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ES - EXECUTIVE SUMMARY

ES.1 - Purpose

This Draft Environmental Impact Report (Draft EIR) is prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the implementation of Bottoms Property Residential Project (State Clearinghouse No. 2013102024). This document is prepared in conformance with CEQA (California Public Resources Code, Section 21000, et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000, et seq.).

The purpose of this Draft EIR is to inform decision makers, representatives of affected and responsible agencies, the public, and other interested parties of the potential environmental effects that may result from implementation of the proposed project. This Draft EIR describes potential impacts relating to a wide variety of environmental issues and methods by which these impacts can be mitigated or avoided.

ES.2 - Proposed Project

Project Location

The project site is located in the City of Richmond, Contra Costa County, California. The project site consists of five (5) parcels totaling 25.27 acres located east of the intersection of Brickyard Cove Road, Sandpiper Spit, and Seacliff Drive. The project site is bounded by Seacliff Drive (west), Seacliff Estates single-family family residential neighborhood (north), Canal Boulevard and Port of Richmond Shipyards No. 3 (east), and San Francisco Bay (south).

Project Description

The project proposes to develop 60 units of market-rate condominiums. Nine buildings would be developed as part of the project, providing a total of 134 bedrooms. The project includes a request to re-zone the site to Planned Area (PA) District. The City of Richmond General Plan states the purpose of this district is to promote development of large areas in substantial compliance with the principles and standards of the Richmond General Plan. This includes permitting appropriate variety and diversity in the composition and relationship of land uses, building types, structures, lot sizes and open spaces. The specific purposes of the PA district are to:

A. Establish a procedure for the development of large parcels of land (2 acres or more) in order to reduce or eliminate the rigidity, delays and conflicts that otherwise may result from application of zoning standards and procedures designed primarily for small parcels;

B. Ensure orderly and thorough planning review procedures that will result in quality urban design;

C. Establish a review procedure for large residential developments including condominium developments;
D. Provide the allocation and improvement of common open space in residential areas, and provide the mechanisms for the maintenance of open space by those who will most directly benefit from it;

E. Permit the development of commercial and industrial developments in appropriate locations to obtain a coherent design, increased public amenities, and protection and buffering for adjacent land uses;

F. Establish review procedures for any project utilizing atypical design concepts, and/or not conforming to the standards of the base zoning district;

G. To facilitate implementation of the City’s affordable housing policies.

Minimum lot areas, setbacks, building height limits, other development standards and similar regulations of the base zoning districts may be modified as a part of an approved PA district (City of Richmond Municipal Code Section 15.04.610.020 D).

**Project Density**

The Medium Density Residential land use designation permits a density of 10 to 40 dwelling units per acre (du/ac). The project site in total is 25.27 acres, indicating that development of 60 units would yield a density of 2.37 units per acre, which is well below the density range identified for the medium density residential land use classification. However, because a large portion of the site is located under San Francisco Bay or is otherwise restricted from development, project density is calculated based on the developable “net” acreage (6.18 acres). The resulting density is 9.72 units per net acre, which is rounded up to 10 units per net acre for the purpose of analysis.

**Project Height**

Building height limits that apply within base zoning districts may be modified as part of an approved PA district (City of Richmond Municipal Code Section 15.04.610.020(D)). Accordingly, although the Medium Density Residential land use designation would typically impose a building height limit of 35 feet, the proposed PA district proposed under the project includes a building height limit of 50 feet. As discussed below, the project includes structures ranging from 23.8 to 46.3 feet in height, which is within the 50-foot parameters of the proposed PA zone. Nine buildings would be developed as part of the project. Buildings 1 through 5, located along the Bay shoreline, would be two stories in height (approximately 23.8 feet). Buildings 6 through 9, located behind Buildings 1 through 5, would be four stories in height (approximately 46.3 feet).

In order to ensure consistency with the City of Richmond General Plan, the project Applicant is also proposing a General Plan Amendment (GPA) as part of the project entitlements. The proposed GPA would modify General Plan Table 3.1, by adding text that would provide that “Building height in a Medium-Density Residential land use classification may exceed 35 feet as part of an approved Planned Area (PA) district.”
Project Access and Parking

Access would be provided via a private entrance road from Seacliff Drive. A secondary entrance to the project would be provided from Canal Boulevard, near the northeast corner of the project site. A total of 280 parking spaces would be provided in accordance with the City’s parking requirements, of which 128 are garage parking, 120 are driveway parking, and 32 are guest parking spaces.

Project Phasing

Development of the proposed project would be completed in a two-year phase, with an anticipated completion date of 2016.

Landscaping and Trail Improvements

In addition to project landscaping, the project would provide enhancements to the new section of the Bay Trail, which was recently completed by the City and the Trails for Richmond Action Committee (TRAC). The trail, which is located along the shoreline in a 22-foot-wide easement through the property, connects non-contiguous portions of the San Francisco Bay Trail between Canal Boulevard and Seacliff Drive, as contemplated by the City of Richmond’s 2030 General Plan. The trail will include several design features that promote ease of access and user safety, some installed by TRAC and some installed by the project. TRAC will install way finding signs and orientation exhibits, while the project would provide a wider sidewalk between the project entrance and the crosswalk on Seacliff Drive near the intersection of Brickyard Cove Road for safer multi-use access, public access parking on the adjoining Port of Richmond property, shoreline access, and benches along the portion of the Trail through the property. The Bay Trail and easement will be within an approximately 100-foot-wide landscaped buffer area between the residential buildings and the shoreline top of bank.

Project Objectives

The objectives of the proposed project are to:

1. Provide a high-quality for-sale residential development project that offers a common green space amenity for residents.
2. Facilitate the logical and orderly transition of a vacant parcel to residential uses that maximize the satisfaction of market demand.
3. Develop condominium residences at a density that complies with the General Plan land use designation of medium density (10 to 40 dwelling units per acre).
4. Enhance construction of the Bay Trail along the project frontage by providing landscaping, benches, and access for trail users and residents.
5. Maximize economic growth through new capital investment, an expanded population base, and payment of development fees.
6. Maximize new residential opportunities to accommodate forecasted population growth within the City of Richmond and to meet Richmond’s share of regional housing needs.
7. Provide compact development patterns, contemporary building and landscaping practices, as provided in the General Plan Land Use Element, page 3.3.

8. Provide development consistent with the General Plan vision for Brickyard Cove, which states: “Brickyard Cove is designated as Medium-Density Residential to provide a transition from port-related uses to the adjoining residential neighborhood along Seacliff Drive” (page 3.39).

**ES.3 - Areas of Controversy/Issues To Be Resolved**

A Notice of Preparation (NOP) for the proposed project was circulated from October 9, 2013 to November 8, 2013. The NOP described the development concept for the project and range of issues to be addressed in the EIR. The NOP was distributed to the State Clearinghouse, responsible agencies, and other interested parties for a 30-day public review period. The NOP identified the potential for significant impacts on the environment related to the following topical areas:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Land Use
- Transportation

In addition, a public scoping meeting was held on October 29, 2013. Comments made by members of the public mainly related to the same topics identified by the NOP, above, as well as additional comments and concerns related to the following:

- Noise
- Utility and Service Systems (including police and fire protection)

A full transcript of comments made at the public scoping meeting is contained in Appendix A to the Draft EIR.

Section 15123(b) (3) of the CEQA Guidelines requires that an EIR contain issues to be resolved, which includes the choice among alternatives and whether or how to mitigate significant impacts. Based upon the information contained within the EIR, the City of Richmond decision makers will then consider whether to approve or deny the project. In doing so, the decision makers will determine whether the Draft EIR adequately describes the environmental impacts of the proposed project; whether recommended mitigation measures should be adopted or modified; or whether additional mitigation measures need to be applied to the proposed project.

**ES.4 - Alternatives to the Proposed Project**

Below is a summary of the alternatives to the proposed project considered in Section 5, Alternatives to the Proposed Project. The No Project Alternative was identified as the environmentally superior alternative.
No Project Alternative

The discussion and evaluation of a No Project Alternative is required by the CEQA Guidelines Section 15126.6(e). This alternative provides a comparison between the environmental impacts of the project in contrast to the environmental impacts that could result from not approving, or denying, the project. Under the No Project Alternative, the proposed Bottoms Property Residential Project would not be implemented and the existing vacant land use within the project site would continue for the foreseeable future. No residential buildout of the project site would occur.

The zoning across the site would also remain unchanged, and a General Plan Amendment would not be sought by the project Applicant. Currently, the site includes four zoning designations: Planned Area (PA), Coastline Commercial (CC), Community Regional Recreation (CCR), and Marine Industrial (M4).

Increased Intensity Alternative

Under the Increased Intensity Alternative, the project would be built consistent with the current City of Richmond General Plan Land Use map. According to the City of Richmond General Plan Land Use map, the project site is designated as Medium Density Residential (10 to 40 dwelling units per acre).

To evaluate a project reasonably in keeping with the density range identified for this site, this alternative reflects a density of 30 dwelling units per acre. Accordingly, based on the developable acreage (6.18 acres), a density of 30 units per acre would yield a total of 185 dwelling units. (A density of 20 units per acre would yield a total of approximately 123 dwelling units.)

ES.5 - Summary of Impacts and Mitigation Measures

The proposed project will not result in significant adverse effects after the implementation of feasible mitigation measures.

Table ES-1 below summarizes the impacts, mitigation measures, and resulting level of significance after mitigation for the relevant environmental issue areas evaluated for the proposed project. The table is intended to provide an overview; narrative discussions for the issue areas are included in the corresponding sections of this EIR. Table ES-1 is included in the Draft EIR as required by CEQA Guidelines Section 15123(b)(1).

California Public Resources Code Section 21081.6(a)(1)) requires that a Mitigation Monitoring and Reporting Program (MMRP) be adopted at the time that the lead agency determines to carry out a project for which an EIR has been prepared, to ensure that mitigation measures identified in the EIR are fully implemented. A Mitigation Monitoring and Reporting Program (MMRP) will be included within the Final EIR for the project, and will include information such as the timing of mitigation, the monitoring schedule and reporting procedures, and designation of responsible parties for implementing the mitigation measures.
### Table ES-1: Executive Summary of Impacts and Mitigation Measures

<table>
<thead>
<tr>
<th>Impact</th>
<th>Mitigation Measure</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Section 3.1: Aesthetics</strong></td>
<td></td>
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</tr>
<tr>
<td><strong>Impact AES-1</strong>: The project would not have a substantial adverse effect on a scenic vista.</td>
<td>No mitigation measures are required.</td>
<td>Less than significant impact.</td>
</tr>
<tr>
<td><strong>Impact AES-2</strong>: The project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway.</td>
<td>No mitigation measures are required.</td>
<td>No impact.</td>
</tr>
<tr>
<td><strong>Impact AES-3</strong>: The project would not substantially degrade the existing visual character or quality of the site and its surroundings.</td>
<td>No mitigation measures are required.</td>
<td>Less than significant impact.</td>
</tr>
<tr>
<td><strong>Impact AES-4</strong>: The project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.</td>
<td>No mitigation measures are required.</td>
<td>Less than significant impact.</td>
</tr>
<tr>
<td><strong>Section 3.2: Air Quality</strong></td>
<td></td>
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</tr>
<tr>
<td><strong>Impact AIR-1</strong>: The project would not conflict with or obstruct implementation of the applicable air quality plan.</td>
<td>Mitigation Measure AIR-2 is required.</td>
<td>Less than significant impact.</td>
</tr>
</tbody>
</table>
| **Impact AIR-2**: The project may violate an air quality standard or contribute substantially to an existing or projected air quality violation. | **MM AIR-2.** During construction activities, the following air pollution control measures shall be implemented:  
  - Exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.  
  - All haul trucks transporting soil, sand, or other loose material offsite shall be covered. | Less than significant impact after mitigation. |
### Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

<table>
<thead>
<tr>
<th>Impact</th>
<th>Mitigation Measure</th>
<th>Level of Significance</th>
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<tbody>
<tr>
<td>• All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.</td>
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<td>• All roadways, driveways, and sidewalks shall be paved as soon as possible.</td>
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<tr>
<td>• Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485 of the California Code of Regulations). Clear signage shall be provided for construction workers at all access points.</td>
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<tr>
<td>• All construction equipment shall be maintained and properly tuned in accordance with manufacturer’s specifications. All equipment shall be checked by a certified visible emissions evaluator.</td>
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<tr>
<td>• A publicly visible sign shall be posted with the telephone number and person to contact at the City regarding dust complaints. This person shall respond and take corrective action within 48 hours of a complaint or issue notification. The Bay Area Air Quality Management District’s phone number shall also be visible to ensure compliance with applicable regulations.</td>
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</table>

**Impact AIR-3:** The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors).

No mitigation measures are required.  
Less than significant impact.
### Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

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<tr>
<th>Impact</th>
<th>Mitigation Measure</th>
<th>Level of Significance</th>
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</table>
| **Impact AIR-4**: The project would not expose sensitive receptors to substantial pollutant concentrations. | Implementation of Mitigation Measure AIR-2 is required, along with the following additional mitigation measures:  
**MM AIR-4a.** Use Tier 3 construction equipment with level 3 diesel particulate filter (DPF) for equipment greater than 50 horsepower, including excavators, forklifts, tractors/loaders/backhoes and level 2 DPF for all other equipment.  
**MM AIR-4b.** All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.  
**MM AIR-4c.** All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 miles per hour.  
**MM AIR-4d.** The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.  
**MM AIR-4e.** All trucks and equipment, including their tires, shall be washed off prior to leaving the site.  
**MM AIR-4f.** The idling time of diesel-powered construction equipment shall be limited to two minutes. | Less than significant impact after mitigation. |
### Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

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<tr>
<th>Impact</th>
<th>Mitigation Measure</th>
<th>Level of Significance</th>
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</thead>
<tbody>
<tr>
<td><strong>Impact AIR-5:</strong> The project would not create objectionable odors affecting a substantial number of people.</td>
<td>No mitigation measures are required.</td>
<td>Less than significant impact.</td>
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</table>

**Section 3.3: Biological Resources**

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<tr>
<th>Impact</th>
<th>Mitigation Measure</th>
<th>Level of Significance</th>
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<tbody>
<tr>
<td><strong>Impact BIO-1:</strong> The project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.</td>
<td><strong>MM BIO-1a.</strong> If clearing and construction activities will occur during the nesting period for burrowing owls (February 1–August 31), then a qualified biologist shall conduct take avoidance surveys for burrowing owls on and within 500 feet of the project site, where feasible. Surveys shall be conducted no more than 14 days prior to the start of construction activities, and in accordance with Appendix D of CDFW’s Staff Report on Burrowing Owl Mitigation (Staff Report), published March 7, 2012. Surveys shall be repeated if project activities are suspended or delayed for more than 15 days during nesting season. If no burrowing owls are detected, then no further mitigation is required. If active burrowing owls are detected, the project proponent shall follow the protocol outlined in Mitigation Measure BIO-1b, below.</td>
<td>Less than significant impact after mitigation.</td>
</tr>
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</table>

**MM BIO-1b.** If burrowing owls are detected onsite during pre-construction surveys, mitigation shall be required in accordance with CDFW’s Staff Report. If the surveys identify breeding or wintering burrowing owls on or adjacent to the property, occupied burrows shall not be disturbed and shall be provided with protective buffers. Where avoidance is not feasible, an exclusion plan shall be implemented to encourage owls to move away from the work area prior to construction. The exclusion plan shall be subject to CDFW approval and monitoring requirements and approved by the City prior to issuance of a permit for ground-disturbing activities.
Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

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<tr>
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<th>Level of Significance</th>
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<tr>
<td><strong>Impact BIO-1c:</strong> Removal of trees and shrubs shall be conducted outside of the avian nesting season (February through August). If construction must occur during the avian nesting season, a pre-construction bird survey shall be conducted no less than 14 days prior to any ground-disturbing activities. If at any time birds are found to be nesting inside or within 250 feet (500 feet for raptors) of the impact area, construction activities within 250 feet of the nest shall cease until it is determined by a qualified biologist that the nest is no longer active.</td>
<td><strong>MM BIO-1c.</strong></td>
<td>Less than significant impact.</td>
</tr>
<tr>
<td><strong>Impact BIO-2:</strong> The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.</td>
<td>No mitigation measures are required.</td>
<td>Less than significant impact.</td>
</tr>
<tr>
<td><strong>Impact BIO-3:</strong> The project would not have a substantial adverse effect 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.</td>
<td>No mitigation measures are required.</td>
<td>Less than significant impact.</td>
</tr>
<tr>
<td><strong>Impact BIO-4:</strong> The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites.</td>
<td>No mitigation measures are required.</td>
<td>No impact.</td>
</tr>
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</table>
**Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures**

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<thead>
<tr>
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<th>Level of Significance</th>
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<tbody>
<tr>
<td><strong>Impact BIO-5:</strong> The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.</td>
<td>No mitigation measures are required.</td>
<td>No impact.</td>
</tr>
<tr>
<td><strong>Impact BIO-6:</strong> The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.</td>
<td>No mitigation measures are required.</td>
<td>No impact.</td>
</tr>
</tbody>
</table>

**Section 3.4: Cultural Resources**

**Impact CR-1:** The project would not cause a substantial adverse change in the significance of a historical resource as defined in §15064.5.

**MM CR-1.** If a potentially significant cultural resource is encountered during subsurface earthwork activities for the project, all construction activities within a 50-foot radius of the find shall cease until a qualified archaeologist determines whether the resource requires further study. The City shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Any previously undiscovered resources found during construction shall be recorded on appropriate Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of California Environmental Quality Act criteria by a qualified archaeologist. Potentially significant cultural resources consist of but are not limited to building materials, glass, ceramics, wood, railroad features, structural remains, or historic dumpsites. If the resource is determined significant under CEQA, the qualified archaeologist shall prepare and implement a research design and archaeological data recovery plan that will capture those categories of data for which the site is significant. The archaeologist shall also conduct Less than significant impact after mitigation.
Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

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<th>Impact</th>
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<tbody>
<tr>
<td><strong>Impact CR-2:</strong> The project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.</td>
<td><strong>MM CR-2.</strong> If areas of prehistoric or historic archaeological resources are encountered during subsurface excavation, all work within 50 feet of the discovery shall cease until a qualified archaeologist can determine the significance of the find. The discoveries shall be evaluated for their CR and NR eligibility and recommendations made. The identified resource(s) area shall be avoided by project activities during evaluation. The City shall require a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Upon completion of the archaeologist’s evaluation, a report shall be prepared documenting the methods and results, and offering recommendations.</td>
<td>Less than significant impact after mitigation.</td>
</tr>
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</table>

| Impact CR-3: The project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. | **MM CR-3.** In the event that fossils or fossil-bearing deposits are discovered during construction, excavations within 50 feet of the find shall be temporarily halted or diverted until a qualified paleontologist is allowed to examine the discovery. The paleontologist shall document the discovery as needed in accordance with Society of Vertebrate Paleontology standards (Society of Vertebrate Paleontology 1995). The evaluation shall include an assessment of the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume. If | Less than significant impact after mitigation. |
### Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

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<th>Impact</th>
<th>Mitigation Measure</th>
<th>Level of Significance</th>
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<tbody>
<tr>
<td>Avoidance of the resource is determined to be unfeasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important. The plan shall be submitted to the City for review and approval prior to implementation.</td>
<td>MM CR-4. In the event of the accidental discovery or recognition of any human remains, CEQA Guidelines § 15064.5; Health and Safety Code § 7050.5; Public Resources Code § 5097.94 and § 5097.98 must be followed. If during the course of project development there is accidental discovery or recognition of any human remains, the following steps shall be taken: 1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the “most likely descendant” (MLD) of the deceased Native American. The MLD shall make recommendations to the landowner or the person responsible for the excavation work within 48 hours, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98. 2. Where the following conditions occur, the landowner or his authorized representative shall</td>
<td>Less than significant impact after mitigation.</td>
</tr>
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**Impact CR-4:** The project would not disturb any human remains, including those interred outside of formal cemeteries.
### Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

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<th>Impact</th>
<th>Mitigation Measure</th>
<th>Level of Significance</th>
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| rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendant or on the project site in a location not subject to further subsurface disturbance:  
• The NAHC is unable to identify a most likely descendant or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission.  
• The descendant identified fails to make a recommendation.  
• The landowner or his authorized representative rejects the recommendation of the descendant, and mediation by the NAHC fails to provide measures acceptable to the landowner. | | |

### Section 3.5: Geology and Soils

**Impact GEO-1:** The project would not expose people or structures to 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? Refer to Division of Mines and Geology Special Publication 42.

ii) Strong seismic ground shaking.

iii) Seismic-related ground failure, including liquefaction.

iv) Landslides.

**MM GEO-1.** Prior to issuance of a grading permit, a qualified geotechnical engineer or engineering geologist shall prepare a design-level geotechnical investigation to provide site preparation and design recommendations related to site-specific geologic conditions, including seismic-related ground failure, shaking, and liquefaction. The recommendations of the design-level geotechnical investigation shall be incorporated into the project plans and provided to the City of Richmond for review and approval.

| Impact GEO-2: The project would not result in substantial soil erosion or the loss of topsoil. | No mitigation measures are required. | Less than significant impact. |

| | | |
## Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

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<th>Impact</th>
<th>Mitigation Measure</th>
<th>Level of Significance</th>
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<tbody>
<tr>
<td><strong>Impact GEO-3:</strong> The project could be located on a geologic unit or soil that is unstable, or that could become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.</td>
<td><strong>MM GEO-3a.</strong> Additional subsurface exploration, laboratory testing, and engineering analysis shall be performed as part of a design-level investigation to quantify the amount and rate of expected future settlements based on the proposed site grading and expected building loads. As directed by the City Attorney, alternatives to reduce settlement/subsidence may include minimizing the amount (weight) of new foundation loads by supporting the new structures on deep foundations, over-excavating beneath building footprints to “offset” new loads, surcharging the site to accelerate settlement prior to construction, or designing the proposed structures to withstand total and differential ground settlements. Lightweight fill such as lava rock or synthetic materials such as Styrofoam shall also be considered to raise grades, if needed. <strong>MM GEO-3b.</strong> New improvements shall be set back a minimum of 15 feet from the base of the near-vertical rock cut at the site’s northern boundary. Alternatively, a catchment wall or other retaining structure, such as soil nails and Tecco mesh or a Geobrugg-type debris barrier, shall be considered as part of a project design feature.</td>
<td>Less than significant impact after mitigation.</td>
</tr>
<tr>
<td><strong>Impact GEO-4:</strong> The project would not be located on expansive soil, as defined in Table 18-1-8 of the Uniform Building Code (1994), creating substantial risks to life or property.</td>
<td>No mitigation measures are required.</td>
<td>Less than significant impact.</td>
</tr>
<tr>
<td><strong>Impact GEO-5:</strong> The project would not 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.</td>
<td>No mitigation measures are required.</td>
<td>No impact</td>
</tr>
</tbody>
</table>

### Section 3.6: Land Use and Planning
Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

<table>
<thead>
<tr>
<th>Impact LUP-1: The project would not physically divide an established community.</th>
<th>Mitigation Measure</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>No mitigation measures are required.</td>
<td>No impact</td>
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<table>
<thead>
<tr>
<th>Impact LUP-2: The project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.</th>
<th>Mitigation Measure</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>No mitigation measures are required.</td>
<td>Less than significant impact.</td>
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<thead>
<tr>
<th>Impact LUP-3: The project would not conflict with any applicable habitat conservation plan or natural communities conservation plan.</th>
<th>Mitigation Measure</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>No mitigation measures are required.</td>
<td>No impact.</td>
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</table>

**Section 3.7: Transportation and Traffic**

<table>
<thead>
<tr>
<th>Impact TRANS-1: The project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways.</th>
<th>Mitigation Measure</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>MM TRANS-1. Prior to issuance of building permits, the Project Applicant shall pay applicable local and regional traffic impact fees based on the expected level of vehicle trip generation..</td>
<td>Less than significant impact after mitigation.</td>
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</tr>
</tbody>
</table>

<table>
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<tr>
<th>Impact TRANS-2: The project would not conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.</th>
<th>Mitigation Measure</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement Mitigation Measure TRANS-1.</td>
<td>Less than significant impact after mitigation.</td>
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<table>
<thead>
<tr>
<th>Impact TRANS-3: The project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.</th>
<th>Mitigation Measure</th>
<th>Level of Significance</th>
</tr>
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<tbody>
<tr>
<td>No mitigation measures are required.</td>
<td>No impact.</td>
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### Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

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<tr>
<th>Impact</th>
<th>Mitigation Measure</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact TRANS-4: The project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).</td>
<td><strong>MM TRANS-4a.</strong> Prior to issuance of occupancy permits, if the City does not grant a design exception to allow construction of a median break and left-turn access into the site, the project Applicant shall eliminate the westbound left-turn pocket on Seacliff Drive at Sandpiper Spit to facilitate the U-turn movement. If the City grants a design exception to allow construction of a median break and left-turn access into the site, then the left-turn pocket for Sandpiper Spit shall remain in place. <strong>MM TRANS-4b.</strong> Prior to issuance of occupancy permits and ongoing during project operation, the project Applicant shall maintain landscaping at the project driveways to avoid sight distance conflicts (shrubs should not be higher than approximately 30 inches and tree canopies should be approximately six feet from the ground). <strong>MM TRANS-4c.</strong> Prior to issuance of occupancy permits, the project Applicant shall require that residents use their parking garages for parking, not storage. Should there be issues with residents parking in guest spaces and insufficient parking is provided for guests, a permit parking system could be implemented by the homeowners association.</td>
<td>Less than significant impact after mitigation.</td>
</tr>
<tr>
<td>Impact TRANS-5: The project would not result in inadequate emergency access.</td>
<td><strong>MM TRANS-5.</strong> Prior to issuance of building permits, the fire department shall review the site plan for fire hydrant placement and emergency vehicle access to ensure that adequate access exists to ensure the safety of residents and property within the project in accordance with all applicable laws.</td>
<td>Less than significant impact after mitigation.</td>
</tr>
</tbody>
</table>
Table ES-1 (cont.): Executive Summary of Impacts and Mitigation Measures

<table>
<thead>
<tr>
<th>Impact</th>
<th>Mitigation Measure</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact TRANS-6: The project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.</td>
<td><strong>MM TRANS-6a.</strong> Prior to issuance of occupancy permits, the project Applicant shall provide an enhanced pedestrian crosswalk at the project driveway, connecting to the proposed Class I facility along the western edge of the project site. <strong>MM TRANS-6b.</strong> Prior to issuance of occupancy permits, the project Applicant shall restrict the Canal Boulevard entrance to emergency vehicle access only to reduce conflicts between bicycles and vehicles. Alternatively, the Applicant shall provide trail crossing treatments on both the driveway approach and the trail consistent with the Bicycle Master Plan Design Guidelines. Bicycle traffic shall not be expected to stop, but signage and striping would be appropriate to alert them to the presence of vehicles. Other bike path treatments across the driveway, such as colored pavement, may also be appropriate. Traffic exiting the site shall be stop-controlled. Signage and striping shall be used to alert drivers of the potential for bicycle traffic along the corridor. <strong>MM TRANS-6c.</strong> Prior to issuance of occupancy permits, where the proposed path connects to the Ferry Point Loop Trail and the San Francisco Bay Trail, trail intersection treatments shall be installed, including directional signage.</td>
<td>Less than significant impact after mitigation.</td>
</tr>
</tbody>
</table>
SECTION 1: INTRODUCTION

1.1 - Overview of the CEQA Process

This Draft Environmental Impact Report (Draft EIR) is prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the implementation of the Bottoms Property Residential Project (project) (State Clearinghouse No. 2013102024). This document is prepared in conformance with CEQA (California Public Resources Code, Section 21000, et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000, et seq.). This Draft EIR is intended to serve as an informational document for the public agency decision makers and the public regarding the project.

1.1.1 - Overview

The project consists of the development of 60 units of market-rate condominiums and associated infrastructure on a 25.27-acre project site in Richmond, California. The project sponsor also requests rezoning of the site to Planned Area (PA). Section 2, Project Description, provides a complete description of the project.

1.1.2 - Purpose and Authority

This Draft EIR provides a project-level analysis of the environmental effects of the project to the degree of specificity appropriate, in accordance with CEQA Guidelines Section 15146. This document addresses the potentially significant adverse environmental impacts that may be associated with project planning, construction, or operation. It also identifies appropriate and feasible mitigation measures and alternatives that may be adopted to significantly reduce or avoid these impacts.

CEQA requires that an EIR contain, at a minimum, certain specific elements. These elements are contained in this Draft EIR and include:

- Table of Contents
- Introduction
- Executive Summary
- Project Description
- Environmental Setting, Significant Environmental Impacts, and Mitigation Measures
- Cumulative Impacts
- Significant Unavoidable Adverse Impacts
- Alternatives to the Proposed Project
- Growth-Inducing Impacts
- Effects Found Not To Be Significant
- Areas of Known Controversy
1.1.3 - Lead Agency Determination

The City of Richmond is the lead agency for the project. CEQA Guidelines Section 15367 defines the lead agency as “...the public agency, which has the principal responsibility for carrying out or approving a project.” Other public agencies may use this Draft EIR in the decision-making or permit process and may consider the information in this Draft EIR along with other information that may be presented during the CEQA process.

This Draft EIR was prepared by FirstCarbon Solutions, an environmental consultant. Prior to public review, it was extensively reviewed and evaluated by the City of Richmond and a third-party peer reviewer. Lists of organizations and persons consulted and the report preparation personnel are provided in Section 8 of this Draft EIR.

1.2 - Scope of the EIR

The City of Richmond issued a Notice of Preparation (NOP) for the project on October 9, 2013. The statutory 30-day public review period ran from October 9, 2013 to November 8, 2013.

The scope of this Draft EIR includes the potential environmental impacts identified in the NOP and issues raised by agencies and the public in response to the NOP. Comment letters from agencies and individuals are listed in Table 1-1, below; the NOP and all comment letters are included in Appendix A.

1.2.1 - Scoping Meeting

Pursuant to CEQA Guidelines Section 15082(c), the City of Richmond held a public scoping meeting at 5:30 p.m., Tuesday, October 29, 2013 at 1160 Brickyard Cove Road, Suite 202, Richmond, California, 94801. A transcript of the scoping meeting is included within Appendix A. Table 1-1 lists all NOP comment letters received.

Table 1-1: IS-NOP Comment Letters

<table>
<thead>
<tr>
<th>Agency</th>
<th>Author</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>State Agencies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Department of Transportation (DOT)</td>
<td>Erik Alm, AICP District Branch Chief</td>
<td>October 24, 2013</td>
</tr>
<tr>
<td>California Department of Fish and Wildlife (CDFW) - Bay Delta Region</td>
<td>Scott Wilson, Acting Regional Manager</td>
<td>November 8, 2013</td>
</tr>
<tr>
<td><strong>Local Agencies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Point Richmond Neighborhood Council (PRNC)</td>
<td>Margaret Jordan, President</td>
<td>October 31, 2013</td>
</tr>
<tr>
<td>PRNC</td>
<td>Rodrick Satre, Member</td>
<td>October 28, 2013</td>
</tr>
</tbody>
</table>
Table 1-1 (cont.): IS-NOP Comment Letters

<table>
<thead>
<tr>
<th>Agency</th>
<th>Author</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRNC</td>
<td>Rodrick Satre, Member (email sent by Jane Lundin)</td>
<td>November 10, 2013</td>
</tr>
<tr>
<td>Trails for Richmond Action Committee (TRAC)</td>
<td>Bruce Beyaert, TRAC Chair</td>
<td>October 28, 2013</td>
</tr>
<tr>
<td>TRAC</td>
<td>Bruce Beyaert, TRAC Chair</td>
<td>October 31, 2013</td>
</tr>
<tr>
<td>TRAC</td>
<td>Bruce Beyaert, TRAC Chair</td>
<td>November 11, 2013</td>
</tr>
<tr>
<td>San Francisco Bay Trail</td>
<td>Lee Chien Huo, Bay Trail Planner</td>
<td>November 8, 2013</td>
</tr>
<tr>
<td>Michael Woldemar and Associates Incorporated</td>
<td>Michael Woldemar</td>
<td>November 1, 2013</td>
</tr>
<tr>
<td>Design Review Board Member</td>
<td>Ray Welter</td>
<td>November 4, 2013</td>
</tr>
<tr>
<td>Cove Investments, LLC.</td>
<td>Bert Clausen</td>
<td>November 6, 2013</td>
</tr>
<tr>
<td>Studio Fetter</td>
<td>Brant Fetter</td>
<td>November 7, 2013</td>
</tr>
<tr>
<td>Former Design Review Board Member</td>
<td>Jonathan Livingston</td>
<td>November 7, 2013</td>
</tr>
<tr>
<td>San Francisco Bay Conservation and Development Committee (BCDC)</td>
<td>Ellie Knecht, Coastal Analyst</td>
<td>November 8, 2013</td>
</tr>
<tr>
<td>Land Use Committee</td>
<td>Kathryn Dienst</td>
<td>November 12, 2013</td>
</tr>
<tr>
<td>Berding &amp; Weil LLP</td>
<td>Julia Hunting</td>
<td>November 13, 2013</td>
</tr>
</tbody>
</table>

Comments from Individuals

<table>
<thead>
<tr>
<th>Author</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kathryn Dienst &amp; Howard Elfant</td>
<td>October 10, 2013</td>
</tr>
<tr>
<td>Dennis Shusterman</td>
<td>October 14, 2013</td>
</tr>
<tr>
<td>Dennis Shusterman &amp; Alice Shusterman</td>
<td>October 19, 2013</td>
</tr>
<tr>
<td>Randolph D. Blim</td>
<td>October 21, 2013</td>
</tr>
<tr>
<td>Chris Holmes</td>
<td>October 28, 2013</td>
</tr>
<tr>
<td>Chris Holmes</td>
<td>November 4, 2013</td>
</tr>
<tr>
<td>Jim &amp; Kitty Zahradka</td>
<td>November 5, 2013</td>
</tr>
<tr>
<td>Marco &amp; Christine Gonzales</td>
<td>November 8, 2013</td>
</tr>
</tbody>
</table>
Table 1-1 (cont.): IS-NOP Comment Letters

<table>
<thead>
<tr>
<th>Agency</th>
<th>Author</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joy J. Lee</td>
<td>November 10, 2013</td>
<td></td>
</tr>
<tr>
<td>Leisa Johnson</td>
<td>November 11, 2013</td>
<td></td>
</tr>
<tr>
<td>Leisa Johnson (2nd letter)</td>
<td>November 11, 2013</td>
<td></td>
</tr>
<tr>
<td>Stephanie Abromaitis</td>
<td>November 12, 2013</td>
<td></td>
</tr>
<tr>
<td>Jane Lundin (PRNC member-writing as individual)</td>
<td>November 13, 2013</td>
<td></td>
</tr>
</tbody>
</table>

### 1.2.2 - Environmental Issues Determined Not To Be Significant

The NOP disclosed that project impacts appeared to be less than significant in nine topical areas. Accordingly, the following nine topical areas are analyzed in Section 4, Effects Found Not To Be Significant, which includes an explanation of why each issue is determined not to be significant:

- Agricultural and Forest Resources
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Utilities and Service Systems

### 1.2.3 - Potentially Significant Environmental Issues

The NOP found that the following topical areas may contain potentially significant environmental issues that will require further analysis in the EIR. These sections are as follows:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Land Use
- Transportation
1.3 - Organization of the EIR

This Draft EIR is organized into the following main sections:

- **Section ES: Executive Summary.** This section includes a summary of the project and alternatives addressed in the Draft EIR. The executive summary includes a brief description of the areas of controversy and issues to be resolved, and overview of the Mitigation Monitoring and Reporting Program, and a table that summarizes the potential impacts, mitigation measures, level of significance before mitigation, and level of significance after mitigation. California Public Resources Code Section 21081.6(a)(1) requires that a Mitigation Monitoring and Reporting Program (MMRP) be adopted at the time that the lead agency determines to carry out a project for which an EIR has been prepared, to ensure that mitigation measures identified in the EIR are fully implemented. A Mitigation Monitoring and Reporting Program (MMRP) will be included within the Final EIR for the project, and will include information such as the timing of mitigation, the monitoring schedule and reporting procedures, and designation of responsible parties for implementing the mitigation measures.

- **Section 1: Introduction.** This section provides an introduction and overview describing the purpose of this Draft EIR, its scope and components, and the public review process.

- **Section 2: Project Description.** This section includes a detailed description of the project, including its location, site, and project characteristics. A discussion of the project objectives, intended uses of the Draft EIR, responsible agencies, and approvals that are needed for the proposed project is also included.

- **Section 3: Environmental Impact Analysis.** This section analyzes the environmental impacts of the project. Impacts are organized into major topic areas. Each topic area includes a description of the environmental setting, methodology, significance criteria, impacts, mitigation measures, and significance after mitigation. The specific environmental topics that are addressed within Section 3 are as follows:
  - **Section 3.1 - Aesthetics:** Addresses the potential visual impacts of development and the overall increase in illumination produced by the project.
  - **Section 3.2 - Air Quality:** Addresses the potential air quality impacts associated with project construction and operation, as well as consistency with the Bay Area Air Quality Management District 2005 Ozone Strategy.
  - **Section 3.3 - Biological Resources:** Addresses the project’s potential impacts on habitat, vegetation, and wildlife; the potential degradation or elimination of important habitat; and impacts on listed, proposed, and candidate threatened and endangered species.
  - **Section 3.4 - Cultural Resources:** Addresses the project’s potential impacts on cultural resources, including any impacts on known or potential historical, archeological, and paleontological resources.
  - **Section 3.5 - Geology and Soils:** Addresses the potential project impacts related to geology, soil, and seismicity.
  - **Section 3.6 - Land Use:** Addresses the land use impacts associated with implementation of the project, including consistency with regional plans.
- Section 3.7 - Transportation: Addresses the impacts on the local and regional roadway system, public transportation, bicycle, and pedestrian access.

- Section 4: Effects Found Not To Be Significant. This section contains analysis of the topical sections not addressed in Section 3.

- Section 5: Cumulative Effects. This section analyzes the project’s environmental impacts in combination with the impacts of other past, present, and probable future projects.

- Section 6: Other CEQA Required Sections. This section provides a summary of significant environmental impacts, including unavoidable and growth-inducing impacts, and the project’s energy demand.

- Section 7: Alternatives to the Proposed Project. This section compares the impacts of the project with three land-use project alternatives: the No Project Alternative, and the Increased Density Alternative. Of these alternatives, an environmentally superior alternative is identified. In addition, alternatives considered but rejected from further consideration are identified.

- Section 8: Organizations and Persons Consulted. This section contains a list of persons and organizations that were consulted during the preparation of this Draft EIR, by affiliation and name.

- Section 9: List of Preparers. The agency, consultant, and subconsultants that participated in this Draft EIR’s creation are provided in this section.

- Section 10: References. This section contains a list of references that were used in the preparation of this Draft EIR.

- Appendices: This section includes notices and other procedural documents pertinent to the Draft EIR, as well as technical material prepared to support the analysis. The Appendix titles are shown below; their technical report contents are listed below in Section 1.5.
  - Appendix A: Notice of Preparation (NOP), NOP Comment Letters, and Scoping Meeting Transcript
  - Appendix B: Biological Resources
  - Appendix C: Cultural Resources
  - Appendix D: Geology
  - Appendix E: Health Risk Assessment
  - Appendix F: Phase I Environmental Site Assessment (ESA)
  - Appendix G: Noise
  - Appendix H: Transportation and Traffic

1.4 - Documents Incorporated by Reference

As permitted by CEQA Guidelines Section 15150, this Draft EIR has referenced several technical studies, analyses, and previously certified environmental documentation. Information from the documents, which have been incorporated by reference, has been briefly summarized in the appropriate section(s) and the relationship between the incorporated part of the referenced
document and the Draft EIR has been described. The documents and other sources that have been used in the preparation of this Draft EIR include but are not limited to:

- City of Richmond General Plan (2030)
- Richmond Municipal Code (2013 [Updated])
- County of Contra Costa General Plan (2007)

These documents are specifically identified in Section 10, References, of this Draft EIR. In accordance with CEQA Guidelines Section 15150(b), the General Plan, Municipal Code, and the referenced documents and other sources used in the preparation of the Draft EIR are available for review at the City of Richmond offices at the address provided in Section 1.6 below.

### 1.5 - Documents Prepared for the Project

The following technical studies and analyses were prepared for the proposed project:

- Seacliff Site, Point Richmond, California: Biological Resources Due-Diligence Review, prepared by Moore Biological Associates. (Appendix B).
- Geotechnical Exploration, prepared by ENGEO Incorporated (Appendix D).
- Seacliff Site, Point Richmond, California: Health Risk and Hazards Assessment Report, prepared by FirstCarbon Solutions (Appendix E).
- Phase I Environmental Site Assessment, prepared by Innovative and Creative Environmental Solutions (ICES) (Appendix).
- Noise Output Model, prepared by FirstCarbon Solutions. (Appendix G).
- Point Richmond Traffic Impact Assessment, prepared by Fehr & Peers (Appendix H).

### 1.6 - Review of the Draft EIR

Upon completion of the Draft EIR, the City of Richmond filed a Notice of Completion (NOC) with the State Office of Planning and Research to begin the public review period (Public Resources Code, Section 21161). Concurrent with the NOC, this Draft EIR has been distributed to responsible and trustee agencies, other affected agencies, surrounding cities, and interested parties, as well as all parties requesting a copy of the Draft EIR in accordance with Public Resources Code 21092(b)(3).
During the 45-day public review period, the Draft EIR and technical appendices are available for review at the City of Richmond Planning and Building Department office and the Richmond Public Library. The address for each location is provided below:

**City of Richmond**
Planning and Building Department
450 Civic Center Plaza, 2nd Floor
Richmond, CA 94804
Hours:
Monday - Friday: 8 a.m. to 5 p.m.

**Richmond Public Library**
135 Washington Avenue
Richmond, CA 94801
Hours:
Monday: 1:30 pm - 7:00 pm
Tuesday: 10:30 am - 5:00 pm
Wednesday: 1:00 pm - 5:00 pm
Thursday: 1:00 pm - 5:00 pm
Friday, Saturday, Sunday: Closed

Agencies, organizations, and interested parties have the opportunity to comment on the Draft EIR during the public review period. Written comments on this Draft EIR should be addressed to:

Kieron Slaughter, Associate Planner
City of Richmond
Community Development Department
450 Civic Center Plaza, 2nd Floor
Richmond, CA 94804
Phone: 510.620.6887
Fax: 510.620.6858
Email: kieron_slaughter@ci.richmond.ca.us

Submittal of electronic comments in Microsoft Word or Adobe PDF is encouraged. Upon completion of the public review period, written responses to all significant environmental issues raised will be prepared. Responses will be made available for review by the commenting agencies at least 10 days prior to the public hearing for the project before the City of Richmond. Comments received and the responses to comments will be included in the Final EIR as part of the record for consideration by decision makers for the project.

The Final EIR will be prepared by the City acting as lead agency pursuant to the California Environmental Quality Act (CEQA) and will include the Notice of Preparation, Notice of Availability, Notice of Completion, the Draft EIR (circulated from March 27, 2014 through May 12, 2014), technical studies attached as appendices to the Draft EIR, comment letters (provided during the 45-day public review period), the Responses to Comments and textual revisions to the Draft EIR, and the Mitigation Monitoring and Reporting Program.
SECTION 2: PROJECT DESCRIPTION

This Draft EIR analyzes the potential environmental effects of the proposed Bottoms Property Residential Project in Richmond, California.

2.1 - Project Location

The project site is located in the City of Richmond, Contra Costa County, California. Specifically, the project site is located within the United States Geologic Survey 7.5-minute topographic quadrangle map, Range 5 West, Township 1 North, Section 25 (Latitude 37° 54’ 32” North; Longitude 122° 22’ 26” West).

The project site consists of five parcels totaling 25.27 acres. The site extends into San Francisco Bay, with approximately 14.26 acres located under water. The landward portion of the site includes approximately 11 acres. Project Assessor Parcel Numbers (APNs) and acres include 560-320-013 (17.5 acres), 560-320-014 (4.71 acres), 560-340-042 (1.85 acres), 560-340-033 (9.55 acres), and 560-660-073 (2.01 acres) (Exhibit 2-1, Exhibit 2-2, and Exhibit 2-3).

2.2 - Existing Conditions

The project site contains undeveloped, disturbed land previously used for marine industrial uses. A large pile of rocks is located at the eastern portion of the site, and an abandoned pump formerly used by the City of Richmond sanitary sewer district is located in the northeastern portion of the site. The pump will be removed from the site prior to grading, while the rocks will be incorporated into the project’s design.

The site is generally flat, with a small depression in the center of the site and a bluff in the northern portion of the site where the grade rises sharply to the homes along Seacliff Place. An unpaved road extends from a gated access point on Seacliff Drive along the shoreline of San Francisco Bay. The site contains several areas that are considered undevelopable, such as the acreage located under San Francisco Bay, as well as a portion of Seacliff Drive; a buffer along the Port property to the east; and a setback from the Bay shoreline.

Surface elevations of the project site range from sea level at the bay edge, to 10 to 14 feet above mean sea level (MSL) in the mid-section of the site, to approximately 60 feet above MSL at the top of the bluff at the northern edge of the property. The shoreline of the project site consists of riprap- armored slopes that incline at 2:1 (horizontal:vertical) or steeper. No open creek or stream channels cross the site.

The project site does not contain any trees. Vegetation is limited to ruderal grass, weed species (e.g., oats (Avena sp.), soft chess brome (Bromus hordeaceus), ripgut brome (Bromus diandrus), and Mediterranean barley (Hordeum marinum), and plant species such as mustard (Brassica sp.), wild radish (Raphanus sativus), gumplant (Grindelia camporum), English plantain (Plantago lanceolata), filaree (Erodium spp.), fennel (Foeniculum vulgare), common mallow (Malva neglecta), coyote bush (Baccharis pilularis) and Scotch broom (Cytisus scoparius).
The property has been subject to remediation, and all remediation has been completed to the satisfaction of the Department of Toxic Substances Control (DTSC), which issued a No Further Action letter in 2002 (see 2011 Phase I Environmental Site Assessment, Appendix F). The DTSC placed a Covenant to Restrict Use of Property on two parcels consisting of a total of 3.78 acres: APN 560-340-042 (1.93 acres) and APN 560-660-073 (1.85 acres). No residential uses are proposed within the restricted areas, which are generally located within the Bay Trail easement and within the right-of-way of Seacliff Drive (see Exhibit 2-4a, Site Plan and Exhibit 2-4b, Preliminary Utility Plan).

### 2.2.1 - Surrounding Land Uses

**West**

Seacliff Drive and a portion of the San Francisco Bay bound the project site to the west. The Brickyard Cove residential neighborhood is located west of Seacliff Drive. The Class I Ferry Point multi-use trail runs along the landward side of Seacliff Drive.

**North**

The northern boundary of the project site includes the Seacliff Estates single-family residential neighborhood.

**East**

The project site is bounded by Canal Boulevard and the Port of Richmond Shipyard No.3 to the East.

**South**

The San Francisco Bay bounds the southern portion of the project site.

### 2.2.2 - Land Use Designations and Zoning

The City of Richmond 2030 General Plan designates the project site for Medium Density Residential (10 to 40 dwelling units per acre). The site includes four zoning districts, including Planned Area (PA), Coastline Commercial (CC), Community Regional Recreation (CCR), and Marine Industrial (M4).

Exhibit 2-5 depicts the zoning districts and Exhibit 2-6 depicts the General Plan land use designations of the project site and adjacent land.
Exhibit 2-1
Regional Location Map

Exhibit 2-2
Local Vicinity Map - Overview

Source: ESRI Aerial Imagery.
Exhibit 2-3
Local Vicinity Map - Detail

Source: ESRI Aerial Imagery.
Exhibit 2-6
Land Use Map

Source: City of Richmond
2.3 - Project Characteristics

Exhibit 2-4a depicts the project’s site plan and building locations. The project proposes to develop 60 units of market-rate condominiums. Nine buildings would be developed as part of the project, providing a total of 134 bedrooms (Table 2-1).

Table 2-1: Project Characteristics

<table>
<thead>
<tr>
<th>Building</th>
<th>Total Number of Buildings</th>
<th>Number of Condominiums per Building</th>
<th>Total Condominiums</th>
<th>Beds per Unit</th>
<th>Total Bedrooms</th>
</tr>
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<tbody>
<tr>
<td>1, 2, 4, 5</td>
<td>4</td>
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<td>2</td>
<td>10</td>
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<td>2</td>
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<tr>
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<td>9</td>
<td>—</td>
<td>60</td>
<td></td>
<td>134</td>
</tr>
</tbody>
</table>

Source: Shea Homes, 2013.

As shown on Exhibit 2-4a, a portion of the site is already zoned PA District, and the project includes a request to re-zone the entirety of the site to the PA District. The City of Richmond General Plan states the purpose of this district is to promote development of large areas in substantial compliance with the principles and standards of the Richmond General Plan. This includes permitting appropriate variety and diversity in the composition and relationship of land uses, building types, structures, lot sizes, and open spaces. The specific purposes of the PA district are to:

A. Establish a procedure for the development of large parcels of land (2 acres or more) in order to reduce or eliminate the rigidity, delays and conflicts that otherwise may result from application of zoning standards and procedures designed primarily for small parcels;

B. Ensure orderly and thorough planning review procedures that will result in quality urban design;

C. Establish a review procedure for large residential developments including condominium developments;

D. Provide the allocation and improvement of common open space in residential areas, and provide the mechanisms for the maintenance of open space by those who will most directly benefit from it;

E. Permit the development of commercial and industrial developments in appropriate locations to obtain a coherent design, increased public amenities, and protection and buffering for adjacent land uses;

F. Establish review procedures for any project utilizing atypical design concepts, and/or not conforming to the standards of the base zoning district;
G. To facilitate implementation of the City’s affordable housing policies.

Minimum lot areas, setbacks, building height limits, other development standards and similar regulations of the base zoning districts may be modified as a part of an approved PA district.

**Project Density**

The Medium Density Residential land use designation under the General Plan permits a density of 10 to 40 dwelling units per acre (du/ac).

The project site in total is 25.27 acres, indicating that development of 60 units would yield a density of 2.37 du/ac, which is well below the density range identified for the medium density residential land use classification. However, because a large portion of the site is located under San Francisco Bay or is otherwise restricted from development, project density is calculated based on the developable “net” acreage (6.18 acres). The resulting density is 9.72 units per net acre, which is rounded up to 10 units per net acre for the purpose of analysis. Exhibit 2-7a and 2-7b show the site section direction and the site section for the project; and Exhibit 2-8a and 2-8b depict typical elevations for the 2- and 4-story buildings.

**Project Height**

Building height limits that apply within base zoning districts may be modified as part of an approved PA district (City of Richmond Municipal Code Section 15.04.610.020(D)). Accordingly, although the Medium Density Residential land use designation would typically impose a building height limit of 35 feet, the proposed PA district proposed under the project includes a height limit of 50 feet. As discussed below, the project includes structures ranging from 23.8 to 46.3 feet in height, which is within the 50-foot parameters of the proposed PA zone.

Nine buildings would be developed as part of the project. Buildings 1 through 5, located along the Bay shoreline, would be two stories in height (approximately 23.8 feet). Buildings 6 through 9, located behind Buildings 1 through 5, would be four stories in height (approximately 46.3 feet).

In order to ensure consistency with the City of Richmond General Plan, the project applicant is also proposing a General Plan Amendment (GPA) as part of the project entitlements. The proposed GPA would modify General Plan Table 3.1, by adding text which would provide that “Building height in a Medium-Density Residential land use classification may exceed 35 feet as part of an approved Planned Area (PA) district.”

**Project Access and Parking**

Access would be provided via a private entrance road from Seacliff Drive. A secondary entrance to the project would be provided from Canal Boulevard, near the northeast corner of the project site. A total of 280 parking spaces would be provided in accordance with the City’s parking requirements, of which 128 are garage parking, 120 are driveway parking, and 32 are guest parking spaces. Development of the proposed project would be completed in one phase, with an anticipated completion date of 2016.
Landscaping and Trail Improvements

In addition to project landscaping, the project would provide enhancements to the new section of the Bay Trail, which was recently completed by the City and the Trails for Richmond Action Committee (TRAC). The trail, which is located along the shoreline in a 22-foot-wide easement through the property, connects non-contiguous portions of the San Francisco Bay Trail between Canal Boulevard and Seacliff Drive, as contemplated by the City of Richmond’s 2030 General Plan. The trail will include several design features that promote ease of access and user safety, some installed by TRAC and some installed by the project. TRAC will install way finding signs and orientation exhibits, while the project would provide a wider sidewalk between the project entrance and the crosswalk on Seacliff Drive near the intersection of Brickyard Cove Road for safer multi-use access, public access parking on the adjoining Port of Richmond property, shoreline access, and benches along the portion of the Trail through the property. The Bay Trail and easement will be within an approximately 100-foot-wide landscaped buffer area between the residential buildings and the shoreline top of bank.

Table 2-2 summarizes the project components and characteristics.

<table>
<thead>
<tr>
<th>Project Component</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dwelling Units</td>
<td>There are 60 condominiums ranging from 2,094 to 3,118 square feet.</td>
</tr>
<tr>
<td>Roadways</td>
<td>One private loop roadway connecting to Seacliff Drive and Canal Boulevard, four roads that stem off of the main loop connection; secondary roadway access to Canal Boulevard.</td>
</tr>
<tr>
<td>Parking</td>
<td>There are 280 parking spaces, consisting of 128 garage, 120 driveway, and 32 guest spaces.</td>
</tr>
<tr>
<td>Storm Drainage</td>
<td>Two 12-inch storm drain lines would convey flows to a 24-inch diameter storm drain line that would connect to the existing 24-inch diameter municipal storm drain line within Seacliff Drive.</td>
</tr>
<tr>
<td>Potable Water</td>
<td>An 8-inch-diameter potable water line connects to an existing 8-inch-diameter East Bay Municipal Utility District potable water line within Seacliff Drive.</td>
</tr>
<tr>
<td>Sewer</td>
<td>There are 8-inch-diameter gravity sewer lines that convey flows to an existing East Bay Municipal Utility District pump station in Seacliff Drive (see Exhibit 2-4b for the project’s preliminary utility plan).</td>
</tr>
<tr>
<td>San Francisco Bay Trail</td>
<td>There is a 22-foot-wide trail easement segment between Seacliff Drive and Canal Boulevard along bay frontage within a 100-foot wide landscaped bay shore buffer.</td>
</tr>
</tbody>
</table>

Source: FCS, 2013.

2.4 - Project Objectives and Approvals

The objectives of the proposed project are to:
1. Provide a high-quality for-sale residential development project that offers a common green space amenity for residents.

2. Facilitate the logical and orderly transition of a vacant parcel to residential uses that maximize the satisfaction of market demand.

3. Develop condominium residences at a density that complies with the General Plan land use designation of Medium-Density Residential (10 to 40 dwelling units per acre).

4. Enhance construction of the Bay Trail along the project frontage by providing landscaping, benches, and access for trail users and residents.

5. Maximize economic growth through new capital investment, an expanded population base, and payment of development fees.

6. Maximize new residential opportunities to accommodate forecasted population growth within the City of Richmond and to meet Richmond’s share of regional housing needs.

7. Provide compact development patterns, contemporary building and landscaping practices, as provided in the General Plan Land Use Element, page 3.3.

8. Provide development consistent with the General Plan vision for Brickyard Cove, which states: “Brickyard Cove is designated as Medium-Density Residential to provide a transition from port-related uses to the adjoining residential neighborhood along Seacliff Drive” (page 3.39).

2.5 - Intended Uses of This Draft EIR

This Draft EIR is being prepared by the City of Richmond to assess the potential environmental impacts that may arise in connection with actions related to implementation of the project, including necessary utility connections and onsite improvements such as streets and sidewalks to serve the residential development. Pursuant to CEQA Guidelines Section 15367, the City of Richmond is the lead agency for the project and has discretionary authority over the project and project approvals.

2.5.1 - Discretionary and Ministerial Actions

The project applicant is requesting approval of a Vesting Tentative Map to subdivide the property into multiple parcels and condominium units. The project would require the following discretionary approvals:

- General Plan Amendment
- Rezoning to Planned Area (PA) District
- Site Plan Review
- Design Review
- Vesting Tentative Map
- Bay Conservation and Development Commission Permit
- Encroachment Permit
In addition, the project would require ministerial approvals, including issuance of grading and building permits.

2.5.2 - Regulatory Authority

A number of other agencies in addition to the City of Richmond will serve as Responsible and Trustee Agencies, pursuant to CEQA Guidelines Section 15381 and Section 15386, respectively. This Draft EIR will provide environmental information to these and other public agencies, which may be required to grant approvals or facilitate coordination with other agencies, as part of project implementation. These agencies may include but are not limited to the following:

- California Department of Fish and Wildlife (CDFW)
- U.S. Fish and Wildlife Service (USFWS)
- Bay Area Water Quality Control Board (BAWQCB)
- Bay Area Air Quality Management District (BAAQMD)
- Contra Costa County Flood Control District (CCCFCD)
- Association of Bay Area Governments (ABAG)
- Bay Conservation and Development Commission (BCDC)
SECTION 3: ENVIRONMENTAL IMPACT ANALYSIS

Approach to Environmental Analysis

Section 3.1 through Section 3.7 of this Draft EIR contain discussions of the potential environmental impacts related to planning, construction, and operation of the proposed project.

Environmental Topics

The following environmental issues are addressed in Section 3:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Land Use
- Transportation

Organization of Issue Areas

This Draft Environmental Impact Report (Draft EIR) provides analysis of impacts for those environmental topics where it was determined in the Notice of Preparation, or through subsequent analysis that the project would result in “potentially significant impacts.” Sections 3.1 through 3.7 discuss the environmental impacts that may result with approval and implementation of the project.

Each environmental issue area in Sections 3.1 through 3.7 contains the following components:

- **Environmental Setting** identifies and describes the existing onsite physical environmental conditions associated with each of the impact sections.

- **Regulatory Setting** provides an understanding of the regulatory environment associated with the project.

- **Thresholds of Significance** identifies thresholds from Appendix G of the CEQA Guidelines that assist in a determination of the significance of an impact. Unless specifically identified within each environmental issue section of this document, the thresholds of significance used are those contained in Appendix G of the CEQA Guidelines.

- **Project Impacts** describes environmental changes to the existing physical conditions that may occur if the project is implemented, and evaluates these changes with respect to the thresholds of significance.

- **Mitigation Measures** are those specific measures that may be required of the project by the Lead Agency in order to: (1) avoid an impact; (2) minimize an impact; (3) rectify an impact by
restoration; (4) reduce or eliminate an impact over time by preservation and maintenance operations; or (5) compensate for the impact by replacing or providing substitute resources.

- **Level of Significance After Mitigation** describes the level of impact significance remaining after mitigation measures are implemented.

### Level of Significance

Determining the severity of project impacts is fundamental to achieving the objectives of CEQA. CEQA Guidelines Section 15091 requires that decision makers mitigate, as completely as is feasible, the significant impacts identified in the Final EIR. If the EIR identifies any significant unmitigated impacts, CEQA Guidelines Section 15093 requires decision makers in approving a project to adopt a statement of overriding considerations that explains why the benefits of the project outweigh the adverse environmental consequences identified in the EIR.

The level of significance for each impact examined in this Draft EIR was determined by considering the predicted magnitude of the impact against the applicable threshold. Thresholds were developed using criteria from the CEQA Guidelines and checklist; state, federal, and local regulatory schemes; local/regional plans and ordinances; accepted practice; consultation with recognized experts; and other professional opinions.

### Format Used for Impact Analysis and Mitigation Measures

The format adopted in this Draft EIR to present the evaluation of impacts is described and illustrated below.

**Summary Heading of Impact**

**Impact AIR-1:** An impact summary heading appears immediately preceding the impact description (Summary Heading of Impact in this example). The impact abbreviation identifies the section of the report (AIR for Air Quality in this example) and the sequential order of the impact (1 in this example) within that section. To the right of the impact number is the impact statement, which identifies the potential impact.

**Impact Analysis**

A narrative analysis follows the impact statement. In some cases, following the impact discussion, reference is made to state and federal regulations and agency policies that would fully or partially mitigate the impact. In addition, policies and programs from applicable local land use plans that partially or fully mitigate the impact may be cited.

**Significance Before Mitigation**

This section identifies the level of significance of the impact before any mitigation is proposed.
**Mitigation Measures**

Project-specific mitigation measures, beyond those contained in other documents, are set off with a summary heading and described using the format presented below:

**MM AIR-1a**  
Project-specific mitigation is identified that would reduce the impact to the lowest degree feasible. The mitigation number links the particular mitigation to the impact with which it is associated (AIR-1 in this example); the letter identifies the sequential order of that mitigation for that impact (a in this example).

**Significance After Mitigation**

This section identifies the resulting level of significance of the impact following mitigation.

Abbreviations used in the mitigation measure numbering are shown in:

**Table 3-1: Environmental Issue Abbreviations**

<table>
<thead>
<tr>
<th>Code</th>
<th>Environmental Issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>AES</td>
<td>Aesthetics</td>
</tr>
<tr>
<td>AIR</td>
<td>Air Quality</td>
</tr>
<tr>
<td>BIO</td>
<td>Biological Resources</td>
</tr>
<tr>
<td>CR</td>
<td>Cultural Resources</td>
</tr>
<tr>
<td>GEO</td>
<td>Geology, Soils, and Seismicity</td>
</tr>
<tr>
<td>LUP</td>
<td>Land Use and Planning</td>
</tr>
<tr>
<td>TRANS</td>
<td>Transportation/Traffic</td>
</tr>
</tbody>
</table>
3.1 - Aesthetics

This section describes the existing aesthetics, light, and glare setting and potential effects from project implementation on visual resources and the site and its surroundings. Descriptions and analysis in this section are based on site reconnaissance by FirstCarbon Solutions, as well as review of the City of Richmond General Plan and the Richmond Municipal Code.

The project design reflects extensive community input gained from over 20 meetings with more than 200 people, including surrounding neighbors and members of the various homeowners associations for Seacliff Estates, Brickyard Cove, Brickyard Landing and Sandpiper Spit, members of TRAC, the Richmond Yacht Club, Bay Conservation and Development Commission (BCDC), and City staff and Council Members. On July 25, 2012, the Point Richmond Neighborhood Council voted 12 to 4 to support the general concept of the proposed development. The project design attempts to minimize impacts upon existing private views and attempts to create a project with staggered and interesting height variations. The project has been reduced in size (from 74 units to the 60 units) since the time that initial community input was sought in 2012.

3.1.1 - Existing Conditions

City of Richmond

The City of Richmond provides an urban context within a coastal and mountainous backdrop that typifies many cities in the San Francisco Bay Area. Richmond is oriented along the eastern edge of the San Francisco/San Pablo Bay and to the west of the Sobrante Ridge, a portion of the San Pablo/Potrero Hills Range within Contra Costa County. The City is relatively flat and low-lying, with gradual elevation increases occurring towards the eastern portions of the City. Richmond is a predominately built-out environment, with the majority of natural open space areas limited to the City edges. The City’s proximity to the Bay, combined with the gradual topographic changes from the coastal edge to the mountain ranges, provide a wide range of natural hillside and bay views from various areas. Long-range views within the City are generally expansive because of the flat terrain throughout the City. However, due to the flat terrain, existing mature trees and buildings often block views (City of Richmond General Plan Draft EIR 2012).

Scenic Vistas

The project site is located along the San Francisco Bay. Portions of Seacliff Drive and the residences at Seacliff Estates have framed views of the bay, as well as the San Francisco skyline and Marin County hillsides. Please refer to Exhibit 3.1-1, Visual Simulation A; Exhibit 3.1-2, Visual Simulation B, and Exhibit 3.1-3, Visual Simulation C for a complete description of visual simulations of existing views and views with the project. According to the City of Richmond General Plan EIR, various points throughout the City of Richmond have views of the shoreline or the hillside that would constitute a locally recognized scenic vista or corridor. Seacliff Drive is included among the scenic corridors listed in the City of Richmond General Plan EIR.

As detailed in the General Plan Draft EIR, the Richmond Municipal Code provides development standards that guide the City in its development practices and protects views. The municipal code
guidelines aim to create standards that allow for the development of new and innovative structures that maintain established natural and man-made views that help define the City of Richmond.

**Existing Visual Quality of the Project Site**

The site is generally flat and consists of highly disturbed land from which most natural vegetation has been removed by grading, paving, filling, compaction, and remediation activities or other past land uses. There is a diversity of visual features in the vicinity of the project site, including unobstructed views of San Francisco Bay. The following is a brief discussion of the visual character of the areas surrounding the project site.

- **North.** Directly to the north of the project site is the Seacliff Estates residential development. Seacliff Estates includes 149 two- and three-story townhomes. The Brickyard Landing residential development is located further to the north of Seacliff Estates and includes 240 condominium units. These developments abut the eastern upland portion of the Miller-Knox Regional Shoreline Park. This area of the Park is characterized by a steep bluff with walking trails along the ridge providing expansive vistas of San Francisco Bay.

- **Northwest.** The Brickyard Cove Marina and associated single-family homes along Sandpiper Spit are located northwest of the project site. Brickyard Cove Marina contains private docks and wet berths. The Richmond Yacht Club is located to the west of the Marina and contains a boat ramp, wet berths, lockers, and trailer spaces.

- **East.** The Port of Richmond Shipyard No. 3 is located to the east of the project site. The eastern two-thirds of the project site were formerly used for shipping-related uses as part of Shipyard No. 3.

- **South and West.** Directly west and south of the project site is the Harbor Channel of San Francisco Bay with views of the East Bay waterfront, San Francisco and Angel Island.

**Views from the Project Site**

The project site enjoys open views in almost all directions. Views to the north are of the Seacliff Estates residential development. Views to the west are of homes along Sandpiper Spit and the Brickyard Cove Marina. Views to the east are of the Port of Richmond Shipyard No. 3, the auto storage facility, and several large storage tanks operated by Chevron. Views to the west and south extend across San Francisco Bay to the City of San Francisco.

**State Scenic Highways**

The nearest freeway to the project site is Interstate 580 (I-580). The California Scenic Highway Mapping System does not classify the segment of the I-580 as an Officially Designated State Scenic Highway, nor is it considered an Eligible State Scenic Highway.

Exhibit 3.1-2
Visual Simulation B
Existing View from Canal Boulevard looking northwest

Visual Simulation of Proposed Project


Exhibit 3.1-3
Visual Simulation C
**Light and Glare**

The project site consists of disturbed vacant land, and does not currently contain any sources of light or glare. Surrounding areas also include numerous sources of light, especially the Port of Richmond Shipyard, which includes tall pole-mounted security lights in the auto storage facility.

### 3.1.2 - Regulatory Setting

**State Regulations**

**California State Scenic Highway Program**

The California Scenic Highway Program, maintained by the California Department of Transportation (Caltrans), was created by the State Legislature in 1963. The purpose of the State Scenic Highway Program is to protect and enhance the natural scenic beauty of California highways and adjacent corridors, through special conservation treatment. The State laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260 through 263. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler’s enjoyment of the view. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been officially designated. The status of a proposed state scenic highway changes from eligible to officially designated when the local governing body applies to Caltrans for scenic highway approval, adopts a Corridor Protection Program, and receives notification that the highway has been officially designated a Scenic Highway. This has not occurred for I-580.

**Local Regulations**

**Richmond General Plan 2030**

*Conservation, Natural Resources and Open Space - Hillsides and Scenic Resources*

Surrounding hills and the San Francisco and San Pablo Bays are prominent scenic areas in Richmond. The hills and bays are integral to the community’s image and identity, providing beautiful scenic backdrops, environmental sanctuaries, and recreational resources. The City is bounded by the Berkeley Hills, San Pablo Ridge, Sobrante Ridge, and Point Richmond. These hills sustain a rich environment for native plant and wildlife species and create continuous wildlife corridors. The hill areas provide for water infiltration and vegetation, which helps moderate the urban heat island effect. In addition, local foothills provide publicly accessible trails and vistas for enjoying nature, viewing the bays, nearby bridges and surrounding cities. Richmond actively protects its hills, ridges, and associated natural features through a Hillside Ordinance.

- **GoalCN2: Conserved Open Space:** Conserve open space to ensure that Richmond’s expansive shoreline, network of parklands, trails, hillsides, and undeveloped natural areas remain viable in supporting biological communities and providing sanctuary for future generations. Conserve open space, expand public access to open space, where appropriate, and acquire additional lands where feasible. Continue to protect surrounding hills and viewsheds as character-defining features that provide scenic backdrops, as well as publicly accessible trails and vistas.
- **Policy CN2.2: Richmond Shoreline**: Minimize the impacts of development on the shoreline with special attention to intensity, density, and proximity to the water. Conserve, protect, and enhance natural and cultural resources along the Richmond shoreline. Promote a balance of uses along the shoreline that supports multiple community needs such as economic development, recreation, historic preservation, and natural resource protection.
  - Provide a mix of residential and recreation uses in the Southern Gateway change area; support an active industrial waterfront around the Port and along the Santa Fe Channel; and promote a cultural heritage shoreline west of the Port.
  - Protect and restore wetlands, native habitats and open space; develop shoreline parks and trails to increase public access; encourage recreation and tourism activities; and enhance and showcase historic and cultural resources. Prepare, adopt, and implement plans that will protect natural and built environments from adverse potential impacts of sea level rise due to climate change.

- **Policy CN2.3: Natural Topography and Hillside Protection.** Protect natural topography to preserve and enhance Richmond’s natural beauty and require developers to concentrate residential development before the 400-foot elevation. The natural characteristics of the Berkeley Hills, San Pablo Ridge, El Sobrante Ridge, Point Potrero and San Pablo Peninsula should be protected and enhanced by regulating allowable methods of site preparation, grading, soils repair, foundation design and topographic alteration, as well as the height, color, material and siting of structures and roadways, quantities of cut and fill, placement of utility crossings and removal of vegetation.

  - **Action CN2.E: Hillside Physical Constraint Area Ordinance.** Continue to implement the Hillside Physical Constraint Area Ordinance (“Hillside Ordinance”), which prohibits large-scale redistribution of earth and alteration of topographic conditions on sloping sites.
  - **Action CN2.F: Community Access and Mobility.** Provide bicycle and pedestrian-friendly routes including completion of major trails and pathways like the San Francisco Bay Trail and Richmond Greenway.

- **Land Use and Urban Design: Port Priority Use Area (CA-14):** This change area is defined by port and water-related uses. This change area is anticipated to remain a major hub for port and related industrial uses. New improvements should focus on strengthening the overall economic viability of the Port of Richmond. Specific land uses for this change area are described below.
  - The large parcel east of Miller/Knox Regional Shoreline and the area between Interstate 580 and railroad tracks is designated as Industrial to support adjacent port and industrial uses.
  - The Port Priority Use Area is designated as Port to recognize and reflect the Port’s continuing role as a major hub of port and related industrial uses.
  - Brickyard Cove is designated as Medium-Density Residential to provide a transition from port-related use to the adjoining residential neighborhood along Sea Cliff Drive.
  - Eventually, the large petroleum storage tanks located at the top of Seacliff drive should be moved to a less visually intrusive and more secure location.
City of Richmond Zoning Ordinance

Hillside Ordinance

Hillside Physical Constraint Area: The following additional regulations apply to the area identified on map entitled “Hillside Physical Constraint Area” on file at the Richmond Planning Department (please note, the project site is not identified on the map as a Hillside Physical Constraint Area). The purpose of these regulations is to preserve the hills and ridges, and their natural features, and to maintain a harmonious visual and functional relationship between the existing natural environment and future development. Therefore, it is the intent of the City to place more restrictive development regulations on hillside areas of fifteen percent or greater slope in order to:

a. Minimize grading and cut and fill operations consistent with retaining the natural character of the hill areas;
b. Preserve significant features of a sloping and elevated hill area in an essentially natural state;
c. Facilitate protection of existing views from vantage points within public open spaces, rights-of-way, public parks, and private development from encroachment upon by new development;
d. Minimize the water runoff and soil erosion problems incurred in adjusting to the terrain to meet on-site and off-site development needs;
e. Achieve land use densities that are in keeping with the General Plan. However, in order to retain the significant natural features of the hill areas, densities will diminish as the slope of the terrain increases;
f. Protect the general public from geologic and hydrologic hazards including damage to property from landslides, erosion, earth creep, and storm water runoff, wildland fires, and other hazards in and near hillside areas;
g. To preserve and enhance the hillside areas and natural resources as identified in the Richmond General Plan;
h. To implement the policies of this Richmond General Plan.

Although the project site is not located within a Hillside Physical Constraint Area, it will voluntarily implement the above standards, which are encouraged by the City as best practices for all development.

Lighting and Glare

Section 14.04.840 of the Richmond Zoning Ordinance sets forth the following performance standards:

- **Section 15.04.840.040 Lighting and glare:** This provision requires that lighting, reflective surfaces and other sources of illumination are designed to prevent glare on the public street or adjacent parcels. Lights shall be shielded at lot lines so as not to be directly visible from an adjoining residential district.
• **Section 15.04.840.070 Design standards:** This provision requires compliance with Design Review permit site development and review procedures, with emphasis placed on project design, site planning, building elevations, and neighborhood compatibility.

Building Height
The Richmond General Plan’s description of the Medium-Density Residential land use designation includes one- to three-story apartment buildings as one example of housing types within this designation (see Richmond General Plan at p. 3-13, Table 3.1). The project will include three-story and four-story buildings, which are consistent with the PA district, the purpose of which is to “... promote development of large areas in substantial compliance with the principles and standards of the Richmond general plan. This includes permitting appropriate variety and diversity in the composition and relationship of land uses, building types, structures, lot sizes and open spaces” (City of Richmond Municipal Code Section 15.04.610.010).

Likewise, building height limits that apply within base zoning districts may be modified as part of an approved PA district (City of Richmond Municipal Code Section 15.04.610.020(D)). Accordingly, although the Medium Density Residential land use designation would typically impose a building height limit of 35 feet, the proposed PA district includes a building height limit of 50 feet. The project includes structures ranging from 23.8 to 46.3 feet in height, which is within the 50-foot parameter of the proposed PA zone. Nine buildings would be developed as part of the project. Buildings 1 through 5, located along the Bay shoreline, would be two stories in height (approximately 23.8 feet). Buildings 6 through 9, located behind Buildings 1 through 5, would be four stories in height (approximately 46.3 feet).

In order to ensure consistency with the City of Richmond General Plan, the project applicant is also proposing a General Plan Amendment (GPA) as part of the project entitlements. The proposed GPA would modify General Plan Table 3.1, by adding text that would provide that building height in a Medium-Density Residential land use classification may exceed 35 feet as part of an approved Planned Area (PA) district.

**3.1.3 - Thresholds of Significance**
According to the CEQA Guidelines’ Appendix G Environmental Checklist, to determine whether impacts to aesthetics are significant environmental effects, the following questions are analyzed and evaluated. 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 building within a state scenic highway?

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?
3.1.4 - Project Impact Analysis and Mitigation Measures

During the 30-day Notice of Preparation comment period, sixteen (16) comment letters were provided regarding aesthetics (specifically concerns with regard to building height and views), which are included within Appendix A of this Draft EIR. All comment letters were taken into account when preparing this section. Generally, while a project’s interference with public scenic views from public vantage points would be considered an adverse aesthetic effect on the environment, the obstruction of individual landowners’ views from private property is not considered a significant environmental impact under CEQA. The purpose of CEQA is to evaluate the impacts of a project on the environment in general, not the impacts of a project on particular individuals.

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Methodology for Analysis

FirstCarbon Solutions (FCS) evaluated potential project impacts on aesthetics, light, and glare through site reconnaissance and review of applicable plans and policies. FCS personnel visited the project site in September 2013 and documented site conditions and relationships to surrounding land uses with photographs. FCS personnel also reviewed aerial photographs, topographical maps, street maps, project plans, and elevations to identify surrounding land uses and evaluate potential impacts from project development. The City of Richmond General Plan and the Richmond Municipal Code were reviewed to determine applicable policies and design requirements for the proposed project.

Three computer generated visual simulations were prepared, which simulate the future visual character after project construction from publicly accessible locations:

- Exhibit 3.1-1 provides an existing view and a Visual Simulation of Project from the park at Seacliff Place looking south.
- Exhibit 3.1-2 provides an existing view and a Visual Simulation of Project from Sea Cliff Drive looking southeast.
- Exhibit 3.1-3 provides an existing view and a Visual Simulation of Project from Canal Boulevard looking northwest.

Scenic Vista

Impact AES-1: The project would not have a substantial adverse effect on a scenic vista.

Impact Analysis

The City of Richmond General Plan states that various points throughout the City of Richmond have views of the shoreline or the hillside that would constitute a locally recognized scenic vista or corridor. In the project vicinity, these areas include trails through the Miller Knox Regional Park, and the newly constructed Bay Trail along the project shoreline. Portions of Seacliff Drive and the public
park along Seacliff Place have views of the San Francisco Bay, as well as the San Francisco skyline and/or Marin County hillsides. The following discussion analyzes the potential effect of the project to publicly accessible views of the bay.

The public park located along Seacliff Place currently offers an unobstructed view of the project site and San Francisco Bay. The public park is at an elevation of approximately 51 feet above mean sea level. As shown in Exhibit 3.1-1, the difference in elevation ensures that development of the project would not substantially diminish views of the San Francisco Bay from this location. While the project buildings would be visible, views of the Bay remain intact, and development of the project is not considered to have a substantial adverse effect on this scenic vista.

Views for motorists and pedestrians travelling along Seacliff Drive are currently framed by residential development on both sides of the street. While views directly south along Seacliff Drive are unobstructed, views to the east and west are partially obstructed by existing two-story, single-family dwellings. The effect of the project would be similar to this pattern of residential development that already exists along both sides of Seacliff Drive and does not represent a significant impact.

Views of San Francisco Bay from trails in Miller-Knox Regional Park would continue to provide the public with views of the Bay. Similarly, as shown in Exhibit 3.1-2 and Exhibit 3.1-3, a portion of the Bay Trail is located along the project’s southern boundary, which provides access to bay views for all members of the public. The new trail will include crosswalks at the intersections of Brickyard Cove Road and Dornan Drive, as well as Seacliff Drive and Brickyard Cove Road. To promote safety and enhanced pedestrian access to bay views, way finding signs and “you are here” panels, as well as two benches will also be installed at various locations along the trail. User safety will also be improved by the project’s widening of the sidewalk between the project entrance and the Seacliff Drive crosswalk to 10 feet.

As such, the project would enhance access to scenic vistas for all members of the public, and as such would not have a substantial adverse effect on a scenic vista. Impacts would be less than significant.

**Level of Significance Before Mitigation**
Less than significant impact.

**Mitigation Measures**
No mitigation measures are required.

**Level of Significance After Mitigation**
Less than significant impact.
Scenic Resources within a State Scenic Highway

Impact AES-2: The project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway.

Impact Analysis
The nearest freeway to the project site is I-580. The segment of I-580 near the project site is not an Officially Designated State Scenic Highway, nor is it considered an Eligible State Scenic Highway. The site does not contain any scenic resources such as trees, rocks, and outcroppings. The project site is characterized by mostly flat relief, with a small depression in the center of the site and small bluff in the northern portion of the site adjacent to Seacliff Estates single-family residential neighborhood. In addition, there are no historic buildings on the project site, nor are any state scenic highways visible from the project site. Therefore, no impact would occur to scenic resources, including but not limited to trees, rock outcroppings, or historic buildings within a state scenic highway.

Level of Significance Before Mitigation
No impact.

Mitigation Measures
No mitigation measures are required.

Level of Significance After Mitigation
No impact.

Visual Character

Impact AES-3: The project would not substantially degrade the existing visual character or quality of the site and its surroundings.

Impact Analysis
The project proposes to develop 60 units of market-rate condominiums. A total of nine (9) buildings would be developed as part of the project, and construction of the project would alter the visual character of the project site. However, this change in itself is not considered significant unless the visual character or quality is substantially degraded.

As previously discussed, the project site is undeveloped and has been altered by prior industrial uses, and subsequent excavation and remediation conducted to satisfy Department of Toxic Substances Control. As such, the property has been highly disturbed and is now covered by ruderal grasses and weeds. The project vicinity contains various developed residential, industrial, and commercial areas; refer to Exhibit 2-2 in Section 2, Project Description. There are no significant natural features (creeks, ridgelines, forested areas, etc.) within the project boundaries. As such, the project area can be characterized as committed to development for contemporary urban use, and in the context of the surrounding development, the project would not substantially change the existing visual character or quality of the site and its surroundings.
The project site is designated for medium density residential development and the project design and density is consistent with this designation, and represents infill development that would be visually compatible with surrounding residential uses.

Although the development of the project would result in a change in the visual character of the project site, the development and land use activities contemplated by the project would achieve a high-quality design that would be visually compatible with surrounding land uses. The project includes the use of high-quality design, materials, and landscaping, similar to the design of surrounding residential developments, and would enhance the development of the Bay Trail along the site’s southern boundary.

The project is subject to the City of Richmond’s Design Review Process, and the conceptual design has received favorable review comments from the Design Review Board during a publicly noticed study session on November 13, 2013. The Design Review Board will make a recommendation to the Planning Commission on the project, which will include the following required findings:

- Whether the proposed design is suitable for its purpose;
- Whether the proposed design is harmonious with and relates properly to the surrounding neighborhood, contiguous parcels, and the site itself;
- Whether the location, size, design, and characteristics of the proposed project will be compatible with and will not be detrimental to the public health, safety, or welfare of persons residing in or working in or adjacent to the proposed project;
- Whether the overall design will be of a quality that will preserve the integrity of, and upgrade, the existing neighborhood; and
- Whether the design of the proposed project is in accordance with the general plan of the City of Richmond and all applicable provisions of the zoning ordinance.

If necessary, the Design Review Board may also impose conditions related to design impacts of the project (City of Richmond Municipal Code Section 15.04.930.110). Based on the foregoing, impacts related to visual character and quality would be less than significant.

**Level of Significance Before Mitigation**
Less than significant impact.

**Mitigation Measures**
No mitigation measures are required.

**Level of Significance After Mitigation**
Less than significant impact.
Light or Glare

Impact AES-4: The project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Impact Analysis
The project site is located in an existing urban environment with existing sources of light and glare from surrounding residential, commercial, and industrial uses. The development of 60 multi-family residential units would introduce various forms of glare and lighting such as glazing (windows), exterior lighting, and other lighting sources from residences and vehicles, which would add new sources of light and glare to the project site. As a residential development, the project would result in similar levels of light and glare as the surrounding residential neighborhoods.

In addition, proposed development within the project site would be subject to the City’s development standards set forth in Zoning Ordinance Section 15.04.840, which establish standards for light and glare. For example, the City of Richmond Zoning Ordinance sets forth the following performance standards:

Section 15.04.840.040 Lighting and glare: This provision requires that lighting, reflective surfaces and other sources of illumination are designed to prevent glare on the public street or adjacent parcels. Lights shall be shielded at lot lines so as not to be directly visible from an adjoining residential district.

Section 15.04.840.070 Design standards: This provision requires compliance with Design Review permit site development and review procedures, with emphasis placed on project design, site planning, building elevations, and neighborhood compatibility.

The project would be required to comply with provisions of the City of Richmond Zoning Ordinance and the Design Review process, which will ensure that the project will not create new sources of substantial light or glare. Therefore, light and glare-reducing measures would be included in the approved project design during the initial design process, and also as may be required by the City through additional, project-specific conditions of approval, if necessary. Thus, additional sources of light and glare from the proposed project will not adversely affect day or nighttime views in the area. Impacts are less than significant.

Level of Significance Before Mitigation
Less than significant impact.

Mitigation Measures
No mitigation measures are required.

Level of Significance After Mitigation
Less than significant impact.
3.2 - Air Quality

This section addresses the potential impacts to regional and local air quality associated with implementation of the project. Descriptions and analysis in this section are based on analysis performed by First Carbon Solutions as well as information contained in the Health Risk Assessment (HRA) prepared by FirstCarbon Solutions in December 2013, included in this Draft EIR as Appendix E.

3.2.1 - Existing Conditions

Existing Regional Conditions

The City of Richmond is located within the San Francisco Bay Area Air Basin (Air Basin), which consists of the entirety of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties; the western portion of Solano County; and the southern portion of Sonoma County. Its terrain and geographical location determine the distinctive climate of the Air Basin, as the Air Basin is a coastal plain with connecting valleys and low hills. The local agency with jurisdiction over air quality in the Air Basin is the Bay Area Air Quality Management District (BAAQMD).

Existing Local Conditions

Meteorology acts on the emissions released into the atmosphere to produce pollutant concentrations. These airborne pollutant concentrations are measured throughout California at air quality monitoring sites. The California Air Resources Board (ARB) operates a statewide network of monitors. Data from this network are supplemented with data collected by local air districts, other public agencies, and private contractors.

The air quality monitoring station closest to the project site is the Point Richmond monitoring station located approximately 1.5 miles north of the project site; however, this station does not monitor criteria pollutants. The Richmond-7th Street monitoring station, located approximately 2.3 miles north of the project site, monitors sulfur dioxide. The San Pablo-Rumrill monitoring station measures CO, NO₂, and PM₁₀. Table 3.2-1 summarizes the recorded ambient air data at the representative monitoring stations for years 2010 through 2012.

<table>
<thead>
<tr>
<th>Air Pollutant</th>
<th>Averaging Time</th>
<th>Item</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone</td>
<td>1 Hour</td>
<td>Max 1 Hour (ppm)</td>
<td>0.097</td>
<td>0.078</td>
<td>0.086</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Days &gt; State Standard (0.09 ppm)</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>8 Hour</td>
<td>Max 8 Hour (ppm)</td>
<td>0.082</td>
<td>0.059</td>
<td>0.059</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Days &gt; State Standard (0.07 ppm)</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Days &gt; National Standard (0.075 ppm)</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
### Table 3.2-1 (cont.): Air Quality Monitoring Summary

<table>
<thead>
<tr>
<th>Air Pollutant</th>
<th>Averaging Time</th>
<th>Item</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon monoxide</td>
<td>8 Hour</td>
<td>Max 8 Hour (ppm)</td>
<td>0.91</td>
<td>0.99</td>
<td>0.99</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Days &gt; State Standard (9.0 ppm)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Days &gt; National Standard (9 ppm)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Nitrogen dioxide</td>
<td>Annual</td>
<td>Annual Average (ppm)</td>
<td>0</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>1 Hour</td>
<td>98th percentile (ppm)</td>
<td>38.6</td>
<td>40.1</td>
<td>40.1</td>
</tr>
<tr>
<td></td>
<td>1 Hour</td>
<td>Max 1 Hour (ppm)</td>
<td>49.2</td>
<td>50.7</td>
<td>54.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Days &gt; State Standard (0.18 ppm)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sulfur dioxide</td>
<td>Annual</td>
<td>Annual Average (ppm)</td>
<td>*</td>
<td>0.000</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>24 Hour</td>
<td>Max 24 Hour (ppm)</td>
<td>0.007</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Inhalable coarse particles (PM10)</td>
<td>Annual</td>
<td>Annual Average (µg/m³)</td>
<td>*</td>
<td>19.7</td>
<td>15.7</td>
</tr>
<tr>
<td></td>
<td>24 hour</td>
<td>24 Hour (µg/m³)</td>
<td>41.2</td>
<td>73.4</td>
<td>46.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Days &gt; State Standard (50 µg/m³)</td>
<td>*</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Days &gt; National Standard (150 µg/m³)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Notes and Abbreviations:
- ppm = parts per million
- µg/m³ = micrograms per cubic meter
- max = maximum
- ID = insufficient data
- ND = no data

All monitoring data is from the San Pablo-Rumrill station except sulfur dioxide, which is from the Richmond-7th Street Station.

State Standard = California Ambient Air Quality Standard
National Standard = National Ambient Air Quality Standard
Source: California Air Resources Board 2013a.

### Attainment Status

Air basins where federal or state ambient air quality standards are exceeded are referred to as “nonattainment” areas. If standards are met, the area is designated as an “attainment” area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered “unclassified.” National nonattainment areas are considered severe, serious, or moderate as a function of deviation from standards.

As shown in Table 3.2-2, the Air Basin is in nonattainment for 8-hour ozone and 24-hour PM$_{2.5}$ under the national standard. Under the State standards, the Air Basin is in nonattainment for both 1-hour and 8-hour ozone; 24-hour and annual PM$_{10}$ and annual PM$_{2.5}$. This means that the area experiences poor air quality at times.
Table 3.2-2: Air Basin Attainment Status

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Averaging Time</th>
<th>State Status</th>
<th>National Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone</td>
<td>1-hour</td>
<td>Nonattainment</td>
<td>Not Applicable¹</td>
</tr>
<tr>
<td></td>
<td>8-hour</td>
<td>Nonattainment</td>
<td>Nonattainment²</td>
</tr>
<tr>
<td>Carbon monoxide</td>
<td>1-hour and 8-hour</td>
<td>Attainment</td>
<td>Attainment³</td>
</tr>
<tr>
<td>Nitrogen dioxide</td>
<td>1-hour</td>
<td>Attainment</td>
<td>Unclassified⁴</td>
</tr>
<tr>
<td></td>
<td>Annual</td>
<td>No state classification</td>
<td>Attainment</td>
</tr>
<tr>
<td>Sulfur dioxide⁵</td>
<td>24-hour</td>
<td>Attainment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1-hour</td>
<td>Attainment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Annual</td>
<td>No state standard</td>
<td>Attainment</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>24-hour</td>
<td>Nonattainment</td>
<td>Unclassified</td>
</tr>
<tr>
<td></td>
<td>Annual</td>
<td>Nonattainment</td>
<td>No federal standard⁶</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>24-hour</td>
<td>No state standard</td>
<td>Nonattainment⁷</td>
</tr>
<tr>
<td></td>
<td>Annual</td>
<td>Nonattainment</td>
<td>Attainment</td>
</tr>
</tbody>
</table>

Notes:
1. The national 1-hour ozone standard was revoked by the EPA on June 15, 2005.
3. In April 1998, the Bay Area was redesignated to attainment for the national 8-hour carbon monoxide standard.
4. To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100ppm (effective January 22, 2010).
5. On June 2, 2010, the EPA established a new 1-hour SO₂ standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030-ppm annual and 0.14-ppm 24-hour SO₂ National Ambient Air Quality Standards however must continue to be used until one year following EPA initial designations of the new 1-hour SO₂ National Ambient Air Quality Standards. The EPA was expected to designate areas by June 2012, however in a February 2013 letter to the ARB, the EPA indicated that it had extended the deadline to June 2013.
6. The EPA revoked the annual PM₁₀ standard on September 21, 2006.
7. The EPA lowered the 24-hour PM₂.₅ standard from 65 µg/m³ to 35 µg/m³ in 2006. Bay Area levels were just over the national 24-hour PM₂.₅ standard of 35 µg/m³ based on data for the three-year cycle 2006-2008. This triggered the requirement for the Bay Area to prepare a SIP submittal to demonstrate how the region would attain the standard. However, data for both the 2008-2010 and the 2009-2011 cycles showed that Bay Area DPM levels currently meet the standard. On October 29, 2012, the EPA issued a proposed rule-making to determine that the Bay Area now attains the 24-hour PM₂.₅ national standard. Written comments on the proposed rule-making are due to the EPA by November 28, 2012. When the proposed rule-making is finalized, key SIP requirements to demonstrate how a region will achieve the standard will be suspended as long as monitoring data continues to show that the Bay Area attains the standard. The Bay Area will continue to be designated as “nonattainment” for the national 24-hour PM₂.₅ standard until the BAAQMD elects to submit a “redesignation request” and a “maintenance plan” to the EPA, and the EPA approves the proposed redesignation.

Source: California Air Resources Board, 2013b.

Criteria Air Pollutants

For reasons described below in the Regulatory Framework section, the criteria pollutants of greatest concern for the project area are ozone, (course particulate matter (PM₁₀), and fine particulate matter (PM₂.₅)). Carbon monoxide is of less concern in the Air Basin because it is classified as an attainment area for carbon monoxide. Table 3.2-3 summarizes the most relevant effects from exposure, the
properties, and the sources of the pollutants. Also shown are national and California ambient air quality standards that were established by the Clean Air Act of 1970 and the California Clean Air Act, respectively.

**Toxic Air Contaminants**

In addition to the criteria pollutants, discussed below, toxic air contaminants (TACs), also known as hazardous air pollutants (HAPs), form another group of pollutants of concern. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. In general, for those TACs that may cause cancer, there is no concentration that does not present some risk. In other words, there is no threshold level below which adverse health impacts are not expected to occur. This contrasts with the criteria pollutants for which acceptable levels of exposure can be determined and for which the state and federal governments have set ambient air quality standards.

According to the California Almanac of Emissions and Air Quality, the majority of the estimated health risk from TACs can be attributed to relatively few compounds, the most important being diesel particulate matter (DPM) from diesel-fueled engines.

**Diesel Particulate Matter**

ARB identified the DPM emissions from diesel-fueled engines as a TAC in August 1998 under California’s TAC program. The State of California, after a 10-year research program, determined in 1998 that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic (long-term) health risk. The California Office of Environmental Health Hazard Assessment (OEHHA) recommends using a 70-year exposure duration for determining residential cancer risks.

DPM is emitted from both mobile and stationary sources. In California, on-road diesel-fueled vehicles contribute approximately 38 percent of the statewide total, with an additional 60 percent attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. The remaining inventory of DPM is generated by stationary point sources and aggregated stationary sources.

**Asbestos**

Asbestos is listed as a TAC by the ARB and as a HAP by the United States Environmental Protection Agency (EPA). Naturally occurring asbestos areas are identified based on the type of rock found in the area. Asbestos-containing rocks found in California are ultramafic rocks, including serpentine rocks. Crushing or breaking these rocks, through construction or other means, can release asbestiform fibers into the air. Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining. The risk of disease is dependent upon the intensity and duration of exposure. When inhaled, asbestos fibers may remain in the lungs and with time may be linked to such diseases as asbestosis, lung cancer, and mesothelioma.
According to the California Division of Mines and Geology (CDMG), naturally occurring asbestos (NOA) has been found in scattered locations within Alameda County, however, the nearest known location of naturally occurring asbestos is farther than 1 mile from the plan area. No buildings currently exist on the project site, and therefore asbestos-containing material is not present.
### Table 3.2-3: Description of Air Pollutants

<table>
<thead>
<tr>
<th>Air Pollutant</th>
<th>Averaging Time</th>
<th>California Standard</th>
<th>Federal Standard*</th>
<th>Most Relevant Effects from Pollutant Exposure</th>
<th>Properties</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone</td>
<td>1 Hour</td>
<td>0.09 ppm</td>
<td>—</td>
<td>Irritate respiratory system; reduce lung function; breathing pattern changes; reduction of breathing capacity; inflame and damage cells that line the lungs; make lungs more susceptible to infection; aggravate asthma; aggravate other chronic lung diseases; cause permanent lung damage; some immunological changes; increased mortality risk; vegetation and property damage.</td>
<td>Ozone is a photochemical pollutant as it is not emitted directly into the atmosphere, but is formed by a complex series of chemical reactions between volatile organic compounds (VOC), NOx, and sunlight. Ozone is a regional pollutant that is generated over a large area and is transported and spread by the wind.</td>
<td>Ozone is a secondary pollutant; thus, it is not emitted directly into the lower level of the atmosphere. The primary sources of ozone precursors (VOC and NOx) are mobile sources (on-road and off-road vehicle exhaust).</td>
</tr>
<tr>
<td>Ozone</td>
<td>8 Hour</td>
<td>0.070 ppm</td>
<td>0.075 ppm</td>
<td>Ranges depending on exposure: slight headaches; nausea; aggravation of angina pectoris (chest pain) and other aspects of coronary heart disease; decreased exercise tolerance in persons with peripheral vascular disease and lung disease; impairment of central nervous system functions; possible increased risk to fetuses; death.</td>
<td>CO is a colorless, odorless, toxic gas. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, replaces oxygen as an attachment to hemoglobin, and reduces available oxygen in the blood.</td>
<td>CO is produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential wood burning, and natural sources.</td>
</tr>
<tr>
<td>Carbon monoxide (CO)</td>
<td>1 Hour</td>
<td>20 ppm</td>
<td>35 ppm</td>
<td>Ranges depending on exposure: slight headaches; nausea; aggravation of angina pectoris (chest pain) and other aspects of coronary heart disease; decreased exercise tolerance in persons with peripheral vascular disease and lung disease; impairment of central nervous system functions; possible increased risk to fetuses; death.</td>
<td>CO is a colorless, odorless, toxic gas. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, replaces oxygen as an attachment to hemoglobin, and reduces available oxygen in the blood.</td>
<td>CO is produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential wood burning, and natural sources.</td>
</tr>
<tr>
<td>Nitrogen dioxide (NOx)</td>
<td>Annual</td>
<td>0.18 ppm</td>
<td>0.100 ppm</td>
<td>Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; contributions to atmospheric discoloration’ increased visits to hospital for respiratory illnesses.</td>
<td>During combustion of fossil fuels, oxygen reacts with nitrogen to produce nitrogen oxides - NOx (NO, NO2, NO3, N2O, N2O3, N2O4, and N2O5). NOx is a precursor to ozone, PM10, and PM2.5 formation. NOx can react with compounds to form nitric acid and related small particles and result in DPM-related health effects.</td>
<td>NOx is produced in motor vehicle internal combustion engines and fossil fuel-fired electric utility and industrial boilers. Nitrogen dioxide forms quickly from NOx emissions. NO2 concentrations near major roads can be 30 to 100 percent higher than those at monitoring stations.</td>
</tr>
</tbody>
</table>
### Table 3.2-3 (cont.): Description of Air Pollutants

<table>
<thead>
<tr>
<th>Air Pollutant</th>
<th>Averaging Time</th>
<th>California Standard</th>
<th>Federal Standard</th>
<th>Most Relevant Effects from Pollutant Exposure</th>
<th>Properties</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfur dioxide (SO₂)</td>
<td>1 Hour</td>
<td>0.25 ppm</td>
<td>0.075 ppm</td>
<td>Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.</td>
<td>Sulfur dioxide is a colorless, pungent gas. At levels greater than 0.5 ppm, the gas has a strong odor, similar to rotten eggs. Sulfur oxides (SOₓ) include sulfur dioxide and sulfur trioxide. Sulfuric acid is formed from sulfur dioxide, which can lead to acid deposition and can harm natural resources and materials. Although sulfur dioxide concentrations have been reduced to levels well below state and federal standards, further reductions are desirable because sulfur dioxide is a precursor to sulfate and PM₁₀.</td>
<td>Human caused sources include fossil-fuel combustion, mineral ore processing, and chemical manufacturing. Volcanic emissions are a natural source of sulfur dioxide. The gas can also be produced in the air by dimethylsulfide and hydrogen sulfide. Sulfur dioxide is removed from the air by dissolution in water, chemical reactions, and transfer to soils and ice caps. The sulfur dioxide levels in the State are well below the maximum standards.</td>
</tr>
<tr>
<td></td>
<td>3 Hour</td>
<td>—</td>
<td>0.5 ppm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>24 Hour</td>
<td>0.04 ppm</td>
<td>0.14 (for certain areas)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Annual</td>
<td>—</td>
<td>0.030 ppm (for certain areas)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Particulate matter (PM₁₀)</td>
<td>24 hour</td>
<td>50 µg/m³</td>
<td>150 µg/m³</td>
<td>- Short-term exposure (hours/days): irritation of the eyes, nose, throat; coughing; phlegm; chest tightness; shortness of breath; aggravate existing lung disease, causing asthma attacks and acute bronchitis; those with heart disease can suffer heart attacks and arrhythmias.</td>
<td>Suspended particulate matter is a mixture of small particles that consist of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. PM₁₀ refers to particulate matter that is between 2.5 and 10 microns in diameter, (1 micron is one-millionth of a meter). PM₂.₅ refers to particulate matter that is 2.5 microns or less in diameter, about one-thirtieth the size of the average human hair.</td>
<td>Stationary sources include fuel or wood combustion for electrical utilities, residential space heating, and industrial processes; construction and demolition; metals, minerals, and petrochemicals; wood products processing; mills and elevators used in agriculture; erosion from tilled lands; waste disposal, and recycling. Mobile or transportation related sources are from vehicle exhaust and road dust. Secondary particles form from reactions in the atmosphere.</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>20 µg/m³</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Particulate matter (PM₂.₅)</td>
<td>24 Hour</td>
<td>—</td>
<td>35 µg/m³</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Annual</td>
<td>12 µg/m³</td>
<td>12.0 µg/m³</td>
<td></td>
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<tr>
<td>Visibility-reducing particles</td>
<td>8 Hour</td>
<td>See note below</td>
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</tr>
</tbody>
</table>

Note: See note below...
### Table 3.2-3 (cont.): Description of Air Pollutants

<table>
<thead>
<tr>
<th>Air Pollutant</th>
<th>Averaging Time</th>
<th>California Standard</th>
<th>Federal Standard&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Most Relevant Effects from Pollutant Exposure</th>
<th>Properties</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfates</td>
<td>24 Hour</td>
<td>25 µg/m³</td>
<td>—</td>
<td>(a) Decrease in ventilatory function;</td>
<td>The sulfate ion is a polyatomic anion with the empirical formula SO₄²⁻. Sulfates occur in combination with metal and/or hydrogen ions. Many sulfates are soluble in water.</td>
<td>Sulfates are particulates formed through the photochemical oxidation of sulfur dioxide. In California, the main source of sulfur compounds is combustion of gasoline and diesel fuel.</td>
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<td>(b) aggravation of asthmatic symptoms;</td>
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<td>(c) aggravation of cardio-pulmonary disease;</td>
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<td></td>
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<td></td>
<td>(d) vegetation damage;</td>
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<td></td>
<td>(e) degradation of visibility;</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>(f) property damage.</td>
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<tr>
<td>Lead&lt;sup&gt;b&lt;/sup&gt;</td>
<td>30-day Quarter</td>
<td>1.5 µg/m³</td>
<td>—</td>
<td>Lead accumulates in bones, soft tissue, and</td>
<td>Lead is a solid heavy metal that can exist in air pollution as an aerosol particle component. Leaded gasoline was used in motor vehicles until around 1970. Lead concentrations have not exceeded state or federal standards at any monitoring station since 1982.</td>
<td>Lead ore crushing, lead-ore smelting, and battery manufacturing are currently the largest sources of lead in the atmosphere in the United States. Other sources include dust from soils contaminated with lead-based paint, solid waste disposal, and crustal physical weathering.</td>
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<td></td>
<td>Rolling 3-</td>
<td>—</td>
<td>1.5 µg/m³</td>
<td>blood and can affect the kidneys, liver, and</td>
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<td>month average</td>
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<td>nervous system. It can cause impairment of</td>
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<td>blood formation and nerve conduction,</td>
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<td>behavior disorders, mental retardation,</td>
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<td>neurological impairment, learning</td>
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<td>deficiencies, and low IQs.</td>
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<td>Vinyl chloride&lt;sup&gt;c&lt;/sup&gt;</td>
<td>24 Hour</td>
<td>0.01 ppm</td>
<td>—</td>
<td>Short-term exposure to high levels of vinyl</td>
<td>Vinyl chloride, or chloroethene, is a chlorinated hydrocarbon and a colorless gas with a mild, sweet odor. In 1990, ARB identified vinyl chloride as a toxic air contaminant and estimated a cancer unit risk factor.</td>
<td>Most vinyl chloride is used to make polyvinyl chloride plastic and vinyl products, including pipes, wire and cable coatings, and packaging materials. It can be formed when plastics containing these substances are left to decompose in solid waste landfills. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites.</td>
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<td>chloride in the air causes central nervous</td>
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<td>system effects, such as dizziness, drowsiness,</td>
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<td>and headaches. Epidemiological studies of</td>
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<td>occupationally exposed workers have linked</td>
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<td>vinyl chloride exposure to development of a</td>
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<td>rare cancer, liver angiosarcoma, and have</td>
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<td>suggested a relationship between exposure and</td>
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<td>lung and brain cancers.</td>
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</tbody>
</table>

<sup>a</sup> FirstCarbon Solutions
Table 3.2-3 (cont.): Description of Air Pollutants

<table>
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<tr>
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<th>Federal Standard*</th>
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<th>Properties</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen sulfide</td>
<td>1 Hour</td>
<td>0.03 ppm</td>
<td>—</td>
<td>High levels of hydrogen sulfide can cause immediate respiratory arrest. It can irritate the eyes and respiratory tract and cause headache, nausea, vomiting, and cough. Long exposure can cause pulmonary edema.</td>
<td>Hydrogen sulfide (H₂S) is a flammable, colorless, poisonous gas that smells like rotten eggs.</td>
<td>Manure, storage tanks, ponds, anaerobic lagoons, and land application sites are the primary sources of hydrogen sulfide. Anthropogenic sources include the combustion of sulfur containing fuels (oil and coal).</td>
</tr>
<tr>
<td>Volatile organic compounds (VOC) or Reactive organic gases (ROG)</td>
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<td>Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations because of interference with oxygen uptake. In general, concentrations of VOCs are suspected to cause eye, nose, and throat irritation; headaches; loss of coordination; nausea; and damage to the liver, the kidneys, and the central nervous system. Many VOCs have been classified as toxic air contaminants.</td>
<td>Reactive organic gases (ROGs), or VOCs, are defined as any compound of carbon—including carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate—that participates in atmospheric photochemical reactions. Although there are slight differences in the definition of ROGs and VOCs, the two terms are often used interchangeably.</td>
<td>Indoor sources of VOCs include paints, solvents, aerosol sprays, cleansers, tobacco smoke, etc. Outdoor sources of VOCs are from combustion and fuel evaporation. A reduction in VOC emissions reduces certain chemical reactions that contribute to the formulation of ozone. VOCs are transformed into organic aerosols in the atmosphere, which contribute to higher PM₁₀ and lower visibility.</td>
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<tr>
<td>Benzene</td>
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<td>Short-term (acute) exposure of high doses from inhalation of benzene may cause dizziness, drowsiness, headaches, eye irritation, skin irritation, and respiratory tract irritation, and at higher levels, loss of consciousness can occur. Long-term (chronic) occupational exposure of high doses has caused blood disorders, leukemia, and lymphatic cancer.</td>
<td>Benzene is a VOC. It is a clear or colorless light-yellow, volatile, highly flammable liquid with a gasoline-like odor. The EPA has classified benzene as a “Group A” carcinogen.</td>
<td>Benzene is emitted into the air from fuel evaporation, motor vehicle exhaust, tobacco smoke, and from burning oil and coal. Benzene is used as a solvent for paints, inks, oils, waxes, plastic, and rubber. Benzene occurs naturally in gasoline at 1 to 2 percent by volume. The primary route of human exposure is through inhalation.</td>
</tr>
</tbody>
</table>
### Table 3.2-3 (cont.): Description of Air Pollutants

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<tr>
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<th>Properties</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Diesel particulate matter (DPM)</td>
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<td>Some short-term (acute) effects of DPM exposure include eye, nose, throat, and lung irritation, coughs, headaches, light-headedness, and nausea. Studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Human studies on the carcinogenicity of DPM demonstrate an increased risk of lung cancer, although the increased risk cannot be clearly attributed to diesel exhaust exposure.</td>
<td>DPM is a source of PM$_{2.5}$—diesel particles are typically 2.5 microns and smaller. Diesel exhaust is a complex mixture of thousands of particles and gases that is produced when an engine burns diesel fuel. Organic compounds account for 80 percent of the total particulate matter mass, which consists of compounds such as hydrocarbons and their derivatives, and polycyclic aromatic hydrocarbons and their derivatives. Fifteen polycyclic aromatic hydrocarbons are confirmed carcinogens, a number of which are found in diesel exhaust.</td>
<td>Diesel exhaust is a major source of ambient particulate matter pollution in urban environments. Typically, the main source of DPM is from combustion of diesel fuel in diesel-powered engines. Such engines are in on-road vehicles such as diesel trucks, off-road construction vehicles, diesel electrical generators, and various pieces of stationary construction equipment.</td>
</tr>
</tbody>
</table>

Notes:

- ppm = parts per million (concentration)µg/m$^3$ = micrograms per cubic meter
- Annual = Annual Arithmetic Mean
- 30-day = 30-day average
- Quarter = Calendar quarter
- a Federal standard refers to the primary national ambient air quality standard, or the levels of air quality necessary, with an adequate margin of safety to protect the public health. All standards listed are primary standards except for 3 Hour SO$_2$, which is a secondary standard. A secondary standard is the level of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- b To attain the 1-hour nitrogen dioxide national standard, the 3-year average of the existing 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (0.100 ppm).
- c On June 2, 2010, a new 1-hour SO$_2$ standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the existing 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO$_2$ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
- d Visibility reducing particles: In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are “extinction of 0.23 per kilometer” and “extinction of 0.07 per kilometer” for the statewide and Lake Tahoe Air Basin standards, respectively.
- e The ARB has identified lead and vinyl chloride as ‘toxic air contaminants’ with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

3.2.2 - Regulatory Setting

Air pollutants are regulated at the national, state, and air basin level; each agency has a different level of regulatory responsibility. The EPA regulates at the national level. The ARB regulates at the state level. The BAAQMD regulates at the air basin level.

Federal and State Regulations

The EPA is responsible for global, international, national, and interstate air pollution issues and policies. The EPA sets national vehicle and stationary source emission standards, oversees approval of all State Implementation Plans, provides research and guidance for air pollution programs, and sets National Ambient Air Quality Standards, also known as federal standards. There are federal standards for six common air pollutants, called criteria air pollutants, which were identified from provisions of the Clean Air Act of 1970. The criteria pollutants are:

- Ozone
- Nitrogen dioxide
- Lead
- Particulate matter (PM10 and PM2.5)
- Carbon monoxide (CO)
- Sulfur dioxide

The federal standards were set to protect public health, including that of sensitive individuals; thus, the standards continue to change as more medical research is available regarding the health effects of the criteria pollutants. Primary federal standards are the levels of air quality necessary, with an adequate margin of safety, to protect the public health (California Air Resources Board, 2010).

A State Implementation Plan is a document prepared by each state describing existing air quality conditions and measures that would be followed to attain and maintain federal standards. The State Implementation Plan for the State of California is administered by the ARB, which has overall responsibility for statewide air quality maintenance and air pollution prevention. California's State Implementation Plan also incorporates individual federal attainment plans for regional air districts. Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms.

The ARB also administers California Ambient Air Quality Standards (state standards) for the 10 air pollutants designated in the California Clean Air Act. In addition to the six federal criteria air pollutants, the state air pollutants also include visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride.

State of California

The following state regulations apply to emission sources that may be generated by the project.

**ARB Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling**

adopts new section 2485 within Chapter 10, Article 1, Division 3, title 13 in the California Code of
Regulations. The measure limits the idling of diesel vehicles to reduce emissions of toxics and criteria pollutants. The driver of any vehicle subject to this section: (1) shall not idle the vehicle’s primary diesel engine for greater than five minutes at any location; and (2) shall not idle a diesel-fueled auxiliary power system for more than five minutes to power a heater, air conditioner, or any ancillary equipment on the vehicle if it has a sleeper berth and the truck is located within 100 feet of a restricted area (homes and schools).

**ARB Final Regulation Order, Requirements to Reduce Idling Emissions from New and In-Use Trucks**, requires that new 2008 and subsequent model-year heavy-duty diesel engines be equipped with an engine shutdown system that automatically shuts down the engine after 300 seconds of continuous idling operation once the vehicle is stopped, the transmission is set to “neutral” or “park,” and the parking brake is engaged. If the parking brake is not engaged, then the engine shutdown system shall shut down the engine after 900 seconds of continuous idling operation once the vehicle is stopped and the transmission is set to “neutral” or “park.” Any project trucks manufactured after 2008 would be consistent with this rule, which would ultimately reduce air emissions.

**ARB Regulation for In-Use Off-Road Diesel Vehicles.** On July 26, 2007, the ARB adopted a regulation to reduce diesel particulate matter and NO\textsubscript{x} emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations. The regulation limits idling to no more than five consecutive minutes, requires reporting and labeling, and requires disclosure of the regulation upon vehicle sale. The ARB is enforcing that part of the rule with fines up to $10,000 per day for each vehicle in violation. Performance requirements of the rule are based on a fleet’s average NO\textsubscript{x} emissions, which can be met by replacing older vehicles with newer, cleaner vehicles or by applying exhaust retrofits. The regulation was amended in 2010 to delay the original timeline of the performance requirements making the first compliance deadline January 1, 2014 for large fleets (over 5,000 horsepower), 2017 for medium fleets (2,501-5,000 horsepower), and 2019 for small fleets (2,500 horsepower or less).

**Statewide Truck and Bus Rule.** On December 12, 2008, the ARB approved a new regulation to significantly reduce emissions from existing on-road diesel vehicles operating in California. The regulation requires affected trucks and buses to meet performance requirements between 2011 and 2023. By January 1, 2023, all vehicles must have a 2010 model year engine or equivalent. The regulation applies to all on-road heavy-duty diesel-fueled vehicles with a gross vehicle weight rating greater than 14,000 pounds, agricultural yard trucks with off-road certified engines, and certain diesel fueled shuttle vehicles of any gross vehicle weight rating. Out-of-state trucks and buses that operate in California are also subject to the regulation.

**Bay Area Air Quality Management District**

The agency for air pollution control for the Air Basin is the BAAQMD. BAAQMD is responsible for regulating stationary sources of air pollution in the nine counties that surround San Francisco Bay: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, southwestern Solano, and southern Sonoma counties. BAAQMD maintains 32 air quality-monitoring stations throughout the basin.
The BAAQMD is responsible for controlling and permitting industrial pollution sources (such as power plants, refineries, and manufacturing operations) and widespread, areawide sources (such as bakeries, dry cleaners, service stations, and commercial paint applicators), and for adopting local air quality plans and rules.

The BAAQMD updated their Air Quality Guidelines (Guidelines) in June 2010 to include new screening levels and thresholds of significance (2010 Thresholds) for construction-related criteria pollutants (exhaust PM₁₀ and PM₂.₅), ozone precursors (ROG and NOₓ), TACs and operational-related cumulative TACs. In addition, the 2010 Thresholds included reduced criteria pollutant thresholds for operational criteria pollutants and ozone precursors, to provide a more conservative threshold. The BAAQMD updated the Guidelines in 2011 with clarifications and minor amendments to the assessment methodology, and further updated the Guidelines in May 2012, as described below.

The Guidelines set forth a process of gathering project emissions information, and then comparing the project information against screening criteria or significance thresholds to determine whether additional analysis is warranted. If a project exceeds the screening criteria, the next step is to perform a more detailed and refined analysis, and compare project impacts against a set of significance thresholds. If a project does not exceed the screening criteria or significance thresholds, then the project would be deemed to have a less than significant impact, and no mitigation would be required. Conversely, a project that exceeds the significance thresholds would be required to implement feasible mitigation measures.

The Alameda County Superior Court issued a judgment that found that BAAQMD’s adoption of new thresholds of significance within the 2010 Air Quality Guidelines did not comply with the informational requirements of CEQA. BAAQMD successfully appealed the trial court’s ruling and the case is now under review by the California Supreme Court, with a decision expected in 2014. This lawsuit was primarily concerned with whether BAAQMD violated CEQA’s procedural requirements, and did not challenge the substantive adequacy of the 2010 Thresholds, or the scientific data in support of the 2010 Thresholds.

Nonetheless, in view of the legal uncertainty, the BAAQMD released a new version of the Air Quality Guidelines in May 2012, which removed the 2010 Thresholds. The BAAQMD recommends that lead agencies determine their own appropriate air quality thresholds of significance based on substantial evidence within the lead agency’s administrative record. Lead agencies may still rely on the BAAQMD’s 2010 Guidelines for assistance in calculating air pollution emissions, obtaining information regarding the health impacts of air pollutants, and identifying potential mitigation measures.

**Air Quality Plans**

The latest air quality plan in the Air Basin is the 2010 Clean Air Plan, an update to the Bay Area 2005 Ozone Strategy. The 2010 Clean Air Plan provides the following:

- Review progress in improving Bay Area air quality to date.
- Establish a control strategy including “all feasible measures” to achieve state ozone standards by the earliest practicable date and reduce transport of ozone precursors to neighboring air basins.
• Address ozone, particulate matter, air toxics, and greenhouse gas emissions in a single integrated plan.

Air quality plans are required to address transportation control measures requirements of the federal Clean Air Act and California Clean Air Act. Transportation control measures are defined as “any strategy to reduce vehicle trips, vehicle use, vehicle miles traveled, vehicle idling, or traffic congestion for the purpose of reducing motor vehicle emissions.” The Bay Area has extensive experience with developing and implementing transportation control measures. The first regional plan prepared pursuant to the California Clean Air Act, the 1991 Clean Air Plan, included 23 transportation control measures to meet state planning requirements (state transportation control measures). Plan updates in 1994 and 1997 included revisions to the transportation control measures.

The California Air Toxic “Hot Spots” Program is used to regulate TAC emissions and reduce associated health risks within the basin. The BAAQMD manages the Toxic Hot Spots Program. Under the management of the BAAQMD and the implementation of the Toxic Hot Spots Program, facilities are required to report the types and quantities of toxic substances used. Under BAAQMD requirements, facilities whose emissions exceed established action levels are required to notify all exposed persons. In addition, the BAAQMD has established a cancer risk of 10 in a million and a non-cancer Hazard Index of one as ATHS public notification thresholds (BAAQMD 2013).

The Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposures to outdoor TACs in the Bay Area. The main objectives of the program are to:

• Characterize and evaluate potential cancer and non-cancer health risks associated with exposure to TACs from both stationary and mobile sources throughout the Bay Area.
• Assess potential exposures to sensitive receptors including children, senior citizens, and people with respiratory illnesses.
• Identify significant sources of TAC emissions and prioritize use of resources to reduce TACs in the most highly impacted areas (i.e., priority communities).
• Develop and implement mitigation measures—such as grants, guidelines, or regulations—to achieve cleaner air for the public and the environment, focusing initially on priority communities.

The objectives of the CARE program are to be initiated in three phases, which include an assessment of the sources of TAC and DPM emissions, modeling and measurement programs to estimate concentrations of TAC and DPM, and an assessment of exposures, health risks, and effective mitigations (BAAQMD 2013). The results of Phase 1 indicated that DPM accounts for over 80 percent of the cancer risk weighted TAC emissions. The modeling performed in Phase 2 provided estimates of annual concentrations of five compounds that collectively contributed more than 90 percent of the potential cancer risk from TAC emissions: DPM, 1,3-butadiene, benzene, formaldehyde, and acetaldehyde. Based on the analysis of this program, it was found that the highest cancer risk levels
from ambient TAC in the Bay Area tend to occur in the core urban areas, along major roadways and adjacent to freeways and port activity and that the Richmond-San Pablo area is one of six impacted communities (BAAQMD 2013).

Local Regulations

The following City of Richmond General Plan policies and measures are applicable to the project.

City of Richmond General Plan 2030

- **Policy EC2.4 - Safe and Convenient Walking and Bicycling.** Promote walking and bicycling as a safe and convenient mode of transportation. Improve pedestrian and bicycle amenities to serve the recreation and travel needs of residents and visitors in all part of Richmond. Where feasible, the City will: connect major destinations such as parks, open spaces, civic facilities, employment centers, retail and recreation areas with pedestrian and bicycle infrastructure; promote shared roadways in residential streets; require new development and redevelopment projects to provide pedestrian and bicycle amenities, streetscape improvements and linkages to planned and complete City and regional multi-use trails; and develop safe routes to schools and out-of-school programs that allow access by bicycle and pedestrian paths or reliable and safe transit.

- **Action EC2.K - Engine Replacement and Retrofitting.** Work with the Bay Area Air Quality Management District to develop a program to fund diesel engine retrofitting or replacement in existing automobiles, trucks, rail, ships, and equipment. Regularly identify feasible technologies that can be applied for retrofitting polluting vehicles. Collaborate with key stakeholders to develop and implement the program.

- **Policy EC3.1 - Renewable Energy.** Promote the generation, transmission and use of a range of renewable energy sources such as solar, wind power and waste energy to meet current and future demand and encourage new development and redevelopment projects to generate a portion of their energy needs through renewable sources.

- **Policy EC3.2 - Energy Efficiency and Conservation.** Promote efficient use of energy and conservation of available resources in the design, construction, maintenance, and operation of public and private facilities, infrastructure and equipment. Collaborate with partner agencies, utilities, and businesses to support a range of energy efficiency, conservation and waste reduction measures including: development and retrofitting of green buildings and infrastructure; installation of energy-efficient appliances and equipment in homes and offices; and heightened awareness of energy and conservation issues. Collaborate with local workforce development programs to train and employ Richmond residents in these other green jobs sectors.

- **Action EC4.H - Green Building Ordinances.** Require that newly constructed or renovated City-owned and private buildings and structures comply with the City’s adopted Green Building Ordinances. Periodically upgrade requirements as mainline construction practices develop and new materials and building products become available with the intent of meeting or exceeding the State’s zero net energy goals by the year 2020.
• **Policy ECS.3 - Air Quality.** Support regional policies and efforts that improve air quality to protect human and environmental health and minimize disproportionate impacts on sensitive population groups. Work with businesses and industry, residents, and regulatory agencies to reduce the impact of direct, indirect, and cumulative impacts of stationary and no-stationary sources of pollution such as industry, the Port, railroads, diesel trucks, and busy roadways. Fully utilize Richmond’s police power to regulate industrial and commercial emissions. Ensure that sensitive uses such as schools, childcare centers, park and playgrounds, housing and community gathering places are protected from adverse impacts of emissions. Continue to work with stakeholders to reduce impacts associated with air quality on disadvantaged neighborhoods and continue to participate in regional planning efforts with nearby jurisdictions and the Bay Area Air Quality Management District to meet or exceed air quality standards. Support regional, state, and federal efforts to enforce existing pollution control laws and strengthen regulations.

- **Action ECS.C - Air Quality Monitoring and Reporting Program.** Work with the BAAQMD and other government agencies to establish and identify funding for a citywide air quality monitoring and reporting program. The air quality monitoring and reporting program would assess the cumulative impact of air pollution and toxins on human and environmental health and monitor exposure of sensitive uses such as schools, childcare centers, parks and playgrounds, housing and community gathering places. Collaborate with the County Health Services Department, the Bay Area Air Quality Management District and state agencies to establish baseline exposures and document health effects associated with monitored baseline exposures and develop provisions to hold business and operations financially accountable for their impacts on the environment or community due to air pollution exceeding legal thresholds.

**City of Richmond Zoning Ordinance**

• **Ordinance 15.04.840.030 Odor, Particulate Matter, and Air Contaminant Standards.** No continuous, frequent or repetitive odors are permitted which are perceptible on or beyond adjacent property lines. An odor detected no more than a total of 15 minutes in any one day shall not be deemed to be continuous, frequent or repetitive for this regulation. No dust or particulate matter shall be emitted that is detectable at boundary lines or property by a reasonable person with instruments. Exhaust air ducts shall be located or directed away from abutting residentially-zoned properties.

**3.2.3 - Thresholds of Significance**

According to the CEQA Guidelines’ Appendix G Environmental Checklist, to determine whether impacts to air quality are significant environmental effects, the following questions are analyzed and evaluated.

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

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

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?

d) Expose sensitive receptors to substantial pollutant concentrations?

e) Create objectionable odors affecting a substantial number of people?

3.2.4 - Project Impact Analysis and Mitigation Measures

During the 30-day Notice of Preparation comment period, two comment letters were received that addressed air quality, which are included in Appendix A of this Draft EIR.

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Methodology for Analysis

The proposed project’s air quality impacts were evaluated in accordance with the guidance set forth by the BAAQMD's 2010 Air Quality Guidelines. The Purpose of the Air Quality Guidelines is to assist lead agencies in evaluating air quality impacts of projects and plans proposed in the Air Basin. The Air Quality Guidelines contain guidance on how to conduct project-level analysis, as well as how to determine the significance of a project’s emissions of greenhouse gases. This analysis follows the guidance of the Air Quality Guidelines where appropriate.

Air Quality Plan

| Impact AIR-1: | The project would not conflict with or obstruct implementation of the applicable air quality plan. |

Impact Analysis

The 2010 Clean Air Plan, the regional air quality management plan for the Air Basin, accounts for projections of population growth provided by the Association of Bay Area Governments and vehicle miles traveled provided by the Metropolitan Transportation Commission, and it identifies strategies to bring regional emissions into compliance with federal and state air quality standards.

A project would be judged to conflict with or obstruct implementation of the 2010 Clean Air Plan if it would:

1. Result in substantial new regional emissions not foreseen in the air quality planning process, or
2. Exceed the BAAQMD’s project-level thresholds of significance for criteria pollutants.
The proposed project would be consistent with the City’s General Plan land use designation. The City’s General Plan was adopted in April 2012, which is after adoption of the 2010 Clean Air Plan. The General Plan EIR found that the General Plan would be consistent with the 2009 Clean Air Plan after incorporation of mitigation. Therefore, it is reasonable to assume that the growth anticipated in the City’s General Plan is also consistent with the growth assumed in the 2010 Clean Air Plan. Therefore, the project would not result in a substantial unplanned increase in population, employment, or regional growth in vehicle miles traveled, so it would be consistent with the first criterion.

As shown in Impact AIR-2, the project would not generate a CO hotspot. However, the project is estimated to generate a potentially significant impact from construction-emitted fugitive dust. Implementation of Mitigation Measure AIR-2 would reduce the potential fugitive dust impact to less than significant. As shown in Impact AIR-3, the project would generate a less than significant impact from project construction and operations.

**Level of Significance Before Mitigation**

Potentially significant impact.

**Mitigation Measures**

Mitigation Measure AIR-2 is required.

**Level of Significance After Mitigation**

Less than significant impact.

**Air Quality Standards/Violations**

| Impact AIR-2: | The project may violate an air quality standard or contribute substantially to an existing or projected air quality violation. |

**Impact Analysis**

This impact relates to localized criteria pollutant impacts. Potential localized impacts would be exceedances of state or federal standards for PM$_{2.5}$, PM$_{10}$ or CO. Particulate matter emissions (both PM$_{10}$ and PM$_{2.5}$) are of concern during construction because of the potential to emit fugitive dust during earth-disturbing activities. CO emissions are of concern during project operation because operational CO hotspots are related to increases in on-road vehicle congestion. Each is discussed below.

**Construction Fugitive Dust**

Construction activities associated with development activities contemplated by the project would include grading, building construction, and paving. Generally, the most substantial air pollutant emissions would be dust generated from site grading. If uncontrolled, these emissions could lead to both health and nuisance impacts. Construction activities would also temporarily create emissions of equipment exhaust and other air contaminants. The project’s potential impacts from equipment exhaust are assessed separately in Impact AIR-3, below.
BAAQMD does not recommend a numerical threshold for fugitive, dust-related particulate matter emissions. Instead, BAAQMD bases the determination of significance for fugitive dust on a consideration of the control measures to be implemented. If all appropriate emissions control measures recommended by BAAQMD are implemented for a project, then fugitive dust emissions during construction are not considered significant. Mitigation Measure AIR-2 includes the emission control measures recommended by BAAQMD, thereby reducing this impact to less than significant.

Operational CO Hotspot
Localized high levels of CO (CO hotspots) are associated with traffic congestion and idling or slow-moving vehicles.

The BAAQMD recommends a screening analysis to determine if a project has the potential to contribute to a carbon monoxide hotspot. The screening criteria identify when site-specific carbon CO dispersion modeling is necessary. The project would result in a less than significant impact to air quality for local carbon monoxide if the following screening criteria are met:

- The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans; or

- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; or

- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

As indicated in Section 16, Transportation/Traffic, the project is found to be consistent with the congestion management plan, thereby satisfying the first screening criteria. Further, traffic volumes on Seacliff Drive are less than 1,000 vehicles per day (California Environmental Health Tracking Program 2007), which is below the second screening threshold. Finally, the project would not increase traffic at affected intersections where vertical and/or horizontal mixing is substantially limited, which indicates consistency with the third screening criterion. Therefore, the project would result in a less than significant impact for CO hotspot generation.

Conclusion
In summary, the project would not generate a localized exceedance of fugitive dust after incorporation of mitigation, and would not significantly contribute to a CO hotspot during project operation. Therefore, the project would not contribute substantially to an existing or projected localized air quality violation. Impacts would be less than significant with mitigation incorporated.

Level of Significance Before Mitigation
Potentially significant impact.
Mitigation Measures
The following mitigation measure shall be implemented to reduce potential impacts to less than significant:

MM AIR-2  During construction activities, the following air pollution control measures shall be implemented:

-Exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

-All haul trucks transporting soil, sand, or other loose material offsite shall be covered.

-All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

-All roadways, driveways, and sidewalks shall be paved as soon as possible.

-Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485 of the California Code of Regulations). Clear signage shall be provided for construction workers at all access points.

-All construction equipment shall be maintained and properly tuned in accordance with manufacturer’s specifications. All equipment shall be checked by a certified visible emissions evaluator.

-A publicly visible sign shall be posted with the telephone number and person to contact at the City regarding dust complaints. This person shall respond and take corrective action within 48 hours of a complaint or issue notification. The Bay Area Air Quality Management District’s phone number shall also be visible to ensure compliance with applicable regulations.

Level of Significance After Mitigation
Less than significant impact after mitigation.

Criteria Pollutant

Impact AIR-3:  The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors).

Impact Analysis
This impact is related to regional criteria pollutant impacts. Non-attainment pollutants of concern for this impact are ozone, PM_{10} and PM_{2.5}. In developing thresholds of significance for air pollutants,
BAAQMD considered the emission levels for which a project’s individual emissions would be cumulatively considerable in light of emissions from other existing and future projects. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region’s existing air quality conditions.

As discussed above, the BAAQMD updated its Guidelines in 2010, followed by additional amendments in 2011 and 2012; however, for purposes of clarity, the updated BAAQMD Guidelines are referred to in this section by their 2010 adoption date. For this analysis, the BAAQMD 2010 Air Quality Guidelines and the associated thresholds were utilized for screening and analysis purposes.

Construction
Section 3 of the BAAQMD’s 2010 Guidelines provides screening criteria for determining if a project could potentially result in significant air quality impacts. The screening is used to indicate whether a project’s construction-related air pollutants or precursors could potentially exceed the BAAQMD’s thresholds of significance. The construction of the project would result in a less than significant impact to air quality if the following screening criteria are met:

1. The project is below the applicable screening level size (shown in Table 3-1 of BAAQMD’s Air Quality Guidelines); and
2. All Basic Construction Mitigation Measures would be included in the project design and implemented during construction; and
3. Construction-related activities would not include any of the following:
   a) Demolition activities inconsistent with District Regulation 11, Rule 2: Asbestos Demolition, Renovation and Manufacturing;
   b) Simultaneous occurrence of more than two construction phases (e.g., paving and building construction would occur simultaneously);
   c) Simultaneous construction of more than one land use type (e.g., project would develop residential and commercial uses on the same site) (not applicable to high density infill development);
   d) Extensive site preparation (i.e., greater than default assumptions used by the Urban Land Use Emissions Model [URBEMIS] for grading, cut/fill, or earth movement); or
   e) Extensive material transport (e.g., greater than 10,000 cubic yards of soil import/export) requiring a considerable amount of haul truck activity.

The project would include all Basic Construction Mitigation Measures after incorporation of Mitigation Measure AIR-2. The project would not include any demolition activities, simultaneous construction of more than one land use type, and is not anticipated to include simultaneous occurrence of more than two construction phases. However, construction of the proposed project would have extensive material transport or extensive site preparation. Specifically, construction of the project is anticipated to include 50,000 cubic yards (cy) of soils cut, 17,000 cy of fill, and export of 33,000 cy. Therefore, the project would not meet the BAAQMD’s screening criteria, and additional emissions analysis is warranted to determine the project’s potential impact. The project’s construction-generated emissions were estimated using the CalEEMod model. Construction was
assumed to begin in November 2014 and be completed by December 2015. Default construction phase durations and equipment mix were used except for the following:

- Grading duration was extended from 20 working days to 30 working days.
- Grading equipment fleet was increased by 1 additional grader and 1 additional excavator.

Construction-generated emissions are provided in Table 3.2-4 and Table 3.2-5 for annual and average daily rates, respectively. As shown in Table 3.2-4, the project’s total construction emissions would not exceed the BAAQMD’s annual thresholds of significance for construction. The average daily rate of construction emissions is calculated by averaging the total project emissions over the total duration of construction. According to the emissions modeling analysis, project construction would occur over 310 working days. As shown in Table 3.2-5, the project’s average daily emissions would not exceed the BAAQMD’s average daily thresholds of significance for construction. Therefore, the project’s construction activity would generate a less than significant impact.

### Table 3.2-4: Construction Criteria Pollutant Emissions (Annual Tons)

<table>
<thead>
<tr>
<th>Construction Phase</th>
<th>ROG</th>
<th>NOX</th>
<th>PM10</th>
<th>PM2.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Preparation</td>
<td>0.03</td>
<td>0.29</td>
<td>0.02</td>
<td>0.01</td>
</tr>
<tr>
<td>Grading</td>
<td>0.14</td>
<td>1.69</td>
<td>0.06</td>
<td>0.06</td>
</tr>
<tr>
<td>Building (2014)</td>
<td>0.01</td>
<td>0.05</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Building (2015)</td>
<td>0.45</td>
<td>3.53</td>
<td>0.24</td>
<td>0.23</td>
</tr>
<tr>
<td>Architectural Coatings</td>
<td>0.43</td>
<td>0.03</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Paving</td>
<td>0.43</td>
<td>0.03</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total Emissions</td>
<td>1.08</td>
<td>5.84</td>
<td>0.34</td>
<td>0.32</td>
</tr>
<tr>
<td>BAAQMD Annual Threshold</td>
<td>10</td>
<td>10</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>Significant Impact?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Notes:
1. Exhaust only
2. ROG = reactive organic gases
3. NOX = oxides of nitrogen
4. PM10 = particulate matter 10 microns in diameter
5. PM2.5 = particulate matter 2.5 microns in diameter

Source: BAAQMD 2010 Guidelines.

### Table 3.2-5: Construction Criteria Pollutant Emissions (Average Daily Lbs)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>ROG</th>
<th>NOX</th>
<th>PM10</th>
<th>PM2.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Tons Emissions</td>
<td>1.08</td>
<td>5.84</td>
<td>0.34</td>
<td>0.32</td>
</tr>
<tr>
<td>Total lbs Emissions</td>
<td>2,163</td>
<td>11,683</td>
<td>682</td>
<td>637</td>
</tr>
<tr>
<td>Average lbs per working day</td>
<td>6.98</td>
<td>37.69</td>
<td>2.20</td>
<td>2.06</td>
</tr>
</tbody>
</table>
Table 3.2-5 (cont.): Construction Criteria Pollutant Emissions (Average Daily Lbs)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Air Pollutant</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ROG</td>
</tr>
<tr>
<td>BAAQMD Average Daily Threshold</td>
<td>54</td>
</tr>
<tr>
<td>Significant Impact?</td>
<td>No</td>
</tr>
</tbody>
</table>

Notes:
1. Exhaust only
2. Calculated by dividing the total lbs by the total 310 working days of construction.

Operation

Section 3 of the BAAQMD’s 2010 Guidelines provides screening criteria for determining if a project could potentially result in significant air quality impacts. As stated by the 2010 Guidelines:

If the project meets the screening criteria, the project would not result in the generation of operational-related criteria air pollutants and/or precursors that exceed the thresholds of significance shown in Table 2-2. Operation of the proposed project would result in a less-than-significant cumulative impact to air quality from criteria air pollutant and precursor emissions.

The BAAQMD’s applicable operational screening level from the BAAQMD’s 2010 Guidelines is provided in Table 3.2-6. Although the project would construct 60 condominiums, a total of 61 units was used for the purposes of analysis. The project originally included 61 units and the HRA was prepared based on that prior configuration. The analysis is therefore conservative, and is consistent with the HRA contained in Appendix E.

Table 3.2-6: Operation Criteria Pollutant Screening Level

<table>
<thead>
<tr>
<th>Impact Type</th>
<th>BAAQMD Screening Level Size 1</th>
<th>Project Size</th>
<th>Project Percent of Screening Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condo/Townhouses, General</td>
<td>451 du</td>
<td>61 du</td>
<td>14%</td>
</tr>
</tbody>
</table>

Notes:
1. Screening Level Size is for Condo/Townhouses, General.
2. The project originally contained 61 units. The analysis of 61 units is conservative and does not need to be revised.

du = dwelling unit

Source: BAAQMD 2010 Guidelines.
The project would be less than the BAAQMD’s operational criteria pollutant screening level. Therefore, the project’s operational criteria pollutant and precursor emissions would be less than significant.

**Level of Significance Before Mitigation**
Less than significant impact.

**Mitigation Measures**
No mitigation measures are required.

**Level of Significance After Mitigation**
Less than significant impact.

**Sensitive Receptors**

<table>
<thead>
<tr>
<th>Impact AIR-4:</th>
<th>The project would not expose sensitive receptors to substantial pollutant concentrations.</th>
</tr>
</thead>
</table>

**Impact Analysis**

This discussion addresses whether the project would expose sensitive receptors to asbestos, construction-generated fugitive dust (PM$_{10}$ and PM$_{2.5}$), construction-generated DPM, operational-related TACs, or operational CO hotspots.

The BAAQMD considers a sensitive receptor to be any facility or land use that includes members of the population who are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples include schools, hospitals, and residential areas. The project may be considered a sensitive receptor because some of the residents could be elderly or children who are sensitive to the effects of air pollution. Sensitive receptors also exist near the project site. The nearest sensitive receptor land uses to the project site are the existing residences that border the project site to the north, and along Seacliff Drive.

Air quality problems arise when sources of air pollutants and sensitive receptors are located near one another. Localized impacts to sensitive receptors generally occur in one of two ways:

- A (new) source of air pollutants is located close to existing sensitive receptors.
- A (new) sensitive receptor is located near an existing source of air pollutants.

To address both of these types of impacts, the BAAQMD has established as part of its 2011 Guidelines the following health risk and hazards significance thresholds, as shown in Table 3.2-7. These thresholds were adopted for this assessment.
Table 3.2-7: BAAQMD Health Risk Significance Thresholds

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Cancer Risk (in a million)</th>
<th>Chronic Hazard Index</th>
<th>Acute Hazard Index</th>
<th>PM$_{2.5}$ (mg/m$^3$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Impact</td>
<td>10</td>
<td>1</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Community Cumulative Impact</td>
<td>100</td>
<td>10</td>
<td>10</td>
<td>0.8</td>
</tr>
</tbody>
</table>


Asbestos
The Department of Conservation, Division of Mines and Geology (DMG) has a published guide for generally identifying areas that are likely to contain naturally occurring asbestos (NOA; DMG 2011). The DMG map indicates that there are four locations within Contra Costa County that are likely to contain NOA; however, these sites are not located in the project vicinity. Therefore, disturbance of NOA during project construction is not a concern for the project.

Construction: Fugitive Dust
Dust emissions from grading, trenching, or land clearing can create nuisances and localized health impacts related to fugitive dust. As shown in Impact AIR-2 above, the project would not exceed the threshold of significance for construction-generated PM$_{10}$ and PM$_{2.5}$ because the appropriate dust control measures would be implemented during construction through inclusion of Mitigation Measure AIR-2, as recommended by the BAAQMD. Therefore, the project would not expose receptors to substantial PM$_{10}$ or PM$_{2.5}$ concentrations from construction activities after implementation of mitigation.

Construction: Diesel Particulate Matter (DPM)
Studies have demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk. The project would generate diesel exhaust, a source of DPM, during project construction. Onsite emissions of DPM would occur during construction from the operation of heavy-duty construction equipment and from vendor trucks that operate on the project site.

An HRA was prepared for the project in December 2013. The HRA includes an estimation of potential health risk impacts associated with project construction. The emission estimates were calculated using CalEEMod land use emission model that uses equipment emission rates from the ARB OFFROAD2011 emission model and vehicle emission rates from the ARB EMFAC2011 mobile source emission model. The number of equipment and hours of usage were user-defined inputs consistent with information from the applicant. Where information was not available, CalEEMod model defaults were used. Detailed input and emissions estimate discussions are provided in Appendix E. Potential risks were calculated for individual source (project construction) impacts as well as cumulative sources impacts. In keeping with the health risk assessment guidance from the BAAQMD (BAAQMD 2012b), all sources of toxic emissions located within 1,000 feet of the project (known as the zone of influence), along with other nearby complex and major sources of toxic emissions were evaluated and identified and included within the cumulative sources impacts. The
cumulative sources identified include the nearby rail yard, Port of Richmond, Interstate 580 (I-580), and an emergency generator.

As shown in Table 3.2-8, the maximum child cancer risk related to construction emissions is greater than the BAAQMD’s threshold of 10 cancers in a million, while the adult cancer risk and chronic and acute hazard indices are below the significance threshold. The PM$_{2.5}$ concentration is slightly above the BAAQMD threshold and is also considered significant.

In the cumulative scenario, all risks are well below the BAAQMD thresholds.

### Table 3.2-8: Risk from Construction of the Project on Existing Sensitive Receptors

<table>
<thead>
<tr>
<th>Emission Source$^1$</th>
<th>Cancer Risk</th>
<th>Chronic Hazard</th>
<th>Acute Hazard</th>
<th>PM$_{2.5}$ Concentration (µg/m$^3$)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Construction Emissions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td>38.9 (child)</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.4 (adult)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>BAAQMD Thresholds for Individual Sources</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>1</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td><strong>Significant?</strong></td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Cumulative Sources of Emissions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rail Yard$^2$</td>
<td>7.0</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Port of Richmond$^2$</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>I-580$^3$</td>
<td>6.1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Emergency Generator$^4$</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Total Cumulative Sources</td>
<td>52.1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>BAAQMD Cumulative Thresholds</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>10</td>
<td>10</td>
<td>0.8</td>
</tr>
<tr>
<td><strong>Significant?</strong></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Notes:

1. The location of the maximum exposed receptor by construction activities was first identified. The risks and hazards from all other sources were estimated to the maximally exposed receptor that was identified for construction.

2. Estimated using refined air dispersion modeling.

3. Derived from the District’s Roadway Screening Analysis tables.

4. Derived from the District’s Stationary Source Screening Analysis Tool.

Source: FCS, 2013.

Implementing Mitigation Measures AIR-2, and AIR-4a through AIR-4f would reduce the impact to less than significant as can be seen in Table 3.2-9.
### Table 3.2-9: Mitigated Risk from Construction of the Project on Existing Sensitive Receptors

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>Cancer Risk</th>
<th>Chronic Hazard</th>
<th>Acute Hazard</th>
<th>PM$_{2.5}$ Concentration ($\mu$g/m$^3$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>7.2 (child)</td>
<td>&lt;0.1</td>
<td>&lt;0.1</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td></td>
<td>0.5 (adult)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAAQMD Thresholds for Individual Sources</td>
<td>10</td>
<td>1</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Significant?</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Source: FCS, 2013.

**Operation: Toxic Air Contaminants**

When siting a new receptor, the existing or future proposed sources of TACs and/or PM$_{2.5}$ emissions that would adversely affect individuals within the planned project should be examined, according to the following criteria:

- The extent to which existing sources would increase risk levels, hazard index, and/or PM$_{2.5}$ concentrations near the planned receptor,
- Whether the existing sources are permitted or non-permitted by the BAAQMD, and
- Whether there are freeways or major roadways near the planned receptor.

Operation of the project is not expected to cause any localized emissions that could expose offsite sensitive receptors to unhealthy long-term air pollutant levels. However, as the project includes sensitive receptors, the potential of those receptors to be exposed to substantial pollutants is examined.

An HRA was prepared to identify sources of TACs that may affect the project, and to quantify the potential health risk associated with those sources. To gather the requisite information, various information sources were consulted to derive estimates of emissions from existing sources of TACs. In keeping with the health risk assessment guidance from the BAAQMD (BAAQMD 2012b), all sources of toxic emissions located within 1,000 feet of the project (known as the zone of influence) along with other nearby complex and major sources of toxic emissions were evaluated and identified from the following data sources:

- BAAQMD Stationary Source Screening tool, which was used to identify the locations of hazards from stationary toxic emission sources that are contained within the BAAQMD’s permit database such as emergency generators (BAAQMD 2012c)
- BAAQMD Highway Screening Tool, which was used to identify the locations of hazards from highways throughout the Bay Area, such as I-580 (BAAQMD 2012d)
California Environmental Health Tracking Program’s (CEHTP’s) traffic volume tool, which was used to identify roads with greater than 10,000 AADT near the project site. All the nearby surface roads had less than 10,000 AADT and thus were not included in this analysis (CEHTP 2007)

The ARB Railyard Health Risk Assessment and Mitigation Measures website to obtain emissions estimated for the Richmond Railyard (ARB 2007)

The Port of Richmond Clean Air Action Plan to estimate emissions associated to the port activities (City of Richmond 2010)

The HRA includes an assessment of potential health risks from freeways, nearby stationary sources, the railyard, and the port that could potentially impact the sensitive receptors located within the project site. The community risk impacts to the project are presented in Table 3.2-10 and the data show that the health risks would be below the BAAQMD significance thresholds

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>Cancer Risk (in a million)</th>
<th>Chronic Hazard</th>
<th>Acute Hazard</th>
<th>PM$_{2.5}$ Concentration ($\mu$g/m$^3$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rail Yard$^1$</td>
<td>7.1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Port of Richmond$^1$</td>
<td>0.5</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>I-580$^2$</td>
<td>6.1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Emergency Generator$^3$</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>BAAQMD Thresholds for Individual Sources</td>
<td>10</td>
<td>1</td>
<td>1</td>
<td>0.3</td>
</tr>
</tbody>
</table>

| Significant                             | No                          | No             | No           | No                                     |
| Total Cumulative Sources                | 13.7                        | <1             | <1           | <0.1                                   |
| BAAQMD Cumulative Thresholds           | 100                         | 10             | 10           | 0.8                                    |

| Significant                             | No                          | No             | No           | No                                     |

Notes:  

1. Estimated using refined air dispersion modeling.
2. Derived from the District’s Roadway Screening Analysis tables.
3. Derived from the District’s Stationary Source Screening Analysis Tool.

Source: FCS, 2013.

**Level of Significance Before Mitigation**

Potentially significant impact.

**Mitigation Measures**

Implementation of Mitigation Measure AIR-2 is required, along with the following additional mitigation measures:
Use Tier 3 construction equipment with level 3 diesel particulate filter (DPF) for equipment greater than 50 horsepower, including excavators, forklifts, tractors/loaders/backhoes and level 2 DPF for all other equipment.

All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.

All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 miles per hour.

The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.

All trucks and equipment, including their tires, shall be washed off prior to leaving the site.

The idling time of diesel-powered construction equipment shall be limited to two minutes.

Level of Significance After Mitigation
Less than significant impact after mitigation.

Odors

The project would not create objectionable odors affecting a substantial number of people.

Impact Analysis

Two circumstances have the potential to cause odor impacts:

- A source of odors is proposed to be located near existing or planned sensitive receptors, or
- A sensitive receptor land use is proposed near an existing or planned source of odor.

The BAAQMD does not have a recommended odor threshold, but it does recommend screening criteria based on distance between types of sources known to generate odor and the receptor. For projects within the screening distances, the BAAQMD uses the following threshold for project operations:

An odor source with five (5) or more confirmed complaints per year averaged over three years is considered to have a significant impact on receptors within the screening distance shown in the Bay Area Air Quality Management District’s guidance, Table 3-3.
BAAQMD identifies typical sources of objectionable odor, such as wastewater treatment plants, landfills, asphalt batch plants, rendering plants, metal smelting plants, among other land uses, in Table 3-3 of BAAQMD’s 2010 Guidelines. Both construction and operational-generated impacts are assessed below.

**Project Construction**

The BAAQMD’s guidance does not include recommendations for assessing odor impacts from project construction. During construction and grading, diesel powered vehicles and equipment used on the site could create localized odors. Specifically, site preparation and grading activities would have the highest daily offroad equipment use and, therefore, the greatest potential to emit construction-equipment odor. However, it is estimated that site preparation would be completed within 10 working days, and grading within 30 working days. In addition, residences are located north of the project site, but site preparation and grading activity would be distributed over the approximate 6.49-acre project site. Therefore, construction odor-generating activities would be temporary in nature, dissipate in the prevailing winds, and would be considered less than significant.

**Project Operation**

The project is residential and residential projects are not a typical source of objectionable odors. The operation of the 60-unit condominium complex is not expected to produce any offensive odors that would result in odor complaints.

Furthermore, according to the General Plan Draft EIR, implementation of the General Plan would not create objectionable odors that would affect a substantial number of people, and the EIR concluded that impacts from objectionable odors would be less-than significant. Specifically, the BAAQMD Guidelines provide thresholds of significance for plan-level analysis. In order for General Plans to be considered less-than-significant with respect to potential odor emissions, a plan must identify the location of existing and planned odor sources and include policies to reduce potential odor impacts in the plan area. In accordance with this guidance, the General Plan identified the industrial area in the vicinity of Harbor Way South, Marina Way South, I-580, and Hall Avenue. The General Plan includes General Plan Policies LU5.3 and ED8.2 that are intended to minimize conflicts between land uses to protect human and environmental health and safety, preserve community character, and retain job generating activities. The City reviews proposed uses for the potential to result in nuisance odors to ensure compliance with these actions. With these policies and actions in place to reduce exposure of sensitive receptors to nuisance odors, the General Plan was found to comply with the BAAQMD guidelines for odors.

As an example of these policies in action, the project site is situated within 2.0 miles of the Point Richmond Wastewater Treatment Plant and the Chevron Richmond Refinery. According to the City of Richmond monitoring records, leaks within the cover of the anaerobic digester at the Point Richmond Wastewater Treatment Plant were recorded in 2010. The City sent an informational letter to the residents of Point Richmond and the areas surrounding the City’s wastewater treatment facility. Work to rehabilitate the anaerobic digesters at the wastewater treatment plant is continuing, including the installation of new covers that are expected to reduce or eliminate substantial odors from this facility. These actions are in accordance with the General Plan and BAAQMD guidance.
Similarly, for the years 2010 to 2012, Chevron Richmond Refinery had an average of 13 confirmed recorded complaints. However, for the year 2013, up to the summary date of October 29, 2013, only two confirmed complaints were recorded. Moreover, the direction of the prevailing winds (to the northeast) suggests that the source of complaints is likely not from the vicinity of the project site. The City continues to work with all industrial uses to ensure that complaints are addressed quickly in conformance with BAAQMD guidance and that long-term solutions are sought to reduce conflicts between industrial uses and sensitive receptors.

In summary, as a residential use, the project would not create odors that would adversely affect surrounding residential uses. Impacts would be less than significant.

**Level of Significance Before Mitigation**
Less than significant impact.

**Mitigation Measures**
No mitigation measures are required.

**Level of Significance After Mitigation**
Less than significant impact.
3.3 - Biological Resources

This section describes the existing biological resources and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on a site visit by an FCS biologist in September 2013, as well as information contained in the Biological Resources Due Diligence Review prepared in October 2011 by Moore Biological Consultants, included in this Draft EIR as Appendix B.

3.3.1 - Existing Conditions

Location

The project site is located along the south shore of Point Richmond in Contra Costa County, California. The site extends into San Francisco Bay, with approximately 14.26 acres located underwater (see Section 2, Project Description's Exhibit 2-2). The landward portion of the site includes approximately 11 acres.

Surrounding land uses in this portion of Contra Costa County are primarily maritime and industrial, interspersed with areas of relatively new residential and commercial development. Seacliff Estates residential development borders the site to the north; a large car storage parking lot associated with the Port of Richmond is located to the east; and the San Francisco Bay extends from the site’s southern boundary. The project site is characterized by mostly flat relief, with a small depression in the center of the site and a small bluff in the northern portion of the site where the grade rises sharply to the homes along Seacliff Place. An unpaved road extends from a gated access point on Seacliff Drive along the shoreline of San Francisco Bay.

Surface elevations at the site range from sea level at the Bay edge, to 10 to 14 feet above mean sea level (amsl) in the mid-section of the site, to approximately 60 feet amsl at the top of the bluff at the northern edge of the property. The onshore portion of the site is currently vacant; a large pile of rocks is located at the eastern portion of the site. A pump formerly used by the City of Richmond sanitary sewer district is located in the northeastern portion of the site.

Vegetation

Due to historical uses of the site and amount of recent grading and disturbance from the soil clean up, onsite vegetation primarily consists of ruderal grass and weed species. Dominant grass species include oats (Avena sp.), soft chess brome (Bromus hordeaceus), ripgut brome (Bromus diandrus), and Mediterranean barley (Hordeum marinum). Other grassland species such as mustard (Brassica sp.), wild radish (Raphanus sativus), gumplant (Grindelia camporum), English plantain (Plantago lanceolata), filaree (Erodium spp.), fennel (Foeniculum vulgare), and common mallow (Malva neglecta) are intermixed with the grasses. There are no trees onsite. Coyote bush (Baccharis pilularis) and Scotch broom (Cytisus scoparius) shrubs are scattered across the site (Moore 2011).

Wildlife

According to the Biological Resources Due-Diligence Report (Moore 2011), very few wildlife species were observed on or near the site; all were common species found in urban and rural areas of Contra
Costa County. Some of the more common birds observed onsite include California gull (*Larus californicus*), American crow (*Corvus brachyrhynchos*), mourning dove (*Zenaida macroura*), western meadowlark (*Sturnella neglecta*), Brewer’s blackbird (*Euphagus cyanocephalus*), and western kingbird (*Tyrannus verticalis*). Few trees near the site appear suitable for nesting raptors.

A limited variety of common mammals most likely occur within the project vicinity; however, black-tailed hare (*Lepus californicus*) was the only mammal observed on-site during the survey. Signs of mule deer (black tail deer; *Odocoileus hemionus*) were also observed on the site. Striped skunk (*Mephitis mephitis*), California ground squirrel (*Spermophilus beecheyi*), raccoon (*Procyon lotor*), and Virginia opossum (*Didelphis virginiana*) are expected to occur in the greater project vicinity and may occasionally wander through the site. A number of small rodents including mice (*Mus musculus*, *Reithrodontomys megalotis*, and *Peromyscus maniculatus*) and voles (*Microtus californicus*) also are likely to occur in the area.

Due to a lack of suitable habitat, very few amphibians and reptiles are expected to use habitats in the site. Western fence lizard (*Sceloporus occidentalis*) was the only reptile observed in the site; no amphibians were observed. The site is within the range of the Pacific chorus frog (*Pseudacris regilla*), common king snake (*Lampropeltis getulus*), and common garter snake (*Thamnophis sirtalis*), and western terrestrial garter snake (*Thamnophis elegans*); these and other common amphibian and reptile species may occur in the site on occasion.

### 3.3.2 - Regulatory Setting

**Federal Regulations**

**Federal Endangered Species Act (FESA)**

The purposes of this Act are to provide a means to conserve the ecosystems that endangered and threatened species depend on, and to provide a program for conservation and recovery of these species. The FESA defines species as “endangered” or “threatened” and provides regulatory protection for any species so designated. Section 9 of the FESA prohibits the take of species listed by the USFWS as threatened or endangered. As defined in the FESA, take means “ . . . to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in such conduct.” Harm is defined by the USFWS to encompass “an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering” (50 Code of Federal Regulations [CFR] Section 17.3). Thus, some instances of habitat modification can constitute prohibited “take” if it can be shown that such modification can be expected to result in injury or death to one or more individuals of a listed species.

In recognition that take cannot always be avoided, Section 10(a) of the FESA includes provisions for take that is incidental to, but not the purpose of, otherwise lawful activities. Section 10 (a)(1)(B) permits (incidental take permits) may be issued if taking is incidental and will not appreciably reduce the likelihood of survival and recovery of the species in the wild.

Section 7 (a)(2) of the FESA requires any federal agency taking an action, including the USFWS, to evaluate a project with respect to any species proposed for listing or already listed as endangered or
threatened and their critical habitat, if any is proposed or designated. Federal agencies must undertake programs for the conservation of endangered and threatened species, and are prohibited from authorizing, funding, or carrying out any action that will jeopardize a listed species or destroy or modify its “critical habitat.” As defined in the FESA, “individuals, organizations, states, local governments, and other non-Federal entities are affected by the designation of critical habitat only if their actions occur on Federal lands, require a Federal permit, license, or other authorization, or involve Federal funding.”

**Migratory Bird Treaty Act (MBTA)**

The MBTA makes it unlawful to pursue, capture, kill, or possess or attempt to do the same to any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the United States, Great Britain, Mexico, Japan, and the countries of the former Soviet Union. As with the FESA, the MBTA authorizes the Secretary of the Interior to issue permits for incidental take.

**Section 404 of the Federal Clean Water Act**

Section 404 of the federal Clean Water Act (CWA), which is administered by the U.S. Army Corps of Engineers (USACE), regulates the discharge of dredge and fill material into waters of the United States. USACE has established a series of nationwide permits that authorize certain activities in waters of the United States (U.S.), provided that a proposed activity can demonstrate compliance with standard conditions. Normally, USACE requires an individual permit for an activity that will affect an area equal to or in excess of 0.3 acre of waters of the U.S. Projects that result in impacts to less than 0.3 acre of waters of the U.S. can usually be conducted pursuant to one of the nationwide permits, if consistent with the standard permit conditions. USACE also has discretionary authority to require an Environmental Impact Statement for Projects that result in impacts to an area between 0.1 and 0.3 acre. Use of any nationwide permit is contingent on the activities having no impacts to endangered species.

**State Regulations**

**California Endangered Species Act**

The California Department of Fish and Wildlife (CDFW) administers the California Endangered Species Act (CESA). The State of California considers an “endangered” species one whose prospects of survival and reproduction are in immediate jeopardy. A “threatened” species is one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management. A “rare” species is one present in such small numbers throughout its portion of its known geographic range that it may become endangered if its present environment worsens. The rare species designation applies to California native plants. State threatened and endangered species are fully protected against take, as defined above. The term “species of special concern” is an informal designation used by CDFW for some declining wildlife species that are not state candidates for listing. This designation does not provide legal protection, but signifies that these species are recognized as sensitive by CDFW.

**California Fish and Game Code - Section 1600 to Section 1603**

The California Fish and Game (CFG) Code mandates that “it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of
any river, stream, or lake designated by the department, or use any material from the streambeds, without first notifying the department of such activity.” CDFW jurisdiction includes ephemeral, intermittent, and perennial watercourses, including dry washes, characterized by the presence of hydrophytic vegetation, the location of definable bed and banks, and the presence of existing fish or wildlife resources.

Furthermore, CDFW jurisdiction is often extended to habitats adjacent to watercourses, such as oak woodlands in canyon bottoms or willow woodlands that function as part of the riparian system. Historic court cases have further extended CDFW jurisdiction to include watercourses that seemingly disappear, but re-emerge elsewhere. Under the CDFW definition, a watercourse need not exhibit evidence of an ordinary high water mark (OHWM) to be claimed as jurisdiction. However, CDFW does not regulate isolated wetlands; that is, those that are not associated with a river, stream, or lake.

**Porter-Cologne Water Quality Act**

The Regional Water Quality Control Board (RWQCB) regulates actions that would involve “discharging waste, or proposing to discharge waste, within any region that could affect the water of the state” (California Water Code Section 13260(a)), pursuant to provisions of the Porter-Cologne Water Quality Act. “Waters of the State” are defined as “any surface water or groundwater, including saline waters, within the boundaries of the state” (California Water Code Section 13050 (e)).

**Regional Water Quality Control Board Regulated Activities**

Under Section 401 of the Clean Water Act (CWA), the RWQCB regulates all activities that are regulated by the United States Army Corps of Engineers (USACE). Additionally, under the Porter-Cologne Water Quality Act, the RWQCB regulates all activities, including dredging, filling, or discharge of materials into waters of the state that are not regulated by the USACE due to a lack of connectivity with a navigable water body and/or lack of an OHWM.

**California Fish and Game Code - Section 3503 and Section 3511**

The CDFW administers the CFG Code. There are particular sections of the CFG Code that are applicable to natural resource management. For example, Section 3503 of the CFG Code states it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird that is protected under the MBTA. CFG Code Section 3503.5 further protects all birds in the orders Falconiformes and Strigiformes, birds of prey such as hawks and owls, and their eggs and nests from any form of take. CFG Code Section 3511 lists fully protected bird species where the CDFW is unable to authorize the issuance of permits or licenses to take these species.

**NCCP Act**

The State of California has adopted the Natural Community Conservation Planning and Habitat Conservation Planning (NCCP/HCP) program to focus on creating a multiple-species, multiple-habitat subregional Reserve System and implementing a long-term “adaptive management” program. To accomplish this, the NCCP/HCP creates a subregional habitat Reserve System and implements a coordinated program to manage biological resources within the habitat reserve. The creating of a
defined Reserve System provides certainty to the public and to affected landowners with respect to the location of future development and open space within the subregion. The NCCP/HCP was developed with coordination through the CDFW and the United States Fish and Wildlife Service (USFWS), in order to account for the CESA and the federal ESA.

The project is located within the City of Richmond, Contra Costa County, and does not occur within any NCCP/HCP designated area.

Local Regulations

Richmond General Plan 2030

The City of Richmond General Plan Conservation, Natural Resources and Open Space Element contains the following goals, policies, and actions that address biological resources and are applicable to the project:

- **Goal CN1. Preserved and Restored Natural Habitat and Biodiversity.**
  - **Policy CN1.1: Habitat and Biological Resources Protection and Restoration**
    - Natural habitat is essential to ensuring biodiversity and protecting sensitive biological resources.
    - Protect these areas and work with the California Department of Fish and Game, the San Francisco Bay Regional Water Quality Control Board, the East Bay Regional Park District, and other regional agencies to identify areas for special protection and establish appropriate protection measures for these areas.
    - Protect resources to maximize the efficacy of natural systems and encourage sustainable development practices and conservation measures to ensure a healthy natural environment.
    - Protect wetlands from direct and indirect impacts of new and existing development and infrastructure. Ensure that direct and indirect impacts to wetland habitats are minimized by environmentally sensitive project siting and design.
    - Protect marshlands and baylands to ensure they are not polluted or damaged from bay filling and dredging.
    - Protect and restore creek corridors and riparian areas to ensure they function as healthy wildlife habitat and biological areas.
    - Protect and restore creek corridors and riparian areas by restoring riparian habitat with appropriate vegetation and channel design; removing culverts and hardened channels where appropriate; improving creek access; avoiding future culverting or channelization of creeks; and ensuring appropriate and ongoing maintenance.
    - At a minimum, require mitigation of impacts to sensitive species ensuring that a project does not contribute to the decline of the affected species populations in the region. Identify mitigations in coordination with the U.S. Fish and Wildlife service, the California Department of Fish and Game and other regulatory agencies.
  - **Policy CN1.2: Local Native Plant Species.** Promote the use of locally propagated native plant and tree species and remove and control the spread of exotic plant species. Promote and protect native plant species in natural areas as well as in public landscaping of parks,
schools, medians, and planter strips. Work closely with landowners, landscapers, and nurseries to remove and prevent the spread of invasive exotic plant species.

- **Goal CN2: Conserved Open Space**
  - **Policy CN2.1: Open Space and Conservation Areas.** Preserve open space areas along the shoreline, creeks, and in the hills to protect natural habitat and maintain the integrity of hillsides, creeks and wetlands. Protect existing open space, agricultural lands and parks.
    - **Action CN1.A: Habitat Conservation.** Work closely with Contra Costa County, the East Bay Chapter of the California Native Plant Society (CNPS), and the East Bay Regional Park district to develop habitat conservation plans. Ensure that these plans identify locations and protect sensitive habitat including wetlands, marshes, baylands, creeks and open space. The plans should also establish clear mitigation criteria including no net losses in natural resource acreage, functions or values. The plan should provide for safe wildlife movement by limiting roadways within habitat areas, creating wildlife passable fencing or for existing roadways, incorporating design features and by creating habitat preserves that are immediately adjacent to each other.
    - **Action CN1.F Special Status Species Protection Methods.** Implement the special status survey methods of the California Department of Fish and Game, U.S. Fish and Wildlife Service, Contra Costa County Department of Agriculture and CEQA requirements.
    - **Action CN1.G Landscape Design Guidelines**
      1. Update and implement the City’s Landscape Design and Development Guidelines to conform to bay friendly landscape standards.
      2. Use appropriate tree species and densities in buffer areas.
      3. Ensure that medians include native plants and trees and are wide enough to support their long-term viability with the least demand for irrigation and maintenance.
      4. Prioritize the use of locally propagated native drought-tolerant vegetation and discourage the use of invasive non-native species in home landscaping.
      5. Tree and other plant selections for public landscaping should be made in conformance with the “City of Richmond Urban Forest Management/Master Plan Reforestation Supplement” (Chapter 10.08 of Richmond Municipal Code).
      6. Plans should be grouped together as per their water demand listed in the Water Use Classifications for the Landscape Species or “WUCOLS III,” or successor document by the University of California Extension for the California Department of Water Resources.
  - **Policy CN2.2: Richmond Shoreline.** Minimize the impacts of development on the shoreline with special attention to intensity, density, and proximity to the water. Conserve, protect and enhance natural and cultural resources along the Richmond shoreline. Promote a balance of uses along the shoreline that supports multiple community needs such as economic development, recreation, historic preservation and natural resource protection.
    - Provide a mix of residential and recreation uses in the Southern Gateway change area; support an active industrial waterfront around the Port and along the Santa Fe Channel; and promote a cultural heritage shoreline west of the Port.
    - Protect and restore wetlands, native habitats and open space; develop shoreline parks and trails to increase public access; encourage recreation and tourism activities; and enhance
and showcase historic and cultural resources. Prepare, adopt, and implement plans that will protect natural and built environments from adverse potential impacts of sea level rise due to climate change.

- **Policy CN2.5: Access to Large-Scale Natural Areas.** Improve access to large-scale natural areas located in the City including regional parks along the shoreline and in the hills. These areas should be open for controlled access to improve public enjoyment and interpretation. Access should be limited where natural habitat is extremely sensitive. Work with transit agencies to improve connections and access to open space and recreation facilities from all Richmond neighborhoods.

- **Goal CN6: A Healthy Urban Environment**
  - **Policy CN6.2: Protection and Expansion of Tree Resources.** Protect and expand tree resources within Richmond. Protect native trees, heritage trees and oak woodlands; expand and maintain street tree planning; use zoning and building requirements to ensure that trees are included in new developments; and engage the community to undertake planting campaigns. Furthermore, promote trees as economic and environmental resources for the use, education, and enjoyment of current and future generations.

### 3.3.3 - Thresholds of Significance

According to the CEQA Guidelines’ Appendix G Environmental Checklist, to determine whether impacts to biological resources are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

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

c) Have a substantial adverse effect 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 established native resident or migratory wildlife corridors, or impede the use of 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?
3.3.4 - Project Impact Analysis and Mitigation Measures

During the 30-day Notice of Preparation comment period, the City received a comment letter from the California Department of Fish and Wildlife (CDFW) and members of the public, which are included within Appendix A of this Draft EIR. In addition, a public scoping meeting was held on October 29, 2013, during which members of the public made comments about observing mule deer (*Odocoileus hemionus* ssp. *californicus*), wild turkeys (*Meleagris gallopavo*) and North American river otters (*Lontra canadensis*) near the project site, which are not considered special-status species protected by federal or state law. All comment letters and public comments made during the scoping meeting were taken into account when preparing this section.

This section discusses potential impacts associated with the project and provides mitigation measures where necessary to reduce potentially significant impacts.

**Effect on Species**

**Impact BIO-1:** The project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

**Impact Analysis**

All of the discussions of wildlife and plants in this impact discussion focus primarily on special-status species, which are defined as species that are protected by federal or state law, or are considered sensitive by federal, state, or local resource agencies. Common species such as mule deer (*Odocoileus hemionus* ssp. *californicus*), wild turkeys (*Meleagris gallopavo*) and North American river otters (*Lontra canadensis*), which members of the public identified as potentially occurring on site, are not considered special-status species protected by federal or state law. These species are common and have been observed to occur onsite on a transitory basis; if displaced by the project, these species would be able to utilize other open space lands in the local area such as the Miller/Knox Regional Shoreline.

In addition to reviewing the Biological Resource Due Diligence Report (Moore 2011), a list of special-status species and habitats that have the potential to occur within the project area or in the vicinity (using the *Richmond* and *San Quentin* 7.5-minute USGS quadrangles) was prepared by an FCS consulting biologist using information provided by CDFW’s California Natural Diversity Database (CNDDDB) Rarefind program (CDFW 2014a), CNDDDB online Quickviewer (CDFW 2014b), and the California Native Plant Society online inventory (CNPS 2014). In addition, a formal list of special-status species with the potential to occur in the project area was obtained from the U.S. Fish and Wildlife Service (USFWS) in order to develop a comprehensive list of special-status species to be evaluated (USFWS 2014a).

Appendix B presents the listed and proposed species potentially occurring or known to occur in the project vicinity as well as rationale (whether or not habitat requirements are met within the project area) for considering them in the impact analysis. The habitat preferences for each special-status species were reviewed and considered in the context of the project area and vicinity. Species having
potential for occurrence are expected to occur based on the known elevation or distribution range of the species and presence of suitable habitat.

Because of lack of suitable habitat onsite observed onsite, no special-status plant species are expected to occur in the portion of the site for development. The previously mass-graded and highly disturbed ruderal uplands in the site do not provide suitable habitat for any special-status plants. In addition, as outlined within the Biological Resource Due Diligence Report (2011), the project site does not contain suitable habitat for special-status wildlife species. The site visit by an FCS biologist in September 2013 confirmed that the site remains in a similar condition and that the conclusions of this report remain accurate.

The potential exists for burrowing owls to occur on the site on more than a transitory or occasional basis; debris piles onsite may act as surrogate burrows for nesting habitat. However, no burrowing owls were observed during the 2011 survey, and no ground squirrels or ground squirrel burrows were observed onsite during the 2013 site visit. Additionally, there is only one occurrence of burrowing owl in the CNDB (2013) in the search area, approximately 3 miles east of the site. Despite these findings, burrowing owls are known to move in and occupy inactive sites, if the sites become infested with ground squirrels, which is common in and near industrial areas. While considered unlikely, burrowing owls could nest in the site in the future. Therefore, Mitigation Measures BIO-1a and BIO-1b are recommended to reduce impacts to burrowing owl to a level of less than significant.

The project site is highly disturbed, and the potential to find sensitive species is low. However, the removal of vegetation could disrupt or destroy bird nests if development occurs during the nesting season, particularly in the shrubs on the southern potion of the site. Mitigation Measure BIO-1c is recommended to provide a nesting bird survey if construction occurs during the nesting season (February through August). A professional biologist should perform the survey no less than 14 days prior to the commencement of vegetation removal or earth moving activities. This would mitigate the possibility of disturbing sensitive avian species.

**Level of Significance Before Mitigation**
Potentially significant impact.

**Mitigation Measures**

**MM BIO-1a** If clearing and construction activities will occur during the nesting period for burrowing owls (February 1–August 31), then a qualified biologist shall conduct take avoidance surveys for burrowing owls on and within 500 feet of the project site, where feasible. Surveys shall be conducted no more than 14 days prior to the start of construction activities, and in accordance with Appendix D of CDFW’s Staff Report on Burrowing Owl Mitigation (Staff Report), published March 7, 2012. Surveys shall be repeated if project activities are suspended or delayed for more than 15 days during nesting season. If no burrowing owls are detected, then no further mitigation is required. If active burrowing owls are detected, the project proponent shall follow the protocol outlined in Mitigation Measure BIO-1b, below.
MM BIO-1b If burrowing owls are detected onsite during pre-construction surveys, mitigation shall be required in accordance with CDFW's Staff Report. If the surveys identify breeding or wintering burrowing owls on or adjacent to the property, occupied burrows shall not be disturbed and shall be provided with protective buffers. Where avoidance is not feasible, an exclusion plan shall be implemented to encourage owls to move away from the work area prior to construction. The exclusion plan shall be subject to CDFW approval and monitoring requirements and approved by the City prior to issuance of a permit for ground-disturbing activities.

MM BIO-1c Removal of trees and shrubs shall be conducted outside of the avian nesting season (February through August). If construction must occur during the avian nesting season, a pre-construction bird survey shall be conducted no less than 14 days prior to any ground-disturbing activities. If at any time birds are found to be nesting inside or within 250 feet (500 feet for raptors) of the impact area, construction activities within 250 feet of the nest shall cease until it is determined by a qualified biologist that the nest is no longer active.

Level of Significance After Mitigation
Less than significant impact after mitigation.

Riparian Habitat

Impact BIO-2: The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

Impact Analysis
According to the Biological Assessment (Moore 2011) and a site visit conducted by an FCS biologist in September 2013, the project does not contain riparian habitat or other sensitive natural communities within the project site. Because the amount of impervious surfaces would increase due to site coverage from buildings, roadways, and other related improvements, alterations to the natural drainage patterns could result in a substantial increase in the rate and volume of stormwater runoff that could pollute the shoreline or adjacent waters. However, as discussed below, the implementation of project design features would reduce potential impacts related to stormwater runoff to less than significant.

The County of Contra Costa’s Stormwater C.3 Guidebook outlines recommendations for the treatment of stormwater runoff, and which strategies are most effective based on site features and issues. Bioretention facilities are recommended for sites with permeable native soils, roof drainage, parking lots, and extensive landscaping. Bioretention is considered highly effective at reducing pollutants including sediment, trash, bacteria, oil and grease, organics, and metals, by passing storm waters over or through a buffer and subsequently distributed waters evenly along a ponding area. Exfiltration of the stored water in the bioretention area into the underlying soils occurs over a period of days.
Stormwater generated onsite would be directed to 19 onsite stormwater bio-retention basins totaling 7,837 square feet of treatment area, which exceeds the C.3 requirements. The bio-retention areas are located throughout the site and are designed to be able to accommodate the stormwater run-off volumes associated with the proposed development. All drainage appurtenances are adequately sized to facilitate the transfer and storage of flood flows through the project site to the bio-retention areas. Ultimately, the stormwater drainage system will be sufficient to capture and treat stormwater prior to leaving the project site. (Refer to Section 4, Effects Found Not To Be Significant, Exhibit 4-2, Preliminary Storm Water Quality Plan.)

For these reasons, development of the project would not affect riparian habitat, sensitive natural communities as identified in local or regional plans, policies, and regulations or pollute the shoreline from onsite stormwater runoff.

**Level of Significance Before Mitigation**

Less than significant impact.

**Mitigation Measures**

No mitigation measures are required.

**Level of Significance After Mitigation**

Less than significant impact.

**Federally Protected Wetlands**

| Impact BIO-3 | The project would not have a substantial adverse effect 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. |

**Impact Analysis**

The site does not contain vernal pools, seasonal wetlands, marshes, ponds, lakes, or riparian wetlands of any type. However, the San Francisco Bay is a jurisdictional feature subject to protection via Section 404 of the Clean Water Act, and the bay borders the areas proposed for development. Construction and operation of the project may lead to stormwater runoff that could enter the bay and adversely affect this protected wetland. However, the project’s design includes buffer zones of up to 100 feet along the shoreline to minimize any runoff from entering into the Bay, ultimately reducing impacts to the protected wetland. In addition, as previously analyzed for Impact BIO-2, the project will provide 19 bio-retention basins located throughout the site, which will provide treatment areas in excess of C.3 requirements. As discussed above, the stormwater drainage system will be sufficient to capture and treat stormwater prior to leaving the project site in compliance with C.3 requirements. (Refer to Section 4, Effects Found Not To Be Significant, Exhibit 4-2, Preliminary Storm Water Quality Plan.)

Compliance with Provision C.3 of the RWQCB Municipal Regional Permit would ensure that development of the project would not adversely affect federally protected wetlands as defined by Section 404 of the Clean Water Act.
Level of Significance Before Mitigation
Less than significant impact.

Mitigation Measures
No mitigation measures are required.

Level of Significance After Mitigation
Less than significant impact.

Wildlife Corridors and Nursery Sites

Impact BIO-4: The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites.

Impact Analysis
The project site does not include development within San Francisco Bay or other bodies of water, a condition that precludes the possibility of impacting fish species. The Biological Due Diligence Report (Moore 2011) does not include any recommendations or concerns regarding migratory wildlife corridors or nursery sites. A site visit conducted by an FCS biologist in September 2013 confirms this conclusion. Due to a lack of biological resources and suitable habitat present onsite, it is unlikely that wildlife would use the project site as a nursery site or corridor in the future. Therefore, the project will not interfere with movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites.

Level of Significance Before Mitigation
No impact.

Mitigation Measures
No mitigation measures are required.

Level of Significance After Mitigation
No impact.

Local Policies or Ordinances Protecting Biological Resources

Impact BIO-5: The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Impact Analysis
The project site is not located within a biological conservation zone. In addition, there are no trees or other resources of biological importance on the project site, and the project would not conflict with applicable policies and ordinances protecting biological resources. No impact would result.
**Level of Significance Before Mitigation**
No impact.

**Mitigation Measures**
No mitigation measures are required.

**Level of Significance After Mitigation**
No impact.

**Conservation Plans**

| Impact BIO-6: | The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. |

**Impact Analysis**
The project site is not located within the boundaries of an adopted habitat conservation plan or natural community conservation plan. This condition precludes the possibility of conflicting with provisions of applicable conservation plans. No impact would result.

**Level of Significance Before Mitigation**
No impact.

**Mitigation Measures**
No mitigation measures are required.

**Level of Significance After Mitigation**
No impact.
3.4 - Cultural Resources

This section describes the existing cultural resources and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on information contained in the Cultural Resource Report for the Seacliff Marina Project, which was prepared by LSA (LSA 2005), and is included in this Draft EIR as Appendix C. Although this report was prepared for an earlier proposed project that was never completed, the information and conclusions within the report remain valid and applicable to the site and the current project.

3.4.1 - Existing Conditions

Overview

The term “cultural resources” encompasses historic, archaeological, and paleontological resources, and burial sites. Below is a brief summary of each component:

- **Historic Resources**: Historic resources are associated with the recent past. In California, historic resources are typically associated with the Spanish, Mexican, and American periods in the State’s history and are generally less than 200 years old.

- **Archaeological Resources**: Archaeology is the study of prehistoric human activities and cultures. Archaeological resources are generally associated with indigenous cultures.

- **Paleontological Resources**: Paleontology is the study of plant and animal fossils.

- **Burial Sites**: Burial sites are formal or informal locations where human remains, usually associated with indigenous cultures, are interred.

3.4.2 - Cultural Setting

The following cultural setting information was taken from the LSA 2005 report that can be found in its entirety in Appendix C.

The Paleo-Archaic-Emergent cultural sequence developed by Fredrickson is commonly used to interpret the prehistoric occupation of Central California. The sequence is broken into three broad periods: the Paleoindian Period (10,000–6000 B.C.); the three-staged Archaic Period, consisting of the Lower Archaic (6000–3000 B.C.), Middle Archaic (3000–1000 B.C.), and Upper Archaic (1000 B.C.–A.D. 500); and the Emergent Period (A.D. 500–1800).

The Paleoindian Period began with the first entry of people into California. These people probably subsisted mainly on big game, minimally processed plant foods, and had no trade networks. The Archaic period is characterized by increased use of plant foods, elaboration of burial and grave goods, and increasingly complex trade networks. The Emergent Period is marked by the introduction of the bow and arrow, the ascendance of wealth-linked social status, and the elaboration and expansion of trade networks, signified in part by the appearance of clam disk bead money.

Archaeological excavations at sites in the San Francisco Bay region show evidence of Native American occupation dating from at least 5,500 years ago. Significant excavations near the study...
area were conducted by Nels Nelson at CA-CCO-295, the Ellis Landing Site, in Richmond between 1906 and 1908. A radiocarbon sample from CA-CCO-295 indicated Native American use of the estuarine environs of the Richmond area dating from at least 2,990 ±120 years before present era. (B.P.E.)

The descendents of the native groups that lived in the San Francisco and Monterey bay areas between Carquinez Strait and Point Sur prefer to be called Ohlone, although they are often referred to by the name of their linguistic group, Costanoan. Richmond is within the former territory of the Huichen tribelet of Ohlone, who occupied a large area in the East Bay dominated by freshwater marshes, wetlands, and grasslands. The Huichen spoke Chochenyo or East Bay Costanoan, one of eight Costanoan languages.

An Ohlone household was made up of about 15 individuals, with households grouping together to form villages. Throughout the eastern San Francisco Bay, including the Richmond area, many of these villages were located along waterways. Villages were aggregated into triblets, a politically independent landholding group, with less than a hundred to perhaps four hundred and occasionally five hundred people (LSA 2005).

For the Ohlone, like many other native Californians, the acorn was the dietary staple. The Ohlone used a range of other plant resources, including buckeye, California laurel, manzanita berries, goose berries, toyon berries, wild onion, cattail, amole, clover, and chuchapate. The Huichen in particular made use of abundant marine resources such as fish, marine mammals, and waterfowl.

In addition to sustenance, the Bay Area’s flora and fauna provided the Ohlone with raw materials for clothing, shelter, and boats. For example, the Ohlone built dome-shaped shelters thatched with ferns, tule, and grass. Basket making was generally done by women, who crafted cooking and storage containers, fish traps, and trays for leaching acorns. Tightly woven baskets, decorated with feathers or shell, were valued exchange items.

Intensive Hispanic exploration of the Bay Area began in the late eighteenth century. Ohlone culture was radically transformed when European settlers moved into northern California. These settlers set up the mission system and exposed the Ohlone to diseases from which they had no immunity. After the secularization of the missions in 1834, many native people in the Bay Area moved to ranchos, where they worked as manual laborers.

**Project Area and Vicinity History**

Contra Costa County history began with the arrival of the Fages-Crespi expedition in 1772, which expanded the exploration initiated by the Spanish in the Bay Area in 1769. The Mission and the Presidio of San Francisco were established in 1776 and Mission San Jose was established in 1797. However, the Spanish showed little interest in the Contra Costa (“other shore”) and established neither settlement nor outpost there.

After the independence of Mexico from Spain in 1821, tracts of land called ranchos were granted to citizens in Mexican California. The project area is partially within the boundaries of the Rancho San
Pablo—which was granted to Francisco Castro and his wife, Maria Gabriela Berryessa, in 1823—and title to which was formally approved by the Mexican government in 1834.

The Town of Richmond was established in 1899. The San Francisco and San Joaquin Railroad purchased land near Point Richmond in 1897, proposing to build railroad yards, shops, and a terminal for its transcontinental line. The company went bankrupt and was purchased by the Atchison, Topeka, and Santa Fe Railroad, which set the stage for continued growth in the area. Standard Oil Company purchased 85 acres on the west side of Potrero Hills and built a refinery that opened in 1902.

The Ford Motor Company opened in 1931 and was equipped to mass-produce 400 trucks and automobiles daily. The location of the plant on the Richmond inner harbor allowed parts and materials to be transported by steamships from the company’s East Coast manufacturing plants.

During World War II, Richmond developed into a center for military shipbuilding. Between 1941 and 1942, industrialist Henry J. Kaiser’s corporation, in association with Todd Shipyards, constructed four shipyards along the Richmond shoreline for the U.S. Maritime Commission. During peak production (1941 through 1945), the Kaiser shipyards in Richmond constructed 1,383 merchant ships and 107 warships, comprising 25.73 percent of the total U.S. Maritime Commission’s shipbuilding program production. One of the shipyards, Yard Three, used part of the project area as a steel yard.

In recent years, land usage in the vicinity of the project area has gradually transitioned from heavy industry to mixed uses and now includes the Rosie the Riveter/World War II Home Front National Historical Park, and residential, marina, commercial, and open space uses.

**Archaeological Sensitivity**

Along the Contra Costa County bay shoreline, Native American archaeological sites are typically located near creeks, estuaries, and the margins of bay tidal marshland. Background research indicates that the project area consists of approximately 30 feet of imported fill material. Although the project area is located at the edge of the Bay, it is unlikely that Native American archaeological sites are within the project area, since much of it was at least periodically inundated until the early 20th century.

A review of pre-1950 maps of the project area indicates buildings, a rail line, and an unimproved road transecting the project area. The project area was thought to have been part of Richmond Shipyard Number Three (Shipyard), a property listed in the National Register as a historic district in April of 2000. However, the official boundary for the Shipyard District was determined to be located approximately 0.25 mile west of the current project area. Although the project area is currently vacant, there is a possibility that potentially significant subsurface historical resources or features may be encountered during project construction. Such resources/features may include but are not limited to railroad grades, roadbeds, and building foundations.
3.4.3 - Regulatory Setting

Federal Regulations

Under National Historic Preservation Act (NHPA) Section 106, federal agencies are required to consider the effects of their actions on historic properties and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings. The agencies are responsible for initiating the Section 106 review process and for completing the requirements of the process. Section 106 requires that any federal or federally assisted actions, or any undertaking requiring federal licensing or permitting, consider the effect of the action on historic properties listed in or eligible for the National Register of Historic Places (NR). Under the Code of Federal Regulations (CFR) 36 CFR Part 800.8, all federal agencies are required to coordinate compliance with Section 106 and the National Environmental Policy Act (NEPA). The implementing regulations, “Protection of Historic Properties,” are found in 36 CFR Part 800, while NR listing eligibility is contained in 36 CFR Part 63 and criteria for resource evaluation is located in 36 CFR Part 60.4[a-d].

Properties less than 50 years old may be considered for listing in the NR if they exhibit exemplary cultural characteristics. Listing in the NR requires integrity, and it is the integrity of the resource that must be addressed first in any analysis.

The NHPA established the NR as the official federal list for cultural resources that are considered important because of their historical significance at the local, state, or national level. To be eligible for listing in the NR, properties must meet specific criteria for historic significance and possess certain levels of integrity of form, location, and setting. The criteria for listing in the NR are associated with national 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:

a) Is associated with events that have made a significant contribution to the broad patterns of our history;

b) Is associated with the lives of persons significant in our past;

c) Embodies the distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high artistic values, represent a significant and distinguishable entity whose components may lack individual distinction; and

d) Yields, or may be likely to yield, information important in prehistory or history.

State Regulations

California Register of Historical Resources

As defined by Section 15064.5(a)(3)(A-D) of the CEQA Guidelines, a resource shall be considered historically significant if the resource meets the criteria for listing on the California Register of Historical Resources (CR). The California Register of Historical Resources and many local preservation ordinances have employed the criteria for eligibility to the NRHP as a model, since the NHPA provides the highest standard for evaluating the significance of historic resources. A resource that
meets the NRHP criteria is clearly significant. In addition, a resource that does not meet the NRHP standards may still be considered historically significant at a local or state level.

**California Environmental Quality Act**

The CEQA Guidelines state that a resource need not be listed on any register to be found historically significant. The CEQA Guidelines direct lead agencies to evaluate archaeological sites to determine if they meet the criteria for listing in the California Register. If an archaeological site is a historical resource, in that it is listed or eligible for listing in the California Register, potential adverse impacts to it must be considered. If an archaeological site is considered not to be an historical resource but meets the definition of a “unique archeological resource” as defined in Public Resources Code Section 21083.2, then it would be treated in accordance with the provisions of that section.

**Local Regulations**

The City of Richmond Municipal Code (Chapter 6.06.060) lists six criteria that determine a resource’s eligibility for listing in the City’s historic register. The Richmond Historic Register consists of an inventory of historic resources within the City that have been recognized by the City’s Historic Preservation Review Committee and the Richmond City Council. In order to be considered for listing in the City’s historic register, a resource must meet at least one of the following criteria:

1) It exemplifies or reflects valued elements of the City’s cultural, social, economic, political, aesthetic, engineering, archaeological, or architectural history; or

2) Is identified with persons or events important in local, state, or national history; or

3) It reflects significant geographical patterns, including those associated with different eras of settlement and growth, particular transportation modes, or distinctive examples of park or community planning; or

4) It embodies distinguishing characteristics of an architectural style, type, period, or method of construction, or is a valuable example of the use of indigenous materials or craftsmanship; or

5) It is representative of the notable work of a builder, designer, or architect whose style influenced the City’s architectural development; or

6) A structure, site, or other improvement which meets any of the above criteria at the highest level, and whose loss would be a major loss to the City, may be designated a Richmond Historic Landmark. In addition, the municipal code states, “Procedural standards for evaluation of properties shall be consistent with the National Register of Historic Places Criteria.”

**3.4.4 - Thresholds of Significance**

According to the CEQA Guidelines’ Appendix G Environmental Checklist, to determine whether impacts to cultural resources are significant environmental effects, the following questions are analyzed and evaluated. Would the project:
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

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

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

d) Disturb any human remains, including those interred outside of formal cemeteries?

3.4.5 - Project Impact Analysis and Mitigation Measures

During the 30-day Notice of Preparation comment period, no comment letters were provided in regards to cultural resources.

This section discusses potential impacts associated with the proposed project and provides mitigation measures where necessary.

Historic Resource

Impact CR-1: The project would not cause a substantial adverse change in the significance of a historical resource as defined in §15064.5.

Impact Analysis

The project area was previously part of the NR-listed Richmond Shipyards Number Three, and review of pre-1950 maps indicates that buildings, a railroad line, and an unimproved road were present within the project area at that time. Therefore, although the project area is currently vacant, there is the possibility that remnants of railroad grades, roadbeds, and building foundations may be encountered during construction. However, it should be noted that the project area has been subject to remediation including excavation and removal of soil, which was completed in 2002. Because of past site disturbances and remediation activities, the potential for impacting buried historic-era resources is considered low.

No impacts to known historical resources would occur during project development. However, subsurface construction activities associated with the proposed project, such as trenching and grading, could potentially damage or destroy previously undiscovered historic resources. Accordingly, this is a potentially significant impact. Mitigation is proposed to reduce this potentially significant impact to a level of less than significant.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM CR-1 If a potentially significant cultural resource is encountered during subsurface earthwork activities for the project, all construction activities within a 50-foot radius of the find shall cease until a qualified archaeologist determines whether the
resource requires further study. The City shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Any previously undiscovered resources found during construction shall be recorded on appropriate Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of California Environmental Quality Act criteria by a qualified archaeologist. Potentially significant cultural resources consist of but are not limited to building materials, glass, ceramics, wood, railroad features, structural remains, or historic dumpsites. If the resource is determined significant under CEQA, the qualified archaeologist shall prepare and implement a research design and archaeological data recovery plan that will capture those categories of data for which the site is significant. The archaeologist shall also conduct appropriate technical analyses, prepare a comprehensive report and file it with the appropriate Information Center, and provide for the permanent curation of the recovered materials.

Level of Significance After Mitigation
Less than significant impact after mitigation.

Archaeological Resource

Impact CR-2: The project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.

Impact Analysis
A cultural resource study was prepared by LSA in 2005 for the former Seacliff Marina Project (which contains the current project area). According to the LSA study, the project area is moderately sensitive for archaeological resources. The LSA report indicated that no archaeological resources have been previously recorded within the project area or a 0.25-mile radius, nor were any encountered during the field survey.

The likelihood that previously undiscovered archaeological resources are present within the project site is considered to be low.

However, there is always the possibility that ground-disturbing activities during project development could potentially impact prehistoric or historic archaeological resources. Prehistoric resources can include flaked-stone tools (e.g., projectile points, knives, and choppers) or obsidian, chert, or quartzite toolmaking debris; culturally darkened soil (such as midden soil containing heat-affected rock, ash, and charcoal, shellfish remains, and animal bones); and stone milling equipment (e.g., mortars, pestles, handstones). Historical materials can include wood, stone, foundations, and other structural remains; debris-filled wells or privies; and deposits of wood, glass, ceramics, and other refuse. Accordingly, this is a potentially significant impact. Mitigation is proposed to reduce this potentially significant impact to a level of less than significant.

Level of Significance Before Mitigation
Potentially significant impact.
Mitigation Measures

MM CR-2 If areas of prehistoric or historic archaeological resources are encountered during subsurface excavation, all work within 50 feet of the discovery shall cease until a qualified archaeologist can determine the significance of the find. The discoveries shall be evaluated for their CR and NR eligibility and recommendations made. The identified resource(s) area shall be avoided by project activities during evaluation. The City shall require a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. Upon completion of the archaeologist’s evaluation, a report shall be prepared documenting the methods and results, and offering recommendations.

Level of Significance After Mitigation

Less than significant impact after mitigation.

Paleontological Resource or Geologic Feature

Impact CR-3: The project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Impact Analysis

The proposed project area is not located in an area that is considered likely to have paleontological resources present. Fossils of plants, animals, or other organisms of paleontological significance have not been discovered at the project site, nor has the site been identified to be within an area where such discoveries are likely. The type of depositional environment at the project area typically does not present favorable conditions for the discovery of paleontological resources. Artificial fill at a depth of up to 30 feet, which possesses no paleontological sensitivity, underlies the entire project area. The Franciscan Complex underlies the artificial fills and consists of a sedimentary and volcanic rock that can contain a sparse but diverse assemblage of fossils. However, most of the fossils are found in an open water and, therefore, in a deep-marine setting.

Therefore, excavations at depths shallower than, conservatively, 20 feet would have no impact to scientifically significant paleontological resources, since this would still be within the fill areas. Therefore, because ground disturbance would be within artificial fill with no paleontological sensitivity, no impacts to paleontological resources are anticipated from project development.

In this context, the project would not result in impacts to paleontological resources or unique geologic features. However, if significant paleontological resources are discovered, implementation of Mitigation Measure CR-3 will reduce this potential impact to a less than significant level.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

MM CR-3 In the event that fossils or fossil-bearing deposits are discovered during construction, excavations within 50 feet of the find shall be temporarily halted or
diverted until a qualified paleontologist is allowed to examine the discovery. The paleontologist shall document the discovery as needed in accordance with Society of Vertebrate Paleontology standards (Society of Vertebrate Paleontology 1995). The evaluation shall include an assessment of the significance of the find under the criteria set forth in CEQA Guidelines Section 15064.5.

The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume. If avoidance of the resource is determined to be unfeasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important. The plan shall be submitted to the City for review and approval prior to implementation.

**Level of Significance After Mitigation**
Less than significant impact after mitigation.

**Human Remains**

| Impact CR-4: | The project would not disturb any human remains, including those interred outside of formal cemeteries. |

**Impact Analysis**
There are no known burial sites within the project area and the field survey did not find any evidence of human remains or burial goods within the project area. In addition, none of the previous surveys within a 0.25-mile radius reported finding any human remains. Nonetheless, the possibility exists that subsurface construction activities may encounter undiscovered human remains. Accordingly, this is a potentially significant impact. Mitigation is proposed to reduce this potentially significant impact to a level of less than significant.

**Level of Significance Before Mitigation**
Potentially significant impact.

**Mitigation Measures**

**MM CR-4**

In the event of the accidental discovery or recognition of any human remains, CEQA Guidelines § 15064.5; Health and Safety Code § 7050.5; Public Resources Code § 5097.94 and § 5097.98 must be followed. If during the course of project development there is accidental discovery or recognition of any human remains, the following steps shall be taken:

1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains to be Native American, the coroner shall contact the Native American Heritage Commission (NAHC) within 24 hours, and the NAHC shall identify the person or persons it believes to be the “most likely descendant” (MLD) of the
deceased Native American. The MLD shall make recommendations to the landowner or the person responsible for the excavation work within 48 hours, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98.

2. Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendant or on the project site in a location not subject to further subsurface disturbance:

- The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission.
- The descendant identified fails to make a recommendation.
- The landowner or his authorized representative rejects the recommendation of the descendant, and mediation by the NAHC fails to provide measures acceptable to the landowner.

**Level of Significance After Mitigation**

Less than significant impact after mitigation.
3.5 - Geology and Soils

This section describes the existing geology and soils and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on information contained in the Geotechnical Exploration Seacliff Marina Point Richmond, California prepared in April 2004 by ENGEO Incorporated and the Geotechnical Feasibility Evaluation Bottoms Property Residential Development Point Richmond, California prepared in December 2012 by Miller Pacific Engineering Group, included in this Draft EIR as Appendix D.

3.5.1 - Existing Conditions

Geologic Conditions

Topography
The project site is located in the City of Richmond within the San Francisco Bay Area. The project site consists of five parcels totaling 25.27 acres, of which approximately 14 acres are located under San Francisco Bay. The site is relatively flat, with a small depression in the center of the site, and a bluff along the northern boundary where the grade rises sharply to the homes along Seacliff Place.

Surface elevations range from sea level to 10 to 14 feet above mean sea level (MSL) in the mid-section of the site, to approximately 60 feet above MSL at the top of the bluff. The shoreline of the project site consists of riprap armored slopes that incline at 2:1 (horizontal: vertical) or steeper. No open creek or stream channels cross the site.

Geology and Soils
The project site is located within the California’s Coast Range Geomorphic Province. This seismically active region includes the Central and Northern Coastal Mountain Ranges. In general, the onsite geology consists of layers of fill, bay mud, stiff alluvium, and bedrock. The fill is present from approximately 1 to 30 feet and consists of silty, sandy, gravel with extensive cobbles and boulders (ENGEO 2004). Below the fill lies the native soil, or bay mud, that consists of soft to very soft silty clay and clayey silt. The layer of bay mud is approximately 0 to 25 feet thick. Beneath the layer of bay mud lies older alluvium and bedrock. The stiff alluvium is on average 10 feet thick, although it may reach up to 30 feet. The fill and soil are variable in both composition and thickness throughout the site; however, both soil and fill are generally thicker toward the south of the project site. Groundwater was observed at approximately 6 to 15 feet below ground surface during site exploration but may fluctuate tidally or during periods of heavy rain.

Seismic Conditions
The San Francisco Bay Area is known for strong seismic activity that is due to the tectonic plate boundary between the North American and Pacific lithospheric plates, also known as the San Andreas Fault Zone (SAFZ). The active faults in the area both east and west of the project site include the San Andreas, San Gregorio, Hayward, and Rodgers Creek. The nearest of these faults to the project site are the Hayward fault, which lies approximately 4 miles northeast, and the Rodgers Creek fault, located approximately 13 miles northwest of the project site.
The geotechnical feasibility evaluation found that 45 earthquakes have occurred within 62 miles of the project site between 1769 and 2012. The Uniform California Earthquake Rupture Forecasts (UCERF) assigns probabilities of M>6.7 events on the nearest mapped active faults by 2038. Within the UCERF probabilities, the Hayward-Rodgers Creek Fault System and San Andreas Fault (northern section) have probabilities of 31 percent and 21 percent, respectively, of an M>6.7 by 2038.

**Surface Rupture**
Surface rupture is the breaking of the ground as a result of fault movement during an earthquake. There are no known faults located within the project site; therefore, there is a low surface rupture potential. In addition, no portion of the project site is located within an Alquist-Priolo Earthquake Fault Zone.

**Ground Shaking**
The nearest source of seismic activity would be the Hayward Fault, located approximately 4 miles from the project site. Ground shaking felt at the project site would most likely be related to activity on the Hayward Fault, although it could also result from the Rodgers Creek Fault or the San Andreas Fault.

**Liquefaction and Lateral Spreading**
Liquefaction is the short-term change of loose, granular sediments from a solid state to a liquefied state as a result of seismic ground shaking. According to the “Earthquake Liquefaction Susceptibility Map,” the project site is located in an area that has a liquefaction susceptibility level of “very high” (ABAG 2011). The Richmond General Plan 2030 includes the project site in an area where liquefaction risk is “Potentially Present.” The USGS maps the project site as an area with “very high liquefaction potential” (USGS 2006).

In general, the potential for liquefaction is the highest within areas that are underlain by bay fill, bay mud, and unconsolidated alluvium. However, the majority of the project site is underlain by 10 to 15 feet of well-consolidated fill or bedrock materials that are not susceptible to liquefaction. In addition, as loose to medium-dense gravelly and silty sands were encountered during the exploration of the project site, liquefaction could occur; however, it is likely that the surface effects of liquefaction at depth would be minimal as a result of the thickness of these soils.

As indicated in the geotechnical reports, lateral spreading is a seismic hazard associated with liquefaction of laterally extensive loose granular soil layers. Based on field explorations the project site contains occasional, discontinuous thin pockets of saturated loose sand, which is present in localized pockets. As the only loose granular materials at the project site are localized and not uniformly distributed throughout the site, the risk of lateral spreading at the project site would be expected to be low.

**Slope Stability**
The project site is generally level, although it is bounded by moderately steep fill slopes to the northwest and a tall, near-vertical rock cut to the north. Based on the Geotechnical Reports, the fill slopes appear essentially stable at this time and are not expected to present a significant slope-
stability hazard, although there is some potential for lateral displacements during a seismic event. Additionally, minor localized erosion may result in accumulation of debris requiring periodic maintenance and cleanup.

**Settlement and Differential Settlement**

The geotechnical reports estimate the settlement of the bay mud under the fill loads to be essentially complete, because the site was filled decades ago. Any additional loads of either fill or structures would be anticipated to induce additional settlement over many years.

**Landslide Susceptibility**

The project site is not located near any historical landslides, and is primarily characterized by flat relief, with a small depression in the center of the site and a small bluff in the northern portion of the site adjacent to the Seacliff Estates residential neighborhood. The City of Richmond's General Plan 2030 Landslide Potential Map 12.1 lists the project site as a Category 1A unstable area. This listing identifies the project site as an area of 0-5 percent slope that includes tidelands, marshlands, and swamplands underlain by moist, unconsolidated muds. The bluff provides the potential for rock fall. In recognition of this situation, the project design includes cleaning the rock walls of loose materials, placement of a catchment area at the base of the slope or providing stable facing material, and construction of a retaining wall along a central segment of the bluff. In addition, the geotechnical feasibility evaluation estimated the risk of damage at the site due to various modes of slope instability to be low to moderate.

**3.5.2 - Regulatory Setting**

**State Regulations**

**State**

*Alquist-Priolo Earthquake Fault Zoning Act*

In response to the severe fault rupture damage of structures by the 1971 San Fernando earthquake, the State of California enacted the Alquist-Priolo Earthquake Fault Zoning Act in 1972. This act required the State Geologist to delineate Earthquake Fault Zones (EFZs) along known active faults that have a relatively high potential for ground rupture. Faults that are zoned under the Alquist-Priolo Act must meet the strict definition of being “sufficiently active” and “well-defined” for inclusion as an EFZ. The EFZs are revised periodically, and extend 200 to 500 feet on either side of identified fault traces. No structures for human occupancy may be built across an identified active fault trace. An area of 50 feet on either side of an active fault trace is assumed to be underlain by the fault, unless proven otherwise. Proposed construction in an EFZ is permitted only following the completion of a fault location report prepared by a California Registered Geologist.

*California Building Standards Code*

Title 24 of the California Code of Regulations, also known as the California Building Standards Code, sets forth minimum requirements for building design and construction. The California Building Standards Code is a compilation of three types of building standards from three different origins:
Building standards that have been adopted by state agencies without change from building standards contained in national model codes.

Building standards that have been adopted and adapted from the national model code standards to meet California conditions.

Building standards, authorized by the California legislature, that constitute extensive additions not covered by the model codes that have been adopted to address particular California concerns.

In the context of earthquake hazards, the California Building Standards Code’s design standards have a primary objective of assuring public safety and a secondary goal of minimizing property damage and maintaining function during and following a seismic event. Recognizing that the risk of severe seismic ground motion varies from place to place, the California Building Standards Code seismic code provisions would vary depending on location (Seismic Zones 0, 1, 2, 3, and 4; of which 0 is the least stringent and 4 is the most stringent).

Local Regulations

Richmond General Plan 2030

The City of Richmond General Plan Public Safety and Noise Element contains the following goals, policies, and actions that address geology and soils and are applicable to the project:

- **Goal SN1: Risk Management of Natural and Human-Caused Disasters**
  - **Policy SN1.1: Geologic and Seismic Safety.** Minimize the risk of injury, loss of life, and property damage from seismically induced and other known geologic hazards. Regulate land use and apply development standards and construction practices to reduce the risk to humans and property in the event of an earthquake or other geologic activity.
  - **Action SN1.A: Earthquake Fault Zone.** Utilize the existing Alquist-Priolo Earthquake Zone Maps to guide the location of development and utilities to safe areas, and enforce use restrictions where necessary. Where development is proposed within the zone, require study of potential impacts related to fault movement in the design of all structures, roadways, utility lines and other facilities.
  - **Action SN1.B: Building Structure Safety Standards.** Regularly review and update building standards and guidelines to ensure that all structures in private, public or quasi-public ownership including municipal buildings are designed to protect people and property from hazards.
  - **Action SN1.C: Geotechnical Review Guidelines.** Regularly review and update geotechnical review guidelines for major redevelopments or new developments to determine the degree of seismic and geologic hazards that might be expected for a particular structure or location. Guidelines should require site specific geotechnical studies on a case-by-case basis for projects proposed to be built on, or adjacent to, inactive bedrock faults or other potential geologic hazards including geologic anomalies, slope instability or other potentially hazardous conditions. Ensure that the investigation is performed by technically qualified staff.
3.5.3 - Thresholds of Significance

According to the CEQA Guidelines’ Appendix G Environmental Checklist, to determine whether impacts to geology and soils are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a) Expose people or structures to 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? Refer to Division of Mines and Geology Special Publication 42.
   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 18-1-B 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?

3.5.4 - Project Impact Analysis and Mitigation Measures

This section discusses potential impacts associated with the project and provides mitigation measures where necessary.

During the 30-day Notice of Preparation comment period, two comment letters were received that addressed geology and soils, which are included within Appendix A of this Draft EIR.

Methodology for Analysis

A site inspection was conducted by Miller Pacific Engineering personnel on December 18 and 19, 2012, the results of which are included in the analysis. FirstCarbon Solutions (FCS) evaluated potential project impacts on geology and soils using the Miller Pacific Engineering report, as well as through review of the City of Richmond General Plan. See Exhibit 3.5-1 for the Project’s Preliminary Grading Plan.
Earthquakes

**Impact GEO-1:** The project would not expose people or structures to 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? Refer to Division of Mines and Geology Special Publication 42.

ii) Strong seismic ground shaking.

iii) Seismic-related ground failure, including liquefaction.

iv) Landslides.

**Impact Analysis**

The project site is not located in an Alquist-Priolo Earthquake Zone fault as defined by the California Department of Conservation, Geological Survey. No active faults traverse the site, and the nearest active fault is the Hayward Fault located approximately 4 miles to the northeast. Therefore, the potential for surface rupture is considered less than significant.

The San Francisco Bay Area is known for strong seismic activity. The Hayward fault is the nearest active fault to the project site located approximately 4 miles to the northeast, and the strongest shaking would most likely be felt from this fault. Seismic hazards cannot be completely eliminated, but site-specific geotechnical investigation and advanced building practices would minimize potential impacts from a seismic event. In the Bay Area, because of its geology, exposure to seismic hazards is generally expected to some degree. However, the California Building Code (CBC) requires that project structures be designed with adequate strength to withstand the lateral dynamic displacements induced by the Design Basis Ground Motion, which the CBC defines as the earthquake ground motion that has a 2-percent chance of being exceeded in 50 years. The project is required to comply with the CBC and all California seismic design requirements, which would ensure that the project would not expose persons or property to strong seismic ground shaking hazards. Impacts would be less than significant.
Exhibit 3.5-1
Preliminary Grading Concept

Source: Carlson, Barbee & Gibson, Inc., July 2013.
Seismic shaking can also cause ground failures such as liquefaction events. Liquefaction potential is highest in areas underlain by bay fill, bay mud, and unconsolidated alluvium. The Association of Bay Area Governments (ABAG) has produced maps showing areas with water-saturated sand and silt materials that are susceptible to liquefaction in a seismic event. The maps are not intended to be site specific, but generally describe the risks of an area or neighborhood. According to the “Earthquake Liquefaction Susceptibility Map,” the project site is located in an area that has a liquefaction susceptibility level of “very high” (ABAG 2011). The Richmond General Plan 2030 includes the project site in an area where liquefaction risk is “Potentially Present.” The USGS maps the project site as an area with “very high liquefaction potential” (USGS 2006). While the site-specific level of risk due to liquefaction cannot be determined, it is likely that the project site is located within a liquefaction risk area. Liquefaction risks can be mitigated through a variety of approaches that utilize building structure strategies and soil improvements (Southern California Earthquake Center 1999). Soil improvements can be achieved by soil densification and hardening (mixing) techniques. Structural strategies include transmitting lateral loads to deeper supporting soils, and employing guidelines set forth by the Universal Building Code (UBC). Site design plans for the proposed project must be approved before the issuance of permits, and the Applicant would be required to implement Best Management Practices in accordance with the UBC that mitigate liquefaction and seismic risks, typical of the San Francisco Bay region. Implementation of Mitigation Measure GEO-1 would ensure potential impacts related to seismic ground failure, including liquefaction, would be less than significant.

The project site is designated by the City of Richmond’s General Plan 2030 Landslide Potential Map 12.1 as a Category 1A unstable area. This area is defined as an area of 0 to 5 percent slope that includes tidelands, marshlands, and swamplands, that is underlain by moist, unconsolidated muds. The site is not located near any historical landslides, and is primarily characterized by flat relief, with a small depression in the center of the site and a small bluff in the northern portion of the site adjacent to the Seacliff Estates residential neighborhood. Because rock fall is a potential hazard near the bluff, the project proposes to clean the walls of the bluff of loose materials and place a catchment area at the base of the slope, or provide stable facing material for the slope. Additionally, a retaining wall along a central segment of the bluff is included in the design of the project. With the incorporation of these safety features, impacts from landslides would be less than significant.

**Level of Significance Before Mitigation**

Potentially significant impact.

**Mitigation Measures**

The following mitigation measure would reduce impacts to less than significant levels.

**MM GEO-1**

Prior to issuance of a grading permit, a qualified geotechnical engineer or engineering geologist shall prepare a design-level geotechnical investigation to provide site preparation and design recommendations related to site-specific geologic conditions, including seismic-related ground failure, shaking, and liquefaction. The recommendations of the design-level geotechnical investigation
shall be incorporated into the project plans and provided to the City of Richmond for review and approval.

**Level of Significance After Mitigation**
Less than significant impact after mitigation.

**Soil Erosion or Topsoil Loss**

**Impact GEO-2:** The project would not result in substantial soil erosion or the loss of topsoil.

**Impact Analysis**
Soil exposed by grading activities during development of the proposed project could be subject to erosion if exposed to heavy winds or rain. The National Pollutant Discharge Elimination System (NPDES) stormwater permitting programs regulate stormwater quality from construction sites and new development, which includes erosion and sedimentation. Construction projects that disturb 1 acre or more are required to obtain a permit and prepare a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP includes a site map, description of stormwater discharge activities, and best management practices that would be employed to prevent water pollution. The SWPPP for general construction activity permits must describe Best Management Practices (BMPs) that would be used to control soil erosion and discharges of other construction-related pollutants that could contaminate nearby water resources.

Typical BMPs intended to control erosion include sand bags, detention basins, silt fencing, storm drain inlet protection, street sweeping, and monitoring of water bodies. Implementation of BMPs consistent with NPDES construction regulations would ensure the reduction of potential pollutants during stormwater discharges. Construction activities must comply with the SWPPP and NPDES permit, which provide methods and strategies to reduce soil erosion from construction related activities and reduce potential impacts to less than significant.

**Level of Significance Before Mitigation**
Less than significant impact.

**Mitigation Measures**
No mitigation measures are required.

**Level of Significance After Mitigation**
Less than significant impact.

**Unstable Geologic Location**

**Impact GEO-3:** The project would 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.
Impact Analysis

The project site is generally level, although it is bounded by moderately steep fill slopes to the northwest and a tall, near-vertical rock cut (bluff) to the north. While the fill slopes were likely constructed within the last 20 years, their long-term performance is dependent on the quality of their engineering and construction. Based on the Geotechnical Report prepared for the project (see Appendix D), the fill slopes appear essentially stable at this time and are not expected to present a significant slope-stability hazard, although there is some potential for lateral displacement during a seismic event. Additionally, minor localized erosion may result in accumulation of debris requiring periodic maintenance and cleanup.

Significant settlement can occur when new loads are placed at sites that are located over Bay Mud. The southern and eastern portions of the project site are underlain by deposits of bay mud up to about 20-feet thick. The amount and rate of settlements are dependent on the amount of additional (new) loads, previous loading history, the thickness of compressible material, and the inherent compressibility properties of the bay mud.

Differential settlements are also possible due to variations in the thickness of compressible bay mud; variations in new long-term loads (fill thickness or foundation loads) and variations in historic use of the land; such as old channels or low points through the site that may have required thicker fills, or previous “surcharges” such as old structures or fill mounds. Because the site was filled several decades ago, the bay mud has likely completed the majority or all of its primary consolidation under the loads from the existing fill and previous site structures. Environmental remediation reportedly involved creation of a soil stockpile up to 20-feet high, the location of which should be determined so that its potential impact on settlements can be further evaluated. Small secondary settlements, however, may still be occurring.

A few feet of existing fill soils would be excavated under new structures proposed in the southernmost portions of the site, and up to 20 feet of new fill would be required to raise roadway grades along the eastern site boundary. Where existing fill will be removed, new “net” loads imposed by the new buildings would likely be relatively small and therefore would reduce the expected total settlement (Geotechnical Feasibility Evaluation, 2012). Where new fills are planned, such as for the access road along the eastern site boundary, moderate to significant new settlements should be expected. Settlement is inevitable in areas underlain by bay mud and would be increased if new fill or building loads are applied to the existing ground surface. The fills could also induce settlement beneath the adjacent sloping concrete cap and Canal Boulevard. The potential for settlement-related damage to on- and offsite improvements is moderate to high. This is a potentially significant impact.

The bluff includes exposures of very hard graywacke sandstone and shale bedrock. The rock cut presents little threat of “global” instability, though some moderately sized overhanging blocks near the top of the cut could present a rockfall or toppling hazard where present. Additionally, the crushed shale interbeds and more highly fractured zones within the sandstone are susceptible to
occasional raveling\(^1\), as evidenced by the moderate talus piles at the base of the cut. The geotechnical report concludes that the risk of damage at the site due to various modes of slope instability is generally low to moderate, which is a potentially significant impact.

The project will conduct additional investigations at the site (see Mitigation Measures GEO-1 and GEO-2). New improvements will be designed in accordance with the provisions of the latest edition of the California Building Code (2010 CBC). Seismic design coefficients for the new improvements will likely vary across the site, due to differing and gradational thicknesses of variable subsurface materials. Therefore, several different structural designs will likely be required for buildings underlain by materials of varying thickness or composition. Consequently, with implementation of Mitigation Measures GEO-1 and GEO-2, the project will be consistent with the California Building Code’s seismic design criteria and will reduce impacts to a level of less than significant.

**Level of Significance Before Mitigation**

Potentially significant impact.

**Mitigation Measures**

The following mitigation measures would reduce impacts to less than significant levels.

**MM GEO-3a** Additional subsurface exploration, laboratory testing, and engineering analysis shall be performed as part of a design-level investigation to quantify the amount and rate of expected future settlements based on the proposed site grading and expected building loads. As directed by the City Attorney, alternatives to reduce settlement/subsidence may include minimizing the amount (weight) of new foundation loads by supporting the new structures on deep foundations, over-excavating beneath building footprints to “offset” new loads, surcharging the site to accelerate settlement prior to construction, or designing the proposed structures to withstand total and differential ground settlements. Lightweight fill such as lava rock or synthetic materials such as Styrofoam shall also be considered to raise grades, if needed.

**MM GEO-3b** New improvements shall be set back a minimum of 15 feet from the base of the near-vertical rock cut at the site’s northern boundary. Alternatively, a catchment wall or other retaining structure, such as soil nails and Tecco mesh or a Geobrugg-type debris barrier, shall be considered as part of a project design feature.

**Level of Significance After Mitigation**

Less than significant impact after mitigation.

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\(^1\) Raveling occurs when weak rocks destabilize as a result of their low strength and high deformability.
Expansive Soil

Impact GEO-4: The project would not be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

**Impact Analysis**
The project site consists of vacant, disturbed land previously used for marine industrial uses and contains fill. As a result, expansive soils would not be encountered during construction activities associated with the proposed project. Moderate and highly plastic silts and clays, when located near the ground surface, can exhibit expansive characteristics (shrink-swell) that can be detrimental to structures and flatwork during periods of fluctuating soil moisture content. No evidence of expansive soils was observed on site, and the “stiffened” foundation that would likely be required to mitigate for potential soil movement, would also improve performance if expansive soils are encountered. Impacts related to construction on expansive soils would be less than significant.

**Level of Significance Before Mitigation**
Less than significant impact.

**Mitigation Measures**
No mitigation measures are required.

**Level of Significance After Mitigation**
Less than significant impact.

Wastewater Disposal Systems

Impact GEO-5: The project would not 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.

**Impact Analysis**
The project would have 8-inch-diameter gravity sewer lines that convey flows to an existing East Bay Municipal Utility District pump station in Seacliff Drive; therefore, the project would be connected to an existing sewer system. No septic or alternative wastewater disposal systems would be installed as part of the proposed project. No impacts would occur.

**Level of Significance Before Mitigation**
No impact.

**Mitigation Measures**
No mitigation measures are required.

**Level of Significance After Mitigation**
No impact.
3.6 - Land Use and Planning

This section describes existing land use and planning policies and the potential effects of project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on information contained in the City of Richmond General Plan 2030, the Richmond Zoning Ordinance, and the City of Richmond Municipal Code.

3.6.1 - Existing Conditions

The project site consists of approximately 25.27 acres of undeveloped land within the City of Richmond, Contra Costa County, California. The project site extends into San Francisco Bay, with approximately 14.26 acres located under water (shown in Section 2, Project Description’s Exhibit 2-2). The landward portion of the site includes approximately 11 acres.

Of the landward acreage, approximately 6.49 acres are developable. The remaining land areas include 2.26 acres under the jurisdiction of the Bay Conservation and Development Commissions, 2.13 acres forming a buffer from the Port property along the eastern property line, and 0.241 acre of public right-of-way.

Furthermore, the property has been subject to remediation, and all remediation has been completed to the satisfaction of the Department of Toxic Substances Control (DTSC), which issued a No Further Action letter in 2002 (see 2011 Phase I ESA, Draft EIR Appendix F). The DTSC placed a Covenant to Restrict Use of Property on two parcels (Assessor’s Parcel Numbers [APNs] 560-340-042 and 560-660-073) The total acreage of the two APNs includes 1.93 acres for APN 560-340-042 and 1.85 acres for APN 560-660-073, totaling 3.78 acres. No residential uses are proposed within these restricted areas, which are generally located within the Bay Trail easement and within the right-of-way of Seacliff Drive (see Project Description Exhibit 2-4).

Surrounding Land Use

West

Seacliff Drive and a portion of the San Francisco Bay bound the project site to the west. The Brickyard Cove residential neighborhood is situated beyond Seacliff Drive. The Class I Ferry Point multi-use trail runs along the landward side of Seacliff Drive.

North

The northern boundary of the project site includes the Seacliff Estates single-family residential neighborhood.

East

The project site is bounded by Canal Boulevard and the Port of Richmond Shipyard No. 3 to the East.

South

San Francisco Bay forms the southern boundary of the project site.
Land Use Designations and Zoning

The City of Richmond General Plan designates the project site Medium Density Residential, which permits the development of single- and multi-family housing types such as one- to three-story garden apartments, historic bungalows, and cottages on small lots, townhouses, and stacked flats. Neighborhood mixed-use development is allowed at neighborhood nodes (which is defined as a neighborhood that offers access to retail, employment, and services within walking distance of homes). The designation permits a density of 10 to 40 dwelling units per acre (du/ac), and generally allows building heights up to 35 feet, subject to variations among zoning districts.

The project site currently contains four Zoning Districts: Planned Area (PA), Coastline Commercial (CC), Community Regional Recreation (CCR), and Marine Industrial (M4). See Section 2, Project Description’s Exhibit 2-5, Zoning Map, for the zoning of the project site and adjacent properties.

The area surrounding the project site includes properties with General Plan Land Use Designations of Port to the west, and Parks and Recreation and Low-Density Residential to the north and east. Building heights of up to 35 feet are permitted under the Parks and Recreation and Low-Density Residential General Plan Land Use Designations, and building heights of up to 100 feet are permitted in the Port General Plan Land Use Designation. The area surrounding the project site includes the following Zoning Districts: Marine Industrial (M-4) and Heavy Industrial (M-3) to the east, Community and Regional Recreational (CRR) and Planned Area (PA) to the north, and Multifamily Residential (MFR-1) and Single-Family Low Density Residential (SFR-3) to the west.

3.6.2 - Regulatory Setting

Bay Area Association of Governments

The Association of Bay Area Governments (ABAG) is the regional governing body for the nine counties and 101 cities and towns of the San Francisco Bay region. As a Metropolitan Planning Organization (MPO), ABAG’s main responsibility under state and federal law is preparing the Regional Transportation Plan (RTP) and the Regional Housing Needs Assessment (RHNA). The RTP involves preparation of long-range transportation plans and development and adoption of transportation improvement programs that allocate state and federal funds for highway, transit, and other surface transportation projects. While ABAG does not have formal regulatory authority and cannot directly implement land use decisions, ABAG guides land use planning for the San Francisco Bay region through intergovernmental coordination and consensus building. ABAG serves as the regional clearinghouse for projects requiring environmental documentation under state and federal law. In this role, ABAG reviews proposed development and infrastructure projects to evaluate their impacts on regional planning programs.

Local Regulations

City of Richmond General Plan

Land Use and Urban Design Element

The General Plan establishes a broad vision and framework for land use for urban design in Richmond. The General Plan is designed seeks to define and locate general land uses throughout the city; specify acceptable building heights per land use type; describe the intent and direction of
Richmond’s urban design; link allowable land uses with recommended urban design components; describe area-specific recommendations for street typology, character of buildings, and treatment of the public realm; and include overarching citywide design principles, goals and policies to achieve a high-quality urban environment. The General Plan includes several key Goals and Policies that apply to the project site and the proposed development:

- **Goal LU 1: An Improved Urban Environment.** Improve the urban fabric by crafting development strategies that emphasize high-density, mixed-use infill development and a safe, vibrant, economically-sustainable environment that takes advantage of existing infrastructure and public facilities. Provide improvements that strengthen connections between neighborhoods and amenities such as retail, community facilities, parks, and open space areas.
  - **Policy LU 1.1: Higher-Density and Infill Mixed-Use Development.** Provide higher-density and infill mixed-use development affordable to all incomes on vacant and underutilized parcels throughout the City. Ensure efficient use of land and existing circulation infrastructure by:
    - Promoting higher-density, transit-oriented and pedestrian-friendly development along key commercial corridors, at key intersections (community nodes and gateways); and
    - Supporting local-serving commercial activities in residential areas to provide needed services and amenities close to where people live and work.

- **Goal LU 2: Healthy and Viable Neighborhoods.** Creating healthy and viable neighborhoods that provide safe places for people of all ages, ethnicities and abilities to live, work, and play. Equitably distribute community facilities, urban parks and small public gathering areas to provide all residents with opportunities to enjoy the benefits of a rich social and physical environment. Further support residents’ daily needs requiring small-scale local retail and other neighborhood-supporting uses within walking distance of homes. Encourage development of neighborhood nodes that increase convenient access to local services and amenities.
  - **Policy LU 2.2: Compact Walkable Neighborhoods and Livable Streets.** Promote safe and walkable neighborhoods and inter-connected streets through the design of streetscapes, public gathering places and all types of physical development. Provide pedestrian amenities such as sidewalks and street trees, transit and bike improvements, lighting and landscaping, and appropriate traffic calming measures to ensure a safe pedestrian environment. Support uses and public space improvements that generate street-level activity, create eyes-on-the-street, provide opportunities for community interaction and encourage a sense of collective ownership of common areas. Encourage mixed-use development that attracts people and facilitates activity throughout the day. Prohibit isolated or gated communities in order to improve physical connectivity throughout the City, and create incentives to remove barriers in existing gated areas. Maintain streets to ensure that neighborhoods and streets are safe and well used.

- **Goal LU 4: Enhance Environmental Quality.** Protect and preserve natural resources to nurture environmental and human health. Work with local and regional regulating bodies to protect water quality in creeks and bays, and to reduce or mitigate air, water and soil pollution and
contamination. Encourages the sensitive integration of built and natural environments to develop a high-quality urban experience.

- **Policy LU 4.1: Richmond Shoreline.** Minimize the impacts of development on the shoreline with special attention to intensity, density, and proximity to the water. Conserve, protect, and enhance natural and cultural resources along the Richmond shoreline. Promote a balance of uses along the shoreline that supports multiple community needs such as economic development, recreation, historic preservation, and natural resource protection.
  - Provide a mix of residential and recreation uses in the Southern Gateway change area; support an active industrial waterfront around the Port and along the Santa Fe Channel; and promote a cultural heritage shoreline west of the Port.
  - Protect and restore wetlands, native habitats and open space; develop shoreline parks and trails to increase public access; encourage recreation and tourism activities; and enhance and showcase historic and cultural resources. Prepare, adopt, and implement plans that will protect natural and built environments from adverse potential impacts of sea level rise due to climate change.

- **Policy LU 4.2: Open Space and Conservation Areas.** Preserve open space areas along the shoreline, creeks, and in the hills to protect natural habitat. Maintain the integrity of hillsides, creeks, and wetlands. Protect existing open space, agricultural lands, and parks.

- **Goal 5: Balanced and Compatible Uses.** Achieve a mix of land uses that is ecologically, economically, and socially equitable and sustainable. Encourage a mix of uses in major activity centers, community nodes and gateways, in neighborhood nodes and along key corridors as well as in some industrial areas. Using this pattern and range of land uses, activate focal areas of the City throughout the day and evening, and provide convenient access to goods, services and community amenities.

- **Policy LU 5.1: A Balanced Mix of Land Uses.** Promote a balanced mix of uses in major activity centers, community nodes and gateways, in neighborhood nodes (corner commercial clusters), and along key corridors as well as in industrial areas. Uses may include diverse housing options, office, civic, commercial, retail and parks and open space. In residential areas, the re-establishment of neighborhood nodes allow walkable access to neighborhood retail, services, public parks and other neighborhood amenities that support the daily needs of residents. A mix of uses such as business, residential, light industrial, waterfront commercial, and open space will enhance economic vitality and provide the flexibility needed to adapt to changing economic conditions. Along Richmond’s shoreline, diverse uses should balance community needs for recreation, interpretation, conservation, historic and cultural preservation with economic development opportunities.

- **Policy LU 5.2: Mixed-Use Waterfront.** Continue to create a dynamic mixed-use waterfront that includes amenities and attractions for residents and visitors. There are a number of different uses, features and assets along Richmond’s shoreline that can be enhanced to create a series of distinct places along the waterfront.

- **Policy LU 5.3: Land Use Compatibility.** Minimize conflicts between land uses to protect wetlands, marshlands, and creeks, human and environmental health and safety, preserve community character and retain job generating activities that have long-term viability. Types, intensities and ranges of use and development should be compatible with existing
uses and should minimize or eliminate conflicts that adversely impact wetlands, marshlands, creeks, mudflats, public safety, human or environmental health or generate nuisances. All new development must avoid or mitigate to the greatest extent feasible potential negative impacts such as noise, odors, and pollution.

- **Goal LU 6: High-Quality and Sustainable Development.** Maintain a high standard of design, planning and construction of new and renovated public and private facilities, infrastructure and services. Continue committing to a comprehensive planning approach that supports a sustainable and healthy community and reduces impacts on the natural environment. Provide new development near transit and in areas with existing transportation infrastructure. Activate public areas and reduce the need for residents and employees to travel by automobile to access daily goods by promoting the location of housing, jobs and recreation uses close to transit lines, bicycle routes and pedestrian improvements. In support of a walkable and vibrant community, develop complete mixed-use streets that are safe for pedestrians, bicyclists and all modes of travel.

- **Policy LU 6.3: A Place-Based Land Use Approach.** Utilize a place-based approach to land use. Richmond aims to create distinct places for people that promote community identity, pride and ownership. All parts of the City should respond to the social, cultural and environmental context of the area and provide a safe and comfortable environment. This General Plan’s place-based approach to land use works in tandem with Richmond’s Zoning Ordinance to ensure context-appropriate activities and design character in both public and private realms.

- **Policy LU 6.4: Long-Term Environmental Sustainability.** Promote development standards and land use patterns that encourage long-term sustainability. Support the restoration of natural features such as creeks and wetlands in urban areas and existing neighborhoods as a means of connecting residents with nature and reversing damage to natural systems. Promote landscaping that incorporates native, drought-tolerant plants and sustainable maintenance practices and standards. Provide trees on residential and mixed-use streets and green infrastructure to reduce stormwater runoff. Encourage compact development close to amenities and green buildings to reduce energy use.

- **Policy LU 6.5: High-Quality Design, Planning and Construction.** Promote high-quality design, planning, construction and maintenance of development and infrastructure projects. Require higher standards for affordable housing, streetscape improvements and development proximate to local and regional transit, the shoreline and industrial uses. Provide guidance regarding green building standards, seismic requirements, and pedestrian friendly design by implementing the Green Building Ordinance. Promote best practices for crime prevention.

**Richmond Municipal Code/Zoning Ordinance**

Chapter 15 of the Richmond Municipal Code serves as the City’s Zoning Ordinance. The purpose of the Zoning Ordinance is to specify permitted and conditionally permitted uses within zoning districts; establish development standards for the City as well as for neighborhoods, specific building types and corridors, among others; regulate density (number of residential dwelling units per acre) and intensity (floor area ratio) of development; specifies standards for site design including open space,
building orientation, massing, setbacks and relationship to the street and adjacent properties, and parking requirements; and provide incentives for affordable housing, transit-oriented development and other types of development.

**San Francisco Bay Conservation and Development Commission (BCDC)**

BCDC has regulatory responsibility over development in San Francisco Bay and along the Bay’s nine-county shoreline. BCDC is guided in its decisions by its own regulations, the McAteer-Petris Act, the San Francisco Bay Plan, and other plans for specific areas around the Bay. The project will obtain a permit from BCDC, which is necessary prior to undertaking most work in the Bay or within 100 feet of the shoreline, including filling, dredging, shoreline development and other work.

**3.6.3 - Methodology**

FirstCarbon Solutions (FCS) evaluated the potential for land use impacts through site reconnaissance, use of aerial photos, and review of applicable land use policy documents. Photographs were taken of the project site and surrounding land uses to document existing conditions. FCS reviewed the City of Richmond General Plan and the Richmond Municipal Code to identify applicable policies and provisions that pertain to the proposed project. Finally, FCS reviewed the proposed project for consistency with the General Plan and Municipal Code.

**3.6.4 - Thresholds of Significance**

According to the CEQA Guidelines’ Appendix G Environmental Checklist, to determine whether land use and planning impacts are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a) Physically divide an established community?

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?

**3.6.5 - Project Impact Analysis and Mitigation Measures**

During the 30-day Notice of Preparation comment period, four comment letters were received that addressed land use, which are included within Appendix A of this Draft EIR. Specifically, these letters raised concerns related to General Plan consistency with regard to proposed building heights and shoreline access. These comments were taken into account when conducting the analysis of the project’s potential land use impacts, and were also incorporated into the analysis contained in Aesthetics (Section 3.1).
The analysis in this section takes into account the concerns raised during the public scoping period. The analysis discusses potential impacts associated with the project and provides mitigation measures where appropriate.

**Divide Established Community**

**Impact LUP-1:** The project would not physically divide an established community.

**Impact Analysis**
The project would not physically divide an established community. The project site is located in an existing urbanized area with similar residential uses, and is considered infill of a property that is already designated by the General Plan for medium-density residential uses. Furthermore, the project includes landscaping and other enhancements to the planned construction of a new segment of the Bay Trail, thereby enhancing the existing community and providing connections to other neighborhoods.

The trail, which is located along the shoreline in a 22-foot-wide easement through the property, closes a gap in the San Francisco Bay Trail between Canal Boulevard and Seacliff Drive, as contemplated by the City of Richmond's 2030 General Plan. The trail will include several design features that promote ease of access and user safety, some installed by TRAC and some installed by the project. TRAC will install way finding signs and orientation exhibits, while the project would provide a new crosswalk on Seacliff Drive near the intersection of Brickyard Cove Road, and benches along the portion of the Trail through the property. Therefore, the project would promote connectivity between communities while ensuring the safety of users.

No impacts are anticipated.

**Level of Significance Before Mitigation**
No impact.

**Mitigation Measures**
No mitigation measures are required.

**Level of Significance After Mitigation**
No impact.

**Conflict with Applicable Plans, Policies, or Regulations**

**Impact LUP-2:** The project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

**Impact Analysis**
This impact addresses the potential for the project to conflict with the City of Richmond General Plan and Zoning Ordinance.
General Plan Land Use Designation Consistency Analysis

The project proposes a zoning amendment to re-zone the site to Planned Area (PA) District. The City of Richmond General Plan states the purpose of this district is to promote development of large areas in substantial compliance with the principles and standards of the Richmond General Plan. This includes permitting appropriate variety and diversity in the composition and relationship of land uses, building types, structures, lot sizes and open spaces. The specific purposes of the PA district are to:

A. Establish a procedure for the development of large parcels of land (2 acres or more) in order to reduce or eliminate the rigidity, delays and conflicts that otherwise may result from application of zoning standards and procedures designed primarily for small parcels;

B. Ensure orderly and thorough planning review procedures that will result in quality urban design;

C. Establish a review procedure for large residential developments including condominium developments;

D. Provide the allocation and improvement of common open space in residential areas, and provide the mechanisms for the maintenance of open space by those who will most directly benefit from it;

E. Permit the development of commercial and industrial developments in appropriate locations to obtain a coherent design, increased public amenities, and protection and buffering for adjacent land uses;

F. Establish review procedures for any project utilizing atypical design concepts, and/or not conforming to the standards of the base zoning district;

G. To facilitate implementation of the City’s affordable housing policies.

Minimum lot areas, setbacks, building height limits, other development standards and similar regulations of the base zoning districts may be modified as a part of an approved PA district. In order to ensure consistency with the City of Richmond General Plan, the project Applicant is also proposing a General Plan Amendment (GPA) as part of the project entitlements. The proposed GPA would modify General Plan Table 3.1, by adding text that would allow building height in a Medium-Density Residential land use classification to exceed 35 feet as part of an approved Planned Area (PA) district. Large parcels (2 acres or more) and large residential and condominium developments such as the proposed project are among the types of sites eligible for re-zoning to PA.

Project Density

The Medium Density Residential land use designation permits a density of 10 to 40 du/ac.

The project site in total is 25.27 acres, indicating that development of 60 units would yield a density of 2.37 units per acre, which is well below the density range identified for the medium density residential land use classification. However, because a large portion of the site is located under San Francisco Bay or is otherwise restricted from development, project density is calculated based on the developable “net” acreage (6.18 acres). The resulting density is 9.72 units per net acre, which is
rounded up to 10 units per net acre for the purpose of analysis. Section 2, Project Description’s Exhibit 2-7 shows the project’s site section, and Exhibit 2-8a and 2-8b depict typical elevations for the 2- and 4-story buildings.

**Project Height**

Building height limits that apply within base zoning districts may be modified as part of an approved PA district (City of Richmond Municipal Code Section 15.04.610.020(D)). Accordingly, although the Medium Density Residential land use designation would typically impose a building height limit of 35 feet, the proposed PA district proposed under the project includes a building height limit of 50 feet. The project includes structures ranging from 23.8 to 46.3 feet in height, which is within the 50-foot parameters of the proposed PA zone. Nine buildings would be developed as part of the project. Buildings 1 through 5, located along the Bay shoreline, would be two stories in height (approximately 23.8 feet). Buildings 6 through 9, located behind Buildings 1 through 5, would be four stories in height (approximately 46.3 feet). As discussed above, the project Applicant will also be seeking a General Plan Amendment to allow for greater buildings heights within approved PA districts.

Table 3.6-1 presents the project’s consistency with applicable General Plan Land Use Policies.
### Table 3.6-1: General Plan Consistency Analysis

<table>
<thead>
<tr>
<th>Goal</th>
<th>No.</th>
<th>Policy</th>
<th>Text</th>
<th>Consistency Determination</th>
</tr>
</thead>
</table>
| LU 1 | LU 1.1 | **Higher-Density and Infill Mixed-Use Development.** Provide higher-density and infill mixed-use development affordable to all incomes on vacant and underutilized parcels throughout the City. Ensure efficient use of land and existing circulation infrastructure by:  
- Promoting higher-density, transit-oriented and pedestrian-friendly development along key commercial corridors, at key intersections (community nodes and gateways); and  
- Supporting local-serving commercial activities in residential areas to provide needed services and amenities close to where people live and work. | **Consistent:** The project proposes to develop 60 units of market-rate condominiums. The project would be developed within approximately 6.18 acres of the 25.27-acre site, resulting in a density of 9.72 units per net acre. In addition, the Trails for Richmond Action Committee (TRAC) has constructed a trail on the project site, within a 22-foot wide easement along San Francisco Bay, closing a gap in the San Francisco Bay Trail between Canal Boulevard and Seaclliff Drive as contemplated by the City of Richmond’s 2030 General Plan. |
| LU 2 | LU 2.2 | **Compact Walkable Neighborhoods and Livable Streets**  
Promote safe and walkable neighborhoods and inter-connected streets through the design of streetscapes, public gathering places and all types of physical development. Provide pedestrian amenities such as sidewalks and street trees, transit and bike improvements, lighting and landscaping and appropriate traffic calming measures to ensure a safe pedestrian environment.  
Support uses and public space improvements that generate street-level activity, create eyes-on-the-street, provide opportunities for community interaction and encourage a sense of collective ownership of common areas.  
Encourage mixed-use development that attracts people and facilitates activity throughout the day. Prohibit isolated or gated communities in order to improve physical connectivity throughout the City, and create incentives to remove barriers in existing gated areas. Maintain streets to ensure that neighborhoods and streets are safe and well used. | **Consistent:** The project is not a gated community, and it includes interconnected streets, public gathering places, and open space to encourage walkability and safety for pedestrians.  
In addition to project landscaping, the project also includes landscaping and other enhancements to the planned Bay Trail that is located along the southern boundary of the site within a 22-foot wide easement.  
The trail will provide opportunities for community interaction and recreation and is an important community component and focal point, as contemplated by the City of Richmond’s 2030 General Plan. The trail includes design features that promote ease of access and user safety. The Trail Improvement Plan includes signage depicting the route of the trail and waypoints, a brochure post, benches, as well as crosswalks across Seaclliff Drive, Dorian Drive, and Brickyard Cove Road. |
Table 3.6-1 (cont.): General Plan Consistency Analysis

<table>
<thead>
<tr>
<th>Goal</th>
<th>No.</th>
<th>Policy</th>
<th>Consistency Determination</th>
</tr>
</thead>
</table>
| LU 4 | LU 4.1 | • Provide a mix of residential and recreation uses in the Southern Gateway change area; support an active industrial waterfront around the Port and along the Santa Fe Channel; and promote a cultural heritage shoreline west of the Port.  
• Protect and restore wetlands, native habitats and open space; develop shoreline parks and trails to increase public access; encourage recreation and tourism activities; and enhance and showcase historic and cultural resources. Prepare, adopt, and implement plans that will protect natural and built environments from adverse potential impacts of sea level rise due to climate change. | The project also includes design features such as a bioswale located along the eastern boundary of the site, and a water quality feature extending from the center of the site to the Bay minimize storm water runoff, ultimately reducing potential impacts to protected wetlands. |
| LU 4.2 | Open Space and Conservation Areas. | Preserve open space areas along the shoreline, creeks, and in the hills to protect natural habitat. Maintain the integrity of hillsides, creeks and wetlands. Protect existing open space, agricultural lands and parks. | Consistent: While the project site is undeveloped, it does not contain creeks or valuable habitat. The Bay Trail along the project’s southern boundary maintains the integrity of the existing Bay edge and preserves open space amenities for residents and the public. |
| LU 5 | LU 5.1 | A Balanced Mix of Land Uses. | Consistent: The project is consistent with the medium density residential designation for the site.  
The enhancement of the Bay Trail will provide the public with opportunities for access to the shoreline and opportunities for recreation and enjoyment of this scenic resource. |

FirstCarbon Solutions  
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### Table 3.6-1 (cont.): General Plan Consistency Analysis

<table>
<thead>
<tr>
<th>Goal</th>
<th>No.</th>
<th>Policy</th>
<th>Consistency Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>LU 5.2</td>
<td>Mixed-Use Waterfront. Continue to create a dynamic mixed-use waterfront that includes amenities and attractions for residents and visitors. There are a number of different uses, features and assets along Richmond’s shoreline that can be enhanced to create a series of distinct places along the waterfront.</td>
<td>Consistent: The enhancement of the Bay Trail will provide the public with opportunities for access to the shoreline and opportunities for recreation and enjoyment of this scenic resource.</td>
<td></td>
</tr>
</tbody>
</table>
| LU 5.3 | **Land Use Compatibility**  
Minimize conflicts between land uses to protect wetlands, marshlands, and creeks, human and environmental health and safety, preserve community character and retain job generating activities that have long-term viability. Types, intensities and ranges of use and development should be compatible with existing uses and should minimize or eliminate conflicts that adversely impact wetlands, marshlands, creeks, mudflats, public safety, human or environmental health or generate nuisances. All new development must avoid or mitigate to the greatest extent feasible potential negative impacts such as noise, odors, and pollution. | Consistent: The project design includes buffer zones from the shoreline to minimize runoff from entering into the Bay. Other design features include a bioswale located along the eastern boundary of the site, and a water quality feature extending from the center of the site to the Bay. These features will enhance the ability of the project to treat stormwater runoff by removing sediments and pollutants through onsite retention and treatment, reducing potential impacts to protected wetlands. |
| LU 6 | LU 6.3 | **A Place-Based Land Use Approach.** Utilize a place-based approach to land use. Richmond aims to create distinct places for people that promote community identity, pride and ownership. All parts of the City should respond to the social, cultural and environmental context of the area and provide a safe and comfortable environment. This General Plan’s place-based approach to land use works in tandem with Richmond’s Zoning Ordinance to ensure context-appropriate activities and design character in both public and private realms. | Consistent: The City of Richmond General Plan designates the project site Medium Density Residential. Implementation of the project will include the development of 60 units of market-rate condominiums, which is consistent with the General Plan. A General Plan Amendment will be processed as part of the proposed project, in order to allow for greater building heights. The design character of the project will be appropriate for the social, cultural and environmental context of the area and will provide a safe and comfortable environment for residents of the project and users of the Bay Trail. |
| LU 6.4 | **Long-Term Environmental Sustainability.** Promote development standards and land use patterns that encourage long-term sustainability. Support the restoration of natural features such as creeks and wetlands in urban areas and existing neighborhoods as a means of connecting residents with nature and reversing damage to natural systems. Promote landscaping that incorporates native, | Consistent: As previously noted, the project design includes buffer zones from the shoreline to minimize runoff from entering into the Bay. Other design features include a bioswale located along the eastern boundary of the site, and a water quality feature extending from the center of the site to the Bay. These features will enhance the ability of the project to treat stormwater runoff by removing sediments and pollutants through onsite... |
### Table 3.6-1 (cont.): General Plan Consistency Analysis

<table>
<thead>
<tr>
<th>Goal</th>
<th>No.</th>
<th>Text</th>
<th>Consistency Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>drought-tolerant plants and sustainable maintenance practices and standards. Provide trees on residential and mixed-use streets and green infrastructure to reduce stormwater runoff. Encourage compact development close to amenities and green buildings to reduce energy use.</td>
<td>retention and treatment, reducing potential impacts to protected wetlands. The project also includes the use of drought-tolerant landscaping to reduce water use and promote sustainability in accordance with the local climate.</td>
</tr>
<tr>
<td>LU 6.5</td>
<td>High-Quality Design, Planning and Construction:</td>
<td>Promote high-quality design, planning, construction and maintenance of development and infrastructure projects. Require higher standards for affordable housing, streetscape improvements and development proximate to local and regional transit, the shoreline and industrial uses. Provide guidance regarding green building standards, seismic requirements, and pedestrian friendly design by implementing the Green Building Ordinance. Promote best practices for crime prevention.</td>
<td>Consistent: The project proposes to develop 60 units of market-rate condominiums, including high quality design and materials. The project is subject to review by the City’s Design Review Board to ensure that the building incorporates design features, materials, colors, and amenities that promote long-term sustainability.</td>
</tr>
</tbody>
</table>

Source: City of Richmond, 2012; FirstCarbon Solutions, 2013.
Zoning Ordinance Consistency Analysis
The project site includes four zoning designations: Planned Area (PA), Coastline Commercial (CC), Community Regional Recreation (CCR), and Marine Industrial (M4).

The applicant is requesting to rezone the entire site to PA, and proposes that the development standards for the MFR-2-Multifamily Medium Density Residential District be applied. Pursuant to Municipal Code Section 15.04.600.020, which allows modifications to the development standards of the base zoning districts as a part of an approved PA District, the project is requesting a maximum building height of 50 feet.

- **Section 15.04.600.020 General Standards Pertaining to the PA District**, include the following regulations:
  A. **Minimum Area**: The minimum area of a PA district shall be two acres of contiguous land.
  B. **Density**: The maximum number of dwelling units or density in a PA District shall not exceed the maximum permitted by the Richmond General Plan designation for the total area of parcels designated for the specific use and for open space. This excludes areas devoted to public and private streets and areas with a slope in excess of 30%. Maximum residential density and/or commercial floor area ratio in a PA District shall not exceed the maximum permitted by the Richmond General Plan designation for the total area of parcels designated for PA use.
  C. **Performance Standards**: The performance standards prescribed in Section 15.04.840 shall apply.
  D. **Other Standards**: Minimum lot areas, setbacks, building height limits, other development standards and similar regulations of the base zoning districts may be modified as a part of an approved PA District. Regulations of other sections of this Chapter are applicable.

Regarding the minimum area requirement, the project site contains more than 2 acres and therefore meets the minimum area requirement.

Regarding the density requirement, the project’s density of 9.72 dwelling units per net developable acre does not exceed the 10 to 40 dwelling-units-per-acre density range established by the General Plan Medium Density residential designation. As stated in Section 15.04.600.020(B), the density requirement is expressed in terms of a not-to-exceed maximum, and does not require a minimum density. The project is therefore consistent with this requirement.

The project will be required to comply with all applicable performance standards contained in Municipal Code Section 15.04.840, including noise standards, odors, tree preservation, setbacks from creeks and streams, design standards, sidewalks and street trees, etc. The project will be required to demonstrate compliance with all applicable City standards prior to securing necessary permits for development, and will also be subject to standard conditions of approval imposed by the City related to the construction and ongoing occupancy of the project, which will ensure adherence to all relevant performance standards. With regard to the other standards under Municipal Code Section 15.04.600.020(D), the project will comply with minimum lot areas, setbacks, building height
limits and all other City development standards, following approval of the zone change to change the designation of the project site to PD District.

The building height of the proposed structure is within the 50-foot height limit proposed for the PA district. As discussed above, the project Applicant will be seeking a General Plan Amendment to allow for greater building heights for approved PA districts.

Because the project includes development along a shoreline under the jurisdiction of the BCDC, it will be required to adhere to BCDC policies and obtain a Major Permit. To assure full compliance with BCDC’s laws and policies, permits granted by BCDC generally include several conditions that must be carried out as part of the authorized project. Typical permit conditions include requirements to construct, guarantee and maintain public access to the Bay; specified construction methods to assure safety or to protect water quality; plan review requirements that must be met before construction can begin; and mitigation requirements to offset the adverse environmental impacts of the project.

Although BCDC encourages applicants to contact BCDC staff early in the process to discuss the proposed design, the BCDC permit application cannot be treated as “complete” until all local discretionary approvals (i.e., zone change, tentative map approval) have been issued. After a BCDC permit is issued, it can be amended, if necessary. Permit amendments that materially change a project require full BCDC consideration and a public hearing, but minor changes can be approved by the BCDC Executive Director. If the BCDC permit is not issued, or if modifications to the design are required that materially change the conclusions of this EIR, then further environmental analysis and review may be required.

The project will comply with the policies, goals, and standards of the Richmond General Plan 2030; BCDC requirements; and the Zoning Ordinances Minimum Area, Density, Performance Standards, and other standards. Impacts would be less than significant.

**Level of Significance Before Mitigation**
Less than significant impact.

**Mitigation Measures**
No mitigation measures are required.

**Level of Significance After Mitigation**
Less than significant impact.
Conflict with Conservation Plans

Impact LUP-3: The project would not conflict with any applicable habitat conservation plan or natural communities conservation plan.

Impact Analysis
The project site is not located within the boundaries of an adopted habitat conservation plan or natural community conservation plan. This condition precludes the possibility of conflicting with provisions of applicable conservation plans. No impact would result.

Level of Significance Before Mitigation
No impact.

Mitigation Measures
No mitigation measures are required.

Level of Significance After Mitigation
No impact.
3.7 - Transportation and Traffic

This section describes existing transportation and traffic and potential effects from project implementation on the site and its surrounding area. Descriptions and analysis in this section are based on information contained in the Traffic Impact Assessment (TIA) prepared in January 2014 by Fehr & Peers, included in this Draft EIR as Appendix H.

3.7.1 - Existing Conditions

Project Study Area

Transportation facilities in the project area, including the surrounding roadway network, transit, pedestrian, and bicycle facilities in the project site vicinity, are outlined below.

Regional access to the project site is provided by Interstate 580 (I-580). I-580 generally runs from east to west with three travel lanes in each direction. Access from I-580 to the project site is provided via a full interchange at Canal Boulevard. According to Caltrans records, I-580 has an average annual daily traffic volume (AADT) of approximately 90,000 vehicles through the study area.

Canal Boulevard is a north-south roadway that connects the project site to I-580 and downtown Richmond farther to the north. South of Seacliff Drive, Canal Boulevard provides one lane of travel in each direction. North of Seacliff Drive, Canal Boulevard widens to two travel lanes in each direction. According to the Richmond General Plan (2012), Canal Boulevard is an existing truck route south of Gerard Boulevard.

North of Seacliff Drive, Canal Boulevard provides Class 2 bicycle lanes. South of Seacliff Drive, a Class I bicycle path parallels the west side of the roadway. Railroad tracks run parallel to Canal Boulevard from the shipyards in the south to West Cutting Boulevard in the north. The posted speed limit is 40 miles per hour (mph).

Cutting Boulevard is an east-west roadway that connects San Pablo Avenue and I-580 in the east with South Garrard Boulevard in the west. Within the study area, Cutting Boulevard provides two lanes of travel in both directions with left-turn pockets at signals and two-way left-turn lanes at mid-block driveways. According to the Richmond General Plan (2012), Cutting Boulevard is an existing truck route west of Harbour Way. In the project vicinity, Cutting Boulevard provides bicycle lanes and sidewalks on both sides of the roadway. The posted speed limit is 40 mph.

Seacliff Drive is a two-lane roadway providing direct access to the project site. Seacliff Drive connects Brickyard Cove Road in the west to Canal Boulevard in the east. All of the intersections are stop-controlled, most of which provide left turn pockets. There is a landscaped median along most of the roadway. The Ferry Point multi-use trail runs parallel to the roadway on the side opposite the shoreline. The posted speed limit is 25 mph. Seacliff Dive has a fairly significant grade change between Canal Boulevard and the San Francisco Bay. A number of roadways intersect with Seacliff Drive, including Seacliff Way, Seaview Drive, Seacliff Place, and Sandpiper Spit. Several driveways that serve small clusters of homes (four homes each) also intersect with Seacliff Drive, and a
landscaped median that starts just below Seacliff Way and extends to Brickyard Cove Road restricts access to right in/right out for these driveways.

**Pedestrian and Bicycle Facilities**

Pedestrian facilities include sidewalks, crosswalks, pedestrian signals, and multi-use trails. A sidewalk is provided along the project frontage on Seacliff Drive, which terminates just northwest of Seaview Drive. To the west, sidewalks are provided along the south side of the roadway until just west of Mallard Drive. The Ferry Point Loop Trail is located on the north side of the roadway through the study area and connects to Canal Boulevard. There are striped crosswalks for the side street crossings but no crosswalks across Seacliff Drive.

Based on the City of Richmond Bicycle Master Plan (October 2011), bicycle facilities in the study area can be classified into three types: Bicycle Paths (Class 1), Bicycle Lanes (Class 2), and Bicycles Routes (Class 3).

**Existing Transit Service**

Regional commuter rail transit is provided by Bay Area Rapid Transit (BART) and Amtrak. The nearest rail stations to the project site are Richmond BART station, El Cerrito del Norte BART station, and the Richmond Transit Station (Amtrak). The Richmond BART and Amtrak stations are located 2.5 miles from the project site, in downtown Richmond. The El Cerrito del Norte BART station is located 5 miles from the project site, in El Cerrito. In January 2013, average weekday daily ridership for the Richmond and El Cerrito del Norte stations was 7,500 and 15,800 riders, respectively. There are no local buses that serve the project site. The closest local bus service to the site is on Garrard Boulevard at Cutting Boulevard, an approximately 1.5 mile walk from the site.

**Existing At-Grade Railroad Crossings**

Existing at-grade railroad crossings are present in the study area with Union Pacific Railroad Company, BNSF Railway Company, and Richmond Pacific Railroad Company tracks. There is an at-grade crossing about 150 feet south of the Cutting Boulevard/Canal Boulevard intersection. When a train approaches, the signalized intersection enters a flashing red mode, effectively becoming an all-way stop-controlled intersection. The train also blocks westbound traffic on Cutting Boulevard about 550 feet west of the study intersection.

According to data from the Federal Railroad Administration on railroad crossings, there are 16 daily trains that use the at-grade crossing. These trains are traveling from 0 to 10 mph over the crossing.

For the vehicular approaches, the crossing provides stop lines and “RR Xing” symbols in the pavement; gates with flashing red lights and bells; and advanced warning signs.

The Federal Railroad Administration provides information on collisions at crossings. The last reported collision was in 2001, involving a train and a truck that was parked at the crossing. The train was traveling at 7 mph. There was no reported injury.
**Existing Traffic Counts**

Weekday morning (7:00 to 9:00 a.m.) and evening (4:00 to 6:00 p.m.) peak period intersection turning movement counts were collected at the study intersections, including separate counts of pedestrians and bicyclists. For the study intersections and driveways, the single hour with the highest traffic volumes during the count periods was identified. The AM peak hour in the study area is generally 7:45 to 8:45 a.m. and the PM peak hour is generally from 4:30 to 5:30 p.m.

Bicycle and pedestrian activity is minimal in the vicinity of the I-580 interchange on Canal Boulevard, with 2 to 3 bikes per hour observed during the data collection period and 4 pedestrian crossings. More pedestrian and bicycle activity was observed on Seacliff drive, with 10 bicyclists and 15 pedestrians observed traveling through the corridor during the PM peak hour.

**Existing Intersection Operations**

*Intersection Level of Service*

Existing operations were evaluated for the weekday AM and PM peak hours at the study intersections, as summarized in Table 3.7-1. Observed peak-hour factors were used at all intersections for the existing analysis. Pedestrian and bicycle activity was factored into the analysis. As shown in Table 3.7-1, the signalized study intersections operate at Level of Service (LOS) C or better. The unsignalized intersections operate with minimal delay. Field observations confirmed the calculated levels of service.

**Table 3.7-1: Existing Conditions Peak-Hour Intersection LOS Summary**

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Control Type¹</th>
<th>Peak Hour</th>
<th>Average Delay (in Sec)</th>
<th>LOS²</th>
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</thead>
<tbody>
<tr>
<td>1. Seacliff Drive and Project Driveway</td>
<td>SSSC</td>
<td>AM PM</td>
<td>Does not exist</td>
<td></td>
</tr>
<tr>
<td>2. Seacliff Drive and Seacliff Way</td>
<td>SSSC</td>
<td>AM PM</td>
<td>0 (10) 0 (11)</td>
<td>A (A) A (B)</td>
</tr>
<tr>
<td>3. Seacliff Drive and Canal Boulevard</td>
<td>AWSC</td>
<td>AM PM</td>
<td>9 9</td>
<td>A</td>
</tr>
<tr>
<td>4. W. Cutting Blvd and Canal Boulevard⁴</td>
<td>Signal</td>
<td>AM PM</td>
<td>25 23</td>
<td>C</td>
</tr>
<tr>
<td>5. Canal Blvd and I-580 EB Ramps</td>
<td>Signal</td>
<td>AM PM</td>
<td>23 23</td>
<td>C</td>
</tr>
<tr>
<td>6. Canal Blvd and I-580 WB Ramps</td>
<td>Signal</td>
<td>AM PM</td>
<td>20 21</td>
<td>B</td>
</tr>
<tr>
<td>7. Sandpiper Spit and Seacliff Drive</td>
<td>AWSC</td>
<td>AM PM</td>
<td>7 8</td>
<td>A</td>
</tr>
</tbody>
</table>

¹ Control Type: SSSC, AWSC, Signal
² LOS: A, B, C
⁴ Additional study on Canal Boulevard and Seacliff Way

City of Richmond - Bottoms Property Residential Project
Draft EIR
Transportation and Traffic

FirstCarbon Solutions
Table 3.7-1 (cont.): Existing Conditions Peak-Hour Intersection LOS Summary

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Control Type$^1$</th>
<th>Peak Hour</th>
<th>Average Delay (in Sec)</th>
<th>LOS$^3$</th>
</tr>
</thead>
</table>

Notes:
EB = eastbound  
WB = westbound  
$^1$ Signal = signalized intersection  
AWSC = all-way stop controlled intersection  
SSSC = side street stop controlled intersection  
$^2$ For signalized intersections, average intersection delay and LOS based on the 2000 HCM method is shown. For side-street stop controlled intersections, delays for worst approach and average intersection delay are shown: intersection average (worst approach)  
$^3$ LOS = Level of Service  
$^4$ Operations worse than shown during rail crossing activity  
Source: Fehr & Peers, January 2014

When there is a rail crossing at Canal Boulevard, the traffic signal at the W. Cutting Boulevard at Canal Boulevard intersection enters flashing red mode operation, effectively becoming an all-way stop-controlled intersection. For movements that can continue to operate during a rail crossing, such as the westbound right-turn movement or eastbound left-turn movement, the LOS remains acceptable during the rail crossing activity. For movements that cannot proceed along the desired path of travel, such as the southbound through movement, vehicle queues were not observed during the data collection period to spill back to adjacent intersections. When trains cleared the crossing, vehicle queues were able to clear within one cycle and operations returned to non-rail crossing conditions.

**Signal Warrants**

To assess the need for signalization of stop-controlled intersections, the Manual of Uniform Traffic Control (MUTCD) (Federal Highway Administration 2012) presents eight signal warrants. The Peak Hour Volume and Delay warrants were used in the TIA as a supplemental analysis tool to assess operations at unsignalized intersections. Based on this analysis, none of the unsignalized intersections currently meet peak-hour signal warrants.

**3.7.2 - Regulatory Setting**

**State Regulations**

Contra Costa Transportation Authority (CCTA) serves as the Congestion Management Agency (CMA) for Contra Costa County. CCTA adopted the Country’s first Congestion Management Program (CMP) in October 1991. The most recent CMP is referred to as the 2011 CMP and requires an analysis of any project that is expected to generate more than 100 peak-hour vehicle trips. Because the project would generate less than 100 peak-hour trips, an analysis of CMP facilities in the study area is not required.
Local Regulations

*City of Richmond General Plan*

The City of Richmond does not have a LOS policy for vehicles, but strives to balance modes of travel and provide equitable access, recognizing that people travel by a variety of modes, not just in vehicles, and that the use of auto-focused LOS standards does not address the mobility needs for non-auto roadway users.

The West Contra Costa County Transportation Advisory Committee (WCCTAC) is one of four Regional Transportation Planning Committees in Contra Costa County. The Regional Transportation Planning Committees were created to manage the 1988 Measure C half-cent transportation sales tax projects and programs, and its Extension, Measure J, approved by Contra Costa voters in 2004. In addition to managing revenues from Measures C and J, WCCTAC also administers the sub-regional transportation mitigation fee program (STMP), and participates in defining and implementing policies, programs, and projects to improve local and regional transportation and air quality. WCCTAC defines “Routes of Regional Significance” as roadways that connect two or more regions of Contra Costa County, cross Contra Costa County boundaries, carry a significant amount of traffic, or provide access to a regional freeway or transit facility.

Cutting Boulevard is a designated Route of Regional Significance that may be used by residents and employees of the proposed project. The Union Pacific Rail Road (UPRR) tracks cross Cutting Boulevard just west of Canal Boulevard, creating one of the most dangerous intersections in California, according to the California Public Utilities Commission. The intersection is located near schools and is regularly used by pedestrians. A grade separation at this location may be the most effective long-term solution to safety and noise issues. A more cost-effective approach—using a traffic circle—has been recommended as part of Richmond’s Pedestrian Master Plan. The BNSF tracks cross both Garrand Boulevard and Cutting Boulevard, and periodically longer trains cause extensive backups on these important arterials. Circulation improvements are necessary to address the conflicts between motor vehicle and rail traffic.

The following policies are contained in the Richmond 2030 General Plan (Circulation Element 4):

- **Policy CR1.3 - Local and Regional Transportation Linkages.** Enhance circulation linkages within the City and region. The City will work with regional transportation agencies such as AC Transit, BART, West Contra Costa Transit Agency, and Amtrak to provide or improve connections to Richmond’s key transportation hubs such as the proposed ferry terminal in Marina Bay, the Downtown Intermodal Transit Station, Hilltop Mall, the shoreline, and commercial and mixed-use streets. Collaborate with regional, state, and federal transportation agencies and neighboring jurisdictions to support a high level of service for all users including pedestrians, bicyclists, and automobile drivers.

- **Policy CR1.5 - Safe and Convenient Walk and Bicycling.** Promote walking and bicycling as a safe and convenient mode of transportation. Improve pedestrian and bicycle amenities to serve the recreation and travel needs of residents and visitors in all parts of Richmond. Where feasible, the City will: connect major destinations such as parks, open spaces, civic facilities, employment centers, retail and recreation areas with pedestrian and bicycle amenities,
streetscape improvements and linkages to planned and complete City and regional multi-use trails; and develop safe routes to schools and out-of-school programs that allow access by bicycle and pedestrian paths or reliable and safe transit.

Explore innovative solutions such as bicycle-sharing programs and encourage business, schools, and residential developments to provide secure bicycle parking to ensure that these ecologically-friendly, low-impact transportation modes are available to all community members, thereby reducing emissions from vehicles within the City, improving environmental quality and enhancing mobility and connectivity.

- **Policy CR 1.6 - Comprehensive Network of Multi-Use Trails.** Develop a comprehensive network of multi-use trails including to enhance bicycle and pedestrian connectivity throughout the city and the region. Completion of the Bay Trail will enhance access to the Richmond shoreline and adjacent open space. The proposed San Francisco Bay Water Trail will also provide enhanced access and recreational opportunities to the Bay. Connecting the Richmond Greenway with the Ohlone Greenway and the Bay Trail, and linking Richmond with Marin County with a bicycle trail across the Richmond-San Rafael Bridge will help create a comprehensive network of multi-use trails.

- **Policy CR1.10 - Vehicular Level of Service Standards for West Coast County Routes of Regional Significance.** Maintain vehicular LOS standards for signalized intersections consistent with the CCTA West County Action Plan for Routes of Regional Significance. Require a traffic impact study for projects that would generate more than 100 net new peak-hour vehicular trips. Require traffic impact studies to be prepared by professional transportation consultants selected and hired by the City and require the studies to be fully paid for by the project applicant. Traffic impact studies shall be prepared according to CCTA’s West County Action Plan for Routes of Regional Significance. Projects found to be inconsistent with the CCTA’s West County Action Plan for Routes of Regional Significance may be approved if findings of special circumstances, including appropriate mitigation measures, are adopted by the City.

The following are actions proposed by the City of Richmond in the General Plan 2030 and are applicable to the project.

- **Action CR1.E - Trails and Greenway Program.** Expand multi-use trails and greenways in the City. Provide connector trails and linkages to improve access from neighborhoods in Central Richmond to the regional open space in the hills and along the shoreline. Address barriers such as greenways, the Richmond Parkway, and railroad tracks that limit shoreline access. Provide interpretive signs, maps, brochures, and signage along the trails to enhance the experience of users and to provide information on the City’s cultural and historical assets. Create a Class I multi-use trail loop north of Meeker Tidal Creek and Stege Marsh as a transportation and scenic route. Also provide trailhead staging areas at the south end of 32nd and 46th Streets with bridges across Meeker Tidal Creek and the unnamed creek east of South 32nd Street.
3.7.3 - Thresholds of Significance

According to the CEQA Guidelines’ Appendix G Environmental Checklist, to determine whether transportation and traffic impacts are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

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

e) Result in inadequate emergency access?

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

3.7.4 - Project Impact Analysis and Mitigation Measures

During the 30-day Notice of Preparation comment period, five (5) comment letters were provided in regards to transportation and traffic, which are included within Appendix A of this Draft EIR. All comment letters were taken into account when preparing this section.

This section discusses potential impacts associated with the project and provides mitigation measures where necessary.

Methodology for Analysis

The following section provides the methodologies used to perform the traffic analysis summarized below. The methodologies described are generally consistent with City of Richmond and Contra Costa County Congestion Management Program (CMP) traffic study guidelines. The following analysis scenarios were considered in the 2014 Traffic Impact Analysis:

- Existing Conditions (Section 3.11.1, Existing Condition, above)
- Existing With Project Conditions (Impact TRANS-1, below)
- Cumulative without Project (Impact TRANS-1, below)
- Cumulative with Project (Impact TRANS-1, below)
These scenarios are based on the CMP traffic study guideline requirements and recent court
decisions requiring explicit consideration of Existing Plus Project conditions. The following describes
the overall methodologies used to develop future traffic volume forecasts, the explicit traffic
operations analysis methodologies, and the definitions of deficiencies and significance that have
been used for the traffic analysis.

**Overall Analysis Methodology**

The operations of roadway facilities are described with the term LOS. LOS is a qualitative description
of traffic flow from a vehicle driver’s perspective based on factors such as speed, travel time, delay,
and freedom to maneuver. Six levels of service are defined ranging from LOS A (best operating
conditions) to LOS F (worst operating conditions). LOS E corresponds to operations “at capacity.”
When volumes exceed capacity, stop-and-go conditions result and operations are designated to LOS
F.

**Signalized Intersections**

Traffic conditions at signalized intersections were evaluated using methods developed by the
Transportation Research Board (TRB), as documented in the 2000 Highway Capacity Manual (2000
HCM). The HCM 2000 methods calculates control delay at an intersection based on inputs such as
traffic volumes, lane geometry, signal phasing and timing, pedestrian crossing times, and peak-hour
factors. Control delay is defined as the delay directly associated with the traffic control device (i.e., a
stop sign or a traffic signal) and specifically includes initial deceleration delay, queue move-up time,
stopped delay, and final acceleration delay. These delay estimates are considered meaningful
indicators of driver discomfort and frustration, fuel consumption, and lost travel time. The
relationship between LOS and control delay is summarized in Table 3.7-2.

<table>
<thead>
<tr>
<th>Level of Service</th>
<th>Description</th>
<th>Delay in Seconds</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.</td>
<td>&lt;10.0</td>
</tr>
<tr>
<td>B</td>
<td>Progression is good, cycle lengths are short, or both. More vehicles stop than with LOS A, causing higher levels of average delay.</td>
<td>&gt;10.0 to 20.0</td>
</tr>
<tr>
<td>C</td>
<td>Higher congestion may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level, though many still pass through the intersection without stopping.</td>
<td>&gt;20.0 to 35.0</td>
</tr>
<tr>
<td>D</td>
<td>The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume to capacity (v/c) ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.</td>
<td>&gt;35.0 to 55.0</td>
</tr>
</tbody>
</table>
Table 3.7-2 (cont.): Signalized Intersection LOS Criteria

<table>
<thead>
<tr>
<th>Level of Service</th>
<th>Description</th>
<th>Delay in Seconds</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.</td>
<td>&gt;55.0 to 80.0</td>
</tr>
<tr>
<td>F</td>
<td>This level is considered unacceptable with oversaturation, which is when arrival flow rates exceed the capacity of the intersection. This level may also occur at high v/c ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be contributing factors to such delay levels.</td>
<td>&gt;80.0</td>
</tr>
</tbody>
</table>


Unsignalized Intersections

For unsignalized (all-way stop controlled and side-street stop controlled) intersections, the TRB 2000 HCM method for unsignalized intersections was used. With this method, operations are defined by the average control delay per vehicle (measured in seconds). The control delay incorporates delay associated with deceleration, acceleration, stopping, and moving up in queue. Table 3.7-3 summarizes the relationship between LOS and delay for unsignalized intersections. At side-street stop controlled intersections, the delay is calculated for each stop-controlled movement, the left turn movement from the major street, as well as the intersection average. The intersection average delay and highest movement/approach delay are reported for side-street stop controlled intersections.

Table 3.7-3: Unsignalized Intersection LOS Criteria

<table>
<thead>
<tr>
<th>Level of Service</th>
<th>Description</th>
<th>Delay in Seconds</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Little or no delays</td>
<td>≤10.0</td>
</tr>
<tr>
<td>B</td>
<td>Short traffic delays</td>
<td>&gt;10.0 to 15.0</td>
</tr>
<tr>
<td>C</td>
<td>Average traffic delays</td>
<td>&gt;15.0 to 25.0</td>
</tr>
<tr>
<td>D</td>
<td>Long traffic delays</td>
<td>&gt;25.0 to 35.0</td>
</tr>
<tr>
<td>E</td>
<td>Very long traffic delays</td>
<td>&gt;35.0 to 50.0</td>
</tr>
<tr>
<td>F</td>
<td>Extreme traffic delays, delays where intersection capacity exceeded</td>
<td>&gt;50.0</td>
</tr>
</tbody>
</table>


Significance Criteria

The following significance criteria were used for the TIA and this analysis.

The project would conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of
transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. A significant impact would result:

- If a signalized intersection is projected to operate within acceptable delay ranges (i.e., LOS D or better with an average control delay of equal to or less than 55 seconds per vehicle) without the project and the project is expected to cause the facility to operate at an unacceptable LOS (LOS E or F);
- If an intersection is projected to operate at or over capacity (i.e., LOS E or F) without the project, and the project is expected to increase the average control delay by more than 5 seconds; or
- If the operations of an unsignalized study intersection is projected to decline with the addition of project traffic, and if the installation of a traffic signal based on the Manual on Uniform Traffic Control Devices (MUTCD) Peak Hour Signal Warrant (Warrant 3) would be warranted.

For intersections that meet the above criteria, capacity-enhancing measures that do not degrade other modes of travel should be considered, including upgrading signal equipment, extending left-turn pocket storage, providing non-motorized facilities to reduce vehicular demand, or enhancing transit access to a site.

The project would conflict with an applicable congestion management program, including but not limited to LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads and highways:

- Exceed, either individually or cumulatively, an LOS standard established by the CCTA for designated roads or highways;
- For a freeway segment of the CCTA CMP network, the project would cause a segment to degrade from LOS E or better to LOS F or increase peak-hour volume by five percent or more for a segment already operating at LOS F;
- For a roadway segment of the CCTA CMP network, the project would cause the delay index to exceed 2.0 or increase traffic volumes by more than 1 percent on a roadway already operating with a delay index greater than 2.0.
- The project results in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks;
- The project substantially increases traffic hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment);
- The project results in inadequate emergency access;
- The project conflicts with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities;
A pedestrian impact is significant if it would:
- Disrupt existing pedestrian facilities;
- Interfere with planned pedestrian facilities; or
- Create inconsistencies with adopted pedestrian system plans, guidelines, policies, or standards.

A bicycle impact is significant if it would:
- Disrupt existing bicycle facilities;
- Interfere with planned bicycle facilities;
- Create inconsistencies with adopted bicycle system plans, guidelines, policies, or standards; or
- Not provide secure and safe bicycle parking in adequate proportion to anticipated demand.

A transit impact is considered significant if it would result in development that is inaccessible to transit riders or preclude the future provision of transit.

Traffic Increase

Impact TRANS-1: The project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways.

Impact Analysis

The project will result in the development of 60 multi-family residential units with associated parking and recreational enhancements, including a gathering plaza in the eastern portion of the site, and additional enhancements to a segment of the Bay Trail, located along the southern boundary of the site.

Traffic impacts are considered significant if the proposed project conflicts with the applicable standards and policies set forth by the City of Richmond or the CCTA and their Congestion Management Program (2011 CMP). However, as per CMP requirements, an analysis of CMP facilities in the study area is not warranted, because the project is not expected to generate more than 100 peak-hour vehicle trips.

To determine impacts on traffic levels in the area due to project implementation, a TIA was prepared by Fehr and Peers in January 2014. The project is estimated to generate approximately 420 daily vehicle trips, including 35 AM peak-hour trips and 40 PM peak-hour trips.
**Table 3.7-4: Project Trip Generation Estimates**

<table>
<thead>
<tr>
<th>Land Use</th>
<th>ITE Code</th>
<th>Units</th>
<th>Daily</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Townhouse</td>
<td>230(^1)</td>
<td>61(^2)</td>
<td>420</td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>29</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
1. Trip generated based on Institute of Transportation Engineers (ITE), Trip Generation (9th Edition) equations for Townhouse.
2. The project originally proposed 61 units. Although the project now contains only 60 units, the analysis of 61 units is conservative and provides an adequate basis for analysis of potential impacts.

Land Use Code 230:
- Daily: \( \ln(T) = 0.87 \ln(X) + 2.46 \)
- AM Peak Hour: \( T = 0.80X + 0.26 \)
- PM Peak Hour: \( \ln(T) = 0.82 \ln(X) + 0.32 \)

Where \( T \) = trips generated, \( X \) = Dwelling Units


Impacts of the project are discussed below.

**Existing Plus Project Intersection Operations**

As summarized in Table 3.7-5, the addition of project traffic would not cause the operations of the study intersections to degrade, nor would unsignalized intersections meet peak-hour signal warrants. All study intersections would continue to operate acceptably. Therefore, intersection impacts are less than significant.

**Table 3.7-5: Existing With Project Conditions Peak-Hour Intersection LOS Summary**

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Control Type(^3)</th>
<th>Peak Hour</th>
<th>Existing</th>
<th>Existing with Project</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Delay</td>
<td>LOS</td>
</tr>
<tr>
<td>1. Seacliff Drive and Project Driveway</td>
<td>SSSC</td>
<td>AM</td>
<td>Does not exist</td>
<td>1 (9)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Seacliff Drive and Seacliff Way</td>
<td>SSSC</td>
<td>AM</td>
<td>0 (10)</td>
<td>A (A)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td>0 (11)</td>
<td>A (B)</td>
</tr>
<tr>
<td>3. Seacliff Drive and Canal Boulevard</td>
<td>AWSC</td>
<td>AM</td>
<td>9</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>4. W. Cutting Blvd and Canal Boulevard</td>
<td>Signal</td>
<td>AM</td>
<td>25</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td>23</td>
<td>C</td>
</tr>
<tr>
<td>5. Canal Boulevard and I-580 EB Ramps</td>
<td>Signal</td>
<td>AM</td>
<td>23</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td>21</td>
<td>C</td>
</tr>
<tr>
<td>6. Canal Boulevard and I-580 WB Ramps</td>
<td>Signal</td>
<td>AM</td>
<td>7</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td>8</td>
<td>A</td>
</tr>
</tbody>
</table>

\(^1\) User of 1,000 or more dwelling units

\(^2\) User of 76 or more dwelling units

\(^3\) Extend to include traffic from outside the project boundaries.
Table 3.7-5 (cont.): Existing With Project Conditions Peak-Hour Intersection LOS Summary

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Control Type</th>
<th>Peak Hour</th>
<th>Existing</th>
<th>Existing with Project</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Delay</td>
<td>LOS</td>
</tr>
</tbody>
</table>

Notes:
- EB = eastbound  WB = westbound
- 1 Signal = signalized intersection, AWSC = all-way stop controlled intersection, SSSC = side street stop controlled intersection.
- 2 For signalized intersections, average intersection delay and LOS based on the 2000 HCM method is shown. For side-street stop controlled intersections, delays for worst approach and average intersection delay are shown: intersection average (worst approach).
- 3 LOS = Level of Service.
- 4 Operations worse than shown during rail crossing activity.
Source: Fehr & Peers, January 2014

Parking

**Level of Significance Before Mitigation**
Less than significant impact.

**Mitigation Measures**
No mitigation measures are required.

**Level of Significance After Mitigation**
Less than significant impact.

**Level of Service Standards**

| Impact TRANS-2: | The project would not conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways. |

**Impact Analysis**
As stated within Impact TRANS-1, the addition of project traffic would not cause the operations of the study intersections to degrade substantially. Cutting Boulevard is a designated route of Regional Significance and LOS D must be maintained at intersections along the roadway. As indicated in the TIA, intersections on Cutting Boulevard closest to the project site would continue to operate at LOS D or better with the addition of project traffic. Although the project does not degrade the operation of intersections in the study area, or cause operations to degrade on a Route of Regional Significance, traffic generated by the project would contribute to the cumulative need to provide transportation infrastructure improvements in the City of Richmond.
Section 5.0, Cumulative Impacts includes further discussion of the project’s cumulative effects and includes Mitigation Measure TRANS-1, which requires payment of local and regional transportation impact fees designed to fund transportation infrastructure improvements in the City of Richmond. Payment of fair-share fees toward construction of necessary infrastructure improvements ensure that the project would not conflict with an applicable congestion management program, including, but not limited to LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways. Impacts would be reduced to a level of less than significant.

**Level of Significance Before Mitigation**
Potentially significant impact.

**Mitigation Measures**
Implement Mitigation Measure TRANS-1.

**Level of Significance After Mitigation**
Less than significant impact after mitigation.

**Air Traffic Patterns**

| Impact TRANS-3: | The project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. |

**Impact Analysis**
The project site is approximately 21 miles from Oakland International Airport, the nearest airport to the project site. This condition precludes the possibility of the project altering existing air traffic patterns.

**Level of Significance Before Mitigation**
No impact.

**Mitigation Measures**
No mitigation measures are required.

**Level of Significance After Mitigation**
No impact.

**Hazards**

| Impact TRANS-4: | The project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). |

**Impact Analysis**
Based on a review of the plans dated January 2014, it appears that the internal roadways and turnarounds are of sufficient width to meet City Code Requirements.
Vehicle Site Access
Primary access to the project would be provided from a new driveway at Seacliff Drive. To present a conservative assessment of project impacts at the Sandpiper Spit at Seacliff Drive intersection, the analysis assumed that the driveway would be restricted to right-in/right-out operation, and vehicles accessing the site from westbound Seacliff Drive would need to make a U-turn movement at the Sandpiper Spit intersection. To conservatively assess project impacts to the Seacliff Drive neighborhood, all project trips were assumed to enter the site from Seacliff Drive.

If access to the driveway is restricted to right-in/right-out operation, many vehicles would have difficulty making the U-turn maneuver in one movement, and it is recommend that westbound left-turn pocket on Seacliff Drive at Sandpiper Spit be eliminated to facilitate the U-turn movement from the through lane. The intersection would continue to operate at LOS A during both peak hours with the addition of project traffic in the cumulative condition. Mitigation Measure TRANS-4a requires the applicant to either eliminate the turn pocket prior to occupancy, or confirm an alternate design as discussed below.

As an alternate design, the applicant is evaluating the potential to provide a median break on Seacliff Drive to permit left-turn access into the site. However, because of the proximity of the driveway to Sandpiper Spit and the location of sewer pumps in the median, a design exception would need to be granted by the City of Richmond to permit left-turn access at the currently proposed location, if the sewer pumps remain in the current location. Mitigation Measure TRANS-4a requires the applicant to either confirm this alternate design prior to occupancy or eliminate the turn pocket as discussed above. With implementation of Mitigation Measure TRANS-4a, potential impacts related to vehicle site access would be reduced to a level of less than significant.

A secondary access is proposed on Canal Boulevard, and a supplemental analysis was conducted to evaluate study intersection and driveway operations with all project vehicle access from Canal Boulevard. The results of that analysis indicate that the project driveway on Canal Boulevard would operate acceptably, and all intersection levels of service shown in Table 3.7-1 and Table 3.7-5 would be maintained. The driveway on Canal Boulevard would cross a Class I bicycle facility, and the potential effects of this design are discussed in the bicycle access and circulation subsection under Impact TRANS-6.

City of Richmond requirements for parking require residential uses to provide two (2) spaces for each unit, with an additional 1 guest space for each 5 units. Based on these requirements, the total parking code requirement for the project is 134 parking spaces (120 spaces for residents and 12 guest spaces). Parking for each of the homes within the project site would be provided by a private-attached two-car garage. Some driveway areas also appear to have sufficient length to permit driveway parking. Approximately 37 surface parking spaces would be provided throughout the site. Based on this review, there is sufficient parking provided within the project site to accommodate expected demand.

Vehicle Internal Circulation
Based on a review of the plans dated January 2014, it appears that the internal roadways and turnarounds are of sufficient width to meet City Code Requirements.
Potential sight-distance conflicts from project landscaping may increase hazards if driver visibility is impaired, and the potential use of garage spaces for storage instead of parking may have a potentially significant impact on internal vehicle circulation, which could result in hazards from an excessive number of vehicles being parked on internal roadways. Mitigation Measure TRANS-4b and TRANS-4c are included to ensure that potentially significant impacts related to hazards are reduced to a less than significant level, and that internal circulation meets all City Code Requirements. The project also includes certain other pedestrian improvements such as a crosswalk on Seacliff Drive near the intersection of Brickyard Cove Road, with way finding signs and orientation exhibits for Trail users to ensure that conflicts between trail users and vehicles are reduced.

With the implementation of these measures, the project would not substantially increase hazards due to the project’s design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

**Level of Significance Before Mitigation**

Potentially significant impact.

**Mitigation Measures**

The following mitigation measures are required to reduce impacts relating to transportation to less than significant levels.

**MM TRANS-4a** Prior to issuance of occupancy permits, if the City does not grant a design exception to allow construction of a median break and left-turn access into the site, the project Applicant shall eliminate the westbound left-turn pocket on Seacliff Drive at Sandpiper Spit to facilitate the U-turn movement. If the City grants a design exception to allow construction of a median break and left-turn access into the site, then the left-turn pocket for Sandpiper Spit shall remain in place.

**MM TRANS-4b** Prior to issuance of occupancy permits and ongoing during project operation, the project Applicant shall maintain landscaping at the project driveways to avoid sight distance conflicts (shrubs should not be higher than approximately 30 inches and tree canopies should be approximately six feet from the ground).

**MM TRANS-4c** Prior to issuance of occupancy permits, the project Applicant shall require that residents use their parking garages for parking, not storage. Should there be issues with residents parking in guest spaces and insufficient parking is provided for guests, a permit parking system could be implemented by the homeowners association.

**Level of Significance After Mitigation**

Less than significant impact after mitigation.
Emergency Access

Impact TRANS-5: The project would not result in inadequate emergency access.

Impact Analysis

Emergency vehicles could access the site from Canal Boulevard or Seacliff Drive, so if one entrance were blocked, alternative access would be available. The internal roadways will be designed to ensure sufficient width for large emergency vehicles to navigate through the site. The TIA recommends that the Fire Department review the site plan for fire hydrant placement and emergency vehicle access. Therefore, mitigation measure TRANS-5 is recommended to reduce impacts to a level of less than significant.

Large emergency vehicles may have difficulties if they approach the site from the westbound direction on Seacliff Drive and if they need to make a U-turn at Sandpiper Spit. Mitigation Measure TRANS-1b requires that, prior to occupancy, the applicant shall either eliminate the westbound left-turn pocket on Seacliff Drive at Sandpiper Spit to facilitate the U-turn movement from the through lane, or construct a median break to allow left turn movements into the project site.

Level of Significance Before Mitigation

Potentially significant impact.

Mitigation Measures

The following mitigation measure would reduce impacts to less than significant levels:

MM TRANS-5 Prior to issuance of building permits, the fire department shall review the site plan for fire hydrant placement and emergency vehicle access to ensure that adequate access exists to ensure the safety of residents and property within the project in accordance with all applicable laws.

Level of Significance After Mitigation

Less than significant impact after mitigation.

Conflict with Alternative Transportation

Impact TRANS-6: The project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Impact Analysis

Bicycle and Pedestrian Access and Circulation

Sidewalks would be provided along at least one side of each of the internal streets within the project site. A sidewalk is also proposed to connect with Seacliff Drive.

The project driveways at Seacliff Drive and Canal Boulevard both cross Class I facilities, and the project site also includes new Bay Trail connections at Seacliff Drive and Canal Boulevard. To ensure bicycle and pedestrian safety, the TIA recommends several improvements:
• Provide an enhanced pedestrian crosswalk at the project driveway, connecting to the proposed Class I facility along the western edge of the project site.

• Enhance Trail crossing treatments at the project driveways.

• Review Trail connections at the intersection of the Ferry Point Loop Trail and San Francisco Bay Trail, and install intersection treatments including direction signage to ensure consistency with the Bicycle Master Plan Design Guidelines.

The recommended improvements are shown in Exhibit 3.7-1. Thus, there will be a crosswalk on Seacliff Drive near the intersection of Brickyard Cove Road, with way finding signs on new posts installed on each side of Seacliff Drive and on the existing light pole on the eastern side of the crosswalk. There will also be a “you are here” sign located in 2-feet by 3-feet panels in the existing frames at each end of Seacliff Drive. The other new trail section between Brickyard Landing Condos and Ferry Point would include marked crosswalks at crossings of Brickyard Cove Road and Dornan Drive, as well as appropriate safety and way finding signs, and an additional “you are here” orientation exhibit along the trail on the eastern side of Dornan Drive. Amenities along the new trail consist of two benches.

Because of potentially significant impacts arising from vehicle, pedestrian and bicycle conflicts (particularly at the Canal Boulevard project entrance), Mitigation Measures TRANS-6a through TRANS-6c are included to ensure that the project implements all recommendations to ensure the safety of pedestrians and bicyclists.

**Transit Services**

No local bus service is provided in the vicinity of the site. The closest Alameda-Contra Costa Transit District (AC) transit bus stop is located on Gerard Boulevard at Cutting Boulevard. Construction of the project would not preclude transit service in the area, nor would the addition of project traffic degrade the operation of intersections in the area. However, the project Applicant and the City of Richmond will consult with AC transit to determine if there are plans to extend transit service to the project vicinity.

With the implementation of Mitigation Measures TRANS-6a through TRANS-6c, development of the project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities nor would it otherwise decrease the performance or safety of existing facilities. By enhancing the accessibility and safety of the Bay Trail, the project would complement adopted policies, plans, and programs that support alternative transportation. Therefore, project impacts would be less than significant.
Exhibit 3.7-1
Site Plan Recommendations

- Consult with AC Transit to determine if there are plans to provide transit to the area
- Require residents use garages for parking
- Maintain landscaping at driveway to avoid sight distance conflicts

Source: FEHR + PEERS.
**Level of Significance Before Mitigation**

Potentially significant impact.

**Mitigation Measures**

The following mitigation measures are required to reduce impacts to less than significant levels.

**MM TRANS-6a**  
Prior to issuance of occupancy permits, the project Applicant shall provide an enhanced pedestrian crosswalk at the project driveway, connecting to the proposed Class I facility along the western edge of the project site.

**MM TRANS-6b**  
Prior to issuance of occupancy permits, the project Applicant shall restrict the Canal Boulevard entrance to emergency vehicle access only to reduce conflicts between bicycles and vehicles. Alternatively, the Applicant shall provide trail crossing treatments on both the driveway approach and the trail consistent with the Bicycle Master Plan Design Guidelines. Bicycle traffic shall not be expected to stop, but signage and striping would be appropriate to alert them to the presence of vehicles. Other bike path treatments across the driveway, such as colored pavement, may also be appropriate. Traffic exiting the site shall be stop-controlled. Signage and striping shall be used to alert drivers of the potential for bicycle traffic along the corridor.

**MM TRANS-6c**  
Prior to issuance of occupancy permits, where the proposed path connects to the Ferry Point Loop Trail and the San Francisco Bay Trail, trail intersection treatments shall be installed, including directional signage.

**Level of Significance After Mitigation**

Less than significant impact after mitigation.
SECTION 4: EFFECTS FOUND NOT TO BE SIGNIFICANT

4.1 - NOP Comment Letters

This section is based on the Initial Study (IS) prepared for the proposed project and included as Appendix A in this Draft EIR, as well as on additional information added after the preparation of the Notice of Preparation (NOP) that supports the less than significant and no impact findings. The IS was prepared to identify the potentially significant effects of the proposed project and was circulated for public review as part of the NOP between October 9, 2013 and November 8, 2013. This section provides a brief discussion of the reasons for the less than significant and no impact determinations, which are based on the more detailed analysis conducted during preparation of the IS/NOP.

During the 30-day Notice of Preparation comment period, several comment letters relating to hazards and hazardous materials, hydrology and water quality, noise, population and housing, public services, recreation, and utilities and service systems were provided, which are included within Appendix A of this Draft EIR. All comment letters were taken into account when preparing this section.

4.2 - Agriculture and Forestry Resources

4.2.1 - Important Farmland

According to the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP), the project site is classified as “Urban Built Up Land,” and thus, is not classified as Prime Agricultural Farmland, Unique Agricultural Farmland, or Farmland of Statewide Importance.

4.2.2 - Williamson Act Contracts or Agricultural Zoning

The project site is not zoned for agricultural uses and is not under a Williamson Act Contract. No impact would result.

4.2.3 - Conversion of Forest Land to Non-Forest Use

According to the City of Richmond General Plan, the project site is not zoned for forest land. No impact would result.

4.2.4 - Conflicts with Forest Land Zoning

The project site does not contain forest land; therefore, the project would not convert forest land to non-forest use.

4.2.5 - Pressures to Convert Farmland to Non-Agricultural Use

The project site is located near already developed land and is not located close to any existing agricultural uses; thus, the project would not encourage the conversion of farmland to nonagricultural use. No impacts would occur.
4.3 - Greenhouse Gas

4.3.1 - Greenhouse Gas Emissions

The Bay Area Air Quality Management District (BAAQMD) developed screening levels to indicate when additional analysis is necessary to determine significance for greenhouse gas emissions. According to the greenhouse gas screening level sizes from BAAQMD’s 2011 Air Quality Guidelines, the operational greenhouse gas screening size is 78 dwelling units. Because the project would develop 60 dwelling units, it is below the BAAQMD’s screening size (Table 4-1) and potential greenhouse gas generation would be considered a less than significant impact.

Table 4-1: Greenhouse Gas Screening Level Size

<table>
<thead>
<tr>
<th>Impact Type</th>
<th>BAAQMD Screening Level Size ¹</th>
<th>Project Size</th>
<th>Project Percent of Screening Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operational Greenhouse Gases</td>
<td>78 du</td>
<td>60 du</td>
<td>78%</td>
</tr>
</tbody>
</table>

Notes:
1  Screening Level Size is for Condo/Townhouses, General.

du = dwelling unit
Source: BAAQMD 2011 Guidelines.

4.3.2 - Conflict with Plan, Policy, or Regulation that Reduces Emissions

The project is consistent with both Assembly Bill (AB) 32 and the California Air Resources Board (ARB) Scoping Plan.

Project-related construction and operation would contribute incrementally to cumulative increases in greenhouse gas emissions. The City of Richmond is in the process of creating a Climate Action Plan to address the City’s impacts to climate change. The Climate Action Plan would provide methods and guidance to reduce greenhouse gas emissions in the City; however, because the Climate Action Plan is not yet adopted, it cannot be utilized to determine potential significance.

BAAQMD’s threshold of significance for greenhouse gas emissions is based on AB 32 greenhouse gas emission reduction goals, while also taking into consideration emission reduction strategies outlined in ARB’s Scoping Plan. It can be reasonably concluded that a project that is less than the BAAQMD’s project-level thresholds is consistent with the greenhouse gas emission reduction goals of AB 32 and ARB’s Scoping Plan. As discussed above, the project size (60 dwelling units) is less than the BAAQMD’s screening level for greenhouse gases (78 dwelling units), which indicates that the project would not exceed the BAAQMD’s threshold of significance for greenhouse gas generation. Because the thresholds were developed to be consistent with AB 32 and the ARB’s Scoping Plan, the project would not conflict with AB 32 or the ARB’s Scoping Plan. Impacts would be less than significant.
4.4 - Hazards and Hazardous Materials

4.4.1 - Routine Transport, Use, and Disposal

Project construction activities may involve the use and transport of hazardous materials. These materials may include fuels, oils, mechanical fluids, and other chemicals used during construction. Transportation, storage, use, and disposal of hazardous materials during construction activities would be required to comply with applicable federal, state, and local statutes and regulations. Compliance would ensure that human health and the environment are not exposed to hazardous materials. No significant impacts would occur during construction activities.

In addition, operation of the project as a residential neighborhood would include the use of small quantities of typical household hazardous materials, including cleaning solvents (e.g., degreasers, paint thinners, and aerosol propellants), paints (both latex- and oil based), acids and bases (such as many cleaners), disinfectants, and fertilizers. The potential risks posed by the use and storage of these materials are not expected to expose human health or the environment to undue risks associated with their use, as are typically practiced in a residential setting.

4.4.2 - Upset and Accident Conditions

As discussed in Section 4.4.1, the use of hazardous materials during construction and the use of typical household hazardous materials during project operation in compliance with applicable federal, state, and local statutes and regulations would not result in a significant health risk related to potential upset and accident conditions. Potential impacts would be less than significant.

4.4.3 - Activities Within One-quarter Mile of an Existing School

The school nearest the project site is Washington Elementary School, located 1.7 miles to the northeast. Thus, the project site is not located within 0.25 mile of an existing or proposed school, and no impacts related to hazardous materials within 0.25 mile of a school would result.

4.4.4 - Hazardous Site Listing

A portion of the project site was used for shipbuilding, ship repair, ship scrapping, and metal recycling. Past activities had introduced contaminated soils to the project site, including asbestos, polychlorinated biphenyls, polycyclic aromatic hydrocarbons, total petroleum hydrocarbons, and heavy metals (antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, vanadium, and zinc). Contaminant levels were above the health-based cleanup levels established for the project site, and a Covenant to Restrict Use of the Property was recorded by the Department of Toxic Substances Control (DTSC).

In 2002, the Owner remediated the Restricted Property under the supervision and authority of the DTSC. The project site was remediated pursuant to a Remedial Action Plan (RAP) and an Explanation of Significant Differences (ESD) was prepared and approved pursuant to Chapter 6.8 of Division 20 of the Health and Safety Code. All soils containing contaminants above the residential cleanup levels established in the RAP and ESD were removed from the Restricted Property.
Following the satisfactory remediation of the site, DTSC issued a No Further Action letter in 2002 (see 2011 Phase I Environmental Site Assessment, Appendix F). The DTSC placed a Covenant to Restrict Use of Property on two parcels totaling 3.78 acres: APN 560-340-042 (1.93 acres) and 560-660-073 (1.85 acres). No residential dwellings are proposed within these restricted areas, which are generally located within the Bay Trail easement and within the right-of-way of Seacliff Drive (see Exhibit 2-4). Therefore, related impacts are less than significant.

4.4.5 - Airports

The Oakland International Airport is located 21 miles from the project site and is the nearest public airport to the project site. Therefore, the project site is not located within an airport land use plan or within 2 miles of a public or public use airport or airstrip. No impacts would occur.

4.4.6 - Private Airstrips

The project site is not located within an airport land use plan or within 2 miles of a private airport or airstrip. The closest private airstrip is Buchanan Field Airport, located approximately 18 miles to the east of the project site. No impacts would occur.

4.4.7 - Emergency Plans

The project does not have any characteristics that would impair the implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan. No impacts would result.

4.4.8 - Wildland Fires

The proposed project site is located within a previously developed community of Point Richmond that is urbanized. It does not include, nor is located adjacent to, any areas designated as having a high, extreme, or severe wildland fire hazard (C AlyFIRE 2007). Therefore, exposure to the risk of wildland fires would be minimal.

4.5 - Hydrology and Water Quality

4.5.1 - Seiches, Tsunamis, or Mudflows

The project is located on the San Francisco Bay, and the shoreline and Bay Trail are mapped by the California Geological Survey (2009) as being within a potential tsunami inundation zone (Exhibit 4-1). The area of the site proposed for residential development is located outside of the inundation zone, and future residents would therefore not be affected by tsunami or seiche. The site, as a relatively flat property, would also not be subject to mudflow. Impacts would be less than significant.
Exhibit 4-1
Tsunami Inundation Map

4.5.2 - Water Quality and Waste Discharge Requirements

Water quality in surface and groundwater bodies is regulated in the project vicinity by the San Francisco Bay Regional Water Quality Control Board (RWQCB). The RWQCB is responsible for implementation of state and federal water quality protection guidelines in the Bay Area, including the Water Quality Control Plan (Basin Plan), a master policy document for managing water quality issues in the region, and the Municipal Regional Permit (MRP), which governs the control and treatment of stormwater to protect water quality during project operations.

The project is designated as Group 1 under the RWQCB policies, and would therefore be required to meet all the terms of the MRP, including Numeric Sizing Criteria for Pollutant Removal Treatment Systems, Operation and Maintenance of Treatment Measures, and Limitation on Increase of Peak Storm Water Runoff Discharge Rates. The project would be required to file a Notice of Intent with the RWQCB to be covered under the State National Pollution Discharge Elimination System (NPDES) General Construction Permit for discharges of storm water associated with construction activity. The Applicant would be required to develop and implement a Storm Water Pollution Prevention Plan (SWPPP), including the implementation of Best Management Practices (BMPs) designed to reduce potential impacts to surface water quality during the construction of the project.

The SWPPP is the standard regulation governing construction period runoff, while the NPDES permit governs the control of stormwater runoff during operation. Together, these documents ensure that project construction and operation would comply with the applicable water quality and waste discharge standards and would not otherwise substantially degrade water quality from stormwater runoff.

The SWPPP also requires appropriate structural and non-structural BMPs, including but not limited to the following:

- **Erosion Control.** Employ measures to prevent the movement of soil by wind or water during project construction and may include watering and physical barriers to the movement of soil particles.

- **Sediment Control.** Employ features to prevent the offsite conveyance of sediments, including onsite catch basin inlet protection.

- **Tracking of Soil.** Employ measures to effectively minimize the tracking of soil by vehicles and may include gravel driveways, wheel washes, and street sweeping.

- **Wastes and Cleanup.** The SWPPP must address storage and disposal related to debris, trash, concrete, asphalt, paint, coatings, solvents, and other materials applicable to preparation and construction at the project site.

- **Other Reasonable BMPs.** The SWPPP must also implement other applicable BMPs as needed to keep pollutants away from stormwater. The SWPPP must identify additional applicable measures taken during the rainy season and when storms are anticipated.

Years of field testing and field use have demonstrated that these BMPs reduce stormwater runoff impacts to a less than significant level.
MRP Provision C.3. requires that runoff flow and volume be managed so that the post-project runoff does not exceed estimated pre-project rates and durations, where such increased flow and/or volume is likely to cause increased potential for erosion of creek beds and banks, silt pollutant generation, or other adverse impacts on beneficial uses due to increased erosive force.

Existing runoff currently ponds onsite and sheet flows into San Francisco Bay. The project will result in capture of stormwater in a series of bio-retention basins that will provide onsite treatment before directing runoff into the proposed storm drain system that connects to the existing outfall to San Francisco Bay. No creeks or streams are located between the project site and the outfall location.

Based on the amount of impervious surface to be created, Provision C.3 requires a total of 7,351 square feet of stormwater treatment area. As shown in Exhibit 4-2, stormwater runoff from the project site would be collected and detained in 19 bio-retention basins, totaling 7,837 square feet of treatment area, which exceeds the C.3 requirements. Since the project would comply with the requirements of Provision C.3, including the SWPPP and associated BMPs, the impacts to water quality and waste discharge requirements would be less than significant.

**4.5.3 - Depleting Groundwater Supplies or Interfering with Groundwater Recharge**

The project does not include the use of groundwater. The East Bay Municipal Utility District (EBMUD) would provide domestic water to the project site, and it does not use groundwater as a municipal water supply. The project site is located in an urban area and is not identified as a groundwater recharge location. Thus, the project will not deplete groundwater supplies or interfere with groundwater recharge. As such, impacts would be less than significant.

**4.5.4 - Altering Drainage Patterns, Resulting in Increased Erosion or Siltation**

Currently, the project site is vacant and undeveloped with open soils on the surface. The project would increase impervious surface coverage onsite; however, as discussed in Section 4.5.1 above, the project design includes 19 bio-retention basins that have sufficient capacity to capture and treat stormwater runoff in compliance with Provision C.3 of the RWQCB Municipal Regional Permit. The project design therefore ensures that the project would not result in substantial erosion or siltation on- or offsite. Impacts would be less than significant.

Provision C.3.g. of the RWQCB Municipal Regional Permit requires all Contra Costa County permittees to demonstrate compliance with the Hydromodification Management (HM) Standards by using one of four available options. The project demonstrates compliance with requirement 1.d.i of Attachment C of the Municipal Regional Permit, in that it would not accelerate erosion of the receiving stream reaches. Because the project is located adjacent to the Bay and there are no intervening creeks or streams, the project is considered Low Risk as the downstream channels between the project and the Bay are connected by the following categories:

1) *Enclosed Pipes* – The project will discharge into an existing storm drain system within Seaciff Drive and will discharge directly into the bay at an existing outfall.

2) *Channels subject to tidal action* – The proposed project will discharge into an existing storm drain system that is subject to tidal influence due to the elevation of the existing outfall.
4.5.5 - Altering Drainage Patterns, Resulting in Increased Flooding

No creeks or streams cross the project site. Even though the project site has been disturbed, drainage patterns onsite reveal that the runoff coefficient is relatively low, meaning that a substantial amount of rainfall does not run off the site and either infiltrates or is evaporated back into the atmosphere (LSA 2011). The project would alter the natural drainage pattern; however, in compliance with Provision C.3 of the RWQCB Municipal Regional Permit, the project includes the construction of 19 bio-retention basins with capacity sufficient to accommodate stormwater runoff from the site at a stormwater runoff surface loading rate of 5 inches per hour. Therefore, implementation of the project would not alter drainage patterns in a manner that could increase flooding on- or offsite. Impacts would be less than significant.

4.5.6 - Stormwater Drainage Capacity

The existing storm drain system in Seacliff Drive has adequate capacity to accommodate projected flows from the project site. While the project would increase the amount of impervious surface, the site plan includes 19 bio-retention areas that would retain runoff during storm events, allowing it to be released in a metered fashion that can be accommodated by the existing storm drain system.

The project includes one tie-in to the existing storm drain system in Seacliff Drive. The project will construct a new 24-inch line under the main project driveway, collecting flows from the site and from the swale that runs along the eastern project boundary. The site drainage would connect to the existing 24-inch pipe in Seacliff Drive, which outfalls to the bay near the intersection with Sandpiper Spit.

4.5.7 - Otherwise Substantially Degrade Water Quality

As previously discussed in Section 4.5.1, the project would be subject to RWQCB permit requirements, including the implementation of SWPPP best management practices during project construction, and NPDES permit conditions governing ongoing project operations. In compliance with Provision C.3 of the Municipal Regional Permit, the site design includes bio-retention areas that can accommodate the projected volume of stormwater runoff, ensuring that water quality would not be degraded. Impacts would be less than significant.

4.5.8 - 100-Year Flood

The site is located adjacent to San Francisco Bay, and ground elevations range from 0 to about 20 feet above sea level. Additionally, the portion of the site immediately adjacent to San Francisco Bay is mapped as being within a FEMA 100-year flood zone (FEMA 2009). In order to minimize impacts from adjacent waters near the project site, a 100-foot setback will be in place from the shore to the project structures and amenities. In addition, as outlined within the Geotechnical Feasibility Evaluation (see Appendix D), the project’s finished floor elevations will be designed to be above Contra Costa County flood elevation minimums, taking into consideration the potential for continuing settlement of site soils. Therefore, no residential structures will be located within the 100-year flood zone. Impacts would be less than significant.
4.6 - Mineral Resources

4.6.1 - Mineral Resources of Statewide or Local Importance

The project site is not known to contain mineral resources or aggregate deposits. The project site is not mapped as a significant “Mineral Resource Zone” by the State of California or the City of Richmond. Additionally, the project site has not historically supported mineral extraction operations. This precludes the possibility of the loss of mineral resources of statewide or local importance. No impacts would occur.

4.7 - Noise

4.7.1 - Policies, Plans, and Ordinances

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model is the “Land Use Compatibility for Community Noise Environments Matrix,” which allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise.

Title 24, Chapter 1, Article 4 of the California Administrative Code (California Noise Insulation Standards) requires noise insulation in new hotels, motels, apartment houses, and dwellings (other than single-family detached housing) that provides an annual average noise level of no more than 45 dBA CNEL. When such structures are located within a 60-dBA CNEL (or greater) noise contour, an acoustical analysis is required to ensure that interior levels do not exceed the 45-dBA CNEL annual threshold.

Government Code Section 65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable.

The City of Richmond allows exterior noise levels up to 65 dBA within multi-family residential zoning districts (Zoning Ordinance 15.04.840.020 Noise Standards). This is consistent with Element 12 of the City of Richmond General Plan, which provides that noise levels surrounding multi-family residential development are acceptable at 65 dBA and below; and noise levels above 65 dBA are only conditionally acceptable after a detailed analysis of noise reduction requirements, and with necessary noise insulation features included in the project design (Richmond General Plan, Table 12.1).

The primary noise source in the project vicinity is vehicle traffic on Sealcliff Drive. Two ambient noise measurements were taken on September 3, 2013 on sites adjacent to the project site. The first measurement was taken along Sealcliff Drive, and measured 53.9 dBA $L_{eq}$ with a maximum value of 69.5 dBA and a minimum value of 37.4 dBA. The second measurement was taken north of the project site adjacent to existing residences, and measured 61.3 dBA $L_{eq}$ with a maximum value of 81.6 dBA and a minimum value of 39.7 dBA.
The area surrounding the project site is currently urbanized with surrounding residential and light industrial uses. As a residential project, operational noise levels attributed to the proposed 60 condominium units would be expected to produce sound levels typical of the surrounding residential neighborhoods, and would not exceed applicable noise standards. No impacts would result.

4.7.2 - Groundborne Vibration and Noise

The metric for measuring groundborne noise and vibration is peak ground velocity (measured in inches per second). Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans whose threshold of perception is around 65 VdB. Offsite sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible groundborne noise or vibration.

Construction activity can result in varying degrees of ground vibration, depending on the equipment used on the site. During the project’s site preparation and construction phase, which includes site excavation activities, groundborne vibration and groundborne noise may occur. However, these excavation activities do not include activities known to induce strong vibration effects, such as those produced by tunneling or blasting. Table 4-2 provides approximate vibration levels for particular construction activities, with data that provides a reasonable estimate for a wide range of soil conditions.

**Table 4-2: Vibration Source Levels for Construction Equipment**

<table>
<thead>
<tr>
<th>Equipment</th>
<th>PPV at 25 feet (in/sec)(^1, 3)</th>
<th>Approximate Lv (VdB) at 25 feet(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pile Driver (impact)</td>
<td>Upper range 1.518</td>
<td>112</td>
</tr>
<tr>
<td></td>
<td>Typical 0.644</td>
<td>104</td>
</tr>
<tr>
<td>Pile Driver (vibratory/sonic)</td>
<td>Upper range 0.734</td>
<td>105</td>
</tr>
<tr>
<td></td>
<td>Typical 0.170</td>
<td>93</td>
</tr>
<tr>
<td>Vibratory Roller</td>
<td>0.210</td>
<td>94</td>
</tr>
<tr>
<td>Hoe Ram</td>
<td>0.089</td>
<td>87</td>
</tr>
<tr>
<td>Large Bulldozer</td>
<td>0.089</td>
<td>87</td>
</tr>
<tr>
<td>Caisson Drilling</td>
<td>0.089</td>
<td>87</td>
</tr>
<tr>
<td>Heavy-duty Trucks (Loaded)</td>
<td>0.076</td>
<td>86</td>
</tr>
<tr>
<td>Jackhammer</td>
<td>0.035</td>
<td>79</td>
</tr>
<tr>
<td>Small Bulldozer</td>
<td>0.003</td>
<td>58</td>
</tr>
</tbody>
</table>

Notes:
\(^1\) Where PPV is the peak particle velocity.
\(^2\) Where L\(_v\) is the RMS velocity expressed in vibration decibels (VdB), assuming a crest factor of 4.
\(^3\) Vibration levels can be approximated at other locations and distances using the above reference levels and the following equation: PPV\(_{equip}\) = PPV\(_{ref}\) \(25/D\)\(^{1, 3}\) (in/sec); where “PPV\(_{ref}\)” is the given value in the above table, “D” is the distance for the equipment to the new receiver in feet.

Ground vibration generated by construction equipment spreads through the ground and diminishes in strength with distance. The effects of ground vibration can vary, from no perceptible effects at the lowest levels, to low rumbling sounds and detectable vibrations at moderate levels, and slight damage to nearby structures at the highest levels. At the highest levels of vibration, damage to structures is primarily architectural (e.g., loosening and cracking of plaster or stucco coatings) and rarely results in structural damage. For most structures, a peak particle velocity (PPV) threshold of 0.5 inch per second is sufficient to avoid structural damage, with the exception of fragile historic structures or ruins. For purposes of this analysis, vibration impacts would be considered significant if the project involved any construction or other activities that would create vibration in excess of 0.2 inch per second PPV at any nearby sensitive receptors.

Ground vibration generated by the proposed construction activities would be primarily associated with the use of jackhammers, loaded trucks, and other mobile equipment, which would result in vibration levels of less than 0.08 inch per second PPV at 25 feet. Most ground vibration during construction would consist of onsite truck activity, which typically generates levels less than 0.08 inch per second PPV at 25 feet. In addition, the nearest sensitive receptors to any portion of the proposed condominium sites are approximately 100 feet north of the project site. Vibration levels produced by construction activities are not expected to exceed the peak threshold (0.2 inch per second PPV). As a result, increased vibration levels would be considered less than significant.

### 4.7.3 - Permanent Ambient Noise Levels

The project’s potential to substantially increase ambient noise levels at the project site and the nearby properties is defined by using the term “substantial.” “Substantial” is not defined in the CEQA Guidelines. However, research into the human perception of sound level increases indicates the following:

- A 1-dBA or less increase is difficult to perceive;
- A 3-dBA increase is just perceptible;
- A 5-dBA increase is clearly perceptible, and
- A 10-dBA increase is perceived a being twice as loud.

Therefore, under typical outdoor ambient conditions, where constantly varying noise levels are occurring over time, people typically cannot clearly perceive increases in ambient noise levels until they reach an increase of approximately +3 dBA. Therefore, 3 dBA is generally accepted as the threshold beyond which increases to local ambient noise levels resulting from projects are considered substantial.

In light of the sound level perception thresholds and noise standards described above, a potentially significant increase in ambient noise levels would occur if noise generated by the project would permanently increase outdoor noise levels by 3 dBA or more, and if outdoor noise levels at that location would exceed the City’s noise standards.

As previously discussed, the primary noise source in the project vicinity is vehicle traffic on Seacliff Drive. Two ambient noise measurements were taken on September 3, 2013 on sites adjacent to the
project site. The first measurement was taken along Seacliff Drive, and measured 53.9 dBa L_{eq} with a maximum value of 69.5 dBa and a minimum value of 37.4 dBa. The second measurement was taken north of the project site adjacent to existing residences, and measured 61.3 dBa L_{eq} with a maximum value of 81.6 dBa and a minimum value of 39.7 dBa.

Operational noise levels attributed to the project are not anticipated to exceed applicable noise standards and/or result in any noticeable increase of 3 dBa or more in average daily ambient noise levels. The area surrounding the project site is currently urbanized with surrounding residential and light industrial uses. The proposed residential uses would be expected to produce sound levels consistent with the surrounding residential neighborhoods. The primary source of noise is automobile traffic. A doubling of traffic volume is required to create a noticeable increase in sound (+3 dBa), but the addition of project trips would not double the existing traffic volume and therefore would not cause a substantial permanent increase in noise levels from existing conditions. Therefore, impacts would be less than significant.

4.7.4 - Aviation Noise

The project site is not located within the vicinity of an airport land use plan or within 2 miles of a public airport or public use airport. Therefore, no impacts would occur.

4.7.5 - Temporary Ambient Noise

Construction-related activities such as paving, excavating, and other such activities may cause noise levels to temporarily fluctuate above standard noise levels. Such equipment can generate noise at a level of about 85 dBa at 50 feet from the source. The closest residential receptors are located approximately 100 feet north of the project site. As sound levels are reduced by 6 dBa for every doubling of distance, a sound level of 85 dBa at 50 feet would be reduced to approximately 79 dBa at a distance of 100 feet.

While construction activities would temporarily increase noise in the project vicinity, the City imposes the following noise control measures in accordance with the Noise Ordinance under Chapter 9.52 of the City of Richmond Municipal Code:

- All construction and transport equipment shall be muffled in accordance with State and Federal laws.
- Grading and pile driving operations within ¼ mile of residential units shall be limited to between 7 a.m. and 7 p.m., or as otherwise restricted as part of an approval.
- During construction, trucks and equipment should be running only when necessary.

Mobile construction equipment (intermittent, short-term operation of less than 15 days) may not exceed 80 dBa on weekdays from 7:00 a.m. to 7:00 p.m., and may not exceed 65 dBa on weekends and legal holidays from 9:00 a.m. to 8:00 p.m. The use of stationary construction equipment may not exceed 65 dBa on weekdays from 7:00 a.m. to 7:00 p.m., and may not exceed 60 dBa on weekends and legal holidays from 9:00 a.m. to 8:00 pm (Richmond Municipal Code Section 9.52.110).
No construction would occur on weekends or holidays. In addition, consistency with standard conditions outlined above, which are imposed by the City on all construction projects, ensures that the temporary effects of any construction related activities would have a less than significant impact on surrounding uses.

### 4.8 - Population and Housing

#### 4.8.1 - Growth Inducement

The expected population increase due to the development of the project is not considered significant or unexpected. The Richmond General Plan 2030 designates the project area as Medium Density Residential, indicating that the project site is already envisioned for development with residential uses. The California Department of Finance reports that the average persons per household in the City of Richmond is 2.87 (California Department of Finance 2013). Therefore, by multiplying the total number of units proposed by the average number of people per household, the population increase from the project would be approximately 172 (total units proposed (60) multiplied by the average persons per household (2.87) equals 172.2 people).

Construction of the proposed project could temporarily increase employment in the City of Richmond, but because of the relatively short construction period, the project is not expected to result in a substantial migration of residents into the City of Richmond. Impacts would be less than significant.

#### 4.8.2 - Displacement of Persons of Housing

The project site is currently undeveloped and vacant with no residences occupying the project site. This condition precludes the possibility of displacing current residents or houses.

### 4.9 - Public Services

#### 4.9.1 - Fire

The project area is located within an existing urban and developed community served by various public services. City of Richmond Fire Department currently serves the project site and surrounding area. The nearest fire station to the project site is Fire Station 61 located at 140 W. Richmond Avenue, approximately 1.2 miles from the project site.

The project would cause a slight increase in the demand for fire services in the City of Richmond. The increased demand is due to the population increase on the project site but can be met by existing fire department services, and would not require construction of new facilities. The Richmond General Plan 2030 designates the project area as Medium Density Residential, indicating that the project site is already envisioned for development with residential uses and the effect on public services was already evaluated as part of the EIR prepared for the General Plan 2030. Impacts to fire protection services would be less than significant.
4.9.2 - Police

The project area is located within an existing urban and developed community that is presently served by various public services. The proposed project will create a slight increase in the demand for police services in the City of Richmond but can be met by existing police department services, and would not require construction of new facilities. The Richmond General Plan 2030 designates the project area as Medium Density Residential, indicating that the project site is already envisioned for development with residential uses and the effect on public services was already evaluated as part of the EIR prepared for the General Plan 2030. Impacts to police protection services would be less than significant.

4.9.3 - Schools

The project area is served by the West Contra County Unified School District (WCCUSD). The three local schools nearest the project site are Washington Elementary School, Portola Middle School, and Kennedy High School.

The District has calculated the average number of students associated with different types of housing units and applies these statistics (called student generation rates) to estimate the number of students likely to reside in new housing developments. Student generation rates are currently 0.6213 student per household for single-family homes. Based on the school district student generation rates, the project’s 60 multi-family dwellings would potentially introduce approximately three K-6 students, one 7-8 student, and one 9-12 student. Based on the school district student generation rates, the project’s 60 multi-family dwellings would potentially introduce the following: K-6 (4.3 students), 7-8 (1.2 students), and 9-12 (2.4 students). Current enrollment and capacity of the local schools is shown in Table 4-3.

**Table 4-3: Local School Summary (2012–2013)**

<table>
<thead>
<tr>
<th>School</th>
<th>Grades</th>
<th>Enrollment</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washington Elementary School</td>
<td>K-6</td>
<td>461</td>
<td>488</td>
</tr>
<tr>
<td>Portola Middle School</td>
<td>7-8</td>
<td>526</td>
<td>535</td>
</tr>
<tr>
<td>Kennedy High School</td>
<td>9-12</td>
<td>826</td>
<td>1,017</td>
</tr>
</tbody>
</table>

Source: Ed-Data, 2013.

According to Government Code Section 65995 prohibits a local agency from either denying approval of a land use project because of inadequate school facilities or imposing school impact mitigation measures other than designated fees. Therefore, payment of development fees to the School District would address the proposed project’s impacts on schools and ensure that impacts are less than significant.
4.9.4 - Parks and other Public Facilities

The project would introduce new residents that would use community and neighborhood parks in the area; however, it is not expected to cause degradation in existing parks and recreational facilities. The proposed project would comply with the requirements of the 1975 Quimby Act by providing funds.

New projects within the City are required to dedicate or provide in-lieu payment for parkland equal to 3 acres per 1,000 residences. With a population of over 106,000, the City requires approximately 318 acres of parkland to meet its stated goals. According to the City of Richmond General Plan, the City of Richmond currently contains over 6,500 acres of parks and open space, including local, regional, state, and national resources. This acreage is well in excess of the City’s established requirements.

The project includes construction of a community gathering plaza in the eastern portion of the site as shown in Exhibit 2-3, and includes construction of landscaping and enhancements for the segment of the Bay Trail, which is currently being constructed through the project site along the bay shoreline. The community gathering place and Bay Trail provide immediate recreational outlets for project residents as well as the public. These planned amenities comply with the City’s goals to increase and improve existing parks, trails, and recreational facilities. As a result of the planned improvements already incorporated into the project, impacts to parks and other public facilities are considered less than significant.

4.10 - Recreation

4.10.1 - Existing Facilities

The development of the project may increase the use of existing neighborhood and community amenities such as the shoreline, parks, trails, etc. in the project vicinity from the residences of the project. The development of the proposed project will create pedestrian pathways, as well as landscaping and enhancements to a segment of the Bay Trail currently being constructed to connect to other future segments of the trail in the community. The project also includes construction of a gathering plaza in the eastern portion of the site. With the inclusion of these enhancements, project implementation would not significantly increase the use of existing neighborhood and regional parks or other recreational facilities. Rather, the project would actually provide new recreational facilities, representing a beneficial effect. Impacts would be less than significant.

4.10.2 - Expansion of Facilities

The construction of the proposed project includes the construction of landscaping and other amenities for the segment of the Bay Trail that is currently being constructed through the project site. Impacts of construction of these amenities are considered in this Draft EIR. The proposed addition enhancements to the Bay Trail and construction of the passive gathering plaza in the eastern portion of the site would improve recreational opportunities in the area, while protecting the valuable natural resource of the San Francisco Bay in accordance with San Francisco Bay Conservation and Development Commission policies and goals. The project would not necessitate
further expansion of recreational facilities that might have an adverse effect on the environment. Impacts would be less than significant.

4.11 - Utilities and Service Systems

4.11.1 - Wastewater Treatment

The City of Richmond currently provides sewer services to properties in the area. Thus, the provision of wastewater services would not require major extensions to the existing system in order to serve the project site. In addition, pursuant to correspondence with Chad Davison, General Manager RMSD, the increase in wastewater treatment from the project can easily be served by the City of Richmond’s existing water treatment plant. Furthermore, according to the City of Richmond Sewer Collection System Master Plan (2011), the wastewater treatment facility has the capacity to treat up to 42 million gallons per day, while it currently treats on average 6.3 million gallons per day. Therefore, capacity exists to accommodate the increase in volume associated with the development of 60 additional dwelling units. Moreover, because the General Plan already designates the site for residential development, service was already evaluated as part of the EIR prepared for General Plan 2030. As outlined within the General Plan EIR, buildout of the City would not result in violation of waste discharge requirements (WDRs), because existing measures are in place to ensure compliance with the WDRs and the proposed policies and implementing actions included as part of the General Plan. Impacts would therefore be less than significant.

4.11.2 - Facility Expansion

As discussed previously, the increase in water usage can be served by the City of Richmond’s existing water treatment facilities. Consistent with conversation with David J. Rehnstrom, Senior Civil Engineer of the EBMUD, it is not anticipated that the project will substantially affect or shorten the life span of the facilities serving the project area. All future developments would also be subject to regulations governing waters services and will undergo a separate environmental review by the EBMUD; therefore, impacts would be less than significant.

4.11.3 - Resources and Entitlements

The development of the proposed project would result in increased water supplies to residences of the project area. Currently, EBMUD has enough water supplies to support the residential development (EBMUD 2010 Urban Water Management Plan). In addition, the development of the proposed project will result in the construction of 8-inch diameter potable water line that connects to an existing 8-inch-diameter EBMUD potable water line within Seacliff Drive to serve increased water demands in the project site. The project, similar to all other development within the EBMUD service district, would be subject to water restrictions that may be imposed periodically by EBMUD in response to drought conditions. Therefore, development of the project would not require expanded entitlements, and impacts relating to water supplies would be less than significant.

4.11.4 - Wastewater Capacity

The project would include construction of 8-inch-diameter gravity sewer lines that would convey flows to an existing EBMUD pump station in Seacliff Drive. A new sanitary sewer force main would
extend from the pump station through the project site to Canal Boulevard. All required infrastructure for the project is included in the site plan. As noted in conversation with Chad Davison, General Manager Richmond Municipal Sewer District (December 9, 2013), the existing wastewater treatment facility in the City of Richmond would be able to accommodate the increase in demand from the project site. A number of residents within the Point Richmond neighborhood have voiced concern over odors caused by emission of hydrogen sulfide gas through confirmed leaks from the covers of the anaerobic digester at the City’s wastewater treatment plant operated by Veolia Water. As of December 13, 2010, the City’s Fire Department hazardous materials (Haz-Mat) teams took responsibility for odor complaint response and investigation. The Haz-Mat teams have considerable training related to response and investigations of this type, and work closely with other regulatory agencies, including the BAAQMD.

Work has been completed to rehabilitate the anaerobic digester at the wastewater treatment plant, which included the installation of new covers. The City is requiring Veolia to continue hauling biosolids offsite until the digester process can be operated in compliance with all permit requirements and without impact to the community, as determined by the BAAQMD and the City’s third-party experts. The City is also evaluating a number of different technologies to monitor levels of hydrogen sulfide on a continual basis at areas within Point Richmond. Ongoing compliance with the Fire Department Haz-Mat teams and response and investigations by BAAQMD ensures that impacts would be less than significant.

4.11.5 - Landfill Capacity

Development of the project will result in an increase in solid waste disposal needs in the project area. Currently, the project area is served by the Richmond Sanitary Service, and the nearest landfill is Keller Canyon Landfill, located in Pittsburg, California. The Keller Canyon Landfill currently manages 2,500 tons of waste per day, and can allow up to 3,500 tons of waste per day at the facility. According to the Environmental Protection Agency, the average American produces about 4.4 pounds (2 kg) of waste per day. Consequently, implementation of the project will generate approximately 264 pounds of waste per day. Therefore, existing solid waste disposal facilities have an adequate capacity remaining to support the solid waste requirements of the project. Impacts would be less than significant.

4.11.6 - Solid Waste Regulations

The State of California requires that all jurisdictions meet a 50-percent waste reduction mandate as established by AB 939. Richmond is a member agency of the West Contra Costa Integrated Waste Management Authority, a local Joint Powers Authority responsible for helping its member agencies meet the state waste diversion mandate. West County (which includes the cities of Kensington, El Cerrito, Richmond, San Pablo, Pinole, Hercules, El Sobrante, Rodeo, and Crockett) had a diversion rate of 51 percent in 2006. To meet and maintain the 50-percent diversion rate, Richmond Sanitary Service offers residential and commercial co-mingled recycling collection and green waste collection services throughout its service area. The City of Richmond is meeting the diversion rate set by AB 939, and the project would be provided the recycling collection and green waste collection service to assist the City in continuing to meet and exceed its goals. Impacts would be less than significant.
SECTION 5: CUMULATIVE IMPACT ANALYSIS

5.1 - Introduction

CEQA Guidelines Section 15130 requires the consideration of cumulative impacts within an EIR when a project’s incremental effects are cumulatively considerable. Cumulatively considerable means that “... the incremental effects of an individual 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.” In identifying projects that may contribute to cumulative impacts, the CEQA Guidelines allow the use of a list of past, present, and reasonably anticipated future projects, producing related or cumulative impacts, including those which are outside of the control of the lead agency.

In accordance with CEQA Guidelines Section 15130(b), “... the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, the discussion need not provide as great [a level of] detail as is provided for the effects attributable to the project alone.” The discussion should be guided by standards of practicality and reasonableness, and it should focus on the cumulative impact to which the identified other projects contribute rather than on the attributes of other projects that do not contribute to the cumulative impact.

The proposed project’s cumulative impacts were considered in conjunction with other proposed and approved projects in the cities of Richmond. Consequently, the 2030 Richmond General Plan EIR preferred alternative was used to assess future growth through the City with planned development, ultimately reflecting planned growth. It is anticipated that population, employment and traffic would increase in the project vicinity due to an expected increase in residential and employment uses. By 2030, population in the City of Richmond is expected to increase by 30,000, to approximately 137,000 persons. Employment in the City is expected in increase to approximately 73,000 jobs, an increase of 26,000 jobs. Overall, existing traffic volumes are expected to increase in the study area by approximately 2 percent per year.

5.2 - Cumulative Impact Analysis

Aesthetics

The analysis area for evaluation of cumulative impacts on aesthetics, light, and glare is the City of Richmond. Surrounding hills and the San Francisco and San Pablo Bays are prominent visual features. Buildout of the project, in conjunction with development contemplated by the City of Richmond General Plan, would result in changes to scenic vistas, views of the surrounding hills and the San Francisco and San Pablo Bays, visual character, and light and glare. However, the incremental changes that would occur relative to the baseline conditions would not be cumulatively considerable because of the extent and nature of existing development in Richmond.

When adopting the EIR for the City of Richmond 2030 General Plan, the City found that development activities associated with the proposed General Plan would not result in significant adverse aesthetic impacts for CEQA purposes, and that with mitigation, impacts to scenic vistas and the visual...
character and quality of the City at the General Plan implementation and cumulative level would mitigated to a less than significant level. Specifically, the City found that the Richmond Municipal Code provides development standards that guide the City in its development practices and protect valued scenic corridors and views. The Municipal Code guidelines aim to create standards for the development of new and innovative structures that allow for the maintenance of established natural and man-made views that help define the City of Richmond. General Plan Policies and Actions LU1.1, LU1.2, LU1.4, LU1.D, LU1.H, LU2.2, LU2.B, LU3.4, LU3.E, LU3.G, LU4.1, LU4.2, LU5.2, LU5.3, LU5.B, CN2.3, and AC2.2 were found to reduce the potential for impact on scenic resources and visual character (City of Richmond Resolution No. 51-12, pages 83-88).

With regard to new sources of light and glare, the City found that the City of Richmond is primarily built out, and a significant amount of ambient light and glare from urban uses already exists. However, the City also acknowledged that changing urbanized conditions throughout implementation of the General Plan could result in different distributions of potential light and nighttime glare impacts. However, the City’s General Plan, ordinances, discretionary permit and Design Review process, and the CEQA process each have components designed to protect and enhance the visual character of the City while embracing the changes inherent in an urbanized area. The City’s General Plan, ordinances, discretionary permit and Design Review processes, and CEQA process must be implemented as applicable to future project-level decisions. Accordingly, the City found that the visual quality of the City will improve and will not be the subject of “substantial degradation” as the General Plan is implemented over time, with implementation of the following mitigation measures:

- Mitigation Measures 3.15-2(a): All street lighting shall be directed downward and shielded to prevent light spill onto surrounding properties, sky glow, and glare.
- Mitigation Measures 3.15-2(b): The City shall restrict the use of high level outdoor lighting for new homes, particularly along the hillside ridges.
- Mitigation Measures 3.15-2(c): Landscaping shall be incorporated along internal roads and near off-site homes to reduce spill light emanating from vehicles and buildings.
- Mitigation Measure 3.15-2(d): The City shall require design review of any project containing reflective glass or metal building materials that exceed 50 percent of any building surface or the first three floors.

The CEQA findings for the General Plan EIR also stated that General Plan Policies and Actions LU5.3 and LU5.B would reduce the potential for impact on light and glare. General Plan Policy LU5.3 and General Plan Action LU5.B require Design Guidelines to address all aspects of land use compatibility, including lighting compatibility.

In summary, the CEQA findings for the General Plan EIR concluded that aesthetic impacts at the General Plan and cumulative levels would be less than significant (City of Richmond Resolution No. 51-12, pages 83-88).
In order to ensure consistency with the City of Richmond General Plan, the project Applicant is proposing a General Plan Amendment (GPA) as part of the project entitlements. The proposed GPA would modify General Plan Table 3.1 to provide that building height in a Medium-Density Residential land use classification may exceed 35 feet as part of an approved Planned Area (PA) district.

The project site is located within a “change area” under the City of Richmond 2030 General Plan. The EIR prepared for the 2030 General Plan concluded that development within the designated change areas would be allowed at a higher density, and would allow maximum building heights ranging from 55 feet to 135 feet, instead of the previous building height range of 35 to 75 feet. The 2030 General Plan EIR acknowledged that this potential increase in building height would create a more urban feel, and could result in a substantial adverse change in the character of the change areas as well as those areas that have views of and beyond those change areas. The 2030 General Plan EIR also analyzed the possibility that existing residents could have existing views of the shorelines or hillsides that would either be fully or partially obscured by buildings developed under the proposed General Plan, due to the increase in the number of buildings developed, as well as the increase in building height (City of Richmond 2030 General Plan EIR at page 3.15-10). This was considered a significant and unavoidable impact, even without the proposed project.

However, the GPA proposed by the project Applicant would be limited in scope, and would only apply to those parcels of land within the City that are designated Medium Density Residential and zoned PA. Currently, other than the project site, there are no other parcels zoned PA located within a Medium Density Residential designation within the City of Richmond boundaries. The PA District is primarily intended to apply to large parcels (2 acres or more), as well as large residential developments (including condominiums); thus, the number of properties eligible for a zone change to PA is limited.

The City of Richmond would require that any proposed increased in height in connection with future approval of a PA District shall undergo, prior to or contemporaneous with approval, adequate environmental analysis in a CEQA document that is approved or certified, and that examines and mitigates any significant impacts of the proposed height increase. Any proposed increase in height also shall be subject to review and approval by Planning Commission and/or City Council, as may be required under the City of Richmond Zoning Ordinance, to ensure the additional height is consistent with the principles and standards in the General Plan and the standards identified in Zoning Ordinance provisions concerning PA districts. Accordingly, any cumulative aesthetic impacts related to the GPA will be less than significant.

The project contains development standards to guide the shape and form of new development in a manner that is compatible with surrounding land uses and the vision set forth in the City of Richmond General Plan. Additionally, development proposals would be reviewed by the City to ensure consistency with architectural standards, viewshed policies within the General Plan, and lighting requirements. Therefore, the proposed project, in conjunction with other future development projects, would not have cumulatively considerable impacts on aesthetics, light, and glare.
**Level of Significance Before Mitigation**
No impact.

**Mitigation Measures**
No mitigation measures are required.

**Level of Significance After Mitigation**
No impact.

**Air Quality**
The analysis of cumulative air quality impacts is focused on the San Francisco Bay Area Air Basin (Air Basin), which is identical to the boundaries of the San Francisco Bay Area Air Quality Management District (BAAQMD). The Air Basin consists of Napa, Marin, San Francisco, Contra Costa, Alameda, San Mateo, and Santa Clara counties, as well as the southern portion of Sonoma County and the western portion of Solano County.

Pollutants for which the Air Basin is in non-attainment pollutants include ozone, PM$_{10}$, and PM$_{2.5}$.

The thresholds of significance developed by the BAAQMD for criteria pollutants are the actual thresholds for the identification of a cumulatively considerable contribution by an individual project. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region’s existing air quality conditions.

Section 3 of the BAAQMD’s 2010 Air Quality Guidelines provides screening criteria for determining if a project could potentially result in significant air quality impacts. The BAAQMD’s operational screening criteria is used to indicate whether air pollutants or ozone precursors from a project’s long-term operations could potentially exceed the BAAQMD’s regional thresholds of significance. Section 3.1.1 of the 2011 BAAQMD Air Quality Guidelines states that if the proposed project meets the screening criteria, then:

... [the] project would not result in the generation of operational-related criteria air pollutants and/or precursors that exceed the thresholds of significance shown in Table 2-2. Operation of the proposed project would result in a less-than-significant cumulative impact to air quality from criteria air pollutants and precursor emissions.

As discussed in Impact AIR-1 in Section 3.2, Air Quality, of this EIR, the project’s operational emissions are less than the BAAQMD’s screening criteria. Therefore, the project would not result in a cumulatively considerable contribution to air quality.

**Level of Significance Before Mitigation**
No impact.
Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No impact.

Biological Resources

The analysis area for evaluation of cumulative impacts to biological resources consists of the project vicinity within the City of Richmond. Development projects in the project vicinity may have the potential to impact special-status species. These projects would be required to mitigate for impacts. The proposed project would have the potential to adversely affect special-status species (burrowing owls and nesting birds). Mitigation is proposed to reduce potential impacts on species to a level of less than significant. Therefore, the proposed project, in conjunction with other projects, would not have cumulatively considerable special-status species impacts.

The project site contains undeveloped, disturbed land previously used for marine industrial uses. To prevent runoff associated with construction of the proposed residential project from affecting the shoreline or adjacent waters, the project would implement landscape design features that would minimize offsite flow of potential pollutants, including buffer zones from the shoreline. In addition, natural landscape features, including a swale feature located in the center of the site where water would be detained and percolate into the ground, would trap pollutants from entering into the San Francisco Bay. Therefore, the proposed project, in conjunction with other projects, would not have cumulatively considerable special-status species impacts.

As a result, the proposed project, in conjunction with other projects, would not have cumulatively considerable conflicts with local biological ordinances and policies.

Level of Significance Before Mitigation

No impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

No impact.

Cultural Resources

The analysis area for evaluation of cumulative impacts to cultural resources includes the City of Richmond. The City of Richmond contains a mix of residential, commercial, and industrially developed land. Development activities associated with the proposed project—as well as other future development projects in the area—would result in ground-disturbing activities that may encounter previously undiscovered cultural resources. However, as discussed in Section 3.4, Cultural Resources, the potential for the project to encounter such resources was determined to be low. The project site has been subject to remediation, including excavation and removal of soil, which was
completed in 2002. Because of past site disturbances and remediation activities, the potential for impacting buried historic-era resources is considered low. However, the project does include Mitigation Measure CR-2 in order to reduce potential impacts to cultural resources onsite. Furthermore, according to the City of Richmond General Plan, the project site is not located within the National Register of Historic Places or within the California State Historical Landmarks and Properties. Standard construction monitoring and, if necessary, avoidance or recovery procedures would be required for any project with the potential to adversely affect cultural resources, and would ensure that any construction activities are promptly halted in the event that archaeological deposits are discovered, and that any such deposits are properly recorded, avoided or preserved in accordance with applicable law. Therefore, the proposed project, in conjunction with other future development projects, would not have cumulatively considerable impacts on cultural resources.

**Level of Significance Before Mitigation**

No impact.

**Mitigation Measures**

No mitigation measures are required.

**Level of Significance After Mitigation**

No impact.

**Geology and Soils**

The analysis area for evaluation of cumulative impacts to geology, soils, and seismicity consists of the City of Richmond. The City of Richmond contains a mix of residential, commercial, and industrially developed land.

Development projects in the project vicinity may have the potential to be exposed to seismic hazards. These projects would be required to mitigate for impacts through compliance with applicable laws and geotechnical study recommendations. The project site may be exposed to strong ground shaking during an earthquake. However, the project would be required to comply with the California Building Standards Code seismic design criteria. Seismic design criteria account for Peak Ground Acceleration, soil profile, and other site conditions, and they establish corresponding design standards intended primarily to protect public safety and secondly to minimize property damage. Project construction activities would implement standard stormwater pollution prevention plan (SWPPP) measures to ensure that earthwork activities do not result in substantial erosion offsite and, therefore, would not contribute to area-wide erosion problems. It is reasonable to assume that other development projects would be required to comply with all applicable laws and regulations for erosion control that would reduce project-level impacts to a less than significant level. Therefore, the proposed project, in conjunction with other projects, would not have cumulatively considerable geologic, seismic, or soil impacts.

**Level of Significance Before Mitigation**

No impact.
Mitigation Measures
No mitigation measures are required.

Level of Significance After Mitigation
No impact.

Greenhouse Gas Emissions
The City of Richmond is in the process of creating a Climate Action Plan to address the City’s impacts to climate change. The Climate Action Plan would provide methods and guidance to reduce greenhouse gas emissions in the City. Because the Climate Action Plan is not adopted, however, it cannot be used to determine potential significance.

BAAQMD’s approach to developing the threshold of significance for greenhouse gas emissions is to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide greenhouse gas emissions. BAAQMD set the greenhouse gas significance threshold based on AB 32 greenhouse gas emission reduction goals while taking into consideration emission reduction strategies outlined in California Air Resources Board’s (ARB’s) Scoping Plan. Therefore, it can be reasonably concluded that a project that is less than the BAAQMD’s project-level thresholds is consistent with the greenhouse gas emission reduction goals of AB 32 and ARB’s Scoping Plan. The project is less than the BAAQMD’s screening level for greenhouse gases, which were set to identify projects that would not exceed the BAAQMD’s threshold of significance for greenhouse gas generation. Therefore, because those thresholds were developed to be consistent with AB 32 and the ARB’s Scoping Plan, the proposed project would not conflict with either AB 32 or the ARB’s Scoping Plan. As a result, it is reasonable to conclude that the proposed project, in conjunction with other projects, would implement greenhouse gas emissions reduction measures, resulting in a less than significant cumulatively considerable greenhouse gas emission impact.

Level of Significance Before Mitigation
No impact.

Mitigation Measures
No mitigation measures are required.

Level of Significance After Mitigation
No impact.

Land Use
The analysis area for evaluation of cumulative impacts on land use is the City of Richmond. Most of the City contains urban development. As outlined within Section 3.6, Land Use and Planning, the project’s contemplated residential land uses would be consistent with the City of Richmond General Plan and Zoning Ordinance, and the project’s potential land use impacts identified under CEQA Guidelines Appendix G would be less than significant. Future development projects would also be required to demonstrate consistency with General Plan policies and Zoning Ordinance policies and
ensure that they do not create land use conflicts with adjacent properties, or physically divide an established community; conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project; or conflict with any applicable habitat conservation plan or natural communities conservation plan.

In order to ensure consistency with the City of Richmond General Plan, the project Applicant is proposing a GPA as part of the project entitlements. The proposed GPA would modify General Plan Table 3.1, to provide that building height in a Medium-Density Residential land use classification may exceed 35 feet as part of an approved PA district. Any proposed increase in height shall undergo, prior to or contemporaneous with the consideration of the PA district, adequate environmental analysis under CEQA.

The GPA proposed by the project Applicant would be limited in scope, and would only apply to those parcels of land within the City that are designated Medium Density Residential and zoned PA. Currently, other than the project site, no other parcels zoned PA are located within a Medium Density Residential designation within the City of Richmond boundaries. The PA District is primarily intended to apply to large parcels (2 acres or more), as well as large residential developments (including condominiums); thus, the number of properties eligible for a zone change to PA is limited.

The City of Richmond would require that any proposed increased in height in connection with future approval of a PA District shall undergo, prior to or contemporaneous with approval, adequate environmental analysis in a CEQA document that is approved or certified, and that examines and mitigates any significant impacts of the proposed height increase. Any proposed increase in height also shall be subject to review and approval by Planning Commission and/or City Council, as may be required under the City of Richmond Zoning Ordinance, to ensure the additional height is consistent with the principles and standards in the General Plan and the standards identified in Zoning Ordinance provisions concerning PA districts. Accordingly, the proposed project, in conjunction with other future development projects, would not have cumulatively considerable impacts on land use.

**Level of Significance Before Mitigation**

No impact.

**Mitigation Measures**

No mitigation measures are required.

**Level of Significance After Mitigation**

No impact.

**Transportation**

The analysis area for evaluation of cumulative impacts to transportation is the roadway network in the City of Richmond. Development within the City of Richmond would generate new vehicle trips that may trigger or contribute to unacceptable intersection operations, roadway operations, freeway operations, or queuing. Consequently, the Traffic Impact Assessment prepared by Fehr and Peers
(2014) contains a comparative analysis of cumulative conditions with the project and without the project.

**Cumulative Plus Project Intersection Operations**

As shown in Table 5-1, with the addition of cumulative (without project) traffic, delay at the study intersections would increase compared with existing conditions, but all study intersections are forecast to operate at acceptable service levels. Furthermore, the addition of project traffic would not cause any of the intersections to degrade. The project driveway would operate at acceptable levels of service (LOS). In addition, Cutting Boulevard is a designated Route of Regional Significance, and LOS D must be maintained at intersections along the roadway. As indicated in the Transportation Impact Analysis, intersections on Cutting Boulevard closest to the project site would continue to operate at LOS D or better with the addition of project traffic.

Although the project does not degrade the operation of intersections in the study area, or cause operations to degrade on a Route of Regional Significance, traffic generated by the project would contribute to the cumulative need, identified in the General Plan EIR, to provide transportation infrastructure improvements in the City of Richmond.

Mitigation Measure TRANS-1 is included to ensure that the project contributes its fair share towards the implementation of local and regional transportation infrastructure improvements, thereby reducing potential impacts to a level of less than significant. Fee payments ensure the project would not conflict with an applicable congestion management program, including, but not limited to LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways. As such, the proposed project would not have a cumulatively considerable impact on transportation facilities with implementation of Mitigation Measure TRANS-1.

Under the Cumulative Without Project and With Project conditions, none of the unsignalized intersections would meet peak hour signal warrants. Furthermore, future projects would be subject to site plan review by the Fire Department to assess fire hydrant placement and emergency vehicle access. This project, as with other projects, would also be required to demonstrate that adequate emergency access is available; roadway safety hazards are not created; and that adequate public transit, bicycle, and pedestrian access is provided. These requirements are included in Mitigation Measure TRANS 4a through 4c. Therefore, the proposed project would not result in a cumulatively considerable impact relating to transportation, with implementation of Mitigation Measures TRANS-1, and TRANS 4a through 4c.

**Table 5-1: Cumulative With Project Conditions Peak Hour Intersection LOS Summary**

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Control Type¹</th>
<th>Peak Hour</th>
<th>Cumulative Without Project</th>
<th>Cumulative With Project</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Delay</td>
<td>LOS</td>
</tr>
<tr>
<td>1. Seacliff Drive and Project Driveway</td>
<td>SSSC</td>
<td>AM</td>
<td>Does not exist</td>
<td>1 (9)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM</td>
<td></td>
<td>1 (9)</td>
</tr>
</tbody>
</table>
As such, the proposed project, in conjunction with other future projects, would have a less than cumulatively considerable impact on transportation facilities.

**Level of Significance Before Mitigation**

Potentially significant impact.

**Mitigation Measures**

The following mitigation measures are required to reduce potentially significant cumulative traffic impacts to less than significant levels.

**MM TRANS-1**  Prior to issuance of building permits, the Project Applicant shall pay applicable local and regional traffic impact fees based on the expected level of vehicle trip generation.

**Level of Significance After Mitigation**

Less than significant impact.
SECTION 6: OTHER CEQA CONSIDERATIONS

6.1 - Significant and Unavoidable Impacts

CEQA Guidelines Section 15126.2(a)(b) requires an EIR to identify and focus on the significant environmental effects of the proposed project, including effects that cannot be avoided if the proposed project were implemented.

This section describes significant impacts, including those that can be mitigated but not reduced to a level of less than significant. Where there are impacts that cannot be alleviated without imposing a project alternative, their implications, and the reason why the project is being proposed, notwithstanding their effect, is described. However, with implementation of the proposed project, no significant and unavoidable impacts would occur.

6.2 - Growth Inducing Impacts

There are two types of growth-inducing impacts that a project may have: direct and indirect. To assess the potential for growth-inducing impacts, the project’s characteristics that may encourage and facilitate activities that individually or cumulatively may affect the environment must be evaluated (CEQA Guidelines Section 15126.2(d)).

Direct growth-inducing impacts occur when the development of a project imposes new burdens on a community by directly inducing population growth, or by leading to the construction of additional developments in the same area. Also included in this category are projects that remove physical obstacles to population growth (such as a new road into an undeveloped area or a wastewater treatment plant with excess capacity that could allow additional development in the service area). Construction of these types of infrastructure projects cannot be considered isolated from the development they facilitate and serve. Projects that physically remove obstacles to growth, or projects that indirectly induce growth may provide a catalyst for future unrelated development in an area such as a new residential community that requires additional commercial uses to support residents.

At buildout, the project will develop 60 units of market-rate condominiums. The new residential units envisioned would result in direct population growth; however, the project’s growth projections are accounted for the City of Richmond General Plan growth projections, which in turn are reflected in the regional growth projections set forth in Plan Bay Area. Development and land use activities that are consistent with the General Plan are inherently “planned growth,” and would not be considered growth-inducing.

The project area is currently served by urban infrastructure and utilities, including roads, potable water, wastewater, storm drainage facilities, electricity, and natural gas. As such, the project would not result in a removal of a physical barrier to growth (i.e., indirect growth inducement).
In summary, development of land use and infrastructure that are contemplated by the project have been planned for by the General Plan and therefore would not be considered as resulting in significant direct or indirect growth-inducing impacts.

### 6.3 - Significant Irreversible Changes

The environmental effects of the proposed project are summarized in the Executive Summary, and are analyzed in detail in Section 3, Environmental Impact Analysis, of this Draft EIR.

As mandated by the CEQA Guidelines, the Draft EIR must address any significant irreversible environmental change that would result from implementation of the proposed project. Specifically, pursuant to the CEQA Guidelines (Section 15126.2(c)), such an impact would occur if:

- The project would involve a large commitment of nonrenewable resources;
- Irreversible damage can result from environmental accidents associated with the project; and
- The proposed consumption of resources is not justified (e.g., the project results in the wasteful use of energy).

Development of the project would result in an irretrievable commitment of non-renewable resources such as energy supplies for future residents and construction-related materials. Day-to-day activities would involve the use of non-renewable resources such as petroleum and natural gas during operations. New development projects would be required to adhere to the latest adopted edition of the California Building Standards Code, which includes a number of standards that would reduce energy demand, water consumption, wastewater generation, and solid waste generation that would collectively reduce the demand for resources. This would result in the emission and generation of less pollution and effluent and lessen the severity of corresponding environmental effects. Although development activities that occur pursuant to the project would result in an irretrievable commitment of non-renewable resources, the commitment of these resources would not be significantly inefficient, unnecessary, or wasteful.

The project would develop 60 units of market-rate condominiums on the project site. The proposed residential uses would not handle large quantities of hazardous materials or engage in activities that have the potential to result in serious environmental accidents (e.g., chemical manufacturing, mineral extraction, refining, etc.). As such, the project would not have the potential to cause serious environmental accidents.

The project would increase demand for resources such as energy and water; however, such consumption would not be unusually high or disproportionate relative to similar land uses. The project would implement a number of design features to reduce energy and water consumption, in accordance with the California Green Building Standards Code.

Project construction activities may involve the use and transport of hazardous materials. These materials may include fuels, oils, mechanical fluids, and other chemicals used during construction. Transportation, storage, use, and disposal of hazardous materials during construction activities...
would be required to comply with applicable federal, state, and local statutes and regulations. Compliance would ensure that human health and the environment are not exposed to hazardous materials. No significant impacts would occur during construction activities.

In addition, operation of the project as a residential neighborhood would include the use of small quantities of typical household hazardous materials, including cleaning solvents (e.g., degreasers, paint thinners, and aerosol propellants), paints (both latex- and oil based), acids and bases (such as many cleaners), disinfectants, and fertilizers. The potential risks posed by the use and storage of these materials are not expected to expose human health or the environment to undue risks associated with their use, as are typically practiced in a residential setting.

As discussed in Section 4.4.1, the use of hazardous materials during construction and the use of typical household hazardous materials during project operation in compliance with applicable federal, state, and local statutes and regulations would not result in a significant health risk related to potential upset and accident conditions. Therefore, the project’s end uses have limited potential to cause significant environmental accidents through releases into the environment. Those facilities that handle large quantities of hazardous materials are required to comply with federal and state statutes and regulations concerning transport, use, handling, storage, and disposal of these materials. Thus, compliance with applicable requirements would make the likelihood of hazardous materials release very low.

### 6.4 - Energy Conservation

Public Resources Code Section 21100(b)(3) and CEQA Guidelines Section 15126.4 require EIRs to describe, where relevant, the wasteful, inefficient, and unnecessary consumption of energy caused by a project. In 1975, largely in response to the oil crisis of the 1970s, the State Legislature adopted AB 1575, which created the California Energy Commission (CEC). The statutory mission of the CEC is to forecast future energy needs, license thermal power plants of 50 megawatts or larger, develop energy technologies and renewable energy resources, plan for and direct State responses to energy emergencies, and—perhaps most importantly—promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code Section 21100(b)(3) to require EIRs to consider the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created Appendix F of the CEQA Guidelines.

CEQA Guidelines Appendix F is an advisory document that assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. For the reasons set forth below, this EIR concludes that the project would not result in the wasteful, inefficient, and unnecessary consumption of energy, would not cause the need for additional natural gas or electrical energy-producing facilities, and, therefore, would not create a significant impact on energy resources.

### 6.4.1 - Regulatory Setting

Federal and state agencies regulate energy use and consumption through various means and programs. At the federal level, the United States Department of Transportation, the United States
Department of Energy, and the United States Environmental Protection Agency are three federal
departments with substantial influence over energy policies and programs. Generally, federal agencies
influence and regulate transportation energy consumption through establishment and enforcement
of fuel economy standards for automobiles and light trucks, through funding of energy-related
research and development projects, and through funding for transportation infrastructure
improvements. At the state level, the California Public Utilities Commission (CPUC) and the CEC are
two agencies with authority over different aspects of energy. The CPUC regulates privately owned
utilities in the energy, rail, telecommunications, and water fields. The CEC collects and analyzes
energy-related data, prepares statewide energy policy recommendations and plans, promotes and
funds energy efficiency programs, and adopts and enforces appliance and building energy efficiency
standards. California is exempt under federal law from setting State fuel economy standards for new
on-road motor vehicles. Some of the more relevant federal and State energy-related laws and plans
are discussed below.

Federal Energy Policy and Conservation Act

The Federal Energy Policy and Conservation Act of 1975 sought to ensure that all vehicles sold in the
U.S. would meet certain fuel economy goals. Through this Act, Congress established the first fuel
economy standards for on-road motor vehicles in the U.S. Pursuant to the Act, the National Highway
Traffic and Safety Administration, which is part of the United States Department of Transportation, is
responsible for establishing additional vehicle standards and for revising existing standards. Since
1990, the fuel economy standard for new passenger cars has been 27.5 miles per gallon. Since 1996,
the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has
been 20.7 miles per gallon. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross
vehicle weight) are not currently subject to fuel economy standards. Compliance with federal fuel
economy standards is not determined for each individual vehicle model; rather, compliance is
determined based on each manufacturer’s average fuel economy for the portion of their vehicles
produced for sale in the United States. The Corporate Average Fuel Economy (CAFE) program, which
is administered by United States Environmental Protection Agency, was created to determine vehicle
manufacturers’ compliance with the fuel economy standards. The United States Environmental
Protection Agency calculates a CAFE value for each manufacturer, based on city and highway fuel
economy test results and vehicle sales. On the basis of the information generated under the CAFE
program, the United States Department of Transportation is authorized to assess penalties for
noncompliance. In the course of its over 30-year history, this regulatory program has resulted in
vastly improved fuel economy throughout the nation’s vehicle fleet.

Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) promoted the development of
inter-modal transportation systems to maximize mobility as well as address national and local
interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations
(MPOs) such as the Association of Bay Area Governments (ABAG) were required to address in
developing transportation plans and programs, including some energy-related factors. To meet the
new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and
environmental values that were to guide transportation decisions in that metropolitan area. The
planning process for specific projects would then address these policies. Another requirement was
to consider the consistency of transportation planning with federal, state, and local energy goals. Through this requirement, energy consumption was expected to become a decision criterion, along with cost and other values that determine the best transportation solution.

**The Transportation Equity Act for the 21st Century (TEA-21)**

The Transportation Equity Act for the 21st Century (TEA-21) was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety.

**State of California Energy Plan**

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including providing assistance to public agencies and fleet operators, encouraging urban designs that reduce vehicle miles traveled, and accommodating pedestrian and bicycle access.

**Title 24, Energy Efficiency Standards**

Title 24, which was promulgated by the CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California’s energy consumption, provides energy efficiency standards for residential and nonresidential buildings. According to the CEC, since the energy efficiency standards went into effect in 1978, it is estimated that California residential and nonresidential consumers have reduced their utility bills by at least $15.8 billion. The CEC further estimates that by 2011, residential and nonresidential consumers will save an additional $43 billion in energy costs.

The 2008 CEC Building Energy Efficiency Standards went into effect on January 1, 2010. California’s Building Energy Efficiency Standards are updated on an approximately 3-year cycle. The 2013 Building Energy Efficiency Standards will go into effect on July 1, 2014, and will apply to all projects that apply for a building permit after that date. A copy of the 2008 Building Energy Efficiency Standards and a summary of the key changes between the 2008 and future, 2013 standards may be reviewed online at http://www.energy.ca.gov/title24/. The 2008 Energy Efficiency Standards may also be reviewed at the Energy Efficiency Division, California Energy Commission, 1516 Ninth Street, MS-29, Sacramento, California, 95814-5512.

Because the adoption of Title 24 post-dates the adoption of AB 1575, it has generally been the presumption throughout the State that compliance with Title 24 (as well as compliance with the
federal and State regulations discussed above) ensures that projects will not result in the inefficient, wasteful, and unnecessary consumption of energy. As is the case with other uniform building codes, Title 24 is designed to provide certainty and uniformity throughout the State while ensuring that the efficient and non-wasteful consumption of energy is carried out through design features.

6.4.2 - Energy Requirements of the Project

Short-term construction and long-term operational energy consumption are discussed below.

Short-Term Construction

Development and land use activities contemplated by the project would include short-term construction activities that would consume energy, primarily in the form of diesel fuel (e.g., mobile construction equipment) and electricity (e.g., power tools). It is not possible to reasonably estimate the amount of energy consumed by construction activities, as a number of hard-to-predict variables influence energy consumption (length of activities, size of buildings, equipment fleet, management practices, etc.).

Construction taking place within the project area would be required to monitor air quality emissions using applicable regulatory guidance such as the BAAQMD CEQA Guidelines. The policy indirectly relates to construction energy consumption because construction air pollutant emissions are reduced through functions of energy consumption. As such, compliance with BAAQMD rules and regulations would in some cases simultaneously utilize energy-reducing activities, such as restricting vehicle idling, limiting duration of activities, and promote the use of alternative fuels, thereby reducing energy consumption.

Finally, there are no aspects of the project that would foreseeably result in the inefficient, wasteful, or unnecessary consumption of energy during construction activities. For example, there are no policies that would directly or indirectly cause construction activities to be any less efficient than would otherwise occur elsewhere (restrictions on equipment, labor, types of activities, etc.).

In summary, the project would not result in the inefficient, wasteful, or unnecessary consumption of energy during construction activities.

Long-Term Operations

Development and land use activities contemplated by the project would include long-term operational activities that would consume energy, both in the form of transportation fuel and building/equipment energy (e.g., electricity and natural gas). It is not possible to reasonably estimate the amount of energy consumed by operational activities, as a number of hard-to-predict variables influence energy consumption such as variations among individual households, which may include factors such as family size, personal habits, and consumer choices and preferences that impact energy consumption.

Transportation Energy Demand

A key aspect of the project is to reduce vehicle miles traveled (which reduce transportation fuel consumption) through the development of pedestrian-oriented residential and recreation uses...
within the Bay Trail area. Such uses would be well positioned to allow residents and other members of the community to use the trail, ride bicycles, and walk rather than travel by single-occupant vehicle. In addition, transportation energy demand is continually being reduced through the regulations discussed above, such as the Federal Energy Policy and Conservation Act, ISTEA, TEA-21, and the State of California Energy Plan.

In summary, the project would not result in the inefficient, wasteful, or unnecessary consumption of transportation energy during operational activities.

**Building Energy Demand**

All new residential development within the project boundaries would be subject to the latest adopted edition of the Title 24 energy efficiency standards, which are among the most stringent in the United States. As such, implementation of the project would not result in the unnecessary, wasteful, or inefficient use of energy.
SECTION 7: ALTERNATIVES TO THE PROPOSED PROJECT

7.1 - Introduction

In accordance with CEQA Guidelines Section 15126.6, this Draft EIR contains a comparative impact assessment of alternatives to the project. The primary purpose of this section is to provide decision makers and the public with a reasonable number of feasible project alternatives that could attain most of the basic project objectives, while avoiding or reducing any of the project’s significant adverse environmental effects. However, because this project will not result in any significant environmental impacts after implementation of mitigation measures, an analysis of alternatives to the project is not required under CEQA.

CEQA Guidelines Section 15126.6 states:

Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment, the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project . . .

Although the project will not result in any significant environmental effects with mitigation, analysis of two alternatives to the project is provided for informational purposes. This analysis is guided by the following considerations set forth under CEQA Guidelines Section 15126.6:

- An EIR need not consider every conceivable alternative to a project;
- An EIR should identify alternatives that were considered by the lead agency, but rejected as infeasible during the scoping process;
- Reasons for rejecting an alternative include:
  - Failure to meet most of the basic project objectives;
  - Infeasibility; or
  - Inability to avoid significant environmental effects.

7.1.1 - Significant Unavoidable Impacts

The proposed project would not result in any significant unavoidable impact.

7.1.2 - Alternatives to the Proposed Project

The two alternatives to the proposed project analyzed in this section are the No Project Alternative and Increased Intensity Alternative.

No Project Alternative

Under the No Project Alternative, the proposed Bottoms Property Residential Project would not be implemented and the existing vacant land use would continue for the foreseeable future. No increase in existing buildout potential would occur.
Increased Intensity Alternative

Under the Increased Intensity Alternative, the project would be built consistent with the current City of Richmond General Plan Land Use map. According to the City of Richmond General Plan Land Use map, the project site is designated as Medium Density Residential (10 to 40 dwelling units per acre).

To evaluate a project reasonably in keeping with the density range identified for this site, this alternative reflects a density of 30 dwelling units per acre. Accordingly, based on the developable acreage (6.18 acres), a density of 30 units per acre would yield a total of 185.4 dwelling units. (A density of 20 units per acre would yield an approximate total of 123 dwelling units.)

The analysis of alternatives compares potential impacts with those resulting from implementation of the project as proposed. In several cases, the description of the impact may be the same (i.e., both the project and the alternative would result in a less than significant impact). The actual degree of impact may be slightly different, and this relative difference is the basis for a conclusion of greater or lesser impacts.

7.1.3 - Alternatives Considered But Rejected

Alternative Project Site

An offsite alternative or alternate site is often considered in an EIR. An offsite alternative avoids onsite impacts, but in many cases results in similar impacts at the offsite location. An Alternate Project Site alternative was considered; however, to fully analyze the alternate project site alternative, a vacant alternate site would need to be found within the City of Richmond that includes a land use designation similar to the project site. After extensive review of the City of Richmond Land Use Map, in comparison to vacant sites within the City, no suitable sites were found to exist. An Alternative Project Site would also not meet Project Objective 8, which is to provide development consistent with the General Plan vision for Brickyard Cove, which states: “Brickyard Cove is designated as Medium-Density Residential to provide a transition from port-related uses to the adjoining residential neighborhood along Seacliff Drive” (Richmond General Plan, page 3.39). Consequently, the Alternative Project Site alternative was considered but rejected.

Reduced Density Alternative

A Reduced Density Alternative is often considered as a way to avoid or reduce potential significant effects of the project as proposed. However, the project is already below the lower range of density identified for the site’s land use classification, and would not result in any significant environmental impacts. To reduce the density further would result in a project that is further below the 10 to 40 units per acre density range established for the Multi-Family residential district, and would likely not be financially viable. Therefore, the reduced density alternate was considered but rejected.

7.2 - Project Objectives

As stated in Section 2, Project Description, the objectives of the project are to:

1. Provide a high-quality for-sale residential development project that offers a common green space amenity for residents.
2. Facilitate the logical and orderly transition of a vacant parcel to residential uses that maximize the satisfaction of market demand.

3. Develop condominium residences at a density that is in compliance with the General Plan land use designation of medium density (10 to 40 dwelling units per acre).

4. Enhance construction of the Bay Trail along the project frontage by providing landscaping, benches, and access for trail users and residents.

5. Maximize economic growth through new capital investment, an expanded population base, and payment of development fees.

6. Maximize new residential opportunities to accommodate forecasted population growth within the City of Richmond and to meet Richmond's share of regional housing needs.

7. Provide compact development patterns, contemporary building and landscaping practices, as provided in the General Plan Land Use Element, page 3.3.

8. Provide development consistent with the General Plan vision for Brickyard Cove. “Brickyard Cove is designated as Medium-Density Residential to provide a transition from port-related uses to the adjoining residential neighborhood along Seacliff Drive” as provided in the General Plan, page 3.39.

7.3 - No Project Alternative

The discussion and evaluation of a No Project Alternative is required by the CEQA Guidelines Section 15126.6(e). This alternative provides a comparison between the environmental impacts of the project in contrast to the environmental impacts that could result from not approving, or denying, the project. Under the No Project Alternative, the proposed Bottoms Property Residential Project would not be implemented and the existing vacant land use within the project site would continue for the foreseeable future. No residential buildout of the project site would occur.

The Zoning across the site would also remain unchanged. Currently, the site includes four zoning designations: Planned Area (PA), Coastline Commercial (CC), Community Regional Recreation (CCR), and Marine Industrial (M4).

The purpose of this alternative is to provide decision makers and the public with what would be reasonably expected to occur if the project is not approved and constructed. It is important to note that the site would remain designated by the General Plan for medium density residential development, and it is reasonable to assume that development consistent with this land use designation and density would be pursued at some point in the future.

7.3.1 - Impact Analysis

Aesthetics

The project’s aesthetics impacts were found to be less than significant and no mitigation is required. The No Project Alternative would allow the site to remain in its undeveloped condition, and would
not introduce new sources of light or glare to the area. Therefore, this alternative would have reduced impacts on aesthetics, light, and glare compared to the project.

**Air Quality**

The project-related air quality impacts were found to be less than significant with the implementation of standard BAAQMD mitigation. The No Project Alternative would create no air quality impacts from construction or from vehicle/truck trip generation from the project’s new use. Therefore, the no project alternative would result in reduced impacts related to air quality when compared to the project.

**Biological Resources**

The project would have less than significant impacts to burrowing owls and nesting birds with the incorporation of mitigation. The No Project Alternative would leave the site in its undeveloped, vacant condition, which would avoid any potential impacts to these sensitive species as well as common species that currently utilize the site. The No Project Alternative would result in reduced impacts related to biological resources when compared to the project.

**Cultural Resources**

The Draft EIR determined the project would not have significant impacts to any known cultural resources, and that any potential impacts to previously undiscovered resources during construction would be reduced to less than significant levels through the implementation of standard mitigation measures (i.e., resource surveys, recovery, and monitoring of grading).

The No Project Alternative would leave the site in its present condition and would avoid any impacts to previously undiscovered resources, if any are present. The No Project Alternative would result in reduced impacts related to cultural resources when compared to the project.

**Land Use**

Land use impacts were found to be less than significant and no mitigation would be required for the proposed project. The No Project Alternative would leave the site in its present condition, and would not involve a zone change to the PA district or a General Plan Amendment to permit greater building heights. Under the No Project Alternative, the site would not be developed in accordance with the General Plan land use designation, and would not be enhanced with landscaping, passive gathering places, additional amenities for the Bay Trail, and bio-retention features that would improve water quality and reduce the potential for water borne sediments to reach the Bay during storm events. The No Project Alternative would therefore have a less than significant impact to land use, similar to the project, but none of the benefits under the project would be realized.

**Transportation**

The Draft EIR determined that the transportation impacts of the proposed project, relative to local roadways and intersections could be reduced to less than significant levels with implementation of the recommended mitigation measures. The No Project Alternative would allow the site to remain in its present condition, therefore preventing additional traffic on local roads.
The No Project Alternative would not result in improved crosswalks for pedestrians using the Bay Trail, and would also not generate funding for the alleviation of regional transportation impacts through the payment of fair-share fees. Transportation impact fees provide funding for infrastructure improvements, including those needed to alleviate existing conflicts between motor vehicles and rail traffic. The No Project Alternative would therefore have a less than significant impact to traffic without the need for mitigation, but none of the benefits under the project would be realized. Since the No Project Alternative would not result in the generation of any additional traffic, it would have reduced impacts when compared with the project.

**Geology and Soils**

Under this alternative, the site would remain in its present state and there would be no potential impacts to future structures from geotechnical constraints. While the Draft EIR determines that implementation of the proposed project would have various geotechnical impacts, they would be reduced to less than significant levels through the implementation of standard recommended mitigation measures. Because the No Project Alternative would avoid the need for any mitigation, it is judged to have a reduced impact when compared to the project.

**Conclusion**

The No Project Alternative would reduce or avoid potential impacts to Aesthetics, Air Quality, Biological Resources, and Cultural Resources. In these areas, impacts would remain less than significant, which is similar to the proposed project. However, the No Project Alternative would not advance any of the project benefits, including those related to establishing a land use plan to connect the Bay Trail, providing other pedestrian amenities, and enhancing the treatment of stormwater on the site to reduce runoff during storm events.

**7.4 - Increased Intensity Alternative**

Under the Increased Intensity Alternative, the project would be built consistent with the City of Richmond General Plan land use designation of Medium Density Residential (10 to 40 dwelling units per acre).

The project site in total is 25.27 acres, indicating that development of 60 units would yield a density of 2.37 units per acre, which is well below the minimum 10 units per acre identified for the medium density residential land use classification. However, because a large portion of the site is located under San Francisco Bay or is otherwise restricted from development, project density is calculated based on the developable acreage (6.18 acres). The resulting density is 9.72 units per net acre, which is rounded up to 10 units per net acre for the purpose of analysis.

Although any increased intensity alternative would result in greater land coverage, possibly taller buildings, and greater traffic and air emissions, this alternative reflects a density of 30 dwelling units per acre to demonstrate the impacts of increasing the intensity on the site consistent with the site’s General Plan land use designation. Accordingly, based on the developable acreage (6.18 acres), a density of 30 units per acre would yield a total of 185.4 dwelling units, which is still less than the
maximum allowable density under the Medium Density Residential designation. (A density of 20 units per acre would yield a total of approximately 123 dwelling units.)

7.4.1 - Impact Analysis

Aesthetics

Aesthetics impacts for the proposed project were all determined to be less than significant without mitigation. The Increased Intensity Alternative would have similar construction grading and earthwork requirements, and would have a similar overall design as the proposed project. However, development of this alternative will increase the total units built to 187 units, ultimately increasing project density and height of buildings to accommodate the increase in units. As with the proposed project, a General Plan Amendment would be sought in order to allow for greater building heights. However, since taller buildings would be required, the General Plan Amendment application may include a request to exceed the 50-foot height limit that is being sought as part of the proposed project. The increased density and height of buildings would create greater blockage of views from the public park on Seacliff Place, compared to the proposed project. Light and glare impacts would also be greater than those identified by the project, due to the increase in the number of lights and the height of the lights on taller buildings. Therefore, this alternative would have a greater impact on aesthetics, light, and glare compared with the project.

The Increased Intensity Alternative would have no impact on scenic resources within a State scenic highway. Impacts related to changes to the character and quality of the site are assumed to be similar to the project, based on review by the design review board to ensure high quality design, massing, and compatibility with surrounding uses.

Air Quality

Air Quality impacts for the proposed project were determined to be less than significant with mitigation incorporated. However, due to the increase in units developed onsite, impacts to Air Quality would be increased (due to an increase in traffic).

Section 3 of the BAAQMD’s 2010 Guidelines provides screening criteria for determining if a project could potentially result in significant air quality impacts. If the alternative is less than the applicable operational and construction screening levels contained in the 2010 Air Quality Guidelines, the alternative would not result in criteria air pollutants and/or precursors that exceed the respective thresholds of significance. The BAAQMD’s operational screening level for Condo/Townhouses, General from the BAAQMD’s 2010 Guidelines are provided in Table 7-1.

<table>
<thead>
<tr>
<th>Land Use</th>
<th>BAAQMD Screening Level</th>
<th>Project Size</th>
<th>Project Percent of Screening Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condo/Townhouses, General</td>
<td>451 du</td>
<td>187 du</td>
<td>41.4%</td>
</tr>
</tbody>
</table>

Note:
du = dwelling unit
Source: BAAQMD 2010 Guidelines.
As shown in Table 7-1, the alternative size of 187 units would be less than the screening levels for operational-generated criteria pollutants. Therefore, the alternative would not result in operational-related air pollutants or precursors that would exceed the BAAQMD’s thresholds of significance.

The BAAQMD’s guidance states that construction of the project would result in a less than significant impact to air quality if the following screening criteria are met:

1. The project is below the applicable screening level size, and
2. All Basic Construction Mitigation Measures would be included in the project design and implemented during construction; and
3. Construction-related activities would not include any of the following:
   a) Demolition activities inconsistent with District Regulation 11, Rule 2: Asbestos Demolition, Renovation and Manufacturing;
   b) Simultaneous occurrence of more than two construction phases (e.g., paving and building construction would occur simultaneously);
   c) Simultaneous construction of more than one land use type (e.g., project would develop residential and commercial uses on the same site) (not applicable to high density infill development);
   d) Extensive site preparation (i.e., greater than default assumptions used by the Urban Land Use Emissions Model [URBEMIS] for grading, cut/fill, or earth movement); or
   e) Extensive material transport (e.g., greater than 10,000 cubic yards of soil import/export) requiring a considerable amount of haul truck activity.

The alternative is assumed to require extensive soils movement and soils hauling, similar to the proposed project. Therefore, construction of the alternative would not meet the BAAQMD’s screening criteria. Although the total number of units would increase under the alternative, the site preparation, grading, and paving activities are assumed to be substantially similar to those of the proposed project. Building activity and architectural coatings emissions would be relatively higher for the alternative compared with the proposed project; however, the alternative’s construction emissions would similarly result in a less than significant impact.

The alternative would not generate emissions beyond what has already been assumed in the development of the 2010 Clean Air Plan or exceed the BAAQMD’s thresholds of significance for criteria pollutants; therefore, impacts would be less than significant.

However, the overall emissions for this alternative would be increase in comparison to the project. Therefore, although the alternative would have a less than significant impact towards air quality, it would have greater air quality impacts compared with the project.

**Biological Resources**

As previously outlined, the site would be occupied by residential uses similar to the project. The project’s overall impact to biological habitat are considered less than significant with mitigation due to the low quality of the habitat to support sensitive or endangered wildlife species. Because this
alternative would result in ground disturbance on most of the site, like the proposed project, development of the Increased Intensity Alternative would have similar impacts to sensitive or endangered wildlife species. In addition, this alternative would be required to implement mitigation measures to reduce impacts to biological resources to the greatest extent feasible. Therefore, biological impacts would remain less than significant, similar to the proposed project.

**Cultural Resources**

Similar to biological resources, the area of the site would be occupied by residential uses similar to the project. The project’s overall impact to cultural resources is considered less than significant with mitigation, due to previous uses and remediation at the project site that disturbed the site soils and reduced the likelihood that any previously undiscovered cultural resources will be found during construction activities. Because this alternative would result in ground disturbance on most of the site, like the proposed project, development of the Increased Intensity Alternative would have similar impacts to cultural resources. In addition, this alternative would also be required to implement mitigation measures to reduce impacts to cultural resources to reduce impacts to the greatest extent feasible. Therefore, impacts would remain less than significant, similar to the proposed project.

**Land Use**

Although the Increased Intensity Alternative would result in 127 more units being developed onsite, land use impacts as compared to the project would not change. Landscaping and open space would generally be equivalent as compared to the project. In addition, this alternative would require land use approvals similar to the proposed project, and would yield similar conclusions regarding General Plan, Zoning and Municipal Code consistency. Impacts would remain less than significant for both the project and this alternative.

**Transportation**

The trip generating potential for the Increased Density Alternative was calculated using the same trip generation rates as the proposed project, as presented in Table 7-2. This alternative would further increase vehicle traffic in the area. Development at 30 units per acre would generate more than 100 weekday PM peak hour trips, potentially requiring additional analysis of the CMP network (as discussed in Section 3-7, Transportation and Traffic). Although no intersection analysis was conducted specifically for this alternative, the traffic analysis prepared for the project indicates that intersections in the area do have sufficient excess capacity to accommodate increased vehicle trip generation (see Table 3.7-5). Similar to the project, traffic generated by this alternative would contribute to the cumulative need to provide transportation infrastructure improvements in the City of Richmond, and the alternative would likely be required to pay fair-share fees toward local and regional traffic infrastructure improvements.

A larger development with greater trip generating potential could also increase vehicle conflicts with pedestrian and bicyclists using the Bay Trail and Ferry Point Loop Trail. These impacts could also be reduced with mitigation measures similar to those identified for the project. Therefore, as with the proposed project, this alternative would require similar mitigation measures in the form of payment of fair-share fees and completion of improvements to ensure adequate and safe site access and
circulation. Overall, transportation impacts related to this Alternative would be greater than the project as proposed, but would not result in any significant and unavoidable impacts (Table 7-2).

**Table 7-2: Project Alternative Trip Generation Estimates**

<table>
<thead>
<tr>
<th>Land Use</th>
<th>ITE Code</th>
<th>Units</th>
<th>Daily</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>In  Out Total</td>
<td>In  Out Total</td>
</tr>
<tr>
<td>Project Alternative</td>
<td>230</td>
<td>187</td>
<td>1,110</td>
<td>14  71  85</td>
<td>67  33  100</td>
</tr>
<tr>
<td>Project</td>
<td>230</td>
<td>60</td>
<td>410</td>
<td>6   28  34</td>
<td>27  13  40</td>
</tr>
<tr>
<td>Difference</td>
<td>—</td>
<td>127</td>
<td>700</td>
<td>8   43  51</td>
<td>40  20  60</td>
</tr>
</tbody>
</table>

Notes:
1. Trip generated based on Institute of Transportation Engineers (ITE), Trip Generation (9th Edition) equations for Townhouse.
(Land Use Code 230):
- Daily: \( \ln(T) = 0.87\ln(X) + 2.46 \)
- AM Peak Hour: \( \ln(T) = 0.80\ln(X) + 0.26 \) Enter = 17% Exit = 83%
- PM Peak Hour: \( \ln(T) = 0.82\ln(X) + 0.32 \) Enter = 67% Exit = 33%
- Where \( T \) = trips generated, \( X \) = Dwelling Units

**Geology and Soils**

This alternative would result in similar residential development on the project site; therefore, there would be similar geological impacts from construction and from development of the new residential uses on site. Impacts to geology and soils were found to be less than significant with mitigation incorporated. As with the proposed project, this alternative would have the potential to expose people and structures to seismic hazards and, thus, would implement mitigation similar to the proposed project to reduce impacts to a level of less than significant. Therefore, this alternative would have geology, soils, and seismicity impacts similar to the proposed project.

**Conclusion**

Impacts for four (4) issue areas, including Biological Resources, Cultural Resources, Land Use and Planning, and Geology and Soils, would be roughly equal to the project. Therefore, this alternative would have roughly similar construction grading and earthwork requirements, and would have similar operational impacts as the proposed project, regardless of the increase of the residential units. All impacts would remain less than significant or less than significant with mitigation.

Ultimately, impacts under this alternative would be similar to the project except for Aesthetics, Air Quality, and Transportation and Traffic, which would be increased based on the substantially higher number of units developed on site and the increased number of vehicle trips for this alternative.

**7.5 - Environmentally Superior Alternative**

As required by CEQA Guidelines Section 15126.6, one of the alternatives must be identified as an Environmentally Superior Alternative. The Environmentally Superior Alternative is the one that
would result in the fewest or least significant impacts. If the Environmentally Superior Alternative is the No Project Alternative, then an alternate Environmentally Superior Alternative must be selected from the remaining alternatives.

The No Project Alternative would avoid all environmental impacts without the need for mitigation measures that would be required under the project. However, because analysis of alternative was not required to reduce any significant environmental effects of the project (which are all less than significant with mitigation), the EIR is not required to identify an Environmentally Superior Alternative beyond the No Project Alternative. A comparison of the alternatives is shown in Table 7-3 for informational purposes only.

**Table 7-3: Project Alternative Impacts Comparison**

<table>
<thead>
<tr>
<th>Environmental Issue</th>
<th>Proposed Project</th>
<th>No Project Alternative</th>
<th>Increased Intensity Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aesthetics</td>
<td>LTS</td>
<td>NI</td>
<td>G</td>
</tr>
<tr>
<td>Air Quality</td>
<td>LTS/M</td>
<td>NI</td>
<td>G</td>
</tr>
<tr>
<td>Biological Resources</td>
<td>LTS/M</td>
<td>NI</td>
<td>E</td>
</tr>
<tr>
<td>Cultural Resources</td>
<td>LTS/M</td>
<td>NI</td>
<td>E</td>
</tr>
<tr>
<td>Land Use</td>
<td>LTS</td>
<td>NI</td>
<td>E</td>
</tr>
<tr>
<td>Transportation and Traffic</td>
<td>LTS/M</td>
<td>NI</td>
<td>G</td>
</tr>
<tr>
<td>Geology and Soils</td>
<td>LTS/M</td>
<td>NI</td>
<td>E</td>
</tr>
</tbody>
</table>

**Notes:**
- L = Lesser impact than the proposed project.
- G = Greater impact than the proposed project.
- E = Equivalent impact to the proposed project.
- SIG/U = Significant and Unavoidable.
SECTION 8: PERSONS AND ORGANIZATIONS CONSULTED

8.1 - Public Agencies

8.1.1 - City of Richmond

Planning and Building Services
Director of Planning and Building................................................................. Richard Mitchell
Assistant Planner .......................................................................................... Kieron Slaughter
Recreation Director ..................................................................................... Keith Jabari

8.1.2 - Local Agencies

Police Department
Chief of Police ............................................................................................. Chris Magnus

Fire Department
Fire Chief ....................................................................................................... Michael Banks

West Contra Costa Unified School District
Superintendent ............................................................................................. Bruce Harter

East Bay Municipal Utilities District
Dave Rehnstrom .......................................................................................... Local Customer Service Representative

City of Richmond Municipal Sewer District
Customer Service Representative ................................................................. Bob Steidel

Richmond Sanitary Service
Local Customer Service Representative ......................................................... Bob Steidel

Pacific Gas and Electric Company
Local Customer Service Representative ......................................................... Sid Field

Richmond Public Library
Library and Cultural Services Director .......................................................... Kathy M. Curl

Public Utilities Commission (Richmond Municipal Sewer District)
General Manager .......................................................................................... Chad Davison
## SECTION 9: LIST OF PREPARERS

### 9.1 - Lead Agency

#### 9.1.1 - City of Richmond

**Planning and Building Services**

Director of Planning and Building................................................................. Richard Mitchell
Associate Planner ........................................................................................... Kieron J. Slaughter

### 9.2 - Lead Consultant

#### 9.2.1 - FirstCarbon Solutions

Project Director ................................................................................................ Mary Bean
Project Manager .............................................................................................. Charles Holcombe
Sr. Air Quality Scientist ................................................................................... Shabnam Dilmaghani
Project Manager/ Air Quality Analyst ............................................................. Chryss Meier
Air Quality and Noise Analyst .......................................................................... Ian McIntire
Environmental Analyst ..................................................................................... Liz Westmoreland
Environmental Analyst .................................................................................. Catherine Lytle
Senior Editor ..................................................................................................... Sandra L. Tomlin
Editor ................................................................................................................ Ed Livingston
GIS Technician .................................................................................................. Karlee McCracken
Reprographics .................................................................................................. Octavio Perez

### 9.3 - Technical Subconsultants

#### 9.3.1 - Moore Biological Consultants

Principal Biologist ........................................................................................... Diane S. Moore

#### 9.3.2 - Miller Pacific Engineering Group

Professional Geologist ....................................................................................... Mike Jewett
Geotechnical Engineer ....................................................................................... Eric Dabanian
Geotechnical Engineer ....................................................................................... Scott Stephens

#### 9.3.3 - Innovative and Creative Environmental Solutions

Principal Engineer ............................................................................................ Peng Leong

#### 9.3.4 - LSA

Cultural Scientist .............................................................................................. E. Timothy Jones
9.3.5 - FEHR Peers
Professional Engineer ................................................................................. Kathrin Tellez

9.3.6 - Environmental Vision
Principal ......................................................................................................... Chuck Cornwall
SECTION 10: REFERENCES


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