Alameda County
Transportation Commission

INITIAL STUDY WITH PROPOSED MITIGATED NEGATIVE DECLARATION

Alameda CTC Rail Safety Enhancement Project

Case Number:

Project Location: Virginia Street, Hearst Avenue, Berkeley, California, 94710 (APN: Virginia Street - 57-2112-5 / 57-2111-4, Hearst Avenue - 57-2104-3 / 57-2104-2)

General Plan Designation: Manufacturing, Manufacturing Mixed-Use & Avenue Commercial

Project Description: The project proposes safety improvements to two existing at-grade rail crossings on Virginia Street and Hearst Avenue in the City of Berkeley in Alameda County. The improvements are designed to increase safety for motorists and pedestrians. Currently the two crossings consist of two-lane roadways with parking on both sides, paved medians, sidewalks, and landscaping within the UPRR right-of-way. Single-arm gates are present in each direction of traffic. Safety improvements at both crossings include installation new security gates/fencing, medians, pavement markings, and roadside signals. Additional improvements include Americans with Disabilities Act (ADA) detectable pavers, warning devices, “No Trespassing” signs, replacement of signal arms, and installation of new sidewalks.

March 2023

PREPARED FOR:

Alameda County Transportation Commission

PREPARED BY:

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INITIAL STUDY

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Technical Memoranda

All technical memoranda are incorporated by reference into the Initial Study. The technical memoranda for the project are available upon request.

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INITIAL STUDY

1. Introduction

An application for proposed safety improvements at two existing at-grade rail crossings in the City of Berkeley has been submitted to the Berkeley Planning and Development Department for discretionary review. The Alameda County Transportation Commission (Alameda CTC), as Lead Agency, has determined that the project is subject to the California Environmental Quality Act (CEQA), and that the preparation of an Initial Study is required.

This Initial Study evaluates the potential environmental effects that could result from the construction and operation of the proposed Project. This Initial Study has been prepared in accordance with CEQA (Public Resources Code §21000 et seq.), and the State CEQA Guidelines (Title 14, California Code of Regulations, §15000 et seq.). The Alameda CTC uses Appendix G of the State CEQA Guidelines as the thresholds of significance unless another threshold of significance is expressly identified in the document.

Based on the analysis provided within this Initial Study, the Alameda CTC has concluded that, with incorporation of the identified mitigation as agreed to by the Applicant, the Project would not result in significant impacts on the environment and, therefore, that the preparation of an Initial Study/Mitigated Negative Declaration is appropriate under CEQA. This Initial Study and Mitigated Negative Declaration (IS/MND) is intended as an informational document and is ultimately required to be adopted by the decision-making body prior to project approval by the City of Berkeley. Because it is an informational document, the project's effects are shown both without and with incorporation of the mitigation the Applicant has agreed to incorporate into the Project.

1.1 Purpose of an Initial Study

The CEQA was enacted in 1970 with several basic purposes, including: (1) to inform governmental decision makers and the public about the potential significant environmental effects of proposed projects; (2) to identify ways that environmental damage can be avoided or significantly reduced; (3) to prevent significant, avoidable damage to the environment by requiring changes in projects through the use of feasible alternatives or mitigation measures; and (4) to disclose to the public the reasons behind a project's approval even if significant environmental effects are anticipated.

An Initial Study is a preliminary analysis conducted by the Lead Agency, in consultation with other agencies (responsible or trustee agencies, as applicable), to determine whether there is substantial evidence that a project may have a significant effect on the environment. If the Initial Study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, the Lead Agency shall prepare a Negative Declaration. If the Initial Study identifies potentially significant effects but that revisions have been made by or agreed to by the applicant that would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, a Mitigated Negative Declaration is appropriate. If the Initial Study concludes that neither a Negative Declaration nor Mitigated Negative Declaration is appropriate, an EIR is normally required.[1]

[1] State CEQA Guidelines Section 15063(b)(1) identifies the following three options for the Lead Agency when there is substantial evidence that the project may cause a significant effect on the environment: "(A) Prepare an EIR, or (B) Use a previously prepared EIR which the Lead Agency determines would adequately analyze the project at hand, or (C) Determine, pursuant to a

1.2 Organization of this Initial Study

This Initial Study is organized into sections as follows:

1. Introduction

Describes the purpose and content of the Initial Study and provides an overview of the CEQA process.

2. Executive Summary

Provides Project information, identifies key areas of environmental concern, and includes a determination whether the project may have a significant effect on the environment.

3. Project Description

Provides a description of the environmental setting and the Project, including project characteristics and a list of discretionary actions.

4. Evaluation of Environmental Impacts

Contains the completed Initial Study Checklist and discussion of the environmental factors that would be potentially affected by the Project.

1.3 CEQA Process

In compliance with the State CEQA Guidelines, the Alameda CTC, as the Lead Agency for the project, will provide opportunities for the public to participate in the environmental review process. As described below, throughout the CEQA process, efforts will be made to inform, contact, and solicit input on the project from various government agencies and the general public, including stakeholders and other interested parties.

Initial Study

At the onset of the environmental review process, the Alameda CTC prepared this Initial Study to determine if the proposed Project may have a significant effect on the environment. This Initial Study determined that the proposed Project could have potentially significant environmental impacts, but that the identified mitigation measures which the Applicant agreed to incorporate into the Project would avoid or reduce such impacts to a point where clearly no significant impacts would occur.

A Notice of Intent to Adopt a Mitigated Negative Declaration (MND) or Negative Declaration (ND) is provided to inform the general public, responsible agencies, trustee agencies, and the county clerk of the availability of the document and the locations where the document can be reviewed. A 20-day review period (or 30-day review period when the document is submitted to the State Clearinghouse for state agency review) is identified to allow the public and agencies to review the document. The notice is mailed to any interested parties and is noticed to the public through publication in a newspaper of general circulation.

The decision-making body then considers the Mitigated Negative Declaration or Negative Declaration, together with any comments received during the public review process, and may adopt the MND or ND and approve the project. In addition, when approving a project for which an MND or ND has been prepared, the decision-making body must find that there is no substantial evidence that the project will have a significant effect on the environment, and that the ND or MND reflects the lead agency's

program EIR, tiering, or another appropriate process, which of a project's effects were adequately examined by an earlier EIR or negative declaration.

independent judgement and analysis. When adopting an MND, the lead agency must also adopt a mitigation monitoring and reporting program to ensure that all proposed mitigation measures are implemented to mitigate or avoid significant environmental effects.

2 Executive Summary

Project Title	Alameda CTC Rail Safety Enhancement Program
Lead Agency and Address	Alameda County Transportation Commission 1111 Broadway #800, Oakland, CA 94607
Staff Contact	Jhay Delos Reyes
Phone Number	510-208-7469
Email Address	jdelosreyes@alamedactc.org
Project Location	Virginia Street, Hearst Avenue, Berkeley, California, 94710
Property Owner/Project Proponent	City of Berkeley/Alameda County Transportation Commission
Property APN	Virginia Street - 57-2112-5 / 57-2111-4 Hearst Avenue - 57-2104-3 / 57-2104-2
General Plan Designation	Manufacturing, Manufacturing Mixed-Use & Avenue Commercial
Zoning	Mixed Use/Light Industrial (MULI), Manufacturing & West Berkeley Commercial (C-W)
Council District	Rashi Kesarwani-District 1 Terry Taplin-District 2
Applicant	Alameda County Transportation Commission
Address	1111 Broadway #800, Oakland, CA 94607
Phone Number	(510) 208-7400

2.1 Project Overview

The project proposes safety improvements to two existing at-grade rail crossings on Virginia Street and Hearst Avenue in the City of Berkeley in Alameda County. The improvements are designed to increase safety for motorists and pedestrians. Currently the two crossings consist of two-lane roadways with parking on both sides, paved medians, sidewalks, and landscaping within the UPRR right-of-way. Single-arm gates are present in each direction of traffic. Safety improvements at both crossings include installation new security gates/fencing, medians, pavement markings, and roadside signals. Additional improvements include Americans with Disabilities Act (ADA) detectable pavers, warning devices, “No Trespassing” signs, replacement of signal arms, and installation of new sidewalks.

2.2 Environmental Setting

The project site consists of two existing at-grade rail crossings in the City of Berkeley in Alameda County. The crossings are in the same general area of western Berkeley in predominantly business, commercial, and light industrial areas. The crossings are along Union Pacific Railroad (UPRR) tracks where UPRR tracks intersect with local streets. The crossings are listed in Table 1 below and Figure 1.

2.3 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist included in Section 4, Evaluation of Environmental Impacts.

- ☐ Aesthetics
- ☒ Air Quality
- ☒ Cultural Resources
- ☐ Greenhouse Gas Emissions
- ☐ Hydrology & Water Quality
- ☐ Mineral Resources
- ☐ Population & Housing
- ☐ Parks & Recreation
- ☒ Tribal Cultural Resources
- ☒ Mandatory Findings of Significance
- ☐ Agriculture & Forestry Resources
- ☒ Biological Resources
- ☒ Geology & Soils
- ☒ Hazards & Hazardous Materials
- ☐ Land Use & Planning
- ☐ Noise & Vibration
- ☐ Public Services
- ☐ Transportation & Circulation
- ☐ Utilities & Service Systems

All impacts would be reduced to less-than-significant levels with adherence to applicable policies, and regulations, and incorporation of best management practices (BMPs) and mitigation measures discussed in Section 4, Evaluation of Environmental Impacts.

3 Project Description

3.1 Project Location and Setting

The project site consists of two existing at-grade rail crossings in the City of Berkeley in California. Crossings are in the same general area of western Berkeley in predominantly business, commercial, and light industrial areas. Alameda County Transportation Commission (Alameda CTC) is the Lead Agency under the California Environmental Quality Act (CEQA). The crossings are along Union Pacific Railroad (UPRR) tracks where UPRR tracks intersect with local streets. The crossings are listed in Table 1 below. The Map ID number corresponds to crossing location shown on Figure 1**.** Detailed drawings of each crossing are included in this initial study as attachment A.

Table 1 Crossing Locations

Jurisdiction	Intersection	Map ID
Berkeley	Virginia Street	1
	Hearst Avenue	2

Source: Alameda CTC, 2022

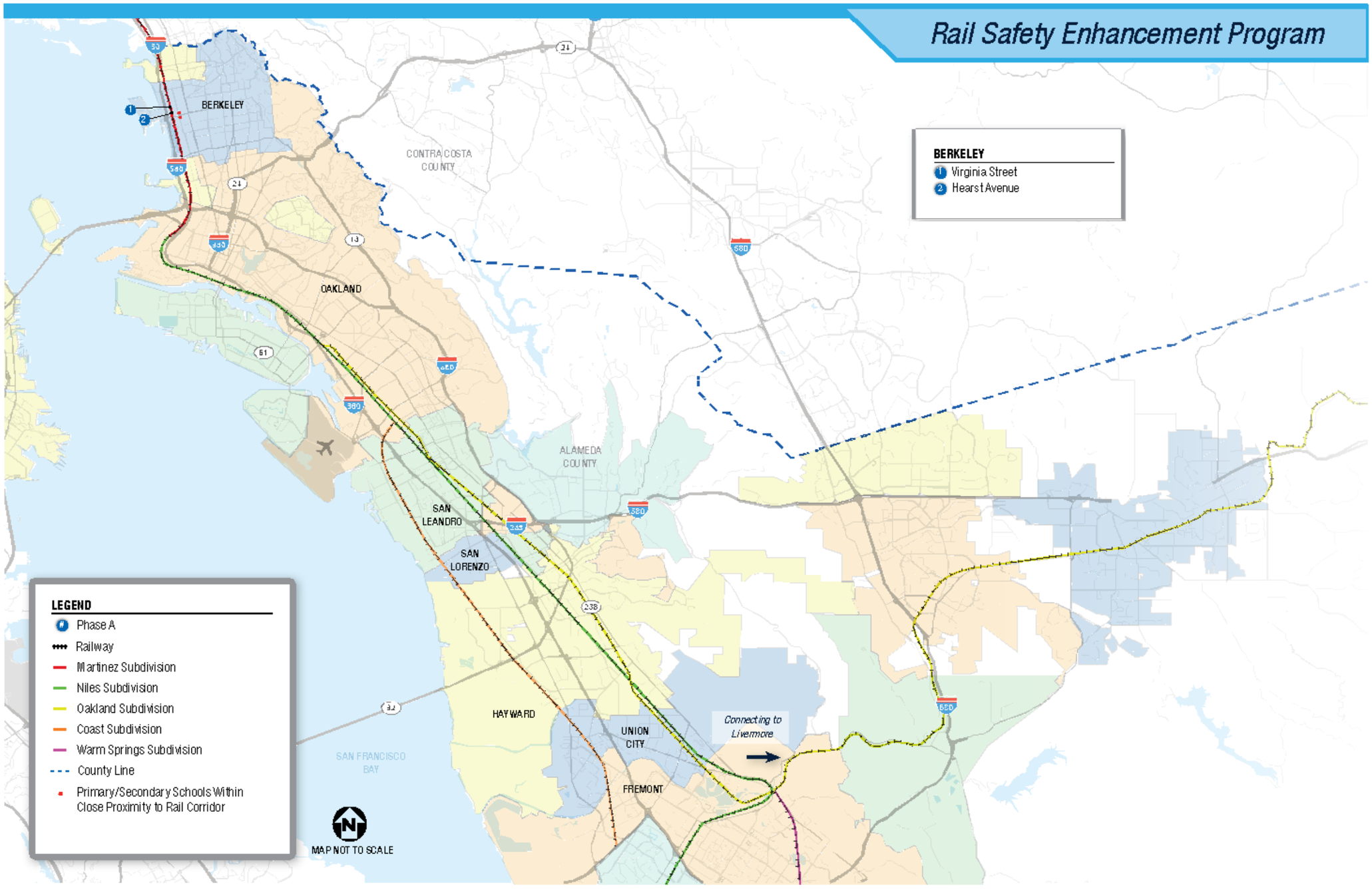

Figure 1: Project Site Map

3.2 Site Conditions

Within Berkeley, General Plan land use designations include Manufacturing, Manufacturing Mixed-Use, and Avenue Commercial. Zoning includes Mixed Use/Light Industrial (MULI), Manufacturing, and West Berkeley Commercial (C-W). Existing development immediately surrounding the crossing locations is predominantly warehouse, aggregate distribution, parking lots, and manufacturing interspersed with commercial and business/office park uses. The Hearst Avenue crossing is within a quarter mile of Fusion Academy, which is approximately 1,000 feet to the east.

Both crossings consist of developed area. The project site is predominantly covered in impervious surfaces except for the gravel shoulder next to UPRR tracks. Both local streets are two-lane streets with the existing railroad gates (one in each direction) with lights and street painting at the crossing location. The existing conditions at each crossing location are described in detail in Table 2.

Table 2 Existing Conditions

Intersection	Description	Map ID
Virginia Street	Two-lane roadway with parking on both sides, paved median, sidewalks, and landscaping. Very little pervious surface except at landscaped areas and within the UPRR right-of-way. Single-arm gates in each direction of traffic.	1
Hearst Avenue	Two-lane roadway with parking on both sides, paved median, sidewalks, and landscaping. Very little pervious surface except at landscaped areas and within the UPRR right-of-way. Single-arm gates in each direction of traffic.	2

Source: Circlepoint, 2022

Figure 2 shows existing conditions at the Virginia Street crossing and Figure 3 shows the existing conditions at the Hearst Avenue crossing. Each photograph is taken from the east side of the crossing looking west. Figure 4 depicts the typical improvements proposed at each crossing in the program for illustrative purposes.

Figure 2 Virginia Street Crossing – Existing Conditions

Figure 3 Hearst Avenue Crossing – Existing Conditions

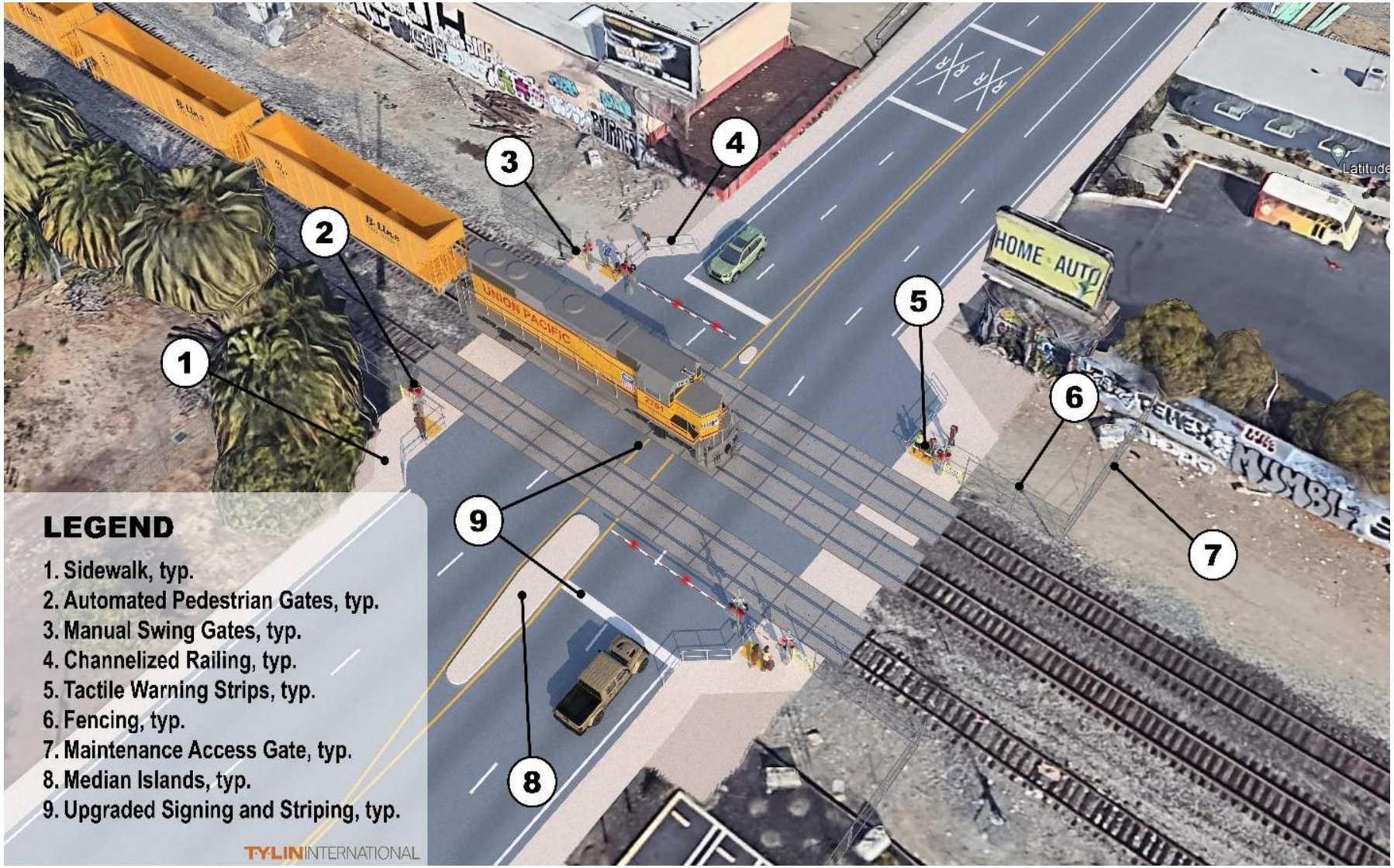

Figure 4 Illustration of Typical Improvements

3.3 Project Components

The project consists of rail safety improvements to existing at-grade rail crossings. The improvements are designed to increase safety for motorists and pedestrians. This includes restricting access to UPRR tracks, improving signage, accessibility improvements, and other safety features. The proposed safety improvements for each crossing are listed in Table 3.

Table 3 Proposed Safety Improvements

Intersection	Description	Excavation/Grading	Map ID
Virginia Street	The following improvements are proposed: • Remove portions of existing pavement/concrete • Install new security access gates/fencing, medians, pavement markings, pavement, roadside signs, Americans with Disabilities Act (ADA) detectable pavers, warning devices, and "No Trespassing" signs • Replacement of signal arms • Installation of new sidewalk	Minor excavation and grading would be required to construct new pavement and curbs and gutters on the project site, to conform new sidewalks to existing, and to create new medians. Minor grading would be required to conform new sidewalks to existing.	1
Hearst Avenue	The following improvements are proposed: • Remove portions of existing pavement/concrete • Install new security access gates/fencing, medians, pavement markings, pavement, roadside signs, ADA detectable pavers, warning devices, and "No Trespassing" signs • Replacement of signal arms • Installation of new sidewalk	Minor excavation and grading would be required to construct new pavement and curbs and gutters on the project site, to conform new sidewalks to existing, and to create new medians. Minor grading would be required to conform new sidewalks to existing.	2

Source: Alameda CTC, 2022

3.4 Construction

Construction of the project is anticipated to take approximately 12 months, beginning in in the third quarter of 2023 and concluding in the third quarter of 2024. Construction would occur in one continuous phase with distinct activities/sub-phases (i.e., demolition, grading, paving).

Construction at each crossing will generally include:

- Temporary closure of crossing to vehicular traffic with an appropriate detour
- Removal of outdated or non-functioning crossing control equipment, fencing, signage, pavement, and other materials

- Installation of new fencing, crossing control equipment, signage, sidewalks and pavement, and other safety features

3.5 Operation

During operation, the improved crossings will function similar to existing conditions. Vehicular traffic will be able to use the crossings as they do under existing conditions, but with improved safety. Operation of the project would require electricity for single-arm pedestrian gates in each direction of traffic but otherwise would not require the use of utilities. Operation of the project would not change the frequency or speed of existing trains along UPRR tracks or effect the volume of vehicles using the crossing. Therefore, operation of the project would not alter existing train noise levels.

The improvements may provide the groundwork for local agencies to pursue a Federal "quiet zone" designation, but this would be completed by the local agencies as a separate project.

3.6 Permits and Approvals

Required permits and approvals are listed in Table 4 below. In addition, agreements for work within City ROW for which UPRR has an easement will be acquired prior to construction.

Table 4 Permits and Approvals

Permitting Agency	Permit/Approval	Timing
City of Berkeley	Encroachment Permits for construction in City street ROW	Prior to ground disturbance

Source: Circlepoint, 2022

4 Evaluation of Environmental Impacts

This Initial Study evaluates impacts based on the CEQA Guidelines Appendix G Environmental Checklist:

- No Impact indicates that there is no impact.
- Less than Significant Impact indicates that, while there is some impact, the impact does not exceed identified thresholds.
- Less than Significant with Mitigation Incorporated indicates that a potentially significant and/or significant impact has been identified in the course of this analysis and mitigation measures have been provided to reduce a potentially significant impact and/or significant impact to a less-than-significant level.
- Significant Impact indicates that not all impacts have been reduced to less-than-significant and an Environmental Impact Report (EIR) will be required. As noted previously, mitigation measures developed for this project reduce any significant impacts to a less-than-significant level and an EIR will not be required.
- Section XVIII, Mandatory Findings, discusses cumulative impacts. Cumulative impacts are two or more individual effects, which when combined, are considerable or which compound or increase other environmental impacts. Cumulative impacts can result from individually minor but collectively significant projects taking place over time. If a significant cumulative impact is identified, the project's contribution to the significant cumulative impact is considered.

The environmental factors checked below would be potentially affected by the project, involving at least one impact that is a potentially significant or significant impact as indicated by the checklist on the following pages. Mitigation measures have been provided for each significant impact, reducing all to a less-than-significant level.

☐ Aesthetics	☐ Agriculture & Forestry Resources
☒ Air Quality	☒ Biological Resources
☒ Cultural Resources	☒ Geology & Soils
☐ Greenhouse Gas Emissions	☒ Hazards & Hazardous Materials
☐ Hydrology & Water Quality	☐ Land Use & Planning
☐ Mineral Resources	☐ Noise & Vibration
☐ Population & Housing	☐ Public Services
☐ Parks & Recreation	☐ Transportation & Circulation
☒ Tribal Cultural Resources	☐ Utilities & Service Systems
☒ Mandatory Findings of Significance	

4.1 Aesthetics

	Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
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 nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). 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?	☐	☐	☒	☐

Environmental Setting

The City's General Plan EIR, in conjunction with City's General Plan, are the primary sources for identifying and determining scenic vistas and scenic routes throughout the City.[2] The City's General Plan EIR discusses the existing environmental conditions as they relate to environmental resources such as aesthetics. According to the General Plan EIR, views from Berkeley include the San Francisco Bay (Bay), the skyline of San Francisco, the Bay Bridge, the Golden Gate Bridge, and the Berkeley Hills. Streets, sidewalks, building facades, and street trees and furniture are all elements that comprise the urban streetscape. Addition, deletion, and modification of any of these elements would affect the visual quality of the City.

The California Department of Transportation (Caltrans) Scenic Highway Program has designated Interstate 580 (I-580) as a scenic highway (between San Leandro and State Route 24) in the project vicinity. The I-580 designated scenic highway portion is approximately 4 miles southeast of both the Virginia Street and Hearst Avenue crossings.

Scenic viewsheds are also important factors to consider when analyzing the aesthetic character of a project site. While a scenic vista is typically a singular scene or view, scenic viewsheds are areas of

[2] City of Berkeley. 2001. Berkeley Draft General Plan EIR. Prepared by LSA Associates Inc. 2001. Accessed September 2022

particular scenic or historic value deemed worthy of preservation against development and other changes.

The City's General Plan does not identify any scenic vistas or view corridors near the existing UPRR corridor. The project site is flat as is most of the surrounding vicinity. Glimpses of the Berkeley Hills are visible above the middle-ground views of two-story buildings and mature street trees from the Hearst Avenue and the Virginia Street crossings. The existing at-grade crossings are predominantly surrounded by warehouses, aggregate distribution, parking lots, and manufacturing interspersed with commercial businesses. The project would require minor surface alterations such as new roadway striping, pavement marking, roadside signs, security access gates, fencing, and new sidewalks. These improvements would generally be visible to pedestrians, bicyclists, and motor vehicle drivers as they approach the intersection.

Regulatory Setting

Local

Berkeley General Plan

Various policies in the City's General Plan have been adopted for avoiding or mitigating visual impacts resulting from project development within the City.[3]

Policy LU-1:	Maintain the character of Berkeley as a special, diverse, unique place to live and work.
Policy LU-4:	Preserve and protect the quality of life in Berkeley's residential areas through careful land use decisions.
Policy LU-6:	Ensure that all residential areas are safe and attractive places to live.
Policy LU-7:	Preserve and protect the quality of life in Berkeley's residential areas through careful land use decisions.

Impact Discussion

a) Have a substantial adverse effect on a scenic vista?

No Impact. The existing crossings are not located in or near any scenic vistas identified by the City. Additionally, existing views from the existing crossings are dominated by manufacturing, industrial buildings, and commercial uses. Therefore, the project would not result in impacts to a scenic vista, and no mitigation is required.

b) Substantially damage scenic resources, including but not limited to: trees, rock outcroppings, and historic buildings within a State scenic highway?

No Impact. According to Caltrans' state scenic highway maps, the nearest designated or eligible scenic highway is more than 4 miles from the existing crossings. Additionally, the project improvements would be confined to the existing rail crossings and would not include tall structures or substantial vertical features that could affect scenic views of the bay. The project would not obstruct views from other public viewpoints. Therefore, the project would not impact scenic resources, and no mitigation is required.

[3] City of Berkeley, 2010. City of Berkeley General Plan, Land Use Element. Available: https://berkeleyca.gov/your-government/our-work/adopted-plans/general-plan. Accessed: October 2022.

c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less than Significant. The project is located in an urbanized area and would require minor improvements at both existing crossings to enhance safety. As discussed in Section 3.3, Project Components, improvements would include new signs, street markings, and security access gates. The existing crossings are surrounded by manufacturing, industrial, and commercial uses. While the crossings afford views of the Berkeley Hills, views are limited and obstructed by surrounding development, including two-story buildings and mature street trees. The project would not conflict with applicable zoning and other regulations governing scenic quality as no scenic vistas or view corridors are located near or adjacent to the existing crossings. Therefore, the project would have a less-than-significant impact on the visual character and quality of the site and vicinity, and no mitigation is required.

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

Less than Significant. While there would be lights associated with the project, such as street lighting and warning lights, these would be similar to existing lighting features onsite. Therefore, the project would not affect day or nighttime views in the area. The impact would be less than significant, and no mitigation measures are required.

4.2 Agriculture and Forest Resources

	Significant Impact	Less than Significant with Mitigation	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 nonagricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or with 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 the 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?	☐	☐	☐	☒

Environmental Setting

The California Department of Conservation administers the Farmland Mapping and Monitoring Program (FMMP), California's statewide agricultural land inventory. Four classifications of farmland are considered valuable: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance. Any conversion of land within these classifications is typically considered an environmental impact under CEQA. Other categories of land that are not protected by the Department of Conservation include Grazing Land, Urban and Built-up Land, and Other Land. The existing crossings are designated as Urban and Built-up Land by the FMMP. There is no important farmland on or adjacent to the existing crossings.[4]

Virtually all of the City's early agricultural lands have been converted to urban uses. Today, agricultural use in the City is limited to private and community gardens.

The proposed improvements would take place at existing rail crossings in urbanized parts of the City. A review of the California Department of Conservation's Important Farmland Finder Interactive Map

[4] California Department of Conservation. 2016. California Important Farmland Finder. Available: https://maps.conservation.ca.gov/dlrp/ciff/. Accessed: September 2022.

revealed that the existing crossings are not located near any land under Williamson Act contract. There is no forest or timberland on or near the existing crossings.[5]

Regulatory Setting

State

California Land Conservation Act

The California Land Conservation Act of 1965, also referred to as the Williamson Act, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value.

Farmland Mapping and Monitoring Program

The California FMMP provides maps and data to decision makers to assist them in making informed decisions regarding the planning of the present and future use of California's agricultural land resources.

PRC/California Government Code

Public Resources Code Section 12220(g) identifies forest land as land that can support a 10 percent native tree cover of any species under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

Public Resources Code Section 4526 identifies timberland as land available for and capable of growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees. Land owned by the federal government and land designated by the State Board of Forestry and Fire Protection as experimental forest land is excluded as timberland.

Government Code Section 51104(g) identifies timberland production zones as areas which have been zoned and are devoted to and used for growing and harvesting timer, or for growing and harvesting timber and compatible uses.

Impact Discussion

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 nonagricultural use?

No Impact. The existing crossings are located in areas surrounded by manufacturing and industrial buildings. The existing crossings are not designated by the California Department of Conservation as farmland of any type. Additionally, no lands adjacent to the existing crossings are designated as farmland. As the existing crossings are not being used for agriculture, implementation of the project would not impact farmland. Therefore, no impact would occur, and no mitigation is required.

b) Conflict with existing zoning for agricultural use, or with a Williamson Act contract?

No Impact. The existing crossings are located in areas surrounded by manufacturing and industrial buildings. The existing crossings are not designated under a Williamson Act contract. Additionally, no

[5] California Department of Conservation. 2016. California Important Farmland Finder. Available: https://maps.conservation.ca.gov/dlrp/ciff/. Accessed: September 2022.

lands adjacent to the existing crossings are designated as farmland. As the existing crossings are not being used for agriculture, implementation of the project would not conflict with zoning for agricultural use or a Williamson Act contract. Therefore, no impact would occur, and no mitigation is required.

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))?

No Impact. The existing crossings are zoned for manufacturing and industrial uses and do not contain forest land or other similar resources. Areas surrounding the existing crossings are currently developed with manufacturing and mixed-use light industrial. Therefore, no impact would occur and no mitigation is required.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The project would not conflict with timberland or timberland zoned production, nor would the project result in loss of forest land or conversion of forest land to non-forest use. As such, no impact would occur, and no mitigation is required.

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?

No Impact. As discussed under thresholds (a) and (b), the existing crossings are not located on or adjacent to land designated as farmland. Implementation of the project would not conflict with timberland or timberland zoned production, nor would it result in loss of forest land or the conversion of forest land to non-forest use. Therefore, no impact would occur, and no mitigation is required.

4.3 Air Quality

	Significant Impact	Less than Significant with Mitigation	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 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?	☐	☐	☒	☐

Environmental Setting

The existing crossings are located in Alameda County within the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the state and federal level for the San Francisco Bay Area Air Basin. The San Francisco Bay Area (Bay Area) currently meets all ambient air quality standards with the exception of ground-level ozone (O_3), respirable particulate matter (PM_{10}) and fine particulate matter ($PM_{2.5}$). High O_3 levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO_x) and can aggravate respiratory and cardiovascular diseases, reduce lung function, and increase coughing and chest discomfort. High particulate matter levels can aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Toxic Air Contaminants

Toxic air contaminants (TAC) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, the criteria air pollutants listed above. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, 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 near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, state, and federal level.

These contaminants include airborne carcinogens and nuisance sources, such as odors or dust. While the meteorology is generally favorable for minimizing air pollution, the Bay Area is a source region for air quality problems in downwind communities. This impact is exacerbated by the frequent traffic congestion in Berkeley. Consequently, emission reductions in Berkeley will have a limited local benefit but will be an important contributor to attaining/maintaining clean air standards in the region.

Transportation is the major contributor to regional air pollution. Stationary sources (e.g., smokestack industries) were once important sources of both regional pollution as well as a local nuisance. Their role

in the pollution picture—regionally and locally—has been substantially reduced in recent years by pollution control programs of the Bay Area Air Quality Management District (BAAQMD).

The California Air Resources Board (CARB) and the United States Environmental Protection Agency (U.S. EPA) have adopted and implemented a number of regulations and emission standards for stationary and mobile sources to reduce emissions of diesel particulate matter. These include emission standards for off-road diesel engines, including backup generators, and regulatory programs that affect medium and heavy-duty diesel trucks that represent the bulk of diesel particulate matter emissions from California highways. The federal air and ambient air quality standards are depicted in Table 5.

Table 5 Federal and Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards	California Standards
Ozone	1-Hour	---	0.09 ppm
	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.030 ppm
	1-Hour	0.100 ppm	0.18 ppm
Sulfur Dioxide	Annual	---	---
	24-Hour	---	0.04 ppm
	1-Hour	0.075 ppm	0.25 ppm
PM_{10}	Annual	---	20 µg/m3
	24-Hour	150 µg/m3	50 µg/m3
PM_{25}	Annual	12 µg/m3	12 µg/m3
	24-Hour	35 µg/m3	---
Lead	30-Day Average	---	1.5 $\mu g/m^3$
	3-Month Average	0.15 $\mu g/m^3$	---

Source: Environmental Protection Agency, 1990
ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter

Regulatory Setting

Federal

40 Code of Federal Regulation 93.126

The 40 Code of Federal Regulation (CFR) 93.126, Exempt Projects, lists highway and transit project types that are exempt from the requirement to determine conformity. Such projects may proceed toward implementation even in the absence of a conforming transportation plan and TIP. Such project is not exempt if the Metropolitan Planning Organization (MPO) in consultation with other or the FTA (in the case of a transit project) concur that it has potentially adverse emissions impacts for any reason. States

and MPOs must ensure that exempt projects do not interfere with transportation control measures implementation.

State

The California Air Resources Board (CARB) and the United States Environmental Protection Agency (USEPA) have adopted and implemented a number of regulations and emission standards for stationary and mobile sources to reduce emissions of diesel particulate matter (DPM). These include emission standards for off-road diesel engines, including backup generators, and regulatory programs that affect medium and heavy-duty diesel trucks that represent the bulk of DPM emissions from California highways.

Sensitive Receptors

CARB has identified the following persons who are most likely to be affected by air pollution: infants, children under 18, 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, elementary schools, churches and places of assembly, and parks. The closest sensitive receptors to the project site are existing residences approximately (500 feet) east of Hearst Avenue crossing and (300 feet) east of Virginia Street crossing.

Regional

BAAQMD

The BAAQMD is the regional agency tasked with managing air quality in the region. At the state level, the CARB (a part of the California Environmental Protection Agency) oversees regional air district activities and regulates air quality at the state level. The BAAQMD has published CEQA Air Quality Guidelines that are used in this analysis to evaluate air quality impacts.

Significance Thresholds

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. The City has consistently applied the BAAQMD thresholds in its environmental documents.

The significance thresholds identified by BAAQMD and used in this analysis are summarized in Table 6. As indicated in Table 6, the project would have a significant impact if average daily emissions from construction and operation exceed 54 lbs/day for ROG, NOx, and $PM_{2.5}$ and 82 lbs/day for PM_{10}. For TACs BAAQMD notes that "[a]n excess cancer risk level of more than 10 in one million, or a non-cancer (i.e., chronic or acute) hazard index greater than 1.0 would be a cumulatively considerable contribution."[6] The BAAQMD's significance thresholds are described in their latest version of their BAAQMD CEQA Air Quality Guidelines issued in May 2017.

[6] BAAQMD, CEQA Air Quality Guidelines, LOCAL COMMUNITY RISK AND HAZARD IMPACTS – PROJECT LEVEL, https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf#page=23

Table 6 BAAQMD Air Quality Significance Thresholds

Criteria Air Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs./day)	Average Daily Emissions (lbs./day)	Annual Average Emissions (tons/year)
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10

Source: Kimley Horn, 2021

Note: ROG = reactive organic gases, NOx = nitrogen oxides, PM_{10} = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less.

Local

Berkeley General Plan

The General Plan outlines policies that have been adopted to address air quality concerns resulting from project development within the City.[7] Based on a review of the General Plan goals and policies, the following polices are determined to be applicable to the project:

Policy EM-1 City of Berkeley Leadership. Maintain Berkeley's position as a leader in the adoption and implementation of environmental management programs.

Policy EM-2 Sustainable Berkeley. Maintain Berkeley's position as a leader in the creation and implementation of sustainable community practices and programs.

Policy EM-3 Regional Coordination. Promote the City's environmental management and sustainability policies and programs and encourage other cities in the region to establish similar or better policies and programs.

Policy EM-18 Regional Air Quality Action Continue working with the Bay Area Air Quality Management District and other regional agencies to:

1. Improve air quality through pollution prevention methods.

2. Ensure enforcement of air emission standards.

3. Reduce local and regional traffic (the single largest source of air pollution in the city) and promote public transit.

Policy EM-19 15% Emission Reduction: Global Warming Plan Make efforts to reduce local emissions by 15% by the year 2010.

Action EM-A Continue to support and implement local emission reduction programs, such as the City of Berkeley's Employee Fleet Bicycle Program, the Police Bicycle

[7] City of Berkeley, 2002. City of Berkeley General Plan, Environmental Management Element. Available: https://berkeleyca.gov/sites/default/files/documents/11_Environmental%20Management%20Element-FINAL.pdf. Accessed: October 2022.

Program, and the actions recommended in the City of Berkeley Resource's Conservation and Global Warming Abatement Plan.

Impact Discussion

Information in this section is based on the Air Quality Analysis prepared for this project by Kimley Horn Consultants in September 2021.[8]

a) Conflict with or obstruct implementation of the applicable air quality plan?

No Impact. The project is exempt from the requirement to determine conformity per 40 Code of Federal Regulation (CFR) 93.126 because it is considered a railroad/highway crossing safety improvement. The project would not conflict with or obstruct implementation of the air quality plan of the area. Therefore, no impact would occur, and no mitigation is required.

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

Less than Significant with Mitigation. The Bay Area is considered a nonattainment area for ground-level O3 and $PM_{2.5}$ under both the federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM_{10} under the California Clean Air Act, but not under the federal Act. The area has attained both state and federal ambient air quality standards for CO. As part of an effort to attain and maintain ambient air quality standards for O3, PM_{10} and $PM_{2.5}$, BAAQMD has established thresholds of significance for air pollutants. These thresholds are for O3 precursor pollutants (ROG and NOx), PM_{10} and $PM_{2.5}$ and apply to both construction period and operational period impacts.

As shown in Table 7, construction of the project would not cause exceedances for ROG, NOx, $PM_{2.5}$, PM_{10}. The calculated emission results for ROG, NOx, $PM_{2.5}$, and PM_{10} from CalEEMod demonstrate that the construction of this project would not exceed maximum daily thresholds created by the BAAQMD. Project emissions would not worsen ambient air quality, create additional violations of federal and state standards, or delay the Basin's goal for meeting attainment standards. Construction impacts of the project would be less than significant.

Additionally, **Mitigation Measure AQ-1**, which outlines BAAQMD's Basic Construction Mitigation Measures Recommended for All Projects, would be implemented at all crossings during construction.

> ***Mitigation Measure AQ-1: BAAQMD's Basic Construction Measures Recommended for All Projects***
>
> These conditions include the following: water exposed surfaces two times daily; cover haul trucks; clean track outs with wet powered vacuum street sweepers; limit speeds on unpaved roads to 15 miles per hour; complete paving as soon as possible after grading; limit idle times to 5 minutes; properly maintain mobile and other construction equipment; and post a publicly visible sign with contact information to register dust complaints and take corrective action within 48 hours.

With implementation of **Mitigation Measure AQ-1** at all crossings during construction, project emissions would not worsen ambient air quality, create additional violations of federal and state standards, or delay the Basin's goal for meeting attainment standards. Construction impacts would be less than significant with mitigation.

[8] Kimley Horn, 2021. Air Quality Analysis for the Alameda County Transportation Commission Rail Safety Enhancement Program.

Table 7 Construction-Related Emissions

Year	Pollutant (maximum pounds per day)					
	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO_x)	Exhaust		Fugitive Dust	
			Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
2023	0.87	7.08	8.36	0.02	0.29	0.34
2024	1.90	15.77	23.90	0.04	2.57	0.70
BAAQMD Significance Threshold	54	54	82	54	BMPs	BMPs
Exceed BAAQMD Threshold?	No	No	No	No	N/A	N/A

Source: Kimley-Horn, 2021
Note: BMP= Best Management Practices

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant. As described in Environmental Setting of Section 4.3, sensitive receptors within 1,000 feet of the existing crossings are existing residences approximately 500 feet east of Hearst Avenue crossing and 300 feet east of Virginia Street crossing. Construction could result in the temporary generation of emissions during demolition, site preparation, site grading, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Diesel-powered construction equipment for the project could include rubber-tired dozers, tractors, loaders, skid-skeer loaders, cement and mortar mixers, pavers, rollers, and graders. Construction equipment would not operate more than 12 hours daily on the weekdays and 11 hours on the weekends. These equipment would be staged within the Alameda CTC right-of-way. As discussed under threshold (b), above, construction activities would generate PM2.5 exhaust of 38.23 lbs/day in 2022 and 58.79 lbs/day in 2023, which would not exceed BAAQMD significance threshold. Construction activities would not result in substantial pollutant emissions or toxic air contaminants and thus no Health Risk Analysis was performed.

Construction activities would be minor and limited to the existing crossing footprints. These activities would be temporary, lasting for approximately 12 months. Furthermore, project operations would not result in a net increase in pollutant emissions because no additional capacity would be added to any of the intersections.

Construction would result in the generation of DPM emissions from the use of off-road diesel equipment. The amount to which the receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. The use of diesel-powered construction equipment would be temporary and episodic. The proposed project includes limited demolition, earth moving, excavation and construction using heavy-duty off-road equipment. The duration of exposure would be short and exhaust from construction equipment

dissipates rapidly. Current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities. Therefore, construction activities are not anticipated to generate high sources of TACs which would result in cancer risk for nearby receivers.

California Office of Environmental Health Hazard Assessment has not identified short-term health effects from DPM. Construction is temporary and would be transient throughout the site (i.e., move from location to location) and would not generate emissions in a fixed location for extended periods of time. Construction would be subject to and would comply with California regulations limiting the idling of heavy-duty construction equipment to no more than 5 minutes to further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions. For these reasons, DPM generated by construction activities, in and of itself, would not be expected to expose sensitive receptors to substantial amounts of air toxics. Therefore, this impact would be less than significant, and no mitigation is required.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less than Significant. During construction activities, only short-term, temporary odors from vehicle exhaust and construction equipment engines would occur. While the existing crossings are located near residential neighborhoods, construction-related odors would disperse and would not cause substantial odors near the existing crossings. Sensitive receptors closest to the existing crossings are single family residences. In addition, construction-related odors would be temporary and would cease upon completion of construction.

Once operational, the project is not expected to produce any offensive odors that would result in odor complaints, based on BAAQMD's guidelines for odor-generating uses and activities. Therefore, the impact would be less than significant, and no mitigation is required.

4.4 Biological Resources

	Significant Impact	Less than Significant with Mitigation	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 candidate, sensitive, or special status species in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
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 California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse impact on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to: marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with an established resident or migratory wildlife corridors, or 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?	☐	☐	☐	☒

Environmental Setting

The project site consists of developed land that has been modified such that most or all vegetation has been removed. Only small areas of landscaped or ruderal vegetation are present. The land cover consists of paved roads, UPRR railroad tracks, and other infrastructure associated with the UPRR crossing.

A Biological Resources Assessment was prepared by Rincon Consultants in April 2021. The project site does not contain watercourses or any bodies of water. The Bay is located approximately 1,400 feet west of the Virginia Street crossing, and approximately 1,800 feet west of the Hearst Avenue crossing. Additionally, Berkeley's Aquatic Park is about 2,000 feet south from Virginia Street, and about 1,000 feet south from Hearst Avenue.

The project site does not fall within the boundaries of a Habitat Conservation Plan. Additionally, trees are scarce in the area and would likely not be affected by the project.

Due to the relatively low amounts of vegetation on site and the urban context (e.g., commercial and light industrial), the possibility of special-status wildlife habitat is unlikely. Generally, wildlife habitats in developed urban areas such as the project site are low in species diversity. Species that may use the project site would be predominantly of the common bird species such as Anna's hummingbird (*Calypte anna*), house sparrow (*Passer domesticus*), California gull (*Larus californicus*), and American crow (*Corvus brachyrhynchos*). Raptors (birds of prey) and other urban birds could use trees and human-made structures on the project site for nesting or as a roost. Raptors and other migratory birds are protected by the Federal Migratory Bird Treaty Act (MBTA) (16 U.S.C. Section 703, et seq.).

No federally listed species have potential to occur within the study area. While none of the work areas at the project site contain suitable habitat for special status species, adjacent landscaped vegetation or structures that occur nearby may provide marginally suitable habitat. Of the species known to occur in the region, the following rare or protected species (5 animals and 2 plants) have the potential to occur in habitats adjacent to the project site: California overwintering populations of monarch butterfly (*Danaus plexippus* population 1), peregrine falcon (*Falco peregrinus anatum*), pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), western mastiff bat (*Eumops perotis californicus*), congested-headed hayfield tarplant (*Hemizonia congesta ssp. congesta*) and two-fork clover (*Trifolium amoenum*). However, the potential of these occurrences is low. For purposes of the CEQA analysis, species with low potential to occur will not be addressed further. No sensitive natural communities, essential wildlife corridors or habitat linkages exist within the study area.

Regulatory Setting

Federal

Federal Endangered Species Act

The U.S. Fish and Wildlife Service (USFWS) Endangered Species Act protects listed wildlife species from harm or "take" which is broadly defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. Take can also include habitat modification or degradation that directly results in death or injury to a listed wildlife species.

Federal Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA; 16 U.S.C., §703, Supp. I, 1989) prohibits killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. Migratory birds protected under this law include all native birds and certain game birds (e.g., turkeys and pheasants). The MBTA encompasses whole birds, parts of birds, and bird nests and eggs. The MBTA protects active nests from destruction and all nests of species protected by the MBTA, whether active or not, cannot be possessed. An active nest under the MBTA, as described by the Department of the Interior in its April 15, 2003, Migratory Bird Permit Memorandum, is one having eggs or young. Nest starts, prior to egg laying, are not protected from destruction. All native bird species in the City are protected under the MBTA.

State

California Endangered Species Act and California Native Plant Protection Act

The California Endangered Species Act (CESA) prohibits the take of any plant or animal listed or proposed for listing as rare (plants only), threatened, or endangered (California Fish and Game Code,

Chapter 1.5, Sections 2050-2116). In accordance with the CESA, the California Department of Fish and Wildlife (CDFW) has jurisdiction over state-listed species. The CDFW regulates activities that may result in "take" of individuals listed under the Act (i.e., "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill"). Habitat degradation or modification is not expressly included in the definition of "take" under the Fish and Game Code. The CDFW, however, has interpreted "take" to include the "killing of a member of a species which is the proximate result of habitat modification." The California Native Plant Protection Act (CNPPA) preserves, protects, and enhances endangered and rare plants in California. It specifically prohibits the importation, take, possession, or sale of any native plant designated by the CDFW as rare or endangered, except under specific circumstances identified in the Act.

California Fish and Game Code

The California Fish and Game Code includes regulations governing the use of, or impacts to, many of the state's fish, wildlife, and sensitive habitats. The CDFW exerts jurisdiction over the bed and banks of rivers, lakes, and streams according to provisions of Sections 1601 - 1603 of the Fish and Game Code. The Fish and Game Code requires a Streambed Alteration Agreement for the fill or removal of material within the bed and banks of a watercourse or waterbody and for the removal of riparian vegetation. Provisions of these sections may apply to modifications of sensitive aquatic habitats and riparian habitats within the City.

Other regulations in the Fish and Game Code provide protection for native birds, including their nests and eggs (Sections 3503, 2513, and 3800). These regulations prohibit all forms of take, including disturbance that causes nest abandonment and/or loss of reproductive effort. Raptors (i.e., eagles, falcons, hawks, and owls) are specifically protected under Fish and Game Code Section 3503.5.

Local

Berkeley General Plan

The Environmental Management element of the City's General Plan establishes policies for the management and conservation of the city's natural resources and the protection of the community from hazards.[9] Based on the review of the General Plan, the following goals, policies, and actions are applicable to the project:

Policy EM-1	City of Berkeley Leadership. Maintain Berkeley's position as a leader in the adoption and implementation of environmental management programs.
Policy EM-2	Sustainable Berkeley. Maintain Berkeley's position as a leader in the creation and implementation of sustainable community practices and programs.
Policy EM-3	Regional Coordination. Promote the City's environmental management and sustainability policies and programs and encourage other cities in the region to establish similar or better policies and programs.
Policy EM-28	Natural Habitat Restore and protect valuable, significant, or unique natural habitat areas.

[9] City of Berkeley, 2002. City of Berkeley General Plan, Environmental Management Element. Available: https://berkeleyca.gov/sites/default/files/documents/11_Environmental%20Management%20Element-FINAL.pdf. Accessed: October 2022.

Policy EM-29	Maintain, enhance, and preserve street and park trees to improve the environment and provide habitat.
Action EM-29C	Ensure that new development preserves existing trees, wherever feasible, and adds trees in the public right-of-way, where appropriate.
Action EM-29F	Preserve and protect heritage trees, including native oaks and other significant trees on public and private property whenever feasible.
Policy EM-30	Use native tree and plant species to enhance ecological richness.
Action EM-30A	Where appropriate, use native landscaping in new and replacement plantings, and remove non-native plants to create ecological corridors for wildlife habitation.

Berkeley Tree Ordinance

Chapter 12.44 of the BMC contains various codes and polices related to the planting or removal of trees and shrubs within the City. City trees are defined as any tree growing on the City-maintained portion of the public right-of-way, or on City-owned property. Additional protections are specified for coast live oak (*Quercus agrifolia*).

Impact Discussion

Information in this section is based on the Biological Resources Assessment prepared for this project by Rincon Consultants in April 2021.

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as candidate, sensitive, or special status species in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less than Significant. A Biological Resources Assessment for the project was conducted to assess potential impacts to sensitive biological resources. Due to the highly developed nature of the project site and surrounding area and lack of suitable habitat for special-status species, no special-status plant species are expected to occur within any of the crossings. No federally protected wildlife species have potential to occur in the project area. The project site is adjacent to landscaped vegetation and buildings that may provide marginally suitable habitat for nesting birds and roosting bats; however, construction impacts are confined to previously developed areas and are unlikely to affect special status species. The proposed project will not have a significant impact on the environment and no significant individual or cumulative impacts to biological resources are expected.

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 California Department of Fish and Game or U.S. Fish and Wildlife Service?

No Impact. There are no sensitive natural communities, riparian habitat, or federally designated critical habitats located within or around the existing crossings. Therefore, no impact would occur, and no mitigation is required.

c) Have a substantial adverse impact on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to: marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less than Significant with Mitigation. No jurisdictional waters or wetlands occur near the existing crossings and no direct impacts are anticipated. However, indirect impacts from project activities could occur if sediment or pollutants were allowed to enter nearby waters, including the Berkeley Aquatic Park, and San Francisco Bay, and its associated wetlands. In addition to the post construction BMPs required under the Municipal Regional Stormwater Permit (MRP), discussed in Section 4.10, Hydrology and Water Quality, **Mitigation Measure BIO-1** would be implemented at all crossing locations to prevent impacts to nearby jurisdictional areas.

Mitigation Measure BIO-1: Mitigation Measures for Waters and Wetlands

At a minimum, the following BMPs will be implemented on-site during and following construction to prevent any indirect impacts to downstream waters and wetlands.

1. Vehicles and equipment should be checked at least daily for leaks and maintained in good working order. Spill kits should be available on-site at all times and a spill response plan should be developed and implemented.
2. Sediment and erosion control measures (e.g., sand or gravel bags, hay bales, check dams) should be implemented and maintained throughout the project site to prevent the entry of sediment and/or pollutants into any waterways or jurisdictional areas. No monofilament plastic will be used for erosion control.

With implementation of **Mitigation Measure BIO-1** at all crossing locations, indirect impacts from project activities would be minimized with BMPs. Therefore, this impact would be less than significant with mitigation.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with an established resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

No Impact. The existing crossings are in a developed urban area at the crossings of an active railway and paved city streets. No Essential Connectivity Areas or Natural Landscape Blocks occur near the existing crossings. Wildlife movement within the study area and surrounding land has long been disrupted by train and vehicular traffic, and wildlife would not be prevented from moving around the area of project disturbance. Project activities are not expected to interfere substantially with the movement of any fish or wildlife species or to impede the use of wildlife corridors or wildlife nursery sites, as construction of the project would include ground clearing, grading, and sidewalk removal and replacement in the existing crossings. Therefore, there would be no impact to wildlife movement, and no mitigation is required.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant with Mitigation. Project activities are subject to the City's General Plan and Municipal Codes. The City's General Plan Environmental Management Element establishes policies for the management and conservation of the City's natural resources and the protection of the community from hazards, pollution, and excessive noise. Protected resources include watercourses, natural habitats, and trees. The project would not remove any trees subject to protection under the City's General Plan or Municipal Code.

Impacts to waterways from project activities are not anticipated, as no open or culverted creeks are in the vicinity of the existing crossings. **Mitigation Measure BIO-1** includes recommendations for reducing any potential impacts to nearby waters, including the Berkeley Aquatic Park and San Francisco Bay,

which are both within a 0.5-mile distance from both crossings. Project activities would not conflict with any local policies or ordinances protecting biological resources. Therefore, with incorporation of **Mitigation Measure BIO-1** at both crossing locations, potential impacts would be less than significant.

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?

No Impact. The project does not fall within the boundaries of any adopted Habitat Conservation Plan or Natural Community Conservation Plan areas. Therefore, the project would not conflict with any adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan. Therefore, no impact would occur, and no mitigation is required.

4.5 Cultural Resources

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

Environmental Setting

Important historical buildings and sites throughout the city have been recognized and designated as landmarks by the Landmarks Preservation Commission. Structures such as historical wharfs, landings and small house structures are present throughout the city.

According to the City's 2016 Historical Resources Map, nearby historic landmarks include the West Berkeley Shellmound Historic Site, Spenger's Fish Grotto, Davis-Harmes House, Silva House, Ghego House, and Heywood House. Additionally, a portion of the Southern Pacific Railroad is within the project site. A prehistoric archaeological site, the School House Creek Site was identified within 15 feet of the Virginia Street project site.

As discussed in the Cultural Resources Study, a search of the California Historical Resources Information System was requested at the Northwest Information Center (NWIC) at Sonoma State University.[10] The records search was intended to identify previously recorded cultural resources, as well as previously conducted cultural resource studies within the project site and a 0.25-mile radius. The records search also included a review of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the Office of Historic Preservation Historic Properties Directory, the California Built Environment Resources Directory, and the Archaeological Determinations of Eligibility list. The NWIC records search was completed in May 2021 by NWIC staff. The records search identified two cultural resources within the project site: a portion of the Southern Pacific Railroad (SPRR), and the West Berkeley Shellmound. Within the 0.25-mile radius, the records search identified 20 previously recorded cultural resources. One of these resources, a prehistoric archaeological site, the School House Creek Site (P-01-010543) was identified within 15 feet of the Virginia Street project site.

A pedestrian field survey was conducted for both railroad crossings comprising the project on June 1, 2021. The survey consisted of inspecting areas of exposed ground for prehistoric artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, ceramics, fire-affected rock), ecofacts (marine shell and bone), soil discoloration that might indicate the presence of a cultural midden, soil depressions, and

[10] Rincon, 2021. Cultural Resources Study Memo.

features indicative of the former presence of structures or buildings (e.g., standing exterior walls, postholes, foundations) or historic debris (e.g., metal, glass, ceramics).

Area of Potential Effects

The Area of Potential Effects for a project is defined in 36 Code of Federal Regulations 800.16(d) as the "geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such property exists." The Area of Potential Effects of the project is confined to the boundaries of the existing railroad intersections of the project site.

Regulatory Setting

Federal

The National Register of Historic Places

The National Register of Historic Places has specific criteria for evaluating the eligibility of historic resources. The criteria apply to the quality of significance in American history, architecture, archaeology, engineering, and culture as present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that: (a) are associated with events that have made a significant contribution to the broad patterns of our history; or (b) that are associated with the lives of persons significant in our past; or (c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant distinguishable entity whose components may lack individual distinction; or (d) that have yielded or may be likely to yield information important in history or prehistory.

State

California Public Resources Code

Archaeological, paleontological, and historical sites are protected by a wide variety of policies and regulations under the California Public Resources Code. Under the Public Resources Code, the State Historical Resources Commission is responsible for oversight of the California Register of Historical Resources (California Register) and designation of State Historical Landmarks and Historical Points of Interest. Key provisions of the Public Resources Code that provide protection to cultural and paleontological resources are outlined below.

- California Public Resources Code Sections 5097.9–5097.991 protects Native American historical and cultural resources and sacred sites and identifies the powers and duties of the Native American Heritage Commission (NAHC). It also requires notification of discoveries of Native American human remains and provides for treatment and disposition of human remains and associated grave goods.
- California Public Resources Code Sections 5097.98 provides that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation until the coroner has determined that the remains are not subject to provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains. If the coroner determines that the remains are not

subject to his or her authority and has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the NAHC.

- California Public Resources Code Section 5097.5 prohibits “knowing and willful” excavation, removal, destruction, injury, and defacement of any paleontological feature on public lands (lands under state, county, city, district, or public authority jurisdiction, or the jurisdiction of a public corporation), except where the agency with jurisdiction has granted permission.

Health and Safety Code Section 7052 and 7050.5

Section 7052 of the Health and Safety Code states that the disturbance of Native American cemeteries is a felony. Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the County coroner can determine whether the remains are those of a Native American. If determined to be Native American, the coroner must contact the California Native Heritage Commission (NAHC).

State Historic Resources Inventory

The California Register of Historical Resources, enacted in 1992, is an authoritative guide to be used to identify the state's historical resources. The California Register program encourages public recognition of resources of architectural, historical, archeological and cultural significance; identifies historical resources for state and local planning purposes; and defines threshold eligibility for state historic preservation grant funding.

13 Code of Federal Regulations, Title 36, Part 60. By law, properties may be added to the California Register in two ways. At this time, the California Register consists of resources that are listed automatically by status through the California Register enabling legislation (AB 2881). The California Register includes properties listed in, or formally determined eligible for, the National Register, and selected California Registered Historical Landmarks. Formal Guidelines and Procedures for the direct nomination of properties must be adopted by the State Historical Resources Commission before other resources can be added. As an informational resource, the State Historic Preservation Office (SHPO) also maintains the Directory of Properties in the Historic Property Data File. This inventory is considered the most comprehensive list of historic properties for the State of California currently in existence. For historic resources in the City, this list is largely based on the State Historic Resources Inventory, which was prepared by the Berkeley Architectural Heritage Association. Properties on this list are not protected or regulated, but merely designated for purposes of recognition.

This state survey produced a representative rather than a comprehensive inventory. The scope and reliability of the data within the listing varies depending upon the availability of information. Many properties exist which have been locally designated as City Landmarks or "Architecturally Significant" buildings that are not within the Historic Property Data File maintained by SHPO. The information contained in the SHPO directory indicates whether a property is listed in the National Register, or is determined eligible for listing in the National Register or through another federal agency. In addition, the State Historic Preservation Office must be consulted on any federally-assisted project which involves any building 50 years of age or older.

California Environmental Quality Act

Historical Resources

The CEQA Guidelines define a significant resource as any resource listed in or determined to be eligible for listing in the California Register of Historical Resources (California Register) [see Public Resources Code, Section 21084.1 and CEQA Guidelines Section 15064.5 (a) and (b)]. The California Register includes

resources listed in or formally determined eligible for listing in the NRHP, as well as some California State Landmarks and Points of Historical Interest. The criteria are nearly identical to those of the NRHP, which includes resources of local, State, and region or national levels of significance. In general, the California Register defines historical resources as any object, building, structure, site, area, place, record, or manuscript that is historically or archaeologically significant; or is significant in the architectural, engineering, scientific, economic, agricultural educational, social, political, or cultural annals of California; and meets the criteria for listing on the California Register including the following:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.

Archeological Resources

CEQA also requires lead agencies to consider whether projects will affect "unique archaeological resources" (Public Resources Code, Section 21083.2(g)) which are defined as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Treatment options for unique archaeological resources include preservation in place in an undisturbed state; excavation and curation or study in place without excavation and curation (if the study finds that the artifacts would not meet one or more of the criteria for defining a "unique archaeological resource").

Paleontological Resources

Treatment of paleontological resources under CEQA is generally similar to treatment of cultural resources, requiring evaluation of resources in a project's area of potential affect, assessment of potential impacts on significant or unique resources, and development of mitigation measures for potentially significant impacts, which may include monitoring combined with data recovery and/or avoidance.

Native American Burials

California law protects Native American burials, skeletal remains, and associated grave goods regardless of their antiquity and provides for the sensitive treatment and disposition of those remains (Section 7050.5(b) of the California Health and Safety Code). CEQA Guidelines section 15064.5(e) requires that excavation activities be stopped whenever human remains are uncovered, and that the county coroner or medical examiner be contacted to assess the remains. If the county coroner or medical examiner determines that the remains are those of Native Americans, the NAHC must be contacted within 24

hours. The property owner is required to consult with the appropriate Native Americans identified by the NAHC as a "most likely descendant" to develop an agreement for the treatment and disposition of the remains. These requirements are also contained in the County Codes for the County of Santa Clara (Sections B6-19 and B6-20).

Local

Berkeley General Plan

The Berkeley General Plan outlines policies that have been adopted for preserving the City's cultural resources and for minimizing impacts that may result from development.[1112] All future development allowed by the proposed land use designations would be subject to the policies listed in the General Plan, including the following:

Action UD-A	Identify and protect historically significant structures, sites, districts, and neighborhoods.
Policy UD-2	Regulation of Significant Properties Increase the extent of regulatory protection that applies to structures, sites, and areas that are historically or culturally significant.
Action UD-C	For any public or private project that may adversely affect an archaeological site, consult with the North Central Information Center of the California Historical Resources Information System, require site evaluation as may be indicated, and attempt to prevent or mitigate any adverse impacts.
Policy S-11	Encourage and support the long-term protection of historic or architecturally significant structures to preserve neighborhood and community character.

Impact Discussion

The information in this section is based on the Cultural Resources Study prepared for this project by Rincon Consultants in August 2021.[13]

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

Less than Significant with Mitigation. The proposed project has the potential to have a significant effect on a historical resource as defined by CEQA (§21084.1). Although the Southern Pacific Railroad (SPRR) was not recorded or evaluated for the CRHR, there is limited potential for the SPRR to be materially impaired regardless of its potential historical resources eligibility as defined in Section 15064.5 of the CEQA Guidelines. The Southern Pacific Railroad (SPRR) has not been recorded or evaluated for the CRHR, due to track materials having been upgraded and replaced with newer materials over the years. Thus, there is limited potential for the SPRR to be materially impaired regardless of its potential historical resources eligibility as defined in Section 15064.5 of the CEQA Guidelines, as the tracks no longer retain historic integrity. The alignment and tracks will not be altered by either of the crossings as the project consists of the removal of existing pavement/concrete, installation of new security features, and

[11] City of Berkeley, 2001. City of Berkeley General Plan, Land Use Element. Available: https://berkeleyca.gov/your-government/our-work/adopted-plans/general-plan. Accessed: October 2022.

[12] City of Berkeley, 2002. City of Berkeley General Plan, Urban Design and Preservation Element. Available: https://berkeleyca.gov/your-government/our-work/adopted-plans/general-plan. Accessed: October 2022.

[13] Rincon, 2021. Cultural Resources Study Memo.

installation of new sidewalk. The proposed safety improvements are consistent with the existing conditions of the railway crossings.

The existing alignment and tracks will not be altered by current project activities as groundwork would be limited and confined to the project area of each crossing, and would include limited construction activities such as ground clearing, minor grading, and sidewalk removal and replacement. Additionally, proposed safety improvements are generally consistent with the existing conditions of the railway crossings. Therefore, this impact would be less than significant, and no mitigation is required.

b) Cause a substantial adverse change in the significance of an archaeological resource, pursuant to Section 15064.5?

Less than Significant with Mitigation. Site conditions and previous land uses indicate that the existing crossings have been extensively disturbed by the extant rail lines and utilities associated with the surrounding development.

The Virginia Street crossing is directly adjacent to a prehistoric archaeological site, the School House Creek Site (P-01-010543), the full boundaries of which are not known. The School House Creek Site is potentially eligible for the CRHR and is considered a historical resource under CEQA (§21084.1). Project construction would require demolition of the street surface and other excavation that could encounter the buried resource. Therefore, the project has the potential to significantly affect a historical resource, and **Mitigation Measure CUL-1** and **Mitigation Measure CUL-2** would be required to minimize and/or avoid potential impacts to the School House Creek Site.

Mitigation Measure CUL-1: Unanticipated Discovery of Archaeological Resources

In the event archaeological resources are encountered during construction, work shall be halted within 100 feet of the discovered materials and workers shall avoid altering the materials and their context until a qualified professional archaeologist has evaluated the situation and provided appropriate recommendations.

If an archaeological resource is encountered in any stage of development, a qualified archaeologist will be consulted to determine whether the resources qualify as historical resources or unique archaeological resources. In the event that the encountered resources qualify, the archaeologist will prepare a research design and archaeological data recovery plan to be implemented prior to resuming construction at the affected area. The archaeologist shall also prepare a written report of the finding, file it with the appropriate agency, and arrange for curation of recovered materials.

Due to the heightened sensitivity for buried resources, and nearby intact buried resources, and Extended Phase I (XPI) subsurface investigation, would be required under **Mitigation Measure CUL-2** for the Hearst Avenue crossing.

Mitigation Measure CUL-2: XPI Testing

For the Hearst Avenue crossing, archaeological testing program will determine how the project will affect CA-ALA-307 (West Berkeley Shell Mound). XPI testing shall comprise a series of shovel test pits and/or hand augured units or other excavation methods to establish the presence or absence of CA-ALA-307 in areas of proposed project disturbance. Consultation with local Native American tribes will be required during XPI testing. Work shall be conducted under the supervision of an archaeologist meeting the Secretary of the Interior's professional qualification standards for archaeology, and a Native American Monitor.

Upon completion of the XPI testing program, if archaeological deposits and/or human remains are identified, additional mitigation measures may be necessary, if avoidance is not possible. If

avoidance is not possible, any mitigation measures developed would need to be completed with consultation from the local tribes.

With adherence to **Mitigation Measure CUL-1** and **Mitigation Measure CUL-2**, potential subsurface archaeological resources would be properly recovered and other direct and indirect impacts from construction would be limited. Therefore, project impacts would be less than significant with mitigation.

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

Less than Significant with Mitigation. In the event that human remains are discovered during construction, the project applicant would comply with the California Health and Safety Code Section 7050.5 regarding human remains, and the PRC Section 5097.98 regarding the treatment of Native American human remains. **Mitigation Measure CUL-3** would be implemented at both crossing locations.

Mitigation Measure CUL-3: Unanticipated Discovery of Human Remains

In the event that human remains are discovered during project construction, all activity within a 50-foot radius of the site shall be halted. The Alameda County Coroner would be notified and would make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner will notify the NAHC immediately. Once NAHC identifies the most likely descendants, the descendants will make recommendations regarding proper burial, which will be implemented in accordance with Section 15064.5(e) of the CEQA Guidelines.

With implementation of **Mitigation Measure CUL-3** at both crossing locations, potential disturbance of human remains would be properly recovered and other direct and indirect impacts from construction would be limited. Therefore, project impacts would be less than significant with mitigation.

4.6 Energy

	Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
Would the project:				
a) Result in 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?	☐	☐	☒	☐

Environmental Setting

California is one of the lowest per capita energy users in the United States, ranked 48th in the nation, due to its energy efficiency programs and mild climate. California consumed 272,576 gigawatt-hours of electricity and approximately 2,250 trillion British thermal units of natural gas in 2019.[14] Most of California's electricity is generated in-state with approximately 30 percent imported from the northwest and southwest in 2019. In addition, approximately 34 percent of California's electricity supply comes from renewable energy sources, such as wind, solar photovoltaic, geothermal, and biomass.[15] Electricity would be provided by Pacific Gas & Electric (PG&E) and East Bay Community Energy. East Bay Community Energy supplies renewable energy, which would reduce the quantity of nonrenewable fuels consumed to supply electricity to the crossings.

To reduce statewide vehicle emissions, California requires that all motorists use California Reformulated Gasoline, which is sourced almost exclusively from in-state refineries. Gasoline is the most used transportation fuel in California and is used by light-duty cars, pickup trucks, and sport utility vehicles. Diesel is the second most-used fuel in California and is used primarily by heavy duty-trucks, delivery vehicles, buses, trains, ships, boats and barges, farm equipment, and heavy-duty construction and military vehicles. Both gasoline and diesel are primarily petroleum-based, and their consumption releases greenhouse gas (GHG) emissions, including CO_2 and N_2O.

[14] U.S. Energy Information Administration. 2021. California State Energy Profile. 2019. Available: https://www.eia.gov/state/print.php?sid=CA. Accessed: September 2022.

[15] California Energy Commission. 2020 Total System Electric Generation. 2022. Available: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation#:~:text=Total%20generation%20for%20California%20was,to%2057%20percent%20in%202019. Accessed: September 2022.

Regulatory Setting

State

The 100 Percent Clean Energy Act of 2018 (Senate Bill 100)

SB 100 sets a 2045 goal of powering all retail electricity sold in California and state agency electricity needs with renewable and zero-carbon resources — those such as solar and wind energy that do not emit climate-altering greenhouse gases. SB 100 also requires updates the state's Renewables Portfolio Standard to ensure that by 2030 at least 60 percent of California's electricity is renewable. Additionally, SB 100 requires the Energy Commission, Public Utilities Commission and Air Resources Board to use programs under existing laws to achieve 100 percent clean electricity and issue a joint policy report on SB 100 by 2021 and every four years thereafter.

Building Energy Efficiency Standards - Title 24

The Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6 of the California Code of Regulations (Title 24), was established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 is updated approximately every three years.[16] Compliance with Title 24 is mandatory at the time new building permits are issued by city and county governments.32

Executive Order B-55-18 To Achieve Carbon Neutrality

In September 2018, Governor Brown issued an executive order, EO-B-55-18 To Achieve Carbon Neutrality, setting a statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." The executive order requires CARB to "ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal." EO-B-55-18 supplements EO S-3-05 by requiring not only emissions reductions, but also that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO2 from the atmosphere through sequestration.

Local

Berkeley Climate Action Plan

The City of Berkeley's Climate Action Plan (CAP) sets forth a vision of a more sustainable, livable, equitable, and economically vibrant community. By using energy more efficiently, harnessing renewable electricity to power our buildings, enhancing access to sustainable transportation, reducing waste, and building local food systems, we can keep dollars in our local economy, create new green jobs, and improve quality of life.[17]

Policy TLU-5.1	Integrate bicycle boulevards and pedestrian networks into broader alternative transportation system and identify mobility gaps that could be addressed through additional bicycle/pedestrian infrastructure.
Policy TLU-5.4	Identify opportunities to modify City streets to better serve the safety and needs of pedestrians and cyclists.

[16] California Energy Commission. 2022. Building Energy Efficiency Standards - Title 24. Available: https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards. Accessed February 2023.

[17] City of Berkeley, 2009. *City of Berkeley. Climate Action Plan.* Available: https://berkeleyca.gov/sites/default/files/2022-01/Berkeley-Climate-Action-Plan.pdf. Accessed: November 2022.

Policy TLU-5.7	Provide adequate sidewalk width, pedestrian crossing time, "count down" signals, and universal access signal features at all signalized crossings.

Berkeley General Plan

The Environmental Management element sets forth goals and policies related to the City's continuing commitment to energy efficiency.[18] The project would be subject to the policies listed in the General Plan, including the following:

Policy EM-35	Promote high-efficiency design and technologies that provide cost-effective methods to conserve energy and use renewable energy sources.
Action EM-36A	Encourage patterns of development, building designs, and construction methods that are energy-efficient and reduce pollution.
Action EM-36B	Encourage the use of lighting that is energy-efficient and non-intrusive.

Impact Discussion

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Construction

Less than Significant. Project construction activities such as grading and sidewalk replacement would require energy resources primarily in the form of fuel consumption to operate heavy equipment, light-duty vehicles, machinery, and generators. Temporary power may also be provided for construction trailers and electric construction equipment.

Electrical power would be required to construct the project and would be supplied from existing electrical infrastructure in the area. However, construction activities would not be expected to have any adverse impact on available electricity supplies or infrastructure. Therefore, energy consumption from project construction would be negligible compared to the overall consumption of electricity in Alameda County or California.

Energy use during construction would be temporary in nature, and construction equipment used would be typical of similar-sized construction projects in the region. Therefore, project construction would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy, and no mitigation is required.

Operation

Less than Significant. Energy demand from project operation would include electricity consumed by crossing arms and lights. The project would operate at energy levels similar to existing energy usage. Therefore, the project's impact on energy consumption would be less than significant, and no mitigation is required.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less than Significant. SB 100 mandates 100 percent clean electricity for California by 2045. Because the project would be powered by the existing electricity grid, the project would eventually be powered by renewable energy and would not conflict with this statewide plan. Furthermore, the

[18] City of Berkeley, 2002. City of Berkeley General Plan, Environmental Management Element. Available: https://berkeleyca.gov/sites/default/files/documents/11_Environmental%20Management%20Element-FINAL.pdf. Accessed: October 2022.

project would comply with all applicable Title 24 requirements pertaining to energy efficiency and renewable energy.

The project would include replacing the existing signal arms on either sides of both crossings. While the addition of the signal arms would slightly increase energy consumption for the City, the energy uses for operation and maintaining the signal arms would be similar to existing uses. Because the additional amount of energy required for the project operation is not expected to be substantial, the project would be consistent with the goals and policies related to renewable energy and energy efficiency that are outlined in the City's General Plan and CAP. Therefore, this impact would be less than significant, and no mitigation is required.

4.7 Geology and Soils

	Significant Impact	Less than Significant with Mitigation	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:				
i) 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?	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) 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 would 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 table 18-1b of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
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 geologic feature?	☐	☒	☐	☐

Environmental Setting

The existing crossings have a flat topography, and no known active or potentially active faults cross any of the existing crossings. The existing crossings are not within an Earthquake Fault Zone as delineated by the Alquist-Priolo Earthquake Fault Zoning Act. The closest earthquake fault is the Hayward Fault located

along the eastern region of the City, approximately 2.5 miles east of the project site.[19] While the project is not within an Earthquake Fault Zone, the Bay Area region has several known seismically active faults, making the area subject to strong ground shaking in the event of an earthquake. Other regional faults near the City include: the San Andreas Fault, located approximately 15 miles west of the City; the Calaveras Fault, located approximately 18 miles to the southeast, and the Rogers Creek Fault, located approximately 20 miles northwest. In addition, the existing crossings are located within the Liquefaction Seismic Hazard Zone.

Regulatory Setting

State

The Alquist-Priolo Earthquake Zoning Act

The Alquist-Priolo Earthquake Zoning Act (1972) and the Seismic Mapping Act (1990) direct the State Geologist to delineate regulatory zones to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The project site is not located within the Alquist-Priolo Earthquake Zone, and no active faults have been mapped on the project site. The closest active fault to the project site is the Greenville Fault Zone, which is approximately .41 miles south of the rail crossing. However, the project does not propose the construction of a structure for human inhabitance. Therefore, the Project would not trigger the Alquist Priolo Act. Other active faults within the San Francisco Bay Area Region capable of generating ground shaking at the project site, include the Calaveras Fault (5.28 miles), Hayward Fault (6.83 miles), San Andreas (14.91 miles), Greenville Fault (19.26 miles), and Mount Diablo Fault (26.1 miles).

As described in the Alquist-Priolo Hazard Zone Act of 1972, a State Geologist is required to delineate wide special study zones in order to encompass all active and potentially active traces of the San Andreas, Calaveras, Hayward, San Jacinto, and other such faults or fault segments as necessary. The established hazard zones are to be a minimum of one-quarter wide.

Local

Berkeley General Plan

Various policies in the General Plan have been adopted for the purpose of avoiding or mitigating geological impacts resulting from planned development within the City.[20] All future development allowed by the proposed land use designations would be subject to the policies listed in the General Plan, including the following:

Policy S-13 Hazards Identification Identify, avoid and minimize natural and human-caused hazards in the development of property and the regulation of land use.

Policy S-14 Land Use Regulation Require appropriate mitigation in new development, in redevelopment/reuse, or in other applications.

Action S-14A When appropriate utilize the environmental review process to ensure avoidance of hazards and/or adequate mitigation of hazard-induced risk.

[19] California Department of Conservation. California Earthquake Sones of Required investigation. Available: https://maps.conservation.ca.gov /cgs/EQZApp/app/. Accessed February 2023.

[20] City of Berkeley, 2002. City of Berkeley General Plan: Disaster Preparedness and Safety Element. Available: https://berkeleyca.gov/sites/default/files/documents/07_Disaster%20Preparedness%20and%20Safety%20Element-FINAL_0.pdf. Accessed: October 2022.

Action S-14-B Require soil investigation and/or geotechnical reports in conjunction with development/redevelopment on sites within designated hazard zones such as areas with high potential for soil erosion, landslide, fault rupture, liquefaction and other soil-related constraints.

Action S-14-C Place structural design conditions on new development to ensure that recommendations of the geotechnical/soils investigations are implemented.

Impact Discussion

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:

i. 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?

No Impact. No active or potentially-active faults are known to pass directly beneath the existing crossings. The closest fault to the existing crossings is the Hayward Fault; other nearby faults include the San Andreas Fault, Calavera Fault, and Rogers Creek Fault. The project site is not within a currently established State of California Earthquake Fault Zone for surface fault rupture hazards. Therefore, the potential for surface rupture due to faulting occurring beneath the site during the design life of project is low. Due to the distances of faults from the project site, and the absence of known faults within or near the project, implementation of the project would not expose people or buildings to known risks of fault rupture. Given this, there would be no impact, and no mitigation is required.

ii) Strong seismic ground shaking?

Less than Significant. Earthquakes along several nearby active faults in the region could cause moderate to strong ground shaking at the project site. The intensity of the earthquake ground motions, and the damage done by shaking would depend on the characteristics of the generating fault, distance to the fault and rupture zone, earthquake magnitude, earthquake duration, and site-specific geologic conditions. Given that the entire Bay Area region is subject to strong seismic ground shaking during a large earthquake event, the project would not expose people or structures to any greater risks involving seismic ground shaking than similar transportation features in the surrounding area. Because the project does not involve habitable structures and is limited to safety improvements at both existing crossings, no additional risk due to ground shaking would occur. Therefore, impacts related to seismic ground shaking would be less than significant, and no mitigation is required.

iii) Seismic-related ground failure, including liquefaction?

Less than Significant. Soil liquefaction is a condition where saturated granular soils near the ground surface undergo a significant loss of strength during seismic events. Loose, water-saturated soils are transformed from a solid to a liquid state during ground shaking. Liquefaction can result in significant deformations and ground rupture. Soils most susceptible to liquefaction are loose, uniformly graded, saturated, fine-grained sands that lie close to the ground surface.

The project site is located within a state-designated Liquefaction Hazard Zone. The likely consequence of potential liquefaction at the site would be settlement. However, the limited scope of the improvements at the existing crossings would not change any risk from liquefaction or settlement. No structures are proposed. Therefore, impacts related to liquefaction would be less than significant, and no mitigation is required.

iv) Landslides?

No Impact. The project site and surrounding area is relatively flat and there are no adjacent steep slopes or hillsides that would be susceptible to landslides. Improvements proposed as part of the project do not include substantial mounding of earth or other substantive changes to grade that would create slope instability hazards. The project would not, therefore, be exposed to landslide-related hazards. No impact would occur, and no mitigation is required.

b) Result in substantial soil erosion or the loss of topsoil?

Less than Significant. Project construction would involve ground disturbing activities that would temporarily expose soils and increase the potential for soil erosion from wind or stormwater runoff. The project would be subject to the requirements of Alameda County Clean Water Program (discussed in Section 4.10, Hydrology and Water Quality) and would be required to comply with the City's BMPs for erosion and sedimentation control during the construction period. As a result, impacts related to erosion and loss of topsoil would be less than significant, and no mitigation is required.

c) 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?

Less than Significant. As discussed in Section 2.7, Geology and Soils, item a.ii and a.iii, liquefaction and landslide risk at the project site are very low. Lateral spreading is a type of ground failure related to liquefaction. It consists of the horizontal displacement of flat-lying alluvial material toward an open face, such as the steep bank of a stream channel. Berkeley Aquatic Park, which includes three lagoons, is located west of the project site. However, it is not steep and is lined with retaining walls.

d) Be located on expansive soil, as defined in table 18-1b of the Uniform Building Code (1994), creating substantial risks to life or property?

No Impact. Moderate to highly expansive soils may be present at the existing crossings. Expansive soils can undergo significant volume changes when moisture content in the soil fluctuates. However, due to the limited nature of the improvements at the crossings and that no structures are proposed, there would be no risks related to expansive soils. No impact would occur, and no mitigation is required.

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?

No Impact. No septic tanks or alternative wastewater disposal systems are proposed, and no wastewater would be generated by the project. Therefore, no impact would occur, and no mitigation is required.

f) Directly or indirectly destroy a unique paleontological resource or site or unique paleontological feature

Less than Significant with Mitigation. The project site is currently developed with existing at-grade rail crossings. Ground disturbance from project construction activities would be primarily limited to previously disturbed areas. As such, it is not anticipated that project construction would encounter paleontological resources. However, in the event that paleontological resources are encountered during construction, they may be inadvertently damaged or destroyed. This is a potentially significant impact. **Mitigation Measure GEO-1** would require the implementation of procedures should paleontological resources be encountered during construction. Implementation of **Mitigation Measure GEO-1** at both crossing locations would reduce potential impacts to paleontological resources.

Mitigation Measure GEO-1: Discovery of Paleontological Resources

Discovery of a paleontological specimen during any phase of the project shall result in a work stoppage in the vicinity of the find until it can be evaluated by a professional paleontologist. Should loss or damage be detected, additional protective measures or further action (e.g., resource removal), as determined by a professional paleontologist, shall be implemented to mitigate the impact.

With implementation of **Mitigation Measure GEO-1**, potential impacts to paleontological resources would be reduced to a less than significant level for both crossings.

4.8 Greenhouse Gas Emissions

	Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas 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 greenhouse gases?	☐	☐	☒	☐

Environmental Setting

Unlike emissions of criteria and toxic air pollutants, GHGs have a broader, global impact. GHGs such as carbon dioxide (CO_2), methane, water vapor and nitrous oxide (NOx) occur naturally in the earth's atmosphere and are responsible for maintaining the earth's surface temperature. Compounds such as chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride are byproducts of human economic activities like fossil fuel combustion and act as GHGs. While natural levels of GHGs keep the earth comfortable, these human-generated compounds pose various adverse effects and result in global warming. The continued release of GHGs at or above current rates would continue to increase average global surface temperatures and would alter the planet's climate, creating significant long-term local, regional, and global impacts.

BAAQMD has adopted thresholds of significance to assist in the review of operational GHGs under CEQA. BAAQMD has not adopted a threshold for construction-period GHG emissions, as GHG emission impacts reflect the long-term and cumulative effect of GHG on a global scale, while construction-period emissions are intermittent and temporary. These thresholds are designed to establish the level at which GHG emissions would cause significant environmental impacts. The significance thresholds identified by BAAQMD are:

- Consistency with a qualified GHG Reduction Strategy (such as a climate action plan) OR
- Emissions below 1,100 MT of CO_2e per year per project OR
- Emissions below 4.6 MT CO_2e per service population per year.

However, the current thresholds set by BAAQMD were established to achieve the state's 2020 GHG reduction target. Because the project will be operational after 2020, an analysis of consistency with the state's post-2020 GHG reduction goals is appropriate. While the achievement of 2020 GHG reduction goals could – in part – reasonably be attained through local reductions in GHGs, such as those outlined in the CAP, the attainment of 2030 goals and beyond increasingly requires sector-wide and statewide policy changes to address GHG emissions. Many of these actions are outside of the jurisdiction and/or capacity of individual municipalities.

For example, in the energy sector, renewable energy production sources (such as wind and solar energy) must comprise 50 percent of all retail sales statewide by 2030. Additionally, the post-2020 Cap and Trade program has been designed to capture 80 percent of statewide GHG emissions. A more detailed list of actions required to achieve 2030 goals is provided below. Therefore, in this analysis, the project is compared to the City's CAP for the project's opening in the year (2024), and additionally is evaluated for overall GHG reductions consistent with 2030 statewide goals.

Regulatory Setting

State

California Assembly Bill 32

With the passage of Assembly Bill 32 (AB 32, Global Warming Solutions Act of 2006), the State of California made a commitment to reduce GHG emissions to 1990 levels by 2020, which represents about a 30 percent decrease over 2006 levels. In December 2008, CARB approved the Climate Change Scoping Plan, which provided a comprehensive set of actions designed to reduce California's dependence on oil, diversify energy sources, save energy, and enhance public health, among other goals. Per AB 32, the Scoping Plan must be updated every five years to evaluate the mix of AB 32 policies to ensure that California is on track to achieve the 2020 GHG reduction goal.

Executive Order B-30-15 and Senate Bill 350

In April 2015, the Governor issued Executive Order B-30-15, which established a GHG reduction target of 40 percent below 1990 levels by 2030. Senate Bill 350 (SB 350) advanced these goals through two measures. First, the law increases the renewable power goal from 33 percent renewables by 2020 to 50 percent by 2030. Second, the law requires the California Energy Commission (CEC) to establish annual targets to double energy efficiency in buildings by 2030. In October 2017, the CEC issued their final report on a strategy to double energy efficiency by 2030. The report sets targets for utility providers and "nonutility" program savings. Nonutility program savings focus on energy efficiency savings from programs such as Building Efficiency Standards and Appliance Efficiency regulation. SB 350 requires large publicly owned utilities and all load-serving entities under the jurisdiction of the California Public Utilities Commission (CPUC) to file integrated resource plans (IRPs) with the CEC and CPUC, respectively. IRPs must detail how each utility will meet their customers resource needs, reduce greenhouse gas emissions, and ramp up the deployment of clean energy resources in order to meet the 2030 target, pursuant to SB 350. The law also requires the CPUC to direct electric utilities to establish annual efficiency targets and implement demand-reduction measures to achieve this goal.

Senate Bill 100

Adopted on September 10, 2018, Senate Bill 100 (SB 100) supports the reduction of GHG emissions from the electricity sector by accelerating the state's Renewables Portfolio Standard Program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

Senate Bill 32

In September 2016, the Governor signed Senate Bill 32 (SB 32) into legislation, which builds on AB 32 and requires the state to cut GHG emissions to 40 percent below 1990 levels by 2030. With SB 32, the Legislature also passed Assembly Bill 197, which provides additional direction for updating the Scoping Plan to meet the 2030 GHG reduction target codified in SB 32. CARB published California's 2017 Climate

Change Scoping Plan Update in November 2017 (2017 Scoping Plan). The 2017 Scoping Plan establishes a strategy that will reduce GHG emissions in California to meet the 2030 target. Key features of this plan are:

- Cap and Trade program places a firm limit on 80 percent of the State's emissions;
- Achieving a 50-percent Renewable Portfolio Standard by 2030;
- Increase energy efficiency in existing buildings;
- Develop fuels with an 18-percent reduction in carbon intensity;
- Develop more high-density, transit-oriented housing;
- Develop walkable and bikeable communities;
- Greatly increase the number of electric vehicles on the road and reduce oil demand in half;
- Increase zero-emissions transit so that 100 percent of new buses are zero emissions;
- Reduce freight-related emissions by transitioning to zero emissions where feasible and near-zero emissions with renewable fuels everywhere else; and
- Reduce "super pollutants" by reducing methane and hydrofluorocarbons by 40 percent.

As presented in the 2017 Scoping Plan, various changes and measures are needed to achieve the 2030 target. The Scoping Plan has established a proposed reduction scenario that requires specific reductions through programs and changes to fossil fuel consumption. Based on the Scoping Plan scenario, a significant portion of GHG emission reductions will result from statewide programs and existing and proposed policies, including Cap and Trade, a doubling of energy efficiency as required by SB 350, Renewable Portfolio Standard requirements, and Low Carbon Fuel standards. Other significant reductions will be achieved through an increase in zero-emission vehicles, trucks and buses.

BAAQMD CEQA Guidelines and 2010 Bay Area Clean Air Plan

BAAQMD identifies thresholds of significance for operational GHG emissions from land-use development projects in its guidelines. These guidelines include recommended significance thresholds, assessment methodologies, and mitigation strategies for GHG emissions. Under the Guidelines, if a project would result in operational-related GHG emissions of 1,100 metric tons (also called the "bright line" threshold), or 4.6 metric tons per service population of CO2e per year or more, it would make a cumulatively considerable contribution to GHG emissions and result in a cumulatively significant impact to global climate change. In jurisdictions where a qualified Greenhouse Gas Reduction Strategy has been reviewed under CEQA and adopted by decision-makers, compliance with the Greenhouse Gas Reduction Strategy would reduce a project's contribution to cumulative GHG emission impacts to a less-than-significant level. The Guidelines also outline a methodology for estimating GHGs.

The Clean Air Plan is a multi-pollutant plan that addresses GHG emissions along with other air emissions in the Bay Area Air Basin. One of the key objectives in the Clean Air Plan is climate protection. The Clean Air Plan includes emission control measures in five categories: Stationary Source Measures, Mobile Source Measures, Transportation Control Measures, Land Use and Local Impact Measures, and Energy and Climate Measures. Consistency of a project with current control measures is one measure of its consistency with the Clean Air Plan. The current Clean Air Plan also includes performance objectives, consistent with the state's climate protection goals under AB 32 and SB 375, designed to reduce emissions of GHGs to 1990 levels by 2020 and 40 percent below 1990 levels by 2035.

Assembly Bill 1279

Assembly Bill 1279 requires the state to achieve net zero greenhouse gas emissions (GHG) as soon as possible, but no later than 2045, and achieve and maintain net negative greenhouse gas emissions thereafter. The bill also requires California to reduce statewide GHG emissions by 85 percent compared to 1990 levels, and directs the California Air Resources Board to work with relevant state agencies to achieve these goals.

Senate Bill 1020

Senate Bill 1020 adds interim targets to the policy framework originally established in Senate Bill 100, requires state agencies to rely on 100% renewable energy and zero-carbon resources to serve their own facilities by 2030, and establishes a Climate and Equity Trust fund to address rising electricity rates that threaten the affordability of basic service and undermine the economics of beneficial building and transportation electrification

Local

Berkeley Climate Action Plan

The Berkeley CAP sets the target for the City to reduce the City's greenhouse gas (GHG) emissions by 80% by the year 2050. Goals of the Plan include:[21]

Goal 5	Accelerate Implementation of the City's Bicycle & Pedestrian Plans.
Policy	Continue to expand and improve the City's bicycle and pedestrian infrastructure.
Implementing Actions	Identify opportunities to modify City streets to better serve the safety and needs of pedestrians and cyclists. Street modifications that serve to slow or reduce automobile traffic and make walking and cycling safer and more viable include traffic circles and allocating additional roadway space to cyclists. The City should develop and adopt "Complete Streets" design standards, and routinely accommodate bicycle and pedestrian improvements in all streets and sidewalks projects. Provide adequate sidewalk width, pedestrian crossing time, "count down" signals, and universal access signal features at all signalized crosswalks. Regularly update the Bicycle and Pedestrian Plans, including updating indicators of pedestrian and cyclist safety.
Goal 6	Make public transit more frequent, reliable, integrated and accessible
Policy	Encourage additional passenger rail service and ridership in Berkeley
Implementing Actions	Improve bicycle and pedestrian access to passenger rail line, including installing additional signage.
Goal 3	Increase recycling of construction and demolition debris.
Implementing Actions	Pending site design and feasibility analysis, create capacity to process C&D materials at new Berkeley Transfer Station. Until the new Transfer Station is built, the City is sending mixed C&D materials to an outside facility for recycling.

[21] City of Berkeley, 2009. Berkeley Climate Action Plan. Available: https://berkeleyca.gov/your-government/our-work/adopted-plans/berkeley-climate-action-plan. Accessed: October 2022.

Impact Discussion

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction

Less than Significant. BAAQMD has not established a threshold for construction-period GHG emissions. Project-related construction emissions are confined to a short period in relation to the overall life of the project. Based on BAAQMD's guidelines and the short nature of construction, GHG emissions during construction would be minor and temporary. Thus, GHG emissions from project construction are considered less than significant, and no mitigation is required.

Operation

Less than Significant. Operation of the project would result in emissions similar to existing conditions. Operation of the project would not change the frequency or speed of existing trains or affect the volume of vehicles using the crossings. As such, GHG emissions from operation of the project would be less than significant, and no mitigation is required.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less than Significant. The project would not conflict with an applicable local plan, policy or regulation adopted for the purpose of reducing the emission of GHGs. Key planning and policy documents in the City include the General Plan, Clean Air Plan, and CAP. Relevant policies and goals are listed above. As the project is consistent with the goals and policies of the General Plan, Clean Air Plan, and CAP, the impact would be less than significant, and no mitigation is required.

4.9 Hazards and Hazardous Materials

	Significant Impact	Less than Significant with Mitigation	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 complied pursuant to Government Code Section 65962.5 and as a result, would 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, would the project 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?	☐	☐	☐	☒

Environmental Setting

The following discussion identifies potential hazardous materials adjacent to the project site.

Potential Sources of Contamination

Both crossings are located in industrial and commercial areas. Based on a desktop search of the California Department of Toxic Substances Control (DTSC), Envirostor database, the crossings would be constructed in areas where potential contamination sources could occur.[22]

Within a 1,000 foot radius of the Virginia Street crossing, four sites contain hazardous waste: Berkeley Redevelopment Agency site, Courtaulds Aerospace Inc site, Kaiser Permanente Berkeley Regional Lab

[22] Department of Toxic substances Control, 2022. Envirostor. Available https://dtsc.ca.gov/your-envirostor/. Accessed: October 2022.

site, and the Safety-Kleen Corp site. The Berkeley Redevelopment Agency site is under a voluntary agreement led by the DTSC, which was certified in 2004. As of 2008, the Courtaulds Aerospace Inc. site is under corrective actions in coordination with the San Francisco Bay Regional Water Quality Control Board (RWQCB). Both the Kaiser Permanente Berkeley Regional Lab site, and the Safety-Kleen Corp. site have been closed.

There are no sites within a 1,000 foot radius of the Hearst Avenue crossing.

Regulatory Setting

State

In California, the USEPA has granted most enforcement authority over federal hazardous materials regulations to the California Environmental Protection Agency (Cal/EPA). In turn, local agencies including the Berkeley Fire Department and the Alameda County Department of Environment Health (ACDEH) have been granted responsibility for implementation and enforcement of many hazardous materials regulations under the Certified Unified Program Agency (CUPA) program.

Department of Toxic Substances Control and Regional Water Quality Control Board

The Department of Toxic Substances Control (DTSC) regulates hazardous waste and remediation of existing contamination and evaluates procedures to reduce the hazardous waste produced in California. DTSC regulates hazardous waste in California primarily under the authority of the federal RCRA and the California Health and Safety Code. The RWQCB also provides regulatory oversight for sites with contaminated groundwater or soils.

Government Code §65962.5 (Cortese List)

Section 65962.5 of the Government Code requires the CalEPA to develop and annually 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 DTSC and the State Water Resources Control Board (SWRCB).

Local

Berkeley General Plan

The Safety Element of the Berkeley General Plan establishes policies for the management and conservation of the City's natural resources and the protection of the community from hazards.[23] The project would be subject to the policies listed in the General Plan, including the following:

Action S-12 Enforce applicable provisions of the Zoning and Building Ordinances.

Policy S-13 Identify, avoid and minimize natural and human-caused hazards in the development of property and the regulation of land use.

Policy S-14 Require appropriate mitigation in new development, in redevelopment/reuse, or in other applications.

Action S-14A When appropriate utilize the environmental review process to ensure avoidance of hazards and/or adequate mitigation of hazard-induced risk.

[23] City of Berkeley, 2002. City of Berkeley General Plan: Disaster Preparedness and Safety Element. Available: https://berkeleyca.gov/sites/default/files/documents/07_Disaster%20Preparedness%20and%20Safety%20Element-FINAL_0.pdf. Accessed: October 2022.

Policy S-15 Construction Standards. Ensure proper design and construction of hazard-resistant structures through careful plan review/approval and thorough and consistent construction inspection.

Berkeley Municipal Code

After a review of the Berkeley Municipal Code, it was determined that the following policies are applicable to the project:

Section 14.48.040 Construction materials and barricades. This ordinance requires that materials used in the construction or repair of any building or structure, together with the necessary pedestrian walkways, barricades and warning signs, when required permits have been obtained from the City. (Ord. 7632-NS § 1 (part), 2018: Ord. 3262-NS § 12.1-b, 1952).

Section 16.04.060 Construction materials and standards--Specifications generally. This ordinance requires that no sidewalks, parking step, driveway approach, curb, or curb and gutter shall be constructed of other material or in other manner than that prescribed by standard plans and specifications, current series, of the Public Works Department, and subject to the conditions set forth in Sections 16.04.070 and 16.04.080. (Ord. 4109-NS § 3 (part), 1965) .

Hazardous Materials Use and Storage Regulation

Within the City, a number of local, state, and federal regulations govern the use, transport, and storage of hazardous materials. A Hazardous Materials Business Plan is generally required of any facility which generates any quantity of hazardous waste, or which handles hazardous materials in amounts greater than 55 gallons for liquids, 500 pounds for solids, and 200 cubic feet for compressed gases. The implementation and enforcement of these local, and state and federal regulations regarding the use, storage and transport of hazardous materials (including setbacks for flammable storage from property lines) reduce the potential for impacts to off-site land uses, in the event of an accidental release.

Impact Discussion

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than Significant. Construction of the project would involve the use of materials that are regarded as hazardous, such as gasoline, hydraulic fluids, paint, and other similar materials. Operation of the project would not require the use or storage on-site of cleaning supplies in small quantities. No hazardous materials would be used or stored on-site.

In accordance with federal and state law, the project would be required to disclose hazardous materials handled at reportable amounts. The small quantities of hazardous materials that may be used during construction would not pose a risk to site users or adjacent land uses. Additionally, the contractor would be required to prepare an emergency response and evacuation plan, conduct hazardous materials training (including remediation of accidental releases), and notify employees who work in the vicinity of hazardous materials, in accordance with the Federal Occupational Health and Safety Administration and California Division of Occupational Safety and Health requirements. Therefore, impacts related to the routine transport, use, or disposal of hazardous materials during construction and operation would be less than significant, and no mitigation is required.

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?

Less than Significant. Construction of the project would include ground clearing, grading, sidewalk removal and replacement, and other construction activities, which may require the limited use of hazardous materials such as fuels, oils, solvents, glues, paint and building material finishing products. Such materials would be used temporarily and typically do not generate hazardous air pollutant emissions or pose a long-term threat to human health or the environment. The use of such products would not reasonably result in an accidental release of hazardous materials into the environment. Conditions at the crossings during operation of the project would be similar to the existing conditions of the crossings and would not handle or emit hazardous materials, substances, or waste. Thus, this impact would be less than significant, and no mitigation is required.

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

Less than Significant. The Hearst Avenue crossing is located within 0.25 miles of one school, Fusion Academy. Hazardous materials such as paints, oils, and absorbents would be used in relatively small quantities during construction of the project. However, due to the nature of the project, the use of the hazardous materials and quantities would be temporary and limited. Conditions at the crossings during operation of the project would be similar to the existing conditions and would not handle or emit hazardous materials, substances, or waste. Therefore, this impact would be less than significant, and no mitigation is required.

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

Less than Significant with Mitigation. A search of the DTSC EnviroStor database along with a search of the RWQCB GeoTracker database shows there are no known hazardous materials or spills associated with the Virginia Street and Hearst Avenue crossings.[24] However, there are sites currently open within 1,000 feet of the project site which could expose workers to hazardous materials. This is a potentially significant impact. **Mitigation Measure HAZ-1** would require construction of both crossings to prepare a Health and Safety Plan (HSAP) for construction activities.

Mitigation Measure HAZ-1: Prepare a Site-specific HASP for Construction Activities

The construction contract specifications shall provide that a licensed hazardous materials professional shall prepare a site-specific HASP for construction activities. The HASP will establish protocols for preventing uncontrolled worker exposure to contaminated media during construction. The HASP will implement the following State and federal regulations govern the protection of worker safety at potential hazardous material sites:

- Worker education and training (Hazard Communication Standard) 29 CFR 1910.1200, 1915.1200, 1917.28, 1918.90, and 1926.59, 1910.1018 (inorganic arsenic)
- Construction Safety Orders 8 CCR Division 1, Chapter 4
- Lead in Construction 8 CCR 1532.1

[24] State Water Resources Control Board, 2022. GeoTracker. Available: https://geotracker.waterboards.ca.gov/. Accessed: October 2022.

- General Industry Safety Orders 8 CCR 5214. Inorganic Arsenic.
- Environmental Health Standards for Management of Hazardous Waste 22 CCR Division 4.5

Upon operation of the project, no hazardous materials would be used at the crossings, and no hazardous materials would be released into the public.

With implementation of **Mitigation Measure HAZ-1** at both crossings, this impact would be less than significant.

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, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. The Oakland International Airport is located approximately 14.7 miles south of the project site, and the project would not be located within two miles of an airport. Therefore, no impact would occur, and no mitigation is required.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Construction

Less than Significant. Construction of the project would result in temporary closure of the crossings to vehicular traffic. Detours would be provided to ensure proper access for emergency vehicles. Additionally, the Emergency Operations Plan for the City of Berkeley would be implemented in the case of any emergency, and the project would comply with procedures determined by the Emergency Operations Plan, if such an event arose.[25]

Operation

No Impact. The project would not change the local roadway circulation pattern in a way that would physically interfere with local emergency response plans. Instead, the project would improve safety by restricting access to UPRR tracks, improve signage, provide accessibility improvements, and other safety features. As the project would not change roadways, local roadway circulation would remain at existing levels and would facilitate implementation of emergency response plans and emergency evacuation plans. Therefore, no impact would occur, and no mitigation is required.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact. The project is located in a developed urban area that does not contain wildland areas. There are no Fire Hazard Severity Zones (FHSZ) within the urbanized areas of the City. The project is not located within a Very High Fire Hazard Severity Zone (VHFHSZ).[26]The existing crossings are not located adjacent to natural areas that would be subject to wildland fires. The project would not result in any

[25] City of Berkeley, 2022. Disaster Preparedness. Available: https://berkeleyca.gov/safety-health/disaster-preparedness#:~:text=The%20Emergency%20Operations%20Plan%20(EOP,disasters%2C%20incidents%2C%20and%20events.&text=The%20Berkeley%20Resilience%20Strategy%20is,known%20for%20inclusiveness%20and%20innovation.. Accessed: November 2022.

[26] Office of the State fire Marshal. 2022. Fire Hazard Severity Zones Maps. Available at: https://egis.fire.ca.gov/FHSZ/. Accessed in September 2022.

significant exposure of people or structures to wildland fires. Therefore, no impact would occur, and no mitigation is required.

4.10 Hydrology and Water Quality

	Significant Impact	Less than Significant with Mitigation	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 groundwater 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:				
i) result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☒	☐
iii) 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	☐	☐	☒	☐
iv) 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?	☐	☐	☒	☐

Environmental Setting

The following discussion qualitatively analyzes potential impacts on the hydrological area surrounding the project site.

Water Supply

The East Bay Municipal Utility District (EBMUD) supplies water services to the City. Ninety percent of EBMUD's potable water comes from the 577-square mile watershed of the Mokelumne River on the western slope of the Sierra Nevada.[27]

EBMUD has approved and adopted an Urban Water Management Plan and Water Shortage Contingency Plan in June 2021. The City did not include projected increases in water demand due to densification and intensification of both residential and non-residential land uses.

Stormwater

The federal Clean Water Act and California's Porter-Cologne Water Quality Control Act are the primary laws related to water quality. Regulations set forth by the U.S. EPA and the State Water Resources Control Board have been developed to fulfill the requirements of this legislation. U.S. EPA's regulations include the National Pollutant Discharge Elimination System (NPDES) permit program, which controls sources that discharge pollutants into waters of the US (e.g., streams, lakes, bays, etc.). These regulations are implemented at the regional level by water quality control boards.

The Virginia Street and Hearst Avenue crossings are defined as small projects as established by RWQCB provision C3.i and governed by the Alameda County Stormwater Control guidelines. These guidelines define small projects as those which create or replace at least 2,500 square feet but less than 10,000 square feet of impervious surface. For projects over 10,000 square feet post-construction stormwater treatment is required.

Groundwater

Fluctuations in groundwater levels are common due to seasonal fluctuation, underground drainage patterns, regional fluctuations, and other factors. Both crossings are located within the Strawberry watershed basin.[28]

Tsunamis and Seiches

Seismically-induced ocean waves are caused by displacement of the sea floor by a submarine earthquake and are called tsunamis. Seiches are waves produced in a confined body of water such as a lake or reservoir by earthquake ground shaking or landsliding. Seiches are possible at reservoir, lake, or pond sites. The existing crossings are located within a Tsunami Hazard Area, which has the possibility of inundation during a tsunami. [29]

Regulatory Setting

Federal

The Clean Water Act

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. Under the CWA, EPA

[27] East Bay Municipal Utility District. 2021. Available: https://www.ebmud.com/water/about-your-water/drink-tap/#:~:text=Most%20of%20EBMUD's%20water%20comes,slope%20of%20the%20Sierra%20Nevada. Accessed: October 2022.

[28] Alameda County Flood Control & Water Conservation District, 2014. Strawberry Creek and Schoolhouse Creek Watersheds Map. Available: https://acfloodcontrol.org/wp-content/uploads/strawberry_creek-schoolhouse_creek.pdf. Accessed: October 2022.

[29] California Department of Conservation. 2022. Alameda County Tsunami Hazard Area Map. Available: https://www.conservation.ca.gov/cgs/tsunami/maps/alameda. Accessed: October 2022.

has implemented pollution control programs such as setting wastewater standards for industry, and has made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit is obtained. The EPA has also developed national water quality criteria recommendations for pollutants in surface waters.

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.

Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations protecting development in floodplains. As part of the NFIP, FEMA publishes Flood Insurance Rate Maps (FIRMs) that identify flood hazard zones within a community. Firm Maps designate 100-year floodplain zones and delineate other flood hazard areas. A 100-year floodplain zone is the area that has a one in one hundred (1 percent) chance of being flooded in any one year based on historical data. Areas subject to the 1 percent flood are designated as Zone AE, A, AH, or AO on the FEMA flood maps. The project site is in Flood Zone X, which is defined as an area of 0.2% annual chance flood hazard, and areas of 1% annual chance flood with average depth less than one foot.[30]

State

Statewide Construction General Permit

The SWRCB has implemented a NPDES General Construction Permit for the State of California. projects that would disturb more than one acre of land are required to submit a Notice of Intent and a SWPPP to the SWRCB to apply for coverage under the NPDES Construction and Land Disturbance General Permit. Construction activities subject to this permit include grading, clearing, or any activities that cause ground disturbance such as stockpiling or excavation. The SWPPP will include the site-specific BMPs to control erosion and sedimentation and maintain water quality during the construction phase. The SWPPP also contains a summary of the structural and non-structural BMPs to be implemented during the post-construction period.

Regional and Local

National Pollutant Discharge Elimination System Permit Program

The NPDES permit program controls sources that discharge pollutants into waters of the United States (e.g., streams, lakes, bays, etc.). For the City, these regulations are implemented at the regional level by the San Francisco Bay RWQCB. The RWQCB is responsible for protecting the quality of surface water and groundwater by issuing and enforcing compliance with the NPDES permits and by preparation and revision of the relevant RWQCB Plan, also known as the Basin Plan.

[30] FEMA. 2014. *FEMA Flood Map Service Center*. Available: https://msc.fema.gov/portal/search?AddressQuery=101%20South%20Jackson%20Avenue%20San%20Jose%20CA%20#searchresultsanchor. Accessed October 2022.

Alameda County Clean Water Program

To protect the San Francisco Bay, as well as rivers and creeks, construction projects in the City of Berkeley are required to comply with the Alameda County Clean Water Program. The measures of the Clean Water Program, designed to protect water quality by minimizing land disturbances and impervious surfaces, encourage infiltration into landscape and direct runoff into vegetated areas. All development projects within the City, regardless of size, must implement construction BMPs for reducing runoff during construction. BMPs include, but are not limited to:

- Temporary erosion controls to stabilize all denuded areas until permanent erosion controls are established.
- Delineate with field markers clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses.
- Provide notes, specifications, or attachments describing the following:
- Construction, operation and maintenance of erosion and sediment controls, include inspection frequency;
- Methods and schedule for grading, excavation, filling, clearing of vegetation, and storage and disposal of excavated or cleared material;
- Specifications for vegetative cover & mulch, include methods and schedules for planting and fertilization;
- Perform clearing and earth moving activities only during dry weather.
- Use sediment controls or filtration to remove sediment when dewatering and obtain all necessary permits.
- Protect all storm drain inlets in vicinity of site using sediment controls such as berms, fiber rolls, or filters.
- Trap sediment on-site, using BMPs such as sediment basins or traps, earthen dikes or berms, silt fences, check dams, soil blankets or mats, covers for soil stock piles, etc.
- Protect adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.
- Limit construction access routes and stabilize designated access points.
- No cleaning, fueling, or maintaining vehicles on-site, except in a designated area where washwater is contained and treated.
- Store, handle, and dispose of construction materials/wastes properly to prevent contact with stormwater.
- Contractor shall train and provide instruction to all employees/subcontractors regarding construction BMPs.
- Control and prevent the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, washwater or sediments, rinse water from architectural copper, and non-stormwater discharges to storm drains and watercourses.
- Divert on-site runoff around exposed areas; divert off-site runoff around the site (e.g., swales and dikes).

C.3 Stormwater Technical Guidance, Version 7.

C.3 Stormwater Technical Guidance, Version 7 is an Alameda Countywide Clean Water Program handbook meant to for developers, builders and project applicants, that help developers, builders, and project sponsors include post-construction stormwater controls in their projects, in order to meet local

municipal requirements and State requirements in the Municipal Regional Stormwater NPDES Permit (MRP). The municipalities have to require post-construction stormwater controls as part of their obligations under Provision C.3 of the MRP.

Groundwater Management Plan

The 2012 Watershed Management Plan describes the City's groundwater sustainability goals, and the strategies, programs, and activities that support those goals. The Watershed Management Plan satisfies the objectives of the Sustainable Groundwater Management Act enacted by the state legislature in 2014.[31]

Berkeley General Plan

The Environmental Management element of the City's General Plan establishes policies for the management and conservation of the City's natural resources and the protection of the community from hazards.[32] The following actions and policies are applicable to the project:

Policy EM-23	Take action to improve water quality in creeks and Bay.
Action EM-23A	Work with the EBMUD to ensure that wastewater discharges comply with the requirements of EBMUD's Wastewater Control Ordinance No. 311 to manage wastewater treatment discharges to protect Bay.
Policy EM-25	Protect local groundwater by promoting enforcement of state water quality laws that ensure non-degradation and beneficial use of groundwater.

Berkeley Municipal Code

After a review of the Berkeley Municipal Code, it was determined that that the following policy is applicable to project:

Section 17.06.100. Permits. Stormwater, surface water, roof runoff, groundwater or subsurface drainage which at the time of adoption of this ordinance codified in this chapter drains into a sanitary sewer, may continue to so drain if a special temporary permit has been obtained from the Director of Public Works. Permits will not be automatically issued and may be issued only when, in the opinion of the Director of Public Works, the denial of a permit would result in extreme hardship, in hazard to property, or in similar conditions. Such permit shall be revocable at any time. In the event of revocation, the permittee shall comply with Section 17.06.020 within one hundred eighty days of personal service or mailing of such revocation. (Ord. 5030-NS § 9, 1978).

Section 17.08.040. Obstructing or interfering with watercourses prohibited. It is unlawful for any person, organization, institution, corporation or the City of Berkeley to fill, or cause to be filled, to obliterate or cause to be obliterated, to obstruct or cause to be obstructed, to construct a building bridging a creek or cause such building to be constructed, or in any manner to interfere with or cause to be interfered with, any natural watercourse in Berkeley which carries off at any time of the year any storm water, or any surface waters, which have been precipitated by rains. This chapter does not apply

[31] City of Berkeley, 2012. *Watershed Management Plan.* Available: https://berkeleyca.gov/your-government/our-work/adopted-plans/watershed-management-plan. Accessed: October 2022.

[32] City of Berkeley, 2002. City of Berkeley General Plan, Environmental Management Element. Available: https://berkeleyca.gov/sites/default/files/documents/11_Environmental%20Management%20Element-FINAL.pdf. Accessed: October 2022.

to structures or conditions existing in creeks on or before January 4, 1990. (Ord. 6956-NS § 1 (part), 2006: Ord. 5961-NS § 2, 1989)

Impact Discussion

The information in this section is based on the Water Quality and Drainage Memo prepared for this project by Kimley Horn in May 2021.[33]

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Less than Significant. The project would result in very little increase in impervious surfaces as the existing crossings are located within developed areas. Both crossings are small projects as described in the MRP and would include post construction BMPs to minimize runoff and pollutants conveyed in that runoff. As less than one acre of land would be disturbed during construction, the project would not be subject to a state NPDES permit. The project would be required to comply with BMPs required by the Alameda County Clean Water Program and Alameda County Stormwater Control guidelines to avoid and minimize pollutants discharge during construction.[34]

During operation, the project would employ stormwater source controls to reduce the likelihood of contaminations from litter, pesticides, fertilizers, and petroleum drippings from automobiles. The source controls will require that all drainage will drain to bio-retention areas prior to discharging to the storm drain system; storm drain inlets will be clearly marked "No Dumping, Drains to Bay"; on-site storm drains will be cleaned annually, prior to the rainy season; and landscaping will be designed to minimize the need for irrigation, pesticide, and fertilizer use. With adherence to these BMPs and guidelines, the impact would be less than significant, and no mitigation is required.

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

No Impact. The project would improve safety to existing railroad crossings and would operate similar to existing conditions. The project would not require the use of water during operation. As such, the project would not decrease groundwater supplies or interfere with groundwater recharge. Therefore, there would be no impact, and no mitigation is required.

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:

i. result in substantial erosion or siltation on- or off-site?

Less Than Significant. Implementation of the project would result in little to no net new impervious surface. Compliance with Alameda County Stormwater Quality BMPs and Alameda County Stormwater Control guidelines will require BMPs be installed and monitored throughout construction; therefore, the project would not result in substantial erosion or siltation on- or off-site. The impact would be less than significant, and no mitigation is required.

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[33] Kimley Horn, 2021. Alameda CTC – RSEP Berkeley/San Leandro CE Water Quality and Drainage Memo.

[34] Alameda County.2019. *C.3 Stormwater Technical Guidance. A handbook for developers, builders and project applicants Version 7.* Available: https://static1.squarespace.com/static/5fe120bdfce3cd3cca992359/t/609a135a54b9e6555b820b0c/1620710253017/Alameda+County+Clean+Water+Program+Technical+Guidelines-compressed.pdf. Accessed February 2023.

ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Less Than Significant. As described above, the project would disturb less than an acre of land at both of the crossings and would not be subject to a state NPDES permit. Both crossings are small projects as described in the MRP and would include post construction BMPs to minimize runoff and pollutants conveyed in that runoff. Therefore, the impact would be less than significant and no mitigation is required.

iii. 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?

Less Than Significant. No improvements to the drainage conveyance system (inlets and underground pipe) are required based upon the proposed construction because discharge and stormwater runoff from the project would be minimal. Additionally, the project would follow Alameda County Stormwater Quality BMPs and Alameda County Stormwater Control guidelines, as outlined in the C.3 Stormwater Technical Guidance, Version 7, to limit potential impacts from runoff and source control measures. Therefore, the impact would be less than significant, and no mitigation is required.

iv. impede or redirect flood flows?

Less than Significant. The Water Quality and Drainage Memorandum conducted for the project concluded that there are no impacts to stormwater drainage systems and implementation of the project would not impede or redirect flows. Therefore, the impact would be less than significant, and no mitigation is required.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less than Significant. The project is located within FEMA Flood Zone X, which is defined as an area of 0.2% annual chance flood hazard, and areas of 1% annual chance flood with average depth less than one foot. The existing crossings are within a Tsunami Hazard Area which has the potential for inundation during a tsunami. However, tsunami waves and flooding have historically resulted in little damage around the Bay. Therefore, risks associated with tsunamis and seiches would be less than significant. Additionally, construction of the project would not introduce any additional pollutants to the existing crossings. Therefore, the risk from flood hazards, tsunami, and seiches would be less than significant, and no mitigation is required.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less than Significant. Construction of the project would comply with Alameda County Stormwater Quality BMPs and the Alameda County Stormwater Control guidelines. With adherence to these BMPs and guidelines, the impact would be less than significant, and no mitigation is required.

4.11 Land Use and Planning

	Significant Impact	Less than Significant with Mitigation	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?	☐	☐	☐	☒

Environmental Setting

Land use and zoning designations surrounding the project site consist of Mixed Use/Light Industrial (MULI) and Manufacturing (M). Development immediately surrounding the crossing locations is predominantly warehouse, aggregate distribution, parking lots, and manufacturing.

The existing crossings are predominantly impervious. The road is paved with asphalt and has white railroad crossing markings. Both crossing are located on local streets which are two-lane side streets with existing single-arm gates (one in each direction) with lights and street painting at the crossing location, respectively.

Regulatory Setting

Local

Berkeley General Plan

The Land Use Element of the City's General Plan provides general direction and guidance for the physical development of Berkeley.[35] The following policies and actions are applicable to the project:

Policy LU-6	Ensure that all residential areas are safe and attractive places to live.
Policy LU-7	Preserve and protect the quality of life in Berkeley's residential areas through careful land use decisions.
Action LU-7B	Carefully evaluate and monitor new and existing uses to minimize or eliminate negative impacts on adjacent residential uses.
Policy LU-11	Pedestrian- and Bicycle-Friendly Neighborhoods Ensure that neighborhoods are pedestrian- and bicycle-friendly with well-maintained streets, street trees, sidewalks, and pathways.

[35] City of Berkeley, 2001. City of Berkeley General Plan, Land Use Element. Available: https://berkeleyca.gov/your-government/our-work/adopted-plans/general-plan. Accessed: October 2022.

Impact Discussion

a) Physically divide an established community?

No Impact. Projects that have the potential to physically divide an established community include new freeways and highways, major arterial streets, and railroad corridors. The project would be located in a developed area surrounded by commercial, and industrial land uses. The project would be compatible with the pattern of surrounding land uses and would not physically divide an established community. Instead of dividing an established community, the project would improve safety elements at existing railroad crossings. The project would improve safety in the area and contribute to the cohesion of established communities. Therefore, no impact would occur, and no mitigation is required.

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?

No impact. The project would be consistent with existing zoning designations. The project would not require any rezoning and would improve safety at existing railroad crossings. The project has been designed in accordance with applicable City regulations. The project would be consistent with both the General Plan land use designation and local zoning and the project would not conflict with any applicable land use plans, policies, or regulations. Therefore, there would be no impact, and no mitigation is required.

4.12 Mineral Resources

	Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would 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?	☐	☐	☐	☒

Environmental Setting

According to the Mineral Land Classification Map for Alameda and San Francisco Counties, the mineral resource topography for the City is generally MRZ-1: Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. Additionally, Berkeley has no mineral extraction industries.

Regulatory Setting

State

Surface Mining and Reclamation Act of 1975

The Surface Mining and Reclamation Act of 1975 (SMARA, Public Resources Code, Sections 2710-2796) provides a comprehensive surface mining and reclamation policy with the regulation of surface mining operations to assure that adverse environmental impacts are minimized and mined lands are reclaimed to a usable condition[36].

SMARA also encourages the production, conservation, and protection of the state's mineral resources. Public Resources Code Section 2207 provides annual reporting requirements for all mines in the state, under which the State Mining and Geology Board is also granted authority and obligations.

Impact Discussion

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

No Impact. The project is located within an area classified as MRZ-1; areas where adequate information indicates that no significant mineral deposits are present or where is it judged that little likelihood exists for their presence. Given this, implementation of the project would not result in the loss of availability of a known resource that would be of value to the region and residents of the state. Therefore, no impact would occur, and no mitigation is required.

[36] California Department of Conservation. 2019. SMARA Statutes and Regulations.2019. Available: https://www.conservation.ca.gov/dmr/lawsandregulations. Accessed October 2022.

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?

No Impact. As discussed above, the project is located within an area classified as MRZ-1; areas where adequate information indicates that no significant mineral deposits are present or where is it judged that little likelihood exists for their presence. Given this, implementation of the project would not disturb protected mineral resources. Therefore, no impact would occur, and no mitigation is required.

4.13 Noise and Vibration

	Significant Impact	Less than Significant with Mitigation	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?	☐	☐	☒	☐
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?	☐	☐	☒	☐

Environmental Setting

Noise is typically described as any unwanted or objectionable sound and is technically described in terms of the loudness of the sound (amplitude) and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). However, because the human ear is not equally sensitive to sound at all frequencies, the A-weighted decibel scale (dBA), which gives greater weight to the frequencies of sound to which the human ear is most sensitive, was devised to relate noise to human sensitivity.

The dBA measurement system is not an effective way to measure noise levels within a community, since community noise is always fluctuating and changing. Therefore, other methods of describing noise levels have been developed, the most common of which are the Community Noise Equivalent Level (CNEL) and the Day-Night Noise Level (Ldn). Ldn is an average of all noise levels recorded over a 24-hour period, with a 10-dB penalty for nighttime noise that occurs between 10:00 p.m. and 7:00 a.m. CNEL is also an average sound level over a 24-hour period, with a 10 dB penalty added for noise between 10:00 p.m. and 7:00 a.m. and an additional 5 dB penalty added for the evening hours of 7:00 p.m. to 10:00 p.m.

Sensitive Receptors

Noise exposure standards and guidelines for various types of land uses reflect the varying noise sensitivities associated with each of these uses. Residences, hospitals, schools, guest lodging, libraries, and churches are treated as the most sensitive to noise intrusion and therefore have more stringent noise exposure targets than do other uses, such as manufacturing or agricultural uses that are not subject to impacts such as sleep disturbance.

The project site is located in an urban area near I-80. As described above, the surrounding land uses are predominately commercial and industrial uses, with some residential uses to the east of both Hearst

Avenue and Virginia Street crossings. Table 8 lists the distances and locations of the nearby sensitive receptors. Additionally, the locations of the sensitive receptors can be found in Figure 5.

Table 8 Sensitive Receptors

Crossing	Sensitive Receptor Description	Distance and Direction from the Crossing
Virginia Street	Single-family Residential	Approximately 300 feet east
Hearst Avenue	Single-family Residential	Approximately 500 feet east

Source: Kimley Horn, 2021

Figure 5 Noise Sensitive Receptors Locations

Regulatory Setting

Federal

Federal Transit Administration

Noise

Recommendations in the federal Transit Administration (FTA)'s Transit Noise and Vibration Impact Assessment Manual (2018) can be used as guidance to determine whether or not a change in traffic would result in a substantial permanent increase in noise. Under the FTA standards, the allowable noise exposure increase is reduced with increasing ambient existing noise exposure, such that higher ambient noise levels have a lower allowable noise exposure increase. Table 9 shows the significance thresholds for increases in traffic-related noise levels. These standards are applicable to a project's impact on existing sensitive receptors.

Table 9 Significance of Increases in Exposure to Traffic Noise

Existing Noise Exposure (dBA L_{dn} or L_{eq})	Allowable Noise Exposure Increase (dBA L_{dn} or L_{eq})
45-49	7
50-54	5
55-59	3
60-64	2
65-74	1
75+	0

Source: Federal Transit Administration 2018

Vibration

The FTA has published standard vibration velocities for construction equipment operations. In general, depending on the building category of the nearest buildings adjacent to the potential pile driving area, the potential construction vibration damage criteria vary. For example, for a building constructed with reinforced concrete with no plaster, the FTA guidelines show that a vibration level of up to 0.50 inch per second (in/sec) peak particle velocity (PPV) is considered safe and would not result in any construction vibration damage. In general, the FTA architectural damage criterion for continuous vibrations (i.e. 0.2 in/sec) appears to be conservative. The types of construction vibration impacts include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on soil composition and underground geological layer between vibration source and receiver.

Local

Berkeley General Plan

The Environmental Management element of the City's General Plan establishes policies for the management and conservation of the City's natural resources and the protection of the community from hazards, such as noise. The following actions and policies are applicable to the project:

Action EM-43A	Increase enforcement of the Noise Ordinance to reduce noise impacts.
Policy EM-46	Require operational limitations and all feasible noise buffering for new uses that generate significant noise impacts near residential, institutional, or recreational uses.
Action EM-46B	Mitigate significant noise impacts on parks and public open space, whenever feasible.

Berkeley Municipal Code Section 13.40

After a review of the Berkeley Municipal Code, it was determined that that the following policy is applicable to project:

Section 13.40 of the BMC contains noise regulations that limit the maximum noise levels. For construction and demolition noise, Section 13.40.070.B.7 includes the following requirements:

a. Operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work before 7:00 a.m. on a weekday (or before 9:00 a.m. on a weekend or holiday) or after 7:00 p.m. on a weekday (or after 8:00 p.m. on a weekend or holiday) such that the sound therefrom across a residential or commercial real property line violates Section 13.40.050 or 13.40.060, except for emergency work of public service utilities or by variance issued by the EHD. (This section shall not apply to the use of domestic power tools as specified in subsection B.11 of this section.)
b. Noise Restrictions at Affected Properties. Where technically and economically feasible, construction activities shall be conducted in such a manner that the maximum sound levels at affected properties do not exceed those listed in the following schedule in Table 10 and Table 11:

Table 10 Noise Standard for Mobile Equipment

Schedule	R-1, R-2 Residential	R-3 and above Multi-Family Residential	Commercial/Industrial
Weekdays 7:00 a.m. to 7:00 p.m.	75 dBA	80 dBA	85 dBA
Weekends 9:00 a.m. to 8:00 p.m. and legal holidays	60 dBA	65 dBA	70 dBA

Source: City of Berkeley, 2022

Table 11 Noise Standard for Stationary Equipment

Schedule	R-1, R-2 Residential	R-3 and above Multi-Family Residential	Commercial/Industrial
Weekdays 7:00 a.m. to 7:00 p.m.	60 dBA	65 dBA	70 dBA
Weekends 9:00 a.m. to 8:00 p.m. and legal holidays	50 dBA	55 dBA	60 dBA

Source: City of Berkeley, 2022

Impact Discussion

Information in this section is based on the Noise Analysis prepared for this project by Kimley Horn Consultants in September 2022.[37]

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?

Less than Significant. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading, excavation, paving). Noise generated by construction equipment, including earth movers, material handlers, can reach high levels. During construction, exterior noise levels could affect the residential neighborhoods surrounding the existing crossings. Project construction would occur approximately 300 feet from existing single-family residences to the east of existing Virginia Street crossing, and 500 feet to the east of existing Hearst Avenue crossing. However, construction activities would occur throughout the project site and would not be concentrated at a single point near sensitive receptors. Noise levels typically attenuate (or drop off) at a rate of 6 dB per doubling of distance from point sources, such as industrial machinery. During construction, exterior noise levels could affect the residential neighborhoods near the construction site.

Construction activities associated with development of the project would include demolition, grading, and paving. Such activities may require graders, dozers, and tractors during grading; cranes, forklifts, generators, tractors, and welders during construction; and pavers, rollers, mixers, tractors, and paving equipment during paving. Grading and excavation phases of project construction tend to be the shortest in duration and create the highest construction noise levels due to the operation of heavy equipment required to complete these activities. It should be noted that only a limited amount of equipment can operate near a given location at a particular time. Equipment typically used during this stage includes heavy-duty trucks, backhoes, bulldozers, excavators, front-end loaders, and scrapers. Operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three to four minutes at lower power settings. Other primary sources of noise would be shorter-duration incidents, such as dropping large pieces of equipment or the hydraulic movement of machinery lifts, which would last less than one minute.

Pile driving would not be used during construction. Table 12 depicts the typical construction equipment noise levels associated with the project.

[37] Kimley Horn Consultants, 2021. Acoustical Analysis Berkeley-San Leandro CE.

Table 12 Typical Construction Equipment Noise Levels

Equipment	Typical Level (dBA) 50 Feet from the Source[1]
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Cranes	88
Dozer	85
Generator	82
Grader	85
Loader	80
Paver	85
Pump	77
Roller	85
Saw	76
Scraper	85
Shovel	82
Truck	84

Source: Kimley Horn, 2022
Notes: [1]Calculated using the inverse square law formula for sound attenuation: dBA2 +20Log (d1/d2) where: dBA2 = estimated noise level at receptor; dBA1 = reference noise level; d1 = reference distance; d2 = receptor location distance

Following the Federal Transit Administration (FTA)'s methodology for quantitative construction noise assessments, the FHWA Roadway Construction Noise Model (RCNM) was used to predict construction noise. Per the FTA Transit Noise and Vibration Manual, when calculating construction noise, all construction equipment is assumed to operate simultaneously at the center of the active construction zone. In reality, equipment would be operating throughout the site and not all of the equipment would be operating at the point closest to the sensitive receptors and considering the distance between the center of the project site and the sensitive receptors is a reasonable assumption. The noise levels identified in Table 13 show the exterior construction noise at the nearest sensitive receptors, without accounting for attenuation from existing physical barriers.

As described above in the Regulatory Setting section, the BMC limits the hours of construction to the less sensitive hours of the day (7:00 a.m. – 7:00 p.m. weekdays, 9:00 a.m. – 8:00 p.m. weekends and holidays). Therefore, construction would not occur during normal sleeping hours for residents, which is the most sensitive time for exposure to noise. This section also states that during the construction period, where technically and economically feasible, construction activities shall be conducted in such a manner that the maximum sound levels from stationary equipment at affected properties will not exceed 60 dBA Leq on weekdays and 50 dBA Leq on weekends and holidays in the R-1 and R-2 zoning districts, and 70 dBA Leq on weekdays and 60 dBA Leq on weekends and holidays in commercial districts. As shown in Table 13, it is anticipated that noise from construction of the proposed project would exceed these limits without implementation of noise reduction measures.

Table 13 Project Construction noise Levels

Construction Phase	Receptor Location		Worst Case Modeled Noise Level, dBA Leq (8-hour)[2]	BMC Noise Standard, dBA Leq[3]	Exceeded?
	Land Use	Distance (feet)[1]			
Demolition	Virginia Street Commercial Receptor	100	77.8	70	Yes
	Hearst Street Commercial Receptor	90	78.7		Yes
	Virginia Street Residential Receptor	365	66.6	60	Yes
	Hearst Street Residential Receptor	500	63.8		Yes
Grading	Virginia Street Commercial Receptor	100	80.9	70	Yes
	Hearst Street Commercial Receptor	90	81.8		Yes
	Virginia Street Residential Receptor	365	69.6	60	Yes
	Hearst Street Residential Receptor	500	66.9		Yes
Paving	Virginia Street Commercial Receptor	100	76.5	70	Yes
	Hearst Street Commercial Receptor	90	77.4		Yes
	Virginia Street Residential Receptor	365	65.2	60	Yes
	Hearst Street Residential Receptor	500	77.4		Yes
Building Construction	Virginia Street Commercial Receptor	100	76.8	70	Yes
	Hearst Street Commercial Receptor	90	77.8		Yes
	Virginia Street Residential Receptor	365	65.6	60	Yes
	Hearst Street Residential Receptor	500	62.9		Yes

1. Distance measured from the center of the project site to the receptor's nearest property line.
2. Modeled noise levels conservatively assume the simultaneous operation of all pieces of equipment.
3. BMC Section 13.40.070 states that during the construction period, where technically and economically feasible, construction activities shall be conducted in such a manner that the maximum sound levels from stationary equipment at affected properties will not exceed 60 dBA Leq on weekdays and 50 dBA Leq on weekends and holidays in the R-1 and R-2 zoning districts, and 70 dBA Leq on weekdays and 60 dBA Leq on weekends and holidays in commercial districts.
Source: Federal Highway Administration, Roadway Construction Noise Model, 2006. Refer to Appendix A for noise modeling results.

As shown in Table 13, the highest exterior noise level at the nearest sensitive receptors would occur during the grading stage of construction and would be 69.6 dBA which would exceed the 60 dBA Leq BMC noise limit. These assumptions represent the worst-case noise scenario because construction activities would typically be spread out throughout the project site, and thus some equipment would be further away from the affected receptors. In addition, construction noise levels are not constant, and in fact, construction activities and associated noise levels would fluctuate and generally be brief and sporadic, depending on the type, intensity, and location of construction activities. Construction noise would also be acoustically dispersed throughout the project site and will be masked by freeway noise and roadway noise.

As described above in the Regulatory Setting section, the BMC limits the hours of construction to the less sensitive hours of the day (7:00 a.m. – 7:00 p.m. weekdays, 9:00 a.m. – 8:00 p.m. weekends and holidays). Therefore, construction would not occur during normal sleeping hours for residents, which is

the most sensitive time for exposure to noise. This section also states that during the construction period, where technically and economically feasible, construction activities shall be conducted in such a manner that the maximum sound levels from stationary equipment at affected properties will not exceed 60 dBA Leq on weekdays and 50 dBA Leq on weekends and holidays in the R-1 and R-2 zoning districts, and 70 dBA Leq on weekdays and 60 dBA Leq on weekends and holidays in commercial districts. As shown in Table 13, it is anticipated that noise from construction of the proposed project would exceed these limits without implementation of noise reduction measures. Implementation of the following standard conditions of approval would minimize construction noise impacts on the off-site nearby sensitive receptors and would implement all technically and economically feasible measures to reduce construction noise, consistent with the requirements of BMC Section 13.40.070.

Standard Conditions of Approval

Construction Noise Reduction Program. The applicant shall develop a site-specific noise reduction program prepared by a qualified acoustical consultant to reduce construction noise impacts to the maximum extent feasible, subject to review and approval of the Zoning Officer. The noise reduction program shall include the time limits for construction listed above, as measures needed to ensure that construction complied with BMC Section 13.40.070. The noise reduction program should include, but shall not be limited to, the following available controls to reduce construction noise levels as low as practical:

- Construction equipment should be well maintained and use judiciously to be as quiet as practical.
- Equip all internal combustion engine-driven equipment with mufflers, which are in good condition and appropriate for the equipment.
- Utilize “quiet” models of air compressors and other stationary noise sources where technology exists. Select hydraulically or electrically powered equipment and avoid pneumatically powered equipment where feasible.
- Locate stationary noise-generating equipment as far as possible from sensitive receptors when adjoining construction sites. Construct temporary noise barriers or partial enclosures to acoustically shield such equipment where feasible.
- Prohibit unnecessary idling of internal combustion engines.
- If impact pile driving is required, pre-drill foundation pile holes to minimize the number of impacts required to seat the pile.
- Construct solid plywood fences around construction sites adjacent to operational business, residences or other noise-sensitive land uses where the noise control plan analysis determines that a barrier would be effective at reducing noise.
- Erect temporary noise control blanket barriers, if necessary, along building facades facing construction sites. This mitigation would only be necessary if conflicts occurred which were irresolvable by proper scheduling. Noise control blanket barriers can be rented and quickly erected.
- Route construction related traffic along major roadways and away from sensitive receptors where feasible.

Construction Noise Management – Public Notice Required. At least two weeks prior to initiating any construction activities at the site, the contractor shall provide notice to businesses and residents within 500 feet of the project site. This notice shall at a minimum provide the following: (1) project description, (2) description of construction activities during extended work hours and reason for extended hours, (3) daily construction schedule (i.e., time of day) and expected duration (number of months), (4) the name and phone number of the project Liaison for the project that is responsible for responding to any local

complaints, and (5) that construction work is about to commence. The liaison would determine the cause of all construction-related complaints (e.g., starting too early, bad muffler, worker parking, etc.) and institute reasonable measures to correct the problem. A copy of such notice and methodology for distributing the notice shall be provided in advance to the City for review and approval.

Construction Phases. The contractor shall provide the Zoning Officer with a schedule of major construction phases with start dates and expected duration, a description of the activities and anticipated noise levels of each phase, and the name(s) and phone number(s) of the individual(s) directly supervising each phase. The Zoning Officer or his/her designee shall have the authority to require an onsite meeting with these individuals as necessary to ensure compliance with these conditions. The applicant shall notify the Zoning Officer of any changes to this schedule as soon as possible.

Construction Hours. Construction activity shall be limited to between the hours of 7:00 a.m. and 6:00 p.m. on Monday through Friday, and between 9:00 a.m. and 4:00 p.m. on Saturday. No construction-related activity shall occur on Sunday or any federal holiday.

Construction Hours Exceptions. It is recognized that certain construction activities, such as the placement of concrete, must be performed in a continuous manner and may require an extension of these work hours. Prior to initiating any activity that might require a longer period, the developer must notify the Zoning Officer and request an exception for a finite period of time. If the Zoning Officer approves the request, then two weeks prior to the expanded schedule, the developer shall notify businesses and residents within 500 feet of the project site describing the expanded construction hours. A copy of such notice and methodology for distributing the notice shall be provided in advance to the City for review and approval. The project shall not be allowed more than 15 extended working days. The applicant shall establish a project construction website with the following information clearly accessible and updated monthly or more frequently as changes warrant:

- Contact information (i.e., "hotline" phone number, and email address) for the project construction manager
- Calendar and schedule of daily/weekly/monthly construction activities
- The final Conditions of Approval, Mitigation Monitoring and Reporting Program, Transportation Construction Plan, Construction Noise Reduction Program, and any other reports or programs related to construction noise, air quality, and traffic.

The implementation of these standard conditions of approval would ensure that the construction of the proposed project would not conflict with the City of Berkeley's construction noise standards and therefore, construction noise impacts would be less than significant.

Operation

No Impact. During operation, the improved crossings would function similar to the existing conditions. Vehicular traffic and pedestrians would be able to use the crossings as they do under existing conditions, but with improved safety. Operation of the project would not change the frequency or speed of existing trains along UPRR tracks or effect the volume of vehicles using the crossing. Since no change in vehicle or train trips and no new vehicle trips are generated by the project there would be no impact to operational noise as a result of project operation.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less than Significant. Construction activities have the potential to result in varying degrees of temporary ground vibration, depending on the specific construction equipment used and operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in

magnitude with increases in distance. The effects of ground vibration may be imperceptible at lowest levels, low rumbling sounds and detectable vibrations at moderate levels, and damage to nearby structures at the highest levels. Project construction would result in vibration levels that would be felt in the immediate vicinity of construction activities and may be felt at nearby properties. Project operation would not have the potential to result in notable vibration.

The City has not adopted a significance threshold to assess vibration impacts during construction and operation. Therefore, the FTA standard vibration velocities, described in Regulatory Setting of Section 4.13, for construction equipment operation is used to evaluate potential construction vibration impacts. Table 14, lists vibration levels at 10 and 25 feet for typical construction equipment. Groundborne vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. As indicated in Table 14, based on FTA data, vibration velocities from typical heavy construction equipment operations that would be used during project construction range from 0.003 to 0.192 in/sec PPV from 10-25 feet from the source of activity. The nearest sensitive receptors are the single-family and multi-family residences approximately 90 feet from the active construction zone for the proposed project.

Table 14 Typical Construction Equipment Vibration Levels

Equipment	Typical Level (dBA) 10 Feet from the Source[1]	Typical Level (dBA) 25 Feet from the Source[1]
Large Bulldozer	0.192	0.089
Loaded Trucks	0.164	0.076
Rock Breaker	0.127	0.059
Jackhammer	0.075	0.035
Small Bulldozer/Tractors	0.007	0.003

Source: Kimley Horn, 2022
Notes: [1]Calculated using the inverse square law formula for sound attenuation: dBA2 +20Log (d1/d2) where: dBA2 = estimated noise level at receptor; dBA1 = reference noise level; d1 = reference distance; d2 = receptor location distance

As shown in Table 14, the highest vibration levels are achieved with the large bulldozer operations. This construction activity is expected to take place during grading. As indicated in Table 14, construction equipment vibration velocities would not exceed the FTA's 0.20 PPV threshold. In general, other construction activities would occur throughout the project site and would not be concentrated at the point closest to the nearest residential structure. Therefore, vibration impacts associated with the project would be less than significant.

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?

Less than Significant. The Oakland International Airport is located approximately 14.7 miles south of the project site. The project is located outside of the 65 dBA CNEL noise contours for the Oakland International Airport. Therefore, this impact would be less-than-significant, and no mitigation is required.

4.14 Population and Housing

	Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
Would the project:				
a) Induce substantial 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 housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Impact Discussion

a) Induce substantial 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)?

No Impact. The project is limited to transportation safety improvements at existing railroad crossings and does not include the construction of residential units or commercial uses or extension of roads or infrastructure. The project would not result in a substantial increase in employment such that population growth could be induced indirectly. Therefore, no impact would occur, and no mitigation is required.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact. There are no existing residential uses on the existing crossings; therefore, the project would not displace individuals or residents, necessitating the construction of replacement housing elsewhere. Therefore, no impact would occur, and no mitigation is required.

4.15 Public Services

	Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
Would the project:				
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 any of the public services:				
i) Fire protection?	☐	☐	☐	☒
ii) Police protection?	☐	☐	☐	☒
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒

Environmental Setting

Fire Protection

The Berkeley Fire Department (BFD) provides fire and emergency services to residents of the City including firefighting and rescue, fire prevention and training, and emergency medical services. The BFD provides emergency response services for immediate life-threatening situations including fire suppression, hazardous materials control and rescue in Berkeley. The BFD has seven fire stations, each with an engine company consisting of three fire fighters and a fire engine. In addition, stations 2 and 5, the downtown fire stations, both have staffed aerial ladder trucks. The Department's staffing standards include seven engines with three persons each, two trucks with three persons each, three ambulances with two paramedics each, and one assistant fire chief on duty 24 hours a day. The City's goal for BFD staffing is reviewed each budget cycle.[38]

[38] City of Berkeley. 2001. Berkeley Draft General Plan EIR. Prepared by LSA Associates Inc. 2001. Available: https://www.cityofberkeley.info/uploadedFiles/Planning_(new_site_map_walk-through)/Level_3_-_General/1intro.pdf. Accessed September 2022.

Police Protection

The Berkeley Police Department (BPD) provides services intended to protect life and property, prevent crime, arrest criminal offenders, and improve the quality of life in the City. The Department consists of three divisions: Patrol, Support and Administrative. The Patrol Division, the largest, responds to calls for police services, provides animal control, conducts drug enforcement activities, and maintains the Foot Patrol Detail and Bicycle Unit. Traditional public safety methods, such as patrolling in automobiles and investigating crimes, are augmented by outreach programs in which the officers become involved with neighborhood organizations, addressing problems such as drug-trafficking. The Detective Bureau is within the Support Division, which also provides other general administrative support functions. The City's goal for BPD staffing is reviewed each budget cycle. This review includes consideration of historical and current year reported crime rates. City population increases are not weighed in the BPD's evaluation of staffing needs. Standard response time for priority one calls (i.e., life threatening situations) is 5 minutes from time of dispatch.[39]

Schools

Schools in the City include both the public schools of the Berkeley Unified School District and the University of California, as well as a number of private schools. The existing crossings are located within the Berkeley Unified School District which operates 35 schools serving the City. Schools near the existing crossings include Fusion Academy (1,000 feet), Black Pine Circle School (1,600 feet), Rosa Parks Elementary School (2,300 feet), Oxford Elementary School (3,700 feet), and Berkeley School (4,400 feet).

Library Services

The Berkeley Public Library has been providing public library services to the Berkeley community since 1893. The library operates a Central Library, four Branch Libraries, and a Tool Lending Library. There are no libraries located within a 0.5-mile radius of the project; the nearest library is 0.7 mile from Hearst Avenue crossing.

Regulatory Setting

State

Quimby Act – California Code Sections 66475-66478

The Quimby Act (California Government Code Sections 66475-66478) was approved by the California legislature to preserve open space and parkland in the state. The Quimby Act authorizes local governments to establish ordinances requiring developers of new subdivisions to dedicate parks, pay an in-lieu fee, or perform a combination of the two. As described below, the City has adopted a Parkland Dedication Ordinance (PDO) and a Park Impact Ordinance (PIO), consistent with the Quimby Act.

Local

Berkeley General Plan

After a review of the various policies in the General Plan have been adopted for avoiding or mitigating impacts to public services, [40] the following policies were determined to be applicable to the project:

[39] Berkeley Police Department, 2021. *Berkeley Calls for Service Analysis.* Available here: https://berkeley-rps.org/wp-content/uploads/2021/10/Berkeley-CFS_Report_FNL-1.pdf. Accessed September 2022.

Policy S-1 G. Conduct coordinated planning and training between local and regional police, fire, and public health agencies in preparation for natural and man-made disasters, and ensure that the City's disaster response communication technologies are compatible with regional agency communication technologies.

Policy S-22 A. Develop proposals to make developed areas more accessible to emergency vehicles and reliable for evacuation. Consider restricting on-street parking, increasing parking fines in hazardous areas, and/or undergrounding overhead utilities. Require that all private access roads be maintained by a responsible party to ensure safe and expedient passage by the Fire Department at any time, and require approval of all locking devices by the Fire Department. Ensure that all public pathways are maintained to provide safe and accessible pedestrian evacuation routes from the hill areas.

Impact Discussion

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 any of the public services:

i. Fire Protection?

No Impact. Fire protection is currently provided at the existing crossings by the BFD. The project would adhere with current fire codes to reduce potential fire hazards. Because the project would not include housing or other uses that would include substantial growth in the area, the project would not increase demand on fire protection providers such that new facilities would be required. Therefore, there would be no impact, and no mitigation is required.

ii. Police Protection?

No Impact. Police protection is currently provided at the existing crossings by the BPD. The project would be consistent with appropriate safety measures to minimize criminal activity. Because the project would not include housing or other uses that would include substantial growth in the area, the project would not increase demand for police protection providers such that new facilities would be required. Therefore, there would be no impact, and no mitigation is required.

iii. Schools?

No Impact. The project would not include any residential uses. The project would include pedestrian and safety improvements at existing railroad crossings. Due to the nature of the project, safer sidewalk connectivity will provide safer pedestrian travel routes for existing residents to nearby schools. As the project is a safety improvement project, the project would not have an impact on schools, and no mitigation is required.

iv. Parks?

No Impact. The project would not include any residential uses. The project would include pedestrian and safety improvements at existing railroad crossings. Due to the nature of the project, safer sidewalk connectivity will provide safer pedestrian travel routes for existing parks and recreational facilities. As the project is a safety improvement project, the project would not have an impact on park facilities, and no mitigation is required.

v. Other public facilities?

No Impact. Open space and other public facilities such as libraries are typically provided to serve residents within their respective jurisdictions. Given the project has no residential component, project implementation would not increase demand for other public facilities. Therefore, no impact would occur, and no mitigation is required.

4.16 Parks and Recreation

	Significant Impact	Less than Significant with Mitigation	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 would 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?	☐	☐	☐	☒

Environmental Setting

The City contains a variety of regional and joint-use open space and recreational facilities that include natural resources, parks, playgrounds, gardens, marina facilities, and swim centers. The City's Park system provides traditional activities, such as sports fields, swimming pools, recreation centers, tennis and basketball courts, as well as numerous tot and school age play areas. In addition, the City's parks include many unique public outdoor environments, such as the historic Rose Garden, a 1,000- berth Marina, a 3,000-foot fishing pier, off-leash dog areas, kite flying, community gardens, Adventure Playground, Nature Center, and a variety of water sports.

Open space and recreation use near the project include public parks and the Aquatic Park. The Aquatic Park is situated approximately 0.6 mile south of the Hearst Avenue crossing and approximately 0.8 mile south of the Virginia Street crossing. Public parks adjacent to both crossings include George Florence Park, located approximately 0.5 miles east of the Hearst Avenue crossing, Berkeley Way Mini Park and Charlie Dorr Mini Park, both approximately 0.8 mile east to the Hearst Avenue crossing, Strawberry Creek Park, approximately 0.9 miles east to the Hearst Avenue crossing, and Cedar Rose Park, located 0.8 miles northeast to the Virginica Street crossing. There are no open space and recreation land uses present on or adjacent to the existing crossings.

Regulatory Setting

Local

Berkeley General Plan

The Open Space and Recreation Element establishes policy framework for the maintenance, improvement, and expansion of Berkeley's open space and recreational facilities.[41] After a review of the General Plan, the following policies were determined to be applicable to the project:

Action OS-9C Provide new safe pedestrian and bicycle railroad crossings, particularly at the southern end of the site, for improved access and circulation from nearby neighborhoods to Aquatic Park.

Action OS-10A Develop and maintain a citywide pedestrian and bicycle network that links open space and recreation facilities with bicycle and walking paths along tree-lined streets, publicly owned pathways, creeks, and other greenways.

Impact Discussion

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?

No Impact. The project would not include any residential uses and therefore would not increase the use of existing parks or recreational facilities by new residents. The project would not result in employment-related growth and therefore would not increase the use of existing neighborhoods, parks or recreational facilities. Therefore, no impact would occur, and no mitigation is required.

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?

No Impact. The project does not include recreational facilities, nor does it require the construction or expansion of recreational facilities. As such, there would not be an increase in the use of parks and recreational facilities. Therefore, there would be no impact on recreational facilities, and no mitigation is required.

[41] City of Berkeley, 2002. City of Berkeley General Plan Open Space and Recreation Element. Available: https://berkeleyca.gov/sites/default/files/documents/08_Open%20Space%20and%20Recreation%20Element-FINAL.pdf. Accessed: October 2022.

4.17 Transportation/Traffic

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

Environmental Setting

The following discussion qualitatively analyzes potential impacts on the local transportation network.

Regional Access

Regional access to the existing crossings is provided by Interstate 80 (I-80), located west of the crossings. I-80 is an east-west interstate which extends north through Alameda County and southwest towards San Francisco. Primary access to and from the I-80 is provided via various on-and-off ramps near the existing crossings.

Local Access

Roadways that provide primary vehicular circulation to the project site include Virginia Street and Hearst Avenue. Access provided by each roadway is discussed below:

- **Virginia Street** is a two-lane side street that connects local industrial businesses and high density apartments to downtown Berkeley.
- **Hearst Avenue** is a two-lane side street that connects local businesses to downtown Berkeley.

Regulatory Setting

Local

Berkeley Strategic Transportation Plan

The Berkeley Strategic Transportation Plan is a cohesive and comprehensive guide to achieving the transportation future that is defined by the adopted Complete Streets Policy and detailed in existing

planning documents, capital expenditure plans, and other city policies and programs.[42] The following goals of the Berkeley Strategic Transportation Plan are relevant to the project:

Goal 1	Increase Mobility and Access for all Mode Choices
Goal 2	Increase User Safety
Goal 3	Increase Access to Commercial Districts and Opportunity Areas
Goal 4	Increase Transportation Choices for Disadvantaged Communities
Goal 5	Increase Environmental Sustainability and Resiliency

Berkeley General Plan

The Transportation Element of the City's General Plan emphasizes the importance of making more efficient use of the existing transportation systems that serve the City.[43] The following policies and actions are applicable to the project:

Policy T-25	Maintain streets, sidewalks, and other public infrastructure to reduce long-term replacement costs.
Action T-25B	Coordinate pedestrian and transit public improvements with street repairs and repaving.
Action T-25C	Ensure that street repairs and repaving are completed without negatively affecting the disabled or bicyclists (e.g., ensure that all repaving and patching provides a smooth surface for bicyclists and wheelchairs).
Policy T-50	Maintain and improve sidewalks in residential and commercial pedestrian areas throughout Berkeley and in the vicinity of public transportation facilities so that they are safe, accessible, clean, attractive, and appropriately lighted.
Action T-50A	Prioritize pedestrian-serving public improvements, such as sidewalk repair and widening, bus shelters, street trees and lighting, public art, fountains, and directional signs.
Action T-50B	Establish safe, attractive pedestrian connections between residential areas, transit, shopping areas, and schools and other community facilities.
Action T-50C	Ensure that sidewalks are kept in good repair and are level, with a suitable grade for pedestrians and wheelchairs. Discourage, and when possible, prevent new developments from creating uncomfortably steep grades.

Berkeley Municipal Code

After review of the Berkeley Municipal Code, it was determined that the following policies are applicable to the project:

[42] City of Berkeley, 2016. Berkeley Strategic Transportation (BeST) Plan. Available: https://berkeleyca.gov/your-government/our-work/adopted-plans/berkeley-strategic-transportation-best-plan#:~:text=The%20Berkeley%20Strategic%20Transportation%20(BeST,favorite%20destinations%20and%20crucial%20parts. Accessed: October 2022.

[43] City of Berkeley, 2001. City of Berkeley, *Transportation Element.* Available: https://berkeleyca.gov/your-government/our-work/adopted-plans/general-plan. Accessed: November 2022.

Section 14.48.020. Obstructions on streets and sidewalks. It is unlawful for any person to place or cause to be placed anywhere upon any Sidewalk, Parklet or roadway, any object which obstructs, restricts, or prevents the use of any portion of such Sidewalk, Parklet or roadway, except as set forth in this Chapter or in a regulation promulgated by the City Manager and adopted by the City Council.

Section 14.48.040. Construction materials and barricades. Materials used in the construction or repair of any building or structure, together with the necessary pedestrian walkways, barricades and warning signs, when required permits have been obtained from the City. (Ord. 7632-NS § 1 (part), 2018: Ord. 3262-NS § 12.1-b, 1952).

Impact Discussion

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less than Significant. Project construction would add vehicle trips to nearby roadways as construction workers and vehicles enter and exit the crossings. However, construction related trips represent a negligible traffic increase that would cease after construction and would not permanently affect traffic circulation in the area. Once construction equipment is in place, there would be no interruptions to traffic service during the construction period. The Berkeley Strategic Plan has adopted plans and goals supporting improvements associated with walkable streets, and bicycle and pedestrian crossing improvements; the project would be consistent with these plans. Operation of the project would be similar to existing conditions with improved safety for automobiles, pedestrians and bicyclists at the railroad crossings. Therefore, the project is in compliance with applicable City plans, and any impacts to the circulation system will be less than significant, and no mitigation is required.

b) Conflict or be consistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less than Significant. The project has been evaluated in conformance with CEQA Guidelines Section 15064.3 and would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). Generally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purpose of this analysis "vehicle miles traveled" refers to the amount and distance of automobile travel attributable to the project. Construction related traffic impacts would be negligible and are temporary in nature. The improved crossings will function similar to existing conditions.

The project would not include land uses that represent new sources of automobile trips, such as residences, offices, or public parks. The project would improve safety at existing railroad crossings. Additionally, the project would provide safer alternative travel routes for non-motorized travelers that would generally reduce Vehicle Miles Traveled (VMT). Therefore, the project would not permanently increase regional miles travelled, and this impact would be less than significant, and no mitigation is required.

c) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The project would improve safety at existing rail crossings. This would result in a beneficial impact by reducing hazards, no mitigation is required.

d) Result in inadequate emergency access?

No Impact. Emergency access to the project stie would continue to be provided by existing roadways. Emergency access would be provided via Virginia Street and Hearst Avenue. The project would comply with all emergency access standards of the Berkeley Fire Department and Police Department. Therefore, the project would not result in inadequate emergency access. No impact would occur, and no mitigation is required.

4.18 Tribal Cultural Resources

	Significant Impact	Less than Significant with Mitigation	Less-than-Significant Impact	No Impact
a) 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:				
i) 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)?	☐	☒	☐	☐
ii) 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Environmental Setting

Tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a tribe that are listed, or determined to be eligible for listing, in the national, state, or local register of historical resources. Additionally, a tribal cultural resource may be a resource that the lead agency determines, in its discretion, is a tribal cultural resource. Cultural resources are generally defined as traces of human occupation and activity that include prehistoric and historic archaeological sites, districts, and objects; standing historic structures buildings, districts, and objects; and locations of important historic events of sites of traditional and/or cultural importance to various groups. Tribal cultural resources signify the intent to protect resources specifically of cultural value to a tribe. Specifically, the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1 protect the following resources:

(c) A resource may be listed as an historical resource in the California Register if it meets any of the following NRHP criteria:

> (1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

(2) Is associated with the lives of persons important in our past.

(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

(4) Has yielded, or may be likely to yield, information important in prehistory or history.

Native American cultural resources in the Berkeley region of Alameda County tend to be closer to the city center or near seasonal and perennial sources of fresh water.

Regulatory Setting

State

Native American Tribal Cultural Resources

On September 25, 2014, Governor Edmund G. Brown signed Assembly Bill 52 (AB 52), creating a new category of environmental resources (tribal cultural resources), which must be considered under CEQA. The legislation includes new requirements for consultation regarding projects that may affect a tribal cultural resource, a definition of "tribal cultural resource", and a list of recommended mitigation measures. AB 52 also requires lead agencies to provide notice to tribes that are traditionally and culturally affiliated with the geographic area if they have requested to be notified of projects proposed within that area. Where a project may have a significant impact on a tribal cultural resource, consultation is required until the parties agree to mitigate or avoid a significant impact on a tribal cultural resource or when it is concluded that mutual agreement cannot be reached. Currently, the City has one tribal representative from the Ohlone Indian Tribe who has requested to be notified of any project that requires an IS/MND or EIR and includes ground disturbance within the City.

Local

Berkeley General Plan

Various policies in the General Plan have been adopted for avoiding or mitigating impacts to cultural resources resulting from planned development within the City.

Policy LU-7	Preserve and protect the quality of life in Berkeley's residential areas through careful land use decisions.
Action LU-7	Require that new development is consistent with zoning density standards and compatible with the existing scale, historic character and surrounding uses.
Policy PD-3	Increase the extent of regulatory protection that applies to structures, sites, and areas that are historically or culturally significant.
Action PD-3	For any public or private project that may adversely affect an archaeological site, consult with the North Central Information Center of the California Historical Resources Information System require site evaluation as may be indicated, and attempt to prevent or mitigate any adverse impacts.
Policy PD-4	Use regulations to protect the character of neighborhoods and districts, and respect the particular conditions of each area.

Impact Discussion

The information in this section is based on the Cultural resources study prepared for this project by Rincon Consultants in August 2021.

a) 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:

i. 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)?

Less than significant with Mitigation. A Sacred Lands File search was requested in April 2021. The Sacred Lands File, operated by the NAHC, is a confidential set of records containing places of religious or social significance to Native Americans. A response from the NAHC was received on April 21, 2021, and indicated that Native American cultural sites have previously been identified on the project site. Implementation of Mitigation Measure CUL-1 (see Section 4.5, Cultural Resources) would require work to be halted within 100 feet of any discovered archaeological materials until a qualified professional archaeologist has evaluated the situation and provided appropriate recommendations. Additionally, during the public review period, Alameda CTC will be conducting tribal consultation with the suggested tribes, as required under AB-52. Results of the tribal consultation will be incorporated into the Final ISMND. With implementation of Mitigation Measure CUL-1 and by adhering to AB-52 requirements, impacts to tribal cultural resources would be reduced to less than significant level with mitigation.

ii. 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less than Significant with Mitigation. As stated in Section 4.5, Cultural Resources, the likelihood of encountering archeological or other buried cultural resources could occur during ground moving construction work. In addition to tribal consultation, implementation of **Mitigation Measure CUL-3** at both crossing locations would ensure any previously unidentified Native American archeological resources or remains encountered during construction are handled appropriately. With implementation of these mitigation measures, impacts to tribal cultural resources would be less than significant with mitigation.

4.19 Utilities and Service Systems

	Significant Impact	Less than Significant with Mitigation	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 storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒
b) Have sufficient 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 has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
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) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Environmental Setting

The following discussion qualitatively analyzes potential impacts on local utility providers.

Potable Water

The EBMUD supplies water services to the City. Ninety percent of EBMUD's potable water comes from the 577-square mile watershed of the Mokelumne River on the western slope of the Sierra Nevada.

Wastewater

The City is responsible for maintaining the City-owned sewer mains and lower sewer laterals. The City has updated its Sewer System Management Plan (SSMP) to meet the requirements established by the State Water Resources Control Board Order 2006-0003, statewide General Discharge Requirements of Sanitary Sewer Systems. The goal of the SSMP is to minimize the frequency and severity of sanitary

sewer overflows. The SSMP covers the management, planning, design, operation and maintenance of the City's sanitary sewer system. The update of the SSMP was completed in May 2019.

Solid Waste

Solid waste collection services are provided by the City's public works department. Solid waste generated by the project would be transferred to the Transfer Station or Berkeley Recycling Center, both operated by the City's public work department.

Natural Gas and Electricity Services

Electric and gas services within the City are provided by PG&E. No new generation peak capacity is necessary to meet the capacity requirements of new construction.

Regulatory Setting

State

Assembly Bill 939

Assembly Bill 939 (AB 939) relates to solid waste diversion requirements for the State of California. In 1995, all jurisdictions in California were required by AB 939 to divert 25 percent of waste generation from landfill. By the year 2000, all California Jurisdictions were required to divert 50 percent of waste generation from landfills.

Solid Waste Disposal Measurement System Act

The Solid Waste Disposal Measurement System Act (SB 1016) was passed in 2008 and required the AB 939 50 percent diversion requirement to be calculated in a per capita disposal rate equivalent.

Local

Berkeley General Plan

After a review of the Environmental Management element of the General Plan, it was determined hat the following policies, adopted for avoiding or mitigating impacts resulting from project development within the City, are applicable to the project:[44]

Policy EM-24	Protect and improve water quality by improving the citywide sewer system.
Action EM-24D	Identify alternative funding sources for essential infrastructure improvements such as grants, public-private partnerships, and special benefit districts.
Policy EM-25	Protect local groundwater by promoting enforcement of state water quality laws that ensure non-degradation and beneficial use of groundwater.

Berkeley Municipal Code

After a review of the Berkeley Municipal Code, the following policy was determined to apply to the project:

Section 17.06.100. Permits. Stormwater, surface water, roof runoff, groundwater or subsurface drainage which at the time of adoption of this ordinance codified in this chapter drains into a sanitary sewer, may continue to so drain if a special temporary permit has been obtained from the Director of

[44] City of Berkeley, 2002. City of Berkeley General Plan, Environmental Management Element. Available: https://berkeleyca.gov/sites/default/files/documents/11_Environmental%20Management%20Element-FINAL.pdf. Accessed: October 2022.

Public Works. Permits will not be automatically issued and may be issued only when, in the opinion of the Director of Public Works, the denial of a permit would result in extreme hardship, in hazard to property, or in similar conditions. Such permit shall be revocable at any time. In the event of revocation, the permittee shall comply with Section 17.06.020 within one hundred eighty days of personal service or mailing of such revocation. (Ord. 5030-NS § 9, 1978).

Impact Discussion

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

No Impact. The City's water and sewer utilities system currently serves the project site. Operation of the project would not require the use of utilities besides the electricity for single-arm pedestrian gates in each direction of traffic. As a result, the project would not require relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunication facilities. The existing utilities and service systems would support the project and growth evaluated by the General Plan. The project would coordinate with utility providers serving the project area to ensure there will be no disruption to utility services. Therefore, this impact would be less than significant, and no mitigation is required.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

No Impact. The City's water and sewer utilities system currently services the project site. The project would not require the use of potable water and would not require additional resources or entitlements to serve the project. Therefore, there would be no impact, and no mitigation is required.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact. As stated above, the City's water and sewer utilities system has available capacity to serve the project. The project would improve safety features of existing crossings and is not anticipated to increase wastewater generation. As such, the project would not require the construction of new water or wastewater treatment facilities. Therefore, no impact would occur, and no mitigation is required.

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?

Less than Significant. Construction activities such as demolition, grading, and paving would generate construction debris and excavated materials on site. Where feasible, such material would be used on site or recycled to reduce impacts on local and regional landfills. Material that cannot feasibly be used on site or recycled would be off-hauled by trucks to the Transfer Station or Berkeley Recycling Center. Once operational, solid waste would not be generated by the project. Given this, the project would be served by a landfill with sufficient capacity to service the project during construction. There would be a less-than-significant impact, and no mitigation is required.

e) Comply with federal, state, and local statutes and regulations related to solid waste?

No Impact. Construction activities such as demolition, grading, and paving would generate construction debris and excavated materials on site. Where feasible, such material would be used on site or recycled to reduce impacts on local and regional landfills. Once operational, the project would not generate solid waste. Therefore, the project would not result in a net increase of solid waste that would jeopardize the City's consistency with AB 939 or SB 1016. Given this, no impact would occur, and no mitigation is required.

4.20 Wildfire

	Significant Impact	Less than Significant with Mitigation	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 change?	☐	☐	☐	☒

Environmental Setting

The existing crossings are located in highly-developed and urbanized areas adjacent to the I-80 freeway. The crossings are developed with existing railroad tracks and surrounded by industrial buildings. The California Department of Forestry and Fire Protection identifies fire hazards based on relevant factors such as fuels, terrain, and weather. There are no Fire Hazard Severity Zones (FHSZ) within the urbanized areas of the City. The project is not located within a Very High Fire Hazard Severity Zone (VHFHSZ).[45]

Impact Discussion

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less Than Significant. As discussed in Section 4.9, Hazards and Hazardous Materials, construction of the project would result in temporary closure of the crossings to vehicular traffic. Detours would be provided to ensure proper access for emergency vehicles. Additionally, the Emergency Operations Plan for the City of Berkeley would be implemented in the case of an emergency, including fire, and the project would comply with procedures determined by the Emergency Operations Plan, if such an event arose. Once the project is completed, operation would not change the local roadway circulation pattern in a way that would physically interfere with local emergency response plans. The project would have a less than significant impact and no mitigation is required.

[45] Office of the State fire Marshal. 2022. Fire Hazard Severity Zones Maps. Available at: https://egis.fire.ca.gov/FHSZ/. Accessed in September 2022.

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?

No Impact. The project site and surrounding areas are relatively flat and developed with urban uses, which preclude factors such as slopes or strong winds exacerbating wildfire risks. Therefore, the project would have no impact and no mitigation is required.

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?

No Impact. As mentioned, the project is located on existing developed sites and would not require the installation or maintenance of infrastructure that may exacerbate fire risk. Further, the existing crossings are not located within a FHSZ. Therefore, the project would have no impact due to wildfire, and no mitigation is required.

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 change?

No Impact. Post fire impacts such as drainage changes and landslides would not occur as the existing crossings and their surroundings are located in highly urbanized, flat areas which do not have any steep slopes or hillsides susceptible to landslides or flooding.

4.21 Mandatory Findings of Significance

	Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Does the project:				
a) Have the potential to degrade 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, 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) 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) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

a) Have the potential to degrade 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, 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?

Less than Significant with Mitigation. As described in Section 2.4, Biological Resources, Section 2.5, Cultural Resources and Section 2.18, Tribal Cultural Resources, the project includes mitigation measures to reduce potential impacts to wildlife and cultural resources. Implementation of mitigation measures described in this Initial Study would reduce all potentially significant impacts of the project to a less-than-significant level.

b) 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)?

Less than Significant with Mitigation. Cumulative impact analysis determines whether an individual project in combination with other approved or foreseeable projects would result in significant impacts. If cumulative impacts could occur, cumulative analysis asks whether the project's contribution to the significant cumulative impact would be cumulatively considerable.

The analysis of cumulative impacts for each environmental factor can employ one of two methods to establish the effects of other past, current, and probable future projects. A lead agency may select a list of projects, including those outside the control of the agency, or alternatively, a summary of projections. These projections may be from an adopted general plan or related planning document, or from a prior environmental document that has been adopted or certified, and these documents may describe or evaluate the regional or area-wide conditions contributing to the cumulative impact.

The project will improve safety at existing railroad crossings, including the installation of new fencing, medians, pavement markings, pavement, roadside signs, ADA detectable pavers, warning devices, and signage, and removal of outdated or non-functioning crossing control equipment, pavement, and existing sidewalk. Additionally, operations of the improved railroad crossings will function similar to the existing conditions (i.e., no change in roadway traffic volumes, or number/frequency of trains). The project, itself, would occur within the roadway and public right-of-way of two railroad crossings. The identified impacts would not extend beyond or combine with impacts from other past, present, and foreseeable future projects. Therefore, mitigation measures outlined within this Initial Study shall be implemented to reduce project-level impacts to a less-than-significant level. As such, the project would not result in any significant impacts that would substantially combine with impacts of other current or probable future projects. Therefore, the project would not considerably contribute to significant cumulative impacts.

c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less than Significant with Mitigation. As previously discussed throughout this Initial Study, the project would not result in significant environmental impacts on human beings with implementation of mitigation measures. Mitigation measures are identified in this Initial Study to reduce potential significant impacts related to air quality, biological resources, cultural resources, tribal cultural resources, geology and soils, and hazards and hazardous materials which could otherwise affect humans. Implementation of these mitigation measures would ensure that the project would not result in impacts that would cause significant impacts on human beings, either directly or indirectly.