3.13 Mineral Resources

3.13.1 Introduction

Under CEQA, rocks, ores, and geologic minerals are all considered to be mineral resources. Mineral resources include, but are not limited to, fuel minerals (coal and oil shale), metallic minerals (gold, silver, and iron), industrial/chemical minerals (salt, boron, clay, limestone, gypsum, and shale), and construction materials (sand, gravel, and crushed stone).

This section describes the regulatory setting and affected environment for mineral resources. It addresses mineral resources that are known to occur or have the potential to occur in the proposed mineral resources RSA and describes the potential impacts on those resources during construction and operation of the proposed Project. Cumulative impacts of the proposed Project on mineral resources are also discussed.

3.13.2 Regulatory Setting

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

3.13.2.1 Federal

Surface Mining Control and Reclamation Act

The Surface Mining Control and Reclamation Act (SMCRA) of 1977 regulates surface mining activities and reclamation of closed mines. SMCRA implemented environmental standards that mining companies are required to follow and requires permit applicants to conduct reclamation efforts following the completion of mining activities. SMCRA is administered by the Department of Interior's Office of Surface Mining.

3.13.2.2 State

Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act (SMARA) of 1975 encourages the production, conservation, and protection of mineral resources. It is administered by the California Department of Conservation and regulates all mines that disturb more than one acre and/or remove more than 1,000 cubic yards of material. SMARA requires the minimization of adverse environmental impacts associated with mining, as well as the reclamation of mined lands to a beneficial land use (open space, wildlife habitat, agriculture, or residential/commercial development).

3.13.2.3 Regional

Alameda County Surface Mining Ordinance

The Alameda County Community Development Agency (CDA) is the county's lead agency under SMARA. CDA's Neighborhood Preservation and Sustainability (NPS) Department administers new and existing mines located on unincorporated lands in Alameda County. NPS implements the Surface Mining Ordinance as required under SMARA Section 2774. This ordinance covers the issuance of permits for mining operations, approval of reclamation plans, and financial assurances required from mining operations.

3.13.2.4 Local

City of Oakland General Plan

The City of Oakland's Open Space, Conservation, and Recreation Element (1996) supports conservation of minerals under SMARA and specifically cites volcanic rock deposits (rhyolite) in the Oakland Hills between Claremont Canyon and San Leandro. These deposits are classified as a regionally significant resource, which are mineral resources of prime importance for future regional needs.

City of San Leandro General Plan

The Open Space, Parks, and Conservation Element of the City of San Leandro's General Plan (2016) also references volcanic rock deposits (rhyolite, basalt, and andesite). However, per the City's general plan, no active quarries are located within the city limits. While mineral resources may remain at the closed quarries, future mining of these resources was rated as unlikely.

City of Hayward General Plan

The City of Hayward's General Plan (2014) discusses historic mineral resources (stone, clay, and salt) that were mined within the city limits. The City's only designated mineral resource of regional significance is a quarry located east of Mission Boulevard and Tennyson Road that previously produced crushed rock.

City of Fremont General Plan

The City of Fremont's General Plan (2011) discusses several mineral resources (sand, gravel, crushed rock, and salt). Although several of these mineral resources have been designated as regionally significant, no active mining operations are underway within the City. Environmental constraints, such as steep slopes, wetlands, and park and public facilities, were discussed in the general plan as being prohibitive for future mineral resource extraction within the City of Fremont.

City of Newark General Plan

The City of Newark's General Plan (2013) notes no mineral recovery sites within the City. Based upon the extent of urban development, and the City's proximity to sensitive environmental resources (such as the Don Edwards San Francisco Bay National Wildlife Refuge), future mineral extraction within Newark was rated as unlikely.

Union City General Plan

Per its 2040 General Plan (2019), there are no known mineral resources within Union City.

3.13.2.5 Consistency with Plans, Policies, and Regulations

The proposed Project is consistent with federal, state, and local plans/policies/regulations. There are no active mining operations within the RSA. No alternatives propose ROW acquisition from active mines or closed mines undergoing reclamation. Therefore, the proposed Project would be consistent with SMCRA and SMARA.

City general plans generally support the conservation of mineral resources within their jurisdictions. Because the proposed Project would not impact mineral resources, the proposed Project would be consistent within applicable city general plans.

3.13.3 Methods for Evaluating Environmental Impacts

This section defines the RSA for mineral resources and describes the methods used to analyze the impacts on mineral resources within the RSA.

3.13.3.1 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.

Mineral deposits can extend over a wide geographic area. To account for potential mineral resources, the urban planning boundary for all cities located within the Project Study Area was reviewed (Oakland, San Leandro, Hayward, Fremont, Newark, and Union City). Unincorporated areas located within a 2-mile radius from the Project footprint were also included in the RSA.

3.13.3.2 Data Sources

State and local data sources were reviewed to identify regionally-significant or locally-important mineral resources within the RSA. Records from the California Geological Survey and Alameda County were reviewed to identify existing and historic mining operations. For cities within the RSA, relevant portions of each city's general plan were reviewed to identify any locally-important mineral resources. Finally, aerial imagery was reviewed to identify active mining operations.

3.13.3.3 CEQA Thresholds

To satisfy CEQA requirements, mineral resource 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 mineral resource impacts under CEQA if it would:

1. 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; or
2. 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.

3.13.4 Affected Environment

3.13.4.1 Environmental Setting

Regional Setting

California is one of the largest producers of non-fuel minerals in the United States (California Geological Survey 2018a). Construction aggregate is the state's most important mined commodity in regard to both tonnage and value (California Department of Conservation 2021). The demand for aggregate is forecast to increase as California's population grows.

Statewide, approximately 90 percent of aggregate materials are transported by truck (California Department of Conservation 2021). High-volume, low-cost construction minerals, such as aggregate, are expensive to transport. Because of this, construction minerals are typically extracted in close proximity to growing communities to allow local sourcing.

Alameda County has few construction mineral mines (California Geological Survey 2018a). Currently, CDA NPS regulates 10 quarries countywide (CDA 2019), including two large-scale mining operations. None of these 10 quarries is located within, or adjacent to, the RSA. Three quarries are located in the Pleasanton-Livermore area, while the other seven quarries are located east of Fremont (near the Sunol area). The closest mining operation is located in an unincorporated portion of Alameda County (approximately 6.5 miles east of the Coast Subdivision). One of the large-scale mining operations is located near the City of Livermore (approximately 15.5 miles northeast of the Coast Subdivision) and has an annual production of more than 5 million tons per year. The remaining large-scale mining operation is located near Sunol (approximately 9.5 miles east of the Coast Subdivision) and has an annual production between 3 and 5 million tons per year.

Based on the projected 50-year demand for aggregate in the southern San Francisco Bay Area, the region does not have sufficient permitted reserves to meet forecast demand (California Geological Survey 2018b). This suggests that new aggregate mines may be needed within the region, including Alameda County.

Local Setting

No active mining operations were identified within the RSA after reviewing relevant city general plans (Section 3.5.1). Several general plans discuss historic mineral resources within their jurisdictions. However, extensive urban development within the RSA and/or existing environmental constraints make it unlikely that remaining mineral resources would be targeted for future extraction. The locally identified mineral resources within the RSA are as follows:

- The City of Oakland has volcanic rock deposits in the Oakland Hills, which are located several miles from the Project footprint. No active mining operations are underway in this area.

- Hayward has a quarry of regional significance. This facility is located within the RSA, approximately 0.5 mile east of the Niles Subdivision. Based on aerial imagery, it appears that this mine has been reclaimed and a residential subdivision has been constructed in its place. The City of Hayward has proposed a 50-acre hillside park, La Vista Park, in the reclaimed mine area, as well.

3.13.5 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.

No BMPs for mineral resources are included in the proposed Project.

3.13.6 Environmental Impacts

This section describes the potential environmental impacts on mineral resources 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.

3.13.6.1 (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 Project Alternative

No Impact. Under the No Project Alternative, the Capitol Corridor passenger rail service between Oakland and San Jose would not be relocated from the Niles Subdivision to the Coast Subdivision associated with the proposed Project. Improvements proposed for the Coast and Niles Subdivisions associated with the proposed Project would not occur. Capitol Corridor passenger trains would continue to operate based on current routes with no changes. Therefore, the No Project Alternative would not result in the loss of availability of a known mineral resource of regional or statewide value, resulting in no impact.

Proposed Project

Construction and Operations

No Impact. No active mining operations were identified within the RSA. A reclaimed mine was identified near Hayward, but the construction of residential units (and a future park) would likely prohibit additional mineral extraction at this location. No proposed ROW would be acquired from any active or reclaimed mine. Because of this, no conversion of land from a mineral extraction use to transportation use would occur. With no active mining operations in the RSA, there would be no direct impacts to mining operations. No indirect impacts are anticipated to the access or operation of mines as a result of changes to local traffic patterns. Freight rail service operations are not expected to change as a result of the proposed Project. Based on this, the proposed Project is not expected to affect the transportation of construction minerals, which are largely transported to

market using trucks. Therefore, the proposed Project would not result in the loss of availability of a known mineral resource, resulting in no impact.

3.13.6.2 (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 Project Alternative

No Impact. Under the No Project Alternative, the Capitol Corridor passenger rail service between Oakland and San Jose would not be relocated from the Niles Subdivision to the Coast Subdivision associated with the proposed Project. Improvements proposed for the Coast and Niles Subdivisions associated with the proposed Project would not occur. Capitol Corridor passenger trains would continue to operate based on current routes with no changes. Therefore, the No Project Alternative would not result in the loss of availability of a locally-important mineral resource recovery site, resulting in no impact.

Proposed Project

Construction and Operation

No Impact. No active mining operations for locally-important mineral resources were identified within the RSA. Existing environmental constraints within the RSA would likely discourage future extraction of the remaining mineral resources. No proposed ROW would be acquired from any active or reclaimed mine, so no conversion of land use from mineral extraction use to transportation use would occur. No indirect impacts to mining operations are anticipated. Therefore, construction and operation of the proposed Project would not result in the loss of availability of locally-important mineral resource recovery sites, resulting in no impact.

3.13.7 Mitigation Measures

No mitigation measures for mineral resources are required for the proposed Project.

3.13.8 Cumulative Impact Analysis

The proposed Project would not impact mineral resources. Because no impacts are anticipated, a cumulative impact analysis is not warranted for mineral resources.

3.13.9 CEQA Significance Findings Summary Table

Table 3.13-1 summarizes the mineral resources impacts of the proposed Project.

Table 3.13-1. Mineral Resources 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) Result in the loss of availability of a known mineral resources that would be of value to the region and the residents of the state	NI	NCC	N/A	NI	NCC
(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	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.

3.13.10 References

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