CITY OF UNION CITY, CALIFORNIA

MidPen Affordable Housing Project

INITIAL STUDY & MITIGATED NEGATIVE DECLARATION

OCTOBER 2019



MidPen Affordable Housing Project

Initial Study/Mitigated Negative Declaration

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California Environmental Quality Act (CEQA) Environmental Checklist Form

1. **Project Title:** MidPen Affordable Housing Project (Lazuli Landing)

(File Nos. AG-19-003, A-19-002, AT-19-003, TPM-19-001, SD-19-003)

2. Lead Agency Name and Address:

City of Union City Economic & Community Development Department 34009 Alvarado–Niles Road Union City, CA 94587–4497

3. Contact Person and Phone Number:

Carmela Campbell, Economic and Community Development Director (510) 675-5316 CarmelaC@unioncity.org

4. Project Location:

Assessor's Parcel Numbers (APNs): 486-3-29, 486-3-28, 486-3-30, 486-3-35, 486-3-34-3, 486-3-34-4

The project site is located in the City of Union City on the west side of Mission Boulevard, also known as State Highway 238, approximately 200 feet south of Whipple Road. The site occupies the block defined by Mission Boulevard, 2nd Street, D Street, and E Street. Regional access is provided by State Highway 238, Interstate 880, located about 2.5 miles to the west, and by Interstate 680, located about 6.8 miles to the south.

5. Project Sponsor's Name and Address:

MidPen Housing Corporation 303 Vintage Park Drive, #250 Foster City, CA 94404

6. General Plan Designation:

CR (Retail Commercial) PI (Private Institutional)

7. Zoning:

CC (Community Commercial) PI (Private Institutional)

8. Description of Project:

Project Overview

The applicant, MidPen Housing Corporation ("MidPen"), is proposing to develop a vacant City-owned block adjacent to Mission Boulevard (State Highway 238) in the north-central portion of the City of Union City with an affordable housing development consisting of 80 apartment rental units and one manager unit housed within two four-story buildings connected by walkways that would occupy the entire block. The northern building, which would be located adjacent to D Street, is referenced throughout this document as Building D, while the southern building, which would be located adjacent to E Street, is referenced as Building E. The location of the project site is shown on Figure 1 and an aerial overview of the site and its surroundings is shown on Figure 2. The proposed site plan is shown on Figure 3. As shown on the building elevations (Figure 4), the two buildings would step down to two stories on the west side of the development that would face existing single-family homes lining 2nd Street, which forms the western boundary of the site.

The mixed-use project would also include ground-floor office space within Building D that would house two social service agencies who would serve project residents as well as the larger community: Union City Youth and Family Services (YFS) and Centro de Servicios. A community activity room and a leasing office would also be located in the ground-floor space within Building E fronting onto Mission Boulevard, as shown on the first floor plan (Figure 5). A two-level parking garage would be provided within the interior of each building, such that the parking would not be visible at the exterior of the project (see Figures 5 and 6).

All of the residential apartments would be affordable to low-income households earning between 20 and 80 percent of Area Median Income (AMI), as determined by the U.S. Department of Housing and Urban Development (HUD). The project would provide a mix of apartment sizes, with 18 one-bedroom units, 35 two-bedroom units, and 28 three-bedroom units. One of the two-bedroom apartments will be reserved for the onsite MidPen property manager. The one-bedroom apartments would range in size from 473 square feet to 680 square feet, while the two-bedroom units would range between 749 to 1,024 square feet. The three-bedroom apartments would provide between 943 square feet and 1,522 square feet of floor area. A total of 75,859 square feet would be occupied by residential uses, while the Centro de Servicios and Youth and YFS' social service offices would occupy approximately 6,058 square feet and 2,033 square feet, respectively. The project would have a total floor area of 167,966 square feet, including 63,182 square feet for the parking garages.

The project applicant will seek to achieve certification as a "Silver" LEED (Leadership in Energy and Environmental Design) building rating by the U.S. Green Building Council.

Building Details

The proposed buildings have been designed with a Spanish Mission architectural style that features beige stucco-covered walls, tower elements, concrete Spanish tile roofs, exposed heavy wood timber beams and rafter tails, some arched doorways and windows, tile relief panels, balconies, decorative metal grilles and sconces, and other architectural details, as shown on the elevations. The two



2000 4000 FEET

Project Site Location

Source: Douglas Herring & Associates



Aerial Overview of Site and Surroundings



Proposed Site Plan

Source: BDE Architecture



Exterior Elevations

Source: BDE Architecture



First Floor Plan



Second Floor Plan

buildings would be connected by covered, open-sided walkways at the third and fourth floors, set back about 40 feet from the Mission Boulevard frontage. The sides of the walkways would be enclosed by wood or galvanized painted metal balcony railings interspersed with wood columns.

The two-story elements of the buildings extending along the 2nd Street project frontage would be configured as attached two-story townhomes housing two- and three-bedroom residential units. Five two-story units would also face the internal courtyard between the two buildings, but these units would have two floors of single-level apartments above them, consistent with the four-story height of the remainder of the buildings.

Each building would be served by an elevator accessed from a ground-floor lobby. The southern building (Building E) would also include three stairwells serving all floors, while the northern building (Building D) would have two stairwells.

In addition to the landscaped ground-floor courtyard that would separate the two buildings in the middle of the site, the third and fourth floors of each building would be configured around a central courtyard located on the third level, as shown on the third and fourth floor plans on Figures 7 and 8, respectively. Residents of the interior apartment units on the fourth floor would be able to look down on the third-floor courtyard.

All of the residential units would come with full kitchens. The three-bedroom units and eleven of the two-bedroom units would provide one and a half bathrooms, while the remainder of the units would have a single bathroom. Community laundry facilities would be provided on the ground floor of Building E adjacent to the community room and on the third floor of Building D, adjacent to a learning center.

The two internal parking garages, located on the first and second levels of the buildings, would provide a total of 133 parking spaces. The two-way garage entrance to Building D would be located on D Street and the entrance to Building E would be located on E Street. The entrances would be open to access visitor parking spaces and have recessed rolling garage doors with security access for the residential parking.

Parking would include 11 spaces dedicated to the social service offices located on the ground floor of Building D, 117 spaces for residents, 4 spaces for MidPen onsite staff, and 5 visitor spaces. Six of the parking spaces would be handicap-accessible spaces, distributed among the resident, visitor, and office parking areas. There would also be 13 pre-wired electric vehicle parking spaces, also distributed among the different parking areas. Sixty-six of the resident parking spaces would be configured as tandem spaces that would be assigned to occupants of the two- and three-bedroom apartment units and some of the social service office staff. Each garage would include bike storage areas that could accommodate parking for 48 bicycles for residents and a bike rack for 6 bicycles for YFS and Centro de Servicios visitors and staff. Trash and recyclables collection areas would be located inside each garage.



Third Floor Plan



Fourth Floor Plan

The proposed buildings would have a height of 44 feet to the top of the upper mansard roofs, measured from grade along Mission Boulevard. The two corner tower elements and two smaller tall roof elements would rise above this, with the tallest central tower on the Mission Boulevard frontage measuring 59 feet 3 inches. Along the Second Street frontage, the two-story townhouses are 28 feet 4 inches from grade. The property slopes down from Mission Boulevard toward Second Street approximately 3 feet. The tallest portions of the building measured from grade are facing D Street and E Street at 46 feet from grade.

Landscaping

The ground-level landscape plan is shown on Figure 9. Pervious landscaping would be placed along the perimeter of the site, planted with a variety of trees, shrubs, and groundcovers. In addition, bioretention planters would be provided in some areas of the interior courtyards that would support trees and shrubs and also provide on-site treatment of stormwater. The ground-level courtyard, which would be paved in concrete with a decorative grid pattern, would be enclosed at both ends by a 6-foot-high decorative metal fence, with a gate at each fence to provide pedestrian access. These gates would have key fob locks to restrict access to project residents and staff.

The podium-level (third-floor) courtyards would be accessed from the linear corridor spanning the length of and connecting the two buildings. The courtyard in Building D would feature synthetic turf and a planted trellis. The courtyard in Building E would feature a tot play apparatus with safety play surfacing and a trellis. The rest of the courtyards would be surfaced with interlocking pavers. Tables and chairs with umbrellas and a BBQ would be provided in each courtyard. The courtyards would be lined on both sides with bio-retention planters containing trees and shrubs.

All of the proposed trees and shrubs would be rated with very low to moderate water demand by the third edition of the Water Use Classification of Landscape Species (WUCOLS III) system developed by the University of California Cooperative Extension under the direction of the California Department of Water Resources. A water-efficient irrigation system would water shrubs and groundcover areas with high-efficiency spray-head sprinklers, while the roots of trees would be irrigated by bubblers. To minimize water consumption, the irrigation system would be adjusted using a controller that would allocate water to each valve grouped by individual hydrozones that are based on the water needs of the plants within those zones.

Stormwater Control

A stormwater management plan (Figure 10) has been developed that complies with regional stormwater treatment requirements, discussed in detail in Section X, Hydrology and Water Quality. The system has been designed and sized to capture and treat on-site all stormwater runoff from the project's roofs and other impervious surfaces. Treatment consisting of natural biological filtration would occur within bio-retention planter boxes placed along the perimeter of the third-floor courtyards in Buildings D and E and in three planters at the Second Street entrance to the central courtyard. The bio-retention planter boxes consist of 18 inches of sandy loam, which would be underlain by 12 inches of Class II permeable base rock. Perforated pipes would be positioned within the rock layers to collect



Ground-Level Landscape Plan



Stormwater Management Plan

the treated stormwater and convey it to the on-site storm drainage system. Three inches of mulch would cover the bio-treatment soil, and the planter boxes would be planted with ornamental trees and grasses. Other methods of stormwater treatment used for this project would include self-retaining areas and interceptor tree credits. Runoff in self-retained areas would be directed to a depressed landscaped area that would allow water to pond a maximum of 3 inches prior to leaving the site; no special landscaping or soils would be required. Interceptor trees are those located within 25 feet of impervious surfaces that intercept rain water on leaves and branches, allowing water to evaporate and to run down the branches and trunk to the soil. Due to improved infiltration and other factors, interceptor trees are granted credits in the calculation of impermeable surfaces for the project. The applicant will need to demonstrate the amount of interceptor tree credits achieved based upon an acceptable methodology, in accordance with the requirements of the Municipal Regional Stormwater Permit discussed in Section X.

Treated stormwater would flow from the self-retaining areas and bio-retention planter boxes to an infiltration and detention vault located under the courtyard, adjacent to 2nd Street designed to meet the hydromodification (HM) requirements for the project, also discussed in Section X. With a capacity of 4,000 cubic feet, the vault would measure approximately 32 feet by 32 feet and have a depth of 4 feet, with approximately 1 foot of cover.

This vault would provide on-site detention of peak stormwater flows sufficient to accommodate the 10year storm without increasing the rate and volume of stormwater discharged from the site in comparison to existing conditions. The detention vault would allow some infiltration of treated stormwater to the underlying groundwater, with the rest being discharged into a minimum 12-inchdiameter storm drain that would connect to an existing 12-inch storm drain located under E Street. An Operations and Maintenance Agreement approved by the Union City Public Works Department will be required to ensure that bio-treatment areas and the detention vault are operated and maintained properly so they perform as designed over time.

Site Preparation

Because the project site is essentially level, extensive earthmoving would not be required across most of the site, and finished grades would be within approximately 1 foot of existing grades. Nonetheless, grading would be required to prepare the site for building foundations and excavation of trenches would be required to install utilities. Deeper excavation would also be required for the stormwater vault described above as well as for an underground water storage reservoir that would be installed underneath the garage of one or both buildings in order to provide adequate fire flow. This project component will be determined in consultation with the Union City Building Division, the Alameda County Fire Department, and the Alameda County Water District (ACWD). The ACWD may also require the project to include reconstruction of the existing water main from Mission Boulevard to May Road in order to upsize the water main to obtain the required site fire flow for the project.

In order to accommodate the proposed building slabs, a total of 3,880 cubic yards of excess soil would be hauled for offsite disposal. However, additional export may be required to accommodate the subterranean water reservoir and upsized offsite water main, if required. In this case, there would be a worst-case estimate of 4,730 cubic yards of soil export. These potential added components to the project have been factored in to the modeling of air pollutants and greenhouse gases that would be generated during project construction. Since these project components have not yet been confirmed, the air quality modeling results represent a worst-case scenario, and may overstate actual construction-related emissions.

Construction Staging and Schedule

Construction is expected to commence in August 2021 and require approximately 20 months to complete. Site preparation and grading would last for approximately one month (19 working days), followed by about 14 months (305 working days) for building construction. If the offsite improvements to the water main in Mission Boulevard prove necessary, it is anticipated that this work would occur concurrently with site grading. Paving and architectural coating would require two weeks and three and a half months (80 working days), respectively. Staging of construction equipment and materials would occur on the project site, to the extent feasible.

The anticipated number of construction workers would vary by construction phase. Approximately six workers would be on site during the initial site clearing and preparation, increasing to about ten workers during site grading. The largest work contingent of 20 to 30 workers would be employed on the site during building construction. The paving phase would require about five workers and the architectural coating phase would require between 10 and 20 workers. Construction workers would park onsite when possible, but would primarily utilize parking on the surrounding streets or on private property with permission.

Planning Approvals

<u>General Plan Amendment</u>: The applicant is requesting a General Plan Amendment to re-designate the property from CR (Retail Commercial) and PI (Private Institutional) to CMU (Corridor Mixed-use Commercial) and a General Plan Text Amendment to add the CMU designation to the General Plan. (File No. AG-19-003)

Zoning Map Amendment: The applicant is requesting a Zoning Map Amendment to rezone the property from CC (Community Commercial) and PI (Private Institutional) to CMU (Corridor Mixed-use Commercial). (File No. AT-19-003)

<u>Zoning Text Amendment</u>: The applicant is requesting a Zoning Text Amendment to add a new chapter to the Zoning Ordinance entitled CMU (Corridor Mixed-use Commercial), which will include development standards applicable to the district. (File No. AT-19-003)

<u>California State Density Bonus Law:</u> The project would be eligible for a 35-percent density bonus, allowing up to 61 dwelling units/acre.

<u>Parcel Map</u>: The applicant is requesting approval of a parcel map, pursuant to Chapter 17.16 of the Zoning Ordinance, to merge six existing parcels into a single parcel. (File No. TPM-19-001)

<u>Site Development Review</u>: The applicant is requesting Site Development Review to allow for redevelopment of the proposed site. Pursuant to Chapter 18.76 of the Zoning Ordinance, Site Development Review is required for all new major developments. (File No. SD-19-003)

Disposition, Development and Loan Agreement: The City of Union City ("City") and MidPen Housing Corporation ("Developer") propose to enter into a Disposition, Development and Loan Agreement ("DDLA"). As proposed, the DDLA would provide for the City to ground lease to Developer certain undeveloped real property bounded by Mission Boulevard, D Street, E Street, and 2nd Street in the City of Union City (the "Property"), for a term of 75 years. The DDLA requires Developer to construct an eighty-one (81) unit multifamily rental housing development on the Property, and to rent the apartment units to low and very low income households at an affordable rent during the term of the lease. Under the DDLA, the City and Developer would execute a regulatory agreement containing the affordability requirements and other obligations for the operation and management of the housing development. The City would lease back approximately 6,500 square feet of ground floor office space in the completed housing development to be used for specified community groups and activities ("Community Space"). In addition, the DDLA would require the City to provide the Developer certain financial assistance for the housing project, including a long-term loan of City funds, the allocation of City's share of County of Alameda Measure A-1 bond funds, and a grant of City funds to be used for the costs of construction and installation of the tenant improvements for the Community Space.

Other Approvals

<u>Union City</u>: The project would require a grading permit for on-site grading and encroachment permits for work in the public right-of-way, such as for trenching, construction of new driveways, sidewalks, undergrounding, and signage and striping/curb painting. A tree removal permit from the Public Works Department will also be required prior to removing any existing street trees. A building permit would be required from the Building Department for the structures and garages.

<u>Union Sanitary District</u>: A sewer permit would be required from the Union Sanitary District (USD) for connection to USD's sanitary sewer system.

<u>Alameda County Water District</u>: Approval of new water meters and domestic water supply service would be required from the Alameda County Water District (ACWD).

<u>State Water Resources Control Board (SWRCB)</u>: The project would require filing of a Notice of Intent (NOI) with the SWRCB for coverage under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) administered by the SWRCB. This requires preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that addresses control of stormwater pollution during and after construction through implementation of Best Management Practices (BMPs). See Section X, Hydrology and Water Quality, for additional information.

<u>San Francisco Bay Regional Water Quality Control Board (RWQCB)</u>: The project would also require coverage under the NPDES Municipal Regional Stormwater Permit (MRP) administered by the RWQCB. This also requires preparation and implementation of a SWPPP that addresses control of stormwater pollution through implementation of BMPs. See Section X, Hydrology and Water Quality, for additional information.

<u>Caltrans</u>: The project would require issuance of an encroachment permit from Caltrans for work in their right-of-way along Mission Boulevard including upgrading existing handicap ramps at the corners of Mission Boulevard and D and E Streets, installation of new fire hydrants, replacement of the existing sidewalk, and any required trenching on Mission Boulevard.

9. Project Setting

The 1.65-acre (71,794-square-foot) rectangular project site is located in the north-central portion of the City of Union City, about 1,500 feet southeast of the City's northern city limits. The site is about 1,000 feet west of the ridge of largely undeveloped hillsides that form a prominent visual backdrop to the cities of Hayward, Union City, and Fremont. The site lies at the transition from the fully developed portions of the City that extend west of Mission Boulevard to the hillsides located to the east of Mission Boulevard, which are characterized by intermittent pockets of residential development amidst sparsely developed ranchland and open space.

The site is comprised of six parcels that would be merged as part of the project. The southern parcel, comprising 17,626 square feet, is zoned PI (Private Institutional) and also has a General Plan Land Use Designation of PI (Private Institutional). The rest of the site, comprising 54,168 square feet, is zoned CC (Community Commercial), with a Land Use Designation of CR (Retail Commercial).

The project site is bounded by Mission Boulevard on the east,¹ 2nd Street on the west, D Street on the north, and E Street on the south. As shown on Figure 11, the site is essentially level, with elevations on the site ranging from 96 feet above mean sea level (msl) on the western edge of the site to 100 feet msl in the northeast corner of the site. Aside from a strip of asphalt pavement approximately 45 feet wide that spans the width of the site near the southern end, the site appears to be entirely devoid of man-made improvements. Aside from the paved strip, the site's surface is covered with dirt, gravel, sparse grasses, weeds, and sporadic shrubs, most of which appear to be dead or dying. However, several healthy shrubs are located along the southern edge of the site. Although street trees line Mission Boulevard within the public right-of-way, only two trees are located on the project property, a small fan palm tree and a small maple tree, both located adjacent to the northern site boundary. A cyclone fence encloses the site.

¹ Mission Boulevard and 2nd Street run in a northwest-southeast direction, while D and E Streets run in a northeastsouthwest direction. To simplify the directional references throughout this Initial Study, Mission Boulevard is assumed to run in a north-south direction, and all other directional references are simplified accordingly.



Existing Site Conditions



a) Viewing southeast across Mission Boulevard from the project site frontage.



Existing Adjacent Conditions

Although the site is surrounded on three sides by existing urban development, the lands to the east consist largely of open space hillsides, as shown on Figure 12-a, while the area immediately to the west is occupied primarily by single-family homes, such as those shown on Figure 12-b. Immediately opposite the site on the other side of Mission Boulevard is a large, flat vacant field owned by Masonic Home, a large senior living community established in 1898 in the hills approximately three-quarters of a mile to the south of the project site. The Masonic Home property encompasses 305 acres and includes most of the land along the east side of Mission Boulevard between May Road and O'Connell Lane. The Masonic Home parcels flank a private ranch property that is visible from the project site when viewing toward the southeast.

The blocks lining the west side of Mission Boulevard south of Whipple Road and north of Decoto Road are predominantly developed with commercial uses. On the block immediately to the south of the project site, the Mission View Food & Liquor store is near the northeast corner of the block. The northwest quadrant of the block is occupied by a two-story AT&T communications facility and office building and small parking lot. The southern half of the block contains a fenced parking lot and a small, unidentified shed.

The next block to the south is developed with a large single-family home, a tree-studded vacant lot, the Union City Teen Workshop (see Figure 13-a), a small office building occupied by the American Red Cross, the Veterinary Medical Center, a small single-family home, and an unidentified parking lot. A second vacant lot is at the southwest corner of this block.

The last block along Mission Boulevard to the south before Decoto Road is developed with a small retail center that hosts Mission Food & Liquor, a nail salon, and a barbershop. The block to the north of the project site, which is less than a half-block in size due to the geometry of Whipple Road, is occupied by a Shell gas station.

With the exception of two churches—the Tri-City A.M.E. Church (Figure 13-b), located on the northwest corner of the intersection of 2^{nd} Street and E Street, and the Iglesia Bautista Ebenezer church located on the northeast corner of the intersection of 3^{rd} Street and E Street, the blocks west of 2^{nd} Street are developed entirely with single-family homes.

Both sides of Mission Boulevard north of Whipple Road/May Road are occupied by residential development. Along the north side of Whipple Road this development consists of single-family homes on large lots, while the area north of May Road is developed with the Dry Creek Apartments, a large complex with several dozen two-story buildings in a park-like setting. The Dry Creek Pioneer Regional Park and Garin Regional Park are located just to the east of this apartment complex.

Another large multi-family residential development is located on the west side of Mission Boulevard north of Whipple Road. The Mission Gateway community owned by the current project applicant consists of affordable rental apartment units in two- and three-story buildings, with ground-floor retail located on the corner of Mission Boulevard and Tamarack Drive.



a) Community garden and youth center located on Mission Boulevard one block south of project site.



Neighboring Land Uses

The following schools are located within one-half mile of the project site:

- Guy Emanuele Jr. Elementary School and Kidango Preschool 100 Decoto Road
 0.27-mile south of the project site
- 2) New Haven Adult School600 G Street0.28-mile southwest of the project site
- Decoto K-12 School for Independent Study 600 G Street
 0.28-mile southwest of the project site
- 4) Mission Hills Middle School250 Tamarack Drive0.32-mile northwest of the project site

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.



DETERMINATION:

On the basis of the initial evaluation:

- □ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☑ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- □ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- □ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on the attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- □ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Printed name

For

(This page intentionally left blank.)

EVALUATION OF ENVIRONMENTAL IMPACTS:

I. AESTHETICS — Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?			X	

Explanation: As shown on Figure 12-a, a scenic vista consisting of open space hillsides is visible from the project site and other locations along Mission Boulevard. These hillsides rise to elevations in the near distance (within ½-mile of Mission Boulevard) to nearly 600 feet above mean sea level (msl), while the hills behind them reach elevations in excess of 1,400 feet msl. These hillside ridges, which trend parallel to Mission Boulevard, extend for miles in either direction and form an important visual backdrop to the cities of Hayward, Union City, Fremont, and others.

A less prominent view of the largely undeveloped hillsides is visible across the project site from locations along 2nd Street adjacent to the site, as well as from the private residences on the west side of 2nd Street. While private views are not afforded protection under CEQA, the street and sidewalks lining 2nd Street are public vantage points for viewing the scenic vista to the east. These views are currently constrained only by the cyclone fence surrounding the site and the street trees lining Mission Boulevard, which could be considered as contributory elements to the scenic vista.

Development of the proposed project would block the scenic view that is currently available across the project site. Views would still be available toward the hillsides from D and E Streets, though these views would also be constrained by the project buildings.

The loss of views from private locations would not be considered a significant impact under CEQA. With respect to the effect on the public vantage points on D, E, and 2nd Streets, the loss of these views would not rise to the level of a significant impact on a scenic vista. To motorists passing the site in vehicles, they would be exposed to the change in visual conditions just for the few seconds it takes to drive past the site. Furthermore, motorists should be and generally are focused on the roadway ahead of them as they are driving; they are not expected to be gazing at the hillsides in a prolonged fashion as they drive past the site. While their passengers, if any, might be free to gaze, the time to pass the site would still limit the time they can enjoy the view, and would similarly limit the time that the view would be interrupted following development of the project.

To eastbound motorists on D and E Streets, the eastern hillsides would remain visible, but they would be constrained by the project as they approached and passed the project site. The views are already partially constrained by existing development, such as the large AT&T building located immediately to the south of the project site. Again, the changes to existing views would be experienced only for the few seconds it takes to drive past the site.

Pedestrians walking on D, E, and 2nd Streets adjacent to the project would also have their views of the eastern hills constrained or blocked by the proposed project. However, there are already significant constraints to the scenic views in the project vicinity. For example, a pedestrian walking the five-block length of 2nd Street is currently unable to see the hillsides along the majority of the street's length, due to intervening development. Partial views are available at the cross streets and, in some cases, across parking lots or undeveloped parcels. Similarly, eastbound pedestrians on D and E Streets currently have only constrained views of the hillsides, circumscribed by surrounding development.

While development of the project would increase the restrictions on views of the hillsides in the immediate site vicinity, this would represent an incremental increase in conditions that already exist throughout the project area. (The only locations in the area where the views are fully unconstrained is from the sidewalk along the east side of Mission Boulevard.) If a passing pedestrian is motivated to enjoy the scenic vista, that person need only walk one short block (about 180 feet) to Mission Boulevard, where the views are constrained only by passing traffic.

Because the changes in visual access to the eastern hillsides would be minor incremental reductions in comparison to existing conditions throughout the project area, and because both pedestrians and motorists could readily move one block to the east to enjoy unobstructed views of the hills, the project's effect on this scenic vista would be a *less-than-significant impact*.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b)	Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X

Explanation: There are no State-designated scenic highways in the vicinity of the project site. Although Caltrans does not currently provide access to its list of designated scenic highways (access was recently removed), Highway 238 (Mission Boulevard) is not included in the lists of State scenic highways presented in Sections 263.1 to 263.8 of the Streets and Highways Code, which identifies all eligible or designated State scenic highways. There are no highways within Union City included in these lists.² Furthermore, there are no scenic resources present on the project site. Therefore, the project would have **no adverse impact** on scenic resources within a State scenic highway.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urban area, would the project conflict with applicable zoning and other regulations governing scenic quality?			\boxtimes	

Explanation: The existing visual quality of the project site is quite low, as shown on Figures 11-a and 11-b. The surface of much of the site consists of bare dirt and gravel, while some portions have a sparse cover of ruderal grasses and weeds. The few shrubs on the site appear to be dead, with the exception of a cluster of shrubs on the western border of the site. There are no variations in topography on the site. The enclosure of the site with cyclone fencing further detracts from the aesthetics of the property.

² California Streets and Highways Code, Division 1, Chapter 2, Article 2.5, State Scenic Highways, Sections 260 through 284.

Although aesthetics impacts are inherently subjective, it can be assumed that the vast majority of people looking at the site would not deem it to have high positive visual character. To the contrary, the characteristics described above present an argument for the site having a substantially negative visual quality.

The visual character of the site would be dramatically transformed by implementation of the proposed project. The conditions described above would be replaced by two attractively designed Mission-style buildings separated by a landscaped courtyard that would be visible from both 2nd Street and Mission Boulevard. As viewed from 2nd Street, the tops of trees in the two landscaped courtyards may also be partially visible at the third story of each building. Ornamental trees and shrubs would be generously placed along all four sides of the site, further enhancing the appearance of the property. Given the character of existing development lining the west side of Mission Boulevard between Whipple Road and Decoto Road, the proposed project would aesthetically enhance this stretch of Mission Boulevard by most measures. Therefore, for the considerations enumerated above, the project would not have a less-*than-significant impact* on the visual character of the site and its surroundings and would in fact have a *beneficial effect*.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

Explanation: There are currently no sources of light or glare on the project site. The proposed buildings would introduce a new source of nighttime lighting. Decorative lighting sconces would be placed at intervals around the outside perimeters of the buildings, primarily flanking entrance doors. In addition, the City would require the applicant to provide new street lights on D and E streets, at a minimum. At night, interior lighting would emanate from some windows, though it is likely that many residents would have their windows covered at night by drapes or blinds for privacy.

The proposed buildings would have interior lighting and a limited amount of exterior security lighting typical of all multi-family residential development and of urban development in general. This would not constitute a new source of substantial light or glare, and would be consistent with existing nighttime lighting of other parcels in the area. The proposed buildings would not be finished in reflective surfaces other than windows, which do not comprise a substantial source of glare in residential developments. While parked cars can be a source of glare, all of the proposed parking would hidden from view in the internal parking garages.

As part of the entitlement process and prior to building permit issuance, the project applicant will be required to submit a lighting plan, which will allow the City to ensure that the proposed lighting does not have any unsightly or undesirable qualities, in accordance with Section 18.76.010 of the Municipal Code. Given the preceding considerations regarding nighttime lighting and daytime glare, the project would have a *less-than-significant impact* related to the creation of nighttime lighting and glare.

II. AGRICULTURAL RESOURCES — In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forest land, including the Forest and Range Assessment project and the Forestry Legacy Assessment project, and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X

<u>Explanation</u>: The project site is designated "Urban and Built-Up Land" on the map of important farmland in Alameda County prepared pursuant to the Farmland Mapping and Monitoring Program (FMMP) by the Department of Conservation (DOC), a department of the California Resources Agency.³ As implied by the designation, Urban and Built-Up Land is not one of the categories of important farmland mapped by the FMMP. Therefore, implementation of the project would have **no** *impact* on valuable farmland.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X

<u>Explanation</u>: The project site is not zoned for agricultural use; it is zoned for residential use and is not under a Williamson Act contract.⁴ Therefore, implementation of the project would have **no impact** related to zoning for agricultural use or a Williamson Act contract.

³ California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, "Alameda County Important Farmland 2016" (map), August 2018.

⁴ City of Union City, CommunityView Property Information, Parcel Details, accessed June 28, 2019 at: <u>http://maps.digitalmapcentral.com/production/vecommunityview/cities/unioncity/index.aspx</u>.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined in Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				X

Explanation: Neither the project site nor any of the surrounding lands are zoned as forest land.⁵ The proposed project would therefore have **no impact** on forest or timber land.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Result in the loss of forest land or conversion of forest land to a non-forest use?				\boxtimes

Explanation: Public Resources Code Section 12220(g) defines forest land as land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. There is no forest land on the project site as defined in Public Resources Code Section 12220(g). Therefore, implementation of the project would have **no impact** on forest land.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?				\boxtimes

Explanation: As discussed above, the project site does not contain farmland or forest land, and implementation of the proposed project would therefore have **no** impact on the potential to convert such lands to other uses.

⁵ Ibid.
III. AIR QUALITY — 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:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?		X		

<u>Explanation</u>: On January 10, 2017, BAAQMD released the *Draft 2017 Clean Air Plan*.⁶ The *Final 2017 Clean Air Plan* was adopted in April 2017.⁷ The 2017 Clean Air Plan/Regional Climate Protection Strategy (CAP/RCPS) provides a roadmap for BAAQMD's efforts over the next few years to reduce air pollution and protect public health and the global climate. The CAP/RCPS includes the Bay Area's first-ever comprehensive RCPS, which identifies potential rules, control measures, and strategies that BAAQMD can pursue to reduce GHG in the Bay Area. Measures of the 2017 CAP addressing the transportation sector are in direct support of *Plan Bay Area 2040*, which was prepared by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) and includes the region's Sustainable Communities Strategy and the 2040 Regional Transportation Plan. Highlights of the *2017 Clean Air Plan* control strategy include:

- Limit Combustion: Develop a region-wide strategy to improve fossil fuel combustion efficiency at industrial facilities, beginning with the three largest sources of industrial emissions: oil refineries, power plants, and cement plants.
- **Stop Methane Leaks:** Reduce methane emissions from landfills, and oil and natural gas production and distribution.
- **Reduce Exposure to Toxics:** Reduce emissions of toxic air contaminants by adopting more stringent limits and methods for evaluating toxic risks at existing and new facilities.
- Put a Price on Driving: Implement pricing measures to reduce travel demand.
- Advance Electric Vehicles: Accelerate the widespread adoption of electric vehicles.
- **Promote Clean Fuels:** Promote the use of clean fuels and low or zero carbon technologies in trucks and heavy-duty vehicles.
- Accelerate Low-Carbon Buildings: Expand the production of low-carbon, renewable energy by promoting on-site technologies such as rooftop solar and ground-source heat pumps.
- **Support More Energy Choices:** Support of community choice energy programs throughout the Bay Area.
- Make Buildings More Efficient: Promote energy efficiency in both new and existing buildings.
- **Make Space and Water Heating Cleaner:** Promote the switch from natural gas to electricity for space and water heating in Bay Area buildings.

⁶ Bay Area Air Quality Management District, *Draft 2017 Clean Air Plan*, January 10, 2017, <u>http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/baaqmd 2017 cap draft 122816-pdf.pdf?la=en</u>

⁷ Bay Area Air Quality Management District, *Final 2017 Clean Air Plan*, April 19, 2017. <u>http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a -proposed-final-cap-vol-1-pdf.pdf?la=en</u>

When a public agency contemplates approving a project where an air quality plan consistency determination is required, BAAQMD recommends that the agency analyze the project with respect to the following questions: (1) Does the project support the primary goals of the air quality plan; (2) Does the project include applicable control measures from the air quality plan; and (3) Does the project disrupt or hinder implementation of any 2017 CAP control measures? If the first two questions are concluded in the affirmative and the third question concluded in the negative, the BAAQMD considers the project consistent with air quality plans prepared for the Bay Area.

Any project that would not support the 2017 CAP goals would not be considered consistent with the 2017 CAP. The recommended measure for determining project support of these goals is consistency with BAAQMD CEQA thresholds of significance. As presented in the subsequent impact discussions in this section, the proposed project would not exceed the BAAQMD significance thresholds; consequently, the proposed project would support the primary goals of the 2017 CAP and would not hinder implementation of any of the CAP control measures. Therefore, the proposed project with implementation of mitigation measures would have a *less-than-significant impact with mitigation* associated with, conflicting with, or obstructing implementation of the applicable air quality plan.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) 	Result in a cumulatively considerable net increase of any criteria pollutant for which the region is non- attainment under an applicable federal or state ambient air quality standard?		X		

<u>Explanation</u>: Information in this section is based on the *Air Quality, Greenhouse Gas, and Health Risk Assessment Technical Report* prepared by RCH Group.⁸ The Air Quality Technical Report provides an overview of the existing air quality conditions at the proposed project site, the air quality regulatory framework, an analysis of potential air quality impacts (including assumptions and methodology) that would result from implementation of the proposed project, and identification of applicable mitigation measures. Other issues related to air emissions covered include the assessment of emissions related to air quality health impacts.

The air quality analysis is consistent with the methods described in the Bay Area Air Quality Management District (BAAQMD)'s *CEQA Air Quality Guidelines*.⁹ Mitigation measures are presented to reduce impacts to less than significant, as applicable. The air quality analysis includes a review of criteria pollutant emissions such as carbon monoxide (CO)¹⁰, nitrogen oxides (NO_x), sulfur dioxide (SO₂), volatile organic compounds (VOC) as reactive organic gases (ROG)¹¹, particulate matter less

⁸RCH Group, Draft MidPen Housing at Mission D&E, Union City, CA Air Quality, Greenhouse Gas, and Health Risk Assessment Technical Report, August 19, 2019.

⁹Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, May 2017, <u>http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa guidelines may2017-pdf.pdf?la=en</u>

¹⁰CO is a gaseous pollutant that is a product of incomplete combustion of organic material, and is mostly associated with internal combustion engines such as those in motor vehicles, and in wintertime, with wood–burning stoves and fireplaces.

¹¹VOC means any compound of carbon, excluding CO, carbon dioxide (CO₂), carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions and thus, a precursor of ozone formation. ROG are any reactive compounds of carbon, excluding methane, CO, CO₂ carbonic acid, metallic carbides or carbonates, ammonium carbonate, and other exempt compounds. The terms VOC and ROG are often used interchangeably.

than 10 micrometers (coarse or PM_{10}), and particulate matter less than 2.5 micrometers (fine or $PM_{2.5}$).¹²

Construction Impacts

Construction activities are expected to occur from August 2021 through March 2023. Typically, construction activities would occur for 8 hours per day, Monday through Friday. The California Emissions Estimator Model (CalEEMod, Version 2016.3.2) produced by the California Air Resources Board (CARB) and the Sacramento Metropolitan Air Quality Management District (SMAQMD) Road Construction Emissions Model, Version 9.0.0¹³ were used to quantify construction-related pollutant emissions.¹⁴ CalEEMod and Road Construction Emissions Model output Files of the Air Quality Technical Report.

The BAAQMD *CEQA Air Quality Guidelines* recommend quantification of construction-related exhaust emissions and comparison of those emissions to significance thresholds. For fugitive dust emissions, BAAQMD recommends implementation of best management practices to reduce wind-blown dust.

Table AQ-1 provides the estimated (unmitigated and mitigated) short-term average daily construction emissions that would be associated with the proposed project and compares those emissions to the BAAQMD's significance thresholds for construction exhaust emissions. The calculations include the emissions from the potential construction of an underground water storage reservoir at the site as well as the possible offsite expansion of the existing water main in Mission Boulevard, from the project site to May Road. The construction phases (i.e., site preparation, grading, building construction, paving, etc.) are sequential (i.e., do not generally occur simultaneously). Thus, the average daily construction emissions were determined as the total construction emissions divided by the number of construction days and then compared to the BAAQMD significance thresholds.

As indicated in Table AQ-1, the estimated average daily construction emissions would be below the BAAQMD's significance thresholds. The maximum daily construction emissions would vary from phase to phase; where NO_x, PM₁₀, and PM_{2.5} emissions tend to be highest during site preparation and grading, and ROG tends to be highest during application of architectural coatings.

¹²PM₁₀ and PM_{2.5} consists of airborne particles that measure 10 microns or less in diameter and 2.5 microns or less in diameter, respectively. PM₁₀ and PM_{2.5} represent fractions of particulate matter that can be inhaled into the air passages and the lungs, causing adverse health effects.

¹³ Sacramento Metropolitan Air Quality Management District, Road Construction Emissions Model, Version 9.0.0, May 2018, http://www.airquality.org/businesses/ceqa-land-use-planning/ceqa-guidance-tools.

¹⁴California Air Resources Board, *California Emissions Estimator Model User's Guide*, November 9, 2017, <u>http://www.caleemod.com/</u>

Condition	ROG	NOx	PM10	PM2.5	СО
	Unmitigated				
Construction	6.40	20.3	0.86	0.80	18.4
Significance Threshold	54	54	82	54	
Significant (Yes or No)?	No	No	No	No	No
		l	Mitigated		
Construction	5.12	7.69	0.05	0.05	19.0
Significance Threshold	54	54	82	54	
Significant (Yes or No)?	No	No	No	No	No

Table AQ-1 Estimated Daily Construction Emissions (pounds)

SOURCE: CARB CalEEMod Version 2016.3.2 and SMAQMD Road Construction Emissions Model Version 9.0.0. NOTE: Mitigated construction emissions estimates assume implementation of Mitigation Measures AQ-1 through AQ-4.

Although construction of the proposed project would not exceed the daily significance thresholds for criteria air pollutants, BAAQMD considers construction projects that involve site disturbance to have a potentially significant impact on air quality unless the District's *Construction Mitigation Measures* are implemented during construction. Therefore, for purposes of this analysis, the proposed project would have a potentially significant impact on air quality due to emissions of criteria air pollutants during proposed project construction. Implementation of the following mitigation measures would reduce the impact to a *less-than-significant-with-mitigation* level:

Mitigation Measure AQ-1:

BAAQMD Required Fugitive Dust Control Measures. The construction contractor shall reduce construction-related air pollutant emissions by implementing BAAQMD's basic fugitive dust control measures, including:

- All 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 off-site 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 vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

- A publicly visible sign shall be posted with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.
- **Mitigation Measure AQ-2:** BAAQMD Required Exhaust Emissions Reduction Measures. The construction contractor shall reduce construction-related air pollutant emissions by implementing the following BAAQMD exhaust emissions reduction measures:
 - 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 California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
 - All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Mitigation Measure AQ-3: BAAQMD Regulation 8, Rule 3 for Architectural Coatings. In order to minimize emissions of volatile organic compounds (VOCs), architectural coatings employed during construction of the proposed project shall comply with BAAQMD Regulation 8: Organic Compounds, Rule 3: Architectural Coatings (Rule 8-3). The Rule 8-3 VOC architectural coating limits specify that the use paints and solvents with a VOC content of 100 grams per liter or less for interior and 150 grams per liter or less for exterior surfaces shall be required.

Based on the CalEEMod and using standard fuel consumption estimates, construction activities would require 77,650 gallons of diesel fuel.¹⁵ For the finishing phase of construction, some electricity may be used (e.g., for power tools and work lighting). While this electricity usage cannot be quantified at this time, it is anticipated to be relatively minor compared to normal building operations. When not in use, electric equipment would be powered off so as to avoid unnecessary energy consumption. Natural gas would not be used during construction.

Operational Impacts

CalEEMod was used to estimate emissions that would be associated with motor vehicle use, space and water heating, and landscape maintenance emissions expected to occur after the proposed project construction is complete and operational. The proposed project land use types and size and other project-specific information were input to the model. CalEEMod provides emissions for

¹⁵Fuel usage is estimated using the CalEEMod output for CO2, and a kgCO2/gallon conversion factor, as cited in the *U.S. Energy Information Administration Voluntary Reporting of Greenhouse Gases Program*, <u>https://www.eia.gov/environment/pdfpages/0608s(2009)index.php.</u>

transportation, area sources,¹⁶ electricity consumption, natural gas combustion, electricity usage associated with water usage and wastewater discharge, and solid waste land filling and transport. CalEEMod output worksheets are included in Appendix A.

Annual electricity and natural gas consumption were calculated using the demand factors provided in CalEEMod. The proposed project's building and parking garage lighting energy consumption was estimated to be approximately 813,204 kilowatt-hours (kWh) of electricity per year and natural gas consumption was estimated to be approximately 0.86 million British Thermal Units (BTU) per year. The daily weekday vehicle trip rate of 5.43 weekday trips per dwelling unit and 12.3 weekday trips per 1,000 square feet of office space was used to estimate mobile vehicle emissions.¹⁷ The estimated annual vehicle miles traveled for the proposed project would be approximately 1,173,932 miles, requiring approximately 55,610 gallons of gasoline.

Estimated daily and annual operational emissions that would be associated with the proposed project are presented in Tables AQ-2 and AQ-3 and are compared to BAAQMD's thresholds of significance. As indicated in Tables AQ-2 and AQ-3, the estimated proposed project operational emissions would be below the BAAQMD's significance thresholds and would be *less than significant*.

Condition	ROG	NOx	PM10	PM2.5	СО
Summer	3.76	4.51	2.75	0.79	14.5
Winter	3.65	4.65	2.75	0.80	14.6
Maximum Daily Proposed Project	3.76	4.65	2.75	0.80	14.6
Significance Threshold	54	54	82	54	
Significant (Yes or No)?	No	No	No	No	No

Table AQ-2 Estimated Daily Operational Emissions (pounds)

SOURCE: CARB CalEEMod Version 2016.3.2 and SMAQMD Road Construction Emissions Model Version 9.0.0.

¹⁶Area sources include operational emissions associated with hearths (natural gas/propane fireplaces), consumer products (various solvents used in non-industrial applications, which typically include cleaning supplies, kitchen aerosols, and toiletries), area architectural coatings, and landscaping equipment.

¹⁷Fehr & Peers, *MidPen Mixed-Use Project Transportation Impact Analysis*. August 2019.

Condition	ROG	NOx	PM10	PM2.5	СО
Annual Proposed Project	0.64	0.78	0.45	0.13	1.90
Significance Threshold	10	10	15	10	
Significant (Yes or No)?	No	No	No	No	No

Table AQ-3Estimated Annual Operational Emissions (tons)

SOURCE: CARB CalEEMod Version 2016.3.2 and SMAQMD Road Construction Emissions Model Version 9.0.0.

In addition to regional air quality impacts, addressed previously, BAAQMD requires reviewing the proposed project's impacts on localized CO impacts near intersections and other areas with motor vehicles. Increased traffic volumes due to the proposed project operations would result in increased pollutant emissions in the vicinity of the roadways utilized by this traffic, which can cause pollutant levels to exceed the California Ambient Air Quality Standards (CAAQS) or National Ambient Air Quality Standards (NAAQS), especially near congested intersections. The BAAQMD *CEQA Air Quality Guidelines* identify the following screening criteria for determining whether a project's motor vehicle CO emissions would likely cause CAAQS/NAAQS to be exceeded along congested roadway and other areas with motor vehicles. The project would have a less-than-significant impact on localized CO concentrations if the following 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, the regional transportation plan, and local congestion management agency plans.
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per day.
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per day where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

The proposed project would generate new traffic trips (595 trips per day) well below these thresholds, and thus would comply with these screening criteria. Based on BAAQMD's screening criteria, project-related traffic would not exceed CO standards and, therefore, no further analysis was conducted for CO impacts. The proposed project's emissions of carbon monoxide would have a **less-than-significant impact** on air quality on both a project-level and cumulative basis.

As shown in Tables AQ-1 through AQ-3, the proposed project construction and operational emissions would be less than the BAAQMD significance thresholds per BAAQMD's *CEQA Air Quality Guidelines*. The BAAQMD *CEQA Air Quality Guidelines* recommend that cumulative air quality effects from criteria air pollutants also be addressed by comparison to the mass daily and annual thresholds. These thresholds were developed to identify a cumulatively considerable contribution to a significant regional air quality impact. Project-related construction and operational emissions would be below the significance thresholds. Therefore, the proposed project would not be cumulatively considerable and cumulative impacts would be *less than significant with mitigation*.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c)	Expose sensitive receptors to substantial pollutant concentrations?		X		

Explanation: The BAAQMD CEQA Air Quality Guidelines require an assessment of air toxics impacts on sensitive receptors. Toxic air contaminants (TACs) are a broad class of compounds known to cause morbidity or mortality. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and some commercial operations, such as gasoline service stations and dry cleaners. TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and federal level.

The BAAQMD *CEQA Air Quality Guidelines* also require an assessment of PM_{2.5} concentrations as a result of a proposed project's construction exhaust emissions. The proposed project would constitute a new emission source of TACs—including diesel particulate matter (DPM) and PM_{2.5}—during project construction from operation of heavy-duty construction equipment.¹⁸ 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 proposed project would also locate sensitive receptors near existing permitted stationary sources and major roadways.

A Health Risk Assessment (HRA) was conducted to determine the health impacts, in terms of excess cancer risk and non-cancer hazards, using the significance levels identified by the BAAQMD's *CEQA Air Quality Guidelines*. In accordance with the BAAQMD *CEQA Air Quality Guidelines*, the HRA also evaluated concentrations of PM_{2.5}. The HRA was prepared based on the California Office of Environmental Health Hazard Assessment's (OEHHA's) *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*.¹⁹

Health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. Individual cancer risk is the likelihood that a person exposed to air toxic concentrations over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. The maximally exposed individual (MEI) represents the worst-case risk estimate, based on a theoretical person continuously exposed for a lifetime at the point of highest compound concentration in the air. This is a highly conservative assumption, since most people do not remain at home all day and on average residents change residences every 11 to 12 years. In addition, this assumption assumes that residents are experiencing outdoor concentrations for the entire exposure period.

The HRA analyzed the incremental cancer risks to sensitive receptors in the vicinity of the proposed project, using emission rates (in pounds per hour) from CARB's CalEEMod emission model. DPM (reported as exhaust emissions of PM_{2.5}) emission rates were input into the USEPA's AERMOD atmospheric dispersion model to calculate ambient air concentrations at receptors in the proposed project vicinity. The HRA is intended to provide a worst-case estimate of the increased exposure by employing a standard emission estimation program, an accepted pollutant dispersion model, approved toxicity factors, and conservative exposure parameters. The supporting methodology and assumptions

¹⁸In 1998, CARB classified diesel particulate matter as a toxic air contaminant, citing its potential to cause cancer and other health problems. The USEPA concluded that long-term exposure to diesel engine exhaust is likely to pose a lung cancer hazard to humans and can also contribute to other acute and chronic health effects.

¹⁹Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*, March 6, 2015. <u>http://oehha.ca.gov/air/hot_spots/hotspots2015.html</u>.

used in the HRA are provided in Attachment B: Health Risk Assessment Methodology and Assumptions of the Air Quality Technical Report.

Both acute (short-term, such as one-hour) and chronic (continuous or recurring, such as three months or more) adverse health impacts unrelated to cancer were also addressed and are measured against a hazard index (HI). The hazard index is defined as the ratio of the estimated air concentrations of DPM at the nearby sensitive receptors to a reference exposure level (REL) that could cause adverse health effects. The health impact is considered to be significant if the HI is greater than 1.0 (i.e., the estimated air concentrations of DPM is greater than the REL).

There is no acute REL for DPM. However, diesel exhaust does contain acrolein, formaldehyde, and other compounds, which do have acute RELs. Acrolein emissions represent over 90 percent of the acute health impacts from diesel engines. Accordingly, the HRA focused on the acute health impacts from exposure to acrolein emissions. The acute REL for acrolein established by the California OEHHA is 2.5 μ g/m³.²⁰ Thus, if the proposed project-related one-hour concentration of acrolein exceeds 2.5 μ g/m³, resulting in an acute HI of greater than 1.0 (i.e., acrolein one-hour concentration/2.5 μ g/m³), the acute health impacts would be significant. The chronic reference exposure level for DPM established by the California OEHHA is 5 μ g/m³.²¹ Thus, if the proposed project-related annual concentration of DPM exceeds 5.0 μ g/m³, resulting in a chronic HI of greater than 1.0 (i.e., DPM annual concentration/5.0 μ g/m³), the chronic health impacts would be significant.

Dispersion modeling also estimated the exposure of sensitive receptors to concentrations of PM_{2.5} (expressed in μ g/m³) generated during project construction. The BAAQMD *CEQA Air Quality Guidelines* require inclusion only of PM_{2.5} exhaust emissions in the HRA analysis, while fugitive dust emissions are addressed under BAAQMD dust control measures which are required by Mitigation Measure AQ-1, above, to be implemented during project construction.

In accordance with the OEHHA *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments,* the HRA for the proposed project was conducted by applying the highest estimated concentrations of TACs at the receptors analyzed to the established cancer potency factors and acceptable reference concentrations for non-cancer health effects. Increased cancer risks were calculated using the modeled DPM concentrations and OEHHA-recommended methodologies for both a young child exposure (from the third trimester of the mother's pregnancy through 2 years of age) and adult exposure. The OEHHA-recommended age sensitivity factors and breathing rates were also applied to the cancer risk calculations of the DPM concentration exposures, as were assumptions of the fraction of time spent at home and a long-term exposure duration of 30 years. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer-causing air pollutants.

These conservative methodologies overestimate both non-carcinogenic and carcinogenic health risk, possibly by an order of magnitude or more. Therefore, for carcinogenic risks, the actual probabilities of cancer formation in the populations of concern due to exposure to carcinogenic pollutants are likely to be lower than the risks derived using the HRA methodology. The extrapolation of toxicity data in animals to humans, the estimation of concentration prediction methods within dispersion models, and the variability in lifestyles, fitness, and other confounding factors of the human population also contribute to the overestimation of health impacts. Therefore, the results of the HRA are highly overstated.

²⁰California Office of Environmental Health Hazards Assessment, Acute, 8-hour, and Chronic Reference Exposure Levels, June 2014, <u>http://www.oehha.ca.gov/air/allrels.html.</u>

²¹Ibid.

Proposed Project Construction Health Impacts on Existing Residences

The following describes the HRA results of potential health risk to existing receptors from exposure to unmitigated project construction activities. The maximum cancer risk from unmitigated construction emissions for a residential-adult receptor would be 10.3 additional cancers per million people and for a residential-child receptor it would be 100 additional cancers per million persons. As shown in Table AQ-4, the total maximum cancer risk from unmitigated proposed project construction emissions for a residential receptor would be 100 cancers per million.²² The maximum concentrations would occur at a residential receptor (also known as the maximum exposed individual, or MEI) to the west of the proposed project. Thus, the cancer risk due to construction activities are potentially above the BAAQMD threshold of 10 per million and would be **a** potentially significant cancer risk impact. Implementation of the following mitigation measure would reduce the impact to a **less-than-significant-with-mitigation** level:

Mitigation Measure AQ-4: BAAQMD Enhanced Exhaust Emissions Reduction Measures. The applicant shall implement the following measures during construction to further reduce construction-related exhaust emissions:

All off-road equipment greater than 25 horsepower (hp) and operating for more than 20 total hours over the entire duration of construction activities shall meet the following requirements:

- 1. Where access to alternative sources of power are available, portable diesel engines shall be prohibited; and
- 2. All off-road equipment shall have engines that meet or exceed either USEPA or CARB Tier 4 off-road emission standards.

Source	Cancer Risk (adult/child)	Hazard Impact (acute/chronic)	PM _{2.5} Concentration
Unmitigated Project Construction	10.3/100	1.03/0.26	1.30
Significance Threshold	10	1.0	0.3
Significant (Yes or No)?	Yes	Yes	Yes

Table AQ-4

Estimated Unmitigated Construction Health Impacts on Existing Receptors

SOURCE: RCH Group

As shown in Table AQ-5, with the implementation of Mitigation Measure AQ-4, the maximum cancer risk from mitigated proposed project construction for a residential-adult receptor would be 0.65 cancers per million people and for a residential-child receptor it would be 6.39 cancers per million. The total maximum cancer risk from mitigated proposed project construction emissions for a residential receptor

²²This theoretical individual would be born on construction year 1 and subsequently be exposed to the full construction period. Individuals born after construction year 1 would be exposed to shorter construction duration and thus, result in a lower risk and health impacts.

would be 6.39 per million. Thus, the cancer risk due to construction activities and project operations would be below the BAAQMD threshold of 10 per million and would be *less than significant with mitigation*.

Table AQ-5

Source	Cancer Risk (adult/child)	Hazard Impact (acute/chronic)	PM _{2.5} Concentration
Mitigated Project Construction	0.65/6.39	0.06/0.02	0.08
Significance Threshold	10	1.0	0.3
Significant (Yes or No)?	No	No	No

Estimated Mitigated Construction Health Impacts on Existing Receptors

SOURCE: RCH Group

Proposed Project Construction Non-Cancer Health Hazard Associated with Existing Receptors

Although there is no acute REL for DPM, as previously noted, there is an REL for acrolein, whose emissions represent over 90 percent of the acute health impacts from diesel engines. The acute REL for acrolein established by the California OEHHA is 2.5 mg/m³. Again factoring in the applicable acute REL, the unmitigated acute HI would be 1.03, based on a project-related maximum 1-hour diesel concentration of 199 μ g/m³ (as determined by the dispersion modeling analysis) and acrolein speciation of 1.3 percent for DPM (i.e., 199 μ g/m³/2.5 μ g/m³ times 1.3 percent = 1.03). The mitigated acute HI would be 0.06. Both the unmitigated and mitigated acute HI would be below the project-level threshold of 1.0 and the impact of the proposed project would therefore be **less than significant**.

The chronic reference exposure level for DPM was established by the California OEHHA as $5 \ \mu g/m^{3}$.²³ Thus, the proposed project-related annual concentration of DPM cannot exceed 5.0 $\mu g/m^{3}$; which would result in a chronic acute HI of greater than 1.0 (i.e., DPM annual concentration/5.0 $\mu g/m^{3}$). The dispersion modeling analysis determined that the unmitigated chronic HI would be 0.26, based on a proposed project-related maximum annual diesel concentration of 1.30 $\mu g/m^{3}$ (1.30 $\mu g/m^{3}/5.0 \ \mu g/m^{3}$ = 0.26), while the mitigated chronic HI would be 0.02. Both the mitigated and unmitigated chronic HI would be below the project-level threshold of 1 and the proposed project would therefore have a *less-than-significant impact* on non-cancer health hazard to existing residential receptors.

PM_{2.5} Concentration

Dispersion modeling also estimated the exposure of sensitive receptors to project-related concentrations of $PM_{2.5}$. The BAAQMD *Air Quality Guidelines* requires inclusion only of $PM_{2.5}$ exhaust emissions in this analysis (i.e., fugitive dust emissions are addressed under BAAQMD dust control measures which are required by law to be implemented during project construction). The proposed project's unmitigated annual $PM_{2.5}$ concentration from construction activities would be 1.30 µg/m³, which would be a significant impact on receptor health. With implementation of Mitigation Measure AQ-4, the annual $PM_{2.5}$ concentration would be reduced to 0.10 µg/m³, below the BAAQMD threshold

²³ California Office of Environmental Health Hazards Assessment - Acute, 8-hour, and Chronic Reference Exposure Levels, June 2014, <u>http://www.oehha.ca.gov/air/allrels.html.</u>

of 0.3 μ g/m³. Therefore, the project would have a *less-than-significant impact with mitigation* on receptor health due to PM_{2.5} exposure during project construction.

Health Impacts on Proposed Residential Receptors

The following describes the health risk that future residents of the proposed project could be exposed to from existing cumulative sources, including vehicular activity on major roadways, rail activities, permitted sources (i.e., diesel generators, boilers, gasoline stations), etc. While workers at the proposed office spaces would also be exposed to an increased health risk, their duration of time spent at the site would be lower than that of residents of the proposed apartments, and their calculated health risk would therefore be lower than the residents' risk.

The BAAQMD's *CEQA Air Quality Guidelines* include standards and methods for determining the significance of cumulative health risk impacts. The method for determining cumulative health risk requires the tallying of health risk from permitted stationary sources, major roadways and any other identified substantial air toxic sources in the vicinity of a project site (i.e., within a 1,000-foot radius) and then adding the individual sources to determine whether the BAAQMD's cumulative health risk thresholds are exceeded.

Table AQ-6 lists the cumulative cancer risks, hazard indices, and PM_{2.5} concentrations (in μ g/m³) impacting the proposed residences from existing emission sources within 1,000 feet of the project site without mitigation. The nearby stationary sources include the Shell gas station located at 33365 Mission Boulevard, immediately to the north of the project site, and a diesel generator at the AT&T (formerly Pacific Bell) facility located immediately to the south of the site. The maximum impacts from exposure PM_{2.5} concentrations would be 0.33 μ g/m³, which is below the cumulative significance threshold of 0.80 μ g/m³.

The maximum cancer risk from Mission Boulevard would be 85.3 and 64.6 cancers per million for the first-floor and second-floor residences, respectively. The cancer risk from Whipple Road would be 5.5 cancers per million. The cancer risk from the nearby service station would be 16.2 cancers per million and the cancer risk from a nearby diesel generator would be 4.8 cancers per million. The cumulative cancer risk of 112 cancers per million for the first-floor residents would be above the BAAQMD cumulative significance threshold of 100 per million for new residential receptors; the cumulative cancer risk for second-floor residents of 91.1 cancers per million would be below the threshold. Thus, the proposed project would have a potentially significant health impact on proposed receptors. Implementation of the following mitigation measure would reduce the impact to a *less-thansignificant-with-mitigation* level:

- Mitigation Measure AQ-5: Proposed Receptor Exposure Reduction Measures. The project applicant shall incorporate the following health-risk reduction measures into the project. These measures shall be applied, at a minimum, to the first-floor residences located within 75 feet of Mission Boulevard. These features shall be submitted to the City of Union City for review and approval and be included on the project drawings submitted for the construction-related permits or on other documentation submitted to the City:
 - Installation of air filtration to reduce cancer risks and particulate matter exposure for residents and other sensitive populations in the project that are in close proximity to sources of air pollution. Air filter devices shall be rated Minimum Efficiency Reporting Value (MERV)-13 or higher. MERV-13 air filters are considered high efficiency filters able to remove 80 percent of PM_{2.5} from indoor air. MERV-13 air

filters may reduce concentrations of DPM from mobile sources by approximately 53 percent and cancer risk by 42 percent. As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required.

To ensure adequate health protection to sensitive receptors, the ventilation system shall meet the following minimal design standards:

- A MERV-13, or higher, rating that represents a minimum of 80-percent efficiency to capture fine particulates;
- At least one air exchange per hour of fresh outside filtered air;
- o At least four air exchanges/hour recirculation; and
- At least 0.25 air exchange per hour in unfiltered infiltration.
- Where appropriate, install passive electrostatic filtering systems, especially those with low air velocities (i.e., one mph).
- The project shall be designed to locate sensitive receptors as far away as feasible from the source(s) of air pollution. Operable windows, balconies, and building air intakes shall be located as far away from these sources as feasible.
- Planting trees and/or vegetation between sensitive receptors and pollution source, if feasible. Trees that are best suited to trapping PM shall be planted, including one or more of the following: Pine (*Pinus nigra var. maritima*), Cypress (*X Cupressocyparis leylandii*), Hybrid poplar (*Populus deltoids X trichocarpa*), and Redwood (*Sequoia sempervirens*).

Table AQ-7 lists the cumulative cancer risks, hazard indexes, and $PM_{2.5}$ concentrations (in $\mu g/m^3$) impacting the proposed residences from existing emission sources within 1,000 feet of the project site with the incorporation of the recommended mitigation measures. The cumulative cancer risk of 91.1 cancers per million (65 cancers per million for second-floor residents) would be below the BAAQMD cumulative significance threshold of 100 cancers per million for new residential receptors. Thus, the proposed project would have a less-than-significant cancer risk impact on proposed residents. The maximum impacts to $PM_{2.5}$ concentrations would be 0.33 $\mu g/m^3$, which is less than the cumulative significance threshold of 0.80 $\mu g/m^3$. Therefore, health impacts associated with the proposed project residences would be *less than significant with mitigation*.

Table AQ-6

Source	Cancer Risk (adult/child)	Hazard Impact (acute/chronic)	PM _{2.5} Concentration
Mission Boulevard	85.3	0.032	0.22
Whipple Road	5.53	0	0.10
Mission Shell Gas Station	16.2	0.08	0
AT&T/Pacific Bell diesel generator	4.77	0.008	0.006
Cumulative Impact	112	0.12	0.33
Significance Threshold	100	10	0.8
Significant (Yes or No)?	Yes	No	No

Estimated Unmitigated Health Impacts on Proposed Project Receptors

SOURCE: Bay Area Air Quality Management District, Highway Screening Analysis Tool, May 2011, Bay Area Air Quality Management District, Stationary Source Risk & Hazard Analysis Tool, May 2011, Bay Area Air Quality Management District, Rail Activities Screening Analysis Tool, 2016, and Email from Areana Flores at BAAQMD on June 18, 2019 - Stationary Source Inquiry Form Request – Union City MidPen Housing.

Table AQ-7

Estimated Mitigated Health Impacts on Proposed Project Receptors

Source	Cancer Risk (adult/child)	Hazard Impact (acute/chronic)	PM _{2.5} Concentration
Mission Boulevard	64.6	0.032	0.22
Whipple Road	5.53	0	0.10
Mission Shell Gas Station	16.2	0.08	0
Pacific Bell	4.77	0.008	0.006
Cumulative Impact	91.1	0.12	0.33
Significance Threshold	100	10	0.8
Significant (Yes or No)?	No	No	No

SOURCE: Bay Area Air Quality Management District, Highway Screening Analysis Tool, May 2011, Bay Area Air Quality Management District, Stationary Source Risk & Hazard Analysis Tool, May 2011, Bay Area Air Quality Management District, Rail Activities Screening Analysis Tool, 2016, and Email from Areana Flores at BAAQMD on June 18, 2019 - Stationary Source Inquiry Form Request – Union City MidPen Housing.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Result in other emissions (such as those leading odors) adversely affecting a substantial number people?	o of		X	

<u>Explanation</u>: Though offensive odors from stationary and mobile sources rarely cause any physical harm, they still remain unpleasant and can lead to public distress, generating citizen complaints to local governments. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

The BAAQMD's significance criteria for odors are subjective and are based on the number of odor complaints generated by a project. Generally, the BAAQMD considers any project with the potential to frequently expose members of the public to objectionable odors to cause a significant impact. With respect to the proposed project, diesel-fueled construction equipment exhaust would generate some odors. However, these emissions typically dissipate quickly and would be unlikely to affect a substantial number of people. The proposed project would not involve operational activities that generate odors. Therefore, odor impacts associated with the proposed project would be *less than significant*.

IV. BIOLOGICAL RESOURCES — Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special- status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		

<u>Explanation</u>: The essentially flat project site is completely void of any quality natural habitat. The limited vegetation on the site consists of ruderal grasses and weeds, with a limited number of small shrubs scattered across the site, most of which appear to be dead or dying. Significant portions of the site have a surface of bare dirt and gravel, and a paved asphalt strip, approximately 45 feet wide, extends across the southern portion of the site.

Despite the paucity of habitat on the site, there is a considerable amount of potential habitat for burrowing owl (*Athene cunicularia*) in the large vacant field located opposite the project site on the east side of Mission Boulevard. The burrowing owl is considered by the U.S. Fish and Wildlife Service (USFWS) as a Candidate species. These are plant or animal species that may warrant future official listing as Threatened or Endangered, but for which conclusive data to give them this protection is currently lacking. As a Candidate species, burrowing owls receive no legal protection under the Endangered Species Act. However, this species does receive some legal protection from the U.S. through the Migratory Bird Treaty Act, which forbids the destruction of the birds and active nests. In California, the burrowing owl is considered a "species of special concern."

Burrowing owls are ground-dwelling members of the owl family; they are small brown to tan colored birds with bold spots and barring. Burrowing owls generally require open annual grassland habitats with low vegetative cover for nesting, but can be found on abandoned lots, roads, airports, and other urban areas. Burrowing owls generally use abandoned California ground squirrel holes for their nesting burrows, but are also known to use pipes or other debris for nesting purposes. The breeding season for burrowing owls occurs from March through August. Burrowing owls often nest in loose colonies about 100 yards apart. They lay three to twelve eggs from mid-May to early June. The female incubates the clutch for about 28 days, while the male provides her with food. The young owls begin appearing at the burrow's entrance two weeks after hatching and leave the nest to hunt for insects on their own after about 45 days. The chicks can fly well at six weeks old.

Given the proximity of suitable habitat for the burrowing owl less than 150 feet from the project site, there is a limited potential for this species to move onto the site by the time construction of the project commences. While its occurrence on the site is unlikely, its presence cannot definitively be ruled out. Therefore, it is assumed for purposes of this analysis that implementation of the proposed project could potentially cause a significant adverse impact on the burrowing owl. Implementation of Mitigation Measure BIO–1 would reduce the impact to a *less-than-significant-with-mitigation* level.

Mitigation Measure BIO-1: Prior to issuance of a grading permit, a gualified biologist shall conduct a preconstruction survey no more than 30 days prior to any ground-disturbing activities to determine whether the burrowing owl breeds on the site. If owls are encountered during the survey, a Burrowing Owl Mitigation Plan shall be prepared, approved by the Union City Community Development Department and the California Department of Fish and Wildlife (CDFW), and implemented; this plan must be approved by the City prior to issuance of a grading permit. The mitigation plan may include passive relocation during the non-breeding season (September 1st to January 31st). No burrowing owls shall be evicted from burrows during the nesting season (February 1st through August 31st) unless evidence indicates that nesting is not actively occurring (e.g., because the owls have not yet begun nesting early in the season, or because young have already fledged late in the season). During the nesting season, a 250-foot buffer, within which no new activity will be permissible, shall be maintained between project activities and occupied burrows.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				X

Explanation: There is no riparian habitat or other sensitive habitat present on the project site. The project would have **no impact** on sensitive habitats.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>c)</i>	Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X

Explanation: There are no wetlands present on the project site. The project would have **no impact** on wetlands.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with any established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X

<u>Explanation</u>: The project site does not provide any habitat that would support migratory wildlife, and there are no migratory wildlife species utilizing the site as a movement corridor or nursery site. The project would have **no impact** on migratory wildlife.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				\boxtimes

Explanation: Union City's Tree Preservation Ordinance is codified in Chapter 12.16 of the Municipal Code. The ordinance states that the "preservation of trees is necessary for the health and welfare of the citizens of the City in order to preserve the scenic beauty, prevent erosion of topsoil, protect against flood hazards and risk of landslides, counteract the pollutants in the air, maintain the climatic balance and decrease wind velocities, contributing greatly to the value of land in the City."

The ordinance regulates removal or trimming of trees both within public places (streets, parks, etc.) and on private property. Section 12.16.170 requires a permit for removal or trimming of any trees meeting criteria that vary according to the context of the proposed removal. In the case of the proposed project, which occurs on an undeveloped property, a permit is required for removal of any tree with a trunk circumference of 12 inches or greater, as measured 3 feet above the ground.

Only two trees are located on the project property, a small fan palm tree and a small maple tree, both located adjacent to the northern site boundary. Both of these trees appear to meet the applicable size criterion requiring a tree removal permit from the Union City Public Works Director.

The Public Works Director may impose conditions on the approval of a tree removal permit, such as requiring planting of replacement trees. The Public Works Department utilizes a sliding scale for tree replacement commensurate with the tree health. If the required number of replacement trees cannot be accommodated on-site, then the applicant is responsible for paying an in-lieu tree replacement fee that will be used to plant new trees in other parts of the City. The tree removal permit will be issued concurrently with the grading permit.

Based on the preliminary landscaping plan, the applicant is proposing to plant 29 trees along the perimeter of the site, with additional trees proposed in each of the three courtyards. All of the proposed trees would be 24-inch box size or 15-gallon size trees. Proposed tree species include crape myrtle (*Lagerstromia indica 'Muskogee'* and *Lagerstromia indica 'Tuscarora'*), Chinese pistache (*Pistacia Chinensis*), water gum (*Tristania laurina*), Hearts of Gold Eastern redbud (*Cercis c. 'Hearts of Gold'*), and Wilsonii fruitless olive (*Olea europaea 'Wilsonii'*).

Eleven street trees line the Mission Boulevard frontage within the public right-of-way. The existing sidewalk will likely be replaced so that the new wider sidewalk can be more uniform. The City has not yet determined whether it will be feasible to protect the existing trees in place during installation of the sidewalk or remove and replace the street trees.

Although the proposed trees are expected to exceed any replacement tree requirements, the applicant would be required to obtain approval of a tree removal permit and comply with any conditions imposed on the permit. Therefore, the project would not conflict with any local policies or ordinances protecting trees.

There are no other local policies or ordinances protecting biological resources that would apply to the project or with which the project could conflict. The project would have **no impact** on policies related to protection of biological resources.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				\boxtimes

Explanation: There is no adopted Habitat Conservation Plan or other conservation plan applicable to the project site.

V. CULTURAL RESOURCES — Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?		X		

Explanation: In order to be considered a significant historical resource as defined in Section 15064.5 of the *CEQA Guidelines*, a building must be at least 50 years old. In addition, Section 15064.5 defines an historical resource as, "... a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources," properties included in a local register of historical resources, or properties deemed significant pursuant to criteria set forth in *Public Resources Code* Section 5024.1(g). According to *CEQA Guidelines* Section 15064.5(a)(3), a lead agency can determine that a resource is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided that the determination is supported by substantial evidence in light of the whole record.

In order to be eligible for listing in the California Register of Historical Resources (CRHR), a property must meet at least one of the following criteria:

- Criterion 1: Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Criterion 2: Is associated with the lives of persons important in our past;
- Criterion 3: Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Criterion 4: Has yielded, or may be likely to yield, information important in prehistory or history.²⁴

In addition, to be eligible for the California Register, the resource must retain enough of its historic integrity to be recognizable as an historical resource, and typically must be at least 50 years old. Following the National Register of Historic Places integrity criteria, California Register regulations specify that integrity is a quality that applies to historic resources in seven ways: location, design, setting, materials, workmanship, feeling, and association.²⁵

Based on a review of historic topographic maps dating to 1899 and historic aerial photographs dating to 1939, the currently vacant project site was historically used for agricultural production and was developed with a single-family residence associated with that use by 1939. Research conducted during preparation of the Phase I Environmental Site Assessment (ESA) summarized in Section IX, Hazards and Hazardous Materials, determined that the site was developed with unspecified "commercial properties" from 1958 until 1966, and was occupied by commercial buildings from 1974

²⁴ California Resources Agency, *CEQA Guidelines*, Section 15064.5(a)(3), as amended September 27, 2016.

²⁵ The definition of integrity under the California Register follows National Register of Historic Places criteria. Detailed definitions of the qualities of historic integrity are in National Register Bulletin 15, *How to Apply National Register Criteria for Evaluation*, published by the National Park Service.

to 1998, with uses including a salon/barbershop, bar/restaurant, music shop, auto supply shop, other stores, offices, and the previously mentioned residence. All of these buildings were demolished in 2003-2004 and the site has remained vacant since then.

Were the original residence still extant on the site, it would be an historic structure, though not necessarily historically significant. However, all of the buildings on the site were removed long ago and there are no remaining building foundations or other remnants of the former buildings evident on the site. Nonetheless, the Northwest Information Center (NWIC) at Sonoma State University, which is part of the California Historical Resources Information System (CHRIS) concluded that there is a moderately high potential for unrecorded historic-period archaeological resources to be present on the site.²⁶ Were such resources to be present in the subsurface of the site, potential damage or destruction of the resources during site preparation and grading activities could result in a potentially significant impact to historic resources. Implementation of Mitigation Measure CR-1, set forth in the following subsection, would reduce the impact to a *less-than-significant-with-mitigation* level.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		X		

<u>Explanation</u>: The San Francisco Bay area was occupied by Native Americans as far back as 3,000 to 4,000 years ago. Recorded archaeological sites in the region indicate that at the time of initial Euroamerican incursion into the project area (circa 1770), the region was occupied by Native Americans who spoke Chochenyo. These people were a subset of the Penutian-speaking Ohlone (referred to as "Costanoans" by the Spanish) residing in northern California at the time the Spanish arrived in the region. The Ohlone territory encompassed much of the San Francisco Bay area and extended eastward to the Central Valley and southward through Monterey Bay. Previously undiscovered Native American resources are often encountered on the Bay margins and in proximity to historic water sources, among other places.

An archival search was performed by the NWIC at Sonoma State University to identify any recorded Native American cultural resources in the project vicinity.²⁷ Although no recorded archaeological sites were identified in proximity to the site, the NWIC noted that Native American resources have been found in this part of Alameda County near areas populated by oak, buckeye, laurel, and hazelnut, as well as near a variety of plant and animal resources and near watercourses and surface water bodies (i.e., lakes and bays). The NWIC noted that the project site is located on a flat terrace near partially wooded hills, and is also situated less than 600 feet from Dry Creek. Given these historic environmental conditions that were conducive to Native American settlements, the NWIC concluded that there is a high potential for unrecorded Native American resources to exist within the project site.

Excavation, grading, or other surface/subsurface disturbance undertaken during the development of the project could encounter and damage or destroy previously unknown archaeological resources that could be present in the subsurface. Any disturbance to such resources, were they to exist, could result

²⁶ Northwest Information Center, Sonoma State University, Record Search Results for the Proposed MidPen Affordable Housing Project, City of Union City, Alameda County, California, NWIC File No. 19-0008, August 1, 2019.

²⁷ Ibid.

in a significant, adverse impact on archaeological resources. Implementation of the following mitigation measures would reduce the potential impact to a *less-than-significant-with-mitigation* level:

- **Mitigation Measure CR-1:** City Staff shall advise the Project Construction Superintendent, Project Inspector, and Building Inspector at a pre-construction conference of the potential for encountering cultural resources during construction and the applicant's responsibilities per CEQA should resources be encountered. This advisory shall also be printed on the Plans and Specification Drawings for this project.
- **Mitigation Measure CR-2:** Throughout site grading and all other ground-disturbing project construction activities, a qualified archaeological monitor shall be present to observe the construction activities in order to identify any historic or prehistoric cultural resources that could be encountered during the ground-disturbing activities. In the event that any cultural resources are discovered, all ground disturbance within 100 feet of the find shall be halted until the archaeologist can evaluate the resource(s) and, if necessary, recommend mitigation measures to document and prevent any significant adverse effects on the resource(s). (Construction personnel shall not collect any cultural resources.) Any further mitigation measures recommended by the archaeologist shall be implemented and construction shall not resume in the vicinity of the find until the archaeologist has authorized the resumption of work. The results of any additional archaeological effort required through the implementation of this measure and/or Mitigation Measure CR-3 shall be presented in a professional-quality report, to be submitted to the Union City Planning Division and the Northwest Information Center at Sonoma State University in Rohnert Park.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Disturb any human remains, including those interred outside of formal cemeteries?		\mathbf{X}		

<u>Explanation</u>: Similar to the potential to encounter cultural artifacts described in the preceding subsection, there is a possibility that human remains associated with the possible prehistoric occupation of the site by Native Americans. Such remains are considered sacred by Native Americans tribal groups, and their disturbance or destruction during site grading or other project construction activities would be a potentially significant impact. Implementation of the following mitigation measures would reduce the potential impact to *less than significant with mitigation*.

Mitigation Measure CR-3:

In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately and a qualified archaeologist shall notify the Office of the Alameda County Coroner and advise that office as to whether the remains are likely to be prehistoric or historic period in date. If determined to be prehistoric, the Coroner's Office will notify the Native American Heritage Commission of the find, which, in turn, will then appoint a "Most Likely Descendant" (MLD). The MLD in consultation with the archaeological consultant and the City, will advise and help formulate an appropriate plan for treatment of the remains, which might include recordation, removal, and scientific study of the remains and any associated artifacts. After completion of analysis and preparation of the report of findings, the remains and associated grave goods shall be returned to the MLD for reburial.

VI. ENERGY — Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?			X	

Explanation: Construction of the proposed project would require consumption of gasoline and diesel fuel by construction workers travelling to and from the site, by trucks delivering construction materials and supplies to the site, and by earthmoving, paving, and other construction equipment. Once the project is completed and occupied, gasoline and diesel fuel would continue to be consumed by residents, employees, visitors, delivery and repair vehicles, and service providers traveling to and from the site. Electricity and natural gas would be consumed for space and water heating and landscape maintenance (i.e., electricity to control irrigation equipment), as well as the operation of household appliances and amenities that the future homeowners might use, such as hot tubs or electric vehicle charging.

The computer modeling of the project's air pollutant emissions described in detail in Section III, Air Quality, utilized standard fuel consumption estimates to determine that project construction activities would require 51,410 gallons of diesel fuel.²⁸ For the finishing phase of construction, some electricity may be used (e.g., for power tools and work lighting). While this electricity usage cannot be quantified at this time, it is anticipated to be relatively minor compared to normal building operations. When not in use, electric equipment would be powered off so as to avoid unnecessary energy consumption. Natural gas would not be used during construction.

During construction of the project, the building contractor would be required by Mitigation Measure AQ-2 (see Section III-b) to limit idling time of equipment and vehicles to 5 minutes or less and maintain construction equipment and vehicles in optimal working condition. These requirements would improve air quality and would also prevent wasteful or inefficient consumption of fuel during project construction. The applicant will also be required to comply with the City's Construction and Demolition (C&D) Debris Recycling Ordinance codified in Chapter 15.75 of the Municipal Code, which mandates recycling of 100 percent of the Portland cement, asphalt concrete, land-clearing and soils, and plant debris from all covered construction projects, which would include the proposed project. The ordinance requires diversion of at least 50 percent of all remaining C&D debris from landfill disposal. To ensure compliance, the applicant will be required to post a performance security fee of \$10,000 or 3 percent

²⁸Fuel usage is estimated using the CalEEMod output for CO2, and a kgCO2/gallon conversion factor, as cited in the U.S. Energy Information Administration Voluntary Reporting of Greenhouse Gases Program, <u>https://www.eia.gov/environment/pdfpages/0608s(2009)index.php.</u>

of the total project cost, whichever is less. Compliance with the ordinance would help reduce consumption of energy associated with transport, processing, and disposal of solid waste at landfills.

Annual electricity and natural gas consumption were calculated using the demand factors provided in CalEEMod. The proposed project's building and parking garage lighting energy consumption was estimated to be approximately 861,044 kilowatt-hours (kWh) of electricity per year, while natural gas consumption was estimated to be approximately 0.95 million British Thermal Units (BTU) per year. Based on the number of vehicle trips estimated for project operations, the estimated annual vehicle miles traveled for the proposed project would be approximately 1,275,234 miles, requiring approximately 60,164 gallons of gasoline.

Once the project is completed and occupied, the City won't have direct control over how residents consume energy, but inefficient use of energy would be minimized through the City's requirement that the project obtain Leadership in Energy and Environmental Design (LEED) certification with a Silver rating. Pursuant to Municipal Code Section 15.76.050, City-sponsored and public partnership buildings that are covered projects must meet a minimum LEED[™] Silver rating and be so certified by the U.S. Green Building Council. Projects subject to this requirement must have a LEED-Accredited Professional as a principal member of the design team. The City's Building Official must approve the LEED[™] rating, and has discretion to require a higher rating if it is deemed more appropriate for the project.

At a minimum, LEED-certified buildings must meet the following requirements, among others, pertaining to energy efficiency (other minimum requirements apply to water efficiency, renewable resources, indoor air quality, and more):

- Demonstrate an improvement of 5% for new construction, 3% for major renovations, or 2% for core and shell projects in the proposed building performance rating compared with the baseline building performance rating, or comply with alternative prescriptive provisions.
- Install new or use existing building-level energy meters, or submeters that can be aggregated to provide building-level data representing total building energy consumption (electricity, natural gas, chilled water, steam, fuel oil, propane, biomass, etc.). Utility-owned meters capable of aggregating building-level resource use are acceptable.
- Do not use chlorofluorocarbon (CFC)-based refrigerants in new heating, ventilating, airconditioning, and refrigeration (HVAC&R) systems.
- Install advanced energy metering for all whole-building energy sources used by the building and any individual energy end uses that represent 10 percent or more of the total annual consumption of the building.

Project construction would also be required to comply with applicable provisions of the California Green Building Standards Code, codified in Title 24 of the California Code of Regulations (CCR), and with general building energy efficiency standards, also part of Title 24, which require energy-efficient ceiling and rafter roof insulation, walls, floors, windows, doors, luminaires, heating and cooling systems, appliances, water heaters, and pool and spa systems.

Part 6 of Title 24 also sets energy and/or water efficiency standards for home appliances, including refrigerators, freezers, dishwashers, clothes washers and dryers, stoves, room and central air conditioners, space heaters, water heaters, pool heaters, plumbing fixtures, incandescent and fluorescent lamps, emergency lighting, luminaires, computers, televisions, audio and video equipment, battery charger systems, and more. There are also federal regulations pertaining to appliance efficiency, and in many cases, the California standards are the same as the federal standards. It should be noted that water efficiency contributes to energy efficiency by reducing energy requirements for treating and pumping domestic water.

Compliance with these required regulations, including the LEED Silver certification, would ensure that construction and operation of the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources. The project would have a *less-than-significant impact* on energy resources.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b)	Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?				X

<u>Explanation</u>: Statewide, the *Integrated Energy Policy Report* prepared by the California Energy Commission provides a blueprint for continuing to grow the California economy while reducing the environmental footprint of its energy system.²⁹ The State's energy system includes energy extraction, transport, conversion (such as combusting natural gas in power plants to generate electricity or producing gasoline and diesel from crude oil in refineries), and consumption for services (such as electricity for lighting, natural gas use in homes and buildings for space and water heating, pumping water to communities and crops, and gasoline and diesel to fuel cars and trucks), as well as electricity from out-of-State plants serving California.

California's electricity generation capacity is composed of multiple fuel sources, including coal, hydroelectric, natural gas, nuclear, oil, petroleum coke, waste heat, biomass, geothermal, solar photovoltaic, solar thermal, and wind. In 2018, the State had an installed generation capacity from these multiple sources of 194,727 gigawatt hours (GWh).³⁰ The composition of California's in-State generation capacity has shifted since the 2002 passage of Senate Bill 1078, which required that 20 percent of electric production come from renewable resources by 2017. With the passage of SB X1-2 in 2011, this was increased to 33 percent renewables by 2020; it was raised again to 50 percent renewables by December 31, 2030 by SB 350, passed in 2015.

Because energy consumption is directly tied to the emissions of GHGs, and in fact, is the source of 80 percent of GHG emissions in the State,³¹ Union City's Climate Action Plan (CAP), intended to reduce emissions of GHGs, can be viewed as a local plan for energy efficiency, and in fact it contains GHG reduction measures specifically pertaining to building and energy efficiency as well as measures to conserve water. (As noted above, water conservation has a beneficial effect on energy consumption.) As discussed in more detail in Section VIII-b, below, the project would not conflict with the City's CAP, and therefore would not conflict with a local plan for energy efficiency.

Because the CEC's *Integrated Energy Policy Report* is intended to reduce GHG emissions by transitioning the State's energy portfolio to more renewable energy sources, it can also be viewed as a plan for renewable energy and energy efficiency on the Statewide level. As discussed in Section VI-a, above, the proposed project would be required to comply with a variety of building and appliance energy efficiency standards, which would maximize its energy efficiency. Therefore, the project would not conflict with a State plan for energy efficiency.

²⁹ California Energy Commission, 2016 Integrated Energy Policy Report Update, February 28, 2017.

³⁰ California Energy Commission, *California Energy Almanac*, Electric Generation Capacity & Energy, In-State Electric Generation by Fuel Type, Accessed May 30, 2019 at: <u>http://www.energy.ca.gov/almanac/ electricity_data/electric_generation_capacity.html</u>.

³¹ California Energy Commission, 2016 IEPR Update: Integrated Energy Policy Report, Publication No. CEC-100-2016-003-CMF, Chapter 1: Environmental Performance of the Electricity Generation System, 2016.

VII. GEOLOGY AND SOILS — Would the project:

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X

Explanation: Although the Hayward fault is located less than ¼-mile east of the project site, the site lies outside the Alquist-Priolo fault zone that flanks the fault.³² No seismically active fault crosses the project site or in proximity to the site. There is therefore no potential for fault rupture at the project site.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
ii) Strong seismic ground shaking?			X	

<u>Explanation</u>: Similar to most locations throughout the San Francisco Bay Area, the project site is potentially subject to strong seismic ground shaking during an earthquake on one of the major active earthquake faults that transect the region. The project is in an area mapped as having a Very Strong seismic shaking severity potential, equivalent to a Modified Mercalli Intensity of 8, corresponding to moderate structural damage.³³ The major active faults with the potential to affect the project include the Hayward, Calaveras, and San Andreas faults, which are located 0.2-mile northeast, 11 miles east, and 30 miles west of the project site, respectively.

Given the magnitude of seismic ground shaking and related peak ground acceleration that could be experienced at the site, there is potential for a strong seismic event in the region to result in catastrophic structural failure of the proposed mixed-use buildings, with potential to severely injure or kill building occupants. However, in accordance with recent CEQA case law (e.g., *California Building Industry Association v. Bay Area Air Quality Management District* (Aug.12, 2016) 2 Cal.App.5th 1057), CEQA generally no longer considers an impact of the environment on a project to be a significant

³² California Geological Survey, Earthquake Zones of Required Investigation: Newark Quadrangle [map], January 1, 1982.

³³ Association of Bay Area Governments, Earthquake and Hazards Program, Probabilistic Seismic Hazard Analysis [interactive map], accessed July 8, 2019 at: <u>http://gis.abag.ca.gov/website/Hazards/?hlyr=seismicHazard Analysis</u>.

impact. Accordingly, this would be a *less-than-significant impact*. However, pursuant to Section 15.85.100 of the Union City Municipal Code and General Plan Policy HS-B.1.1, the project applicant has been required to submit a site-specific geotechnical report prepared by a geotechnical engineer that includes recommendations for site preparation and foundation design.³⁴

The recommendations include over-excavating the site and backfilling it with properly compacted engineered fill, controlled-density fill, or sand-cement slurry. The buildings can be supported on spread footings at least 18 inches wide for continuous footings and at least 24 inches wide for isolated spread footings. The footings must extend at least 24 inches below the lowest adjacent exterior soil subgrade and at least 18 inches below the lowest adjacent interior soil subgrade, and must be designed using allowable bearing pressures of 4,000 pounds per square foot (psf) for dead-plus-live loads and 6,000 psf for total design loads, which include wind or seismic forces. A water vapor retarder should be installed beneath the concrete slab-on-grade floors, except under the parking garage floors, where at least 6 inches of Class 2 aggregate base should be compacted to at least 95 percent relative compaction. The geotechnical investigation report also provides recommendations for pavement design, utility trench design and backfill, and surface drainage facilities.

The Union City Building Division will ensure that the project design incorporates the recommendations in the geotechnical report and that it complies with the current California Building Standards Code, which includes detailed structural design requirements intended to provide adequate structural integrity to withstand the maximum credible earthquake and the associated ground motion acceleration. Compliance with the applicable building codes will maximize the structural stability of the proposed building and minimize the potential for damage and injury during a strong seismic event.



<u>Explanation</u>: Liquefaction occurs when clean, loose, saturated, uniformly graded, fine–grained soils are exposed to strong seismic ground shaking. The soils temporarily lose strength and cohesion, resulting in a loss of ground stability that can cause building foundations to fail. The project site is within an area mapped as having low liquefaction potential.³⁵

A preliminary geotechnical investigation previously conducted for a different development proposed for the project site included subsurface exploration with three cone penetration tests (CPTs) advanced to depths ranging from 32.5 feet to 50 feet below the ground surface (bgs).³⁶ Four additional CPTs to a depth of 50 feet bgs as well as four test borings to depths of 30 feet bgs were performed during the April 2019 investigation by Rockridge Geotechnical. Based on the test results of the recent and prior subsurface testing at the site, which was interspersed throughout the site, as shown on Figure GS-1, Rockridge Geotechnical determined that the site is underlain by very stiff to hard clay or dense to very

³⁴ Rockridge Geotechnical, Geotechnical Investigation Report: Affordable Housing Development, Mission Boulevard and D Street, Union City, California, Project No. 18-1528, April 3, 2019.

³⁵ U.S. Geological Survey, Preliminary Maps of Quaternary Deposits and Liquefaction Susceptibility, Nine–County San Francisco Bay Region [map], California: A Digital Database, USGA Open–File Report 00–444, 2000.

³⁶ Treadwell & Rollo, Inc., *Preliminary Geotechnical Investigation: Mission Boulevard and E Street, Union City, California*, May 24, 2006.

dense granular material, and groundwater was not encountered in any of the borings or CPTs. On this basis, Rockridge Geotechnical also concluded that the potential for liquefaction as the site is very low.

Lateral spreading, another form of seismic ground failure, is generally associated with liquefaction; since the potential for liquefaction at the site is low, Rockridge Geotechnical concluded the potential for lateral spreading is also very low. As noted in Section VII-a-ii, the geotechnical investigation report prepared for the project includes site and building foundation design recommendations that will ensure the structural stability of the proposed site improvements. For the reasons set forth in Section VI-a-ii, this would be a *less-than-significant impact*.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
iv) Landslides?				X

Explanation: A landslide is a slope failure created by down-slope slippage of a mass of earth or rock that typically occurs as a planar or rotational feature along single or multiple surfaces. Landslides can range from slow-moving, deep-seated slumps to rapid, shallow debris flows. The hazard is greatest on steep slopes with gradients of 15 percent or more, but can occur on shallower slopes with unstable soils, particularly when saturated.

The project site is essentially level, as are all of the parcels surrounding the site. There are no steep slopes located in close proximity to the site. Consequently, the potential for landslides is non-existent. There would be *no impact* due to landslides.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Result in substantial soil erosion or the loss of topsoil?		\boxtimes		

Explanation: Any construction project that exposes surface soils creates a potential for erosion from wind and stormwater runoff. The potential for erosion increases on large, steep, or windy sites; it also increases significantly during rainstorms. Although the proposed project would occur on a level site, construction is expected to occur during the rainy season, which increases the potential for erosion at the site. In addition, approximately 1.65 acres of land would be disturbed, increasing the potential for exposure of soils to the erosional effects of wind and rain. Therefore, the potential for erosion during project construction would be fairly high and would be considered a potentially significant impact on the environment. The impact would be reduced to a *less-than-significant-with-mitigation* level through implementation of the Erosion Control Plan required by Mitigation Measure WQ-1 and additional erosion controls required by Mitigation Measure WQ-2 (see Section X).

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>c)</i>	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?			X	

<u>Explanation</u>: As discussed in Sections VII-a-ii and VII-a-iii, above, there is no potential for landslide at the site, and there is very low potential for liquefaction, lateral spreading, and other types of seismically-induced ground failure. As previously noted, the project would be required to meet engineering and structural requirements and comply with all applicable building codes and seismic requirements, which would ensure that the proposed buildings would not be exposed to unstable ground that could result in structural failure. This would therefore be a *less-than-significant impact*.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			X	

Explanation: Expansive soils can undergo significant volume change with changes in moisture content. They shrink and harden when dried and expand and soften when wetted. The risks associated with expansive soils generally occur within approximately 5 feet of the ground surface, where substantial changes in soil volume can damage building foundations and pavements. The subsurface testing that was conducted as part of the geotechnical investigation of the site, discussed in Section VII-a-iii, identified clay soils and clayey gravels at the site. Rockridge Geotechnical performed Atterberg limits tests on near-surface soil samples that resulted in plasticity indices ranging from 12 to 14, which indicate low expansion potential. Nonetheless, due to other site stability concerns, the geotechnical engineering report for the project recommends over-excavation of the site and backfilling with engineered fill. Implementation of this recommendation, which will be required by the Union City Building Division, would eliminate the risk of expansive soils adversely affecting the structural stability of the proposed foundations, buildings, and pavements. This would be a *less-than-significant impact*.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				X

<u>Explanation</u>: The project would utilize the existing sanitary sewer system that serves the project area; septic tanks or alternative wastewater disposal systems would not be required.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

Explanation: Paleontological resources are the fossilized remains of vertebrate or invertebrate organisms from prehistoric environments found in geologic strata. They are valued for the information they yield about the history of the earth and its past ecological settings. They are most typically embedded in sedimentary rock foundations, and may be encountered in surface rock outcroppings or in the subsurface during site grading.

Based on the subsurface geological testing of the project site, no sedimentary rock foundations are present to depths of 50 feet bgs. Excavation of the site is not expected to exceed 4 feet bgs. Because the first 1 to 4 feet of the site's subsurface consists of undocumented fill composed primarily of clayey gravel, it is highly unlikely that paleontological resources would be encountered during project construction. However, the possible presence of such resources cannot be definitively ruled out. If any unique paleontological resources were encountered during project construction, they could be damaged, destroyed, or lost during subsurface disturbance of the site. This would be a potentially significant impact. Implementation of the following mitigation measure would reduce this potential impact to *less than significant with mitigation*:

Mitigation Measure GS-1: If any paleontological resources—such as fossilized bone, teeth, shell, tracks, trails, casts, molds, or impressions—are encountered during site grading or other construction activities, all ground disturbance within 100 feet of the find shall be halted until the services of a qualified paleontologist can be retained to identify and evaluate the scientific value of the resource(s) and, if necessary, recommend mitigation measures to document and prevent any significant adverse effects on the resource(s). Any further mitigation measures recommended by the paleontologist shall be implemented and construction shall not resume in the vicinity of the find until the paleontologist has authorized the resumption of work. Significant paleontological resources shall be salvaged and deposited in an accredited and permanent scientific institution, such as the University of California Museum of Paleontology (UCMP).

VIII. GREENHOUSE GAS EMISSIONS — Would the project:

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	

<u>Explanation</u>: Greenhouse gases (GHGs) refer to gases that trap heat in the atmosphere and contribute to global warming. The primary GHGs are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (NO_x), sulfur hexafluoride (SF₆), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), and water vapor (H₂O). The majority of GHG emissions in the Bay Area come from transportation (39.7 percent), followed by industrial/commercial sources (35.7 percent) and electricity generation (14.0 percent). Construction equipment and other off-road equipment contribute 1.5 percent of the total GHG emissions.³⁷

For quantifying a project's GHG emissions, the Bay Area Air Quality Management District (BAAQMD) recommends that all GHG emissions from a project be estimated, including a project's direct and indirect GHG emissions from operations. Direct emissions refer to emissions produced from onsite combustion of energy, such as natural gas used in furnaces and boilers, emissions from industrial processes, and fuel combustion from mobile sources. Indirect emissions are emissions produced offsite from energy production and water conveyance due to a project's energy use and water consumption.

Because BAAQMD has not established separate thresholds of significance for construction-related emissions of GHG, the assessment of potential GHG impacts presented below addresses both construction and operational GHG emissions together, and applies the operational standards of significance to both emissions sources. CalEEMod was used to quantify GHG emissions associated with construction activities, as well as long-term operational emissions produced by motor vehicles, natural gas combustion for space and water heating, electricity use, and landscape maintenance equipment.

CalEEMod incorporates GHG emission factors for the central electric utility serving the Bay Area. Default rates for energy consumption were assumed in the model. Emissions rates associated with electricity consumption were adjusted to account for Pacific Gas & Electric utility's projected CO_2 intensity rate. This projected CO_2 intensity rate is based, in part, on the requirement of a renewable energy portfolio standard of 33 percent by the year 2020. CalEEMod uses a default rate of 641 pounds of CO_2 per megawatt of electricity produced. The projected CO_2 intensity rate of 290 pounds of CO_2 per megawatt of electricity produced for 2024 (the first year of project operations) was used.³⁸

The proposed project's estimated construction and operational GHG emissions are presented in Table GHG-1. Project construction would generate GHG emissions of approximately 788 metric tons of carbon dioxide equivalents (CO₂e). CO₂e is an equivalency for the composite of different greenhouse

³⁷Bay Area Air Quality Management District, *Bay Area Emissions Inventory, Summary Report: Greenhouse Gases, Base Year 2011*, Table F: 2011 Bay Area GHG Emissions by Sector, updated January 2015.

³⁸PG&E, Greenhouse Gas Emission Factors: Guidance for PG&E Customers, November 2015, <u>http://www.pge.com/includes/docs/pdfs/shared/environment/calculator/pge_ghg_emission_factor_info_sheet.pdf</u>

gases; it represents the impact of each different greenhouse gas in terms of the amount of CO₂ that would create the same amount of warming. There is no BAAQMD CEQA significance threshold for construction-related GHG emissions, so this analysis (similar to many other analyses prepared in the San Francisco Bay Area Air Basin) amortizes the construction emissions over the lifetime of the proposed project (30 years).³⁹ The 30-year amortized annual construction-related GHG emissions would be approximately 26 metric tons of CO₂e. The combined GHG construction and operational emissions would be 719 metric tons per year, which is below the BAAQMD bright-line threshold of 1,100 metric tons per year. The applicant is pursuing a LEED Certification and is targeting to reach LEED Silver rating, which would further reduce the project's GHG emissions. Therefore, the proposed project would have a *less-than-significant impact* from its emissions of GHGs.

Table GHG-1

Estimated Unmitigated Greenhouse Gas Emissions (metric tons)

Source	Annual CO₂e Metric Tons
Construction (30-year amortized)	26.3
Operations	
Area Sources	1.01
Energy	154
Mobile	495
Solid Waste	24.6
Water	17.8
Total Proposed Project Emissions	719
Significance Threshold	1,100
Significant (Yes or No)?	No

SOURCE: CARB CalEEMod Version 2016.3.2.

³⁹ For CEQA documents within the BAAQMD and the City of Union City, it is customary for construction GHG emissions be amortized over a 30-year project lifetime and then added to the annualized operational GHG emissions. These total emissions are then compared to the significance threshold.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b)	Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				X

Explanation: The City of Union City adopted its *Climate Action Plan* (CAP) in 2010.⁴⁰ The CAP is a roadmap for how the City will reduce energy consumption and GHG emissions to meet State GHG emissions targets established by AB 32, which is the principal State plan and policy adopted for the purpose of reducing GHG emissions. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020. Statewide plans and regulations such as GHG emissions standards for vehicles and the low carbon fuel standard are being implemented at the statewide level, and compliance at the specific plan or project level is not addressed. In September of 2016, AB 32 was extended to achieve reductions in GHG of 40 percent below 1990 levels by 2030. The new plan, outlined in SB 32, involves increasing renewable energy use, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries.

The assumption is that AB 32 and other regulations will be successful in reducing GHG emissions and reducing the cumulative GHG emissions statewide by 2020 and beyond. The State has taken these measures, because no project individually could have a major impact (either positively or negatively) on the global concentration of GHG. Therefore, the proposed project would result in a significant impact if it would be in conflict with AB 32 State goals. The proposed project has been reviewed relative to the AB 32 measures and it has been determined that the proposed project would not conflict with the goals of AB 32. Therefore, the proposed project would have a *less-than-significant impact* related to a conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

IX. HAZARDS AND HAZARDOUS MATERIALS — Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	

<u>Explanation</u>: The proposed project would not involve the routine transport, use, or disposal of hazardous materials. While construction of the project could entail transport and use of hazardous materials for equipment operation and maintenance, such as motor oil, transmission fluid, solvents, or construction materials, such use would be in quantities ordinarily used for their intended purposes and used in accordance with applicable law. Such use is typical of most construction projects and does not represent a significant hazard. Once construction is complete and the project is occupied,

⁴⁰ City of Union City, *Union City Climate Action Plan*, November 2010.

residential and office occupants of the site would be expected to store and use small containerized quantities of hazardous household products of a wide variety. This type of usage is typical of all residential and office development, and would not constitute a significant hazard to the public or the environment. The project would have a *less-than-significant impact* from the transport, use, or disposal of hazardous materials.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Create a significant hazard to the public or environment through reasonably foreseeable up and accident conditions involving the release hazardous materials into the environment?	the oset of	X		

<u>Explanation</u>: As discussed in Section IX-a above, the proposed project would not introduce hazardous materials beyond those generally found within residential and office uses, including containerized household cleaning products. To evaluate the possible presence of hazardous materials within the soil or groundwater underlying the site, a Phase I Environmental Site Assessment (ESA) was performed for the project by AEI Consultants, the results of which are summarized herein.⁴¹ A Phase I ESA is intended to identify recognized environmental conditions on the site, including the presence or likely presence of any hazardous substances that could create a significant hazard to the public or the environment, whether through an existing release, past release, or threat of a release into structures, into the ground, or into surface or groundwater.

Previous Use of the Project Property

Based on a review of historic City directories, topographic maps dating to 1899, and historic aerial photographs dating to 1939, the project site has been vacant since 2004. Between 1939 and 1948 the site was used for agricultural production, with residences in the northwest corner.⁴² The Phase I ESA states that during the time from 1958 until 1966, the site consisted of "commercial properties" with agricultural land on the northwest corner. Commercial buildings operating as a retail strip center with salon/barbershops, bar/restaurant, music shop, stores, and auto supply shop as well as a residence and offices occupied the site from 1974 to 1998. These buildings were demolished in 2003-2004 and the site has remained vacant since then.

Given the apparent prior use of the property for tree orchard production and row crops, the Phase I ESA determined that agricultural chemicals such as pesticides, herbicides, and fertilizers were likely used on the site, and previous sampling conducted in 2001 by Brown & Caldwell confirmed the presence of agricultural chemicals, including lead, arsenic, and organochlorine pesticides. The only organochlorine pesticide that exceeded San Francisco Bay Regional Water Quality Control Board's (RWQCB) health-based environmental screening level (ESL) for soils at residential sites was dieldrin, found in one soil sample at a concentration of 0.03 milligrams per kilogram (mg/kg). However, lead was found in a surface soil sample taken from the front yard of the former residential dwelling that

⁴¹ AEI Consultants, Phase I Environmental Site Assessment: 33403-33459 Mission Boulevard, Union City, Alameda County, California, Project No. 391136, July 27, 2018.

⁴² This is reported in the Phase I ESA. However, an independent review indicates the northwest corner was occupied by a tree orchard, and a single residence and an agricultural building were in the northeast corner, using the directional reference convention discussed in Section 9, Project Setting. Based on this independent review, these buildings were present until at least 1993, when they were still visible on aerial photographs. Commercial buildings were present on the southern portion of the site by 1958.

exceeded the screening level of 80 mg/kg, with a concentration of 890 mg/kg in 1991. The subsequent Phase II performed in 2018 yield lead at concentrations up to a maximum of 120 mg/kg. The results of a statistical analysis calculated the 95% H-Upper confidence level (UCL) for the recent lead sample results in soils at the Site of 60.41 mg/kg, which is below the screening level of 80 mg/kg. Due to the proposed residential use of the property, these chemicals were deemed to pose a potential health risk threat to future project residents, which is addressed later in this discussion.

Hazardous Materials Sites On Or In the Vicinity of the Project

Records obtained from the Union City Fire Department revealed that there was a fire permit for the project property issued to Union City Auto Supply on June 19, 1989 that permitted the storage of flammable liquids. No violations were recorded with this permit. A permit was issued in November 1990 for the removal of two gasoline underground storage tanks (USTs) from the property. The following March, there was a report that the UST excavation area was contaminated, with remediation required. A Phase II ESA work plan was approved in March 1996 and the work was completed in April 1996. On June 18, 1996 there was a recommendation for case closure after the removal of two 550-gallon gasoline USTs for a convenience store and former automotive repair facility. A tank removal report with no violations was recorded on August 6, 1996.

As part of the Phase I ESA, AEI Consultants reviewed over 100 publicly available local, State, and federal environmental databases to identify hazardous waste and hazardous materials release sites in the project vicinity. The search results revealed that the northeast corner of the site was listed on a number of regulatory databases as a result of a former leaking underground storage tank (LUST) at the site. Two 550-gallon gasoline underground storage tanks (USTs) were removed from the parcel at 33407 Mission Boulevard, adjacent to D Street, in November 1990. Soil and groundwater samples collected from under and adjacent to the excavations and three nearby concrete-lined pits were submitted to testing at a State-certified laboratory for total petroleum hydrocarbons (TPH) as gasoline (TPG-g), THP as diesel (TPH-d), and BTEX (benzene, toluene, ethylbenzene, and xylenes). Samples from beneath the concrete pits were also analyzed for oil and grease, volatile organic compounds (VOCs), and inorganic metals. Lead was detected at normal background levels but no petroleum hydrocarbons were detected in any soil samples. Groundwater samples found no detectable levels of TPH-g or BTEX but did indicate 670 parts per billion (ppb) of TPH-d. The LUST case was granted case closure with no further action by the RWQCB on June 27, 1993.

As part of a proposed 2001 redevelopment plan for the property, never implemented, an updated groundwater and soil sampling investigation of the site was performed by Brown and Caldwell to further assess possible soil and groundwater contamination present on the property due to the former USTs present as well as former agricultural use of the property. Three soil borings (BH-1, BH-2, and BH-3) were advanced along the northern edge of the site in the area of the former USTs. Three additional shallow borings (BH-4, BH-5, and BH-6) were advanced in the northern portion of the site. Additional soil samples were not collected during this investigation due to buildings still present on the property.

One deep soil boring (BH-1) was advanced to 76 feet below the ground surface (bgs) to collect a grab groundwater sample. BH-2 and BH-3 were advanced to 16 feet bgs and no groundwater was encountered. Soil samples were collected from each borehole at 7 to 7.5 feet and 13 to 13.5 feet bgs, while the surface soil samples (BH-4, BH-5, and BH-6) were collected at depths of 4 to 8 inches bgs. One sample from each of the surface soil borings was analyzed for lead, arsenic, and organochlorine pesticides. The samples collected from B-1, B-2, and B-3 were analyzed for TPH-g, TPH-d, BTEX, methyl tertbutyl ether (MtBE), and lead. The grab groundwater sample collected from BH-1 was analyzed for TPH-g, TPH-d, and volatile organic compounds (VOCs). No TPH-g, TPH-d, BTEX or MtBE were detected above laboratory reporting limits in any of the subsurface soil samples. No TPH-g, TPH-d, BTEX, or MTBE were detected above laboratory reporting limits in any of the subsurface soil samples. No TPH-g, TPH-d, BTEX, the BH-1 grab groundwater sample. Chloroform was the only VOC detected above laboratory limits at 1.4

micrograms per liter (μ g/L) but below California Department of Health Services maximum contaminant level (MCL) for drinking water. It was presumed that this may have been due to a leaking water line due to chloroform being a common byproduct of drinking water chlorination. The Phase I ESA concluded that these subsurface testing results did not represent a significant environmental concern.

The Phase I ESA identified the following hazardous materials sites within the applicable search radii around the project site listed on one or more of the regulatory databases searched:

- 1. 118 E Street: The AT&T property located on the block just south of the project site (listed as a Pacific Bell property) is listed on a variety of regulatory databases due to a leaking diesel UST. A release of diesel fuel at this UST location was previously detected in August 1992 during an inspection by the City of Union City. A 5,000-gallon single-walled steel diesel UST was removed from the property on July 19, 1993 and a 3,000-gallon diesel double-walled UST was installed in in its place the following month. The site was over-excavated when the LUST was removed, and a soil sample revealed that Total Extractable Hydrocarbons were present at 0.82 parts per million (ppm) in the soil. The RWQCB issued a case closure letter for the site on October 17, 1995. Although no groundwater contamination was identified at this site, its groundwater is downgradient from the project site. Based on this fact and the closure status of the case, the Phase I ESA concluded that this property does not represent a significant environmental concern to the proposed project.
- 2. 33509 Mission Boulevard: Identified as Meek's Campers, this property is just to the south of the AT&T property. According Alameda County Water District records, four single walled USTs (one 550-gallon waste oil tank, two 3,000-gallon gasoline tanks, and one 1,000-gallon gasoline tank) were removed from the adjacent property to the south in January 1986. Four soil samples were collected and tested, and the analytical results indicated contamination with TPH-g at concentrations of 24, 19, 9.3, and 16 ppm, respectively. Additional investigation of the site was conducted by Weber, Hayes & Associates in August 1994 to confirm and determine the extent of contamination. This investigation included drilling four soil borings to depths ranging from 15 to 25 feet bgs in the former tank excavation area and the collection of soil samples from each boring. All soil samples were found to be below laboratory testing limits for TPH-g and BTEX. The case was granted case closure on March 5, 1995 by the RWQCB. Based on its down-gradient location and the completion of remediation, the Phase I ESA concluded that this property does not represent a significant environmental concern to the proposed project.
- 3. **33365 Mission Boulevard:** This property is occupied by the Shell gas station located immediately to the north of the project site. It is listed on multiple databases due to its operation of USTs and to a former LUST on the property.

A 550-gallon waste oil UST was replaced on the property in May 1987 and was subsequently removed in April 2004. No evidence of soil contamination was observed when the UST was removed, but two soil samples were collected and analyzed for TPH-g, TPH-d, BTEX, and MTBE. No detectable concentrations of any constituents were reported except for metals below background levels. Excavated soil was used to backfill the excavation.

Two 8,000-gallon gasoline USTs and one 10,000-gallon gasoline UST were replaced in August 1995 with two 15,000-gallon double-walled fiberglass USTs. Collected soil samples from the tank areas revealed unspecified levels of contamination with petroleum hydrocarbons. All contaminated soil was excavated in accordance with applicable soil clean up levels in effect at the time of excavation (i.e., total petroleum hydrocarbons less than 100 ppm). However, residual soil contamination that exceeds the RWQCB's ESLs for residential use was left in place beneath the southwest pump island due to concerns of structural integrity of the adjacent gas station canopy.

Between 1986 and 2003, 21 soil boreholes, seven groundwater monitoring wells, and three vapor monitoring wells were drilled at the site to define the extent of soil and groundwater contamination at the Shell property. The closest borehole/groundwater monitoring well (S-7) to the project site, which is 91 feet northwest of the site, has shown low to no detectable concentrations of petroleum hydrocarbons for the last four sampling events. The gas vapor concentration in the closest vapor monitoring well to the subject property (V-3, located approximately 80 feet northwest of the project site) was found to be below laboratory reporting limits for TPH (octane), TPH-g, and BTEX. All monitoring wells were destroyed in December 2009 and the Alameda County Water District granted case closure on January 7, 2010. Based on the preceding facts, the Phase I ESA concluded that this property does not represent a significant environmental concern to the proposed project.

Site Reconnaissance

The project site was systematically surveyed by a Registered Environmental Assessor (REA) on July 10, 2018 in a series of walking transects in order to identify any signs of a Recognized Environmental Condition (REC) at the project site. The only condition noted on the site was the presence of trash and furniture that appeared to have been dumped without authorization. However, no evidence of impact to the property, such as surface staining, odors, stressed vegetation, or spillage of contents, was observed. Based on this information, the Phase I ESA concluded that the solid waste on the site, which would be removed prior to project construction, does not constitute an REC.

The site reconnaissance identified several noteworthy conditions on properties adjacent to the project site, including the Shell gas station discussed above. Additionally, a pad-mounted transformer was identified on an adjacent site (unspecified, but presumed to be the AT&T facility to the south). Toxic polychlorinated biphenyls (PCBs) were historically used in electric transformers and other electrical equipment, but their use was prohibited after January 1, 1977. Although it is unknown whether the adjacent transformer contains PCBs, no signs of spills, staining, or leaks were observed during the site reconnaissance, and the equipment was not identified as an environmental concern to the project. The third adjacent condition noted in the Phase I ESA was the presence of several storm drains observed in the parking areas of the adjacent properties and adjacent roadways. AEI did not observe evidence of hazardous substances or petroleum products in the vicinity of the drains, and concluded they did not represent a significant environmental concern.

Phase I ESA Findings

Due to the presumed prior use of pesticides, herbicides, and fertilizers at the site and the elevated lead concentration found in a surface soil sample taken from the front yard of the former residential dwelling, the Phase I ESA recommended further assessment of the shallow soils throughout the site. Because soil gas testing was not performed during prior environmental assessments of the site, a limited program of soil gas testing was also recommended, due to the former presence of USTs and auto repair operations on the site. Given the site history, the Phase I ESA also noted that an Environmental Site Management Plan (SMP) may be appropriate, to ensure best practices are in place for addressing environmental conditions that may be encountered and proper handling of soils. In accordance with these recommendations, a limited Phase II subsurface ESA was performed in November 2018, as discussed below.

Phase II ESA and Additional Subsurface Investigation

A limited Phase II ESA was conducted at the project site by AEI Consultants in the Fall of 2018 that included the advancement of 15 soil borings spaced throughout the site and drilled to a depth of 4 feet bgs, with collected soil samples submitted to laboratory analysis at a State-certified laboratory.⁴³ Three

⁴³AEI Consultants, Limited Phase II Subsurface Investigation: 33403-33459 Mission Boulevard, Union City, Alameda County, California, Project No. 391136, November 13, 2018.
additional borings were advanced to 5.5 feet bgs for the placement of soil gas probes in the area of the former USTs. The locations of the borings are shown on Figure HM-1. Soil samples from all 22 borings were analyzed, with the following results:

- Arsenic was detected above laboratory reporting limits in four samples at concentrations ranging from 5.8 mg/kg to 12 mg/kg. Although these concentrations exceed the residential ESL for arsenic of 0.067 mg/kg, typical Bay Area background arsenic concentrations range up to 11 mg/kg.⁴⁴ Only one sample, SB-15-0.5 (12 mg/kg), exceeded this typical background concentration. Given prior site use, presence of other samples with similar concentrations within the background range, sample SB-15 is presumed to be within the upper range of regional background concentrations and not from an agricultural or industrial source.
- Lead was detected above laboratory reporting limits in each of the 18 samples collected and analyzed, but was detected above the residential ESL only in the shallow surface samples. The four shallow samples collected within the first 6 inches of soil (SB-4-0.5, SB-6-0.5, SB-15-0.5, and SB-16-0.5) yielded concentrations above the residential ESL of 80 mg/kg; the highest concentration was 120 mg/kg. Due to these elevated lead concentrations, additional soil samples were collected from these four borings at 2 feet bgs and analyzed for lead. The concentrations of lead detected in the soil borings at 2 feet bgs ranged between 9.4 mg/kg in SB-16 to 65 mg/kg in SB-15, all below the residential ESL. AEI concluded that the elevated lead concentrations are limited in depth. In accordance with the procedures defined in the ESL guidance document, a statistical analysis was performed to determine a representative sitewide concentration for lead in surface soils at the site. The results calculated the 95-percent H-Upper confidence level (UCL) for lead in surface soils at the site of 60.41 mg/kg, which is below the screening level of 80 mg/kg.
- Four shallow soil samples collected at borings dispersed throughout the site (SB-9, SB-11, SB-15, and SB-17) were tested for dichloro-diphenyl-dichloroethylene (DDE). DDE was detected in three of the four samples at maximum concentrations of 0.025 mg/kg, well below the residential ESL for DDE of 1.9 mg/kg.
- The same four shallow soil samples (SB-9, SB-11, SB-15, and SB-17) were also analyzed for dichloro-diphenyl-trichloroethane (DDT), which was detected in one of the samples at a concentration of to 0.0080 mg/kg, well below the residential ESL for DDT of 1.9 mg/kg.
- No other organochlorine pesticides (OCPs) were detected above laboratory method reporting limits in the samples collected and analyzed.

The soil gas probes were placed at a depth of 5 feet bgs, with 6 inches of clean, dry sand placed above and below each probe. These boreholes were then backfilled with 1 foot of dry granular bentonite followed by the placement of hydrated granular bentonite to grade. Following a 120-minute waiting period to allow the probes to equilibrate with surrounding soils, shut-in tests, and purging, soil gas samples were collected in accordance with guidelines recommended by the California Department of Toxic Substances Control (DTSC). Soil vapor gas samples from each of the test probes were analyzed for benzene, ethylbenzene, tetrachloroethylene/perchloroethylene (PCE), other VOCs, and helium, with the following results:

- Benzene was detected in each of the three collected soil gas samples at concentrations of 7.02, 7.30, and 38.1 micrograms per cubic meter (μg/m³), respectively, all below the thenapplicable residential ESL of 48 μg/m³.
- Ethylbenzene was detected in each of the three soil gas samples at concentrations of 16.0, 18.8, and 82.6 μg/m³, respectively, all substantially below the residential ESL of 560 μg/m³.

⁴⁴ G. R. Bradford, et. al., *Background Concentrations of Trace and Major Elements in California Soils*, March 1996.



Figure HM-1

2018 Soil Boring Locations

Source: AEI Consultants

- Tetrachloroethylene was detected in one soil gas sample at a concentration of 6.33 μ g/m³, below the then-applicable residential ESL of 240 μ g/m³.
- Other VOCs were detected in the soil gas samples collected and analyzed, but were observed at concentrations below their respective residential ESLs, where available.
- Helium, a component of the leak check compound, was detected in each of the soil gas samples collected and analyzed, observed at very low concentrations of 0.190, 0.195, and 0.553 percent by volume, respectively, which is well below the maximum allowable helium as a percentage of the helium atmosphere in the sampling shroud. Therefore, there was not a significant leak during sampling and the soil gas results are considered valid.

The low levels of petroleum hydrocarbons detected in the soil gas samples collected in the vicinity of the former USTs suggest that there are residual petroleum hydrocarbon impacts to soil. However, the concentrations of petroleum hydrocarbons observed were below their respective, then-applicable, residential ESLs. Other VOCs were also all observed at concentrations below their respective ESLs, where available. The Phase II ESA concluded that at the observed concentrations, the chemicals present in soil gas at the site do not pose a risk to future project residents.

All 22 borings conducted during the Phase II ESA and additional subsurface investigation were backfilled with neat cement grout as required by the Alameda County Water District (ACWD) and were inspected and approved by the ACWD.

Based on the testing results described above, the Phase II ESA concluded that OCPs in the soils at the site are at low enough concentrations to pose no substantial risk to future project residents, and they are not expected to pose a significant health risk to workers during project construction. Similarly, arsenic and VOCs in the soil were not found to pose a risk to future project residents.

Subsequent to the completion of the Phase II ESA, the RWQCB revised the ESL for, as applicable here, benzene from 48 μ g/m³ to 3.2 μ g/m³. Consequently, additional subsurface testing of the site was performed by AEI Consultants in August 2019, with five additional soil gas samples and two grab groundwater samples collected.⁴⁵ Benzene and ethylbenzene were detected in each of the collected soil gas samples, observed at maximum concentrations of 19.9 and 25.2 μ g/m³, respectively. Although the maximum concentration of ethylbenzene was below the current residential ESL of 37 μ g/m³, the observed benzene concentration exceeded the current residential ESL of 3.2 μ g/m³. PCE was detected in four of the five soil gas samples at a maximum concentration of 2.39 μ g/m³, which is below the current residential ESL of 15 μ g/m³. One soil gas sampled yielded chloroform, observed at a concentration of 6.45 μ g/m³, which is slightly above the residential ESL of 4.1 μ g/m³.

Since benzene was detected at concentrations slightly above the recently revised residential ESL, the concentrations were further evaluated in accordance with the RWQCB's guidelines for applying the ESLs at sites impacted by a release from a leaking UST under the State Water Resources Control Board's Low-Threat Underground Storage Tank Case Closure Policy (LTCP).⁴⁶ Under the LTCP Scenario 4, conservatively assuming no bioattenuation zone, for a soil gas sample collected at a depth of 5 feet, the residential soil gas criteria for benzene is 85 μ g/m³. Since the observed benzene concentrations were far below this LTCP soil gas screening criterion, AEI Consultants concluded that benzene does not pose an unacceptable risk to the proposed new residential development, and the existing LUST Closure status remains appropriate. (The reason for the large discrepancy between the

⁴⁵ AEI Consultants, *Environmental Site Summary:* 33403-33459 Mission Boulevard, Union City, California, Project No. 391136, October 22, 2019.

⁴⁶San Francisco Bay Regional Water Quality Control Board, User's Guide: Derivation and Application of Environmental Screening Levels (ESLs), interim final 2019.

ESL and the LTCP closure criteria is that LTCP takes into account the natural biological degradation of benzene in soil gas.)

With respect to the additional groundwater samples, one sample revealed total petroleum hydrocarbons as diesel (TPH-d) at a concentration of 300 micrograms per liter (μ g/L). Although this is slightly above the RWQCB's Maximum Contaminant Level (MCL) of 200 μ g/L, the residual concentration of TPH-d would be evaluated under the LTCP discussed above. LTCP is primarily driven by benzene, ethylbenzene, and naphthalene, and since these chemicals were not detected in groundwater, no action relative to the observed residual petroleum hydrocarbons in groundwater is anticipated. AEI Consultants concluded that there do not appear to be significant impacts to groundwater from the former USTs.

The subsurface testing summarized above appears to demonstrate that lead concentrations that are elevated in near-surface soils decrease at lower depths. The lead concentrations in the soil samples collected at 2 feet bgs did not exceed the residential ESL, but this threshold was exceeded in all four of the near-surface soil samples. However, in accordance with the procedures within the ESL guidance document, a statistical analysis was performed, as referenced above, and the analysis results calculated the 95-percent H-UCL for lead in the surface soils at the site is 60.41 mg/kg, which is below the applicable ESL for residential land use.

Although the preceding discussion demonstrates that the concentrations of hazardous materials at the site appear to be below regulatory thresholds, given the history of soil contamination at the site and the proposed residential use of the site, in an abundance of caution, the City is assuming that there may remain soil contaminated with lead or other hazardous materials that could pose a potential health risk to construction workers during development of the site and to future project residents. This would be a potentially significant impact. With implementation of the following mitigation measure, this impact would be **less than significant with mitigation**:

Mitigation Measure HM-1: Prior to the issuance of a grading permit, the project sponsor shall retain the services of a qualified environmental engineering firm to prepare and implement, during site preparation and grading activities, a Site Management Plan (SMP). The SMP shall be designed to protect human health and the environment, including protocols, measures, and techniques for proper handling, management, and disposition of impacted soils on the site during site preparation and grading activities, protection of workers and off-site receptors during site activities, and to ensure proper characterization management and/or disposal of contaminated environmental media above ESLs. The SMP shall be prepared by a commercial environmental engineering firm with demonstrated expertise and experience in the preparation of SMPs and shall be stamped by an appropriately licensed professional.

The SMP shall establish protocols and measures to address the discovery of presently unknown environmental conditions or subsurface structures such as underground storage tanks or sumps. If the environmental engineering firm subsequently identifies the need for further sampling, the project sponsor shall implement this and any other requirements identified in the SMP.

The project sponsor shall enter into a voluntary agreement with the RWQCB and/or the California Department of Toxic Substances Control (DTSC) for review and approval of the SMP. Prior to issuance

of the grading permit, the project sponsor shall provide the City with a copy of the approved SMP and shall implement the SMP during site preparation and grading under the approving agency's oversight at the project sponsor's cost.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>c)</i>	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X

Explanation: There are four schools located within one-half mile of the project site. The closest include Guy Emanuele Jr. Elementary School and Kidango Preschool at 100 Decoto Road, 0.27-mile south of the project site, and New Haven Adult School at 600 G Street, 0.28-mile southwest of the project site. However, the proposed residential and office uses would not emit hazardous emissions, handle hazardous materials, or generate hazardous waste. There would be **no impact** on schools related to hazardous materials as a result of project implementation.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?		X		

Explanation: The list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 actually consists of several lists, including:

- A list of hazardous waste sites compiled by the California Department of Toxic Substances Control (DTSC);
- A list of contaminated water wells compiled by the California Department of Health Services (DHS) (subsequently reorganized into the California Department of Health Care Services and the California Department of Public Health);
- A list of leaking underground storage tank sites and solid waste disposal facilities from which there is a migration of hazardous waste, compiled by the State Water Resources Control Board (SWRCB); and
- A list of solid waste disposal facilities from which there is a migration of hazardous waste, compiled by the Local Enforcement Agency (LEA). These lists are consolidated by the Department of Resources Recycling and Recovery (CalRecycle).

Each of these lists must be updated at least annually, and must be submitted to the Secretary for Environmental Protection, the head of the California Environmental Protection Agency (CalEPA).

DTSC maintains the EnviroStor database for purposes of complying with Section 65962.5, while the SWRCB maintains the GeoTracker database. These databases were searched during preparation of the Phase I ESA, as discussed in Section IX-b. As discussed in more detail in that section, implementation of the project could potentially expose construction workers or project residents to elevated lead concentrations encountered in the northern portion of the site, but with implementation of Mitigation Measure HM-1, potential impacts from such exposure would be reduced to a *less-than-significant-with-mitigation* level. All other impacts related to hazardous materials sites compiled pursuant to Government Code Section 65962.5 were found to be less than significant.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e)	For a project within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X

<u>Explanation</u>: There are no airports near the project site; the nearest public airport is Oakland International Airport located more than 12 miles northwest of the site. The proposed project would not expose people to a safety hazard from airport operations.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X

Explanation: The project would not block or impede access to emergency evacuation routes, and the development of a self-contained city block with 81 apartment units and 6,500 square feet of offices would not have the potential to interfere with implementation of the City's disaster management operations plan or emergency response procedures adopted by any local service providers.

The City's 2014 *Comprehensive Emergency Management Plan* (CEMP) was reviewed to identify any potential conflicts that could be caused by the proposed project. The CEMP details procedures and responsibilities during disasters for a wide range of potential emergencies, including civil disturbance, dam failure, earthquake, flood, hazardous materials spill, train derailment, landslide, terrorism, wildfire, and more. It identifies the Ruggieri Senior Center at 33997 Alvarado-Niles Road (approximately 1.2 miles south of the project site) as the City's primary Emergency Operations Center.

The project site is located in Area 4, one of five evacuation areas with possible sites for Refuges of Last Resort in the event of a large-scale catastrophic event that could involve evacuation of half or more of the population. Within Area 4, Logan High School, located about 1 mile south of the project site, is identified as a possible site for a Refuge of Last Resort during a need to terminate evacuations.

The CEMP also identifies emergency shelters throughout the City, most located at schools or parks. In the project vicinity, shelter sites are identified at Mission Hills Middle School (250 Tamarack Drive,

approximately 0.32-mile northwest of the project site), Guy Emanuele Jr. Elementary School (100 Decoto Road, approximately 0.27-mile south of the project site), New Haven Adult School (600 G Street, approximately 0.28-mile southwest of the project site), and Shorty Garcia Park (33940 7th Street, approximately 0.37-mile southwest of the project site).

The proposed project would not interfere with evacuation procedures if they became necessary and would not otherwise impair implementation of the CEMP.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Expose people or structures, either directly or indirectly, to significant risk of loss, injury, or death involving wildland fires?			X	

<u>Explanation</u>: Government Code Section 51178 directs the California Department of Forestry and Fire Protection (CAL FIRE) to identify areas of high fire hazard within Local Responsibility Areas (LRAs) that are not under the direct jurisdiction of CAL FIRE, where local fire-fighting agencies have primary responsibility for fire response. CAL FIRE's mapping of Very High Fire Hazard Severity Zones (VHFHSZs) is based on data and models of potential wildland fuels over a 30- to 50-year time horizon and their expected fire behavior and burn probabilities. The project site and all surrounding lands are designated as an LRA, but they are not within a VHFHSZ.⁴⁷ The project site is located in an urbanized area and there are no wildlands in close proximity to the site. Therefore, the potential for wildfire at the project site is extremely low.

X. HYDROLOGY AND WATER QUALITY — Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?		X		

Explanation:

Construction Impacts

Construction activities could potentially affect water quality as a result of erosion of sediment. Once construction sites become disturbed by clearing, grading, excavation, and other site preparation activities, site soils become particularly susceptible to erosion from wind and rain water. Wind-blown soils adversely affect air quality, as discussed in more detail in Section III-b, while soil entrained by flowing stormwater becomes transported off site, flowing into downstream receiving waters, such as

⁴⁷ California Department of Forestry and Fire Protection (CAL FIRE), Alameda County Very High Fire Hazard Severity Zones in LRA, As Recommended by CAL FIRE [map], September 3, 2008.

storm drains and flood control channels. Because the City's stormwater drainage system discharges to Alameda Creek and subsequently into San Francisco Bay, these water bodies are susceptible to increased sedimentation from uncontrolled erosion from construction sites. In addition, leaks from construction equipment; accidental spills of fuel, oil, or hazardous liquids used for equipment maintenance; and accidental spills of construction materials are all potential sources of pollutants that could degrade water quality during construction.

Stormwater runoff from the site is ultimately discharged to San Francisco Bay, which is on the list of impaired water bodies compiled by the San Francisco Bay Regional Water Quality Control Board (RWQCB) pursuant to the federal Clean Water Act. Because the State is required to develop action plans and establish Total Maximum Daily Loads (TMDLs) to improve water quality within these water bodies, uncontrolled discharge of pollutants into them is considered particularly detrimental.

Any new development that entails "land disturbance" of 1 acre or more requires the project sponsor to obtain coverage under Construction General Permit (CGP) Order 2009-0009-DWQ, administered by the RWQCB. With a site area of 1.65 acres, the project would be required to obtain coverage under the CGP. Order 2009-0009-DWQ requires project sponsors to implement construction Best Management Practices (BMPs) at the project site and comply with numeric action levels (NALs) in order to achieve minimum federal water quality standards. The CGP requires control of non-stormwater discharges as well as stormwater discharges during project construction. Measures to control non-stormwater discharges such as spills, leakage, and dumping must be addressed through structural as well as administrative BMPs. Precautions to address such discharges will be addressed using standard practice and/or as detailed in the required Stormwater Pollution Prevention Plan (SWPPP), discussed below.

Construction stormwater BMPs are intended to minimize the migration of sediments off-site. They can include covering soil stockpiles, sweeping soil from streets or other paved areas, performing sitedisturbing activities in dry periods, and planting vegetation or landscaping quickly after disturbance to stabilize soils. Other typical stormwater BMPs include erosion-reduction controls such as hay bales, water bars, covers, sediment fences, sensitive area access restrictions (for example, flagging), vehicle mats in wet areas, and retention/settlement ponds.

To obtain coverage, the applicant must electronically file a number of permit-related compliance documents referred to as Permit Registration Documents (PRDs). The required PRDs include a Notice of Intent (NOI), a risk assessment, site map, signed certification, SWPPP, Notice of Termination (NOT), NAL exceedance reports, and other site-specific PRDs that may be required. The PRDs must be prepared by a Qualified SWPPP Practitioner (QSP) or Qualified SWPPP Developer (QSD) and filed by a Legally Responsible Person (LRP) on the RWQCB's Stormwater Multi-Application Report Tracking System (SMARTS). Once filed, these documents become immediately available to the public for review and comment.

Although project construction effects on surface water quality could result in a potentially significant impact on water quality, implementation of Mitigation Measures WQ-1 and WQ-2 would ensure that construction impacts on water quality remain *less than significant with mitigation*.

Mitigation Measure WQ-1:

Prior to issuance of a grading permit the project sponsor shall obtain National Pollutant Discharge Elimination System (NPDES) construction coverage as required by Construction General Permit (CGP) No. CAS000002, as modified by State Water Resources Control Board (SWRCB) Order No. 2009-0009-DWQ. Pursuant to the Order, the project applicant shall electronically file the Permit Registration Documents (PRDs), which include a Notice of Intent (NOI), a risk assessment, site map, signed certification, Stormwater Pollution Prevention Plan (SWPPP), and other site-specific PRDs that

may be required. At a minimum the SWPPP shall incorporate the standards provided in the Association of Bay Area Governments' Manual of Standards for Erosion and Sedimentation Control Measures (2005), the California Stormwater Quality Association's California Stormwater Best Management Practices Handbook (2003), the prescriptive standards included in the CGP, or as required by the Clean Water Program Alameda County, Implementation of the plan will help stabilize graded areas and reduce erosion and sedimentation. The SWPPP shall identify Best Management Practices (BMPs) that shall be adhered to during construction activities. Erosion-minimizing efforts such as fiber rolls, stabilized construction entrances, sediment traps, water bars (placed across roadways or pathways to interrupt flow), stockpile covers, sediment fences, sensitive area access restrictions (for example, flagging), vehicle mats and/or corrugated metal plates in wet areas, and retention/settlement ponds shall be installed in conjunction with clearing and grading operations. Adjacent public streets shall be kept clean and swept on a regular basis during construction. Mulching, seeding, or other suitable stabilization measures shall be used to protect exposed areas during and after construction activities. The SWPPP shall be reviewed and approved by the Union City Public Works Department.

Mitigation Measure WQ-2: All cut-and-fill slopes shall be stabilized as soon as possible after completion of grading. No site grading shall occur between October 15th and April 15th unless appropriate erosion control measures are approved as part of the grading plan review and are implemented/in place throughout site grading.

Currently Union City General Plan Policy NHR-B.1.2 also requires preparation and implementation of an Erosion Control Plan as a condition of issuance of a grading permit. Policy NHR-B.3 ensures, through on-site inspections, that the Erosion Control Plan is being properly implemented during project construction. An updated General Plan is currently out for public review, and may supercede the 2002 General Plan by the time the proposed project is approved. However, the proposed General Plan includes Resource Conservation Policy RC-3.3, which includes the same requirements as policies NHR-B.1.2 and NHR-B.3.

Operational Impacts

The primary source of water pollutants from residential and office development is from automotive vehicles traveling on site roadways. Moving vehicles deposit oil and grease, fuel residues, heavy metals (e.g. lead, copper, cadmium, and zinc), tire particles, and other pollutants. They emit polycyclic aromatic hydrocarbons (PAHs) from their exhaust, resulting from incomplete combustion of gasoline, which settles to the ground. Although parked vehicles can also deposit oil, metals, and other pollutants that can be washed into the storm drain system by rain water, the parking for the proposed project would be fully enclosed, so vehicles parked at the project site would not contribute additional stormwater pollutants in this manner. Although the applicant proposes that wash water used to clean the interior parking garages and enclosed and covered trash collection areas be collected in floor drains plumbed to the sanitary sewer and be subsequently be treated at the Alvarado Wastewater Treatment Plant (AWTP) operated by the Union Sanitary District (USD), it is not certain that the USD will allow this arrangement.⁴⁸ Wash water would entrain the potential pollutants from parked vehicles

⁴⁸ Michelle Kim, Senior Project Manager, MidPen Housing, Stormwater Requirements Checklist, Mission D & E Project, August 2, 2019.

described above as well as detergents used for washing the garage floors, all of which could degrade water quality in downstream receiving waters if not properly treated and disposed of. This would be a potentially significant impact on water quality. Implementation of the following mitigation measures would reduce the impact to a *less-than-significant-with-mitigation* level:

Mitigation Measure WQ-3: Wash water used to clean the interior parking garages and enclosed and covered trash collection areas shall be collected in floor drains plumbed to the sanitary sewer if allowed by the Union Sanitary District (USD). If USD will not allow the garage floor drains to be plumbed to the sanitary sewer, the applicant shall install an on-site treatment system or otherwise provide for the treatment and discharge of garage wash water to the satisfaction of the USD.

All of the pollutants described above collect on roofs, pavements, and other impervious surfaces, where they can be washed by stormwater into downstream surface waters, thereby degrading water quality. Pesticides that may be used on landscaping or around buildings can potentially contribute to the depletion of dissolved oxygen and/or toxic concentrations of dissolved ammonia in downstream receiving waters, creating acute toxicity for aquatic wildlife. Fertilizers can similarly degrade water quality.

Buildings and equipment enclosures also provide potential sources of water pollutants because weathered paint and eroded metals from painted and unpainted surfaces can be washed away by stormwater. In addition, mercury and polychlorinated biphenyls (PCBs) that get deposited on roofs and other impervious surfaces as airborne pollutants can be washed into surface waters during storm events. Microbial pathogens are yet another pollutant that can be entrained in stormwater coming in contact with poorly protected trash collection areas, though these areas would be in enclosed rooms inside the garage in the proposed project.

Operational stormwater discharges from new development are regulated under the National Pollutant Discharge Elimination System (NPDES), administered by the RWQCB under authority of the U.S. Environmental Protection Agency. In accordance with the NPDES, the RWQCB regulates stormwater discharges via municipal stormwater permits issued to the cities, counties, water districts, and flood control districts under its jurisdiction in the San Francisco Bay Area. In the City of Union City, development projects must comply with NPDES Permit No. CAS612008, issued to the Alameda Countywide Clean Water Program (ACCWP)⁴⁹ and other Bay Area jurisdictions by the RWQCB (NPDES Order No. R2-2015-0049). The revised Municipal Regional Stormwater Permit (MRP) was adopted on November 19, 2015 and became effective on January 1, 2016. This permit replaced the previous permit issued on October 14, 2009, which was formally rescinded by the RWQCB. The current MRP consolidates the multiple countywide permits previously issued to member agencies in the San Francisco Bay Area under a single MRP regulating stormwater discharges from municipalities and local agencies in Alameda, Contra Costa, San Mateo, and Santa Clara counties and the cities of Fairfield, Suisun City, and Vallejo.

Although the MRP imposes a variety of responsibilities for monitoring and protecting stormwater quality on member agencies, it also includes requirements for individual development projects. Specifically, Provision C.3 of the MRP requires any private or public development project that would create or modify 10,000 square feet or more of impervious surfaces to take measures to improve water quality of stormwater discharges from the project site (i.e., stormwater runoff), including providing

⁴⁹ Although the named Permitee in the MRP is Alameda Countywide Clean Water Program, this organization is also referenced on its website as Clean Water Program Alameda County as well as Alameda Countywide Clean Water Program.

treatment of 100 percent of the stormwater runoff from the site. The size threshold is reduced to 5,000 square feet for certain special land use categories, which include auto service facilities, retail gasoline outlets, restaurants, and uncovered parking lots. Where a redevelopment project would alter 50 percent or more of the impervious surfaces of a previously existing project that was not subject to Provision C.3 requirements, the entire project must be designed and operated in compliance with Provision C.3. The Provision C.3 requirements also pertain to construction or widening of roads, trails, and sidewalks.

Projects subject to Provision C.3 must include low-impact development (LID) measures to capture and perform onsite treatment of all stormwater from the site prior to its discharge, including rainwater falling on building rooftops. (Treatment may also occur offsite at an approved joint stormwater treatment facility.) Project applicants are required to implement appropriate source control and site design measures and to design and implement stormwater treatment measures in order to reduce the discharge of stormwater pollutants to the *maximum extent practicable* (MEP), a standard established by the 1987 amendments to the federal Clean Water Act. LID treatment measures include harvesting and reuse, infiltration, evapotranspiration, and biotreatment.

Provision C.3 LID requirements include source controls and site design and stormwater treatment requirements. Examples of source control requirements that could be relevant to the proposed project include:

- Landscaping that minimizes irrigation and runoff, promotes surface infiltration, minimizes the use of pesticides and fertilizers, and incorporates other appropriate sustainable landscaping practices and programs such as Bay-Friendly Landscaping;
- Efficient irrigation systems;
- Properly designed trash storage areas; and
- Storm drain system stenciling or signage.

The MRP states that permitees (i.e., the cities and counties) should encourage projects that do not meet the Provision C.3 size thresholds to still implement these source control measures to the extent feasible.

Examples of site design and stormwater treatment requirements that could be relevant to the proposed project include:

- Minimization of impervious surfaces;
- Construction of sidewalks, walkways, patios, and/or parking lots with pervious pavements;
- Inclusion of self-treating areas and self-retaining areas;
- Rainwater harvesting and reuse;
- Minimization of stormwater runoff by directing runoff from roofs, sidewalks, walkways, driveways, and/or uncovered parking lots onto vegetated areas; and
- Treatment of 100 percent of the site's stormwater runoff with onsite LID treatment measures (or with LID treatment measures at a joint stormwater treatment facility) through harvesting and re-use, infiltration, evapotranspiration, or biotreatment.

Biotreatment (or bioretention) systems must be designed to have a surface area no smaller than what is required to accommodate a 5 inches/hour stormwater runoff surface loading rate, and infiltrate runoff at a minimum of 5 inches per hour during the life of the facility. The planting and soil media for biotreatment (or bioretention) systems must be designed to sustain healthy, vigorous plant growth and maximize stormwater runoff retention and pollutant removal. Biotreatment soil media must meet

minimum specifications. Green roofs may be considered biotreatment systems provided they meet the criteria for treatment capacity stipulated in the MRP and have a sufficient depth of planting media to support the long-term health of the vegetation selected for the green roof.

The size and capacity of required stormwater treatment systems is determined in part on historical rainfall records for the project area. Systems may be based on the volume of runoff, the peak flow rate of runoff, or a combination of the two, with numeric hydraulic design criteria stipulated in the MRP for each method.

In certain cases where an applicant can demonstrate the infeasibility of treating 100 percent of the runoff from a project site, there are provisions for payment of an in-lieu fee for treatment of the untreated portion of stormwater at a regional or municipal treatment facility. Provision C.3 also defines three categories of "special projects" (Category A, B, and C) that may be eligible for a reduction in the amount of stormwater they are required to treat via Incentive LID Treatment Reduction Credits that must be approved by the RWQCB. Special projects are generally land development projects that can be characterized as infill, smart growth, high-density, or transit-oriented development that can either reduce existing impervious surfaces or create less "accessory" impervious areas and automobile-related pollutant impacts. The LID Treatment Reduction Credits allow the treatment of a stipulated portion of the site's runoff with non-LID treatment systems, such as tree box high-flow-rate bio-filters or vault-based high-flow-rate media filters. The proposed project would not meet the criteria for any of the special projects defined in Section C.3.e.ii of the MRP.

Provision C.3 of the MRP also includes hydromodification management (HM) requirements for certain projects located in areas susceptible to hydrograph modification. Hydrograph modification occurs when an undeveloped site is developed with impervious surfaces such as buildings and pavements, which prevents natural infiltration by rain water, and which results in an increase in the volume and rate of stormwater runoff from the site. Hydrograph modification has the undesirable effect of increasing erosion of natural creeks and earthen channels, which can cause flooding, property damage, degradation of stream habitat, and deterioration of water quality.

Projects that create or replace 1 acre or more of impervious surfaces on sites within a designated "susceptible area" as mapped by the ACCWP must implement HM measures to minimize changes in the rate and flow of stormwater runoff in comparison with pre-project conditions. The MRP includes provisions for compliance with the HM requirements in cases where meeting the HM standard is not practical due to excessive cost (more than 2 percent of project construction costs) or extreme space limitations.

For Alameda County permitees, the HM controls must be designed such that the post-project discharge rates and durations match pre-project discharge rates and durations from 10 percent of the pre-project 2-year peak flow up to the pre-project 10-year peak flow. HM measures can include site design and hydrologic source control measures, on-site structural HM measures, regional HM control structures, in-stream restorative measures, or a combination thereof. However, in-stream measures may only be used when the receiving stream is in a hardened channel or already shows evidence of excessive sediment, erosion, or deposition.

The project site is located within an area subject to HM requirements, as shown on the interactive HMP Susceptibility Map provided on the Clean Water Program Alameda County website.⁵⁰ It is located in an area between the hilly areas to the east, where HM impacts are of particular concern, and the tidal zone to the west, where HM controls do not apply. Projects located within this zone that can demonstrate that all project runoff will flow through fully hardened channels or are connected to storm

⁵⁰Clean Water Program Alameda County, Hydro-Modification Susceptibility Map, Accessed August 11, 2019 at: <u>http://accwp.maps.arcgis.com/apps/webappviewer/index.html?id=11d7a1bfb90d46ce80f94defc03d012c</u>.

drains that discharge to the tidal area do not have to meet the HM standard. However, this exception does not apply to the proposed project, because stormwater in the site vicinity drains to an earthen channel; the project is therefore subject to the HM requirements.⁵¹

The proposed project would replace approximately 15,000 square feet of impervious surfaces and create 62,688 square feet of new impervious surfaces, for a total of 71,835 square feet (1.649 acres) of new and replaced impervious surfaces, well in excess of the 10,000-square-foot Provision C.3 threshold.⁵² Following development of the project, there would also be 9,147 square feet of pervious surfaces devoted to landscaping. With a substantial increase in impervious surfaces, absent measures to treat contaminated stormwater from the site and retard peak stormwater discharge rates and flows, runoff from the site would contribute pollutants to downstream surface waters, including San Francisco Bay, and could exceed the capacity of downstream storm drainage facilities, both of which would be *potentially significant impacts*.

Based on the proposed impervious surfaces, the project engineer has determined that a bio-treatment area of 2,228 square feet is required, subject to confirmation by the Public Works Department. The proposed stormwater treatment system would provide 3,517 square feet of bio-treatment areas, well over the required minimum. The stormwater management plan for the project identifies six drainage management areas (DMAs), with three of them requiring bioretention areas to treat the site's runoff. Two of the DMAs are self-treating areas and one DMA is an interceptor tree area, both of which are described below. An interceptor tree area is separate from a bio-treatment tree planter box, but the ACCWP allows interceptor tree areas to provide credit toward reducing the amount of impervious surfaces requiring on-site treatment facilities, subject to certain requirements.

To ensure that the project does not result in an increase in the volume and rate that stormwater is discharged from the site during peak storm events, the project sponsor is proposing an onsite detention vault and a number of bioretention planter boxes that would provide detention and temporary storage of stormwater. These features would also promote the infiltration of collected stormwater to groundwater.

The project would include the following site treatment measures, in compliance with the MRP requirements:

- Self-treating areas, where rainwater falls onto and flows through planted areas prior to discharge from the site, with no additional treatment required;
- Self-retaining areas, where storm runoff is directed into a depressed landscape area that allows water to pond to a depth of 3 inches prior to being discharged from the site, with no treatment required;
- Bio-retention areas, where storm runoff is directed into a planter area that provides natural filtration, while allowing for both infiltration to groundwater and evapotranspiration; and
- Interceptor trees, whose canopies would intercept falling rainwater, providing both detention and transpiration, reducing the amount of stormwater requiring treatment and improving infiltration.

Trees and other landscaping in planter boxes around the site perimeter would provide the self-treating and self-retaining areas. The applicant proposes to use the existing street trees on Mission Boulevard to function as interceptor trees and provide stormwater treatment credits to the project. The ACCWP allows the use of existing trees for interceptor tree credits, which are determined by the square footage

⁵¹ Sandis Civil Engineers, Mission D & E Tentative Parcel Map No. 11004, Stormwater Management Plan, August 5, 2019.

⁵² Michelle Kim, *op. cit*.

under the tree canopy of trees with an average diameter at breast height (DBH) of 12 inches or more. These credits may not be available if the street trees need to be removed to accommodate a new sidewalk, in which case, the amount of bio-treatment areas could require adjustment. However, the proposed bio-treatment areas already exceed the required amount by 1,289 square feet, so it is likely additional areas beyond that currently shown on the project plans would not be necessary.

The bio-retention facilities would be within planter boxes placed throughout the third-floor courtyards in buildings D and E. and in three planters at the Second Street entrance to the ground-floor courtyard separating buildings D and E. They would consist of 18 inches of bio-treatment soil mix underlain by 12 inches of Class II permeable rock. A 4-inch-diameter perforated pipe would run along the bottom of the drain rock layer to collect filtered rainwater and discharge it to the storm drains serving the site.

Discharge from all of the bio-retention facilities would be directed into the detention vault, which would be a square subterranean concrete vault measuring 32 feet by 32 feet, with a depth of 4 feet with approximately 1 foot of cover, providing storage capacity of 4,000 cubic feet of water, while also allowing some infiltration of detained water into the underlying soils. It would be located below the ground-floor courtyard adjacent to 2nd Street. Water from the detention vault would be discharged into the existing storm drain within E Street. The vault detention capacity will be subject to confirmation and approval by the Public Works Department.⁵³

The bio-retention facilities have been designed with a flow-based (versus volume-based) hydraulic sizing method based on a rainfall intensity of 0.2 inches per hour, which is the approach recommended in the *C.3 Stormwater Technical Guidance* manual prepared by ACCWP. Known as the "4-percent method," it is based on an infiltration rate through the biotreatment soil medium of 5 inches per hour (0.2 inches/hour divided by 5 inches/hour = 0.04).

The applicant has designed a bio-retention plan intended to comply with the Provision C.3 requirements, which will be subject to confirmation by the Union City Public Works Department. Implementation of the following mitigation measures would ensure the project's compliance with the Alameda Countywide Clean Water Program and would ensure that the project does not violate Waste Discharge Requirements associated with the ACCWP's NPDES municipal stormwater permit:

Mitigation Measure WQ-4: Prior to issuance of a grading permit, the project applicant shall prepare a C.3 Stormwater Control Plan in accordance with current construction and post-construction requirements specified by State Water Resource Control Board (SWRCB) Order No. 2009-0009-DWQ and the post-construction requirements specified by National Pollutant Discharge Elimination System (NPDES) Order No. R2-2015-0049 and the Alameda Countywide Clean Water Program (ACCWP). The C.3 Stormwater Control Plan shall be developed in accordance with the provisions of ACCWP's C.3 Stormwater Technical Guidance manual (Version 6, October 31, 2017, with May 2019 Errata). Additionally, as required by the C.3 Provisions, grading permit applications must be accompanied by a Stormwater Control Plan, for review and approval by the City Engineer, which specifies the treatment measures and appropriate source control and site design features that will be incorporated into project design and construction to reduce the pollutant load in stormwater discharges and manage runoff flows.

⁵³ Farooq M. Azim, P.E., Acting City Engineer, Union City Public Works Department, personal communication, September 5, 2019.

The C.3 Stormwater Control Plan shall be submitted for review and approval by the Union City Clean Water Program (UCCWP). The plan and a Stormwater Requirements Checklist shall be prepared by a gualified civil engineer or landscape architect. The applicant shall demonstrate to UCCWP via drawings and engineering calculations that the proposed project includes site design features sufficient to capture and treat on site all stormwater runoff from the project site, in compliance with Provision C.3 of the ACCWP. Landscape features shall be used in lieu of structural features to the degree feasible. As part of compliance with the ACCWP, the applicant shall execute and implement an operations and maintenance (O&M) agreement with the City of Union City to provide for the maintenance of all onsite stormwater treatment features and devices in perpetuity, including specification of how the maintenance will be financed. The requirements stipulated in the O&M agreement shall apply to current and all future owners of the project. Prior to issuance of the certificate of occupancy, the applicant shall provide proof of recording this agreement from the Alameda County Clerk Recorder's Office. The applicant shall submit to the Union City Public Works Department annual certificates of compliance with the operations and maintenance requirements stipulated in the O&M agreement.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) S ii s g	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?				X

Explanation: The project site is underlain by the Niles Cone Basin groundwater aquifer, which extends across the larger tri-cities area encompassing Union City, Fremont, and Newark.⁵⁴ The Niles Cone Basin is an alluvial aquifer system of unconsolidated gravel, silt, and clay that is separated into different levels by the Hayward Fault. The basin's deepest water-bearing units extend to 400 to 500 feet or more below the ground surface (bgs). Water quality in some of the sub-basins below the Hayward Fault is degraded due to saltwater intrusion from San Francisco Bay. The Alameda County Water District (ACWD) has operated an Aquifer Reclamation Program to remove and control the movement of intruded saline water since 1974. The program has succeeded in preventing further saltwater intrusion and flushing saltwater from one of the sub-basins, the Newark Aquifer.

Groundwater supplies in the project area are managed by ACWD, which is the domestic water supplier for the cities of Union City, Fremont, and Newark. Following the passage of the Sustainable Groundwater Management Act in 2014, the first legislation to regulate groundwater extraction in California, ACWD was designated by the State as the exclusive local agency to monitor and manage the groundwater in the Niles Cone Basin. The District has developed and implemented eight major groundwater management programs to ensure a reliable long-term supply of high-quality groundwater

⁵⁴County of Alameda Department of Environmental Health, Local Agency Management Program for Onsite Wastewater Treatment Systems, Alameda County, California, Figure 2.2: Major Groundwater Basins, Alameda County LAMP, April 25, 2016.

to meet the present and future needs of its municipal, industrial, recreational, and agricultural customers. The programs include:

- Water Supply Management
- Groundwater Replenishment
- Watershed Protection and Monitoring
- Basin Monitoring
- Wellhead Protection Program
- Aquifer Reclamation Program
- Groundwater Protection Program
- Well Ordinance Administration

ACWD derives 37 percent of its total water supply from groundwater in normal years; over 60 percent comes from groundwater in dry years. Although the District does not distribute water pumped from private wells, it tracks extraction from private wells as part of its groundwater management planning. In Fiscal Year (FY) 2017/2018 ACWD pumped 21,100 acre-feet (AF) from the basin, which received 15,000 AF in recharge from rainfall, applied water, and recharge at the District's groundwater recharge facilities at Quarry Lakes Regional Recreation Area and adjacent areas.⁵⁵ In general, extraction occurs during dry years and recharge and recovery occur during wet years. The Niles Cone Groundwater Basin is sustainably managed by the District and is not an adjudicated basin, nor is it considered to be in an "overdraft" or "potentially overdraft" condition by the California Department of Water Resources (DWR).⁵⁶ ACWD has had a Groundwater Management Policy in place since 1989 that outlines the District's protection and management oversight of the Niles Cone Groundwater Basin via the groundwater management programs listed above.

Although the majority of groundwater recharge of the Niles Cone Groundwater Basin occurs via stormwater runoff to the ACWD's recharge facilities at the Quarry Lakes in Fremont, a portion does come via direct infiltration. Because the project site currently has no development, the only existing constraint to infiltration is from the strip of pavement crossing the southern portion of the site. However, the high clay content soils on the site limit the potential for infiltration. Development of the project would cover about 12.7 percent of the 1.65-acre site with impervious surfaces, which would incrementally reduce the potential for groundwater recharge at the site. As previously noted, the proposed stormwater detention vault would allow infiltration of detained water into the underlying soils, somewhat offsetting the reduction in groundwater recharge that would be caused by the project. However, given the relatively small role infiltration plays overall in recharging the groundwater table. the existing constraint to infiltration due to the site soils, and the miniscule project site area relative to the total groundwater basin, there is no potential for the proposed project to interfere substantially with groundwater recharge such that there would be a net deficit in aguifer volume or a lowering of the local groundwater table level. No groundwater would be pumped at the project site, so there is no potential for the project to substantially deplete groundwater supplies. While the project would incrementally increase consumption of domestic water provided by the ACWD, a portion of which is derived from groundwater supplies, the incremental increase would be an infinitesimally small percentage of total water demand in the District. Therefore, the project would have a *less-than-significant impact* on groundwater supplies.

⁵⁵Alameda County Water District, *Survey Report on Groundwater Conditions*, Table 3: Annual Overdraft, February 2019.

⁵⁶ Alameda County Water District, *Urban Water Management Plan 2015–2020*, Chapter 4: Groundwater, adopted June 9, 2016.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>c)</i>	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river of through the addition of impervious surfaces, in a manner which would:				
	i) Result in substantial erosion or siltation on- or off-site?				X

<u>Explanation</u>: Construction-related impacts relating to erosion or siltation both on and off-site are discussed in Section X-a. The proposed project would not alter the course of a stream or river, but it would increase the amount of impervious surfaces on the site, which would result in changes to existing surface drainage patterns. Absent appropriate controls, the additional impervious surface area would result in an increased rate and volume of stormwater discharge from the site, which could increase erosion and siltation in Alameda Creek. However, with implementation of the stormwater detention and treatment features discussed in Section X-a, above, the project would not cause substantial erosion or siltation on or off the site.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?				\mathbf{X}

Explanation: As discussed in Section X-a, above, the project would be required to comply with hydromodification management requirements that are part of Provision C.3 as a condition of obtaining coverage under the MRP. The bioretention facilities and subterranean detention vault that are proposed to meet the Provision C.3 requirements would ensure that neither the volume nor the rate of peak stormwater runoff from the site would increase in comparison to existing conditions. Therefore, there is no potential for storm runoff from the site to increase the potential for flooding on or off the site.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
iii) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			X	

<u>Explanation</u>: Stormwater runoff from the project site flows into the City's stormwater collection system located under public streets. In the project vicinity, it is subsequently discharged into Alameda Creek. Since the project would be required to provide on-site capture, treatment, and detention of all stormwater runoff from the site, the amount and rate of stormwater discharged from the site would not increase in comparison to existing conditions, and therefore would not have the potential to exceed the capacity of the existing storm drainage facilities. The on-site treatment of stormwater would ensure that water subsequently discharged from the site would not carry substantial amounts of pollutants. The project would therefore have a *less-than-significant impact* on the stormwater drainage system.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				\boxtimes

<u>Explanation</u>: The project site is not located within a flood hazard area, as mapped by the Federal Emergency Management Agency (FEMA).⁵⁷ Given its distance from the San Francisco Bay, it is not located within a potential tsunami runup area.⁵⁸ There is no potential for inundation of the site due to seiche, which is a free or standing wave oscillation(s) of the surface of water in an enclosed or semienclosed basin that may be initiated by an earthquake, because there is no surface water body near the project site. Because there is virtually no potential for the site to become inundated by flooding, tsunami, or seiche, there is no risk of pollutants to be released from the project site into flood waters.

⁵⁷ Federal Emergency Management Agency, Flood Insurance Rate Map, Alameda County, California and Incorporated Areas, Map Number 03001C0432G, Effective Date August 3, 2009.

⁵⁸ Association of Bay Area Governments, Resilience Program, Tsunami Inundation Area for Emergency Planning [interactive map], Accessed August 17, 2019 at: <u>http://gis.abag.ca.gov/website/Hazards/?hlyr=tsunami</u>.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

Explanation:

Water Quality Control Plan

The *Water Quality Control Plan for the San Francisco Bay Basin* (Basin Plan) is the master water quality control planning document adopted by the San Francisco Bay Regional Water Quality Control Board (RWQCB) in accordance with the Porter-Cologne Water Quality Control Act of 1969.⁵⁹ It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan has been adopted and approved by the State Water Resources Control Board, U.S. Environmental Protection Agency (USEPA), and the Office of Administrative Law, where required.

Among other provisions, the Basin Plan establishes conditions (discharge prohibitions) that must be met at all times. These include restrictions on discharge of wastewater, wastewater sludge, biocides (i.e., pesticides, herbicides, copper, etc.), oils, and a wide range of solid materials, including silt, sand, and clay. Point source discharges must be made in accordance with waste discharge requirements (WDRs) established by the RWQCB in accordance with the NPDES program described in Section X-a.

The Basin Plan is a large and complex document with many specific provisions, policies, and implementation plans all with the overarching goal of protecting water quality for beneficial uses, such as:

- agricultural, municipal, domestic, and industrial supply;
- marine, estuarine, and warm and cold freshwater wildlife habitats;
- commercial and sport fishing;
- navigation;
- preservation of rare and endangered species;
- contact and non-contact water recreation;
- shellfish harvesting;
- fish spawning;
- and more.

Many of the programs and other provisions described in the Basin Plan are not applicable to the proposed project. However, the proposed project would be required to comply with the NPDES regulations pertaining to construction and operation of new development sites, described in detail in

⁵⁹ California Regional Water Quality Control Board, San Francisco Bay Region, San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan), May 4, 2017.

Section X-a, above. By complying with the applicable provisions of these regulations, potential water pollutants generated by construction and operation of the project would be minimized and would not adversely affect surface or groundwater quality. Therefore, the project would not conflict with or obstruct implementation of the applicable water quality control plan. This would be a *less-than-significant* impact.

Sustainable Groundwater Management Plan

Despite California's heavy reliance on groundwater, the extraction of groundwater was never regulated until the 2014 passage of a package of bills that collectively formed the Sustainable Groundwater Management Act (SGMA). Senate Bill (SB) 1168, Assembly Bill (AB) 1739, and SB 1319 (which amended AB 1739) established a comprehensive Statewide groundwater management program with the primary goal of achieving sustainable groundwater basins over the next 20 years. Improved groundwater management is intended to provide a water supply buffer during periods of drought.

Rather than regulating groundwater at the State level, the SGMA allocates responsibility for local management of groundwater basins. The basins are to be managed by Groundwater Sustainability Agencies (GSAs), which can be formed by any local agency or coordinated group of agencies for purpose of complying with the SGMA. If no agency is formed, the county is presumed to be the local GSA unless the county explicitly opts out. In some cases, the legislation lists new special districts, which have exclusive authority for managing groundwater within their jurisdictional boundaries.

GSAs have authority to acquire land and water for purposes of recharging the groundwater basin and storing and transporting water. The GSAs must submit annual reports to the California Department of Water Resources (DWR), listing groundwater elevation data, amount of groundwater storage, use of surface water for groundwater recharge (or as water supply), and total use of water within the GSA's boundaries.

The DWR was required by prior legislation to rank the priority of each of the State's 515 groundwater basins and subbasins as either high, medium, low, or very low priority by January 31, 2015. These rankings were made in accordance with the California Statewide Groundwater Elevation Monitoring (CASGEM) program. The CASGEM program considers such factors as the number of public wells in the basin, population served, acreage of land above the basin, reliance on groundwater, history of overdrafting, occurrence of subsidence, degradation in water quality, and other factors.

The SGMA requires Groundwater Sustainability Agencies (GSAs) to form in the State's high- and medium-priority basins and subbasins by June 30, 2017. For groundwater basins designed as medium or high priority, the SGMA requires the responsible GSA to prepare and adopt a Groundwater Sustainability Plan (GSP). Under certain conditions, including where a GSA has performed an analysis that demonstrates the groundwater basin under its purview has been operated within its sustainable yield over a period of at least 10 years, the GSA may prepare an Alternative to a GSP. The GSPs or Alternative GSPs must encompass an entire basin or subbasin and must demonstrate that the basin can achieve sustainable groundwater management within 20 years of adoption of the plan.

The Niles Cone Basin groundwater aquifer that underlies the City of Union City is designated by DWR as a medium-priority basin.⁶⁰ The Alameda County Water District (ACWD) has been designated as the exclusive GSA for the Niles Cone groundwater basin.⁶¹ Since the ACWD has completed an analysis of basin conditions that demonstrates that the Niles Cone Subbasin 2-09.01 has operated within its sustainable yield over a period of 10 years, on December 8, 2016, ACWD's Board of Directors

⁶⁰ California Department of Water Resources, Public Affairs Office, Statewide Map of SGMA 2019 Basin Prioritization Results, April 30, 2019.

⁶¹California Department of Water Resources, Groundwater Sustainability Agencies, GSA Map Viewer [interactive map], Accessed August 18, 2019 at: <u>https://sgma.water.ca.gov/webgis/index.jsp?appid=gasmaster&rz=true</u>.

adopted Resolution No. 16-075 authorizing staff to submit an Alternative to a Groundwater Sustainability Plan for Niles Cone 2-09.01. ACWD's Alternative submittal will include an explanation of how the Alternative is functionally equivalent to elements of a Groundwater Sustainability Plan and achieves the objectives of SGMA.

Since the ACWD has not yet adopted an Alternative GSP, there is no potential for the proposed project to obstruct the implementation of an applicable GSP. Furthermore, as discussed in Section X-b, no groundwater would be pumped at the project site, and development of the project would have a negligible effect on groundwater recharge at the site. Consequently, there is no potential for the project to substantially interfere with the management of groundwater supplies. This would be a *less-thansignificant* impact.

XI. LAND USE AND PLANNING — Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?				X

<u>Explanation</u>: The proposed project would develop a vacant city block defined by established streets along each side of the block. The project would not block or interrupt access on any of these streets. The project would be integrated into the existing community, but would not divide the community in any way.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				X

Explanation: The southern end of the site has a General Plan land use designation of PI (Private Institutional) and the remainder of the site has a designation of CR (Retail Commercial). However, the proposed project includes a request for a General Plan Amendment to re-designate the property from CR and PI to CMU (Corridor Mixed-use Commercial). The CMU designation is a new land use category in the proposed 2040 General Plan that has not yet been adopted. The designation is intended to allow for the construction of commercial uses and mixed-use higher-density residential development that will support the commercial uses and create vibrant places for people to live, work, shop, and play. Ground floor commercial is required in mixed-use buildings along arterials. The CMU designation will allow residential density of 17 to 45 dwelling units per acre. The proposed General Plan amendment also includes the addition of the new CMU designation to the 2002 General Plan in the event the 2040 General Plan is not adopted prior to the project being reviewed by the decision makers.

Because the 2040 General Plan has not yet been adopted, the existing 2002 General Plan policies were reviewed to identify potential conflicts with policies that were adopted for purposes of avoiding or mitigation an environmental effect. No conflicts with applicable policies were identified in any of the General Plan elements, while numerous policies were identified that the project would support or contribute to their implementation. In particular, the project would support Land Use Element Policy LU-A.1.2, which states that the City shall promote infill development and reuse of underutilized parcels, consistent with maintaining or enhancing the positive qualities of the surrounding neighborhoods.

The southern end of the site is zoned PI (Private Institutional) and the rest of the site is zoned CC (Community Commercial). The applicant is requesting a Zoning Text Amendment to add a new chapter to the Zoning Ordinance entitled CMU (Corridor Mixed-use Commercial), which will include developments standards applicable to the district. Consequently, the existing development regulations for PI and CC districts were not reviewed. It is assumed that the project will conform to the developments standards that will be codified with the new CMU district.

Based on information available at the time of this environmental review, no conflicts were identified with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Accordingly, the project would have **no impact** related to such conflicts.

XII. MINERAL RESOURCES — Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?				X

Explanation: The project site and all lands in the vicinity of the site are classified as Mineral Resource Zone (MRZ) category MRZ-1 by the California Department of Conservation's Division of Mines and Geology (DMG).⁶² The MRZ-1 designation is assigned to areas where adequate information is available to make a determination that no significant mineral deposits are present, or where it is judged by DMG that there is little likelihood that they are present. It can therefore be assumed that mineral resources that would be of value to the region and the residents of the State are absent from the site. In addition, the site is located in a developed urbanized area, where extraction of minerals from the site would be impractical and highly disruptive to surrounding established land uses. This is reinforced by a statement in the DMG report published with the MRZ maps for the Bay Area that mineral lands located within areas that have already been urbanized are not considered viable for extraction, and are deemed incompatible.⁶³ Therefore, the project would have **no impact** on the availability of mineral resources.

⁶² California Department of Conservation, Division of Mines and Geology, Revised Generalized Mineral Land Classification Map, Aggregate Resources Only, South San Francisco Bay Production-Consumption Region, Newark Quadrangle [map] (Plate 3 of 29), 1996.

⁶³ California Department of Conservation, Division of Mines and Geology, Update of Mineral Land Classification: Aggregate Materials in the South San Francisco Bay Production-Consumption Region, Concepts Used in Identifying Available Aggregate Resources (page 7), 1996.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Result in the loss of availability of a locally- important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				\boxtimes

Explanation: No locally significant mineral resources are designated in the City's General Plan. As noted above, the proposed project would not have an adverse effect on the availability of significant mineral resources.

XIII. NOISE — Would the project result in:

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		

Explanation:

Noise Descriptors

Similar to most jurisdictions, Union City's regulation of noise is based on commonly-employed noise parameters that are based on the fundamental metric of a decibel (dB), which is a unit of sound energy intensity caused by rapid fluctuation of air pressure as sound waves travel outward from a source. Decibels are logarithmic units that compare the wide range of sound intensities to which the human ear is sensitive, with 0 dB corresponding roughly to the threshold of hearing.

A frequency weighting measure, which simulates human perception, is commonly used to describe noise environments and to assess impacts on noise-sensitive areas. A-weighting of sound levels best reflects the human ear's reduced sensitivity to low and extremely high frequencies, and correlates well with human perceptions of the annoying aspects of noise. An A-weighted decibel (dBA) is a decibel corrected for the variation in frequency response to the typical human ear at commonly encountered noise levels. The dBA scale is cited in most noise criteria, including Union City's General Plan and Municipal Code standards.

Several time-averaged scales represent noise environments and consequences of human activities. The most commonly used noise descriptors are the equivalent A-weighted sound level over a given

time period (L_{eq}) ;⁶⁴ average day-night 24-hour average sound level $(L_{dn})^{65}$ with a nighttime increase of 10 dBA to account for sensitivity to noise during the nighttime; and community noise equivalent level (CNEL),⁶⁶ also a 24-hour average that includes both an evening and a nighttime weighting. Peak noise levels, such as train pass-bys or operation of heavy-duty construction equipment, are often described as the highest instantaneous noise measurement during any measurement period (L_{max}).

Noise levels are generally considered low when ambient levels are below 45 dBA, moderate in the 45-60 dBA range, and high above 60 dBA. Outdoor day/night sound levels (Ldn) vary over 50 dBA, depending on the specific type of land use. The Ldn noise levels average approximately 35 dBA in wilderness areas, 40 to 50 dBA in small towns or wooded residential areas, 75 dBA in major metropolis downtown areas, and 85 dBA near major freeways and airports. Although people often accept the higher levels associated with very noisy urban residential and residential-commercial zones, they nevertheless are considered to be adverse levels of noise with respect to public health.

Existing Noise Levels

Due to its location adjacent to a busy divided highway (State Route 238/Mission Boulevard) that is six lanes wide between Whipple Road and Decoto Road (i.e., along the site frontage), existing ambient noise levels at the site are high. To accurately characterize existing noise levels, short-term (10-minute) noise measurements were conducted by RCH Group at six locations distributed across the project site, including each corner and at the mid-point of the Mission Boulevard and 2nd Street frontages (see Figure NOI-1). In addition, a long-term (72-hour) measurement was taken from near the center of the site (Site 1), approximately 50 feet from Mission Boulevard. The results of the noise measurements are presented in Table NOI-1.

As shown in the table, daytime noise levels along the Mission Boulevard frontage range from 53 to 70 dBA L_{eq} . These short-term sound levels vary, increasing with passing of loud trucks or motorcycles, large concentrations of traffic, passing aircraft, back-up beepers from service vehicles, barking dogs, playing children, etc. These daytime L_{eq} levels are expected to be higher than the 24-hour CNEL due to the higher traffic and other activity levels during the daytime hours. This was confirmed by a three-day measurement period at Site 1, during which the CNEL was measured for each 24-hour period at 66, 67, and 68 dBA, respectively.

Noise Exposure

The proposed multi-family residential development would be considered a noise-sensitive land use, as defined by Policy HS-C.1.1 of the Health and Safety Element of the 2002 Union City General Plan. Under the proposed 2040 General Plan, which may be adopted prior to approval of the proposed project, Safety Policy S-8.1 also defines multi-family residential development as a noise-sensitive land use. Under Policy HS-C.1.2 and Table HS-2 (Policy S-8.2 and Table S-8.1, in the case of the proposed 2040 General Plan), the General Plan establishes acceptable limits of noise for this and other land use types. For multiple-family residential uses, a CNEL up to 60 dBA is a "normally acceptable" noise environment (this is increased to 65 dBA under the proposed General Plan), assuming the buildings

⁶⁴ The Equivalent Sound Level (L_{eq}) is a single value of a constant sound level for the same measurement period duration, which has sound energy equal to the time-varying sound energy in the measurement period.

⁶⁵L_{dn} is the day-night average sound level that is equal to the 24-hour A-weighted equivalent sound level with a tendecibel penalty applied to night between 10:00 p.m. and 7:00 a.m.

⁶⁶ CNEL is the average A-weighted noise level during a 24-hour day, obtained by addition of 5 decibels in the evening from 7:00 to 10:00 p.m., and an addition of a 10-decibel penalty in the night between 10:00 p.m. and 7:00 a.m.



Figure NOI-1

Noise Measurement Locations

Source: RCH Group

involved are of normal, conventional construction, without any special noise insulation. CNEL noise levels between 61 and 70 dBA (65 to 70 dBA under the proposed General Plan) are considered "conditionally acceptable," whereby the new development should be undertaken only after a detailed noise analysis that identifies necessary noise insulation features to meet acceptable indoor and outdoor noise levels. Ambient noise levels of 71 to 75 dBA are considered "normally unacceptable," though development may be allowed with sufficient noise reduction. Noise levels above 75 dBA are unacceptable, and new construction is not allowed. (The "normally acceptable" and "unacceptable" noise limits would remain unchanged under the proposed General Plan.) For projects in areas where existing ambient noise levels exceed the applicable "normally acceptable" level both general plans include policies requiring a quantified noise assessment by a qualified acoustical engineer.

Table NOI-1

Location	Time Period- Thursday July 11, 2019	Noise Levels (dB)	Noise Sources
Site 1: 85 feet west of Mission Blvd within site	July 12, 12:00 a.m. through July 14, 11:59 p.m. 2019	Hourly L _{eq} 's ranged from: 53-70	Unattended noise measurements do not specifically identify noise
vicinity	Friday – Sunday 72-hour measurement	CNELs: 66, 67, 68	sources. See data graphs.
Site 1: 85 feet west of Mission Blvd within site vicinity	1:25 - 1:35 p.m.	5-min L _{eq} 's: 62, 62	Periods of flowing traffic 64 dB, 66 dB, 67 dB, motorcycle 69 dB, loud car 72 dB
Site 2: West boundary pointed towards western residences, 25 feet east of Second St. center line	1:13 -1:23 p.m.	5-min L _{eq} 's: 57, 57	Children playing in the background 52 dB, cars passing 70-74 dB
Site 3: Southwest corner of Second St & E St, 30 feet east of intersection	1:37 -1:47 p.m.	5-min L _{eq} 's: 58, 60	Dogs barking 56 dB, passing cars 68 dB, nearby beeping from service vehicle 70 dB
Site 4: Southeast corner of Mission Blvd & E St, 65 west of Mission Blvd centerline	1:49 -1:59 p.m.	5-min L _{eq} 's: 65, 67	Very busy road, traffic flows from 70-74 dB, garbage truck 75 dB, motorcycle 77 dB, overhead plane 73 dB
Site 5: Northeast corner of Mission Blvd & D St, 60 feet west of Mission Blvd centerline	2:01 – 2:11 p.m.	5-min L _{eq} 's: 67, 68	Busy traffic measured at 69-74 dB, large truck 76 dB, garbage truck 77 dB
Site 6: Northwest corner of Second & D St, 35 feet east of intersection	2:12 -2:22 p.m.	5-min L _{eq} 's: 54, 59	Children in background 55 dB, cars passing by 60 dB, 68 dB, 69 dB

Short- and Long-Term Noise Measurements at the Project Site

Source: RCH Group, 2019

Similar to Union City's noise standards, the State of California also requires preparation of an acoustical analysis of residential projects proposed in an area with exterior noise levels greater than 60 dBA CNEL. The analysis must demonstrate the manner in which dwelling units have been designed to meet the interior standard established in Title 24 of the California Code of Regulations. The Title 24 noise insulation standards set an interior limit of 45 dBA CNEL in any habitable room with all doors and windows closed.

As a result of a December 2015 ruling by the California Supreme Court,⁶⁷ with certain exceptions, CEQA no longer considers impacts of the environment (such as elevated levels of existing ambient noise) on a project to be a significant impact unless the project would exacerbate existing environmental hazards. However, if a project would conflict with a policy, ordinance, or regulation adopted by a public agency for the purpose of avoiding or mitigating an environmental effect, such a conflict would still represent a significant impact under CEQA.

The noise standards established in both Union City's current and proposed General Plans (as well as the State standards) were adopted to avoid exposure of residents to excessive noise levels, and can therefore be seen as a policy adopted to avoid an environmental effect. Consequently, any conflict with the City's noise standards is considered a significant environmental impact in this analysis. Because the proposed multi-family residential project would be exposed to ambient noise levels defined as "conditionally acceptable," absent the detailed noise analysis required for projects located in a conditionally acceptable noise environment, the project would conflict with General Plan Policy HS-C.1.2 (or Policy S-8.4 of the proposed General Plan, if it is adopted prior to project approval), which would be a **potentially significant impact**. Implementation of the following mitigation measure would reduce the impact to a less-than-significant level:

Mitigation Measure NOI-1: Prior to the issuance of a building permit, the City shall retain the services of a qualified noise consultant or acoustical engineer (to be paid for by the applicant) to conduct a detailed noise analysis to determine any special noise insulation features necessary to ensure that interior noise levels in the proposed residential units would not exceed 45 dBA CNEL in any habitable room with all doors and windows closed. The noise analysis should stipulate required Sound Transmission Class (STC) ratings for window, door, wall, and floor/ceiling assemblies to be employed in the project in order to achieve the required level of sound insulation. The acoustical design recommendations shall be incorporated into project plans and implemented during project construction.

Operational Noise Impacts

Union City also regulates noise with its Community Noise Ordinance, promulgated at Municipal Code Chapter 9.40. The ordinance declares it to be the policy of the City that the peace, health, safety and welfare of the citizens of Union City require protection from excessive, unnecessary, and unreasonable noises from any and all sources in the community. The ordinance empowers the Union City Planning Department to investigate complaints of noise disturbance and noise sources that meet the criteria for noise disturbance may be referred to the Planning Commission and be required to implement a noise reduction plan. Municipal Code Section 9.40.041 prohibits the production of sound by any machine, animal, or device on a residential property more than 10 dBA above the local ambient noise level at any point outside of the property.

⁶⁷ California Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal.4th 369.

Operation of the project would generate a negligible amount of noise, primarily by passenger vehicles of the residents and their visitors, delivery trucks, and maintenance/service vehicles arriving to and departing from the single-family residences. These noise sources are common to all residential development, and are not considered noise disturbances subject to regulation.

The project would not have the potential to substantially increase the existing ambient noise levels in the project vicinity. With vehicular traffic on Mission Boulevard constituting the primary source of ambient noise near the project, traffic volumes would need to double to produce a 3-dBA increase in the noise generated along the roadway. (A sound increase of 3 dBA is the lowest threshold at which most people can perceive an increase in the sound level.) As discussed in more detail in Section XVII, Transportation, the incremental traffic generated by the project would represent a fraction of the existing traffic on Mission Boulevard and would not come close to doubling the traffic on this roadway. Therefore, project-generated traffic would not cause a perceptible increase in ambient noise.

Based on the considerations discussed above, operation of the project would not have the potential to exceed noise limits established in the Union City General Plan or the City's Community Noise Ordinance. The proposed project would have a *less-than-significant operational noise impact*.

Construction Noise Impacts

Chapter 9.40 of the Municipal Code also regulates construction noise and limits construction activity to the hours of 8:00 a.m. to 8:00 p.m. daily except Saturday, when the hours are limited to between 9:00 a.m. and 8:00 p.m. On Sundays and holidays the hours are limited to between 10:00 a.m. and 6:00 p.m. In addition, at least one of the following limitations must be met: 1) no individual piece of equipment shall produce a maximum continuous sound level exceeding 83 dBA at a distance of 25 feet, or 2) the noise level at any point outside the property plane of the project shall not exceed 86 dBA.

The specific limitations on noise levels included in Chapter 9.40 represent a more rigorous approach to construction noise control than is exercised by most Bay Area jurisdictions, and compliance is therefore more difficult to achieve. Many types of heavy-duty construction equipment emit maximum sound levels in excess of 83 dBA at a distance of 25 feet. The majority of noise emitted from such equipment originates from their internal combustion engines—typically diesel-fueled—and is emitted during the air intake and exhaust cycles. Equipment that would be operated during project construction would include rubber-tired dozers, tractors, loaders, backhoes, graders, cranes, forklifts, generator sets, welders, cement and mortar mixers, pavers, rollers, and air compressors. Based on data provided by the Federal Highway Administration, this equipment would emit noise levels of 74 to 85 dBA at a distance of 50 feet.⁶⁸

Since noise from point sources attenuates at a rate of 6 dBA over hard surfaces and level ground with no obstructions, it can be inferred that at a distance of 25 feet, noise levels from equipment used during project construction would emit noise levels of 80 to 91 dBA, well in excess of the limit established in Municipal Code Chapter 9.40. Since the equipment would be operated adjacent to or in close proximity to the property line, some of the construction activities would also exceed the 86-dBA limit at the property line. This would be a **potentially significant impact**. However, since there are no noise-sensitive land uses adjacent to the site on Mission Boulevard, D Street, or E Street, only the residential development west of the site on 2nd Street would be affected. Implementation of the following mitigation would reduce the impact to a less-than-significant level:

⁶⁸U.S. Department of Transportation, Federal Highway Administration, *Construction Noise Handbook*, Roadway Construction Noise Model (RCNM) Inventory, Table 9.1: RCNM Default Noise Emission Reference Levels and Usage Factors, August 2006.

Mitigation Measure NOI-2: Prior to the initiation of site clearing and grading, the construction contractor shall erect a temporary solid 6-foot-tall plywood wall along the western edge of the project site along 2nd Street to deflect and contain noise generated by the operation of heavy construction equipment. The wall shall include returns at each end to extend along the D Street and E Street frontages for a minimum of 20 feet to minimize the potential for fugitive noise to propagate around the ends of the construction sound wall. A separate solid enclosure shall also be erected around stationary equipment such as a generator set or cement mixer. Since a grader is the noisiest piece of equipment that would be utilized during project construction and it would be employed during the earliest phases of construction, when operation of a grader commences, a qualified noise consultant shall be present to take offsite L_{max} noise measurements adjacent to the project site during full operation of the equipment to determine resulting noise levels adjacent to the property line. If noise levels exceed 86 dBA, the noise consultant shall identify additional measures to further attenuate the noise levels to no higher than 86 dBA Lmax. Such measures could include attaching an angled baffle along the top of the temporary sound wall, lining the interior side of the sound wall with straw bales, providing additional muffling of the grader engine(s), or using quieter equipment (newer equipment is generally quieter than older equipment). The project construction contractor shall implement all additional sound mitigation measures identified by the noise consultant. The plywood sound wall shall be kept in place at least until the completion of all site grading and excavation activities, or as recommended by the noise consultant.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b)	Generation of excessive groundborne vibration or groundborne noise levels?			X	

Explanation: While vibration generated by construction activity can cause annoyance to nearby receptors, operation of typical construction equipment that would be employed during development of the project is not associated with excessive levels of groundborne vibration or noise. Any vibration generated during project construction would be minimal, intermittent, and would occur only during the short-term grading period or other construction phases involving operation of heavy equipment. Furthermore, groundborne vibration falls off quickly with distance, and at a distance of 25 feet from the equipment, vibration caused by bulldozers and excavators has no potential to cause structural or non-structural damage to buildings. For example, operation of a large bulldozer produces a vibration level at 25 feet of 0.089 inches per second (in/sec) of peak particle velocity (PPV).⁶⁹ In comparison, a recommended exposure threshold for more vulnerable older and historic buildings is 0.5 in/sec PPV.⁷⁰ There are no historic buildings or buildings of any type within 25 feet of the project site, so there is no

⁶⁹ Federal Transit Administration (FTA), *Transit Noise and Vibration Impact Assessment Manual*, Table 7-4: Vibration Source Levels for Construction Equipment, FTA Report No. 0123, September 2018.

⁷⁰ California Department of Transportation (Caltrans), *Transportation and Construction Vibration Guidance* Manual, Table 14: Dowding Building Structure Vibration Criteria, September 2013.

potential for vibration from heavy equipment to cause structural or non-structural damage to buildings in the project vicinity. Temporary construction-related vibration could be noticeable to some people, but occupants of the nearby residences would not experience excessive groundborne vibration or groundborne noise during project construction activities. Following completion of construction, there would be no operational generation of vibration. This would be a **less-than-significant** impact.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X

Explanation: The nearest airport to the project site is Hayward Executive Airport, located 6 miles northwest of the site. Project occupants would not be exposed to excessive noise from operations at this airport. There would be **no impact** from airport noise.

XIV. POPULATION AND HOUSING — Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	

Explanation: The proposed project would directly induce population growth in Union City by creating 81 new affordable one-, two- and three-bedroom apartments, with the potential to draw new residents to Union City. Based on the 2010 U.S. Census, Union City has an average household size of 3.38 persons.⁷¹ Thus, the proposed project could theoretically increase the City's population by approximately 274 people. This is quite a conservative estimate, since only 28 of the apartments would be three-bedroom units, while 18 of them would be one-bedroom units and 35 of them would have two bedrooms. Most one-bedroom units would house single residents or, in some cases, couples. Even the two-bedroom units would be unlikely to be occupied by three or more people. For comparison purposes, if the resident population of all apartments was assumed to correspond to the number of bedrooms, the project would have a population of 170 residents. Nonetheless, for purposes of this analysis, the official average household size for Union City was assumed, resulting in a potential on-site population of 274 persons. While some project residents would be new residents to Union City

⁷¹United States Census Bureau, American FactFinder, Table DP-1: Profile of General Population and Housing Characteristics: 2010 Demographic Profile Data, accessed June 6, 2019 at: <u>https://factfinder.census.gov/faces/</u> <u>tableservices/jsf/pages/productview.xhtml?pid=DEC_10_AIAN_AIANDP1&prodType=table</u>.

and possibly to the greater Bay Area, a substantial portion of the residents would be existing residents of the City or region.

The majority of the site—1.24 acres out of a total of 1.65 acres—currently has a General Plan land use designation of Retail Commercial (CR), which has an allowable residential density of 30 dwelling units per acre (du/ac). This portion of the site would therefore allow a population of 125 people (1.24 X 30 X 3.38 = 125.74). (The allowable density would be increased to 45 du/ac under the proposed General Plan Amendment that is part of the project, allowing a population of 188 people.) Thus, the currently allowable residential population on this portion of the site under the existing standard is 125 persons. Regional population planning and forecasting undertaken by the Association of Bay Area Governments (ABAG) is based on the build-out densities established by the general plans of Bay Area cities, among other factors. Thus, a population of 125 people on the project site has previously been factored in to Union City and ABAG planning. Subtracting this number from the conservatively-estimated project population results in an increase of 149 people, many of whom could potentially be new residents to the City.

This would not represent substantial population growth. According to the most recent U.S. Census, Union City has a population of 69,516 people.⁷² The net increase in population of up to 149 people would represent a 0.21-percent increase in population. Applying the more realistic expected population increase of 45 people (170 people minus the 125 allowed under current density standards) would result in a population increase of 0.06 percent. A population increase of this magnitude would not represent substantial population growth. For comparison purposes, ABAG projects that Union City will have a population of 76,215 people by 2020, an increase of 6,699 people (about 10 percent) over the 2010 census.⁷³ The population is projected to grow another 4.7 percent between 2020 and 2040. Regionally, ABAG projects Bay Area population to grow from 7,591,490 people in 2015 to 9,652,950 by 2040, representing a 27-percent increase in the region's population, adding 2,061,460 residents.⁷⁴ The possible addition of 149 people generated by the project would be 0.007 percent of the projected regional growth by 2040.

Under State law, the California Department of Housing and Community Development (HCD) determines the total number of new homes the Bay Area needs to build—and how affordable those homes need to be—in order to meet the housing needs of people at all income levels. ABAG is responsible for distributing a share of the region's housing need to each city, town and county in the region, which is known as the Regional Housing Need Allocation, or RHNA. Each local government must then update the Housing Element of its general plan to show the locations where housing can be built and promulgate policies and strategies to meet the community's housing needs.

The most recent RHNA is for the 2015 to 2023 period. This RHNA indicates that Union City should add 1,106 new residential units to its housing stock by 2023, including 497 units affordable to low- and very-low-income households.⁷⁵ The proposed project would help the City achieve this goal for new housing.

It's also worth noting that the City is in the process of updating its general plan, and will be assigning a new land use designation for the site (Corridor Mixed-Use Commercial) that will allow a higher

⁷² United States Census Bureau, American FactFinder, Community Facts: Union City city, California, accessed July 12, 2019 at: <u>https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml</u>.

⁷³ Association of Bay Area Governments, Projections 2040 by Jurisdiction: Demography [table], May 1, 2019, accessed July 13, 2019 at: <u>https://data.bayareametro.gov/Demography/Projections-2040-by-Jurisdiction/grqz-amra</u>.

⁷⁴ Association of Bay Area Governments, *Projections 2040: A Companion to Plan Bay Area 2040*, Regional Summary [table], November 2018.

 ⁷⁵ Association of Bay Area Governments, *Regional Housing Need Plan: San Francisco Bay Area, 2015-2023**, Section IX: Final Regional Housing Need Allocation, 2015-2023, adopted July 18, 2013.

density of residential development on the site. The Draft Environmental Impact Report for the general plan update is currently out for public review, and adoption of the new general plan is expected about the time this Initial Study is circulated for public review. The new general plan states that infill development, such as the proposed project, and creative reuse and redevelopment of existing sites have emerged as the primary means for accommodating future growth in Union City. The City encourages this type of infill development to re-energize neighborhoods, improve existing urban areas, and jump-start economic activity. The proposed project can be seen to support these goals.

The proposed project would provide 81 affordable housing units in a region that faces a housing shortage crisis that has resulted in tens of thousands of homeless people living on the streets. The reality is that most if not all of the proposed housing units are likely to be occupied by people already living in the Bay Area. Thus, the project would likely actually induce very little, if any, population growth. For all of the foregoing considerations, implementation of the project would have a *less-than-significant impact* on population growth.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

Explanation: The project site is currently vacant and therefore no existing people or housing would be displaced as a result of the project.

XV. PUBLIC SERVICES - Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Fire protection?			\mathbf{X}	

Explanation: Fire protection services in Union City are provided by the Alameda County Fire Department (ACFD), which also provides emergency medical response. The Fire Department has 30 fire stations distributed throughout its service area of approximately 508 square miles, four of which are located within Union City. The Department has over 400 personnel and 100 Reserve Firefighters.⁷⁶ The fire station nearest to the project site is Station No. 33, located at 33942 7th Street, about one-half mile south of the site.

⁷⁶ Alameda County Fire Department, General Information, accessed August 18, 2019 at: <u>https://www.acgov.org/fire/about/index.htm</u>.

With a service population of about 394,000, the ACFD received 41,683 calls for service in fiscal year 2017-2018, 5,350 of which were within Union City. Of these Union City calls, 158 were structure fires and other fires, and 3,947 were for rescue or emergency medical response.⁷⁷ Systemwide, the ACFD received approximately one call for service for every 10 persons residing in its service area in fiscal year 2017-2018, including non-emergency calls, false alarms, and cancelled calls.

The City has recently conducted environmental review of a proposed General Plan update that has not yet been adopted at the time this Initial Study was being prepared. The proposed General Plan Amendment is consistent with the updates included in the proposed General Plan, which would assign a new land use designation to the project site of Corridor Mixed Use Commercial. This land use category allows a residential density of up to 45 dwelling units per acre (du/ac) along with ground-floor commercial uses at an allowed floor area ratio (FAR) of 0.5 to 1.5. The Draft Environmental Impact Report (Draft EIR) prepared for the proposed General Plan update evaluated demand for public services, including fire protection services, from buildout of the City at the maximum density allowed under the proposed General Plan. While the proposed project would have a residential density of 49 du/ac, which would be slightly higher than the allowed base density of 45 du/ac, the affordable housing project is eligible for a density bonus that would allow the proposed density. Under the State Density Bonus Law,⁷⁸ the project would be eligible for a 35-percent density bonus, allowing up to 61 du/ac.

The 2040 General Plan Draft EIR determined that buildout of the proposed 2040 General Plan could increase the City's population by up to 11,486 new residents.⁷⁹ The Draft EIR found that as future buildout occurs under the 2040 General Plan, the City will evaluate operations and deployment of services to efficiently use resources. Additionally, new development under buildout of the 2040 General Plan would be required to comply with all applicable federal, State, and local regulations governing the provision of fire protection services, including adequate fire access, fire flows, and number of hydrants. This includes the current California Fire Code, which contains project-specific requirements such as construction standards in new structures and remodels, road widths and configurations designed to accommodate the passage of fire trucks and engines, and requirements for sprinkler systems and minimum fire flow rates for water mains. The ACFD includes a Fire Prevention Branch that reviews building and facility plans through the City's development review and building permit processes. Fire Prevention personnel also inspect new and remodeled buildings and facilities to ensure that the structures meet State and local fire codes and standards.

The General Plan Draft EIR concluded that new development allowed under the proposed 2040 General Plan would have a less-than-significant impact on fire protection services because it would be required to comply with proposed policies requiring the availability of adequate public services. Specifically, the following proposed policies pertain to the provision of fire protection services:

Policy PF-1.1: Ensure Adequate Facilities and Services. The City shall ensure through the development review process that adequate public facilities and services are available to serve new development when required. The City shall not approve new development where existing facilities are inadequate to support the project unless the applicant can demonstrate that all necessary public facilities (including water service, sewer service, storm drainage, transportation, police and fire protection services) will be installed or adequately financed and maintained (through fees, special taxes, assessments, or other means).

⁷⁷ Alameda County Fire Department, Response and Activity Statistics, 2015-2016 Fiscal Year, accessed August 18, 2019 at: <u>http://www.acgov.org/fire/about/statistics.htm</u>.

⁷⁸ California Government Code, Sections 65915-65918.

⁷⁹ City of Union City, 2040 Union City General Plan Update Draft Environmental Impact Report, SCH #2018102057, Section 4.13, Public Services and Recreation, Impact PS-1, page 4.13.9, June 2019.

Policy PF-1.2: On-site and Off-site Infrastructure. The City shall require all new development and major modifications to existing development to construct necessary onsite and off-site infrastructure to serve the project in accordance with City standards.

Policy PF-1.3: Development Fair Share. The City shall require, to the extent legally possible, that new development or major modification to existing development pays the fair share cost of providing new public facilities and services and/or the cost for upgrading existing facilities.

Policy PF-10.3: Development Fees. The City shall require new development to build or fund its fair share of fire protection facilities, personnel, operations, and maintenance that, at minimum, maintains the above service standards.

Policy PF-10.5: Fire Department Review of Development Projects. The City shall engage fire personnel in the review of proposed development to identify necessary fire prevention and risk reduction measures.

While the City has not yet adopted these proposed policies, the current 2002 General Plan includes the following similar policies:

Policy PF-A.1.1: The City shall ensure through the development review process that adequate public facilities and services are available to serve new development when required. The City shall not approve new development where existing facilities are inadequate to support the project unless the applicant can demonstrate that all necessary public facilities (including water service, sewer service, storm drainage, transportation, police and fire protection services) will be installed or adequately financed and maintained (through fees, special taxes, assessments, or other means).

Policy PF-A.1.2: The City shall require all new development and major modifications to existing development to construct necessary on-site infrastructure to serve the project in accordance with City standards.

Policy PF-A.1.3: When reviewing applications for land use designation changes (i.e., zone change, General Plan Amendment, specific plan amendment), the City shall analyze the impacts of the proposed land use designation changes on all aspects of the infrastructure system within the city and require mitigation as legally appropriate. This shall include consultation with other service providers, such as the Alameda County Water District (ACWD) and the Union Sanitary District (USD), who have infrastructure within the city.

Policy PF-B.1.3: The City shall require, to the extent legally possible, that new development pays the cost of providing new public facilities and services and/or the cost for upgrading all existing facilities that are used. Exceptions may be made when new development generates significant public benefits (e.g., low-income housing, significant primary wage earner employment) and/or when alternative sources of funding can be identified to offset foregone revenues.

Policy PF-B.1.4: Where some services are provided by other public entities, such as the Alameda County Water District (ACWD) and the Union Sanitary District (USD), the City shall coordinate construction efforts with these agencies to provide appropriate levels of service and minimize redundant construction costs.

Policy PF-B.1.5: The City shall require all new development or major modifications to existing development, to construct or provide a fair share contribution toward the construction of any off-site improvements necessary to off-set project impacts and/or support the project.

The analysis presented in the proposed 2040 General Plan Draft EIR is applicable to the proposed project, which would be subject to either the current 2002 General Plan policies or the proposed 2040 General Plan policies if that document is adopted by the City prior to approval of the proposed MidPen Affordable Housing project, which is likely. As concluded in the Draft EIR, prior to approval of the

project, the City would ensure that fire protection facilities and services are adequate to serve the project. It is not anticipated that the incremental demand for fire protection services that would be generated by the project would require the construction of new or expanded fire protection facilities. Therefore, the proposed project would not have a *less-than-significant impact* on fire protection services.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Police protection?			X	

<u>Explanation</u>: Police protection services in Union City are provided by the Union City Police Department (UCPD), which operates out of headquarters located at City Hall (34009 Alvarado-Niles Road). The UCPD also operates from two sub-stations, one located at 32195 Union Landing Boulevard and the other located at 31880 Alvarado Boulevard.

The UCPD currently has a staff of 81 sworn police officers and more than 25 non-sworn personnel, with a staffing ratio of 1.11 sworn officers per 1,000 residents.⁸⁰ In 2018, the UCPD handled 1,923 calls for Part I crimes (i.e., homicide, rape, robbery, assault, burglary, larceny/theft, vehicle theft, and arson).⁸¹

As discussed in the preceding subsection, the City recently evaluated the impacts on public services that would occur from implementation of the proposed 2040 General Plan. Similar to the findings on fire protection services, the 2040 General Plan Draft EIR determined that the additional population in Union City that would result from buildout of the 2040 General Plan would increase the demand for police protection services. It found that the addition of 11,486 residents through the year 2040 would require the City to employ an additional 38 sworn officers in order to meet the minimum police service ratio recommended by the League of California Cities of 1.4 police officers per 1,000 residents. This increased staffing could require construction of a new police station, but it is currently unknown if, when, and where such a facility would be constructed. Identifying potential impacts from such future development would be speculative at this time, but separate environmental review would be performed pursuant to CEQA once an additional police station is needed, a location has been identified, and a development plan has been created. No new facility is currently required to accommodate additional demand from the proposed MidPen Affordable Housing project.

In addition to the proposed General Plan policies (i.e., policies PF-1.1, PF-1.2, PS-1.3, PF-10.3, and PF-10.5) listed in Section XV-a, above, the 2040 General Plan Draft EIR identified the following policies pertaining to police protection:

Policy PF-9.1: Police Staffing. The City shall strive to maintain Police Department staffing levels in line with population growth by using a baseline staffing benchmark based on the average staffing-to-population ratio of cities within Alameda County (sworn officers and civilian support staff).

⁸⁰City of Union City, 2040 Union City General Plan Update Draft Environmental Impact Report, SCH #2018102057, Section 4.13, Public Services and Recreation, June 2019.

⁸¹ Union City Police Department, Crimes Statistics, Five-Year Comparisons, accessed August 19, 2019 at: <u>https://www.unioncity.org/DocumentCenter/View/1838/Crime-Stats-2018?bidld=</u>.

Policy PF-9.2: Police Equipment and Facilities. The Police Department shall provide and maintain equipment, technologies, and facilities to meet modern standards of safety, dependability, and efficiency.

Policy PF-9.6: Coordinate Emergency Response Services with Local Agencies. The City should continue to coordinate and maintain mutual aid agreements with emergency response services with Alameda County, other jurisdictions within the county, special districts, service agencies, voluntary organizations, and state and federal agencies.

Policy PF-9.8: Provide Periodic Updates on Police Statistics. The City shall continue to provide updates to the City Council and the community regarding statistics such as crime rates, types of crime committed, and police accountability and use of force. Crime data shall also be mapped and made available to the public.

The proposed project would be consistent with policies pertaining to police protection services included in both the 2002 General Plan as well as the proposed 2040 General Plan. Therefore, similar to the above discussion on fire protection services, if the proposed 2040 General Plan has not been adopted by the time the City considers whether or not to adopt a Mitigated Negative Declaration for the proposed MidPen Affordable Housing project, compliance with the 2002 General Plan policies identified above would ensure that the proposed project's impact on police protection services would be **less than significant**, which would also be the case if the new General Plan has been adopted.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Schools?			X	

Explanation: Public school services in Union City are provided by the New Haven Unified School District (NHUSD), which also serves part of south Hayward. Within Union City, the enrollment during the 2017-2018 school year was 10,899 students, and has been declining in recent years, dropping by 1,670 students between 2011 and 2018.⁸² The District did not respond to requests for information regarding the current enrollments and capacities of schools that would be utilized by future project residents. However, pursuant to Senate Bill 50 (1998), with payment of applicable school impact fees, the State has determined that proposed development projects would have a less-than-significant impact on schools.⁸³ While the NHUSD did not respond to inquiries regarding the current school impact fees, the fees listed on its website, which were passed by resolution in April 2016, were \$4.60 per square foot for multi-family residential development and \$0.56 per square foot for commercial development.⁸⁴ The project would be required to pay these fees, which would ensure that the project would have a *less-than-significant impact* on schools.

⁸² City of Union City, op. cit.

⁸³ Senate Bill (SB 50), Leroy F. Greene School Facilities Act of 1998, Statutes 1998, Chapter 407.

⁸⁴New Haven Unified School District, Public Notice, Facility Needs Analysis/School Impact Fee, Resolution No. 050-1516, Accessed August 24, 2019 at: <u>https://www.mynhusd.org/apps/pages/index.jsp?uREC ID=411168&type=</u> <u>d&pREC_ID=963406</u>.
	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Parks?			X	

<u>Explanation</u>: There are 30 parks in Union City, encompassing a land area of approximately 136 acres. In the project vicinity, there is Decoto Plaza Park at 500 E Street, approximately 800 feet to the southwest, and Shorty Garcia Park, located at 33940 7th Street, about 0.35-mile southeast of the project site. Charles F. Kennedy Park, Union City's largest community park, is located about 0.75-mile to the south, at 1333 Decoto Road. In addition, Dry Creek Pioneer Regional Park, operated by the East Bay Regional Park District (EBRPD), is located about 0.3-mile north of the project site and another large regional park managed by the EBRPD, Garin Regional Park, is contiguous to the northwest with Dry Creek Pioneer Regional Park.

As discussed in Section XIV, Population and Housing, the proposed project would directly induce population growth in Union City by up to 274 persons, though for reasons previously discussed, this is a very conservative estimate, and the actual number would likely be well below this number. This increased population would generate additional demand for parks. The 2040 General Plan Draft EIR concluded that the impact on parks from future development under the 2040 General Plan would be mitigated by compliance with applicable General Plan policies and by the payment of the City's Park Facilities Fee assessed on new residential development that is not associated with a subdivision (which is subject to a park dedication requirement or payment of an in-lieu fee) pursuant to Chapter 18.105 of the Municipal Code. The primary proposed General Plan policy pertinent to the proposed project is:

Policy HQL-2.3: Park Impact Fees for Rental Housing. The City shall continue to collect Park Facilities Fees on new multifamily rental housing to offset the increase in park needs resulting from new residents. Park Facilities Fees shall only be used to build new parks.

Existing Public Facilities and Services Element Policy PF-A.1.1, listed above in Section XV-a would achieve the same function if the 2040 General Plan has not yet been adopted at the time the City adopts the MND for the proposed project. By complying with the applicable General Plan policy in effect at the time of project approval, the proposed project would have a *less-than-significant impact* on parks.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Other public facilities?			\mathbf{X}	

Explanation: The only other public facilities anticipated to be affected by the proposed project would be library facilities. The Union City Library, which is operated as part of the Alameda County Library, is located at 34007 Alvarado-Niles Road, in the Civic Center complex next to City Hall, approximately 1.2 miles south of the project site. With a large collection of books and other media, the library serves the residents of Union City, Fremont, Hayward, and Newark.

As previously discussed, implementation of the proposed project could result in population growth in Union City by up to 274 persons, though the increase would likely be considerably smaller. New residents would potentially increase the demand for library services and facilities in Union City. The

incremental increase in demand would not have the potential to require the construction of new or expanded library facilities, so the proposed project would have a *less-than-significant impact* on other public facilities.

XVI. RECREATION -

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			\boxtimes	

Explanation: The proposed project's potential impact on parks is discussed in Section XV-d, above.

Other recreational facilities in Union City include:

- 1. **Dan Oden Swim Complex**, 33917 Syracuse Avenue. This aquatics center provides swim lessons to a variety of age groups, from 3-year-old toddlers to teenagers and also hosts a youth swim team and water polo team.
- 2. Mark Green Sports Center, 31224 Union City Boulevard. This 12,000-square-foot gymnasium is a full fitness center offering adult sports programs, including basketball, volleyball, badminton, table tennis, and family fitness programming. The center also offers health and nutrition classes, personal training, small group specialty exercise programs, and fitness therapy.
- 3. **Ruggieri Senior Center**, 33997 Alvarado-Niles Road. In addition to exercise, cultural, educational, and recreational programs for seniors, this center offers a variety of martial arts classes and musical instrument instruction to children.
- 4. **Kennedy Youth Center**, 1333 Decoto Road. This youth center for teens aged 12 to 17 includes a computer lab, game room, art room, teen lounge, and outside lounge.
- 5. **Holly Community Center**, 31600 Alvarado Boulevard. This center offers a variety of martial arts classes to children, and also hosts a wide range of events including weddings, large banquets, meetings, and conferences.

Similar to parks, the additional population that would be generated by the proposed project would result in an incremental increase in demand for the services and programs provided by these recreational facilities. However, the City has General Plan policies in place (and similar policies in the proposed 2040 General Plan) that are intended to keep pace with new development in providing adequate recreational and other public facilities in order to ensure that adequate facility and service standards are achieved and maintained. These include the following policies from the Public Facilities and Services Element:

- **Policy PF-B.1.1:** The City shall review its Capital Facilities Fee (Residential Impact Fee) annually and adjust the fee as allowed by the Zoning Ordinance to provide adequate public facilities and services.
- **Policy PF-B.1.2:** The City will identify and pursue alternative funding sources, including grant funding, that can be used for capital improvement project construction, staffing, and ongoing maintenance of public improvements.
- **Policy PF-B.1.3:** The City shall require, to the extent legally possible, that new development pays the cost of providing new public facilities and services and/or the cost for upgrading all existing facilities that are used. Exceptions may be made when new development generates significant public benefits (e.g., low-income housing, significant primary wage earner employment) and/or when alternative sources of funding can be identified to offset foregone revenues.
- **Policy PF-B.1.5:** The City shall require all new development or major modifications to existing development, to construct or provide a fair share contribution toward the construction of any off-site improvements necessary to off-set project impacts and/or support the project.

Corresponding policies in the proposed 2040 General Plan include policies PF-1.1, PF-1.2, PF 1.3, PF-1.8, PF-1.9, PF-1.10, and others.

Additionally, these policies from the Youth, Family, Seniors, and Health Element provide further support for the provision of programs and facilities that serve youth, families, and seniors:

- **Policy YFSH-A.1.1:** The City shall continue to support the extensive recreation programs and facilities operated by the Leisure Services Department.
- **Policy YFSH-A.1.2:** The City shall continue to use public funds to assist community and health services provided by non-profit agencies.
- **Policy YFSH-A.1.3:** The City shall continue to support the extensive collaboration among the New Haven School District, the Leisure Services Department, and non-profit organizations in providing services to the community.
- **Policy YFSH-A.1.4:** The City shall continue to seek to establish new collaborations with other agencies and private non-profit organizations in order to meet the needs of youth, families, seniors, and the disabled.
- **Policy YFSH-B.2:** The City shall periodically update the Parks and Recreation Master Plan to evaluate the entertainment and recreational needs of children.
- **Policy YFSH-B.3:** The City shall work with community organizations in the community to expand children-oriented service to youth of Union City.
- **Policy YFSH-C.1.2:** The City shall periodically assess the city's entertainment/recreation resources for seniors to ensure that their needs are being met.
- **Policy YFSH-D.1.1:** The City shall continually adapt its programs to meet changing community needs and create new programs to serve youth (ages 6-12), teens (ages 13-19), and seniors.
- **Policy YFSH-D.1.8:** The City shall provide recreational and supervisory training to community and cultural groups to improve the quality and quantity of their recreation programs.

Similar corresponding policies in the proposed 2040 General Plan include Health & Quality of Life Element policies HQL-2.7, HQL-2.9, HQL-3.1, HQL-3.5, HQL-3.8, HQL-4.1, HQL-4.9, HQL-4.10, and HQL-4.12, and implementing programs HQL-2.C, HQL-4.B.

The preceding list is not an exhaustive list of General Plan policies in support of maintaining the City's recreational facilities and programs, but it demonstrates the City's commitment to this goal. The City's implementation of these policies would ensure that the increase in demand for recreation facilities in Union City would have a *less-than-significant impact* on recreation facilities.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?		X		

Explanation: The proposed project would include landscaped courtyards on the first and third levels that would provide recreational space for project residents to enjoy. The courtyard on the third level of Building E would include a tot play apparatus with safety play surfacing as well as a barbecue area with tables and chairs. The courtyard on the third level of Building D would include a synthetic turf area and tables and chairs. There would also be a community activity room in the ground floor of Building E and a Learning Center on the third level of Building D. Construction of these facilities would cause short-term environmental effects that have been addressed elsewhere in this Initial Study. Potential construction impacts on air quality, cultural resources, energy, geology and soils (erosion), greenhouse gases, water quality, and noise are addressed in the sections devoted to those environmental resources. While construction of the project that includes recreation facilities could result in a significant, adverse impact on the environment, with implementation of mitigation measures identified in some of the sections listed above, the impact would be reduced to *less than significant with mitigation*.

XVII. TRANSPORTATION/TRAFFIC — Would the project:

On December 28, 2019 the California Natural Resources Agency, Governor's Office of Planning and Research, adopted revised *CEQA Guidelines*, which included numerous changes to the Environmental Checklist presented in Appendix G of the *CEQA Guidelines*. While the Checklist questions in all other sections of this Initial Study reflect the recent revisions, the questions addressed in this section are based on the prior Environmental Checklist. The revised Transportation Checklist questions are based on a new traffic analysis methodology based on vehicle miles travelled (VMT) that does not become mandatory for CEQA lead agencies to employ until July 1, 2020. Until that time, lead agencies have the discretion to base traffic impact analysis on the new VMT methodology or on the intersection delay methodology that has been in use for many decades. The analysis presented in this section utilized the intersection delay methodology.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?			\boxtimes	

Explanation: The traffic impact analysis presented in this section was performed by Fehr & Peers in August 2019.⁸⁵

Traffic Scenarios

The intersection analysis was performed for the following scenarios:

Existing Conditions. Existing conditions are represented by existing peak-hour traffic volumes at the study intersections, obtained from traffic counts conducted in November 2018 and June 2019.

Existing Plus Project Conditions. Existing Plus Project conditions were estimated by adding to existing traffic volumes the additional traffic generated by the project. Existing Plus Project conditions were evaluated relative to existing conditions in order to determine potential project impacts.

<u>Cumulative Conditions</u>. Future Year 2040 conditions were determined by adding anticipated future development to existing conditions. Year 2040 intersection turning movement forecasts were developed using the Alameda County Transportation Commission's (Alameda CTC) Countywide Travel Demand Model and existing intersection turning movement counts. The main inputs to the 2040 forecasting process are the model outputs from the Alameda CTC Model and the existing traffic counts, which reflect past, present, and future developments expected by year 2040.

<u>Cumulative Plus Project Conditions</u>. Cumulative Plus Project conditions were estimated by adding the additional traffic generated by the project to Future Year 2040 traffic volumes. Cumulative Plus Project conditions were evaluated relative to projected cumulative conditions in order to determine potential project impacts.

Study Intersections

The traffic study evaluated the project at six intersections during the AM and PM peak hours, using the 2010 *Highway Capacity Manual* (HCM) and SYNCHRO software. The study intersections were identified in consultation with Union City staff. Within Union City, the AM and PM peak hours (commonly referred to as the commute hours), occur on weekdays between 7:00 a.m. and 9:00 a.m. and between 4:00 p.m. and 6:00 p.m. The peak hour represents the most congested 60-minute peak period during these respective commute periods. In the vicinity of the project site, the peak hours generally occur on weekdays between 7:15 a.m. and 8:15 a.m. and between 4:30 p.m. and 5:50 p.m. Operating conditions at the following intersections were evaluated:

⁸⁵ Fehr & Peers, Draft Transportation Impact Analysis, MidPen Mixed-Use Project, August 2019.

- Mission Boulevard/Whipple Road/May Road
- Mission Boulevard/D Street
- Mission Boulevard/E Street
- 2nd Street/ Whipple Road
- 2nd Street/D Street
- 2nd Street/E Street

All of the study intersections except Mission Boulevard/Whipple Road/May Road, which is signal controlled, are side-street stop-controlled intersections. The traffic counts at the Mission Boulevard/Whipple Road/May Road were conducted in November 2018, while counts at all other study intersections were conducted in June 2019.

Level-of-Service Criteria

The Level of Service (LOS) criteria from the 2010 *Highway Capacity Manual* (HCM) were utilized for local roadway analysis. LOS primarily describes traffic flow conditions. LOS varies from LOS A to LOS F, and ranges from LOS A (indicating free-flow traffic conditions with little or no delay at intersections) to LOS F (representing over-saturated conditions where traffic flows exceed design capacity, resulting in long queues and delays). The relationship between LOS and control delay (in seconds per vehicle) is summarized in Table TRA-1.

Table TRA-1

Intersection Level Of Service Thresholds

Level of Service	Signalized Intersection Control Delay (sec./vehicle)	Unsignalized Intersection Control Delay (sec./ vehicle)	General Description
A	≤10.0	≤10.0	Little to no congestion or delays.
В	>10.0 and ≤20.0	>10.0 and ≤15.0	Limited congestion, short delays.
С	>20.0 and ≤35.0	>15.0 and ≤25.0	Some congestion, with average delays.
D	>35.0 and ≤55.0	>25.0 and ≤35.0	Significant congestion and delays
Е	>55.0 and ≤80.0	>35.0 and ≤50.0	Severe congestion and delays
F	>80	>50.0	Total breakdown with extreme delays.

Source: Transportation Research Board, Highway Capacity Manual 2000.

The proposed 2040 Union City General Plan identifies LOS D as the goal for the city's signalized intersections during peak commute hours, with the exception of intersections on roadways that are part of the Alameda County Congestion Management Program (CMP), where the standard is LOS E. The General Plan states that if maintaining the LOS standards would, in the City's judgement, be infeasible and/or conflict with the achievement of other General Plan goals, LOS E or F conditions may be accepted provided that provisions are made to improve the overall system, promote non-vehicular transportation, and/or implement vehicle trip reduction measures as part of a development project or a City-initiated project.

In the event the proposed 2040 General Plan has not yet been adopted at the time of project approval, the provisions of the existing 2002 General Plan would hold. That document establishes a level of service standard of mid-range LOS D at all signalized intersections on arterial and collector streets, with the exception of intersections on major regional routes, including I-880, Mission Boulevard (SR 238) and the Route 84/Decoto Road corridor.

Based on these City and CMP standards, the traffic impact analysis performed by Fehr & Peers utilized the following thresholds of significance. The project would have a significant traffic impact if it would:

- Cause signalized intersection LOS on CMP roadway to (a) degrade from LOS E or better to LOS F or (b) the average intersection delay to increase by five seconds or more at an intersection that operates at LOS F under without Project conditions.
- Cause unsignalized intersection LOS on CMP roadway to degrade from LOS E or better to LOS F and meet the CA MUTCD Peak Hour Signal Warrant.
- Cause unsignalized intersection LOS on non-CMP roadway to (a) degrade from LOS mid-D or better to LOS high-D, LOS E, or F and meet the CA MUTCD Peak Hour Signal Warrant; or (b) the LOS to degrade from LOS high-D to LOS E or F and meet the CA MUTCD Peak Hour Signal Warrant, or (c) the LOS to degrade from LOS E to LOS F and meet the CA MUTCD Peak Hour Signal Warrant.

Existing Conditions

Road Network

Regional access to the project site is provided by Interstate 880 and Mission Boulevard, also designated as State Route 238 (SR 238). Local access to the project site is provided by Whipple Road, 2nd Street, D Street, and E Street. The roadways that would serve the project are described below:

Interstate 880 (I–880) is a north/south freeway connecting the San Jose area in the south to Downtown Oakland and the Bay Bridge in the north. The speed limit is 65 miles per hour (mph) near the study area. In the vicinity of Union City, I-880 provides four to five lanes in each direction, including a high occupancy (HOV) lane. Access between I-880 and the study area is provided via interchanges at Whipple Road, Alvarado- Niles Road, and Decoto Road, which are over two miles away. The 2017 annual average daily traffic (AADT) on I-880 between Alvarado-Niles Road and Whipple Road was 215,000 vehicles.

Mission Boulevard (SR 238) is a four- to six-lane, north/south State route divided by a landscaped median. The speed limit is 50 mph south of Decoto Road, and 40 mph north of Decoto Road. A sidewalk is provided on the west side of the street, and a Class II bike lane is provided in each direction south of Decoto Road. Mission Boulevard is one of the primary parallel routes to I-880. The 2017 AADT on Mission Boulevard in the Project vicinity was 31,500 vehicles.

Decoto Road is a four- to six-lane east-west road divided by a median with limited landscaping. The posted speed limit is typically 35 mph. A sidewalk and a Class II bike lane are provided in each

direction. It connects Mission Boulevard to I-880 and continues beyond I-880 as State Route 84 (SR 84) over the Dumbarton Bridge. Decoto Road also provides access to the Union City BART station.

Whipple Road is an east-west, two-lane arterial that traverses residential land uses in the vicinity of the project site. Whipple Road provides access to I-880 west of the project site. The posted speed limit is 30 mph and parking is permitted along the northern side of the street. Sidewalks are generally continuous on both sides of the street in the vicinity of the project site but there are several sidewalk gaps on the north side of the street west of Railroad Avenue.

2nd Street is a north-south, two-lane residential collector that extends between Whipple Road and Decoto Road. Sidewalks are continuous along the street and parking is permitted on both sides. The posted speed limit is 25 mph.

D Street is an east-west, two-lane residential collector that forms the northern border of the project site and extends between Mission Boulevard and 11th Street. Access to the project site is proposed via a driveway located mid-block on D Street between 2nd Street and Mission Boulevard. Sidewalks are continuous along the street and parking is permitted along both sides. The posted speed limit is 25 mph.

E Street is an east-west, two-lane residential collector that forms the southern border of the project site and extends between Mission Boulevard west to 11th Street. Access to the project site is proposed via a driveway located mid-block on E Street between 2nd Street and Mission Boulevard. Sidewalks are continuous along the street and parking is permitted along both sides. The posted speed limit is 25 mph.

Existing Intersection Operations

The existing traffic volumes at all study intersections except Mission Boulevard/Whipple Road/May Road were obtained from peak-period turning movement counts conducted on Wednesday, June 5, 2019, while area schools were still in session. Intersection data at the Mission Boulevard/Whipple Road/May Road intersection (#1) was collected on Thursday, November 8, 2018. Traffic conditions at the study intersections were evaluated using LOS. The City of Union City utilizes the HCM methodology to evaluate intersection operations on the basis of average control delay time for all vehicles at the intersection. This average delay, which includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay, can then be correlated to a level of service. The HCM 2010 method 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. The SYNCHRO analysis software was used to calculate level of service and estimate vehicle queues for the AM and PM peak hours.

For unsignalized (all-way stop-controlled and side-street stop-controlled) intersections, the 2010 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.

Weekday morning (7:00 to 9:00 a.m.) and evening (4:00 to 6:00 p.m.) peak-period intersection turning movement counts, including separate counts of pedestrians and bicyclists, were collected at all study intersections. Intersection data at the Mission Boulevard/Whipple Road/May Road intersection (#1) was collected on Thursday, November 8, 2018, data for the remaining study intersections was collected on Wednesday,

As shown in Table TRA-2, the results show that, measured against Union City standards, all of the study intersections currently operate at acceptable levels of service during the AM and PM peak hours.

The intersection turning movement volumes that influence the levels of service are shown on Figure TRA-1.

		AM Pea	ık Hour	PM Peak Hour		
Intersection	Control	Delay ²	LOS ³	Delay ²	LOS ³	
 Mission Blvd./ Whipple Road/ May Rd. 	Signal ¹	23	С	21	С	
2. Mission Blvd./ D Street	SSSC ⁴	1 (23)	A (C)	1 (16)	A (C)	
3. Mission Blvd./ E Street	SSSC ⁴	1 (26)	A (D)	1 (16)	A (C)	
4. 2 nd Street/ Whipple Road	SSSC ⁴	1 (14)	A (B)	1 (16)	A (C)	
5. 2 nd Street/ D Street	SSSC ⁴	3 (9)	A (A)	4 (10)	A (A)	
6. 2 nd Street/ E Street	SSSC ⁴	3 (10)	A (A)	3 (11)	A (B)	

Table TRA-2

Existing Intersection Levels Of Service

Source: Fehr & Peers, August 2019

¹Signal = Signalized intersection

²Delay in seconds calculated using the 2010 *Highway Capacity Manual* methodology.

³LOS = Level of Service

⁴SSSC = Side Street Stop Control. For SSSC intersections, average LOS and delay are reported first, followed by the delay for the worst movement in parentheses.

The analysis of unsignalized intersections in the study area also examined the general correlation between the planned level of future development and the need to install new traffic signals. Fehr & Peers evaluated the *California Manual on Uniform Traffic Control Devices* (CA MUTCD) peak-hour volume traffic signal warrant (Warrant 3B) for urban conditions and determined that none of the unsignalized study intersections meet the peak-hour volume traffic signal warrant under existing conditions.

Existing Plus Project Conditions

Project conditions are represented by existing traffic conditions with the addition of traffic generated by the project. Because there are currently no planned improvements to the study intersections, the project roadway network was assumed to be the same as the existing roadway network.

Project Traffic Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear are estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic entering the site was estimated.

The project site is in a primarily residential area, with nearby commercial uses on Mission Boulevard. The site is about 1.3 miles from the Union City BART Station. Trip generation data published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual* (Tenth Edition) was used to estimate the vehicle trip generation. The *Trip Generation Manual* methodology is primarily based on



Existing Peak-Hour Conditions at Traffic Study Intersections

data collected at suburban, single-use, free-standing sites. Multiple land uses from the *Trip Generation Manual* were used to account for the project's mixed-use character.

Trip generation for the proposed apartments/townhomes was estimated using the ITE land use category "Multi-family Housing (Mid-Rise)" (land use code 221), which includes apartment and townhome complexes that have three to ten floors. The 6,500-square foot office space was estimated using the ITE land use category "General Office Building" (land use code 710). Adjustments for transit use were not applied in order to provide a conservative analysis. It is also conservatively assumed that office employees at the project site would not live in any of the apartments or townhouses on site. Research on the transportation impacts of affordable housing indicates that for any given home location and housing type, lower income households typically generate fewer automobile trips than moderate and high-income households. However, to further present a conservative analysis, the project trip generation was not adjusted to account for the proposed project potentially generating fewer vehicle trips due to the residents' income level.

Table TRA-3 summarizes the trip generation for the proposed project. As shown in the table, the project is estimated to generate 520 daily trips, 61 AM peak-hour trips, and 46 PM peak-hour net-new automobile trips.

Table TRA-3

Automobile Trip Generation Estimate

			A	M Peak Hou	ır	PI	M Peak Hou	ır
Land Use	Size ¹	Daily Trips	In	Out	Total	In	Out	Total
Apartments	81 du	440	7	21	88	23	14	37
Office Space	6.5 ksf	80	28	5	33	1	8	9
Total Project Trips		520	35	26	121	24	22	46

Source: Fehr & Peers, August 2019

 1 du = dwelling units; ksf = 1,000 square feet

Project Trip Distribution

Project trip distribution percentages, shown on Figure TRA-2, were assigned to the study area based on existing travel patterns and data from the Alameda CTC Countywide Travel Demand Model. The project vehicle trips were then assigned to the roadway network based on the directions of approach and departure for the AM and PM peak hours, as shown on Figure TRA-3.

Intersection Operations

Existing Plus Project traffic conditions were evaluated using the same methods described for Existing conditions. The Existing Plus Project analysis results are presented in Table TRA-4, based on the vehicle volumes shown on Figure TRA-4. Table TRA-4 also shows the operations results for Existing conditions for comparison purposes. Detailed intersection LOS calculation worksheets are provided in Appendix B. As shown in Table TRA-4, all study intersections are expected to continue to operate at LOS D or better during the AM and PM peak hours under Existing Plus Project conditions, with an average delay increase of 1 second or less at all of the study intersections.



Project Trip Distribution



Project Trip Assignment



Existing Plus Project Peak-Hour Intersection Traffic Volumes, Lane Configuration, and Traffic Control

Source: Fehr & Peers

Table TRA-4

Existing Plus Project Intersection Levels Of Service

		AM Peak Hour				PM Peak Hour			
Intersection	Control ¹	Existing		Plus P	roject	Existing		Plus Project	
		Delay ²	LOS ³						
1. Mission Blvd./ Whipple Road/ May Rd.	Signal ¹	23	С	23	С	21	С	22	С
2. Mission Blvd./ D Street	SSSC ⁴	1 (23)	A (C)	1 (23)	A (C)	1 (16)	A (C)	1 (16)	A (C)
3. Mission Blvd./ E Street	SSSC ⁴	1 (26)	A (D)	1 (27)	A (D)	1 (16)	A (C)	1 (16)	A (C)
4. 2 nd Street/ Whipple Road	SSSC⁴	1 (14)	A (B)	1 (15)	A (B)	1 (16)	A (C)	1 (16)	A (C)
5. 2 nd Street/ D Street	SSSC ⁴	3 (9)	A (A)	4 (10)	A (A)	4 (10)	A (A)	4 (10)	A (A)
6. 2 nd Street/ E Street	SSSC ⁴	3 (10)	A (A)	3 (11)	A (B)	3 (11)	A (B)	3 (11)	A (B)

Source: Fehr & Peers, August 2019

¹Signal = Signalized intersection

²Delay in seconds calculated using the 2010 *Highway Capacity Manual* methodology.

³LOS = Level of Service

⁴SSSC = Side Street Stop Control. For SSSC intersections, average LOS and delay are reported first, followed by the delay for the worst movement in parentheses.

As with the evaluation of Existing conditions, Fehr & Peers evaluated the *California Manual on Uniform Traffic Control Devices* (CA MUTCD) peak-hour volume traffic signal warrant (Warrant 3B) for urban conditions under the Existing Plus Project scenario and determined that none of the unsignalized study intersections would meet the peak-hour volume traffic signal warrant.

As demonstrated in Table TRA-4, the Mission Boulevard/Whipple Road/May Road intersection (#1) would operate at an acceptable LOS C under Existing Plus Project conditions during the AM and PM peak hours. The unsignalized study intersections along Mission Boulevard at D and E Streets (intersections #2 and #3, respectively) are expected to operate at LOS D or better during the AM and PM peak hours under Existing Plus Project conditions. The 2nd Street/Whipple Road intersection (#4) is projected to continue to operate at LOS C or better during both peak hours under Existing Plus Project conditions with D and E Streets (intersections #5 and #6, respectively) are projected to operate at LOS B or better. Furthermore, none of the study intersections would meet the peak-hour signal warrant. Therefore, the proposed project would have a *less-than-significant impact* at the signalized and unsignalized study intersections along CMP and non-CMP roadways.

Cumulative (Year 2040) Conditions

Cumulative Roadway Assumptions

The following roadway improvements are planned within and around the study area and are anticipated to be implemented by year 2040:

The Quarry Lakes Parkway, also known as the East-West Connector, is a four-lane arterial
planned along the southern Union City/Fremont boundary, parallel to Decoto Road. The
Quarry Lakes Parkway is planned to be a grade-separated roadway with an undercrossing at
the Bay Area Rapid Transit (BART) and Union Pacific Railroad (UPRR) tracks. Quarry Lakes
Parkway will extend between Mission Boulevard in the east and I-880 in the City of Fremont
in the west, including a new four-lane arterial with bicycle and pedestrian facilities extending
between Mission Boulevard and Paseo Padre Parkway. Although the facility is not within the
study area, it is expected to change travel demand within the study area.

Union City staff have identified foreseeable funding sources for the Quarry Lakes Parkway improvements listed above and they are therefore assumed to be implemented by year 2040, and are included in the Alameda CTC Model. Year 2040 intersection lane configurations and traffic controls are assumed to remain the same as Existing conditions for all other study intersections. The Cumulative without and with Project conditions analyses also assume the same signal timings as currently occur under Existing conditions at the Mission Boulevard/Whipple Road/May Road intersection (#1).

Cumulative Forecasts

Cumulative (year 2040) intersection turning movement forecasts were developed using the Alameda CTC Countywide Travel Demand Model and existing intersection turning movement counts. The main inputs to the 2040 forecasting process are the model outputs from the Alameda CTC Model and the existing traffic counts, which together reflect past, present, and future developments expected by year 2040.

The Alameda CTC Model version released in May 2018, which uses land use data consistent with Association of Bay Area Government's (ABAG) Projections 2017 incorporated into Plan Bay Area 2040 (Metropolitan Transportation Commission, 2017), was used for this analysis. The base year land use inputs were modified to reflect recent land use estimates within Union City based on the land use inputs developed for the 2040 General Plan; the modified base year land use inputs reflect year 2016 conditions in the vicinity of the project site. The year 2040 land use files were also modified to reflect the buildout assumptions of the 2040 General Plan in addition to recent buildout assumptions within the Station East area east of the Union City BART Station. The base year (2016) and cumulative year (2040) Alameda CTC Model AM and PM peak-hour traffic volume outputs were reviewed to estimate volume growth by intersection turning movement; the growth was then added to the existing 2018 counts at the Mission Boulevard/Whipple Road/May Road intersection (#1) to estimate Cumulative Plus Project forecasts at this location. The estimated growth at the Mission Boulevard/Whipple Road/May Road intersection (#1) was then distributed to the surrounding study intersections and added to the existing 2019 counts to estimate Cumulative Plus Project forecasts at the remaining intersections. Intersection AM and PM peak-hour traffic volumes are estimated to increase between 2.5 and 3.0 percent per year, which is conservative for the study area.

The year 2040 land use inputs assume some level of higher-density development at the current project site; therefore, the 2040 forecasts developed using the Alameda CTC Model are assumed to represent Cumulative Plus Project conditions. The project trip assignment previously discussed was subtracted from the Cumulative Plus Project forecasts to estimate Cumulative without Project forecasts. The Cumulative without Project forecasts are presented on Figure TRA-5 and the Cumulative Plus Project forecasts are shown on Figure TRA-6.



Cumulative (Year 2040) Without Project Peak-Hour Intersection Traffic Volumes, Lane Configurations, and Traffic Controls



Cumulative (Year 2040) Plus Project Peak-Hour Intersection Traffic Volumes, Lane Configurations, and Traffic Controls

Cumulative Conditions Intersection Operations

Cumulative without and with Project Conditions were evaluated using the same methods previously described for the Existing scenarios. The intersection analysis results are presented in Table TRA-5, based on the vehicle volumes shown on Figures TRA-5 and TRA-6. Detailed intersection LOS calculation worksheets are presented in Appendix B.

As shown in Table TRA-5, all three study intersections along Mission Boulevard are projected to operate at unacceptable LOS F conditions during the AM peak hour under Cumulative without and with Project conditions; the intersections are projected to operate at acceptable LOS D conditions during the PM peak hour. Although average intersection vehicle delay is about 10 seconds or less (LOS A) at the Mission Boulevard intersections with D and E Streets, vehicles along the stop-controlled eastbound approaches to each intersection are expected to experience average vehicle delays higher than 90 seconds per vehicle (LOS F). LOS for unsignalized side-street-stop controlled intersections is based on the worst movement delay; however, the average intersection delay is also reported in Table TRA-5 for reference. All three unsignalized study intersections along 2nd Street are projected to operate at LOS C or better during the AM and PM peak hours under Cumulative and Cumulative Plus Project conditions.

Table TRA-5

		AM Peak Hour				PM Peak Hour			
Intersection	Control ¹	Exis	Existing Plu		roject	Exis	ting	Plus P	roject
		Delay ²	LOS ³						
1. Mission Blvd./ Whipple Road/ May Rd.	Signal ¹	142	F	143	F	51	D	51	D
2. Mission Blvd./ D Street	SSSC ⁴	1 (87)	A (F)	1 (94)	A (F)	1 (26)	A (D)	1 (26)	A (D)
3. Mission Blvd./ E Street	SSSC	6 (126)	A (F)	10 (153)	A (F)	1 (26)	A (D)	1 (27)	A (D)
4. 2 nd Street/ Whipple Road	SSSC	2 (17)	A (C)	2 (18)	A (C)	1 (16)	A (C)	1 (16)	A (C)
5. 2 nd Street/ D Street	SSSC	4 (10)	A (A)	4 (11)	A (B)	5 (10)	A (A)	5 (10)	A (A)
6. 2 nd Street/ E Street	SSSC	6 (11)	A (B)	6 (12)	A (B)	4 (11)	A (B)	4 (11)	A (B)

Cumulative Conditions Intersection Levels Of Service

Source: Fehr & Peers, August 2019

¹Signal = Signalized intersection

²Delay in seconds calculated using the 2010 *Highway Capacity Manual* methodology.

³LOS = Level of Service

⁴SSSC = Side Street Stop Control. For SSSC intersections, average LOS and delay are reported first, followed by the delay for the worst movement in parentheses.

The CA MUTCD peak-hour volume traffic signal warrant (Warrant 3B) for urban conditions was evaluated for the unsignalized study intersections, and none of the intersections would meet the peak-hour signal warrant under Cumulative and Cumulative Plus Project conditions. (Detailed signal warrant calculations are provided in Appendix B.)

The Alameda County CMP requires the assessment of development-driven impacts on regional roadways for development projects that generate more than 100 "net-new" PM peak-hour vehicle trips. However, since the proposed project is estimated to generate 46 PM peak-hour trips, an evaluation of CMP roadway segments was not required for the project.

Although the signalized study intersection of Mission Boulevard/Whipple Road/May Road (#1) is expected to operate unacceptably at LOS F during the AM peak hour and at LOS D during the PM peak hour under Cumulative conditions, the addition of project-generated traffic would increase average intersection delay by just 1 second, below the 5-second significance threshold previously identified. Therefore, the proposed project would not cause a significant impact at this intersection.

The unsignalized study intersections along Mission Boulevard at D and E Streets (intersections #2 and #3, respectively) are also expected to operate unacceptably at LOS F at the worst movement under Cumulative conditions during the AM peak hour both with and without the addition of project traffic. However, neither intersection is expected to meet the peak-hour signal warrant, and therefore the project impacts at these intersections would be less than significant.

Since significance thresholds would not be exceeded at the intersections operating unacceptably under Cumulative conditions and the other intersections would operate acceptably, the proposed project would a *less-than-significant impact* on traffic conditions under future Cumulative conditions.

Pedestrian Facilities

Pedestrian facilities within the project vicinity include sidewalks, crosswalks, and pedestrian signal heads. There are sidewalks on both sides of the street adjacent to the project site along D, E, and 2nd Streets, with sidewalk widths ranging between 5 and 9 feet. Mission Boulevard provides a 6-foot-wide sidewalk along the project site frontage, but sidewalks are not provided on the east side of Mission Boulevard. The following pedestrian facilities are provided at the study intersections:

- The Mission Boulevard/Whipple Road/May Road intersection (Intersection #1) provides crosswalks and pedestrian signal heads with push buttons along the westbound, eastbound, and southbound approaches. Directional curb ramps with truncated domes are provided at the northeast and southeast corners of the intersection, diagonal curb ramps with truncated domes are provided at the northwest and southwest corners.
- The Mission Boulevard/D Street intersection (Intersection #2) is stop-controlled along the D Street approach and does not provides marked crosswalks; however, pedestrians can cross D Street. Crossing Mission Boulevard is prohibited at this intersection. A diagonal curb ramp with truncated domes is located at the northwest corner while a directional curb ramp with truncated domes is provided at the southeast corner.
- The Mission Boulevard/E Street intersection (Intersection #3) is stop-controlled along the E Street approach and does not provide marked crosswalks; however, pedestrians can cross E Street. Crossing Mission Boulevard is prohibited at this intersection. Directional curb ramps with truncated domes are provided at the northwest and southwest corners of the intersection.
- The Whipple Road/2nd Street intersection (Intersection #4) is stop-controlled along the 2nd Street approach and does not provide marked crosswalks. A directional curb ramp is provided at the southwest corner and a diagonal curb ramp with truncated domes is provided on the southeast corner.

- The 2nd Street/D Street intersection (Intersection #5) is stop-controlled along both D Street approaches and does not provide marked crosswalks. Diagonal curb ramps are provided at all four corners of the intersection, truncated domes are only provided on the northeast corner.
- The 2nd Street/E Street intersection (Intersection #6) is stop-controlled along both 2nd Street approaches and does not provide marked crosswalks. Diagonal curb ramps are provided at all four corners of the intersection.

The project applicant proposes to widen existing sidewalks to a 10-foot-width along the Mission Boulevard frontage (including tree wells that maintain at least 6 feet clear) and to a 6.5-foot-width on the D Street, E Street, and 2nd Street project frontages. Primary pedestrian access for the northern building (Building D) would be provided via a main lobby accessed from the central pedestrian plaza, while access to the southern residential building (Building E) would be provided via a main lobby on Mission Boulevard. About 17 out of the 81 residential units would also have direct pedestrian access to each unit along the 2nd Street frontage and within the pedestrian plaza. Primary pedestrian access for the office spaces would be provided via Mission Boulevard.

The project will be conditioned to require upgrades to the existing directional curb ramps with truncated domes at the southwest corner of the Mission Boulevard/D Street intersection and the northwest corner of the Mission Boulevard/E Street intersection to bring them up to the current standard. The existing diagonal curb ramps at the southeast corner of the 2nd Street/D Street intersection and the northeast corner of the 2nd Street/E Street intersection will remain diagonal but will also be upgraded to meet the current Americans with Disabilities Act (ADA) standard.

Bicycle Facilities

The *City of Union City Pedestrian and Bicycle Master Plan* (January 2012) classifies bicycle facilities according to a typology established by Caltrans as documented in "Chapter 1000: Bikeway Planning and Design" of the *Highway Design Manual* (HDM, 6th Edition, California Department of Transportation). While the current Pedestrian and Bicycle Master Plan includes three facility types, the current Caltrans standards include the following four types of distinct types of bikeway facilities:

- Class I Bikeway (Multi-Use Path) provides a separate right-of-way and is designated for the exclusive use of bicycles and pedestrians with vehicle and pedestrian crossflow minimized.
- Class II Bikeway (Bike Lane) provides a restricted right-of-way and is designated for the use of bicycles with a striped lane on a street or highway. Vehicle parking and vehicle/ pedestrian crossflow are permitted.
- Class III Bikeway (Bike Route) provides for a right-of-way designated by signs or pavement markings for shared use with motor vehicles.
- Class IV Bikeway (Separated Bikeway) is a bikeway for the exclusive use of bicycles and includes a separation between the bikeway and the through vehicular traffic. The separation may include, but is not limited to, grade separation, flexible posts, inflexible posts, inflexible barriers, or on-street parking. This facility type is not included in the current Pedestrian and Bicycle Master Plan but is included in the current Caltrans HDM.

There are limited bicycle facilities within the project vicinity. Mission Boulevard provides Class II bike lanes south of Decoto Road; Whipple Road provides Class II bike lanes in the vicinity of the former Barnard-White Middle School; and Decoto Road provides Class II bike lanes west of 2nd Street. The Dry Creek Trail, a Class I multi-use path, extends north of Whipple road to Mission Boulevard. The 2012 Bicycle and Pedestrian Master Plan recommends the following bicycle infrastructure improvements in the vicinity of the project site:

• Whipple Road between Union City Boulevard and Mission Boulevard, and Mission Boulevard within Union City limits:

- Conduct engineering feasibility study for bicycle improvements along the Whipple Road and Mission Boulevard corridors, including:
 - Bicycle lane striping and signage
 - Travel lane reconfiguration
 - On-street parking removal or reconfiguration
 - Bicycle accommodations at intersections, including bicycle loop detectors

Funding and schedule for the engineering feasibility study listed above has not been identified.

The proposed project would maintain existing on-street parking along the southbound Mission Boulevard frontage; this parking may potentially preclude implementation of a future Class II bike lane. However, Union City has not yet determined if Class II bike lanes will be implemented along Mission Boulevard in the vicinity of the project site. Future removal of on-street parking along the Mission Boulevard frontage may be necessary if Union City implements Class II bike lanes. Any loss of on-street parking would not be a significant impact under CEQA.

Transit Access

Transit service in the study area includes Alameda-Contra Costa Transit District (AC Transit), which provides regional bus service, and Union City Transit (UC Transit), which provide local bus service. The Bay Area Rapid Transit (BART) system also provides rail transit service about a mile from the project site. Each service is described below.

AC Transit

Three AC Transit routes serve the study area. with stops on southbound Mission Boulevard just north of D Street, and on northbound Mission Boulevard just north of Whipple Road. Both bus stops provide signage but do not provide any other amenities, such as shelter or benches. Table TRA-6 summarizes AC Transit service near the project site.

UC Transit

UC Transit provides local bus service exclusively within Union City and provides connections to BART, AC Transit, and the Dumbarton Express. Line 4 currently serves the project vicinity, with the nearest stops located on southbound Mission Boulevard just north of D Street and northbound 2nd Street just north of D Street. Both bus stops provide signage but do not provide any other amenities, such as shelter or benches. Line 2 also operates in the vicinity of the Project site, with bus stops on both directions of E Street just west of 6th Street. Table TRA-6 summarizes UC Transit service near the project site.

BART

The Bay Area Rapid Transit (BART) system provides regional rail transit service connecting San Francisco, Alameda County, Contra Costa County, and parts of San Mateo County. The nearest BART station to the project site is the Union City BART Station, which is approximately 1.3 miles south of the site. The station is served by two BART routes: the Richmond-Warm Springs/South Fremont and the Daly City-Warm Springs/South Fremont lines. The Richmond-Warm Springs/South Fremont line operates at a 15-minute frequency from 4:00 a.m. to 7:00 p.m. on weekdays, and a 20-minute frequency from 7:00 p.m. to 1:00 a.m. on weekdays, 6:00 a.m. to 1:00 a.m. on Saturdays, and 8:00 a.m. to 1:00 a.m. on Sundays. The Daly City-Warm Springs/South Fremont line operates at a frequency of 15 minutes from 5:00 a.m. to 7:00 p.m. on weekdays, and at a frequency of 20 minutes from 9:00 a.m. to 7:00 p.m. on Saturdays. The Daly City-Warm Springs/South Fremont line does not operate on Sundays.

Table TRA-6

Bus Service in the Project Vicinity

			Week	days	Week	ends
Route	Description	Nearest Bus Stop	Hours	Headway	Hours	Headway
AC Trans	iit					
99	Hayward BART, South Hayward BART, Union City BART, Fremont BART	Mission Boulevard just north of D Street (SB) and north of Whipple Road (NB)	5:00 a.m. to 1:00 a.m.	20 min.	6:00 a.m. to 1:00 a.m.	30 min.
801	12 th Street BART, Lake Merritt BART, Fruitvale BART, San Leandro BART, Bay Fair BART, Hayward BART, South Hayward BART, Union City BART, Fremont BART	Mission Boulevard just north of D Street (SB) and north of Whipple Road (NB)	11:45 p.m. to 6:30 a.m.	60 min.	11:45 p.m. to 7:30 a.m.	60 min.
232	Fremont BART, Union City BART, NewPark Mall	Decoto Road at 3rd Street (EB)	5:00 a.m. to 8:00 p.m.	60 min.	5:00 a.m. to 8:00 p.m.	60 min.
UC Trans	it					
2	Kaiser Permanente to Union City BART	E Street just west of 6th Street (EB and WB)	5:15 a.m. to 8:30 p.m.	30-60 min.	7:30 a.m. to 7:00 p.m.	60 min.
4	Union Landing to Union City BART	Mission Boulevard just north of D Street (SB) and 2 nd Street just north of D Street (NB)	6:50 a.m. to 8:30 p.m.	60 min.	8:30 a.m. to 7:15 p.m.	60 min.

Source: Fehr & Peers, August 2019

Fehr & Peers did not identify any impacts related to transit access and service.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				X

<u>Explanation</u>: The congestion management agency for Alameda County is the Alameda County Transportation Commission (Alameda CTC). Alameda CTC's Congestion Management Program (CMP) only requires review of potential impacts on CMP roadways from proposed land use actions that would cause a net increase of 100 PM peak-hour vehicle trips or more. Implementation of the proposed CARP would not generate new traffic, so there would be **no impact** on CMP roadways and no potential to conflict with the CMP.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Result in a change in air traffic patterns, inclu either an increase in traffic levels or a chang location that results in substantial safety risks?	ding le in 🔲			X

Explanation: The proposed project would have no effect on air traffic patterns.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				\boxtimes

Explanation: Residents within the study area have raised concerns with City staff regarding the traffic operational characteristics at the following three intersections along E Street in the project vicinity:

- 2nd Street/E Street (unsignalized with stop controls at both 2nd Street approaches)
- 5th Street/E Street (unsignalized with stop controls at both 5th Street approaches)
- 9th Street/E Street (unsignalized with stop controls at both 9th Street approaches)

Specifically, residents are concerned about an increase in cut-through traffic along 2nd Street that has been experienced in recent years and the potential sight distance issues at each intersection. At the

request of the City, Fehr & Peers conducted an evaluation to determine if all-way-stop controls are warranted for any of the three intersections along E Street.

Section 2B.07 of the CA MUTCD provides guidance on the decision to install all-way-stop controls at intersections; the guidance is based on criteria for traffic volumes (including pedestrian and bicycle volumes), safety hazards, and traffic operational characteristics. None of the three intersections along E Street would warrant the need for all-way-stop controls based on vehicle, pedestrian, and/or bicycle volumes alone. However, the CA MUTCD also provides the following relevant guidance on the decision to install all-way-stop controls at intersections:

- Five or more reported collisions in a 12-month period that are susceptible to correction by an all-way-stop installation.
- Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop.

As shown in Table TRA-7, none of the E Street intersections experienced five or more collisions within a 12-month period based on collision data obtained from the Statewide Integrated Traffic Records System (SWITRS) for the five-year period between January 1, 2013 and December 31, 2017. Most of the reported collisions were broadside collisions. Although the 9th Street/E Street intersection experienced the highest number of collisions (nine) during the five-year period, five or more collisions were not observed within a 12-month period. Therefore, the number of reported collisions during the five-year period would not warrant the need for all-way-stop controls at any of the three intersections.

Table TRA-7

Intersection	Head-On	Side- Swipe	Rear- End	Broad- side	Hit Object	Pedest- rian Involved	Bicycle Involved	Total
2 nd Street/ E Street	0	0	0	4	0	0	0	4
5 th Street/ E Street	0	1	0	3	0	0	0	4
9 th Street/ E Street	0	1	0	6	1	0	1	9
Total	0	2	0	13	1	0	1	17

Five-Year History of Intersection Collisions, by Type¹

Source: Fehr & Peers, August 2019

¹Based on SWITRS five-year collision data reported from January 1, 2013 to December 31, 2017

An evaluation of corner sight distance⁸⁶ was also conducted at each of the three intersections along E Street. Per the CA MUTCD criteria listed above, sight distance is an important factor in determining the need for all-way-stop controls. According to the Caltrans *Highway Design Manual* (HDM), a substantially clear line of sight should be maintained at unsignalized intersections between the driver of a vehicle, bicyclist, or pedestrian stopped on the minor road and the driver of an approaching vehicle on the major road that has no stop. E Street has a posted speed limit of 25 mph; a minimum corner

⁸⁶Corner sight distance refers to the intersection line of sight maintained between the driver of a vehicle waiting at the minor street and the driver of approaching vehicle on the major street.

sight distance of 275 feet is recommended (per the HDM) for stop-controlled approaches of sidestreet-stop controlled intersections with a roadway design speed of 25 mph.

An evaluation of corner sight distance at the stop-controlled approaches for each of the three intersections on E Street confirmed that the existing sight distances typically ranges between 60 and 130 feet, which is less than the recommended 275 feet. The primary reason for the sight distance issue is due to the provision of on-street parking along E Street immediately adjacent to the intersections with 2nd, 5th, and 9th Streets; vehicles parked adjacent to the intersections obstruct the line of sight. One solution to providing a minimum corner sight distance of 275 feet is to prohibit on-street parking along E Street within 20 feet of each intersection; which would eliminate about 12 on-street parking spaces along E Street. However, on-street parking is a high priority for residents along E Street and the surrounding neighborhoods; the preference of Union City staff is to maintain existing on-street parking supply. Alternatively, installing the all-way-stop controls at each of the E Street intersections with 2nd, 5th, and 9th Streets would adequately address the existing sight distance concerns for vehicles. Furthermore, installing all-way-stop controls at each intersection would also improve bicycle and pedestrian crossing safety across E Street.

As a result of this analysis, Fehr & Peers recommended the installation of all-way-stop controls at the E Street intersections with 2nd, 5th, and 9th Streets. However, the analysis did not identify a significant impact pursuant to CEQA.

On the basis of the preceding discussion, the proposed project would have a *less-than-significant impact* related to traffic hazards.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Result in inadequate emergency access?				X

<u>Explanation</u>: The surrounding streets defining the project site—Mission Boulevard, 2nd Street, D Street, and E Street—would continue to provide emergency access to the site. The traffic assessment performed by Fehr & Peers, summarized in the preceding subsections, included a site plan review, and did not identify any constraints to adequate emergency access to the site following implementation of the proposed project. There would be **no impact** on emergency access.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
f)	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety to such facilities?				X

Explanation: The project's potential impacts on public transit and bicycle and pedestrian facilities are discussed above in Section XVII-a. As no impacts were identified, the project would have no conflicts with the adopted policies, plans, and programs pertaining to these alternative modes of transportation. There would be **no impact**.

XVIII. TRIBAL CULTURAL RESOURCES — Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?		X		

Explanation: Pursuant to Assembly Bill (AB) 52, passed by the California Legislature in September 2014, the City sent a Tribal Consultation List Request to the Native American Heritage Commission (NAHC) on June 28, 2019 in order to identify Native American tribal groups who may be traditionally and culturally affiliated with the geographic area of the proposed project site. A response letter from the NAHC identified the following tribal groups as having potential affiliation with the City:

- Amah Mutsun Tribal Band of Mission San Juan Bautista
- Indian Canyon Mutsun Band of Costanoan
- Muwekma Ohlone Indian Tribe of the San Francisco Bay Area
- The Ohlone Indian Tribe
- Costanoan Rumsen Carmel Tribe

Letters were mailed to the representatives of each of these tribal groups (two representatives were identified for the Muwekma tribe) on August 20, 2019, offering them the opportunity to provide input regarding any concerns their tribes may have about the potential impacts implementation of the proposed project could have on tribal cultural resources. As of the time of publication of this Initial Study, the City had not received any responses from the tribal groups who, pursuant to AB 52, had 30 days to respond.

As discussed further in Section V, the possible presence of buried prehistoric cultural materials at the project site, including tribal cultural resources, cannot be ruled out, and any disturbance to such resources, were they to exist, could result in a significant, adverse impact on tribal cultural resources. Implementation of Mitigation Measures CR-1 through CR-3, set forth in Section V, would reduce the potential impact to a *less-than-significant-with-mitigation* level:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) A resource determined by the Lead Agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the Lead Agency shall consider the significance of the resource to a California Native American tribe.		X		

<u>Explanation</u>: Public Resources Code Section 5024.1 establishes the California Register of Historical Resources and defines the criteria for inclusion on the California Register. No historic resources are known or suspected to be present at the project site. However, as discussed in Section V-a, their potential presence cannot be completely ruled out. Were such resources to be present, disturbance of the subsurface during construction could damage or destroy the resource(s), which would be a potentially significant impact on historic resources. Implementation of Mitigation Measures CR-1 through CR-3 (see Section V) would reduce the impact to *less than significant with mitigation*.

XIX. UTILITIES AND SERVICE SYSTEMS — Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	

Explanation:

Water Treatment Facilities

As discussed in more detail in Section XIX-b, below, water would be supplied to the project by the Alameda County Water District (ACWD), which provides water to the cities of Fremont, Newark, and Union City. Water supplied to most of Union City is treated at ACWD's Blending Facility, which blends water from the District's production well water from the Mowry and Peralta/Tyson Wellfields with water from San Francisco Regional Water Supplies in order to reduce the hardness of the well water.⁸⁷ The Blending Facility utilizes three parallel in-line static mixers, each with a design capacity of 20 mgd. Although total production of 60 mgd can be achieved, the normal sustainable output of the Blending Facility is 45 mgd.

⁸⁷ Alameda County Water District, 2018 Water Quality Report, Where Our Water Comes From, [undated].

The ACWD operates three treatment facilities within its service area, with a combined treatment capacity of 86 mgd.⁸⁸ With average daily production in Fiscal Year 2017-2018 of 37.0 mgd, the District has more than adequate excess treatment capacity to accommodate the additional water demand generated by the project (discussed below in Section XIX-b) without requiring construction or expansion of water treatment facilities.

Wastewater Treatment Facilities

Wastewater generated in Union City is treated at the Alvarado Wastewater Treatment Plant (AWTP), operated by the Union Sanitary District (USD). The treatment plant is located near the western edge of Union City, just west of Union City Boulevard and south of Horner Street. The wastewater treatment plant provides primary and secondary (activated sludge) treatment. The current capacity is 33 mgd and average daily flows in 2018 were approximately 22.99 mgd.⁸⁹ There is substantial excess capacity at the treatment plant, and no potential for the incremental increase in wastewater treatment demand that would be generated by the project to exceed existing treatment capacity or require the construction of new or expanded treatment facilities.

Stormwater Drainage Facilities

The City recently conducted environmental review of the proposed 2040 General Plan, which included an assessment of potential impacts to the City's stormwater drainage facilities.⁹⁰ The 2040 General Plan Draft EIR concluded that buildout under the proposed General Plan would have a less-than-significant impact on stormwater drainage facilities for the following reasons:

- The majority of future development facilitated by the proposed General Plan would consist of infill development in areas already primarily developed, and would result in minimal conversion of open space and permeable surfaces to impermeable surfaces;
- 2) New development would be required to comply with the City's Low Impact Development (LID) goals and policies that reduce the amount and rate of stormwater discharge; and
- 3) New development would be required to comply with Provision C.3 of the Municipal Regional Stormwater Permit (MRP) (discussed in detail in Section X-a), which also requires incorporation of LID techniques and facilities and requires most projects in Union City to provide detention or bioretention such that the rate and volume of stormwater discharged from a site does not exceed the pre-development levels.

The proposed project is essentially consistent with the density assumed for the site in the 2040 General Plan Draft EIR and, as discussed in Section X-a, the project would not increase peak stormwater discharge from the site in comparison to existing conditions. Therefore, implementation of the project would not require the construction of new or expanded stormwater drainage facilities.

Electric Power, Natural Gas, and Telecommunications Facilities

The 2040 General Plan Draft EIR also evaluated the increased demand for electric power, natural gas, and telecommunications facilities that would result from buildout under the proposed General Plan, and found the impact to be less than significant.⁹¹ The analysis determined that new development would be required to comply with existing energy efficiency regulations and would be encouraged to

⁸⁸Alameda County Water District, ACWD Fact Sheet, Accessed August 24, 2019 at: <u>https://www.acwd.org/93/Fact-Sheet</u>.

⁸⁹Union Sanitary District, Our Mission, Facts, and History, accessed August 23, 2019 at: <u>https://www.unionsanitary.</u> <u>com/about-us/about-us/mission-facts-history</u>.

⁹⁰City of Union City, 2040 Union City General Plan Update Draft Environmental Impact Report, SCH #2018102057, Section 4.16, Utilities and Service Systems, Impact UTL-1, June 2019.

⁹¹Ibid.

implement additional voluntary energy efficiency measures. Additionally, future development would occur within already developed areas of the City where electric power and natural gas infrastructure is already present. The analysis also cited the following proposed General Plan policy:

Policy PF-7.3: Coordination on Siting of Utilities. The City shall coordinate with utility providers in the siting, site layout, and design of gas and electric facilities, including changes to existing facilities, to minimize environmental, aesthetic, electromagnetic, and safety impacts on existing and future residents.

While the City has not yet adopted these proposed policies, the current 2002 General Plan includes the following similar policies:

Policy PF-A.1.1: The City shall ensure through the development review process that adequate public facilities and services are available to serve new development when required. The City shall not approve new development where existing facilities are inadequate to support the project unless the applicant can demonstrate that all necessary public facilities (including water service, sewer service, storm drainage, transportation, police and fire protection services) will be installed or adequately financed and maintained (through fees, special taxes, assessments, or other means).

Policy PF-A.1.2: The City shall require all new development and major modifications to existing development to construct necessary on-site infrastructure to serve the project in accordance with City standards.

Policy PF-A.1.3: When reviewing applications for land use designation changes (i.e., zone change, General Plan Amendment, specific plan amendment), the City shall analyze the impacts of the proposed land use designation changes on all aspects of the infrastructure system within the city and require mitigation as legally appropriate. This shall include consultation with other service providers, such as the Alameda County Water District (ACWD) and the Union Sanitary District (USD), who have infrastructure within the city.

The analysis presented in the 2040 General Plan Draft EIR is applicable to the proposed project, which would be subject to either the current 2002 General Plan policies or the proposed 2040 General Plan policies if that document is adopted by the City prior to approval of the proposed MidPen Affordable Housing project, which is likely. As concluded in the Draft EIR, future development under the General Plan would not require the construction of new or expanded electric power, natural gas, or telecommunications facilities.

Based on the preceding discussions, the proposed project would have a *less-than-significant impact* on electric power, natural gas, or telecommunications facilities.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?				\boxtimes

<u>Explanation</u>: Implementation of the proposed project would temporarily consume water for suppression of dust during site grading activities. Water would also be used during project construction for production of concrete, washing equipment, and for other miscellaneous purposes. Following project construction, domestic water would be consumed by project residents and employees, and

water would be used for irrigating the proposed landscaping and for cleaning common areas, such as the parking garage and trash collection area.

Water Supply and Demand

Water would be provided to the site by the Alameda County Water District (ACWD), which derives its domestic water supply from three major sources: State Water Project (SWP) water from the Sacramento/San Joaquin Delta (29 percent), Hetch Hetchy Reservoir in the Sierras (17 percent), and local supplies (54 percent).⁹² Source water for the SWP consists of rainfall and snowmelt runoff from northern and central California. The SWP water is delivered to the service area from Lake Oroville via the Feather River, Sacramento River, and South Bay Aqueduct. Hetch Hetchy water is conveyed from Hetch Hetchy Dam, operated by the San Francisco Public Utilities Commission (SFPUC), via the Hetch–Hetchy Aqueduct. The ACWD also receives SFPUC surface water originating in Alameda and San Mateo counties.

The ACWD's local supplies include fresh groundwater from the Niles Cone Groundwater Basin underlying the District's service area (recharged by runoff from the Alameda Creek watershed), brackish groundwater desalinated at the Newark Desalination Facility and blended with Hetch Hetchy water, and surface water from Del Valle Reservoir, near the City of Livermore.

The ACWD is required by State law to prepare an Urban Water Management Plan (UWMP) to identify existing and projected water supply sources, develop demand projections for its approximately 100-square-mile service area, and identify strategies for ensuring that long-term water supplies are sufficient to meet demand under all future demand conditions, including during single- and multiple-year droughts. The UWMP must be updated every five years. The normal UWMP submittal cycle requires that the plans be prepared and submitted in December of years ending in five and zero.

The District's water supply planning is coordinated with other agencies throughout the San Francisco Bay Area. For example, it has participated with a large group of stakeholders including resource agencies, local governments, and environmental groups in developing a *Bay Area Integrated Regional Water Management Plan* (Bay Area IRWMP), last updated in 2013. The ACWD also participates in regional Alameda Creek watershed planning efforts.

At the time of preparation of the latest UWMP, California was in the fifth year of a prolonged drought. The State had previously passed the Water Conservation Bill of 2009 (SBX7-7), which requires a Statewide 20-percent reduction in urban per capita water use by 2020. It requires that retail urban water suppliers determine baseline water use and set reduction targets according to specified requirements, and requires agricultural water suppliers to prepare plans and implement efficient water management practices. In further response to the drought, in July 2014 the State Water Resources Control Board (SWRCB) replaced the Statewide reduction target with agency-specific goals based on each agency's average previous residential consumption. The reduction target assigned to ACWD is 16 percent from its baseline use established during select months of 2013.

As the drought persisted, the Governor issued Executive Order B-29-15 on April 1, 2015 that mandated a Statewide reduction in water use of 25 percent from 2013 levels. ACWD has been able to exceed each of the mandated reductions, lowering district-wide consumption in fiscal year (FY) 2014-2015 to 73 percent of the demand in FY2012-2013.

The currently adopted UWMP reported that the total long-term average annual available water supply was estimated to be 73,500 acre-feet⁹³ per year (AFY) of combined imported and local water

⁹² Alameda County Water District, *Urban Water Management Plan 2015–2020*, June 9, 2016.

⁹³An acre–foot is the amount of water necessary to cover 1 acre of land to a depth of 1 foot, and is equivalent to 325,851.43 gallons, or 43,560 cubic feet.

supplies.⁹⁴ Factoring in implementation of multi-faceted strategies identified in an Integrated Resources Plan (IRP), water demand in ACWD service area was projected to be 77,200 AFY in 2020, when available supply was projected to be 62,900 AFY, leaving excess capacity of 14,300 AFY. By 2040 excess capacity is still projected, though it would be reduced to 6,200 AFY, with demand of 69,800 AFY being met by a supply of 76,000 AFY.⁹⁵

The District's projections for a sustained drought comparable to the most severe five-year drought on record (1987-1991), based on records dating to 1922, indicate that ACWD will have sufficient supplies to withstand a similar long-term drought through 2020, when supply would balance demand. However, during the multi-year design drought, by 2022 demand could exceed supply by 2,900 AFY.

Although District policy is to sustain a shortage of no more than 10 percent during dry and critically dry conditions, it recognizes that severe conditions, such as an earthquake, could result in interruptions to either imported or local water supplies that could result in significantly greater shortages. In such a case, the District would declare a water shortage emergency and enact its Water Shortage Contingency Plan (WSCP) at the appropriate level to address the shortfall. The WSCP is designed to replace the water supply shortage up to a 50-percent shortage. Strategies in the WSCP include drawing on its Semitropic Groundwater Banking System, which currently has over 107,000 AF in storage, and imposing mandatory demand reduction measures, among other strategies. The District would also look to secure additional supplies through purchase of water from a California Department of Water Resources drought bank or similar water purchase/transfer program.

Water-Efficient Landscape Ordinance

The proposed project would provide 10,795 square feet of new landscaping, which would require water for irrigation. The project would be required to comply with the City's water-efficient landscape requirements promulgated in Chapter 18.112 of the *Union City Municipal Code*, which are based on the State Water Efficient Landscape Ordinance. The ordinance requires landscaping for projects generally requiring Site Development Review (and all discretionary projects with 2,500 square feet or more of landscaping) to design the landscape with water-efficient hydro-zones containing plants with similar water needs. Turf areas may not exceed 25 percent of the landscaping, and at least 75 percent of the non-turf plants must be drought-resistant, requiring occasional, little, or no summer water application. (No turf areas are proposed for the project.) Disease- and pest-resistant native plants must be selected based on their adaptability to the climatic, geologic, and topographical conditions of the site.

Where irrigation is required, an efficient system tailored to each hydro-zone must be employed that meets specific efficiency requirements based on flow rate, application rate, and design operating pressure for each zone. The system must be designed by a licensed landscape architect, certified irrigation designer, licensed landscape contractor, or "any other person authorized to design an irrigation system." Irrigation for the proposed landscaping may not exceed a Maximum Applied Water Allowance (MAWA) that will be calculated for the project. The project will be required to install automatic irrigation controllers using current reference evapotranspiration data or soil moisture sensors, such that total applied water does not exceed the MAWA. An irrigation audit must be submitted to the City demonstrating compliance and proper functioning of the irrigation system.

Project Water Demand

Per-capita water demand has been declining this century in the San Francisco Bay Area in response to water conservation efforts in the wake of frequent droughts. For example, water demand within the ACWD declined by 27.7 percent between 2013 and 2016, which were drought years. The District

⁹⁴ Alameda County Water District, op. cit.

⁹⁵ *Ibid*, Table 9-2.

estimated that there would be a permanent 6-percent reduction in demand beyond the end of the drought.⁹⁶

The residential water demand of the project was estimated based on the per-capita demand rate reported by the ACWD for 2015, which was 100 gallons per day (gpd) per capita, with a 10-year average of 136 gpd.⁹⁷ For purposes of this analysis, the 10-year average is used. The very conservative estimate of 274 residents generated by the project (see Section XIV-a) would thus have a water demand of 37,264 gpd, or 13,601,360 gallons per year.

The future water demand of the proposed office spaces was estimated based on a consumption rate of 55.6 gallons per 1,000 square feet of building area. This average daily rate was determined in a 2012 nationwide survey of commercial buildings by the U.S. Energy Information Administration in cooperation with the U.S. Environmental Protection Agency (EPA).⁹⁸ Applying this rate to the proposed office space (12,954 square feet), the proposed office uses would have an estimated average water demand of about 720 gallons per day (gpd), and an annual demand of 262,800 gallons.

In addition, the proposed landscaping plan indicates that a total of 24,294 square feet of landscaped areas would require irrigation. The landscaping would be irrigated in different hydro-zones determined by plant water requirements. Irrigation would occur via a combination of high-efficiency rotor and stream spray-head sprinklers and subsurface drip lines, depending on the hydro-zone. The irrigation would be controlled and timed by an automatic controller, based on evapotranspiration data, including climatic conditions at the site and the soil and plant characteristics applicable to each zone. In compliance with Municipal Code Chapter 18.112, a landscape architect retained by the project applicant will be required to prepare a Water Efficient Landscape Worksheet for the proposed landscaping. The worksheet must factor in the evapotranspiration rate applicable to the climatic conditions at the site and the soil and plant characteristics applicable to the climatic conditions at the site and the soil and plant characteristics applicable to the proposed landscaping. The worksheet must factor in the evapotranspiration rate applicable to the climatic conditions at the site and the soil and plant characteristics applicable to each hydro-zone. At the time of this environmental review, a Water Efficient Landscape Worksheet had not yet been prepared for the project; it will be prepared as part of the construction documents following project approval.

In order to estimate the project's future water demand for landscape irrigation, the basic parameters of the proposed landscaping were plugged into the EPA's interactive water demand tool, which factors in local precipitation and evapotranspiration rates.⁹⁹ The results indicate that landscape irrigation would require a total of 30,711 gallons per month during the peak watering month of July, when there is typically no rainfall. This would be an average landscape water demand of about 990 gallons per day. During wet winter months in a normal rainfall year, this demand would be reduced substantially or eliminated altogether because the landscaped courtyards and site perimeter landscaping would all be uncovered and exposed to rainfall.

The project's combined domestic and landscape water use is estimated to be 38,974 gpd, though this is a conservative estimate for reasons previously discussed. The estimated average water consumption of 38,974 gpd represents a small fraction of ACWD's average daily water production of 37.0 million gallons per day.¹⁰⁰

⁹⁶Alameda County Water District, *op. cit.*, Section 2.4: Projected Future Water Demands.

⁹⁷Alameda County Water District, op. cit., Table 8.1: District Data for Analysis and Compliance with SBX7-7.

⁹⁸U.S. Energy Information Administration, Commercial Buildings Energy Consumption Survey (CBECS): Water Consumption in Large Buildings Summary, accessed May 18, 2017 at: <u>https://www.eia.gov/consumption/</u> <u>commercial/reports/2012/water/index.php - ftn1</u>.

⁹⁹U.S. Environmental Protection Agency, WaterSense Water Budget Tool, accessed August 23, 2019 at: <u>https://www.epa.gov/watersense/water-budget-tool</u>.

¹⁰⁰Alameda County Water District, ACWD Fact Sheet, accessed August 23, 2019 at: <u>http://www.acwd.org/index.</u> <u>aspx?nid=93</u>.

The City recently conducted environmental review of the proposed 2040 General Plan, which would assign a new land use designation to the project site that would allow for greater density of development on the site than currently allowed under the Retail Commercial designation. The proposed project is essentially consistent with the density assumed for the site in the 2040 General Plan Draft EIR. The EIR concluded that with adherence to General Plan policies and ACWD drought contingency plans, buildout under the proposed General Plan would have a less-than-significant impact on water supplies during both normal rainfall years and multiple drought years. While the policies cited in the EIR had not yet been adopted at the time of preparation of this Initial Study, the existing General Plan has similar policies already in place, including the following policies:

- **Policy PF-C.1.1:** The City shall coordinate its review of development proposals with the ACWD to ensure that new development can be adequately served by the District's water supply system.
- **Policy PF-C.1.2:** With concurrence of the ACWD, water distribution systems are to be interconnected ("looped") wherever feasible to facilitate the reliable delivery of water anywhere in the city.
- **Policy PF-C.1.3:** The City shall only approve new development where an adequate public water supply and conveyance system exists or will be provided by the ACWD.
- **Policy PF-C.1.4:** The City shall promote efficient water use and reduced water demand by:
 - a. Requiring water-conserving design and equipment in new construction;
 - b. Encouraging water-conserving landscaping and other conservation measures;
 - c. Encouraging the retrofitting of existing development with water-conserving devices;
 - d. Providing public education programs;
 - e. Distributing outdoor lawn watering guidelines; and
 - f. Working with ACWD, promote water audit and leak detection programs.

The proposed project would be consistent with the assumptions behind the environmental analysis presented in the 2040 General Plan Draft EIR. The project would therefore have a *less-than-significant impact* on water supplies.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	

Explanation: See Section XIX-b, above.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d)	Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	

Explanation: Solid waste in Union City is collected by Republic Services, which hauls the waste to the Fremont Transfer and Recycling Station, located on Boyce Road between Stevenson Road and Auto Mall Parkway in Fremont. There the waste is sorted to remove hazardous waste, reloaded into large-capacity transfer trucks, and transported to the Altamont Landfill, located adjacent to Interstate 580, east of the City of Livermore. Altamont Landfill is permitted for a total refuse capacity of 124,400,000 cubic yards (approximately 14,880,000 tons), with a daily permitted throughput of 11,150 tons/day.¹⁰¹ As of December 31, 2014, the landfill had 65,400,000 cubic yards of remaining capacity.

Solid waste would be generated at the site during project construction, which would include demolition debris from the removal of the existing pavements and plants on the site. The project would be required to comply with the City's Construction and Demolition Debris (C&DD) Ordinance—which requires the recycling of at least 50 percent of construction and demolition debris generated by a project and 100 percent of all cement, concrete, asphalt concrete, non-contaminated soils, land-clearing debris, and plant debris.

Once project construction is complete and the proposed residences and offices are occupied, the future occupants of the building would generate solid waste on an ongoing basis during the course of their daily operations. The project would be required to recycle materials that are recyclable. Alameda County Waste Management Authority Ordinance 2012-01 requires businesses generating four or more cubic yards of solid waste per week and all multi-family property owners (five units or more) to obtain a level of recycling service adequate for the amount of recyclables they generate. This local ordinance builds upon a California law, AB 341, which requires the commercial and multi-family accounts to either subscribe to recycling services, self-haul, or arrange for periodic pick-up of recyclables. A property owner of a commercial business or multi-family residential dwelling may require tenants to separate their recyclable materials to aid in compliance with the law.

Implementation of the proposed project would result in an incremental increase in the amount of solid waste and recyclables that would be generated by the project. The 2040 General Plan Draft EIR reported that the average per-capital solid waste disposal rate in Union City, which factors in the generation of commercial waste, is 0.56 tons per person per year.¹⁰² Based on the conservative estimate of the population increase that would be generated by the project (see Section XIV-a), the project could generate 153.44 tons of solid waste per year, which represents 0.00377 percent of the annual permitted throughput at Altamont Landfill.

The project would be required to comply with the State and local laws mandating recycling of recyclable materials. There would still be residual waste requiring landfill disposal, but the incremental

¹⁰¹CalRecycle (formerly California Integrated Waste Management Board), Solid Waste Information System Facility/Site Database, Altamont Landfill & Resource Recovery (01-AA-0009), Accessed August 24, 2019 at: <u>https://www2.calrecycle.ca.gov/swfacilities/Directory/01-AA-0009/</u>.

¹⁰²City of Union City, 2040 Union City General Plan Update Draft Environmental Impact Report, SCH #2018102057, Section 4.16, Utilities and Service Systems, Impact UTL-4, June 2019.

increase in solid waste sent to landfill would have an imperceptible effect on landfill capacity. As of December 31, 2014, the landfill had 65.4 million cubic yards of remaining capacity, about half of its permitted capacity of 124.4 million cubic yards.¹⁰³ There would therefore be adequate landfill capacity to accommodate solid waste generated by the proposed project, and the project would have a *less-than-significant impact* on solid waste disposal capacity.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
e)	Comply with federal, State, and local management and reduction statutes and regulations related to solid waste?			X	

<u>Explanation</u>: Under the Alameda County Waste Management Authority Mandatory Recycling Ordinance 2012-01, property owners and managers are required to provide garbage and recycling services to multi-family residential developments in Alameda County with five or more units. Tri-CED Community Recycling provides these services in Union City.

The project applicant has prepared a Trash Management Plan that details how the project will comply with applicable requirements for collection of waste, recyclables, and compostable organic materials (plant debris, food scraps, and food-soiled paper). Due to the size of the project, the applicant will be contracting with Republic Services for recycling services. There will be a residential trash room in each building with two compactor chutes, one for solid waste and one for mixed recycling, along with separate cardboard collection rooms. Organic waste containers will be located in each trash room. There will also be provisions for the collection of office waste and recyclables.

The 2040 General Plan Draft EIR concluded that future development facilitated by the proposed 2040 General Plan would be required to comply with General Plan policies intended to increase recycling and comply with federal, State, and local waste reduction regulations, and would have a less-thansignificant impact due to conflicts with solid waste management statutes and regulations. The EIR identified the following policies in the Public Facilities and Services Element of the proposed 2040 General Plan intended to promote sustainability and reduce the need for landfills:

Goal PF-6: Maintain and support the provision of an efficient program for the management and reduction of solid waste materials, including reuse, recycling, collection, and disposal, to protect public health and the natural environment, to conserve energy and natural resources, and to extend landfill capacity.

Policy PF-6.1: Adequate Service. The City shall strive to ensure that franchise haulers provide convenient, dependable, and competitively priced solid waste, recycling, and organics collections services.

Policy PF-6.2: Solid Waste Disposal. The City shall ensure that the franchise haulers dispose of solid waste in an environmentally sound, dependable, and cost-effective manner.

Policy PF-6.3: Solid Waste Diversion. The City shall meet or exceed State goals regarding waste diversion from landfills and Alameda County Waste Management Authority requirements for recycling and composting, through enhancement of programs

¹⁰³Ibid.
that reduce, reuse, and recycle waste and through ongoing and consistent public outreach and education, monitoring, and enforcement activities.

Policy PF-6-10: Design New Development to Accommodate Recycling and Waste Collection. All new development with private roads shall be required to construct interior roadways that can accommodate the weight of recycling trucks and waste hauling trucks. Multi-family development shall be designed to provide adequate street space and a clear point of travel to easily service containers in the designated collection area. Multi-family developments with centralized waste, recycling and organics collection areas shall be designed to minimize distances from homes and recycling area.

Policy PF-6.11: Fair Share Recycling and Solid Waste Disposal Rates. The City shall strive to have recycling and solid waste collection/processing/disposal rates for residential and commercial uses be based on the fair share cost to provide these services.

Policy PF-6.12: Maintain Competitive Rates. The City shall strive to maintain recycling and solid waste collection/processing/disposal rates that are competitive with nearby cities.

While the policies cited in the EIR had not yet been adopted at the time of preparation of this Initial Study, the existing General Plan has similar policies already in place, including the following policies:

- **Policy PF-F.1.2:** The City shall promote maximum use of solid waste reduction, recycling, composting, and environmentally-safe transformation of wastes and strive for an annual reduction in commercial and industrial waste disposal.
- **Policy PF-F.1.3:** The City shall encourage the development of regional and communitybased recycling facilities in industrial areas.
- **Policy PF-F.1.4:** Where economically feasible, the City should use recycled materials and products.
- **Policy PF-F.1.5:** The City shall work with recycling contractors to encourage businesses to use recycled products in their manufacturing processes and consumers to buy recycled products.
- **Policy PF-F.1.6:** The City shall strive to maintain the diversion of 50 percent of all waste generated citywide for recycling and strive to increase the diversion of waste for recycling to 75 percent by 2010.
- **Policy PF-F.1.7:** The City shall work with recycling contractors to strive to expand the types of materials that can be included in recycling programs.
- Policy PF-F.1.8: The City shall encourage the recycling of construction debris.
- **Policy PF-F.1.9:** The City shall encourage the recycling and proper disposal of hazardous materials.

The proposed project would be required to comply with the applicable policies and regulations intended to reduce solid waste generation in effect at the time of project approval. Furthermore, the project would be consistent with development assumed under buildout of the proposed 2040 General Plan, so its potential impact related to conflicts with solid waste management statutes and regulations has already been evaluated. Therefore, the project would have a *less-than-significant impact* related to conflicts with solid waste management statutes.

XX. WILDFIRE — If located in or near a State Responsibility Area or lands classified as a Very High Fire Hazard Severity Zone, would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				\mathbf{X}

Explanation: As discussed in more detail in Section IX-f, the project would not block or impede access to emergency evacuation routes, and would not interfere with implementation of the City's disaster management operations plan—the *Comprehensive Emergency Management Plan* (CEMP)—or emergency response procedures adopted by any local service providers.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire of the uncontrolled spread of a wildfire?			\mathbf{X}	

<u>Explanation</u>: As discussed in more detail in Section IX-g, the project site is not located within a Very High Fire Hazard Severity Zone (VHFHSZ), as mapped by the California Department of Forestry and Fire Protection (CAL FIRE). The site is not adjacent to or near wildlands or slopes, and is located in an urbanized area substantially developed with pavements and buildings. As concluded in Section IX-g, the potential for wildfire at the project site is extremely low. The project would have a *less-than-significant impact* due to increased risk of wildfire.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X

<u>Explanation</u>: The project site is fully served by existing roads, water supply, and fire-fighting services. No new infrastructure construction would be required to provide fire-fighting services to the project, so there would be no associated construction impacts to the environment.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
d)	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				\boxtimes

Explanation: As discussed in Sections X and VII, respectively, there is no potential for flooding or landslide at the project site. As discussed in Section XX-b, above, there is not a significant risk of wildfire at or near the project site, and there are no nearby slopes, so secondary effects such as post-fire slope instability would not occur. The project would have **no impact** related to the exposure of people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE —

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		

Explanation: Project construction could potentially impact nesting burrowing owls, were they to be present at the time of construction, but implementation of the mitigation measure identified in this Initial Study would ensure that potential impacts to the burrowing owl would not be significant. Mitigation measures have been identified in this Initial Study to ensure that both construction-related and operational air quality impacts remain less than significant. There is a possibility for prehistoric or historic cultural resources to be buried under the site, and subsurface disturbance of the site during construction could damage or destroy any buried cultural resources that may be present. Similarly, if paleontological resources are present, they could also be damaged or destroyed during construction activities. However, mitigation measures have been identified to ensure that these potential impacts would be *less than significant with mitigation*.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)			X	

Explanation: No significant cumulative impacts were identified for the proposed project.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
 c) Does the project have environ will cause substantial adverse beings, either directly or indirect 	ental effects that effects on human ?	X		

<u>Explanation</u>: Residual lead contamination in the site soils could pose a significant health risk impact to construction workers and future residents, but implementation of the identified mitigation measures would ensure that impacts from exposure to hazardous materials would remain *less than significant with mitigation*. No other environmental effects of the project were identified that could cause substantial adverse effects on human beings, either directly or indirectly.

REPORT PREPARATION

This Initial Study/Mitigated Negative Declaration was prepared under the direction of Douglas Herring & Associates, with assistance from the City of Union City.

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MITIGATION MEASURES

Air Quality

Mitigation Measure AQ-1:

BAAQMD Required Fugitive Dust Control Measures. The construction contractor shall reduce construction-related air pollutant emissions by implementing BAAQMD's basic fugitive dust control measures, including:

- All 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 off-site 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 vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- A publicly visible sign shall be posted with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.
- **Mitigation Measure AQ-2:** BAAQMD Required Exhaust Emissions Reduction Measures. The construction contractor shall reduce construction-related air pollutant emissions by implementing the following BAAQMD exhaust emissions reduction measures:
 - 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 California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
 - All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Mitigation Measure AQ-3: BAAQMD Regulation 8, Rule 3 for Architectural Coatings. In order to minimize emissions of volatile organic compounds (VOCs), architectural coatings employed during construction of the proposed

project shall comply with BAAQMD Regulation 8: Organic Compounds, Rule 3: Architectural Coatings (Rule 8-3). The Rule 8-3 VOC architectural coating limits specify that the use paints and solvents with a VOC content of 100 grams per liter or less for interior and 150 grams per liter or less for exterior surfaces shall be required.

Mitigation Measure AQ-4: BAAQMD Enhanced Exhaust Emissions Reduction Measures. The applicant shall implement the following measures during construction to further reduce construction-related exhaust emissions:

All off-road equipment greater than 25 horsepower (hp) and operating for more than 20 total hours over the entire duration of construction activities shall meet the following requirements:

- 1. Where access to alternative sources of power are available, portable diesel engines shall be prohibited; and
- 2. All off-road equipment shall have engines that meet or exceed either USEPA or CARB Tier 4 off-road emission standards
- Mitigation Measure AQ-5: Proposed Receptor Exposure Reduction Measures. The project applicant shall incorporate the following health-risk reduction measures into the project. These features shall be submitted to the City of Union City for review and approval and be included on the project drawings submitted for the construction-related permits or on other documentation submitted to the City:
 - Installation of air filtration to reduce cancer risks and particulate matter exposure for residents and other sensitive populations in the project that are in close proximity to sources of air pollution. Air filter devices shall be rated Minimum Efficiency Reporting Value (MERV)-13 or higher. MERV-13 air filters are considered high efficiency filters able to remove 80 percent of PM_{2.5} from indoor air. MERV-13 air filters may reduce concentrations of DPM from mobile sources by approximately 53 percent and cancer risk by 42 percent. As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required.

To ensure adequate health protection to sensitive receptors, the ventilation system shall meet the following minimal design standards:

- A MERV-13, or higher, rating that represents a minimum of 80-percent efficiency to capture fine particulates;
- At least one air exchange per hour of fresh outside filtered air;
- o At least four air exchanges/hour recirculation; and
- $\circ\,$ At least 0.25 air exchange per hour in unfiltered infiltration.

- Where appropriate, install passive electrostatic filtering systems, especially those with low air velocities (i.e., one mph).
- The project shall be designed to locate sensitive receptors as far away as feasible from the source(s) of air pollution. Operable windows, balconies, and building air intakes shall be located as far away from these sources as feasible.
- Planting trees and/or vegetation between sensitive receptors and pollution source, if feasible. Trees that are best suited to trapping PM shall be planted, including one or more of the following: Pine (*Pinus nigra var. maritima*), Cypress (*X Cupressocyparis leylandii*), Hybrid poplar (*Populus deltoids X trichocarpa*), and Redwood (*Sequoia sempervirens*).

Biological Resources

Mitigation Measure BIO-1: Prior to issuance of a grading permit, a qualified biologist shall conduct a preconstruction survey no more than 30 days prior to any ground-disturbing activities to determine whether the burrowing owl breeds on the site. If owls are encountered during the survey, a Burrowing Owl Mitigation Plan shall be prepared, approved by the Union City Community Development Department and the California Department of Fish and Wildlife (CDFW), and implemented; this plan must be approved by the City prior to issuance of a grading permit. The mitigation plan may include passive relocation during the non-breeding season (September 1st to January 31st). No burrowing owls shall be evicted from burrows during the nesting season (February 1st through August 31st) unless evidence indicates that nesting is not actively occurring (e.g., because the owls have not yet begun nesting early in the season, or because young have already fledged late in the season). During the nesting season, a 250-foot buffer, within which no new activity will be permissible, shall be maintained between project activities and occupied burrows.

Cultural Resources

- Mitigation Measure CR-1: City Staff shall advise the Project Construction Superintendent, Project Inspector, and Building Inspector at a pre-construction conference of the potential for encountering cultural resources during construction and the applicant's responsibilities per CEQA should resources be encountered. This advisory shall also be printed on the Plans and Specification Drawings for this project.
- **Mitigation Measure CR-2:** Throughout site grading and all other ground-disturbing project construction activities, a qualified archaeological monitor shall be present to observe the construction activities in order to identify any historic or prehistoric cultural resources that could be encountered during the ground-disturbing activities. In the event that any cultural

resources are discovered, all ground disturbance within 100 feet of the find shall be halted until the archaeologist can evaluate the resource(s) and, if necessary, recommend mitigation measures to document and prevent any significant adverse effects on the resource(s). (Construction personnel shall not collect any cultural resources.) The results of any additional archaeological effort required through the implementation of this measure and/or Mitigation Measure CR-3 shall be presented in a professional-quality report, to be submitted to the Union Planning Division and the Northwest Information Center at Sonoma State University in Rohnert Park.

Mitigation Measure CR-3: In the event that any human remains are encountered during site disturbance, all ground-disturbing work shall cease immediately and a qualified archaeologist shall notify the Office of the Alameda County Coroner and advise that office as to whether the remains are likely to be prehistoric or historic period in date. If determined to be prehistoric, the Coroner's Office will notify the Native American Heritage Commission of the find, which, in turn, will then appoint a "Most Likely Descendant" (MLD). The MLD in consultation with the archaeological consultant and the City, will advise and help formulate an appropriate plan for treatment of the remains, which might include recordation, removal, and scientific study of the remains and any associated artifacts. After completion of analysis and preparation of the report of findings, the remains and associated grave goods shall be returned to the MLD for reburial.

Geology and Soils

Mitigation Measure GS-1:

iS-1: If any paleontological resources—such as fossilized bone, teeth, shell, tracks, trails, casts, molds, or impressions—are encountered during site grading or other construction activities, all ground disturbance within 100 feet of the find shall be halted until the services of a qualified paleontologist can be retained to identify and evaluate the scientific value of the resource(s) and, if necessary, recommend mitigation measures to document and prevent any significant adverse effects on the resource(s). Significant paleontological resources shall be salvaged and deposited in an accredited and permanent scientific institution, such as the University of California Museum of Paleontology (UCMP).

Hazards and Hazardous Materials

Mitigation Measure HM-1: Prior to the issuance of a grading permit, the project sponsor shall retain the services of a qualified environmental engineering firm to prepare and implement, during site preparation and grading activities, a Site Management Plan (SMP). The SMP shall be designed to protect human health and the environment, including protocols, measures, and techniques for proper handling, management, and disposition of impacted soils on the site during site preparation and grading activities, protection of workers and off-site receptors during site activities, and to ensure proper characterization management

and/or disposal of contaminated environmental media above ESLs. The SMP shall be prepared by a commercial environmental engineering firm with demonstrated expertise and experience in the preparation of SMPs and shall be stamped by an appropriately licensed professional.

The SMP shall establish protocols and measures to address the discovery of presently unknown environmental conditions or subsurface structures such as underground storage tanks or sumps. If the environmental engineering firm subsequently identifies the need for further sampling, the project sponsor shall implement this and any other requirements identified in the SMP.

The project sponsor shall enter into a voluntary agreement with the RWQCB and/or the California Department of Toxic Substances Control (DTSC) for review and approval of the SMP. Prior to issuance of the grading permit, the project sponsor shall provide the City with a copy of the approved SMP and shall implement the SMP during site preparation and grading under the approving agency's oversight at the project sponsor's cost.

Hydrology/Water Quality

Mitigation Measure WQ-1:

Prior to issuance of a grading permit the project sponsor shall obtain National Pollutant Discharge Elimination System (NPDES) construction coverage as required by Construction General Permit (CGP) No. CAS000002, as modified by State Water Resources Control Board (SWRCB) Order No. 2009-0009-DWQ. Pursuant to the Order, the project applicant shall electronically file the Permit Registration Documents (PRDs), which include a Notice of Intent (NOI), a risk assessment, site map, signed certification, Stormwater Pollution Prevention Plan (SWPPP), and other site-specific PRDs that may be required. At a minimum the SWPPP shall incorporate the standards provided in the Association of Bay Area Governments' Manual of Standards for Erosion and Sedimentation Control Measures (2005), the California Stormwater Quality Association's California Stormwater Best Management Practices Handbook (2009), the prescriptive standards included in the CGP, or as required by the Clean Water Program Alameda County. Implementation of the plan will help stabilize graded areas and reduce erosion and sedimentation. The SWPPP shall identify Best Management Practices (BMPs) that shall be adhered to during construction activities. Erosion-minimizing efforts such as hay bales, water bars, covers, sediment fences, sensitive area access restrictions (for vehicle mats in wet example. flagging), areas, and retention/settlement ponds shall be installed before extensive clearing and grading begins. Mulching, seeding, or other suitable stabilization measures shall be used to protect exposed areas during and after construction activities. The SWPPP shall be reviewed and approved by the Union City Public Works Department.

- Mitigation Measure WQ-2: All cut-and-fill slopes shall be stabilized as soon as possible after completion of grading. No site grading shall occur between October 15th and April 15th unless approved erosion control measures are in place.
- Mitigation Measure WQ-3: Wash water used to clean the interior parking garages and enclosed and covered trash collection areas shall be collected in floor drains plumbed to the sanitary sewer if allowed by the Union Sanitary District (USD). If USD will not allow the garage floor drains to be plumbed to the sanitary sewer, the applicant shall install an on-site treatment system or otherwise provide for the treatment and discharge of garage wash water to the satisfaction of the USD.
- **Mitigation Measure WQ-4:** Prior to issuance of a grading permit, the project applicant shall prepare a C.3 Stormwater Control Plan in accordance with current construction and post-construction requirements specified by State Water Resource Control Board (SWRCB) Order No. 2009-0009-DWQ and the post-construction requirements specified by National Pollutant Discharge Elimination System (NPDES) Order No. R2-2015-0049 and the Alameda Countywide Clean Water Program (ACCWP). The C.3 Stormwater Control Plan shall be developed in accordance with the provisions of ACCWP's C.3 Stormwater Technical Guidance manual (Version 6, October 31, 2017, with May 2019 Errata). Additionally, as required by the C.3 Provisions, building permit applications must be accompanied by a Stormwater Control Plan, for review and approval by the City Engineer, which specifies the treatment measures and appropriate source control and site design features that will be incorporated into project design and construction to reduce the pollutant load in stormwater discharges and manage runoff flows.

The C.3 Stormwater Control Plan shall be submitted for review and approval by the Union City Clean Water Program (UCCWP). The plan and a Stormwater Requirements Checklist shall be prepared by a gualified civil engineer or landscape architect. The applicant shall demonstrate to UCCWP via drawings and engineering calculations that the proposed project includes site design features sufficient to capture and treat on site all stormwater runoff from the project site, in compliance with Provision C.3 of the ACCWP. Landscape features shall be used in lieu of structural features to the degree feasible. As part of compliance with the ACCWP, the applicant shall execute and implement an operations and maintenance (O&M) agreement with the City of Union City to provide for the maintenance of all onsite stormwater treatment features and devices in perpetuity, including specification of how the maintenance will be financed. The requirements stipulated in the O&M agreement shall apply to current and all future owners of the project. Prior to issuance of the certificate of occupancy, the applicant shall provide proof of recording this agreement from the Alameda County Clerk Recorder's Office. The applicant shall submit to the Union City Public Works Department annual certificates of compliance with the operations and maintenance requirements stipulated in the O&M agreement.

Noise

- **Mitigation Measure NOI-1:** Prior to the issuance of a building permit, the City shall retain the services of a qualified noise consultant or acoustical engineer (to be paid for by the applicant) to conduct a detailed noise analysis to determine any special noise insulation features necessary to ensure that interior noise levels in the proposed residential units would not exceed 45 dBA CNEL in any habitable room with all doors and windows closed. The noise analysis should stipulate required Sound Transmission Class (STC) ratings for window, door, wall, and floor/ceiling assemblies to be employed in the project in order to achieve the required level of sound insulation. The acoustical design recommendations shall be incorporated into project plans and implemented during project construction.
- Mitigation Measure NOI-2: Prior to the initiation of site clearing and grading, the construction contractor shall erect a temporary solid 6-foot-tall plywood wall around the perimeter of the project site to deflect and contain noise generated by the operation of heavy construction equipment. A separate solid enclosure shall also be erected around stationary equipment such as a generator set or cement mixer. Since a grader is the noisiest piece of equipment that would be utilized during project construction and it would be employed during the earliest phases of construction, when operation of a grader commences, a qualified noise consultant shall be present to take offsite L_{max} noise measurements adjacent to the project site during full operation of the equipment to determine resulting noise levels adjacent to the property line. If noise levels exceed 86 dBA, the noise consultant shall identify additional measures to further attenuate the noise levels to no higher than 86 dBA L_{max}. Such measures could include attaching an angled baffle along the top of the temporary sound wall, lining the interior side of the sound wall with straw bales, providing additional muffling of the grader engine(s), or using guieter equipment (newer equipment is generally quieter than older equipment). The project construction contractor shall implement all additional sound mitigation measures identified by the noise consultant. The plywood sound wall shall be kept in place at least until the completion of all site grading and excavation activities, or as recommended by the noise consultant.

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