3.21 Wildfire

3.21.1 Introduction

This section describes the regulatory setting and affected environment for wildfire, addresses wildfire hazards within the wildfire RSA and describes the potential impacts related to wildfire during construction and operation of the proposed Project. This section also identifies the cumulative impacts of the proposed Project on wildfire when considered in combination with other relevant projects.

3.21.2 Regulatory Setting

This section identifies the federal, state, regional, and local laws, regulations, and orders that are relevant to the analysis of wildfire. This section also addresses the proposed Project's consistency with the regulations described herein.

3.21.2.1 Federal

National Fire Protection Association Codes and Standards

The NFPA develops, publishes, and disseminates more than 300 codes and standards intended to minimize the possibility and effects of fire and other risks. NFPA 130, Standard for Fixed Guideway and Passenger Rail Systems (NFPA 2020), provides guidance on incorporating passenger safety in system design; egress routes in the event of an emergency; emergency response planning, training, and operations; and fire and smoke prevention and suppression. Additionally, NFPA 1710, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments (NFPA 2020), includes measures to protect citizens and the occupational safety and health of fire department employees. NFPA 502 addresses bridge and tunnel exposure to fires, however this only applies to bridges over 1,000 feet in length (Quiel 2018).

3.21.2.2 State

California PRC Titles 14 Natural Resources and 19 Public Safety

CALFIRE implements fire safety regulations in the state. The California PRC (Title 14 and Title 19) includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment with an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify the fire suppression equipment that must be provided on site for various types of work in fire-prone areas.

CALFIRE has rated areas within California for their potential fire hazards. To quantify this potential risk, CALFIRE has developed a fire hazard severity scale to predict the damage a fire is likely to cause. CALFIRE's fire hazard model has two key elements: probability of an area burning and expected fire behavior (CALFIRE 2023b). The hazard score is based on the factors that influence fire likelihood and fire behavior such as fire history, existing and potential fuel (natural vegetation),

predicted flame length, blowing embers, terrain, and typical fire weather for the area (CALFIRE 2023b). These methods allow designation of Fire Hazard Severity Zones (FHSZs), which are geographical areas classified by state or local agencies by their likelihood of burning and how damaging a fire would be as moderate, high, or very high. In this analysis, FHSZs are considered based on their proximity to the Project as defined by the wildfire RSA (defined in Section 3.21.3.1).

CALFIRE has the primary financial responsibility of preventing and suppressing fires in State Responsibility Areas (SRAs). These areas include "lands covered wholly or in part by timber, brush, undergrowth, or grass, whether of commercial value or not; lands that protect the soil from erosion and retard run off or percolation; lands used principally for range or forage purposes; lands not owned by the federal government; and lands that are not incorporated" (Section 4126). Under CALFIRE's fire hazard model, all SRAs are rated moderate, high, or very high (CALFIRE 2022b). CALFIRE adopted FHSZ maps for SRAs in November 2007 (CALFIRE 2022b). Areas that are not within an SRA are considered to be within a Local Responsibility Area (LRA). LRA maps were recommended by CALFIRE for Alameda County in September 2008 (CALFIRE 2022ba.

Community Wildfire Prevention and Mitigation Report

CALFIRE prepared the *Community Wildfire Prevention & Mitigation Report* in response to Executive Order N-05-19, which directed CALFIRE, in consultation with other state agencies and departments, to recommend immediate, medium-term, and long-term actions to help prevent destructive wildfires, with a specific focus on vulnerable communities and populations in the state (CALFIRE 2019). Based on local fire plans developed by CALFIRE units, CALFIRE identified 35 priority projects for immediate implementation to help reduce public safety risks for more than 200 communities. Projects include removal of hazardous dead trees, vegetation clearing, creation of fuel breaks and community defensible spaces, and creation of ingress and egress corridors. The *Community Wildfire Prevention & Mitigation Report* also identifies near-term administrative, regulatory, and policy actions to address community vulnerability and wildfire fuel buildup through rapid deployment of resources.

CALFIRE's identified medium-term and long-term actions encourage coordination and cooperation among the various levels of regional and local fire protection agencies.

California Fire Code

The California Fire Code (CCR Title 24, Part 9) establishes minimum requirements to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings. Chapter 33 of the Code contains requirements for fire preserving safety during construction, such as to develop a pre-fire plan in coordination with the fire chief, maintain vehicle access for firefighting at construction sites, and meet requirements for safe operation of construction equipment powered by internal combustion engines.

California Government Code Section 65302

California Government Code Section 65302 requires cities and counties to include in their general plan a statement of development policies setting forth objectives, principles, standards, and plan proposals for seven policy areas, including safety. The safety element provides for the protection of the community from any unreasonable risks associated with wildland and urban fires. The safety element must also address evacuation routes, peak load water supply requirements, and minimum road widths and clearances around structures, because those items relate to identified fire hazards.

California Government Code Title 5, Chapter 6.8 - VHFHSZ (Sections 51175-51189)

Sections 51175-51189 classify lands in the state in accordance with whether a very high fire hazard is present so that public officials can identify measures that will retard the rate of spread and reduce the potential intensity of uncontrolled fires that threaten to destroy resources, life, or property, and to require that those measures be taken.

Section 51177 defines wildfire as an "unplanned, unwanted wildland fire, including unauthorized human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, and all other wildland fires where the objective is to extinguish the fire."

Section 51182 (a) requires that an occupied structure on or adjoining a mountainous area, forest-covered land, brush-covered land, grass-covered land, or land that is covered with flammable material, and is within a VHFHSZ designated by the local agency shall maintain defensible space, an area clear of flammable vegetation around a structure.

Section 51183 allows a local agency to exempt structures with exteriors constructed entirely of nonflammable materials (or conditioned upon the contents and composition of the structure) and may vary the requirements for management of fuels surrounding the structures in those cases.

California Fire Code - California Code of Regulations (CCR), Title 24, Chapter 49 - Requirements for Wildland-Urban Interface Areas (24 CCR Chapter 49)

Chapter 49 defines wildland-urban interface (WUI) fire areas as areas identified by the state as an FHSZ or other areas designated by the enforcing agency to be at a significant risk from wildfires (California Fire Code 2019). Section 4907 Defensible Space requires that buildings and structures within the VHFHZ of a LRA maintain defensible space as outlined in Government Code 51175 — 51189, and any local ordinance of the authority having jurisdiction. LRAs are lands designated by the state to be under local responsibility (county or municipality) for fire suppression.

CCR Power Line Safety and Fire Prevention (14 CCR 1250)

14 CCR 1250 "Fire Prevention Standards for Electric Utilities," specifies utility-related measures for fire prevention within SRAs. SRAs are lands that are classified by the Board of Forestry where the financial responsibility of preventing and suppressing forest fires is primarily the responsibility of the state (California Fire Code). SRAs are lands exclusive of cities and federal lands (but regardless of ownership) and are covered wholly or in part by timber, brush, undergrowth, or grass, whether of commercial value or not, which protect the soil from erosion, retard runoff of water or accelerated percolation, and lands used principally for range or forage purpose (CALFIRE 2023). 14 CCR 1250 also provides specific exemptions from electric pole and tower firebreak clearance standards, as well as electric conductor clearance standards, and specifies when and where the standards apply.

California PRC Division 4, Chapter 3 Mountainous, Forest-, Brush- and Grass Covered Lands

Section 4292 requires anyone that controls, operates, or maintains electrical lines on any brush- or grass covered land to clear at least 10 feet around any pole or tower which supports a switch, fuse, transformer, lightning arrester, line junction, or dead end or corner pole (except for telephone, telegraph, telephone or telegraph messenger call, fire or alarm line, or other line which is classed as a communication circuit).

Section 4293 requires anyone that controls, operates, or maintains electrical lines to provide the following clearance between all vegetation (dead or alive) and all conductors which are carrying electric current:

- For any line which is operating at 2,400 or more volts, but less than 72,000 volts, 4 feet.
- For any line which is operating at 72,000 or more volts, but less than 110,000 volts, 6 feet.
- For any line which is operating at 110,000 or more volts, 10 feet.

Dead or dying trees, or their parts that are leaning toward the line which may contact or may fall on the line, are required to be removed. Lines of less than 750 volts are exempt from sections 4292 and 4293.

State Board of Forestry and Fire Protection; CALFIRE - 2018 Strategic Fire Plan for California

The Strategic Fire Plan for California (CALFIRE 2018) provides the state's road map for reducing the risk of wildfire by providing broad, strategic direction to CALFIRE. The 2018 Plan includes eight goals and supporting objectives to enhance the protection of lives, property, and natural resources from wildland fire, as well as improve environmental resilience to wildland fire.

3.21.2.3 Regional

CALFIRE Santa Clara Unit 2020 Strategic Fire Plan

CALFIRE is organized into 21 Operational Units to address fire suppression, which geographically follow county lines. Alameda County is included in the Santa Clara Unit. The Strategic Fire Plan for the Santa Clara Unit designates Communities at Risk (CALFIRE 2023a). The Plan also describes defensible space fuel treatment tactics to help homeowners comply with PRC Section 4291 (within SRAs). There are two zones of defensible space, from the structure outward to 30 feet and from 30 to 100 feet from structures (the reduced fuel zone).

Alameda County Community Wildfire Protection Plan 2015 Update

The goal of the Community Wildfire Protection Plan (CWPP) is to reduce fire hazard through increased information and education about wildfires, hazardous fuels reduction, actions to reduce structure ignitability, and other recommendations to assist emergency preparedness and fire suppression efforts. The CWPP's recommendations are organized into four broad categories:

- Information, education, and collaborative planning priorities;
- Enhanced suppression capability and emergency preparedness priorities;
- Fuel reduction treatments around homes and on public lands and related priorities; and
- Improving survivability of structures priorities.

The plan makes 10 general recommendations for strategies to reduce fire risk within the WUI. Strategy 8 includes the recommendation to integrate wildfire safety into vegetation planting requirements (Diablo Fire Safe Council 2015).

Alameda County General Plan Safety Element

The Alameda County General Plan identifies CALFIRE's recommended FHSZs (SRA and LRA) within unincorporated communities (Alameda County Community Development Agency 2014, 2016). Goal 2 of the Safety Element is "to reduce the risk of urban and wildland fire hazards." This goal is supported by 13 policies and 22 actions to reduce the risk of both urban and wildland fire hazards. Out of the 13 policies, one is applicable to the proposed Project:

- **Policy 10:** The County shall require the use of fire-resistant building materials, fire resistant landscaping, and adequate clearance around structures in "high" and "very high" fire hazard areas.

Alameda County Emergency Operations Plan

The purpose of the EOP is to establish the foundational policies and procedures that define how Alameda County will effectively prepare for, respond to, recover from, and mitigate against natural or human-caused disasters. It describes the emergency management organization and how it is activated. The EOP (Alameda County Sheriff's Office of Homeland Security and Emergency Services, 2012) provides an overview of the County's approach to emergency operations. It identifies emergency response policies, describes the response and recovery organization, and assigns specific roles and responsibilities to County departments, agencies, and community partners.

3.21.2.4 Local

City of Oakland General Plan Safety Element

Safety Element Policy FI-3 of the City of Oakland's General Plan (City of Oakland 2012) is to "prioritize the reduction of the wildfire hazard, with an emphasis on prevention." The four actions within this policy are applicable to the Berkeley Hills in east Oakland.

City of Oakland Code of Ordinances Chapter 15.12 Oakland Fire Code

Within the Oakland Fire Code, Chapter 49 (Wildland-Urban Interface Areas) Section 4904.3 defines the Oakland VHFHSZ as the area north and east of the boundaries identified in the ordinance, which are limited to the hillside areas in eastern Oakland, outside of the RSA.

City of Oakland 2021–2026 Hazard Mitigation Plan

The Hazard Mitigation Plan (City of Oakland 2021) identifies mitigation alternatives to reduce risk associated with wildfire in Oakland, in terms of personal, corporate, and governmental responsibility. Measures that are relevant to the proposed Project are:

- Locate [project or features] outside of hazard area.
- Create and maintain defensible space around structures and infrastructure.
- Use fire-resistant building materials.
- Use fire-resistant plantings in buffer areas of high wildfire threat.

City of San Leandro 2035 General Plan Chapter 7 Environmental Hazards

The City of San Leandro General Plan (City of San Leandro 2016) references the CALFIRE designated VHFHSZs within the LRA and does not designate additional areas. Goal EH-2 is to "Minimize urban wildfire hazards, both within the city and throughout the East Bay Hills," which include policies and actions applicable within VHFHSZs. The Alameda County Fire Department is responsible for wildfire prevention activities in the City of San Leandro and works with property owners to maintain defensible space around homes and requires the removal of flammable vegetation and combustible litter. The California Fire Code specifies additional requirements that are enforced by the City's Building Department. The City also requires fire-resistant roofing materials in new construction and major remodeling projects.

City of Hayward Municipal Code Chapter 3 Article 14 Chapter 49 Wildland-Urban Interface Fire Area

In the City of Hayward's Municipal Code, WUI fire areas are designated lands which are covered with grass, grain, brush or forest, whether privately or publicly owned, within which a fire would present an abnormally difficult job of suppression or would result in great and unusual damage through fire or resulting erosion. The WUI fire area in Hayward has been defined as: "the areas east of Mission Boulevard from the south side of D Street to the city limits south to Union City."

City of Hayward General Plan

Goal 5 Urban Wildlife Hazards of the City of Hayward's General Plan (City of Hayward 2014) is to protect life and minimize potential property damage from urban wildfire hazards in hillside areas. This goal and its supporting policies are designed to minimize urban wildfire risks through the implementation of wildland/urban interface guidelines, fire prevention codes, and open space management practices that reduce the potential for wildfires.

Union City General Plan Health and Safety Element

Union City's General Plan (Union City 2002) does not specify VHFHSZs as the state had not yet identified VHFHSZs in Alameda County when the Plan was approved. The Plan identifies a greater potential for wildland fires in open hillside areas in the eastern part of the city. Policies HS-E1.3 through 6 apply to fires in wildlands and the WUI.

City of Fremont Municipal Code Title 15 Chapter 15.35 Fremont Fire Code

The Fremont Fire Code incorporates by reference the California Fire Code (24 CCR) with additional requirements for the city.

Section 15.35.220 requires a fire protection plan be prepared when required by the fire chief. The plan shall be based upon a site-specific wildfire risk assessment that includes considerations of location, topography, aspect, flammable vegetation, climatic conditions, and fire history. The plan shall address water supply, access, building ignition and fire-resistance factors, fire protection systems and equipment, defensible space, and vegetation management.

Section 15.35.240 requires that persons owning, leasing, controlling, operating, or maintaining buildings or structures in, upon, or adjoining WUI Fire Areas (including state and local VHFHSZs) and persons owning, leasing, or controlling land adjacent to such buildings or structures, shall

maintain additional effective defensible space by removing brush, flammable vegetation and combustible growth located 30 feet to 100 feet from the buildings or structures when required by the Fire Chief (due to steepness of terrain or other conditions that would cause a defensible space of only 30 feet to be insufficient). An exception to this is for grass and other vegetation located more than 30 feet from buildings or structures and less than 18 inches in height above the ground need not be removed where necessary to stabilize the soil and prevent erosion.

City of Fremont Wildland-Urban Interface Ordinance 33-2007

Ordinance 33-2007 (the Wildland-Urban Interface Ordinance) designates areas within the City of Fremont that are VHFHZs. These areas were not designated as such on state maps. These areas define the WUI fire area for purposes of applying the building standards for heightened fire protection, vegetation management, and other regulations contained in the California Building Standards Code as adopted and amended by the City of Fremont.

City of Fremont General Plan Chapter 10 Safety Element

The City of Fremont's General Plan (City of Fremont 2011) defines wildland fires as "a fire occurring in a suburban or rural area which contains uncultivated lands, timber, range, watershed, brush or grasslands. This includes areas where there is mixed developed and undeveloped lands." The Plan designated much of the hills in eastern Fremont as a Hazardous Fire Area and requiring special development controls. These controls include the use of non-combustible roofing, one-hour rated exterior walls, wetbands, firebreaks, sufficient clearance between structures, drought-tolerant landscaping, and maintaining defensible space. The provision of adequate water supply is also critical.

On larger developments, Fremont typically requires two ingress-egress roads to ensure sufficient access in the event of an emergency. The City has established minimum pavement widths and overhead clearance for all emergency access roads. Overhead clearance, turning radii, and turnaround areas are also regulated to ensure emergency vehicle access. Fire lanes, emergency access roads, dead end streets and alleys must also end in a cul-de-sac or other approved turning area ensuring adequate width and clearance for emergency vehicles. The City of Fremont also requires water lines supplying developments to have minimum flow rates and water pressure.

The following policies and implementation actions are relevant to fire protection:

- **Policy 10-4.2: Development Standards:** Maintain development standards that limit potential health and safety risks, and the risks of structure damage and severe economic loss due to fire hazards.
    - **Implementation 10-4.2.A: Fire Code Compliance:** Require all new development and renovations to comply with the California Building Code, Fire Code, and all local ordinances for construction and adequacy of water flow and pressure, ingress/egress and other measures for fire protection.
- **Policy 10-4.3: Access and Clearance:** Require adequate access and clearance for fire equipment, fire suppression personnel, and evacuation for new development.
    - **Implementation 10-4.3.A: Development Review:** Review new projects for necessary fire access, street widths and clearances.

- **Implementation 10-4.3.B: Development Criteria:** Require all development to provide adequate access and clearance and other fire safety measures as appropriate, and require additional vehicular access or clearance areas as determined by the Fire Department and local amendments to the Fire Code.
- **Implementation 10-4.3.C: Fire Resistant Construction:** Enforce regulations related to fire resistant construction, sprinkler systems and early warning fire detection system installation. Maintain accurate information on construction methods of structures and location and number of structures on a site.
- **Implementation 10-4.3.D: Balance Amenities with Fire Safety:** Use creative design solutions to create human-scale pedestrian environments while also ensuring fire safety in new developments.

City of Fremont Draft Emergency Operations Plan, Basic Plan (2020)

The City of Fremont has recently adopted an EOP (City of Fremont 2020a) that outlines the framework used by the City should a natural disaster, including a wildfire, occur. The EOP identifies the city's Emergency Operations Center (EOC) facility is located at 42551 Osgood Road. Alternate EOCs are the Fremont Police Department Operations Center at 2000 Stevenson and the Fremont Fire Department Operations Center at 43600 Grimmer Boulevard.

City of Fremont Local Hazard Mitigation Plan

The City of Fremont's Local Hazard Mitigation Plan (City of Fremont 2017) includes a medium priority strategy to utilize vegetation management to reduce risks in existing development (Strategy #18). This strategy includes the action to encourage the use of least flammable mulches, such as coarse compost.

City of Newark General Plan

As described in the City of Newark's General Plan (City of Newark 2013), CALFIRE has determined that Newark does not have any SRAs or LRAs. No additional FHSZs were identified by the City.

3.21.2.5 Consistency with Plans, Policies, and Regulations

Federal

NFPA Codes and Standards

The proposed Project would implement NFPA codes and standards into guideway, station, and structure design. UPRR *General Conditions and Specifications* (UPRR 2022a) and *Electrical Design Manual* (UPRR 2012) follow NFPA codes and standards. The Ardenwood Station design would comply with NFPA codes and standards. NFPA 502 is not applicable to the proposed Project as there are no bridges longer than 1,000 feet.

State

California Government Code Section 65302

The proposed Project would comply with Section 65302. The proposed Project would not affect cities' development of General Plan safety elements.

California Government Code Title 5 Chapter 6.8 VHFHSZ (Sections 51175-51189); California Fire Code 24 CCR Chapter 49 Requirements for Wildland-Urban Interface Areas

There are no Project features proposed within SRAs; therefore, the Project is consistent with all plans, policies, and regulations applicable to SRAs. There are no occupied structures proposed by the Project within or adjacent to VHFHSZs. The only occupied structure proposed by the Project would be the Ardenwood Station. The Ardenwood Station parking structure would be approximately 0.1 mile from a local VHFHSZ at the Ardenwood Historic Farm (Ardenwood VHFHSZ). Therefore, defensible space requirements are not applicable to the Ardenwood Station.

Power Line Safety and Fire Prevention (14 CCR 1250); California PRC Division 4, Chapter 3 Mountainous, Forest-, Brush- and Grass Covered Lands

There are no mountainous or forested areas within the proposed Project footprint. Grassy, brushy areas may be present along roadsides, embankments, and adjacent to waterways. The Project would comply with required vegetation clearances around power lines supplying the Project. The Project would ensure sufficient vegetation clearances during any required relocation of electrical lines; however, ongoing vegetation clearance would be the responsibility of the utility company that owns the line. There are no utility installations or relocations within the Ardenwood VHFHSZ and therefore 14 CCR Section 1250 is not applicable. Lines of less than 750 volts are exempt from sections 4292 and 4293.

California PRC (Title 14 Natural Resources and Title 19 Public Safety)

The California PRC includes fire safety regulations that apply to SRAs and therefore are not applicable to the proposed Project because there are no SRAs within the RSA.

State Board of Forestry and Fire Protection; CALFIRE – 2018 Strategic Fire Plan for California

The proposed Project is consistent with the Strategic Fire Plan for California's (CALFIRE 2018). As described in Section 3.21.6, the proposed Project is expected to have no impact on wildfire hazards and therefore supports the plan's goals and objectives to enhance the protection of lives, property and natural resources from wildland fire, as well as improve environmental resilience to wildland fire.

County and Regional

CALFIRE Santa Clara Unit 2020 Strategic Fire Plan

Defensible space fuel treatment tactics included in this Plan apply to SRAs. The Project does not propose any features within or near SRAs. The Project is therefore consistent with the Strategic Fire Plan.

Alameda County Community Wildfire Protection Plan 2015 Update

BMP WF-2 (described in Section 3.21.5), included as part of the proposed Project, is consistent with CWPP recommendations to factor wildfire safety when developing and implementing landscape planting for crossing and roadway improvements, outside of the UPRR ROW.

Alameda County General Plan Safety Element

The Alameda County General Plan (Alameda County Community Development Agency 2014) does not identify any VHFHSZs near the Project in unincorporated areas, such as San Lorenzo. With the implementation of Project BMPs, the proposed Project is consistent with all 13 policies and 22 actions to reduce the risk of both urban and wildland fire hazards.

Alameda County EOP

The proposed Project is consistent with the Alameda County EOP. Specific evacuation routes or locations of operations were not identified in the EOP, and the Project would not inhibit implementation of any protocol or procedures described in the EOP.

Municipal

General Plans (Cities of Oakland, Hayward, San Leandro, Union City, Newark), Oakland Fire Code

Within the cities of Oakland, Hayward, San Leandro, Union City, and Newark, the proposed Project is outside of VHFHSZs, WUI areas, and eastern hillside areas. The Project does not propose new, occupied structures within these cities and there are no VHFHSZs within 500 feet of the proposed Project. The proposed Project is therefore consistent with these municipal General Plans and codes relating to wildfire.

City of Fremont Municipal Code Title 15 Chapter 15.35 Fremont Fire Code

Defensible space requirements apply only to structures within state and local VHFHSZs. There are no structures proposed by the Project within local VHFHSZs. The Project would prepare a fire protection plan if required by the City of Fremont Fire Chief.

City of Fremont Wildland-Urban Interface Ordinance 33-2007

Ardenwood Historic Farm, adjacent to the Project is designated as a VHFHSZs (City of Fremont 2021 and 2007). Project features within or adjacent to the Ardenwood VHFHSZ would comply with vegetation management and other regulations in the California Building Standards Code as adopted and amended by the City of Fremont.

City of Fremont General Plan Chapter 10 Safety Element

As applicable to a rail project with roadway modifications, the Project would comply with development controls, including the use of drought-tolerant landscaping. The proposed Project would maintain two ingress-egress roads during construction and operation. New roadways and grade separations would meet minimum pavement widths, turn arounds and turning radii, and overhead clearance so that sufficient vertical and horizontal clearance is provided for emergency vehicles. The Project would maintain any existing water lines and flows necessary for fire suppression. Additional water lines and water line improvements to meet flow requirements would be provided where required to meet codes and standards.

City of Fremont EOP

The City of Fremont EOC and alternate EOCs are not within or near the Project footprint. The proposed Project would not affect operations at the EOCs and therefore would be consistent with the EOP.

City of Fremont Local Hazard Mitigation Plan (LHMP)

With implementation of BMP WF-2, the proposed Project would reduce the flammability of Project landscaping, consistent with the LHMP Strategy 18 regarding vegetation management. The other strategies included in the LHMP focus on residential buildings, City-owned facilities, and improving municipal government processes, which would not be affected by the proposed Project.

3.21.3 Methods for Evaluating Environmental Impacts

This section defines the wildfire RSA and describes the methods used to analyze the impacts on wildfire hazards within the RSA.

3.21.3.1 Resource Study Area

As defined in Section 3.1, Introduction, RSAs are the geographic boundaries within which the environmental investigations specific to each resource topic were conducted.

A 500-foot buffer from the proposed Project footprint was used to establish the wildfire RSA. See Figure 3.21-1 through Figure 3.21-4. The purpose of this buffer was to identify any lands classified by the state or local governments as VHFHSZs in or near the Project. A 500-foot RSA was selected due to the primarily urban land uses with major roads, highways, development, and grade separations that would inhibit the rapid spread of wildfire that would otherwise occur in grassy, forested, or brushy open spaces.

3.21.3.2 Data Sources

The evaluation of the potential impacts that the proposed Project could have on wildfire hazards looked at whether the Project would exacerbate existing hazards or result in a new wildfire-related hazard. CCJPA assessed wildfire hazard impacts by reviewing existing conditions compared to the design and operational features of the proposed Project. CCJPA analysts collected maps and GIS datasets from local and regional government sources to determine potential fire hazards and to evaluate how construction and operation of the proposed Project may cause new or exacerbate existing wildfire hazards. Data sources included CALFIRE's FHSZ maps and GIS layers (CALFIRE 2007, 2008b, 2008c, 2022a, 2022b) as well as local mapping of VHFHSZ (City of Fremont 2021, 2007, 2020b).

Figure 3.21-1. Wildfire RSA Extent 1

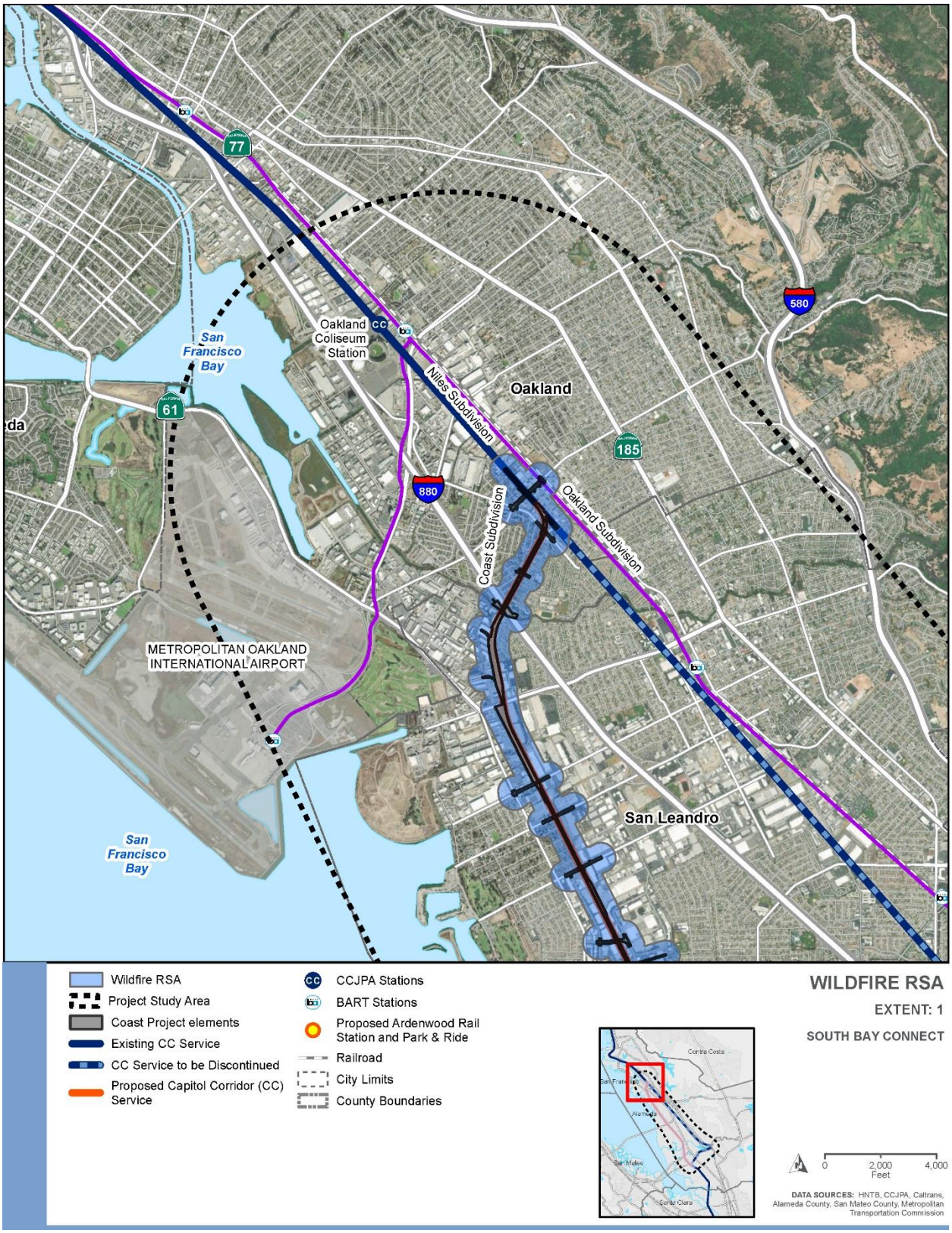


Figure 3.21-2. Wildfire RSA Extent 2

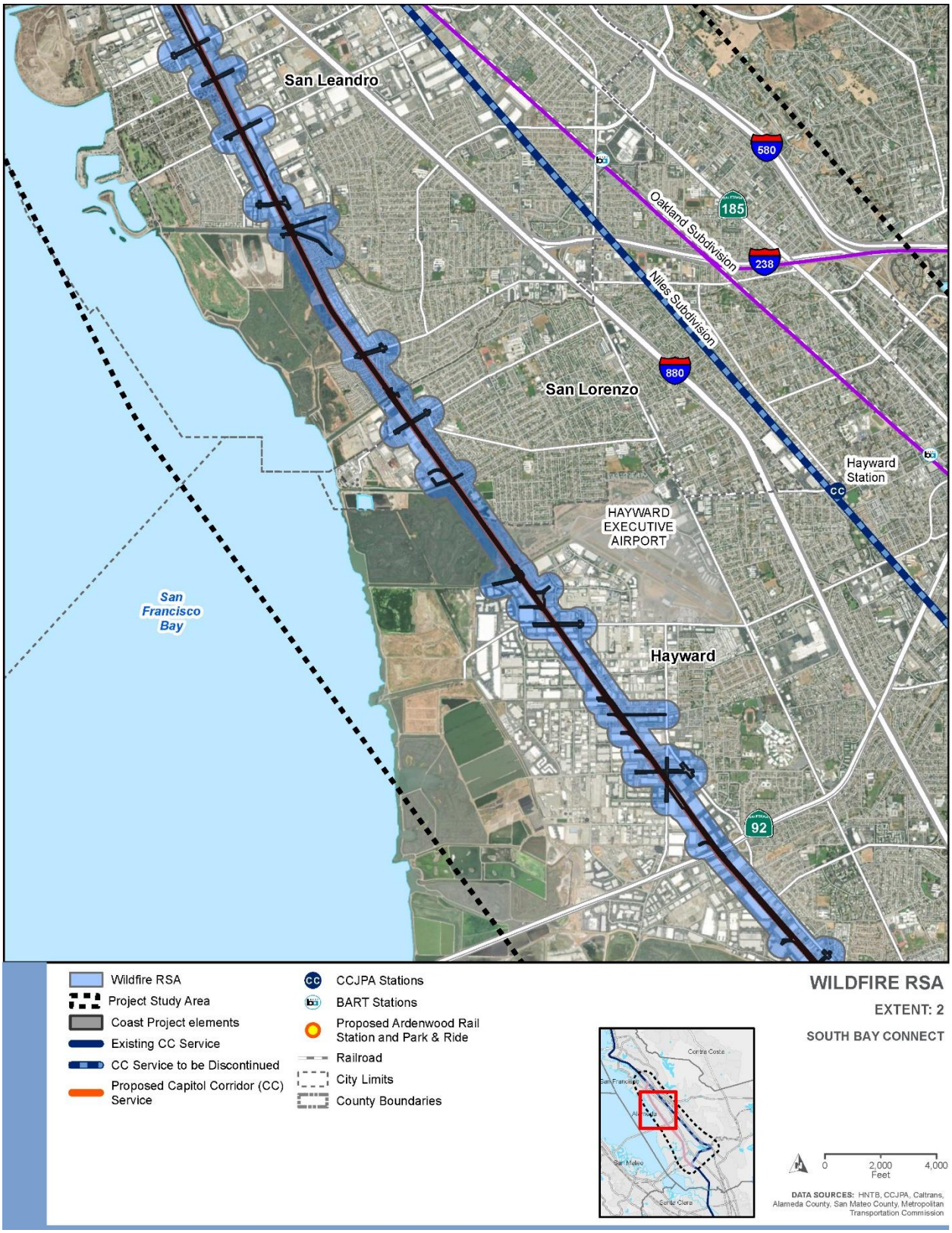


Figure 3.21-3. Wildfire RSA Extent 3

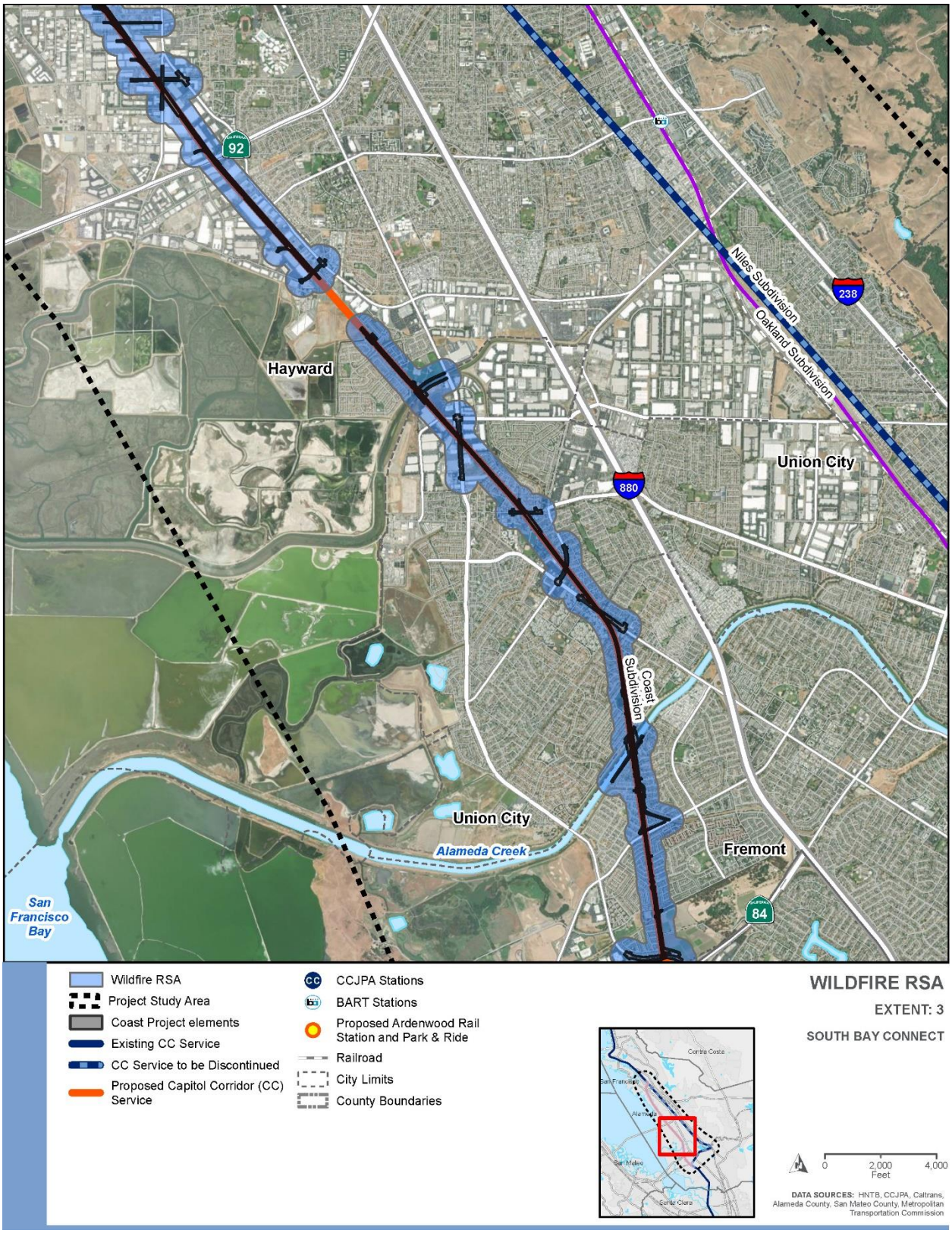
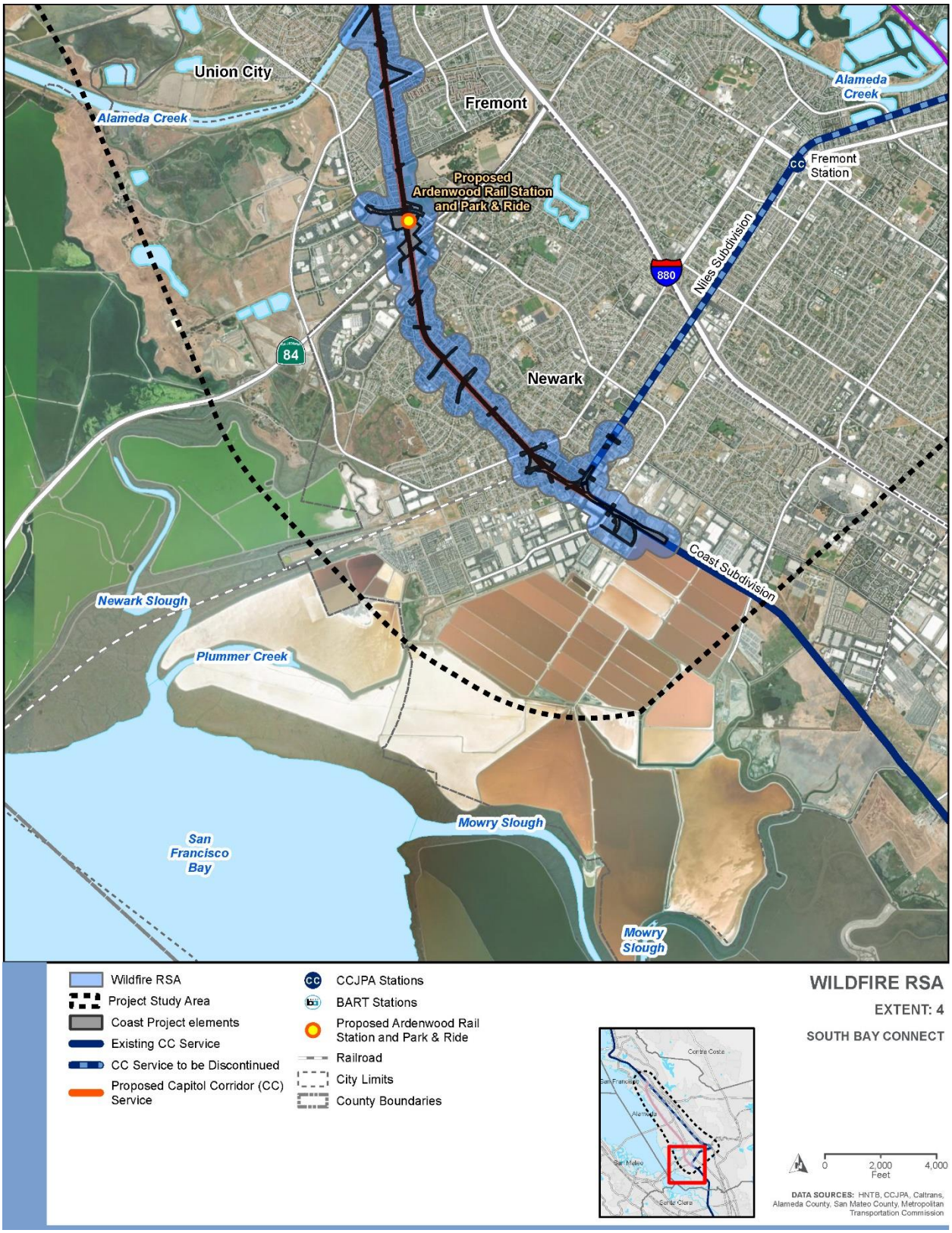


Figure 3.21-4. Wildfire RSA Extent 4



3.21.3.3 CEQA Thresholds

To satisfy CEQA requirements, wildfire impacts were analyzed in accordance with Appendix G of the CEQA Guidelines. According to the CEQA Guidelines, CCR, Title 14, Section 15002(g), "a significant effect on the environment is defined as a substantial adverse change in the physical conditions which exist in the area affected by the proposed project." As stated in CEQA Guidelines Section 15064(b)(1), the significance of an activity may vary with the setting. The impact analysis identifies and analyzes construction (short-term) and operation (long-term) impacts, as well as direct and indirect impacts (see PRC Section 21065). The proposed Project would have significant Wildfire impacts under CEQA if it would:

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; or

d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

3.21.4 Affected Environment

Wildfire is any uncontrolled fire spreading through vegetative fuels that threatens to destroy life, property, or resources (California Fire Code). The fire environment is defined as the surrounding conditions, influences, and modifying forces that determine fire behavior. There are four major factors that determine wildfire behavior (and risk): topography, fuel, weather, and human behavior (CALFIRE 2023a).

Topographic characteristics of slope and aspect affect fire behavior. Steeper slopes can contribute to fire hazard by preheating fuels, intensifying the effects of wind, and making fire suppression difficult by reducing accessibility. The rate of spread of fire increases with slope (Castro Rego et al. 2021). The effect of slope on fire behavior depends on how densely the fuel is packed together, but in general, a fire burning upslope aided by wind shows the highest rates of spread, greatest potential for damage, and greatest difficulty to control (Weise and Biging 1997). Westward facing slopes tend to be more arid due to long exposure to the afternoon sun, and therefore are more combustible (Diablo Fire Safe Council 2015). However, ridgetops can inhibit fire propagation, as fire spreads more slowly downhill or may even be unable to spread (Alameda County Sheriff's Office of Homeland Security and Emergency Services 2012).

The type and condition of vegetation plays a significant role in the occurrence and spread of wildfires. Certain types of plants are more susceptible to burning or burn with greater intensity; and non-native plants can be more susceptible to burning than native species. Dense or overgrown vegetation increases the fuel load (the amount of combustible material available to fuel the fire). The ratio of living to dead plant matter as well as fuel moisture content is also important. The risk of fire increases significantly during periods of prolonged drought, as the moisture content of both living and dead plant matter decreases; it also increases when a disease or infestation has caused

widespread damage to plant communities. The fuel's continuity, both horizontally (e.g., large areas of forests where trees have been killed by disease) and vertically (e.g., areas with grasses, shrubs, and trees), is also an important factor, as wildfires in areas with continuous fuel sources are more likely to spread farther (Alameda County Sheriff's Office of Homeland Security and Emergency Services 2012).

Temperature, humidity, wind, and lightning can affect chances of ignition and the rate at which fire spreads. Extreme weather, such as high temperatures and low humidity, can lead to extreme wildfire activity. By contrast, cooling and higher humidity correlate to reduced wildfire occurrence and easier containment. Lightning strikes are major initiators of wildfires in northern California. For example, 12,000 lightning strikes in August of 2020 resulted in 585 fires (Boxall 2020). Of California's top 20 largest fires, nine were caused by lightning strikes (CALFIRE 2020c).

Human behavior is another major contributor to wildfire risk. Fires can be started intentionally by arson or unintentionally such as from campfires, debris burning, smoking, electrical failures, or driving on tall dry grass. Of the top 20 largest California wildfires, seven were caused by human activity in addition to the three wildfires that were caused by powerline issues (CALFIRE 2022c).

3.21.4.1 Environmental Setting

Regional Setting

Located within Alameda County, the Project is within CALFIRE's Santa Clara Administrative Unit, which consists of the Counties of Contra Costa, Alameda, Santa Clara, and western portions of Stanislaus and San Joaquin. This unit is characterized by large urban population centers adjacent to wildland areas resulting in some of the largest WUI areas in California (CALFIRE 2023a). WUI areas are defined by the California Fire Code (Section 4902) as "a geographical area identified by the state as a 'Fire Hazard Severity Zone' or other areas designated by the enforcing agency to be at a significant risk from wildfires." The Federal Emergency Management Administration (FEMA) defines WUI as "the zone of transition between unoccupied land and human development. It is the line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels (CALFIRE 2022). Major fires over the last 35 years within the Santa Clara Administrative Unit are listed in Table 3.21-1.

Vegetation types in the unit are predominantly annual grasses, chaparral, and oak dominated woodland (CALFIRE 2023a). Topography ranges from rolling hills near the San Francisco Bay to mountainous elevations up to 4,000 feet with steep canyon drainages. Alameda County's steep topography, with canyons and swales, influences fire behavior and in many instances intensifies fire effects.

The climate is considered Mediterranean, characterized by warm, dry summers and falls with wetter winters and springs. Weather during fire season (summer and fall) is more temperate closer to the San Francisco Bay and hotter and drier farther inland, east of the Berkeley Hills. Wind patterns are predominantly west to east during fire season due to the cooler marine air flowing from the San Francisco Bay into the Livermore and San Joaquin valleys. Wind speeds vary but on most summer days the winds near the Bay are 10 to 20 miles per hour (CALFIRE 2023a). Even though relative humidity is tempered by the marine influence, higher wind speeds adversely affect fire behavior. Uncontrollable fire storms are more likely to occur under the extreme, but periodic conditions of Red Flag weather days. Red Flag warnings are issued by the National Weather Service when weather elements such as low relative humidity and strong winds, which could lead to rapid spread of

wildfires. In Alameda County, Red Flag weather can mean the occurrence of strong, hot, dry offshore winds. These winds are known locally as Diablo Winds since they come from the north, northeast in the direction of Mount Diablo. These can occur at any time of year but are especially dangerous in the driest months of summer and fall (Diablo Fire Safe Council 2015).

Table 3.21-1. Santa Clara Administrative Fire Unit History

Fire	County	Year	Acres Burned	Structures Lost	Deaths
Lexington	Santa Clara	1985	13,128	0	0
Tunnel	Alameda	1991	1,624	3,500	25
Croy	Santa Clara	2002	3,007	300	0
Santa Clara Complex	Santa Clara	2003	4,270	0	0
Lick	Santa Clara	2007	47,183	0	0
Summit	Santa Clara	2008	4,270	0	0
Corral	Alameda	2009	12,500	0	0
Morgan	Contra Costa	2013	3,111	0	0
Tesla	Alameda	2015	2,850	0	0
Loma	Santa Clara	2016	4,476	0	0
SCU Lightning Complex	Santa Clara, Alameda, Contra Costa, San Joaquin, Stanislaus	2020	396,624	222	0

Source: CALFIRE (2020, 2021e).

Local Setting

Within the RSA, topography is generally flat as the Project is located on the west side of the Berkeley Hills. The predominant topographical features within the RSA are grade separations. Weather within the RSA is generally as described in Section 3.21.2.3.

The potential for wildland fires represents a hazard where development is adjacent to open space, near wildland fuels, and/or designated fire severity zones. CALFIRE's Strategic Fire Plan for the Santa Clara Unit (2020) identifies Fremont, Hayward, Oakland, San Leandro, and Union City as

California-designated Communities at Risk. These areas are at high risk of damage from wildfire based on fuel hazards, probability of fire, and housing density.

CALFIRE has designated VHFHSZs in SRAs and LRAs in Alameda County (Figure 3.21-5); however, none of these is within the RSA. VHFHSZs can also be designated by a local agency (California Fire Code 2019). The following cities and unincorporated areas do not have local VHFHSZs within the RSA: Oakland, Hayward, San Leandro, Newark, and Union City. Alameda County has not identified any VHFHSZs within San Lorenzo (Alameda County Community Development Agency 2014).

The City of Fremont has designated VHFHSZs within the city (City of Fremont 2021, 2007, 2020b) and one is within the RSA: Ardenwood Historic Farm (Figure 3.21-4). The Ardenwood Historic Farm is located east of the Coast Subdivision, north of Ardenwood Boulevard.

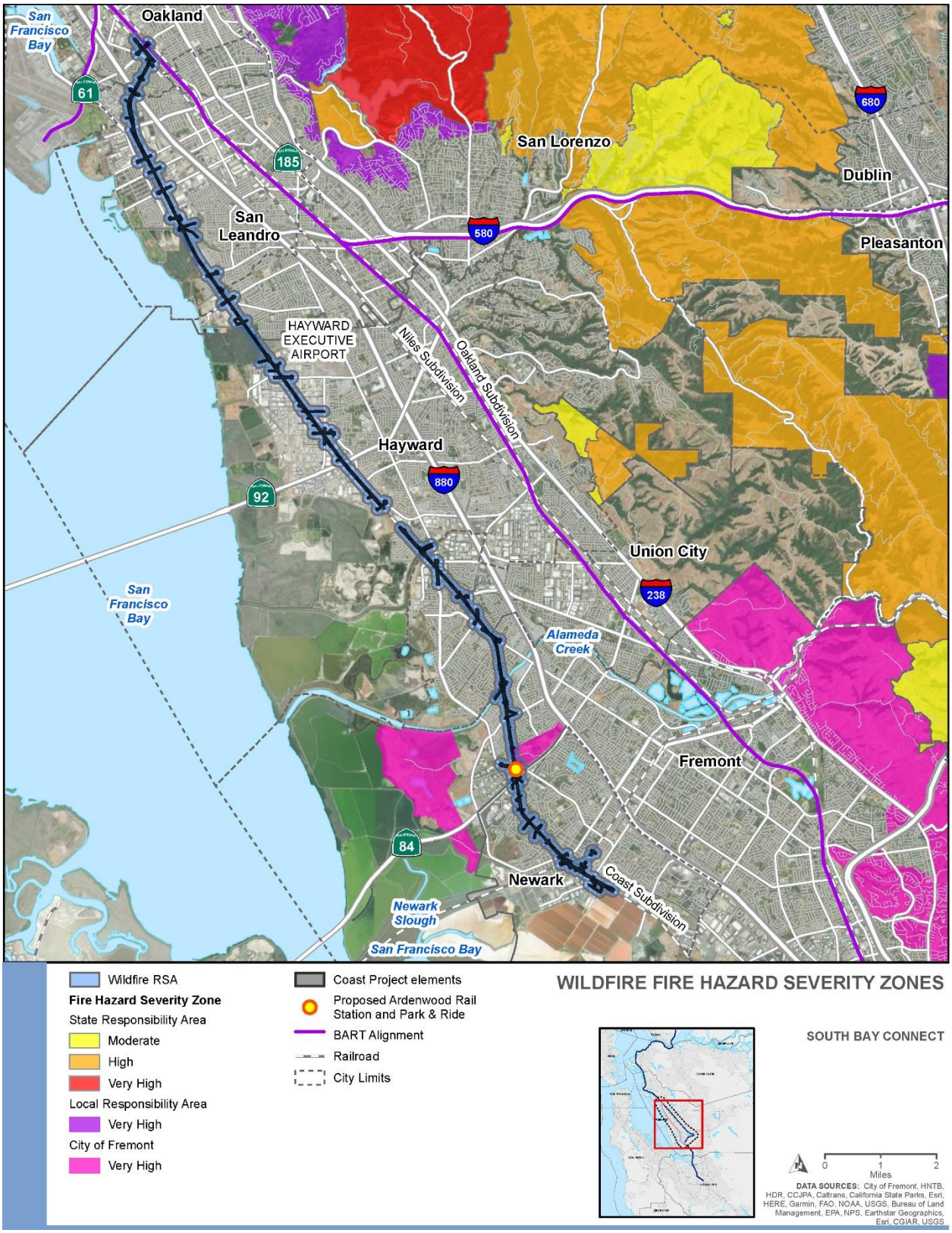
There are six different entities that have direct fire protection responsibility within the RSA (Table 3.21-2). Ardenwood Historic Farm, as part of the East Bay Regional Parks District (EBRPD), could be served by either the EBRPD Fire Department or by the City of Fremont Fire Department. The Ardenwood Historic Farm is located within the City of Fremont's Fire District 10 and is served by Fire Station 10 at 5001 Deep Creek Road, approximately 0.5 mile from the farm. The farm would be accessible to the fire station via Paseo Padre Parkway and Ardenwood Boulevard, with an estimated drive time of five minutes (Google Maps 2021).

The only significant wildfire that has occurred in the City of Fremont was in July 1958 on the Mission Hills mountain range between Mission Peak and I-680 at Mission Pass, more than 6 miles from the RSA (City of Fremont 2017).

Table 3.21-2. Alameda County Fire Protection Agencies within the RSA

Agency	Service Area
Alameda County Fire Department	San Leandro, San Lorenzo, Hayward, Union City, Newark
CALFIRE (Battalion 4)	Partners with local agencies outside of SRAs
East Bay Regional Parks District Fire Department	Ardenwood Historic Farm
Fremont Fire Department	City of Fremont
Hayward Fire Department	City of Hayward
Oakland Fire Department	City of Oakland

Figure 3.21-5. Fire Hazard Severity Zones



3.21.5 Best Management Practices

As noted in Chapter 2, Project Alternatives, CCJPA would incorporate a range of BMPs to avoid and minimize adverse effects on the environment that could result from implementation of the proposed Project. BMPs are included in the proposed Project description, and the impact analyses were conducted assuming application of these practices. The BMPs relevant to wildfire are listed below. Full descriptions of the BMPs are provided in Chapter 2, Project Alternatives.

BMP WF-1 Prepare Fire Prevention Plan near VHFHSZ

BMP WF-2 Use Drought-Tolerant and Fire-Resistant Native Plants

BMP TR-1 Transportation Management Plan (TMP)

BMP HYD-1 Construction Stormwater Management

3.21.6 Environmental Impacts

This section describes the potential environmental impacts on wildfire hazards as a result of implementation of the proposed Project. Lettering shown within title for each environmental factor below correlates with CEQA Statute and Guidelines, Appendix G table lettering and numbering.

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

No Project Alternative

No Impact. Under the No Project Alternative, there would be no change to existing transportation facilities or emergency access. The No Project Alternative would have no impact on the ability to implement or comply with adopted emergency response or evacuation plans.

Proposed Project

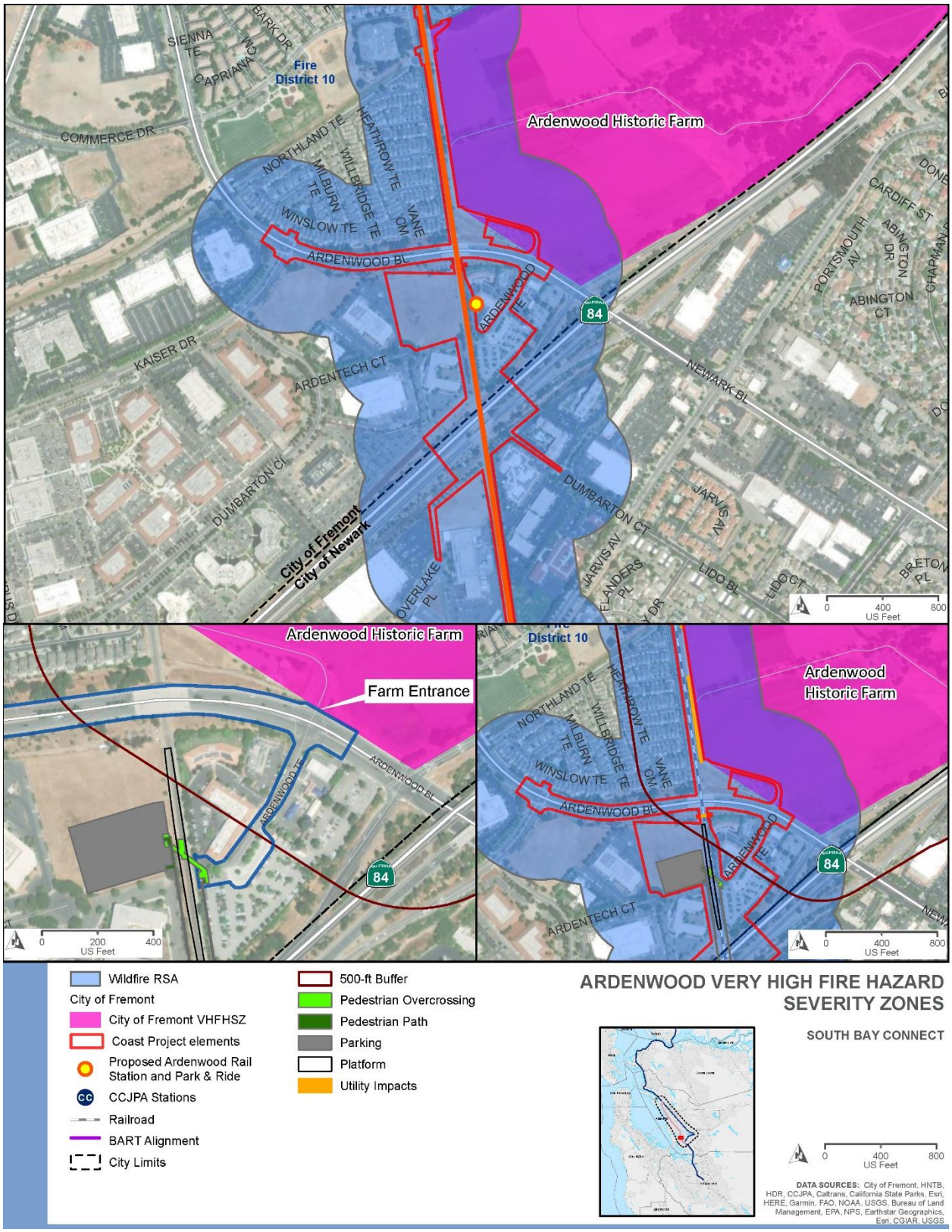
No Impact. The City of Fremont has adopted an EOP (City of Fremont 2020a) and a Local Hazard Mitigation Plan (2017). The Local Hazard Mitigation Plan identifies a key wildfire safety strategy of maintaining fire access road ingress/egress in risk areas to aid in emergency response and site evacuation. The City's EOC is located at the Public Works Maintenance Facility at 42551 Osgood Road (City of Fremont 2017). Alternate EOCs are the Fremont Police Department Operations Center (DOC) at 2000 Stevenson and the Fremont Fire DOC at 43600 Grimmer Boulevard, which are also located outside of the RSA. The proposed Project would not affect use of the EOC, or the implementation of the EOP or Local Hazard Mitigation Plan.

The South Section of the Coast Subdivision parallels Ardenwood Historic Farm, which the City of Fremont has identified as a VHFHSZ. Project features adjacent to the farm would include intersection improvements to facilitate multi-modal access to the new Ardenwood Station, which would be constructed on the opposite side of Ardenwood Boulevard from the farm entrance (Figure 3.21-6). The proposed Project would install a new track adjacent to the farm as part of the continuous double track from Elmhurst to Newark junctions. Within 500 feet of Ardenwood Historic Farm, the proposed Project would install retaining walls on both sides of the track within existing

ROW, relocate utilities, stage construction, install pier protection for the Ardenwood Boulevard bridge, roadway improvements, and platform construction (Figure 3.21-6).

Construction and operation of the proposed Project, including Ardenwood Station, would not affect emergency response to or evacuation from the Ardenwood Historic Farm (Figure 3.21-6). Access to the farm would be maintained from Ardenwood Boulevard throughout construction and operation. At the Ardenwood Station, existing roadway widths and turnaround areas would be maintained at Ardentech Court and Ardenwood Terrace. The new Ardenwood Station would provide an additional benefit with respect to evacuation routes. With new passenger service at the Station, there would be a new evacuation route via passenger train in the event of an emergency. Additionally, construction of new pedestrian access features (walkway and south pedestrian crossing) could be used as routes in the event of an emergency by pedestrians to cross the railroad tracks or pass under SR 84. Therefore, construction and operation of the proposed Project near the Ardenwood Historic Farm would not substantially impair any adopted emergency response plan or emergency evacuation plan, or otherwise impact emergency access. As a result, no impacts would occur.

Figure 3.21-6. Ardenwood Station/Ardenwood Historic Farm Very High Fire Hazard Severity Zones



3.21.6.2 (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 Project Alternative

No Impact. Under the No Project Alternative, there would be no construction activities and therefore no change to existing slopes, wind patterns, pollutant concentrations, wildfire risk, pollutant concentrations, or wildfire spread. Therefore, the No Project Alternative would have no impact on wildfire risks due to slope, prevailing winds, or other factors, and thereby would have no impact with respect to exposing project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

Proposed Project

No Impact. Construction and operation of the proposed Project would not exacerbate wildfire risks due to slope, prevailing winds, and other factors, and therefore would not expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Construction would comply with UPRR standards as well as all state and local fire safety codes and regulations applicable within the VHFHSZs, such as restrictions on the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment with an internal combustion engine; safe use of gasoline-powered tools in fire hazard areas; and required fire suppression equipment that must be provided on site for various types of work in fire-prone areas. With implementation of BMP WF-1, these restrictions would also be applicable near (within 500 feet of) a VHFHSZ. The proposed Project would also comply with Occupational Safety and Health Administration safety requirements and implementation of BMP HYD-1 would ensure the safe storage of ignitable materials.

The proposed Project operation would not exacerbate wildfire risks as the proposed Project would comply with UPRR design standards and maintenance practices. Design of the rail system would comply with NFPA fire protection requirements. Ongoing vegetation removal is required by UPRR as part of regular maintenance within its ROW. UPRR requires 12 feet on either side of track centers be cleared of vegetation for main lines, sidings, and industrial lead tracks (Table 3.21-3) (UPRR 2022b). Additional vegetation clearance is required at bridges, public crossings, around buildings, stations and platforms, and around signs and signals. Further, implementation of BMP WF-2 factors in wildfire safety when developing and implementing landscape planting for crossing and roadway improvements by requiring the use of drought-tolerant plants and low-flammability materials. UPRR would continue vegetation clearance along all subdivisions as part of Project operation. Due to UPRR's ongoing vegetation clearing, rail operation would not cause vegetation fires as a result of sparks or contact with the underside of the passenger and freight rail cars.

Table 3.21-3. UPRR Vegetation Clearance Guidelines

Feature	Vegetation Removal
Main Line and Industrial Leads	12 feet both sides from center of track
Sidings	12 feet both sides from center of track
Bridges	50 feet
Industry Tracks	12 feet center
Off Track	Varies

Source: UPRR 2022b.

The proposed Project would shift passenger rail facilities from the Niles to Coast Subdivisions, which shifts passenger rail service outside of VHFHSZs. Although Ardenwood Historic Farm is a VHFHSZ, it is isolated from other VHFHSZs. The Fremont-designated VHFHSZs at Niles Junction are part of a contiguous SRA and LRA FHSZs that cover the hills in eastern Fremont. Moving passenger rail service out of a large VHSHZ to outside an isolated VHFHSZ reduces overall risk to train passengers.

Within the RSA near Ardenwood Historic Farm, the dominant topographical features are embankments supporting existing roadway overcrossings. Within 500 feet of the farm, the proposed Project would not include creation of new slopes, nor would they increase the slopes of existing embankments. Grading would be limited to minor adjustments of the rail bed to accommodate the proposed station construction. The existing farm and adjacent track are flat with minimal slope; therefore, the proposed Project would not affect spread of wildfire or exacerbate wildfire risks at Ardenwood Farm due to slope modifications. As a result, no impacts would occur.

3.21.6.3 (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 Project Alternative

No Impact. Under the No Project Alternative, there would be no installation of infrastructure and no change to maintenance of existing infrastructure. Therefore, the No Project Alternative would have no impact with respect to 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.

Proposed Project

No Impact. Construction of major new utilities such as high-voltage power lines (over 50 kilovolts) and water lines over 20 inches in diameter are not proposed as part of the Project. New, low-voltage power lines would be installed to supply power for rail signals, train control equipment, grade crossings, as well as the new Ardenwood Station. There are no high-voltage power line relocations proposed by the Project. Existing utilities would need to be relocated or protected in place as part of the proposed Project. Relocations of existing utilities would generally take place within or adjacent to rail or roadway ROW. UPRR requires overhead wires to have a minimum clearance of 27.5 feet above the top of rail for electrical lines of less than 750 volts and 29.5 feet for lines over 751 volts (UPRR 2012). Relocated utilities would meet all state and local standards with respect to safety and fire prevention, including California PRC Division 4, Chapter 3. New utility installation and relocation would comply with the CCR with regard to Power Line Safety and Fire Prevention, as well as California PRC. Within grassy, brushy areas (such as may be found on roadsides, embankments, and adjacent to waterways), the Project would comply with vegetation clearances around the power lines supplying the Project required by California PRC. The Project would ensure sufficient vegetation clearances during the relocation of electrical lines; however, ongoing vegetation clearance of relocated lines would be the responsibility of the utility company that owns the network.

UPRR-required vegetation clearance along the rail lines (UPRR 2022b) entail that the UPRR alignments function as fuel breaks. Additional vegetation clearance associated with new and shifted tracks would likely increase the effectiveness of the rail ROW impeding the spread of any wildfire. Within 500 feet of Fremont's VHFHSZ's, the Project would not include installation or maintenance of any infrastructure that may exacerbate fire risk. Therefore, no impacts would occur.

3.21.6.4 (d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Project Alternative

No Impact. There would be no construction under the No Project Alternative. The No Project Alternative would not change existing population patterns, would not construct or demolish any structures, and would not change existing flooding, landslide, runoff, or drainage patterns. Therefore, the No Project Alternative would have no impact with respect to exposing people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

Proposed Project

No Impact. After fires have impacted a watershed, substantial sediment and debris flows can result from surface erosion due to rainfall runoff, or land sliding due to rainfall infiltration into the soil. Fire generally reduces the infiltration and storage capacity of soils, which increases runoff and erosion (Caltrans 2020). All slopes proposed by the proposed Project would meet UPRR standards and be engineered based on the results of site-specific geotechnical investigations (UPRR 2020). This would prevent the proposed Project from resulting in post-fire slope instability that could result in downslope landslides.

The Project design is not expected to expose people or structures to downstream flooding as a result of runoff or drainage changes after wildfire. As required by UPRR standards, the rail alignments are cleared of vegetation as part of standard maintenance practices. Track ballast and sub-ballast is pervious to stormwater and would continue to allow for stormwater infiltration after a fire. Embankment slopes (supporting grade separations and water crossings) would be subject to soil stabilization during and post-construction and would generally remain pervious to stormwater in non-fire conditions. Since the grade separations would retain some permeability even after a fire due to the rail ballast, excessive runoff is not expected. Therefore, there is not a risk of downslope or downstream flooding.

The South Section of the Coast Subdivision passes next to Ardenwood Historic Farm, which the City of Fremont identified as an VHFHSZ. Within 500 feet of Ardenwood Historic Farm, downstream flooding is also not expected as the Farm and adjacent track are generally flat and are outside of the 0.2 percent chance annual flood zone, as shown in the Flood Insurance Rate Map (FEMA 2009). The Project would not result in major changes to the existing drainage in this area. Due to the flat existing terrain, excessive runoff post-fire is not expected and therefore would not cause downstream flooding. Within 500 feet of Ardenwood Historic Farm, no slopes are proposed and no modifications to the existing Ardenwood Boulevard grade separation slopes are proposed. Therefore, the proposed Project would not expose people or structures to new or additional risks related to runoff, post-fire slope stability, or drainage changes, resulting in no impact.

3.21.7 Mitigation Measures

No mitigation measures for wildfire are required for the proposed Project.

3.21.8 Cumulative Impact Analysis

The Proposed Project would not impact wildfire risk. Because no impacts are anticipated, a cumulative impact analysis is not warranted for wildfire.

3.21.9 CEQA Significance Findings Summary Table

Table 3.21-4 summarizes the wildfire impacts of the proposed Project.

Table 3.21-4. Wildfire Impacts Summary

Impact	Level of Significance Before Mitigation	Incremental Project Contribution to Cumulative Impacts	Mitigation	Level of Significance with Mitigation Incorporated	Incremental Project Cumulative Impact after Mitigation
(a) Substantially impair an adopted emergency response plan or emergency evacuation plan	NI	NCC	N/A	NI	NCC
(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	NI	NCC	N/A	NI	NCC
(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	NI	NCC	N/A	NI	NCC
(d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes	NI	NCC	N/A	NI	NCC

Notes: LTS = Less than Significant Impact, NI = No Impact, N/A = Not Applicable, SI = Significant Impact, S/M = Significant Impact but Mitigable to a Less than Significant Level, CC = Cumulatively Considerable, NCC = Not Cumulatively Considerable.

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