-in hybrid EVs in the percentage requirements to keep the manufacturing of zero-emissions as the primary goal. Existing gasoline cars can continue to be driven and sold as used cars beyond 2035. CARB is required to track and report on the zero-emissions vehicle market development annually.

Regional and Local

2017 Clean Air Plan

To protect the climate, the 2017 Clean Air Plan prepared by the Air District includes control measures designed to reduce emissions of methane and other super-GHGs that are potent climate pollutants in the near-term, and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

City of Antioch Climate Action Resilience Plan

The initial Climate Action and Resilience Plan (CARP) was adopted by City Council on May 12, 2020 in order to begin preparing the Antioch community for hazard shocks such as drought, flood, and extreme heat that are expected to intensify in the future and to reduce the community's reliance on carbon-based energy sources. The primary goal of the CARP is to provide tools for the City of Antioch and the Antioch community to build community resilience to climate challenges. Actions that build resilience have benefits that fall into three broad categories: adaptation to climate related changes, mitigation of greenhouse gas emissions, and community development for building strong communities that can withstand the climate challenge.

4.8.1.3 *Existing Conditions*

Unlike emissions of criteria and toxic air pollutants, which have regional and local impacts, emissions of GHGs have a broader, global impact. Global warming is a process whereby GHGs accumulating in the upper atmosphere contribute to an increase in the temperature of the earth and changes in weather patterns.

Existing sources of GHG emissions along the project corridor include vehicle traffic along L Street and other local roadways and trains running along the UPRR line crossing over L Street. UPRR primarily uses diesel-electric locomotives, however, testing on hybrid electric-battery locomotives began in 2024 as part of UPRR’s ongoing efforts of reducing GHG emissions.³³

4.8.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?	☐	☐	☒	☐
a) Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?				

Project Construction

GHG emissions associated with the project would occur over the short-term from construction activities, consisting primarily of emissions from equipment exhaust and worker and vendor trips. The project would result in approximately 658 MT of CO₂e per year and a total of 987 MT of CO₂e for the total duration of construction.³⁴ Neither the Air District nor the City of Antioch recommend a GHG emissions threshold of significance for construction emissions. As described in Section 4.3 Air Quality, the project would be required to implement control measures during construction that would limit emissions generated by equipment used. For these reasons, project construction would not generate a significant amount of GHG emissions.

Project Operation

Operational GHG emissions would continue to result primarily from vehicles traveling along the L Street corridor. The project would not result in any changes that would affect operation of the UPRR line and GHG emissions associated with passing locomotives. GHG emissions for project operation were computed using CT-EMFAC2021 for the existing year and future years under Build and No-Build scenarios. A summary of the GHG emissions for the existing year (2020), opening year (2030), and design year (2050) is shown in Table 4.8-1.

³³ UPRR. “Union Pacific Testing First-of-its-Kind Hybrid Locomotive”. Accessed July 31, 2025.
<https://www.up.com/news/service/ztr-hybrid-locomotives-it-240429>

³⁴ Illingworth & Rodkin, Inc. *Air Quality Report: Antioch L Street Pathways to Transit Phase 2*. December 2025.

Table 4.8-1: Modeled Annual CO₂e Emissions by Alternative

Measure	Existing 2020	No-Build 2030	Build 2030	No-Build 2050	Build 2050
GHG Emissions (MT/year)	239,612	204,994	204,884	218,227	217,993
Difference Between No-Build and Build (MT/year)	--	--	-110	--	-234
Change Between Existing and Alternative (MT/year)	--	-34,617	-34,728	-21,385	-21,618

As shown in Table 4.8-1, with or without the project, the mobile-source GHG emissions along the project corridor would decrease due to improvements in vehicle technology and reformulation of fuels. Implementation of the proposed bicycle and pedestrian improvements would further decrease GHG emissions by encouraging the use of active transportation methods and reducing VMT. Therefore, the project would not generate a significant amount of GHG emissions. **(Less than Significant Impact)**

-
- b) Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?
-

The project would implement bicycle and pedestrian improvements along the L Street corridor, consistent with proposed actions of the CARP to expand bicycle ridership and make the downtown area more accessible by active transportation and public transportation, specifically by implementing bike lanes along L Street. Additionally, the project would be consistent with the 2017 Clean Air Plan Transportation Control Measure TR9: Bicycle and Pedestrian Access and Facilities, which encourages planning for bicycle and pedestrian facilities. Therefore, the project would not conflict with the City's CARP, the 2017 Clean Air Plan or another plan, policy, or regulation adopted for the purpose of reducing GHG emissions. **(Less than Significant Impact)**

4.9 Hazards and Hazardous Materials

The following discussion is based, in part, on a Phase I Initial Site Assessment prepared by Parikh Consultants, Inc., dated September 2025. A copy of this report is included in Appendix B of this Initial Study.

4.9.1 Environmental Setting

4.9.1.1 *Regulatory Framework*

Overview

The storage, use, generation, transport, and disposal of hazardous materials and waste are highly regulated under federal and state laws. In California, the EPA has granted most enforcement authority over federal hazardous materials regulations to the California Environmental Protection Agency (CalEPA). In turn, local agencies have been granted responsibility for implementation and enforcement of many hazardous materials regulations under the Certified Unified Program Agency (CUPA) program.

Worker health and safety and public safety are key issues when dealing with hazardous materials. Proper handling and disposal of hazardous material is vital if it is disturbed during project construction. Cal/OSHA enforces state worker health and safety regulations related to construction activities. Regulations include exposure limits, requirements for protective clothing, and training requirements to prevent exposure to hazardous materials. Cal/OSHA also enforces occupational health and safety regulations specific to lead and asbestos investigations and abatement.

Federal and State

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. Over five years, \$1.6 billion was collected and the tax went to a trust fund for cleaning up abandoned or uncontrolled hazardous waste sites. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified.

The law authorizes short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response, and long-term remedial response actions that permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life-threatening. These actions can be completed only at sites listed on the EPA's National Priorities List.

CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.³⁵

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA), enacted in 1976, is the principal federal law in the United States governing the disposal of solid waste and hazardous waste. RCRA gives the EPA the authority to control hazardous waste from the "cradle to the grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also sets forth a framework for the management of non-hazardous solid wastes.

The Federal Hazardous and Solid Waste Amendments (HSWA) are the 1984 amendments to RCRA that focused on waste minimization, phasing out land disposal of hazardous waste, and corrective action for releases. Some of the other mandates of this law include increased enforcement authority for the EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program.³⁶

Government Code Section 65962.5

Section 65962.5 of the Government Code requires CalEPA to develop and update a list of hazardous waste and substances sites, known as the Cortese List. The Cortese List is used by state and local agencies and developers to comply with CEQA requirements. The Cortese List includes hazardous substance release sites identified by the Department of Toxic Substances Control (DTSC) and State Water Resources Control Board (SWRCB).³⁷

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) of 1976 provides the EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics, and pesticides. The TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint.

³⁵ United States Environmental Protection Agency. "Superfund: CERCLA Overview." Accessed August 19, 2025. <https://www.epa.gov/superfund/superfund-cercla-overview>.

³⁶ United States Environmental Protection Agency. "Summary of the Resource Conservation and Recovery Act." Accessed August 19, 2025. <https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act>.

³⁷ California Environmental Protection Agency. "Cortese List Data Resources." Accessed August 19, 2025. <https://calepa.ca.gov/sitecleanup/corteselist/>.

California Accidental Release Prevention Program

The California Accidental Release Prevention (CalARP) Program aims to prevent accidental releases of regulated hazardous materials that represent a potential hazard beyond the boundaries of a property. Facilities that are required to participate in the CalARP Program use or store specified quantities of toxic and flammable substances (hazardous materials) that can have off-site consequences if accidentally released. Contra Costa Health reviews CalARP risk management plans as the CUPA.

Asbestos-Containing Materials

Friable asbestos is any asbestos-containing material (ACM) that, when dry, can easily be crumbled or pulverized to a powder by hand, allowing the asbestos particles to become airborne. Common examples of products that have been found to contain friable asbestos include acoustical ceilings, plaster, wallboard, and thermal insulation for water heaters and pipes. Common examples of non-friable ACMs are asphalt roofing shingles, vinyl floor tiles, and transite siding made with cement. The EPA began phasing out use of friable asbestos products in 1973 and issued a ban in 1978 on manufacture, import, processing, and distribution of some asbestos-containing products and new uses of asbestos products.³⁸ The EPA is currently considering a proposed ban on on-going use of asbestos.³⁹ National Emission Standards for Hazardous Air Pollutants (NESHAP) guidelines require that potentially friable ACMs be removed prior to building demolition or remodeling that may disturb the ACMs.

CCR Title 8, Section 1532.1

The United States Consumer Product Safety Commission banned the use of lead-based paint in 1978. Removal of older structures with lead-based paint is subject to requirements outlined by the Cal/OSHA Lead in Construction Standard, CCR Title 8, Section 1532.1 during demolition activities. Requirements include employee training, employee air monitoring, and dust control. If lead-based paint is peeling, flaking, or blistered, it is required to be removed prior to demolition.

4.9.1.2 *Existing Conditions*

On-Site Sources of Contamination

Aerially deposited lead (ADL) is a common hazardous material found along roadways due to vehicle tailpipe exhaust when lead was formerly a constituent of gasoline. It is likely that ADL is present on and adjacent to the existing roadway. There is also potential for ACMs to be present within the building materials used for the UPRR overcrossing and the Kinder Morgan pipe rack bridge just south of the UPRR overcrossing given that they both were constructed in the 1950s.

³⁸ United States Environmental Protection Agency. "EPA Actions to Protect the Public from Exposure to Asbestos." Accessed August 19, 2025. <https://www.epa.gov/asbestos/epa-actions-protect-public-exposure-asbestos>

³⁹Ibid.

Lead based paint (LBP) is also likely present on the surfaces of the Kinder Morgan pipeline. Paint flaking was observed on the Kinder Morgan pipeline, therefore, there is also potential for the presence of LBP in on-site soils. Existing thermoplastic roadway striping could contain hazardous levels of lead and chromium.

Off-Site Sources of Contamination

A record search of the Cortese List and other Federal, State, and County databases was conducted to identify the presence of hazardous waste sites in the project vicinity. The following sites were listed adjacent to the project limits and were evaluated for their potential to pose a risk to the project site:

- Unocal (1029 10th Street): This case was opened in 1993 following an unauthorized release from a gasoline UST. Corrective action was taken and the case was closed in 2011. Minimal residual impacts at the site were considered not to pose a threat to human health and safety or to water quality.
- Chevron (2100 L Street): This case was opened in 1990 due to a gasoline LUST that was discovered after the closure and removal of a Chevron gas station. Quarterly groundwater monitoring was conducted until May 1994 and the case was closed in December 1994 when the RWQCB determined that no further action was required because groundwater contamination was at non-detectable levels.

Airports

The nearest airport to the project site is Buchanan Field Airport, located approximately 13 miles west of the project limits. The project site is located outside of the Airport Influence Area.⁴⁰

Wildland Fires

The project is not located within a fire hazard severity zone as mapped by CAL FIRE, indicating that the site does not have a substantial risk of wildland fires.⁴¹

⁴⁰ Contra Costa County Airport Land Use Commission. *Contra Costa County Airport Land Use Compatibility Plan*. December 13, 2000. Figure 3A Airport Influence Area.

⁴¹ CAL FIRE. Fire Hazard Severity Zone Viewer. Accessed August 19, 2025.
<https://experience.arcgis.com/experience/5065c998b4b0462f9ec3c6c226c610a9>

4.9.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☒	☐	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, will it create a significant hazard to the public or the environment?	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒
a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				

Construction of the proposed project would require the temporary use of gasoline-, diesel- or electric-powered equipment; as well as the use of hazardous materials including petroleum products, lubricants, cleaners, paints, and solvents. Once operational, these materials would also be utilized for occasional maintenance on an as-needed basis (likely not more than once each year). These materials would be used in accordance with relevant federal, state, and local laws, as

required by the City of Antioch. If used as directed, these materials would not pose a hazard to the environment or workers or persons in the vicinity.

Similar to existing conditions, hazardous materials could be transported by commercial and/or private vehicles along L Street. Vehicles operating on public roads are subject to all local, state, and federal regulations governing the transport of hazardous materials. This includes, but is not limited to, the Hazardous Materials Transportation Act. Additionally, all public roadways constructed within the City of Antioch are required to adhere to all applicable roadway design standards and regulations. For these reasons, the proposed project would not result in a significant impact related to the routine transport, use, and disposal of hazardous materials. **(Less than Significant Impact)**

-
- b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
-

As previously discussed, it is likely that ADL, LBP, and thermoplastic striping are present on and adjacent to the existing roadway. These materials could be released by ground-disturbing activities during project construction and could potentially impact workers, area residents, and the environment.

Impact HAZ-1: Ground-disturbing activities during project construction could release hazardous materials into the environment, creating a hazard to construction workers and nearby receptors. **(Significant Impact)**

Mitigation Measures: The project would be required to implement the following measures to reduce impacts associated with the release of hazardous materials during construction to a less than significant level.

MM HAZ-1.1: As part of project development, a soil investigation will be conducted to determine whether aerially-deposited lead (ADL) has affected soils that will be excavated as part of the proposed project. The investigation for ADL will be performed in accordance with Caltrans' Lead Testing Guidance Procedure. The analytical results will be compared against applicable hazardous waste criteria. Based on analytical results, the investigation will provide recommendations regarding management and disposal of affected soils in the project area including the reuse potential of ADL-affected soil during project development. The provisions of a variance granted to Caltrans by the California Department of Toxic Substances Control on September 22, 2000 (or any subsequent variance in effect when the project is constructed) regarding aerially-deposited lead will be followed.

MM HAZ-1.2: Soils beneath and adjacent to the Kinder Morgan pipe rack bridge should be tested for lead prior to construction disturbance. If lead-impacted soils are

encountered, appropriate worker protection and waste management procedures shall be followed.

MM HAZ-1.3: If components of the Union Pacific Railroad overcrossing or Kinder Morgan pipe rack are disturbed during construction, an asbestos survey by a California Division of Occupational Safety and Health (Cal/OSHA)-certified consultant shall be conducted. Any identified asbestos containing materials shall be handled and disposed of in accordance with regulatory requirements.

MM HAZ-1.4: Removal of painted traffic markings shall follow Caltrans Standard Special Provision (14-11.12) for managing materials containing lead and chromium.

With implementation of the mitigation measures listed above, potentially hazardous materials would be properly handled and disposed of. For these reasons, project construction would not create a significant hazard to the public or the environment involving the release of hazardous materials into the environment. **(Less than Significant Impact with Mitigation Incorporated)**

-
- c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
-

Antioch High School is located adjacent to the L Street corridor. As previously discussed under checklist question a), project operation would not introduce any new uses that would include hazardous emissions or handling of acutely hazardous materials. As discussed in Section 4.3 Air Quality, the project would not result in any significant operational or construction-period emissions. Project construction would involve the temporary use of gasoline-, diesel- or electric-powered equipment; as well as the use of hazardous materials including petroleum products, lubricants, cleaners, paints, and solvents. Use of these materials would be limited to the project work limits and the construction staging area. Project construction would also potentially disturb surfaces containing hazardous materials such as ACMs, LBP, and thermoplastic striping. As discussed under checklist question b), these impacts would be reduced to a less than significant level with implementation of MM HAZ-1.1 through MM HAZ-1.4. **(Less than Significant Impact with Mitigation Incorporated)**

-
- d) Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
-

As discussed in Section 4.9.1.2 Existing Conditions, there are two Cortese List sites within the project vicinity. However, remedial action and monitoring have taken place at each site and both have been determined to not pose a risk at the project site. Additionally, implementation of MM HAZ-1.1 through MM HAZ-1.4 would ensure that any potentially hazardous materials encountered during construction would be properly handled and disposed of. For these reasons, the project

would not create a significant hazard to the public or the environment in connection with a Cortese List site. **(Less than Significant Impact with Mitigation Incorporated)**

- e) If located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?
-

As previously discussed, the project is not located within the influence area of Buchanan Field Airport, the nearest airport to the project limits. The project would not include any structures that would require submittal to the FAA for airspace safety review. For these reasons, the project would not result in a significant airport and aircraft safety hazard impact. **(No Impact)**

- f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
-

During the construction phase of the project, any temporary lane or road closures and detours would be coordinated in advance with the local emergency response agencies to ensure that adequate emergency access is provided throughout construction. Project operation would improve traffic circulation and safety along the project corridor, resulting in a long-term benefit to emergency response and evacuation routes. **(Less than Significant Impact)**

- g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?
-

The project is not located within a fire hazard severity zone and therefore, would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. **(No Impact)**

4.10 Hydrology and Water Quality

4.10.1 Environmental Setting

4.10.1.1 *Regulatory Framework*

Federal and State

The federal Clean Water Act and California's Porter-Cologne Water Quality Control Act are the primary laws related to water quality in California. Regulations set forth by the Environmental Protection Agency (EPA) and the State Water Resources Control Board (SWRCB) have been developed to fulfill the requirements of this legislation. EPA regulations include the National Pollutant Discharge Elimination System (NPDES) permit program, which controls sources that discharge pollutants into the waters of the United States (e.g., streams, lakes, bays, etc.). These regulations are implemented at the regional level by the Regional Water Quality Control Boards (RWQCBs). The project site is within the jurisdiction of the Central Valley RWQCB.

Under Section 303(d) of the federal Clean Water Act, the SWRCB and RWQCBs are required to identify impaired surface water bodies that do not meet water quality standards and develop total maximum daily loads (TMDLs) for contaminants of concern. The list of the state's identified impaired surface water bodies, known as the "303(d) list" can be found on the on the SWRCB's website.⁴²

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) established the National Flood Insurance Program (NFIP) to reduce impacts of flooding on private and public properties. The program provides subsidized flood insurance to communities that comply with FEMA regulations protecting development in floodplains. As part of the program, FEMA publishes Flood Insurance Rate Maps (FIRMs) that identify Special Flood Hazard Areas (SFHAs). An SFHA is an area that would be inundated by the one-percent annual chance flood, which is also referred to as the base flood or 100-year flood.

Statewide Construction General Permit

The SWRCB has implemented an NPDES General Construction Permit for the State of California (Construction General Permit). For projects disturbing one acre or more of soil, a Notice of Intent (NOI) must be filed with the RWQCB by the project sponsor, and a Storm Water Pollution Prevention Plan (SWPPP) must be prepared by a qualified professional prior to commencement of construction and filed with the RWQCB by the project sponsor. The Construction General Permit includes requirements for training, inspections, record keeping, and, for projects of certain risk

⁴² California State Water Resources Control Board. "2020-2022 California Integrated Report (Clean Water Act Section 303(d) List and 305(b) Report)." May 11, 2022. Accessed August 15, 2025
https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2020_2022_integrated_report.html.

levels, monitoring. The general purpose of the requirements is to minimize the discharge of pollutants and to protect beneficial uses and receiving waters from the adverse effects of construction-related storm water discharges.

Regional and Local

Sacramento River and San Joaquin River Basin Plan

The Central Valley RWQCB regulates water quality in accordance with the Water Quality Control Plan for the Sacramento and San Joaquin River Basin (Basin Plan). The Basin Plan lists the beneficial uses that the Central Valley RWQCB has identified for local aquifers, streams, marshes, and rivers, as well as the water quality objectives and criteria that must be met to protect these uses. The Central Valley RWQCB implements the Basin Plan by issuing and enforcing waste discharge requirements, including permits for nonpoint sources such as the urban runoff discharged by a City's stormwater drainage system. The Basin Plan also describes watershed management programs and water quality attainment strategies.

Phase I MS4 Municipal Program

The City of Antioch is a permittee under the East Contra Costa County MS4 Permit (Municipal Separate Storm Sewer System Control Order No. R5-2010-012). The Municipal Storm Water Permitting Program regulates storm water discharges from municipal separate storm sewer systems (MS4s). Under Phase I, which started in 1990, the RWQCBs have adopted NPDES storm water permits for medium (serving between 100,000 and 250,000 people) and large (serving 250,000 or more people) municipalities. Most of these permits are issued to a group of Co - permittees encompassing an entire metropolitan area. The East Contra Costa MS4 Permit was adopted in September 2010.

Provision C.3 of the MS4 Permit requires that permittees use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development redevelopment projects to address both soluble and insoluble stormwater runoff pollutant discharges and prevent increases in runoff flows. This goal is to be accomplished primarily through the implementation of low impact development (LID) techniques. Roadway projects that create 5,000 square feet or more of newly constructed contiguous impervious surfaces are subject to Provision C.3 of the MS4 Permit.

Contra Costa Clean Water Program

The City of Antioch is a member of the Contra Costa Clean Water Program (CCCWP), established in 1991 in response to the federal stormwater regulations and the NPDES municipal general permits. Through the CCCWP, Contra Costa municipalities have prepared a Stormwater C.3 Guidebook to assist applicants through the process of submittals and reviews (updated July 2023). Provision C.3 in the municipal general permit requires site designs to minimize the addition of impervious surfaces, controlling the rates and durations of site runoff, install pervious surfaces where feasible to facilitate onsite infiltration, treat remaining runoff from impervious areas using bioretention, and

maintain stormwater treatment and flow-control facilities in perpetuity. The C.3 requirements are separate from, and in addition to, construction requirements for erosion and sediment control and pollution prevention measures.

City of Antioch General Plan

The General Plan contains the following policies relevant to hydrology and water quality.

Policy	Description
10.7.2-d	Protect, where possible, groundwater recharge areas, including protection of stream sides from urban encroachment.
10.7.2-g	Require public and private development projects to be in compliance with applicable National Pollution Discharge Elimination System (NPDES) permit requirements, and require the implementation of best management practices to minimize erosion and sedimentation resulting from new development.

4.10.1.2 *Existing Conditions*

Hydrology and Drainage

The project site is located within the City of Antioch in the East Antioch Watershed, which drains to the Sacramento-San Joaquin River Delta.⁴³ There is an existing storm drain main underneath L Street and there are curb inlets on the roadway along existing sidewalks. The Contra Costa County Fairgrounds property is known to flood every year or two due to a substandard box culvert and undersized channels.⁴⁴ The site is approximately 1.31 miles west of Lake Alhambra and is approximately 1.75 miles southeast of Kirker Creek.

The project site currently consists of approximately 255,921 square feet (75 percent) of impervious surfaces and approximately 87,088 square feet (25 percent) of pervious surfaces.

Flooding

The project site lies within Flood Zone X.⁴⁵ The project corridor between W.18th Street and Sycamore Drive is mapped as within a 0.2 percent annual chance flood hazard area (areas of one percent annual change flood with average depths less than one foot or with drainage areas of less than one quarter mile). The remainder of the project corridor is mapped as an area of minimal flood hazard.

⁴³ Contra Costa County Board of Supervisors, Contra Costa County Community Development Department, and Contra Costa County Public Works Department. *Contra Costa Watershed Atlas*. November 2003.

⁴⁴ City of Antioch. General Plan EIR. July 2003. P.4.7-4.

⁴⁵ FEMA. Flood Insurance Rate Map No. 06013CO139G. Effective September 30, 2015.

4.10.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐
- result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
- substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☒	☐
- create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
- impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

-
- a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?
-

Construction of the project would require demolition of existing pavement, grading, and paving. Construction materials and equipment would be moved on- and off-site as necessary for the duration of construction. These construction activities would temporarily increase the amount of

unconsolidated materials on-site. Additionally, grading activities could temporarily increase erosion and sedimentation that could be carried by runoff into nearby waterways.

The project would result in 75,502 square feet of net new impervious surfaces on-site, resulting in a total of 315,871 square feet (92 percent) of impervious surfaces and 15,552 square feet (eight percent) of pervious surfaces. This would represent a 17 percent increase in impervious surfaces within the project limits compared to existing conditions. Consistent with Provision C.3 of the MS4 Permit and the CCCWP, the project would include stormwater treatment facilities in the form of linear bioretention areas along the proposed sidewalk that would abut the Contra Costa County Fairgrounds property.

Standard Conditions of Approval

HYD-1: The project would be required to develop and implement BMPs to control erosion and sedimentation during construction. The project applicant would be required to comply with the state's Construction General Permit for Storm Water Discharges Associated with Construction Activity. This entails filing a Notice of Intent, paying a filing fee, and preparing and implementing a site-specific SWPPP (which includes both construction-stage and post-construction BMPs for stormwater quality protection). Preparation of and compliance with a SWPPP as part of the NPDES program is mandated by state and federal statutes.

Implementation of a SWPPP and Standard Condition of Approval HYD-1 would ensure impacts to water quality during construction would be less than significant. For these reasons, the project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. **(Less than Significant Impact)**

-
- b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?
-

The project would result in 75,502 square feet of net new impervious surfaces on-site, resulting in a total of 315,871 square feet (92 percent) of impervious surfaces and 15,552 square feet (eight percent) of pervious surfaces. This would represent a 17 percent increase in impervious surfaces within the project limits compared to existing conditions. However, the project site is not considered an important groundwater recharge area such as a stream side as referenced in General Plan Policy 10.7.2-d.

The proposed roadway improvements would not utilize or otherwise deplete existing groundwater supplies. For these reasons, the project would not impede sustainable groundwater management of the basin. **(Less than Significant Impact)**

-
- c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows?
-

The project would result in an increase in impervious surfaces on-site due to roadway widening as discussed above. The project would not alter the course of any bodies of water. Consistent with Provision C.3 of the MS4 Permit and the CCCWP, the project would include stormwater treatment facilities in the form of linear bioretention areas along the proposed sidewalk that would abut the Contra Costa County Fairgrounds property. Additionally, as discussed under Checklist Question a), the project would be required to prepare and implement a SWPPP to manage stormwater runoff during construction. For these reasons, the project would not result in a significant impact associated with erosion, flooding, or stormwater pollution and would not exceed the capacity of existing or planned stormwater drainage systems. **(Less than Significant Impact)**

- d) Would the project risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones?
-

The project is not located within a 100-year floodplain. The risk of pollutants would temporarily increase during project construction as discussed under checklist question a). However, the project would incorporate BMPs and SWPPP requirements to reduce the risk of pollution during construction.

The project area is not located within a tsunami zone.⁴⁶ The project is not located within the immediate vicinity of the shoreline of the San Francisco Bay and would, therefore, not be subject to seiches. For these reasons, the project would not risk release of pollutants due to inundation in flood hazard, tsunami, or seiche zones. **(Less than Significant Impact)**

- e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?
-

The project would comply with the NPDES program and the Central Valley RWQCB Basin Plan. For these reasons, the project would not conflict or obstruct the implementation of a water quality control plan. **(Less than Significant Impact)**

⁴⁶ California Department of Conservation. "California Tsunami Maps." Accessed August 14, 2025. <https://www.conservation.ca.gov/cgs/tsunami/maps>.

4.11 Land Use and Planning

4.11.1 Environmental Setting

4.11.1.1 *Regulatory Framework*

Countywide Bicycle and Pedestrian Plan

In 2009, the Contra Costa Transportation Authority (CCTA) adopted a Countywide Bicycle and Pedestrian Plan, which incorporated Antioch's local projects and programs, and subsequently adopted by the City in 2009. Appendix D, updated in 2025, contains a list of locally sponsored bicycle and pedestrian improvement projects, including the proposed project.

City of Antioch General Plan

The General Plan contains the following policies relevant to land use and planning.

Policy	Description
7.3.2-s	Expand intersections to include additional turning and through lanes at intersections where needed to relieve congestion and improve intersection operations, so long as the intersection can continue to accommodate pedestrians and bicyclists. Avoid traffic system improvements that facilitate vehicular turning and bus movements, but that also discourage pedestrian or bicycle movements. This can be accomplished on wide streets by providing safe stopping places for pedestrian crossing the street.
7.4.2-f	Provide, as appropriate, bicycle lanes (Class II) or parallel bicycle/pedestrian paths (Class I) along all arterial streets and high volume collector streets, as well as along major access routes to schools and parks.

City of Antioch Downtown Specific Plan

The City adopted the Downtown Specific Plan (DTSP) in 2018 and has since updated the DTSP in November of 2024. L Street is included in the DTSP at its intersection with W. 10th Street and upward. The following DTSP policy is pertinent to the project:

- Policy 1.5.3: This Plan calls for the City to explore and implement feasible vehicular access and aesthetic improvements to the three main roadways into Downtown (A Street, L Street, and Auto Center Drive), and to work with schools, parents and bicycle clubs on the best ways to improve bike access into and around Downtown and schools between State Route 4 and Downtown.

4.11.1.2 *Existing Conditions*

Surrounding land uses along the project corridor include single-family residences, commercial businesses, Antioch High School, and the Contra Costa County Fairgrounds. The residential parcels in the project vicinity are generally designated as medium-low density and residential parcels southwest of the UPRR line are medium density. L Street from W. 10th Street northward is within the City's Downtown Specific Plan.

L Street is classified as an arterial roadway in the City's General Plan. Arterial roadways are defined as the major streets in the City that serve large volumes of through traffic between different sections of the urbanized area and provide access to freeways and expressways.

4.11.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	☐	☐	☒	☐
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

a) Would the project physically divide an established community?

Examples of projects that have the potential to physically divide an established community include new freeways and highways, major arterial streets, and railroad lines. L Street is an existing arterial street and the proposed roadway modifications to the existing L Street corridor would not introduce a new highway or other physically divisive feature. The project would include the construction of new and improved bicycle and pedestrian facilities which would improve community connectivity along the project corridor. For these reasons, the project would not physically divide an established community. **(Less than Significant Impact)**

b) Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The project would be consistent with the goals and policies of the City's General Plan, the DTSP, and the Countywide Bicycle and Pedestrian Plan to make improvements to vehicular travel and bicycle and pedestrian facilities along L Street.

The project would require the acquisition of additional ROW, as previously described in Section 3.2 Right-of-Way Requirements. The ROW acquisition would result in some land use changes, including the conversion of one full commercial property into roadway facilities. The project would also require a partial conversion of the Contra Costa County Fairgrounds property. The partial conversion would be relatively minor and would not affect the capacity of the property to be used for the County Fair or other events. The project would not introduce any new land uses that would conflict with surrounding development. The project, therefore, would not conflict with the City's land use plans, policies, or regulations. **(Less than Significant Impact)**

4.12 Mineral Resources

4.12.1 Environmental Setting

4.12.1.1 *Regulatory Framework*

State

Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act (SMARA) was enacted by the California legislature in 1975 to address the need for a continuing supply of mineral resources, and to prevent or minimize the negative impacts of surface mining to public health, property, and the environment. As mandated under SMARA, the State Geologist has designated mineral land classifications in order to help identify and protect mineral resources in areas within the state subject to urban expansion or other irreversible land uses which would preclude mineral extraction. SMARA also allowed the State Mining and Geology Board (SMGB), after receiving classification information from the State Geologist, to designate lands containing mineral deposits of regional or statewide significance.

4.12.1.2 *Existing Conditions*

The City's General Plan DEIR states that none of the areas identified for new development in the General Plan contain mineral resources that would be of value to the region and residents of the state.⁴⁷ Additionally, the project is located along an existing roadway in an urban area and the parcels adjacent to the site are developed. There are no mineral recovery sites near the L Street roadway corridor.

4.12.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that will be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

⁴⁷ City of Antioch. *Draft General Plan Update Environmental Impact Report*. July 2003. Page 5-9

-
- a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state?
-

The project site does not contain any known mineral resources that would be of value to the region and residents of the state. **(No Impact)**

-
- b) Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?
-

Based on local land use plans, the project site does not contain any known mineral resources that would be of local importance. **(No Impact)**

4.13 Noise

The following discussion is based, in part, on a Noise Study Report prepared by Illingworth & Rodkin, Inc., dated December 2025. A copy of this report is included in Appendix C.

4.13.1 Environmental Setting

4.13.1.1 *Background Information*

Noise

Factors that influence sound as it is perceived by the human ear, include the actual level of sound, period of exposure, frequencies involved, and fluctuation in the noise level during exposure. Noise is measured on a decibel scale, which serves as an index of loudness. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness. Because the human ear cannot hear all pitches or frequencies, sound levels are frequently adjusted or weighted to correspond to human hearing. This adjusted unit is known as the A-weighted decibel, or dBA.

Since excessive noise levels can adversely affect human activities and human health, federal, state, and local governmental agencies have set forth criteria or planning goals to minimize or avoid these effects. Noise guidelines are generally expressed using one of several noise averaging methods, including L_{eq} , DNL, or CNEL.⁴⁸ These descriptors are used to measure a location's overall noise exposure, given that there are times when noise levels are higher (e.g., when a jet is taking off from an airport or when a leaf blower is operating) and times when noise levels are lower (e.g., during lulls in traffic flows on freeways or in the middle of the night). L_{max} is the maximum A-weighted noise level during a measurement period.

Vibration

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Vibration amplitude can be quantified using Peak Particle Velocity (PPV), which is defined as the maximum instantaneous positive or negative peak of the vibration wave. PPV has been routinely used to measure and assess ground-borne construction vibration. Studies have shown that the threshold of perception for average persons is in the range of 0.008 to 0.012 inches/second (in/sec) PPV.

⁴⁸ L_{eq} is a measurement of average energy level intensity of noise over a given period of time. Day-Night Level (DNL) is a 24-hour average of noise levels, with a 10 dB penalty applied to noise occurring between 10:00 PM and 7:00 AM. Community Noise Equivalent Level (CNEL) includes an additional five dB applied to noise occurring between 7:00 PM and 10:00 PM. Where traffic noise predominates, the CNEL and DNL are typically within two dBA of the peak-hour L_{eq} .

4.13.1.2 *Regulatory Framework*

State and Local

Caltrans Standard Specifications for Noise

Section 14-8.02: Noise Control of the Caltrans Standard Specifications addresses noise levels for construction projects and includes the following directives:

- Do not exceed 86 dBA at 50 feet from the job site activities from 9:00 p.m. to 6:00 a.m. Use an alternative warning method instead of a sound signal unless required by safety laws.
- Equip an internal combustion engine with the manufacturer-recommended muffler. Do not operate an internal combustion engine on the job site without the appropriate muffler.

Caltrans Regulatory Vibration Criteria

Caltrans recommends a vibration limit of 0.5 inches/second, peak particle velocity (in/sec, PPV) for buildings that are structurally sound and designed to modern engineering standards, 0.3 in/sec, PPV for older residential buildings, 0.25 in/sec, PPV for historic and some old buildings, and a conservative limit of 0.08 in/sec, PPV for ancient buildings or buildings that are documented to be structurally weakened. The buildings in the project vicinity are assumed to be structurally sound; however, these buildings may not have been designed to modern engineering standards. No ancient buildings or buildings that are documented to be structurally weakened are known to exist in the area.

City of Antioch General Plan

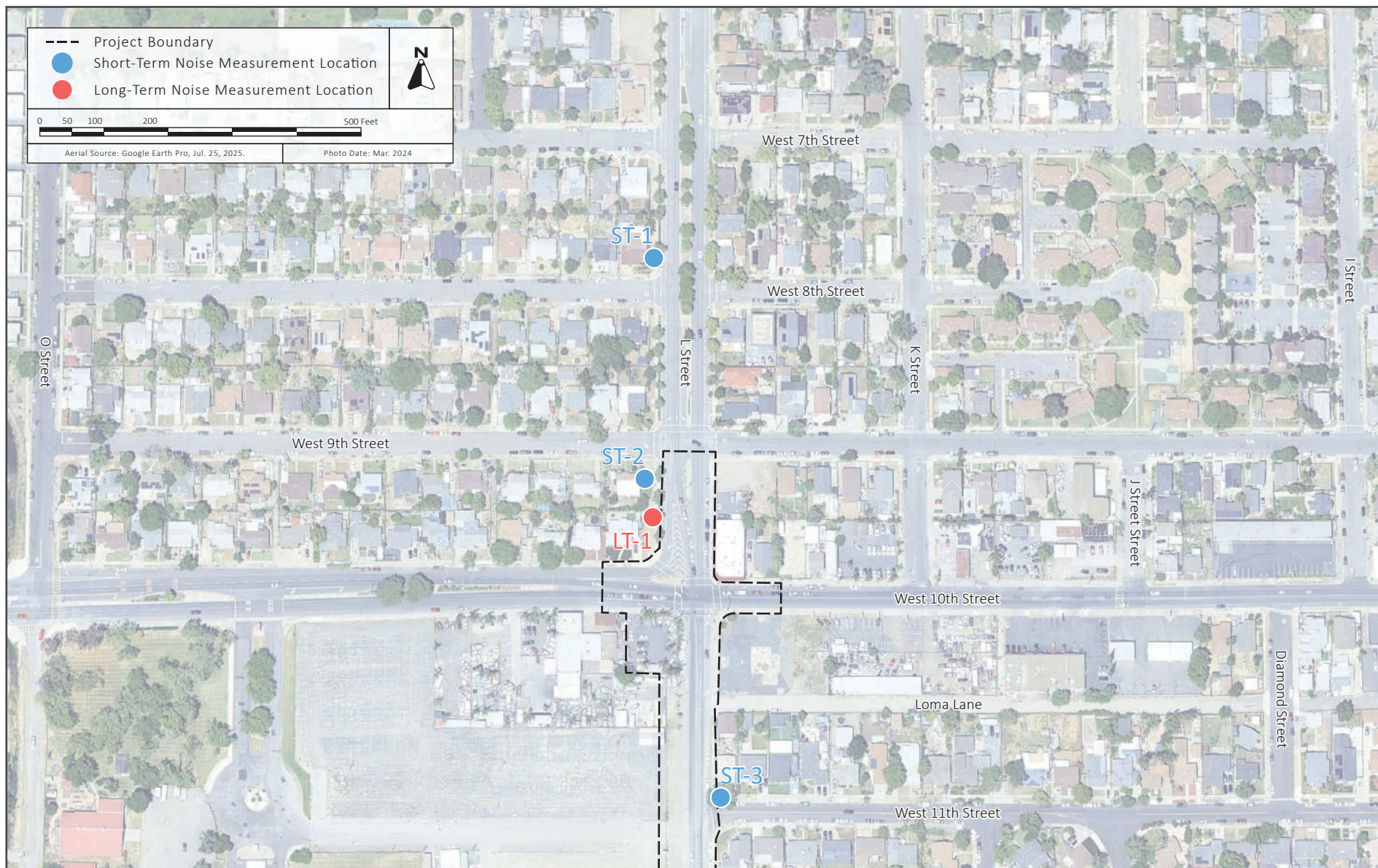
The General Plan Noise Objective is to achieve and maintain exterior noise levels appropriate to planned land uses throughout Antioch. The objectives for residential development are 60 dBA CNEL in yards and interior open space, 65 dBA CNEL in classrooms and 70 dBA CNEL in play/sports areas for schools, and 70 dBA CNEL at the front setback for commercial uses. The General Plan contains the following policies relevant to noise.

Policy	Description
11.8.2-f	Where new development (including construction and improvement of roadways) is proposed in areas exceeding the noise levels identified in the General Plan Noise Objective, or where the development of proposed uses could result in a significant increase in noise, require a detailed noise study to be prepared by a qualified acoustical engineer to determine appropriate mitigation and ways to incorporate such mitigation into project design and implementation.
11.8.2-g	When new development incorporating a potentially significant noise generator is proposed, require noise analyses to be prepared by a qualified acoustical engineer. Require the implementation of appropriate noise mitigation when the proposed project will cause new exceedances of General Plan noise objectives, or an audible (3.0 dBA) increase in noise in areas where General Plan noise objectives are already exceeded as the result of existing development.
11.8.2-l	Ensure that construction activities and permitted hours of operation are regulated in order to avoid or mitigate noise impacts on adjacent noise-sensitive land uses.

11.8.2-m	Require proposed development adjacent to occupied noise sensitive land uses to implement a construction-related noise mitigation plan. This plan would depict the location of construction equipment storage and maintenance areas, and document methods to be employed to minimize noise impacts on adjacent noise sensitive land uses.
11.8.2-n	Require that all construction equipment utilize noise reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer.
11.8.2-p	The construction-related noise mitigation plan required shall also specify that haul truck deliveries be subject to the same hours specified for construction equipment. Additionally, the plan shall denote any construction traffic haul routes where trucks would exceed 100 daily trips (counting those both to and from the construction site). To the extent feasible, the plan shall denote haul routes that do not pass sensitive land uses or residential dwellings. Lastly, the construction-related noise mitigation plan shall incorporate any other restrictions imposed by the City.

4.13.1.3 *Existing Conditions*

A noise monitoring survey of the project area was conducted from May 28, 2025 to May 30, 2025. The noise monitoring survey included eight short-term (ten-minute intervals) measurements and two long-term measurements (48 hours) taken at the locations shown in Figure 4.13-1 through Figure 4.13-3. Noise levels measured are summarized in Table 4.13-1 and Table 4.13-2. The loudest 10-minute measurement ranged from 69 to 70 L_{eq} dBA at ST-8, taken at 2112 L Street, south of the intersection of L Street and Sycamore Drive. The loudest hour noise levels ranged from 66 to 75 dBA $L_{eq[h]}$ at long-term locations. As previously identified, land uses in the project area include the Contra Costa County Fairgrounds, Antioch High School, and residential and commercial development. The primary noise source in the project area is vehicle traffic from the local roadways.



NOISE MEASUREMENT LOCATIONS BETWEEN 7TH STREET AND 11TH STREET

FIGURE 4.13-1



NOISE MEASUREMENT LOCATIONS AT 14TH STREET

FIGURE 4.13-2



NOISE MEASUREMENT LOCATIONS BETWEEN 18TH STREET AND SYCAMORE DRIVE

FIGURE 4.13-3

Table 4.13-1: Summary of Short-Term Noise Measurements

Receptor ID	Location	Land Use	Start Time	10-minute L_{eq} , dBA
ST-1	1104 8 th Street	Residential	10:00am 10:10am	63 62
ST-2	1105 9 th Street	Residential	10:30am 11:50am	60 61
ST-3	1045 L Street	Residential	10:50am 11:00am	69 69
ST-4	1125 L Street	Residential	11:20am 11:30am	67 69
ST-5	1142 Leggett Street	Residential	9:10am 9:20am	58 56
ST-6	700 18 th Street	School	9:40am 9:50am	66 66
ST-7	262 William Reed Drive	Residential	10:10am 10:20am	66 64
ST-8	2112 L Street	Residential	10:40am 10:50am	69 70

Table 4.13-2: Summary of Long-Term Noise Monitoring

Receptor ID	Location	Date	Loudest Hour(s)	Loudest Hour $L_{eq[h]}$, dBA
LT-1	1106 W. 10 th Street	5/28/25 5/29/25 5/30/25	12:00pm 8:00am 7:00am	75 71 66
LT-2	Contra Costa County Fairgrounds	5/28/25 5/29/25 5/30/25	7:00pm 8:00am 10:00am	72 74 73

4.13.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in:				
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☒	☐	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
a) Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				

Construction Noise

Noise generated by project-related construction activities would be a function of the noise levels generated by individual pieces of construction equipment, the type and amount of equipment operating at any given time, the timing and duration of construction activities, the proximity of nearby sensitive land uses, and the presence or lack of shielding at these sensitive land uses. Construction noise levels would vary on a day-to-day basis during each phase of construction, depending on the specific task being completed.

Table 4.13-3 presents construction noise levels calculated for each major phase of construction at a distance of 50 feet, based on calculations conducted in the Federal Highway Administration's (FHWA) Roadway Construction Noise Model using project-specific construction information. In some instances, maximum instantaneous noise levels are calculated to be slightly lower than hourly average noise levels. This occurs because the model reports the maximum instantaneous noise level generated by the loudest single piece of construction equipment, while reporting the hourly average noise levels resulting from the additive effect of multiple pieces of construction equipment operating simultaneously. Noise generated by construction equipment drops off at a rate of six dB per doubling of distance.

Table 4.13-3: Construction Noise Levels at 50 Feet

Construction Phase	Maximum Noise Level (L_{max} , dBA)	Hourly Average Noise Level ($L_{eq[h]}$, dBA)
Grubbing and Land Clearing	84	83
Grading and Excavation	85	89
Drainage, Utilities, and Sub-Grade	85	87
Paving	80	81

Although the overall construction schedule is anticipated to occur over a period of 18 months, roadway construction activities typically occur for relatively short periods of time in specific locations as construction proceeds along the project corridor. Construction noise would mostly be of concern in areas where heavy construction would be concentrated for extended periods of time in areas adjacent to noise-sensitive receptors, where noise levels from individual pieces of equipment are substantially higher than ambient conditions, or when construction activities would occur during noise-sensitive time periods, such as early morning, evening, or nighttime hours.

As indicated in Table 4.13-4, short periods of grading/excavation and drainage/utilities/sub-grade activities would exceed the quantitative noise limit of 86 dBA L_{max} established by Caltrans, which only applies during the nighttime period. If grading/excavation and drainage/utilities/sub-grade occurs between the daytime hours of 6:00 a.m. and 9:00 p.m., construction noise levels would not be regulated by Caltrans.

Impact NOI-1: Project construction activities could exceed the Caltrans nighttime noise limit of 86 dBA L_{max} . **(Significant Impact)**

Mitigation Measures: The project will be required to implement the following measures to reduce the potential for construction noise impacts consistent with Caltrans' standards.

MM NOI-1.1: To reduce the potential for noise impacts resulting from project construction, the following measures shall be implemented:

- All construction equipment shall conform to Section 14-8.02, Noise Control, of the latest Standard Specifications.
- Noise-generating construction activities shall be restricted to between 8:00 a.m. and 5:00 p.m. on weekdays and from 9:00 a.m. to 5:00 p.m. on weekends and holidays.
- All internal combustion engine driven equipment shall be equipped with manufacturer recommended intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Unnecessary idling of internal combustion engines within 100 feet of residences shall be strictly prohibited.
- Noise generating equipment shall be located as far as practical from sensitive receptors when sensitive receptors adjoin or are near the construction project area.
- Notify community and stakeholders in advance in accordance with Local Agency procedures.
- Locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction.

With implementation of MM NOI-1.1, construction activities would be limited to daytime hours and construction equipment would be controlled to minimize noise. Therefore, construction noise impacts would be reduced to a less than significant level.

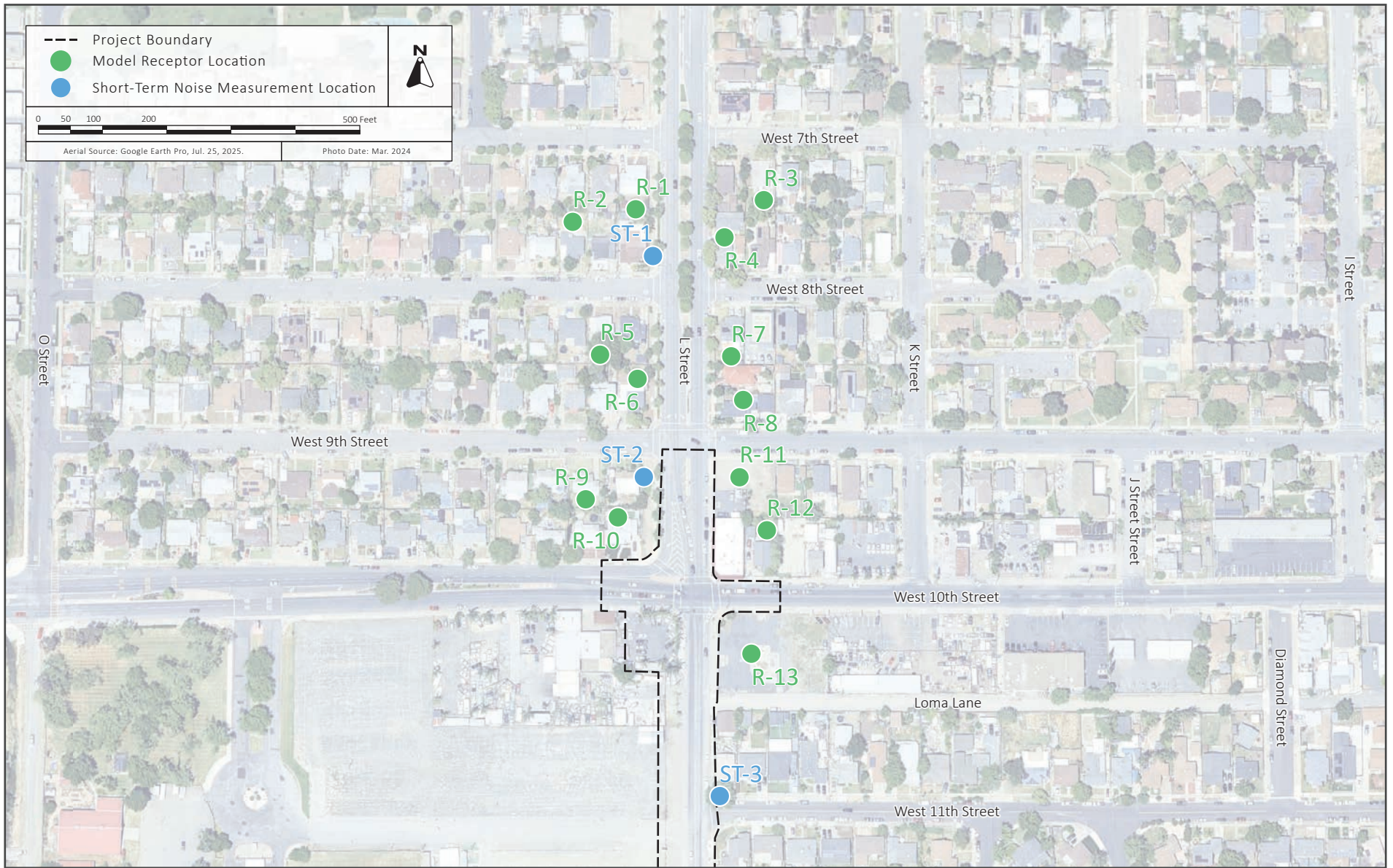
Operational Noise

The primary source of noise from project operation would continue to be vehicle traffic along the L Street corridor. The project does not propose any noise-generating uses. The 40 modeled receptor locations, shown in Figure 4.13-4 through Figure 4.13-8, were used to calculate existing and future traffic noise levels. Future noise levels were calculated for the project design year, 2050. A summary of the existing and future noise levels at the identified receptor locations is given in Table 4.13-4.

Table 4.13-4: Existing and Future Noise Levels

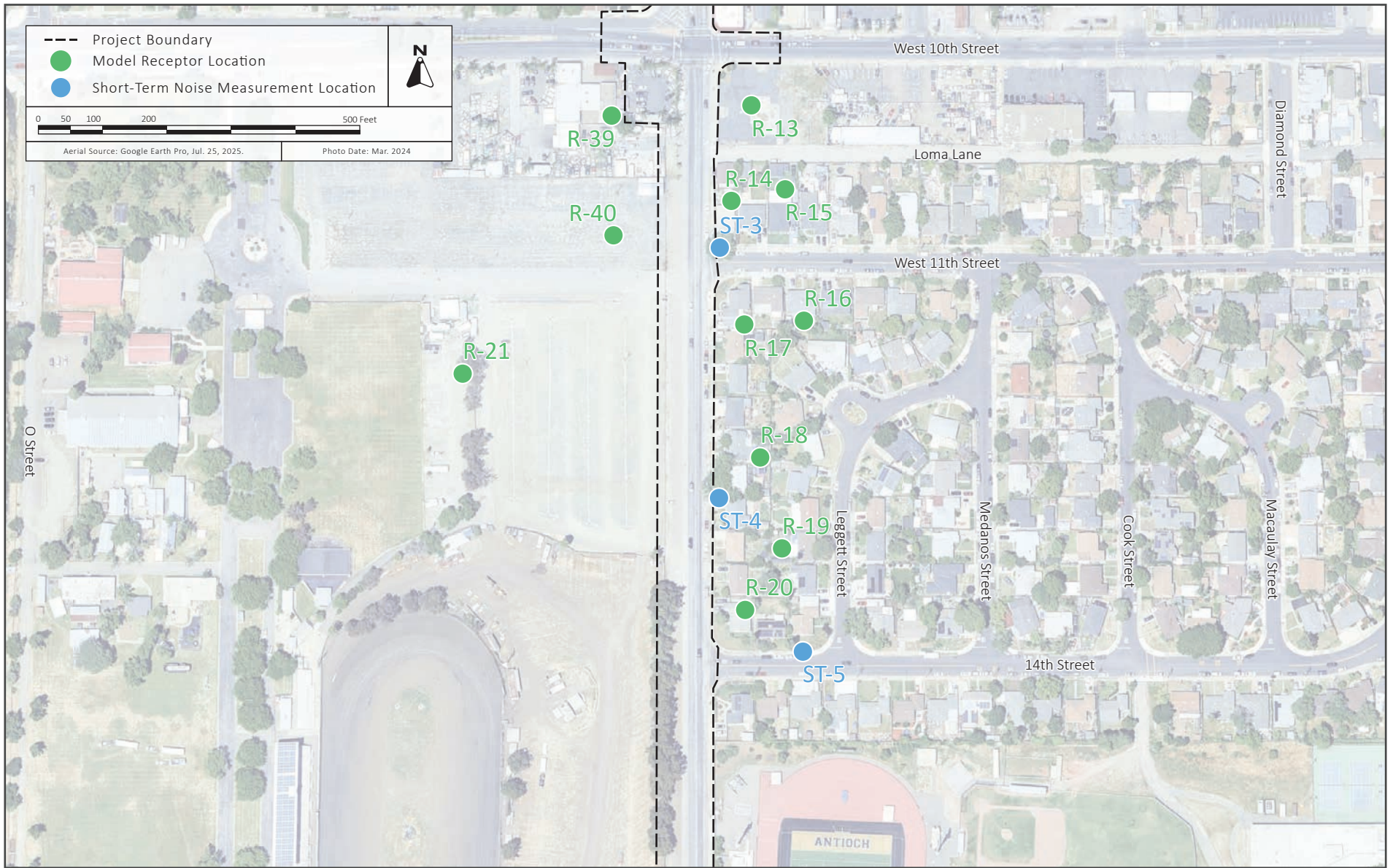
Receptor ID, Address	Land Use	Existing Noise Level, L_{eq} [h], dBA	2050 No-Build Alt. Noise Levels, L_{eq} [h], dBA	2050 Build Alt. Noise Levels, L_{eq} [h], dBA
ST-1, 1104 8 th St.	Residential	60	62	62
ST-2, 1105 9 th St.	Residential	60	62	64
ST-3, 1045 L St.	Residential	70	70	70
ST-4, 1125 L St.	Residential	69	70	70
ST-5, 1142 Leggett St.	Residential	56	56	57
ST-6, 700 18 th St.	School	68	70	70
ST-7, 262 William Reed Dr.	Residential	67	68	68
ST-8, 2112 L St.	Residential	69	70	71
R1, 1105 7 th St.	Residential	56	58	58
R2, 1112 8 th St.	Residential	49	51	51
R3, 1017 7 th St.	Residential	51	53	53
R4, 709 L St.	Residential	55	57	57
R5, 1109 8 th St.	Residential	53	55	55
R6, 810 9 th St.	Residential	57	59	59
R7, 1025 8 th St.	Residential	57	59	59
R8, 815 L St.	Residential	53	55	55
R9, 1109 9 th St.	Residential	51	53	55
R10, 1106 10 th St.	Residential	53	56	58
R11, 1017 9 th St.	Undeveloped	59	61	62
R12, 1016 W. 10 th St.	Residential	55	57	57
R13, 1029 W. 10 th St.	Undeveloped	63	64	64
R14, 1045 L St.	Residential	62	63	61

Receptor ID, Address	Land Use	Existing Noise Level, $L_{eq [h]}$, dBA	2050 No-Build Alt. Noise Levels, $L_{eq [h]}$, dBA	2050 Build Alt. Noise Levels, $L_{eq [h]}$, dBA
R15, 1026 11 th St.	Residential	54	55	53
R16, 1013 11 th St.	Residential	48	49	49
R17, 1101 L St.	Residential	50	51	51
R18, 1125 L St.	Residential	50	51	51
R19, 1134 Leggett St.	Residential	49	50	50
R20, 1141 L St.	Residential	55	55	56
R21, 1201 W. 10 th St.	Contra Costa County Fair RV Park	57	58	59
R22, 1401 L St.	Residential	64	64	65
R23, 1013 14 th St.	Residential	57	58	59
R24, 1201 W. 10 th St.	Antioch Speedway	58	58	60
R25, 1201 W. 10 th St.	Antioch Speedway	54	55	56
R26, 700 18 th St.	Antioch High School	57	58	57
R27, 700 18 th St.	Antioch High School	55	56	56
R28, 700 18 th St.	Antioch High School	60	61	61
R29, 1304 Sycamore Dr.	County Fairgrounds, Dog Show Site	61	63	63
R30, 260 William Reed Dr.	Residential	61	62	62
R31, 256 William Reed Dr.	Residential	59	61	61
R32, 1203 Sycamore Drive	Contra Loma Estates Office and Pool	59	60	60
R33, 2100 L St.	Undeveloped	63	64	65
R34, 2101 L St.	Residential	59	60	60
R35, 2113 L St.	Residential	54	55	55
R36, 3 Brisdale Pl.	Residential	52	54	54
R37, 2209 L St.	Residential	62	63	63
R38, 2117 L St.	Residential	62	63	63
R39, 1101 W. 10 th St.	Commercial	63	64	65
R40, 1201 W. 10 th St.	Antioch Flea Market	61	61	63



RECEPTOR LOCATIONS NORTH OF 10TH STREET

FIGURE 4.13-4



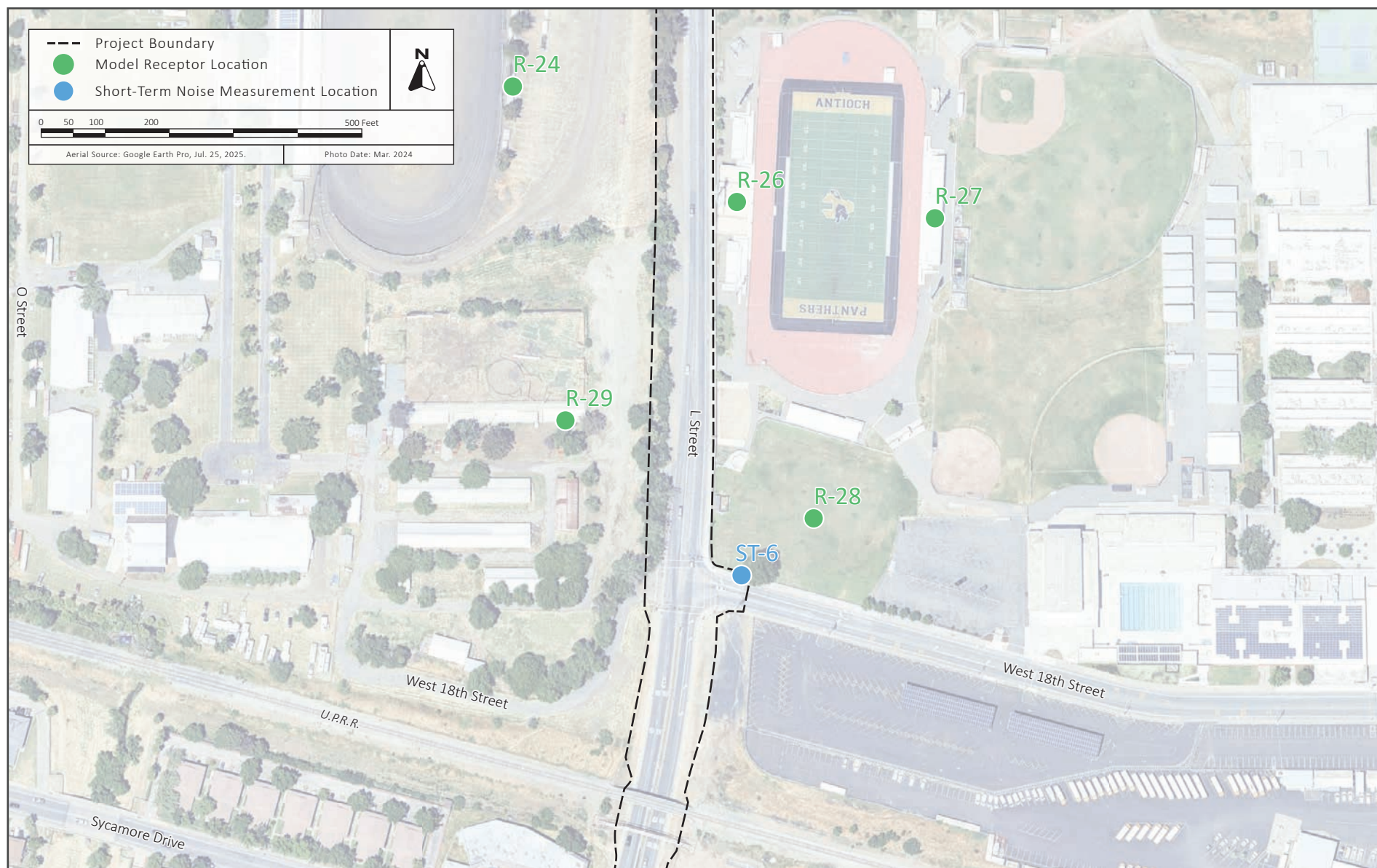
RECEPTOR LOCATIONS SOUTH OF 10TH STREET

FIGURE 4.13-5



RECEPTOR LOCATIONS AT 14TH STREET

FIGURE 4.13-6



RECEPTOR LOCATIONS AT 18TH STREET

FIGURE 4.13-7



As shown in Table 4.13-4, noise levels would increase by up to 3 dBA over Existing conditions under 2050 No Build conditions. When compared to Existing conditions, changes in noise levels under 2050 Build conditions would range from -1 to +5 dBA. When compared to 2050 No Build conditions, changes in noise levels under 2050 Build conditions would range from -2 to +2. The changes to noise levels that would result from the project would either not exceed the City's General Plan noise standards or would not increase noise levels by an audible 3 dBA CNEL when compared to 2050 No Build conditions. For these reasons, project operation would not result in a substantial increase in ambient noise levels in excess of established standards and with implementation of MM NOI-1.1, construction noise impacts would be reduced to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

-
- b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?
-

Traffic, including heavy trucks traveling on a highway, rarely generates vibration amplitudes high enough to cause structural or cosmetic damage. Therefore, the project would not result in generation of excessive vibration during operation. Demolition and construction activities required for construction often generate perceptible vibration levels and levels that could affect nearby structures when heavy equipment or impact tools (e.g., jackhammers, hoe rams) are used in the vicinity of nearby sensitive land uses. The project would not require pile-driving, which can cause excessive vibration.

Construction activities with the greatest potential of generating perceptible vibration levels would include the removal of pavement and soil, the dropping of heavy objects, and the movement of heavy tracked equipment. Table 4.13-5 presents typical vibration levels that could be expected from representative construction equipment at a reference distance of 25 feet and calculated vibration levels at distances representative of the setbacks from the project limits to the nearest structures. Vibration levels are highest close to the source and attenuate with increasing distance depending on soil conditions.

Table 4.13-5: Vibration Source Levels of Construction Equipment

Equipment	PPV at 25 ft (in/sec)	PPV at 10 ft (in/sec)	PPV at 20 ft (in/sec)	PPV at 30 ft (in/sec)
Clam shovel drop	0.202	0.553	0.258	0.165
Hydromill (slurry wall) in soil	0.022	0.047	0.010	0.007
Hydromill (slurry wall) in rock	0.047	0.100	0.022	0.014
Vibratory Roller	0.210	0.575	0.268	0.172
Hoe Ram	0.089	0.244	0.114	0.073
Large bulldozer	0.089	0.244	0.114	0.073

Equipment	PPV at 25 ft (in/sec)	PPV at 10 ft (in/sec)	PPV at 20 ft (in/sec)	PPV at 30 ft (in/sec)
Caisson drilling	0.089	0.244	0.114	0.073
Loaded trucks	0.076	0.208	0.097	0.062
Jackhammer	0.035	0.096	0.045	0.029
Small bulldozer	0.003	0.008	0.004	0.002

The City of Antioch does not specify a construction vibration limit. Caltrans identifies a vibration limit of 0.5 in/sec PPV as the threshold at which there is a potential risk of damage to new residential and modern commercial/industrial structures, 0.3 in/sec PPV for older residential structures, and a conservative limit of 0.25 in/sec PPV for historic and some old buildings. Distances to exceedances of the vibration limits for various structure types are shown in Table 4.13-6.

Table 4.13-6: Distance to Exceedance of Vibration Limit by Structure Type

Structure Type	Threshold (in/sec PPV)	Caisson Drilling	Vibratory Roller	Hoe Ram, Large bulldozer	Loaded trucks	Jackhammer
Historic Building	0.25	10 ft	22 ft	10 ft	9 ft	5 ft
Older Residences	0.3	9 ft	18 ft	9 ft	8 ft	4 ft
New Residential and Commercial/Industrial Buildings	0.5	6 ft	12 ft	6 ft	5 ft	3 ft

Based on a review of the City of Antioch's historical sites and the National Park Service historic resource inventories/mapping, there are no historical structures within 100 feet of the project limits. For this analysis, all structures including commercial buildings along the L Street corridor are conservatively assumed to be older residential construction subject to the 0.3 in/sec PPV threshold. All buildings located within 25 feet of the project limits are summarized in Table 4.13-7, along with the estimated vibration levels that would be experienced at each building.

Table 4.13-7: Vibration Source Levels at Structures within 25 Feet of the Project Limits

Equipment	La Zamorana Market at 1024 W. 10th St. (10 ft)	Res. at 1045 L St. (15 ft)	Res. at 1101 L St. (17 ft)	Res. at 2101 L St. (20 ft)	Res. at 1110 W. 10th St. (24 ft)	Res. at 1106 W. 10th St. (25 ft)
Clam shovel drop	0.553	0.354	0.309	0.258	0.094	0.202
Hydromill (slurry wall) in soil	0.022	0.014	0.012	0.010	0.004	0.022
Hydromill (slurry wall) in rock	0.047	0.030	0.026	0.022	0.008	0.047
Vibratory Roller	0.575	0.368	0.321	0.268	0.098	0.210

Equipment	La Zamorana Market at 1024 W. 10th St. (10 ft)	Res. at 1045 L St. (15 ft)	Res. at 1101 L St. (17 ft)	Res. at 2101 L St. (20 ft)	Res. at 1110 W. 10th St. (24 ft)	Res. at 1106 W. 10th St. (25 ft)
Hoe Ram	0.244	0.156	0.136	0.114	0.042	0.089
Large bulldozer	0.244	0.156	0.136	0.114	0.042	0.089
Caisson drilling	0.244	0.156	0.136	0.114	0.042	0.089
Loaded trucks	0.208	0.133	0.116	0.097	0.035	0.076
Jackhammer	0.096	0.061	0.053	0.045	0.016	0.035
Small bulldozer	0.008	0.005	0.005	0.004	0.001	0.003

As shown in Table 4.13-8, vibration levels generated by vibratory rollers and dropping heavy objects would potentially exceed the 0.3 in/sec PPV threshold of significance at 1024 W. 10th Street, 1045 L Street, and 1101 L Street.

Impact NOI-2: Construction activities including the use of vibratory rollers and dropping heavy objects could exceed the 0.3 in/sec PPV threshold of significance at 1024 W. 10th Street, 1045 L Street, and 1101 L Street. **(Significant Impact)**

Mitigation Measures: The project will be required to implement the following measures to reduce construction vibration impacts to a less than significant level.

MM NOI-2.1: To reduce the potential for vibration impacts resulting from project construction, the following measures shall be implemented during project construction:

- Avoid the use of vibratory rollers within 18 feet of structures. Static mode compaction shall be used when construction activities are less than 18 feet from structures.
- Avoid dropping heavy objects or equipment within 18 feet of structures.
- Avoid the use of CIDH piles, hoe rams, large bulldozers, and caisson drilling equipment within nine feet of structures.
- If vibratory rollers must be used within 18 feet, and all other equipment must be used within nine feet of structures, the following measures will be required:
 - Contractor must perform vibration monitoring, crack monitoring and photo/video documentation of the affected structures during construction. The requirements to perform vibration monitoring, crack monitoring and photo/video documentation will be included in the project's construction specifications as part of the construction contract documents.

Implementation of MM NOI-2.1 would reduce the potential impacts to adjacent buildings by reducing the potential for vibration levels to exceed the respective thresholds. As needed where construction equipment would be used within distances that could exceed 0.3 in/sec PPV, a survey of adjacent buildings would be conducted prior to construction to allow for evaluation of any alleged damage during and upon completion of construction. Therefore, with implementation of MM NOI-2.1, the project would not result in generation of excessive groundborne vibration or groundborne noise levels. **(Less than Significant Impact with Mitigation Incorporated)**

- c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?
-

Buchanan Field Airport, the nearest airport to the project site, is located approximately 13 miles west of the project limits. Additionally, the proposed roadway improvements would not introduce any new residences or workplaces to the site. For these reasons, the project would not expose people residing or working in the area to excessive airport noise levels. **(No Impact)**

4.14 Population and Housing

4.14.1 Environmental Setting

4.14.1.1 *Regulatory Framework*

State

Housing-Element Law

State requirements mandating that housing be included as an element of each jurisdiction's general plan is known as housing-element law. The Regional Housing Need Allocation (RHNA) is the state-mandated process to identify the total number of housing units (by affordability level) that each jurisdiction must accommodate in its housing element. California housing-element law requires cities to: 1) zone adequate lands to accommodate its RHNA; 2) produce an inventory of sites that can accommodate its share of the RHNA; 3) identify governmental and non-governmental constraints to residential development; 4) develop strategies and a work plan to mitigate or eliminate those constraints; and 5) adopt a housing element and update it on a regular basis.⁴⁹ The City of Antioch Housing Element and related land use policies were last updated in October 2023.

Regional and Local

Plan Bay Area 2050

Plan Bay Area 2050 is a long-range plan for the nine-county San Francisco Bay Area that provides strategies that increase the availability of affordable housing, support a more equitable and efficient economy, improve the transportation network, and enhance the region's environmental resilience. Plan Bay Area 2050 promotes the development of a variety of housing types and densities within identified Priority Development Areas (PDAs). PDAs are areas generally near existing job centers or frequent transit that are locally identified for housing and job growth.⁵⁰

ABAG allocates regional housing needs to each city and county within the San Francisco Bay Area, based on statewide goals. These allocations are designed to lay the foundation for Plan Bay Area 2050's long-term envisioned growth pattern for the region. ABAG also develops a series of forecasts and models to project the growth of population, housing units, and jobs in the Bay Area. ABAG, MTC, and local jurisdiction planning staff created the Forecasting and Modeling Report, which is a technical overview of the growth forecasts and land use models upon which Plan Bay Area 2050 is based.

⁴⁹ California Department of Housing and Community Development. "Regional Housing Needs Allocation and Housing Elements" Accessed August 1, 2025. <http://hcd.ca.gov/community-development/housing-element/index.shtml>.

⁵⁰ Association of Bay Area Governments and Metropolitan Transportation Commission. *Plan Bay Area 2050*. October 21, 2021. Page 20.

4.14.1.2 Existing Conditions

The City of Antioch was estimated to have a population of 115,333 people with a total of 36,749 housing units in May 2025.⁵¹ The population within the City is anticipated to increase to a total of 130,725 persons in 41,830 housing units by 2040.⁵² In the project area, there are residential neighborhoods along the east side of L Street between Loma Lane and 14th Street. Additional residential neighborhoods are located beyond the Contra Costa County Fairgrounds and Antioch High School and to the north and south of the project limits.

4.14.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
a) Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				

The proposed transportation improvements would not directly induce population growth by constructing new homes or businesses. The project would improve roadway operations and bicycle and pedestrian safety in a developed area of Antioch. The project would not extend the existing roadway or construct other infrastructure that would indirectly induce population growth. **(No Impact)**

- b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The project would not result in the demolition of any housing units or otherwise necessitate the construction of replacement housing. The project would require one full property acquisition at 1101 W. 10th Street, which is currently developed with a car lot, and partial acquisition of the

⁵¹ California Department of Finance. E-5 Population and Housing Estimates for Cities, Counties, and the State. January 2021-2025, with 2020 Benchmark. May 2025. Accessed August 1, 2025. <https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2025/>

⁵² ABAG. Projections 2040. Accessed April 15, 2026. <http://projections.planbayarea.org/data>

Contra Costa County Fairgrounds property. The project would not acquire any residential property.
(No Impact)

4.15 Public Services

4.15.1 Environmental Setting

4.15.1.1 *Existing Conditions*

Fire and Police Protection Services

Fire protection services for the project area are provided by the Contra Costa County Fire Protection District (CCCYPD). The CCCYPD operates four fire stations in Antioch. The closest fire station to the project corridor is Fire Station 81, located approximately 0.5 miles east of L Street at 315 W. 10th Street.

Police protection services for the project area are provided by the City of Antioch Police Department (APD). The APD is headquartered at 300 L Street, approximately 0.30 miles north of the project corridor.

Schools

The project area is located in the Antioch Unified School District. Students in the project area attend Fremont Elementary School, Marsh Elementary School, Antioch Middle School, and Antioch High School.⁵³ Antioch High School is located directly adjacent to the project limits, on the east side of L Street.

Parks

The City of Antioch Parks has approximately 35 parks in varying sizes ranging from 0.5 to 99 acres.⁵⁴ In addition to parks, the City is served by multi-use trails running east-west, predominantly located south of SR 4. Over 400 acres of parks, open space areas, and marinas are located within the City. Nearby parks include Prosserville Park, located approximately 0.3 miles northwest of the project northern limits, and Contra Loma Estates Park, located approximately 0.4 miles southwest of the project southern limits. Prosserville Park includes a grass field, playground, picnic tables, and a basketball court. Contra Loma Estates Park currently includes grass fields, a playground, and basketball courts. Renovations are currently in progress and will add a new outdoor gym/exercise equipment, a shaded picnic area, a shaded structure, dog park, pedestrian pathway, climbing feature, lighting and fencing for the basketball court, a restroom, and lighting throughout the park.⁵⁵

⁵³ Antioch Unified School District. "School Locator". Accessed April 15, 2026.

<https://antiochunifiedschoolexplorer.azurewebsites.net/>

⁵⁴ City of Antioch. General Plan Environmental Justice Element. December 2023.

⁵⁵ City of Antioch. "Contra Loma Estates Park Renovation". Accessed April 15, 2026.

<https://www.parksforcalifornia.org/project/1537/>

The Contra Costa County Fairgrounds, adjacent to the project limits, is used primarily for commercial purposes, namely the annual Contra Costa County Fair, and is not open to the public for recreational purposes.

4.15.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire Protection?	☐	☐	☒	☐
b) Police Protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☐	☒
d) Parks?	☐	☐	☐	☒
e) Other Public Facilities?	☐	☐	☐	☒

- a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection services?

The project would not introduce any new structures that would require fire protection services. During the construction phase of the project, any temporary lane or road closures and detours would be coordinated in advance with CCCFPD to ensure that adequate emergency access for fire protection services is provided throughout construction. The project would improve traffic circulation along the L Street corridor, resulting in a long-term benefit to fire protection response times. For these reasons, the project would not require the construction of new or physically altered fire protection facilities. **(Less than Significant Impact)**

-
- b) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection services?
-

The project would not introduce any new residents or workers to the project area that would require police protection services. During the construction phase of the project, any temporary lane or road closures and detours would be coordinated with APD to ensure that adequate emergency access for police protection services is provided throughout construction. The project would improve traffic circulation and safety along the L Street corridor, resulting in a long-term benefit to police response times. For these reasons, the project would not require the construction of new or physically altered police protection facilities. **(Less than Significant Impact)**

- c) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools?
-

The project would not introduce any new students to the project area and would not increase existing student populations at nearby schools. The project would not require any ROW from the Antioch High School property and would not otherwise modify the school facilities. Therefore, the project would not result in the need for new or physically altered school facilities. **(No Impact)**

- d) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for parks?
-

The project would not introduce any new residents or workers to the project area that would visit nearby parks. Therefore, the project would not result in the need for new or physically altered parks. **(No Impact)**

-
- e) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for other public facilities?
-

As previously described, the project would not result in an increase in demand on public facilities and would not result in the need for new or physically altered governmental facilities. **(No Impact)**

4.16 Recreation

4.16.1 Environmental Setting

4.16.1.1 *Existing Conditions*

The City of Antioch Parks has approximately 35 parks in varying sizes ranging from 0.5 to 99 acres.⁵⁶ In addition to parks, the City is served by multi-use trails running east-west, predominantly located south of SR 4. Over 400 acres of parks, open space areas, and marinas are located within the City. Nearby parks include Prosserville Park, located approximately 0.3 miles northwest of the project northern limits, and Contra Loma Estates Park, located approximately 0.4 miles southwest of the project southern limits. Prosserville Park includes a grass field, playground, picnic tables, and a basketball court. Contra Loma Estates Park currently includes grass fields, a playground, and basketball courts. Renovations are currently in progress and will add a new outdoor gym/exercise equipment, a shaded picnic area, a shaded structure, dog park, pedestrian pathway, climbing feature, lighting and fencing for the basketball court, a restroom, and lighting throughout the park.⁵⁷

The Contra Costa County Fairgrounds, adjacent to the project limits, is used primarily for commercial purposes, namely the annual Contra Costa County Fair, and is not open to the public for recreational purposes.

4.16.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility will occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

⁵⁶ City of Antioch. General Plan Environmental Justice Element. December 2023.

⁵⁷ City of Antioch. "Contra Loma Estates Park Renovation". Accessed April 15, 2026.
<https://www.parksforcalifornia.org/project/1537/>

-
- a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
-

The project is not a land use project. As previously discussed in Section 4.15 Public Services, the project would not introduce any new residents or workers to the area who would increase demand upon existing parks or other recreational facilities. **(No Impact)**

-
- b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?
-

The project does not include any recreational facilities and as noted above, would not require the construction of new or expanded recreational facilities. **(No Impact)**

4.17 Transportation

4.17.1 Environmental Setting

4.17.1.1 *Regulatory Framework*

State

Senate Bill 743

SB 743 establishes criteria for determining the significance of transportation impacts using a vehicle miles traveled (VMT) metric intended to promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses. Specifically, SB 743 requires analysis of VMT in determining the significance of transportation impacts. Local jurisdictions were required by the Governor's Office of Planning and Research (OPR) to implement a VMT policy by July 1, 2020.

SB 743 did not authorize OPR to set specific VMT impact thresholds, but it did direct OPR to develop guidelines for jurisdictions to utilize. Specifically, CEQA Guidelines Section 15064.3(b)(2) provides that projects that reduce VMT, such as pedestrian, bicycle, and transit projects, would have a less than significant impact. This section further provides that lead agencies have discretion to evaluate roadway capacity projects (including highways), provided that any such analysis is consistent with the requirements of CEQA. Recognizing that roadway capacity projects may be analyzed at a programmatic level, subdivision (b)(2) states that lead agencies may be able to tier from a programmatic analysis that adequately addresses the effects of roadway capacity projects.

Regional and Local

Regional Transportation Plan

MTC is the transportation planning, coordinating, and financing agency for the nine-county San Francisco Bay Area, including Contra Costa County. MTC is charged with regularly updating the Regional Transportation Plan, a comprehensive blueprint for the development of mass transit, highway, airport, seaport, railroad, bicycle, and pedestrian facilities in the region. MTC and ABAG adopted Plan Bay Area 2050 in October 2021, which includes a Regional Transportation Plan to guide regional transportation investment for revenues from federal, state, regional and local sources through 2050.

Congestion Management Program

CCTA serves as the Congestion Management Agency (CMA) for Contra Costa County. As the CMA, the CCTA plays several roles: it prepares a Congestion Management Program (CMP) and updates it every two years, it adopts and updates a Priority Development Area (PDA) strategy, and it helps develop regional plans and allocate regional funding. The relevant state legislation requires that urbanized counties in California prepare a CMP in order to obtain each county's share of gas tax

revenues. State legislation requires that each CMP define traffic LOS standards, transit service standards, a trip reduction and transportation demand management plan, a land use impact analysis program, and a capital improvement element.

Countywide Bicycle and Pedestrian Plan

In 2009, the CCTA adopted a Countywide Bicycle and Pedestrian Plan, which incorporated Antioch's local projects and programs, and subsequently was adopted by the City in 2009. Appendix D, updated in 2025, contains a list of locally sponsored bicycle and pedestrian improvement projects, including the proposed project.

City of Antioch General Plan

The General Plan contains the following policies relevant to transportation.

Policy	Description
7.3.2-s	Expand intersections to include additional turning and through lanes at intersections where needed to relieve congestion and improve intersection operations, so long as the intersection can continue to accommodate pedestrians and bicyclists. Avoid traffic system improvements that facilitate vehicular turning and bus movements, but that also discourage pedestrian or bicycle movements. This can be accomplished on wide streets by providing safe stopping places for pedestrian crossing the street.
7.4.2-f	Provide, as appropriate, bicycle lanes (Class II) or parallel bicycle/ pedestrian paths (Class I) along all arterial streets and high volume collector streets, as well as along major access routes to schools and parks.

4.17.1.2 *Existing Conditions*

L Street is a north-south roadway that stretches from Highway 4 in the south and terminates at a parking lot adjacent to the San Joaquin River along the City's northerly limits. Within the project limits, L Street narrows from four to two lanes between W. 9th Street to W. 10th Street and widens to four lanes again from W. 18th Street to Sycamore Drive. L Street is classified as an arterial roadway in the City's General Plan. Arterial roadways are defined as the major streets in the City that serve large volumes of through traffic between different sections of the urbanized area and provide access to freeways and expressways.

Bicycle and Pedestrian Facilities

While there are continuous sidewalks and marked pedestrian crossings on the east side of L Street within the project limits, there are no sidewalks on the west side of L Street from Loma Lane to W. 18th Street along the Contra Costa County Fairgrounds frontage. There is an existing Class II bike lane in the SB direction between W. 9th Street and W. 10th Street. There are currently no other designated bicycle facilities within the project limits.

Transit Facilities

There are five existing bus stops within the project limits in both the NB and SB directions at W. 9th Street (NB and SB), W. 18th Street (NB and SB), and William Reed Drive (NB only). These stops are served by Tri Delta Transit line 387, which provides service between the Antioch and Pittsburg Bay Area Rapid Transit (BART) stations. The Antioch BART station is located approximately 2.8 miles east of the project site and the Pittsburg BART station is located approximately 4.5 miles west of the project site. The Antioch BART station is the last stop on BART's yellow line. The BART system has multiple lines and extends to final destinations in Richmond, Millbrae, North San José, and Dublin/Pleasanton.

4.17.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian facilities?	☐	☐	☒	☐
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible land uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐
a) Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian facilities?				

The project is listed in, and therefore consistent with, the MTC's *Plan Bay Area 2050*, which is the Regional Transportation Plan (RTP).⁵⁸ The project is also included in the adopted 2025 Transportation Improvement Program (TIP) for the San Francisco Bay Area.⁵⁹

The project would improve the circulation system along the L Street corridor for all users by adding two travel lanes between W. 10th Street and W. 18th Street, constructing new sidewalks and a new Class II bike lane, adding new bus shelters to existing bus stops, and installing ADA compliant curb ramps. These improvements would be consistent with General Plan Vehicular Circulation Policy S and Non-Motorized Transportation Policy F. The proposed improvements would not conflict with

⁵⁸ RTP Project ID 21-T08-060

⁵⁹ TIP Project ID CC-230231

any program, plan, ordinance, or policy addressing the circulation system. **(Less than Significant Impact)**

-
- b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?
-

Historically, transportation analyses prepared under CEQA have utilized delay and congestion on the roadway system as the primary metric for the identification of traffic impacts and potential roadway improvements to relieve traffic congestion that may result due to a proposed project. However, the State of California has recognized the limitations of measuring and mitigating only vehicle delay at intersections. Therefore, in 2013, SB 743 became law, which requires jurisdictions to stop using congestion and delay metrics, such as level of service (LOS), as the measurement for CEQA impacts in a transportation analysis. Per SB 743, as of July 2020, all public agencies are required to base the determination of transportation impacts under CEQA on VMT rather than LOS.⁶⁰ Section 15064.3(b)(2) of the CEQA Guidelines states that transportation projects that reduce, or have no impact on, VMT should be presumed to cause a less than significant transportation impact.

The City of Antioch’s Transportation and VMT Impact Analysis Guidelines do not include a threshold for transportation improvement projects. Therefore, this discussion is based on Caltrans’ Transportation Analysis Under CEQA (2020) Guidelines. Given that the project would add two new travel lanes from L Street from W. 10th Street to 18th Street, it is considered a capacity-increasing project and cannot be screened out from a VMT analysis. Average daily VMT for the City was calculated for the baseline year (2020), opening year (2030), and design year (2050) under Build and No-Build scenarios by Kittelson & Associates. A summary of the project’s VMT impacts is shown below in Table 4.17-1.

Table 4.17-1: Summary of Average Daily VMT within the City of Antioch

Scenario	Baseline 2020	Opening Year 2030	Design Year 2050
No-Build Alternative	1,907,646	2,078,675	2,537,306
Build Alternative	--	2,078,433	2,536,652
Difference (Build vs. No-Build)	--	-243	-653

Source: Kittelson & Associates. *Contra Costa Countywide Travel Demand Model Air Quality/Noise Inputs. Vehicle Miles and Vehicle Hours of Travel*. March 21, 2025.

As shown in Table 4.17-1, average daily VMT will continue to increase throughout the City due to ongoing development and population increases. While the project would add roadway capacity between W. 10th Street and W. 18th Street, implementation of the project would result in a

⁶⁰ VMT measures the amount of distance people travel in personal vehicles to destinations in a day. VMT is measured by multiplying the total vehicle trips by the average distance of those trips.

reduction in average daily VMT as compared to No-Build conditions because it would improve multimodal facilities that would encourage the use of active transportation. Therefore, the project would not result in a significant VMT impact and would not conflict with or be inconsistent with CEQA Guidelines Section 15064.3 (b). **(Less than Significant Impact)**

-
- c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
-

The project would improve safety conditions along the L Street corridor by closing gaps in bicycle and pedestrian facilities and installing ADA compliant curb ramps. The project does not propose any incompatible uses. **(Less than Significant Impact)**

-
- d) Would the project result in inadequate emergency access?
-

The project would not sever or adversely impact emergency response routes along the L Street corridor. During the construction phase of the project, any temporary lane or road closures and detours would be coordinated in advance with the CCCFPD, as well as with other emergency responders (e.g., police, ambulance, etc.). Upon completion of the project, emergency access through the project corridor would be improved. **(Less than Significant Impact)**

4.18 Tribal Cultural Resources

The following discussion is based upon an Archaeological Survey Report (ASR) prepared by Archaeological/Historical Consultants in March 2026. A copy of the ASR, which is a confidential report, is on file at the City of Antioch Public Works Department and is available upon request with appropriate credentials.

4.18.1 Environmental Setting

4.18.1.1 *Regulatory Framework*

State

Assembly Bill 52

AB 52, effective July 2015, established a new category of resources for consideration by public agencies called Tribal Cultural Resources (TCRs). AB 52 requires lead agencies to provide notice of projects to tribes that are traditionally and culturally affiliated with the geographic area if they have requested to be notified. Where a project may have a significant impact on a TCR, consultation is required until the parties agree to measures to mitigate or avoid a significant effect on a TCR or until it is concluded that mutual agreement cannot be reached.

Under AB 52, TCRs are defined as follows:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are also either:
 - Included or determined to be eligible for inclusion in the California Register of Historic Resources, or
 - Included in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).
- A resource determined by the lead agency to be a TCR.

Local

City of Antioch General Plan

The General Plan contains the following policies relevant to TCRs.

Policy	Description
10.9.2-a	Require new development to analyze, and therefore avoid or mitigate impacts to archaeological, paleontological, and historic resources. Require surveys for projects having the potential to impact archaeological, paleontological, and historic resources. If significant resources are found to be present, provide mitigation in accordance with applicable in accordance with applicable CEQA Guidelines and provisions of the California Public Resources Code.

10.9.2-b	If avoidance and/or preservation in the location of any potentially significant cultural resource is not possible, the following measures shall be initiated for each impacted site: • A participant-observer from the appropriate Indian Band or Tribe shall be used during archaeological testing or excavation in the project site. • Prior to the issuance of a grading permit for the project, the project proponent shall develop a test-level research design detailing how the cultural resource investigation shall be executed and providing specific research questions that shall be addressed through the excavation program. In particular, the testing program shall characterize the site constituents, horizontal and vertical extent, and, if possible, period of use. The testing program shall also address the California Register and National Register eligibility of the cultural resource and make recommendations as to the suitability of the resource for listing on either Register. The research design shall be submitted to the City of Antioch for review and comment. For sites determined, through the Testing Program, to be ineligible for listing on either the California or National Register, execution of the Testing Program will suffice as mitigation of project impacts to this resource. • After approval of the research design and prior to the issuance of a grading permit, the project proponent shall complete the excavation program as specified in the research design. The results of this excavation program shall be presented in a technical report that follows the City's outline for Archaeological Testing. The Test Level Report shall be submitted to the City for review and comment. If cultural resources that would be affected by the project are found ineligible for listing on the California or National Register, test-level investigations will have depleted the scientific value of the sites and the project can proceed. • If the resource is identified as being potentially eligible for either the California or National Register, and project designs cannot be altered to avoid impacting the site, a Treatment Program to mitigate project effects shall be initiated. A Treatment Plan detailing the objectives of the Treatment Program shall be developed. The Treatment Plan shall contain specific, testable hypotheses relative to the sites under study and shall attempt to address the potential of the sites to address these research questions. The Treatment Plan shall be submitted to the City for review and comment. • After approval of the Treatment Plan, the Treatment Program for affected, eligible sites shall be initiated. Typically, a Treatment Program involves excavation of a statistically representative sample of the site to preserve those resource values that qualify the site as being eligible for the California or National Register. At the conclusion of the excavation or research program, a Treatment Report shall be developed. This data recovery report shall be submitted to the City for review and comment.
10.9.2-d	As a standard condition of approval for new development projects, require that if unanticipated cultural or paleontological resources are encountered during grading, alteration of earth materials in the vicinity of the find be halted until a qualified expert has evaluated the find and recorded identified cultural resources.

4.18.1.2 *Existing Conditions*

The project Area is likely within the Julpun local tribe's traditional territory who spoke the Bay Miwok language. Bay Miwok speakers spanned from Suisun Bay to just south of Mount Diablo and eastward to the Sacramento-San Joaquin delta. The Bay Miwok were food collectors and hunters.

The soils underlying the site are alluvial deposits from the late Pleistocene and Holocene eras. In early historic times, the nearest seasonal freshwater was West Antioch Creek, approximately 0.2 miles from the southern project limits, and the nearest permanent source of freshwater was Kirker Creek, approximately 1.2 miles west of the project limits. Considering these factors, the site was determined to have moderate sensitivity for surface TCRs and a low sensitivity for buried TCRs.

Native American Correspondence

The Native American Heritage Commission (NAHC) was contacted for a Sacred Lands File search for the project area on January 30, 2025, and was found to be negative. The NAHC provided a contact list of 34 individuals representing 15 Native American tribal organizations to contact for more information. Consultation letters were sent on September 10, 2025 and follow-up emails were sent and phone calls were made on October 1, 2025. The following responses were received:

- The Buena Vista Rancheria of Me-Wuk Indians acknowledged receipt of the letter and declined consultation.
- The Chicken Ranch Rancheria of Me-Wuk Indians stated that they have no comments, questions, or concerns about the project.
- The Confederated Villages of Lisjan Nation requested copies of the record search results, Sacred Lands File search results, and the ASR. The requested files were provided in February 2026.
- The Muwekma Ohlone Tribe of the SF Bay Area requested a consultation meeting, which took place on October 30, 2025. During the consultation meeting, the Tribe voiced concerns about potentially sensitive areas and requested a copy of the ASR. The ASR was provided in February 2026.
- The Northern Valley Yokut/Ohlone Tribe recommended tribal monitoring for the project. A consultation meeting was offered but not scheduled. Caltrans consultation with the Tribe is ongoing to satisfy Section 106 requirements for NEPA compliance.
- The Wilton Rancheria Department of Cultural Preservation requested a consultation meeting, which took place on October 16, 2025. The Tribe asked for specific information regarding construction methods and the archaeological sensitivity assessment and expressed concerns due to the proximity of the San Francisco Bay. The Tribe requested a copy of the ASR, which was provided in February 2026.

4.18.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?	☐	☒	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

- a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?

The site has moderate sensitivity for surface TCRs and low sensitivity for buried TCRs. The project would include excavation. The maximum excavation depth for the project would be approximately 15 feet for traffic signals, seven feet for storm drain line extensions, 4.5 feet for bioretention areas, and 2.5 feet for the roadway widening. The project could impact previously undiscovered Native American resources. However, with implementation of MM CUL-1.1 and MM CUL-2.1, outlined in Section 4.5 Cultural Resources, impacts would be reduced to a less than significant level by halting work in the event that a resource is encountered. Therefore, the project would not cause a substantial adverse change in the significance of a TCR. **(Less than Significant Impact with Mitigation Incorporated)**

-
- b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?
-

Refer to the response under checklist question a), above. **(Less than Significant Impact with Mitigation Incorporated)**

4.19 Utilities and Service Systems

4.19.1 Environmental Setting

4.19.1.1 *Regulatory Framework*

Local

City of Antioch Construction and Demolition Recycling Ordinance

The City of Antioch's Construction and Demolition Recycling Ordinance requires at a minimum a 65 percent diversion rate for construction and demolition materials, by weight, away from landfills. It is the responsibility of owners and/or builders to document compliance with the City requirements through submission of a Waste Management Plan (WMP).

4.19.1.2 *Existing Conditions*

There are existing water and storm drain main lines in L Street and existing storm drain curb inlets. Within the project limits, there are existing overhead utility lines along the east side of L Street between Loma Lane and W. 10th Street. The Kinder Morgan pipeline delivering petroleum crosses over L Street between W. 18th Street and Sycamore Drive. The use of utilities for operation of the L Street roadway corridor is limited to electricity for powering traffic signals and streetlights.

4.19.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☒	☐	☐
b) Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Be noncompliant with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

-
- a) Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?
-

The project would not result in an increase in demand for utilities that would require new or expanded facilities. The project would require the relocation of storm drain lines, a water meter, underground electrical vaults, light poles, and electrical and telecommunication boxes. The project would also extend the storm drain main line in L Street to accommodate connections to the proposed bioretention facilities. The length of storm drain lines to be relocated would range in size from approximately two feet to 93 feet. All other existing utilities would be protected in place. Utility relocations and adjustments would occur within the existing City right-of-way. The proposed utility relocations and adjustments would be relatively minor and would be subject to the construction-related mitigation measures and standard conditions described throughout this Initial Study (see Section 4.3 Air Quality, Section 4.4 Biological Resources, Section 4.5 Cultural Resources, Section 4.9 Hazards and Hazardous Materials, Section 4.10 Hydrology and Water Quality, and Section 4.13 Noise). Therefore, with implementation of the construction-related mitigation measures previously described throughout this Initial Study, the project would not result in a significant environmental effect associated with the proposed utility relocations and adjustments.

(Less than Significant Impact with Mitigation Incorporated)

-
- b) Would the project have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?
-

The project would include landscape irrigation, for medians and bioretention areas, however, water used for project landscaping would be minor compared with the existing water supplies. **(Less than Significant Impact)**

-
- c) Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
-

The project would not result in the generation of any wastewater. **(No Impact)**

-
- d) Would the project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?
-

The operational phase of the project would not generate solid waste. Solid waste generated during the construction phase would be recycled in accordance with the City's Construction and Demolition Recycling Ordinance. Therefore, the project would not generate excessive waste. **(Less than Significant Impact)**

-
- e) Would the project be noncompliant with federal, state, or local management and reduction statutes and regulations related to solid waste?
-

Please see response to question d), above. **(Less than Significant Impact)**

4.20 Wildfire

4.20.1 Environmental Setting

4.20.1.1 *Existing Conditions*

The project is not located within a fire hazard severity zone.⁶¹

4.20.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

The project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones; therefore, the project would not result in wildfire impacts. **(No Impact)**

⁶¹ CAL FIRE. Fire Hazard Severity Zone Viewer. Accessed August 5, 2025.
<https://experience.arcgis.com/experience/6a9cb66bb1824cd98756812af41292a0>

4.21 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☒	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?				

As previously discussed in Section 4.4 Biological Resources, the project has the potential to impact nesting migratory birds and raptors during construction. However, with implementation of MM BIO-1.1, impacts to nesting birds would be reduced to a less than significant level.

As discussed in Section 4.5 Cultural Resources, the project may impact previously undiscovered buried archaeological resources during ground-disturbing construction activities. However, with implementation of the City's Standard Conditions of Approval and MM CUL-1.1, any potential impacts would be reduced to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

b) Does the project have impacts that are individually limited, but cumulatively considerable?

Cumulative impacts arise due to the linking of impacts from past, current, and reasonably foreseeable future projects in the region. Other projects in the vicinity that are evaluated in this cumulative analysis are summarized below in Table 4.21-1.

Table 4.21-1: Cumulative Projects List

Name	Description	Distance to Project Site	Status
L Street Pathway to Transit Bicycle & Pedestrian Improvements, Phase 1	The project will construct concrete curb, gutter, sidewalk, and curb ramps, minor median island modifications, pavement micro-surfacing, and installing pedestrian safety flashing beacons at various locations. The project will also re-stripe to provide a Class II bike lane from 10 th St to Antioch Marina Circle and a Class III bike route from Lemontree Way to Sycamore Drive.	0 feet to 0.4 miles	Approved
Antioch Brackish Water Desalination Project	The project will utilize existing infrastructure to the extent possible and construct new desalination facilities and associated infrastructure to improve the City's water supply reliability and operational flexibility. The project would include a new river intake pump station, 3,000 feet of new pipeline connecting to the City's existing raw water pipeline, a new desalination facility, and approximately 4.3 miles of a new 12-inch brine disposal pipeline. The brine disposal pipeline will connect the new desalination facility to an existing outfall into the San Joaquin River. A portion of the new pipeline would be located	0 feet to 1.5 miles	Under construction

Name	Description	Distance to Project Site	Status
	along L Street, between W. 10 th Street and W. 18 th Street.		
Contra Loma Estates Park Renovation	The project will include grading, landscaping, construction of a dog park, installation of underground utilities, irrigation facilities, pathway and sport court lighting, recreational equipment and restroom facilities, traffic control, and water pollution control.	0.25 miles	Under construction

The project would have no impact on agriculture and forestry resources, mineral resources, population and housing, recreation, and wildfire. Therefore, the project would not contribute to a cumulative impact with regard to these resource areas.

Because air pollutant and GHG emissions would contribute to regional and global emissions of such pollutants, the identified thresholds developed by the Air District and used by the City of Antioch were developed such that a project-level impact would also be a cumulatively considerable impact. The project would not result in significant emissions of air pollutants or GHG emissions and, therefore, would not make a substantial contribution to air quality or GHG emissions impacts.

Impacts discussed in Aesthetics, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Land Use, Noise, and Tribal Cultural Resources would be limited to the project site and adjacent parcels. The Contra Loma Estates Park Renovation project is located approximately 0.25-mile southwest of the project's southern limits and, therefore, the project would not contribute toward cumulative impacts on these resources in combination with the Contra Loma Estates Park Renovation project. Similar to the proposed project, the L Street Phase I and Brackish Water Desalination projects would not result in any land use changes and would not make any substantial visual changes to the project area. These projects would result in similar construction-related impacts along the L Street corridor as the proposed project. However, the project would implement mitigation measures and standard control measures to reduce impacts to a less than significant level and would not make a substantial contribution toward a cumulative impact. Any undiscovered cultural resources, tribal cultural resources, or paleontological resources encountered during ground-disturbing construction activities would be moved to a location where they would not be disturbed by construction activities from multiple projects. Similarly, any soils or groundwater impacted by hazardous materials would be removed and properly disposed of and would not result in additional impacts from multiple projects.

Construction noise and vibration would be temporary and would be kept to a less than significant level with implementation of MM NOI-1.1 and MM NOI-2.1. The Brackish Water Desalination

project was inaugurated on September 15, 2025 and is now in operation.⁶² Therefore, the project would not result in a cumulative noise impact with the Brackish Water Desalination project, which has completed construction. It is unlikely that construction activities of the L Street Phase I project would occur at the same time and in the same location as the proposed project. Construction bids for the L Street Phase I project were considered by the Antioch City Council in April 2025⁶³ and the Council approved to split the L Street Pathway to Transit Project into two projects on October 14, 2025.⁶⁴ The Phase I project would likely be completed prior to the proposed project. Additionally, similar to the proposed project, construction of the Phase I project would move linearly through the L Street corridor and would not result in prolonged noise exposure to the same sensitive receptors over long periods of time.

All the cumulative projects listed in Table 4.21-1 would be subject to similar hydrological conditions as the proposed project. All the cumulative projects would also be subject to the NPDES (including preparation of a SWPPP if disturbance is greater than one acre). For these reasons, the cumulative impact of the project combined with other cumulative projects would not result in a significant cumulative hydrology or water quality impact.

The proposed project would not have any permanent impact on public services as it would not introduce any new housing or businesses to the site. The proposed project, and the other cumulative projects occurring along the L Street corridor, could result in temporary delays during construction that could affect emergency response times. All temporary road closures, detours, and delays would be coordinated with the APD and CCCFPD to ensure that any cumulative impact on emergency response times is reduced to a less than significant level.

The proposed project would result in a reduction in daily average VMT along L Street corridor, as it would implement multimodal improvements and thus, would not have the potential to contribute to a cumulatively significant VMT impact.

The proposed project would have a minimal impact on demand for utility services and would not make a considerable contribution toward utility demand. The project would include the relocation of utilities; the potential cumulative impacts associated with this process during the construction phase have been addressed throughout the discussion above and would not result in a significant cumulative impact.

For these reasons, the project would not result in a cumulatively considerable environmental impact, with incorporation of the various mitigation measures and standard conditions described in this Initial Study. **(Less than Significant Impact with Mitigation Incorporated)**

⁶² City of Antioch. "Water Treatment". Accessed April 15, 2026. <https://www.antiochca.gov/583/Water-Treatment>

⁶³ City of Antioch. *City Council Meeting Minutes. Special/Regular Meeting*. April 22, 2025.

⁶⁴ City of Antioch. *City Council Meeting Minutes. Regular Meeting*. October 14, 2025.

-
- c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?
-

The project would have the potential to cause adverse effects on human beings during the construction phase via air pollutant emissions, release of hazardous materials, and noise. As described in Section 4.3 Air Quality, project construction would not exceed the Air District's thresholds of significance for criteria air pollutant emissions and would incorporate BMPs consistent with Caltrans' Standard Specifications, resulting in a less than significant health risk impact on nearby sensitive receptors.

As described in Section 4.9 Hazards and Hazardous Materials, the project could disturb existing hazardous materials on the roadways and soils along the L Street corridor. However, with implementation of MM HAZ-1.1 through MM HAZ-1.4, hazardous materials encountered during construction would be properly handled and disposed of so as not to adversely affect workers and nearby sensitive receptors.

As described in Section 4.13 Noise, project construction would not result in noise levels exceeding Caltrans' thresholds of significance. The operational phase of the project would not have any adverse effects on human beings as it would improve circulation, access, and safety through the project corridor for all users. Therefore, with implementation of the mitigation measures described above, the project would not have an adverse effect on human beings. **(Less than Significant Impact with Mitigation Incorporated)**

Section 5.0 References

The analysis in this Initial Study is based on the professional judgement and expertise of the environmental specialists preparing this document, based upon review of the site, surrounding conditions, site plans, and the following references:

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Section 6.0 Lead Agency and Consultants

6.1 Lead Agency

City of Antioch, Public Works Department

Scott Buenting, Public Works Director/City Engineer

Mitchell Loving, Junior Engineer

6.2 Consultants

David J. Powers & Associates, Inc.

Environmental Consultants and Planners

Will Burns, Principal Project Manager

Connor Tutino, Project Manager

Ryan Osako, Graphic Artist

Illingworth & Rodkin, Inc.

Air Quality and Noise Consultants

Jay Witt, Senior Air Quality Consultant

Heather Bruce, Senior Noise Consultant

Archaeological/Historical Consultants

Cultural Resources Consultants

Daniel Shoup, RPA, Principal

Jennifer Pennell, RPA, Archaeologist

Parikh Consultants, Inc.

Hazardous Materials Consultants

Craig Langbein, P.G., C.E.G., Project Geologist

Gary Parikh, PE, GE, Project Manager

Section 7.0 Acronyms and Abbreviations

AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACM	asbestos-containing material
ADA	Americans with Disabilities Act
ALUC	Airport Land Use Commission
Air District	Bay Area Air Quality Management District
APD	Antioch Police Department
APN	Assessor's Parcel Number
AQCTF	Air Quality Conformity Task Force
BART	Bay Area Rapid Transit
Bay Area	San Francisco Bay Area
bgs	below ground surface
BMPs	Best management practices
CAAQS	California Ambient Air Quality Standard
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Department of Industrial Relations, Division of Occupational Safety and Health
CalARP	California Accidental Release Prevention
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCCFPD	Contra Costa County Fire Protection District
CCCWP	Contra Costa Clean Water Program
CCTA	Contra Costa Transportation Authority
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFC	chlorofluorocarbon
CFR	Code of Federal Regulations
CGS	California Geological Survey

CH ₄	methane
CLUP	Comprehensive Land Use Plan
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalents
CRHR	California Register of Historical Resources
CT-EMFAC2021	Caltrans Emissions Factors program
CUPA	Certified Unified Program Agency
dBA	A-weighted decibel
DNL	Day/Night Average Sound Level
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
DTSP	Downtown Specific Plan
EIR	Environmental Impact Report
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulations
FHSZ	Fire Hazard Severity Zone
FMMP	Farmland Mapping and Monitoring Program
GHG	greenhouse gas
GWh	gigawatt hour
GWP	Global Warming Potential
hp	horsepower
HSWA	Hazardous and Solid Waste Amendments
ibid	Same source as previous footnote
L _{eq}	Energy-Equivalent Sound/Noise Descriptor
L _{max}	Maximum A-weighted noise level during a measurement period
LBP	lead-based paint
LID	Low impact development

LOS	Level of Service
LRA	Local Responsibility Area
MBTA	Migratory Bird Treaty Act
MMTCO ₂ e	million metric tons of carbon dioxide equivalent
MND	Mitigated Negative Declaration
mpg	miles per gallon
MRP	Municipal Regional Permit
MSL	mean sea level
MTC	Metropolitan Transportation Commission
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standard
NAHC	Native American Heritage Commission
NB	Northbound
NCP	National Contingency Plan
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO ₂	nitrogen dioxide
NOA	naturally occurring asbestos
NOD	Notice of Determination
NO _x	nitrogen oxides
NRHP	National Register of Historic Places
O ₃	ozone
PCB	polychlorinated biphenyls
PFC	perfluorocarbon
PDA	Priority Development Areas
PM	particulate matter
PM ₁₀	particulate matter with a diameter of 10 microns or less
PM _{2.5}	particulate matter with a diameter of 2.5 microns or less
POAQC	Project of air quality concern
PPV	Peak Particle Velocity
RAP	Removal Action Plan
RCRA	Resource Conservation and Recovery Act
ROG	reactive organic gases

ROW	Right-of-way
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	State Bill
SB	Southbound
SCS	Sustainable Communities Strategy
SF ₆	sulfur hexafluoride
SHMA	Seismic Hazards Mapping Act
SMARA	Surface Mining and Reclamation Act
SMGB	State Mining and Geology Board
SMP	Site Management Plan
SO _x	sulfur oxides
SR	State Route
SRA	State Responsibility Area
SWRCB	State Water Resources Control Board
TACs	Toxic Air Contaminants
Title 24	Title 24, Part 6 of the California Code of Regulations
TSCA	Toxic Substances Control Act
UPRR	Union Pacific Railroad
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
VDECS	Verified Diesel Emissions Control Strategy
VMT	vehicle miles traveled
Williamson Act	California Land Conservation Act