

INITIAL STUDY

38134 TEMPLE WAY RESIDENTIAL PROJECT

Lead Agency:

City of Fremont
Community Development Department
39550 Liberty St.
Fremont, CA 94538



September 2024

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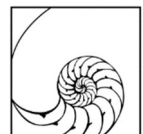


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INTRODUCTION TO THIS DOCUMENT

Purpose

This document serves as the Initial Study for the 38134 Temple Way residential project (“project”), prepared in accordance with the California Environmental Quality Act (CEQA; Public Resources Code Sections 15000 et seq.). As discussed in this document, an Environmental Impact Report (EIR) will be prepared to address indicated topics.

Organization

This document is organized in two sections as follows:

- **Introduction and Project Information.** This section introduces the document and presents the project description including location, setting, and specifics of the lead agency and contacts.
- **Initial Study Checklist.** This section discusses the CEQA environmental topics and checklist questions.

Documents Incorporated by Reference

Pursuant to CEQA Guidelines Section 15150, an environmental analysis may incorporate by reference all or portions of another document which is a matter of public record or is generally available to the public. Information from the documents that have been incorporated by reference has been briefly summarized in the appropriate sections of this document. The following documents are hereby incorporated by reference:

The City of Fremont General Plan 2030 and associated Environmental Impact Report (State Clearinghouse Number 2010082060), adopted in 2011, which are available on the City’s website at: <https://www.fremont.gov/government/departments/community-development/planning-building-permit-services/plans-maps-guidelines/general-plan>. Physical copies of the General Plan and EIR are available for review at the Community Development Department at 39550 Liberty Street and the Fremont Main Library Branch of the Alameda County Library at 2400 Stevenson Boulevard.

Full project application materials that are included in the project files that are available for review at the Community Development Department at 39550 Liberty Street including:

Ray Morneau, Certified Arborist’s Tree Inventory & Pre-Construction Report, March 7, 2023

Quantum Geotechnical, Inc., Geotechnical Investigation, Proposed Residential Development at 38134 Temple Way, August 28, 2023

Ninyo & Moore, Phase I Environmental Site Assessment, 38134 Temple Way, January 6, 2023

Standard Development Requirements

The City of Fremont has established standard development requirements (SDRs) to address resource protection under Fremont Municipal Code (FMC) Chapter 18.218. These requirements apply to air quality (construction-related emissions), biological resources (special-status species), paleontological resources (accidental discovery of paleontological resources), and noise (construction-related noise) in this Initial Study.

The proposed project would comply with these SDRs, which are detailed in the relevant sections (see the following sections: Air Quality, Biological Resources, Geology and Soils, and Noise).

Public Review

This Initial Study will be circulated for public review period. Comments may be submitted in writing by email or regular mail to the following address:

James Willis, Senior Planner
City of Fremont
Community Development Department
39550 Liberty St.
Fremont, CA 94538
Phone: (510) 494-4449
Email: jwillis@fremont.gov

PROJECT INFORMATION

All figures for the project information are included together on pages 6 through 10.

Project Characteristics

- 1. Project Title:** 38134 Temple Way Residential Project
- 2. Lead Agency Name and Address:** City of Fremont
Community Development Department
39550 Liberty St.
Fremont, CA 94538
- 3. Contact Person and Phone Number:** James Willis, Senior Planner
(510) 494-4449
jwillis@fremont.gov
- 4. Project Location:** 38134 Temple Way, Fremont, CA
APNs: 501-1278-50 and -51
- 5. Project Sponsor's Names and Address:** Temple Peralta Investors, LLC
Josh Vrotsos
385 Woodview Avenue
Suite 100
Morgan Hill, CA, 95037
- 6. General Plan Designation:** Low Density Residential
- 7. Zoning:** Residential (R-1-6)
- 8. Description of Project:** 27 single family residences. See Project Description section.
- 9. Surrounding Land Uses and Setting:** Primarily single family residential. See Project Description section.
- 10. Other Public Agencies whose Approval is Required:**

No other public agency approvals are required for the proposed project.

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code §21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

This item is underway and will be addressed in the EIR.

Project Entitlements

Development of the project would require the following approvals from the City of Fremont: Tentative Map, Final Map, Discretionary Design Review, and Private Street.

The project is required to comply with Municipal Regional Permit requirements related to stormwater pollution prevention.

Project Site and Vicinity

The project site is located at 38134 Temple Way, on two parcels totaling 2.3 acres (APNs 501-1278-50 and -51) at the corner of Temple Way and Peralta Boulevard within the Parkmont area of Fremont, California (**Figure 1: Project Location**). The site is relatively flat with elevations ranging from approximately 57 to 60 feet above mean sea level.

The project site is currently developed with a 26,378-square foot church and associated parking lot and landscaping. The site was formerly occupied by the Church of Jesus Christ of Latter-day Saints, but has been vacant since early 2023 (**Figure 2: Existing Conditions**). While historic use can be considered the baseline under CEQA when a site is recently vacant, for a conservative analysis, this document assumes no existing operational use when considering net changes.

Single-family residences are located to the north, east, and west (across Temple Way) of the project site, with vacant land to the south across Peralta Boulevard. The vacant land was formerly agricultural but has been fallow for some time and is surrounded by single-family residences and a church.

The City of Fremont General Plan designates the project site as Low Density Residential, and the site is zoned Residential (R-1-6), which stands for single-family housing with a minimum lot size of 6,000 square feet.

Description of the Project

Proposed Residential Development

The project proposes to demolish the existing vacant church and parking lot and develop 27 single-family residences.

Each residential unit would have a square footage between 1,900 and 2,300 square feet. All units would be two stories, with three bedrooms and 2.5 baths, a 2-car garage, and a private yard. Lot sizes would range from 2,477 to 3,861 square feet. The front doors of the units along Temple Way and Peralta Boulevard would face the streets, while the units along the north and east sides would face an internal walkway to the back of existing homes along Horner Way and Acacia Street.

The project would provide 54 parking spaces within 27 garages, placed at the rear of each unit and accessible by a private internal roadway. This alley-loaded design is intended to reduce the need for driveway cuts along Temple Way and to minimize the prominence of garages from the public roadways. No parking would be allowed on the private internal roadway, which would accommodate emergency vehicles and other trucks (such as garbage pickup). Guests would park along adjacent public road frontages, on a first come first serve basis.

Specific details of the proposed development are shown in **Figure 3: Illustrative Site Plan, Figure 4: Lotting Plan, and Figure 5: Project Elevations.**

Affordability and State Density Bonus

The project applicant is seeking to provide affordable housing as part of its proposal pursuant to the State Density Bonus Law, which enables eligible applicants to receive (1) a density bonus, (2) incentives and concessions, (3) waivers and reductions of development standards, and (4) reduced parking requirements:

- 1) **Density Bonus:** The project applicant would construct and set aside 3 units as affordable units (two at very low-income level, and one unit at moderate income level), which allows the project up to 7 additional units above base density under the 32.5% density bonus [Government Code 65915(f)(1)]. The project applicant is requesting 6 additional units.
- 2) **Incentives and Concessions:** With the provision of 10% low-income affordable units, the project is eligible for two incentives or concessions. The project applicant is requesting to reduce the minimum parcel sizes from 6,000 square feet to approximately 2,477 square feet for residential lots.
- 3) **Development Standard Waivers and Reductions:** The project applicant is requesting a waiver of the following:
 - a. Minimum lot depth of 100 feet - proposing a minimum of approximately 75.2 feet
 - b. Required 1,600 square feet of common open space – no common open space proposed
 - c. Minimum distance between windows of 15 feet - proposing approximately 8.8 feet
 - d. Minimum side yard of 15 feet – proposing approximately 8.8 feet
- 4) **Reduced Parking Requirements:** The project applicant is requesting the City not require on-site guest parking.

Other Site improvements

A 6-foot-tall privacy fence would be installed along the internal borders of the site, between the front yard of the project units and the backyards of the existing residences on Horner Way and Acacia Street. Within the fence, an interior landscaped sidewalk would be constructed to provide pedestrian access to the front of these project homes.

The sidewalks along the public street frontages would be rebuilt as detached sidewalks with a landscaping strip and street trees along both Temple Way and Peralta Boulevard.

In addition to landscaped front yards and landscaping adjacent to garage entries, each unit would have a fenced private yard area, usually a side yard.

Of 41 existing trees, 34 would be removed to accommodate the proposed development and 69 new trees would be planted.

Infrastructure and Utilities

The project anticipates receiving utility service from the following providers:

- Electricity: Pacific Gas & Electric Company
- Solid Waste & Recycling: Republic Services
- Water: Alameda County Water District
- Sewer: Union Sanitary District
- Stormwater: City of Fremont

Water, sewer, and storm drain lines for the project would be extended from existing utilities in Peralta Boulevard and/or Temple Way.

Stormwater collection and management would be accommodated on-site with bioretention treatment facilities meeting required capacity and stormwater treatment quality standards before connecting to the City's stormwater lines. Off-site improvements would include below grade planters along Temple Way for stormwater capture and treatment.

The Alameda County Water Department (ACWD) determined that the existing water main had insufficient supply for the proposed development, so approximately 550 feet of the existing 6-inch water main along Temple Way would be replaced with a new 8-inch water main.

The following overhead electrical lines would be undergrounded:

- approximately 40 feet of overhead electrical line that crosses Temple Way from the joint pole at the corner of Temple Way and Utah Way to the joint pole on the project site side of Temple Way
- approximately 260 feet of overhead electrical line along Peralta Boulevard, from the joint pole on the opposite corner of Temple Way and Peralta Boulevard to the joint pole at the eastern edge of the project site

The project is proposed to be constructed for all-electrical operations, with no gas hook-ups, consistent with the City's Climate Ready Fremont goals for new residential construction.

The project proposes new asphalt pavement on the Peralta Boulevard frontage.

Construction

Project construction is estimated to occur over approximately 20 months, with a start date potentially as early as late 2024 assumed for this analysis. Site grading activities would span approximately 1-2 months, with paving and building construction following. For purposes of this analysis, occupancy of residential units on the site was assumed to begin as early as late 2025, with final occupancy by mid-to-late 2026.

This schedule is intended to be a reasonable projection of the earliest and fastest completion of the construction activities, which would have the greatest potential for environmental impacts. A later or slower construction schedule/occupancy would not worsen the conclusions of this analysis.

The mostly flat site would be re-graded following removal of existing improvements and undocumented fill, and to accommodate proposed landscaping with bioretention areas for stormwater control. Grading to remove or condition undocumented fill and install utilities would involve earth moving to depths of 4 to 6.5 feet across the site.

Required Approvals

The project requires the following City approvals:

- Tentative Map
- Final Map
- Discretionary Design Review
- Private Street

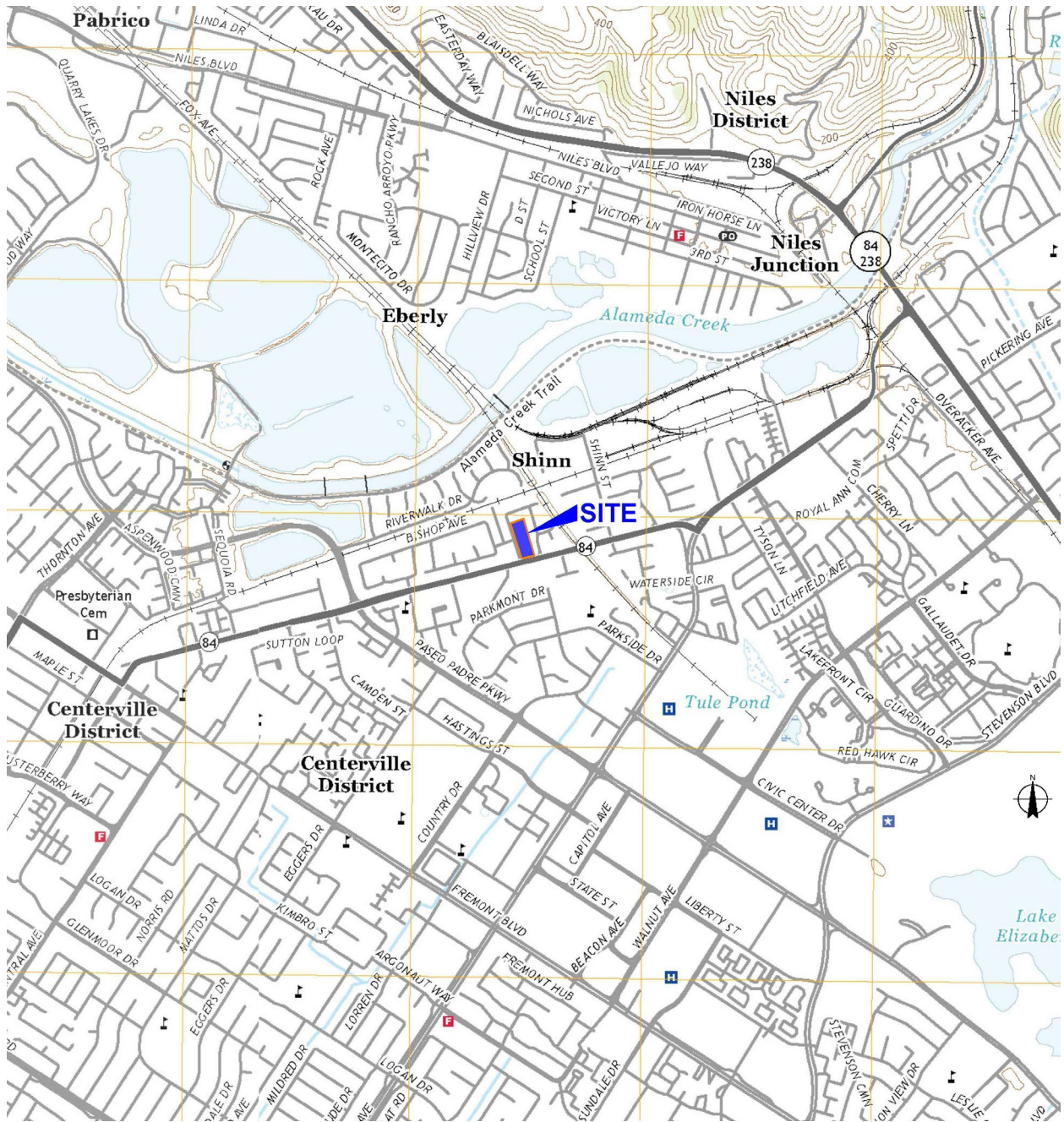


Figure 1: Project Location
 Source: Ninyo & Moore, 2023

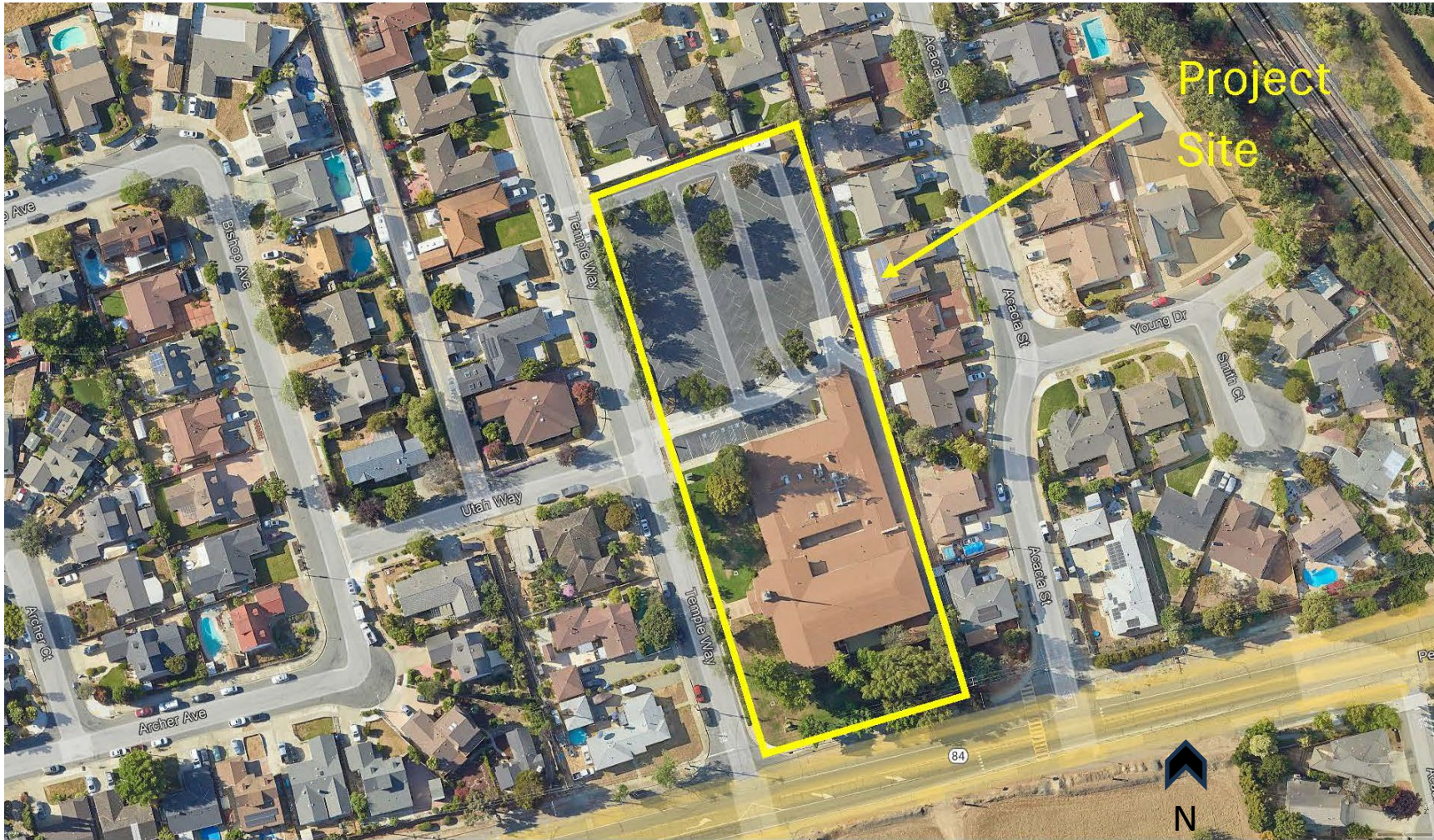



Figure 2: Existing Conditions
Source: Google Earth, modified







SITE INFO:

Site Area: 2.31 Acre
 Number of units: 27 units
 Density: 11.69 Du/ acre

 100 sf minimum ground level private open space required per unit. (min 10' dimension.) Rectangle represents a 10' x 10' square.

UNIT TYPES:

-  PLAN 1, (6 UNITS)
-  PLAN 2, (4 UNITS)
-  PLAN 3, (9 UNITS)
-  PLAN 4, (8 UNITS)

A: Contemporary Elevation style
 B: Abstract Traditional style

Figure 3: Illustrative Site Plan
 Source: Project Plan Set, dated December 1, 2023

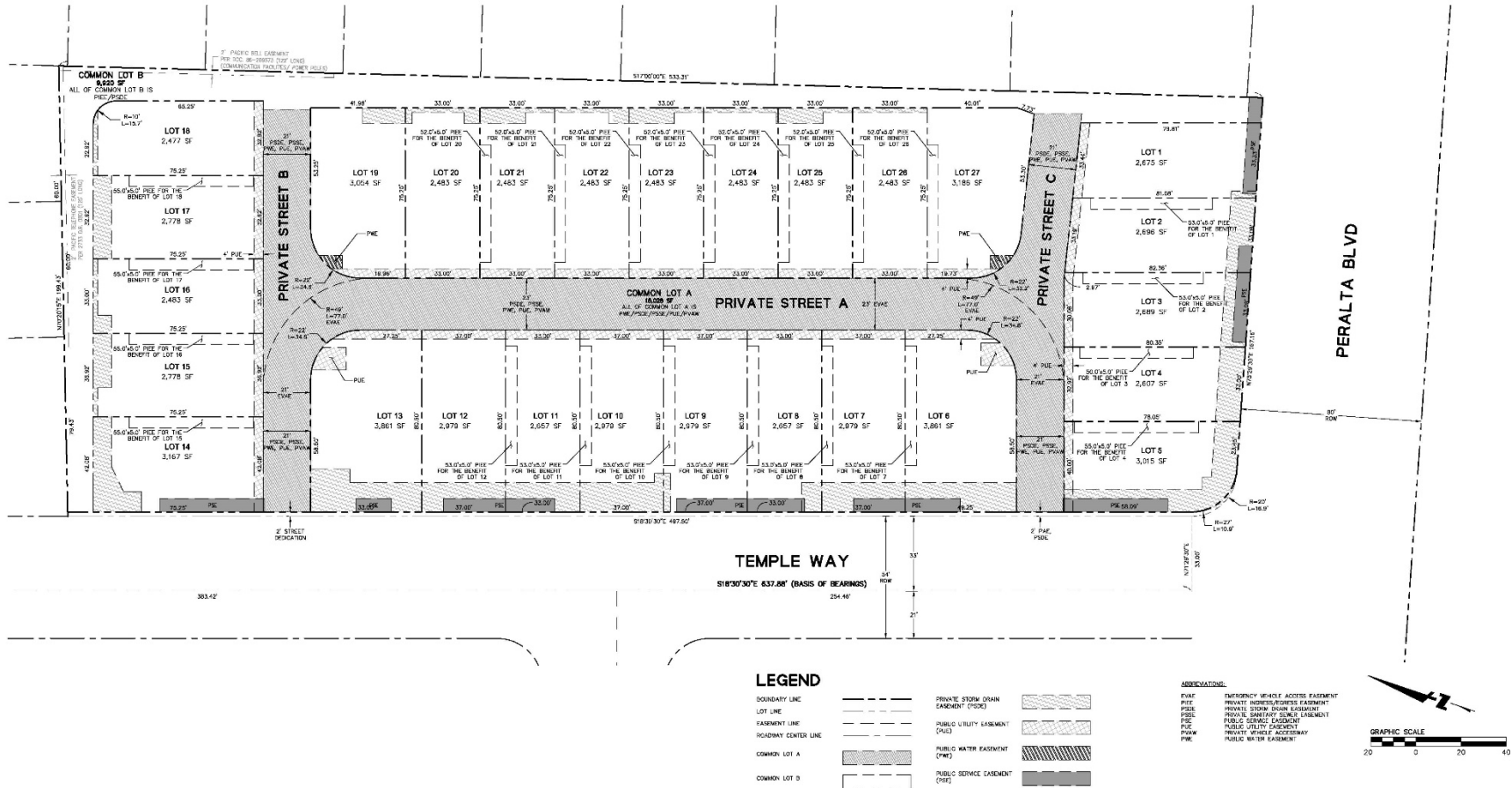


Figure 4: Lotting Plan

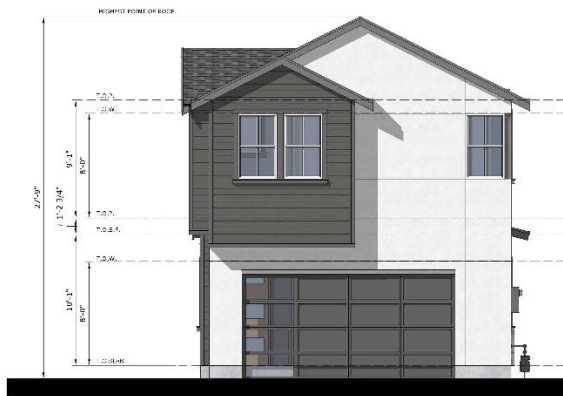
Source: Project Plan Set, dated December 1, 2023



FRONT ELEVATION



RIGHT ELEVATION



REAR ELEVATION



LEFT ELEVATION

Figure 5: Project Elevations

Source: Project Plan Set, dated December 1, 2023

LEAD AGENCY DETERMINATION

On the basis of this evaluation, it can be concluded that:

- The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because mitigation measures to reduce these impacts will be required of the project. A MITIGATED NEGATIVE DECLARATION will be prepared.
- The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- 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 attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- 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.

INITIAL STUDY CHECKLIST

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. Where checked below, the topic with a potentially significant impact will be addressed in an EIR.

- | | | |
|--|---|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture / Forest Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input type="checkbox"/> Geology / Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards / Hazardous Materials |
| <input type="checkbox"/> Hydrology / Water Quality | <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Mineral Resources |
| <input type="checkbox"/> Noise | <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input checked="" type="checkbox"/> Transportation | <input checked="" type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Wildfire | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

For the items checked above, analysis is currently underway and an EIR will be prepared to address the indicated topics above.

EVALUATION OF ENVIRONMENTAL EFFECTS

The Checklist portion of the Initial Study begins below, with explanations of each CEQA issue topic. Four outcomes are possible, as explained below.

1. A “no impact” response indicates that no action that would have an adverse effect on the environment would occur due to the project.
2. A “less than significant” response indicates that while there may be potential for an environmental impact, there are standard procedures or regulations in place, or other features of the project as proposed, which would limit the extent of this impact to a level of “less than significant.”
3. Responses that indicate that the impact of the project would be “less than significant with mitigation” indicate that mitigation measures, identified in the subsequent discussion, will be required as a condition of project approval in order to effectively reduce potential project-related environmental effects to a level of “less than significant.”
4. A “potentially significant impact” response indicates that further analysis is required to determine the extent of the potential impact and identify any appropriate mitigation. If any topics are indicated with a “potentially significant impact,” these topics would need to be analyzed in an Environmental Impact Report.

AESTHETICS

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|--|--------------------------------|---------------------------------------|-------------------------------------|--------------------------|
| <p>Except as provided in Public Resources Code section 21099 (where aesthetic impacts shall not be considered significant for qualifying residential, mixed-use residential, and employment centers), would the project:</p> | | | | |
| a) Have a substantial adverse effect on a scenic vista? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Public Resources Code section 21099 specifies that aesthetic impacts shall not be considered significant for qualifying infill projects in transit priority areas. The project is not within a transit priority area,¹ and therefore Public Resources Code section 21099 does not apply to the project. The potential for the project to result in aesthetics impacts is analyzed below.

a) Scenic Vistas

The General Plan identifies as scenic resources the panoramic views across the city and bay from neighborhoods above Mission Boulevard, views of Niles Canyon, and the scenic backdrop of the East Bay hills.² The project site is in a developed area and would not itself be considered a scenic resource or an area identified as one from which to view a scenic resource – it is not located above Mission Boulevard or proximate to Niles Canyon or the East Bay hills. The area in which the project

¹ Metropolitan Transportation Commission, 2021, Transit Priority Area, accessed at: <https://www.arcgis.com/home/item.html?id=370de9dc4d65402d992a769bf6ac8ef5>.

² City of Fremont, December 2011, *City of Fremont General Plan*, Chapter 4: Community Character, Goal 4-5 on pp. 4-52 to 4-55.

is located is generally flat and views across the site toward East Bay hills are already predominantly blocked by other area development and landscaping. While there is the potential that the project could be visible from more distant, higher-elevation locations, due to the distance, the project development would not be prominent in those views and would be part of city views.

The existing development includes some ground level parking and a church building with some lower single-story areas and some vaulted areas and ranges in height from about 14 feet to about 26 feet tall. The architecture of the proposed homes would vary with the highest elements reaching between 26 feet and 29 feet 9 inches for different models. Immediately adjacent homes are primarily single-story though two-story homes are common in the surrounding neighborhood. The proposed development would result in structures approximately the same or above the existing heights depending on the location at the site. However, two-story homes of the height proposed are allowed in the existing zoning and as discussed above, there are no significant scenic views to or across the site. Therefore, the project impact with respect to scenic vistas would be ***less than significant***.

b) Scenic Highways

According to the California Department of Transportation State Scenic Highway Program, the closest state scenic highway is State Route 84 east of Mission Boulevard (through Niles Canyon), which is located more than 1 mile east of the project site.³ Due to the intervening distance, development, and landscaping, the project site is not visible from this section of highway and would in any case be generally consistent with the character of the existing residential area in which it is located.

The General Plan also designates the section of State Route 84 from I-880 onto the Dumbarton Bridge (2.8 miles at the closest to the project site) and Paseo Padre Parkway (2,400 feet or more from the project site) as scenic corridors.⁴ Due to the intervening distance, development, and landscaping, the project site is not visible from these roadways and would in any case be generally consistent with the character of the existing residential area in which it is located.

Development of the proposed project would have a ***less than significant*** impact with respect to scenic resources within a state scenic highway.

c) Visual Character and Quality

The project would change the development at the site from a church to single-family homes. Immediately adjacent homes are primarily single-story though two-story homes are common in the surrounding neighborhood. The proposed development would result in structures approximately the same or above the existing heights depending on the location at the site. However, two-story homes of the height proposed are allowed in the existing zoning. The project proposes smaller lots than surrounding residential lots, but smaller lots are allowed under the State Housing Density Bonus law. The internal alley-loaded units would minimize public roadway curb cuts and the prominence of garages from public streets.

While a change to the look of the site, as a residential project in an area zoned for residential uses, and consistent with applicable site zoning and State laws, the project would not represent a

³ California Department of Transportation, State Scenic Highway Mapping System, available at: <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>

⁴ City of Fremont, December 2011, *City of Fremont General Plan*, Chapter 4: Community Character, Diagram 4-6.

degradation of the visual character and quality of the site and surroundings. Therefore, the project's impact on visual character and quality would ***be less than significant***.

d) Light and Glare

The project is located in a residential area that is surrounded by existing sources of light typical of urban environments including streetlights and vehicle headlights, and interior and exterior lighting from other residential development in the vicinity.

The project would include residential light and glare sources generally consistent with those existing in the neighborhood and meeting the City's residential lighting standards per FMC 18.90.030(c). Parking for the project would be in individual garages at the rear of each lot, minimizing headlight illumination onto project or adjacent residences. A screen of trees would be planted along the north and east sides of the project site, along with a 6-foot-tall privacy fence, further reducing views of on-site light and glare sources from adjacent homes.

Therefore, because the project's sources of light and glare would be both consistent with the existing area and City standards, these would not be considered substantial and the project's impacts related to light or glare would be ***less than significant***.

AGRICULTURE AND FOREST RESOURCES

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|--|--------------------------------|---------------------------------------|------------------------------|-------------------------------------|
| <p>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland.</p> | | | | |
| <p>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 Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.</p> | | | | |
| <p>Would the project:</p> | | | | |
| <p>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?</p> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| <p>b) Conflict with existing zoning for agricultural use or a Williamson Act contract?</p> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| <p>c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?</p> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| <p>d) Result in the loss of forest land or conversion of forest land to non-forest use?</p> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| <p>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?</p> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

a-e) Agricultural and Forestry Resources

The project consists of redevelopment of a currently developed site. The project site does not contain any farmland/agricultural resources or timberland/forest land, or related uses. The site is identified as “urban and built-up land” (and not farmland of any kind) on the California Department of Conservation’s Farmland Map.⁵ There are no agriculturally zoned lands or existing Williamson Act contracts on or in the vicinity of the project site. Therefore, no agriculture or forest resource impacts would result from the proposed project (***no impact***).

⁵ California Department of Conservation, California Important Farmland Finder Map, available at <https://maps.conservation.ca.gov/dlrp/ciff/>.

AIR QUALITY

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|---|--------------------------------|---------------------------------------|-------------------------------------|--------------------------|
| Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations. | | | | |
| Would the project: | | | | |
| a) Conflict with or obstruct implementation of the applicable air quality plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

a) Air Quality Plan

Projects within Fremont are subject to the Bay Area Clean Air Plan, first adopted by the Bay Area Air Quality Management District (BAAQMD) (in association with the Metropolitan Transportation Commission and the Association of Bay Area Governments) in 1991 to meet state requirements and those of the Federal Clean Air Act, and regularly updated. The plan is meant to demonstrate progress toward meeting the ozone standards, but also includes other elements related to particulate matter, toxic air contaminants, and greenhouse gases. The latest update to the plan, adopted in April 2017, is the Bay Area 2017 Clean Air Plan.⁶

BAAQMD recommends analyzing a project’s consistency with current air quality plan primary goals and control measures. The impact would be significant if the project would conflict with or obstruct attainment of the primary goals or implementation of the control measures.

The primary goals of the Bay Area 2017 Clean Air Plan are:

- Attain all state and national air quality standards.

⁶ BAAQMD, adopted April 19, 2017, *Spare the Air - Cool the Climate: A Blueprint for Clean Air and Climate Protection in the Bay Area*, available at <https://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans>.

- Eliminate disparities among Bay Area communities in cancer health risk from toxic air contaminants.
- Reduce Bay Area greenhouse gas emissions 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050. (This standard is addressed in the Greenhouse Gas Emissions section.)

Many of the Clean Air Plan's control measures are targeted to area-wide improvements, large stationary source reductions, or large employers and these are not applicable to the proposed project. However, the project would be consistent with all rules and regulations related to construction activities and the proposed development would meet current standards of energy and water efficiency (Energy Control Measure EN1 and Water Control Measure WR2) and recycling and green waste requirements (Waste Management Control Measures WA3 and WA4) and does not conflict with applicable control measures aimed at improving access/connectivity for bicycles and pedestrians (Transportation Control Measure TR9) or any other control measures. The project, therefore, would implement the applicable control measures of the current Clean Air Plan, and would not hinder implementation of any control measure. The project would be required to comply with all applicable rules and regulations related to emissions and health risk and would not result in a new substantial source of emissions or toxic air contaminants (see items b-d below) or otherwise conflict with the primary goals of the 2017 Clean Air Plan.

The project, therefore, would be consistent with the Clean Air Plan and have a *less than significant* impact in this regard.

b) Air Quality Standards

Ambient air quality standards have been established by state and federal environmental agencies for specific air pollutants most pervasive in urban environments. These pollutants are referred to as criteria air pollutants because the standards established for them were developed to meet specific health and welfare criteria set forth in the enabling legislation and include ozone precursors (nitrogen oxides and reactive organic gases), carbon monoxide, and suspended particulate matter (PM₁₀ and PM_{2.5}). The Bay Area is considered "non-attainment" for ozone and particulate matter.

Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions may contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact were considerable, then the project's impact on air quality would be considered significant.

Air quality impacts fall into two categories: short-term impacts that would occur during construction of the project and long-term impacts due to project operation. BAAQMD's recommended thresholds of significance are average daily emissions of 54 pounds per day or 10 tons per year of nitrogen oxides (NO_x), reactive organic gases (ROG), and PM_{2.5}, and 82 pounds per day or 15 tons per year of PM₁₀. Both the daily and annual thresholds apply to operation and only the average daily thresholds apply to construction.

Construction-Period Emissions

Construction of the project would involve site preparation, building construction, paving, and finishing and landscaping. Although temporary, construction activities have the potential to cause both nuisance and health-related air quality impacts.

The Bay Area Air Quality Management District (BAAQMD) includes screening criteria in their CEQA Guidelines that identify project sizes by type that could have the potential to result in emissions over criteria levels.⁷ Projects below this screening size and meeting other criteria can be assumed not to have significant impacts without the need for further consideration. For a single-family home development, the screening size is 254 dwelling units for construction pollutants. At 27 units, the proposed project is well below this screening level size. However, because construction activities involve demolition, construction emissions are considered further below.

Construction emissions for the project were modeled using the California Emissions Estimator Model ("CalEEMod") Version 2020.4.0. Project details were entered into the model including the demolition/earthwork volumes and construction schedule. Model defaults were otherwise used. The CalEEMod inputs and outputs are included in Attachment A.

The results from emissions modeling for construction are summarized in **Table 1** (and included in full in Attachment A).

Table 1: Daily Regional Critical Air Pollutant Emissions for Construction (Pounds per Day)

| Description | ROG | NOx | PM ₁₀ * | PM _{2.5} * |
|-------------------------|-----|-----|--------------------|---------------------|
| Average Daily Emissions | 2.7 | 3.7 | <1 | <1 |
| BAAQMD Daily Thresholds | 54 | 54 | 82 | 54 |
| Exceeds Threshold? | No | No | No | No |

* Applies to exhaust emissions only

CalEEMod results included as Attachment A, converted from tons per year to pounds per day across the active construction days (approximately 412 days).

As demonstrated in the table above, the projects construction emissions would be below BAAQMD significance thresholds.

However, BAAQMD recommends implementation of basic measures to reduce construction-related emissions and fugitive dust for all projects, regardless of the comparison to threshold levels to determine that impacts would remain less than significant. These recommendations are consistent with the City of Fremont's SDRs relating to construction period emissions.

SDR FMC 18.218.050(a)(1) Construction Related Emissions. The following construction measures, as periodically amended by BAAQMD, are required for all proposed development projects to reduce construction-related fugitive dust and exhaust emissions:

- (A) All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times daily.

⁷ Bay Area Air Quality Management District, 2022, California Environmental Quality Act Air Quality Guidelines, Table 4-1.

- (B) All haul trucks transporting soil, sand, or other loose material off site shall be covered.
- (C) 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.
- (D) All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
- (E) 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.
- (F) Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five 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.
- (G) All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- (H) A publicly visible sign shall be posted with the telephone number and person to contact regarding dust complaints. This person shall respond and take corrective action within 48 hours. BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations. With implementation of basic construction management practices to control construction dust and emissions as detailed in mitigation measure Air-1, the impact of the project related to construction-period criteria pollutants would be less than significant with mitigation.

FMC 18.218.050(a)(2), which includes BAAQMD's supplemental construction measures, is required for projects that have been determined to exceed construction related air quality significance thresholds. While this project does not exceed significance thresholds related to construction emissions, due to the adjacent residences, as part of the project's construction management plan (see subsection c, below) the applicant has committed to also implementing the supplemental measures SDR:

SDR FMC 18.218.050(a)(2) Construction Related Emissions – Supplemental Measures. The following supplemental construction measures, as periodically amended by BAAQMD, are required for all proposed development projects that would exceed the thresholds of significance for construction criteria air pollutant and precursors provided in the most recent BAAQMD CEQA Guidelines:

- (A) All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.
- (B) All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
- (C) Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.

- (D) Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
- (E) The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the total area of surfaces disturbed at any one time.
- (F) All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- (G) Site accesses to a distance of 100 feet from the paved road shall be treated with a six- to 12-inch compacted layer of wood chips, mulch, or gravel.
- (H) Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.
- (I) Idling time of diesel-powered construction equipment shall be limited to two minutes.
- (J) The project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project-wide fleet-average 20 percent nitrogen oxide (NOx) reduction and 45 percent particulate matter (PM) reduction compared to the most recent Air Resources Board fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.
- (K) Low volatile organic compound (i.e., reactive organic gas) coatings beyond the local requirements (i.e., BAAQMD Regulation 8, Rule 3: Architectural Coatings) shall be used.
- (L) All construction equipment, diesel trucks, and generators shall be equipped with best available control technology for emission reductions of NOx and PM.
- (M) All contractors shall use equipment that meets the Air Resources Board's most recent certification standard for off-road heavy-duty diesel engines.

The project would implement SDRs FMC 18.218.050(a)(1) Construction Related Emissions and FMC 18.218.050(a)(2) Construction Related Emissions – Supplemental Measures to minimize construction period emissions and dust and the impact related to construction-period criteria pollutant impacts would be ***less than significant***.

Operational Emissions

BAAQMD presents screening criteria in their Guidelines that identify project sizes by type that could have the potential to result in emissions over criteria levels.⁸ Projects below this screening size can be assumed not to have significant impacts without the need for further quantification. The Project is well below BAAQMD's screening size for operational criteria pollutants (5.5% of the 494 mid-rise multi-family dwelling units screening size and 15.6% of the 19,000 square feet of retail screening

⁸ Bay Area Air Quality Management District, 2022, California Environmental Quality Act Air Quality Guidelines, Table 4-1.

size). Therefore, the project would have a less than significant impact related to air quality emissions without the need for additional quantification or mitigation.

Additionally, BAAQMD presents traffic-based criteria as screening criteria for carbon monoxide impacts. As operation of the proposed Project would not significantly impact traffic levels (see the traffic analysis, Appendix G), the Project would be below carbon monoxide threshold levels.

The project was compared to BAAQMD screening criteria for operational pollutants.⁹ As it relates to operational pollutants, this criteria includes screening level sizes of 421 dwelling units for single family housing. The project falls well below the screening thresholds. Therefore, the project impact related to operational pollutant emissions would be *less than significant*.

c) *Sensitive Receptors*

BAAQMD identifies “Overburdened Communities” as those with residents already experiencing higher-than normal levels of air pollution. No portion of Fremont is identified as an overburdened community and therefore no supplemental environmental justice analysis is warranted in addition to the analysis below.^{10, 11}

Construction activities associated with the project would generate construction-related toxic air contaminants (TACs), specifically diesel particulate matter, from on-road haul trucks and off-road equipment exhaust emissions, resulting in increased cancer risk or non-cancer health concerns for nearby sensitive receptors. Due to the variable nature of construction activity, the generation of TAC emissions would be temporary, especially considering the short amount of time such equipment is typically within an influential distance that would result in the exposure of sensitive receptors to substantial concentrations.

The project would use standard construction equipment such as loaders, backhoes, cranes, and haul trucks, similar to other projects under construction. The City’s SDRs require projects to submit a construction management plan that outlines how the project would minimize potential construction impacts:

SDR FMC 18.218.050(c): Construction Management Plan. Prior to the issuance of the first construction-related permit for a new development project, the project applicant and his/her general contractor shall submit a construction management plan (CMP) for review and approval by the planning and building divisions and other relevant city departments, such as the fire department and the public works department, as directed. The CMP shall contain measures to minimize potential construction impacts including measures to comply with all construction-related conditions of approval (and mitigation measures if applicable) such as dust control, construction emissions, hazardous materials, construction days/hours, construction traffic control, waste reduction and recycling, erosion and sedimentation control, storm water pollution prevention, noise control, complaint management, and cultural and tribal cultural resource management as applicable. The CMP shall provide project-specific information including descriptive procedures, approval documentation, and drawings (such as a site logistics

⁹ Bay Area Air Quality Management District, 2022, California Environmental Quality Act Air Quality Guidelines, Table 4-1.

¹⁰ Bay Area Air Quality Management District, 2022, California Environmental Quality Act Air Quality Guidelines, Chapter 2.

¹¹ The Office of Environmental Health Hazard Assessment (OEHHA), on behalf of the California Environmental Protection Agency (CalEPA), last updated October 2021, Communities Environmental Health Screening Tool: CalEnviroScreen Version 4.0, available at <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40>.

plan, fire safety plan, construction phasing plan, proposed truck routes, traffic control plan, complaint management plan, construction worker parking plan, and litter/debris clean-up plan) that specify how potential construction impacts will be minimized and how each construction-related requirement will be satisfied throughout construction of the project.

The applicant has committed to using low TAC emission equipment, and the Construction Management Plan identified above will include the following measure, formalized as a Condition of Approval:

Condition of Approval – Construction Diesel Emission Control: All off-road diesel equipment used during construction of the project shall be equipped with the most effective Verified Diesel Emission Control Strategies available for the engine type as certified by CARB (Tier 4 engines automatically meet this requirement).

The project would implement SDR FMC 18.218.050(c): Construction Management Plan detailed here including construction diesel emission control and SDRs FMC 18.218.050(a)(1) Construction Related Emissions and FMC 18.218.050(a)(2) Construction Related Emissions – Supplemental Measures discussed under the Air Quality Standards section above, and the project would have a ***less than significant*** impact related to exposure of sensitive receptors.

d) *Objectionable Odors*

Typical sources of objectionable odors include chemical plants, sewage treatment plants, large composting facilities, rendering plants, and other large industrial facilities that emit odorous compounds. The project would not include any activities that create objectionable odors.

During construction, diesel-powered vehicles and equipment would create odors that some may find objectionable; however, these odors would be temporary and not likely to be noticeable much beyond the project site's boundaries. Therefore, the potential for objectionable odor impacts from the proposed project is ***less than significant***.

BIOLOGICAL RESOURCES

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|--|--------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|
| Would the project: | | | | |
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as 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 the U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

a) Special Status Species

The project site is fully developed and surrounded by other development and therefore has no substantial habitat value. Plant and animal species that would be likely to occur on the site would be common species associated with developed, and ruderal (meaning disturbed) conditions throughout the San Francisco Bay Area.

The federal Migratory Bird Treaty Act and Fish and Game Code of California protect bird species year-round, as well as their eggs and nests during the nesting season. The list of migratory birds includes almost every native bird in the United States. Tree and shrub removal during project construction activities have the potential to impact nests if construction is initiated during the breeding bird season. The City of Fremont's SDR for nesting birds would apply:

SDR FMC 18.218.050(b)(2): Nesting Birds. New development projects with the potential to impact nesting birds through tree or shrub removal shall implement the following measures prior to removal of any trees/shrubs, grading, or ground disturbing activities:

- (A) Avoidance. Proposed projects shall avoid construction activities during the bird nesting season (February 1st through August 31st).
- (B) Preconstruction Surveys. If construction activities are scheduled during the nesting season, a qualified biologist shall conduct a preconstruction survey to identify any potential nesting activity. The biologist shall determine the number and time frame (prior to construction) of surveys to be conducted.
- (C) Protective Buffer Zone(s). If the survey indicates the presence of nesting birds, protective buffer zones shall be established around the nests. The size of the buffer zone shall be recommended by the biologist in consultation with the CDFW depending on the species of nesting bird and level of potential disturbance.
- (D) Initiation of Construction Activities. The buffer zones shall remain in place until the young have fledged and are foraging independently. A qualified biologist shall monitor the nests closely until it is determined the nests are no longer active, at which time construction activities may commence within the buffer area. The project would have a less than significant adverse effect, either directly or through habitat modifications, on special status species. No mitigation is necessary.

The project would implement SDR FMC 18.218.050(b)(2): Nesting Birds to minimize disturbance of nesting birds and the proposed project would result in a *less than significant* impact to special-status species.

b-c) Sensitive Habitat and Wetlands

The Fremont General Plan lists oak woodland, annual grassland, riparian habitat, drainages, and wetlands, including vernal pools, as sensitive habitats that may be present in Fremont. None of these habitats are present on the project site, which is fully developed under current conditions. The closest wetlands to the project site is Alameda Creek, approximately 0.3 miles north of the project site.¹²

¹² City of Fremont, December 2011, *City of Fremont General Plan*, Chapter 7: Conservation, Diagram 7-3.

The project would have **no impact** on sensitive habitat and wetlands.

d) Wildlife Corridors

The project site is already fully developed and surrounded by other developed areas, and therefore the proposed project would not represent a substantial change in the conditions of the site relative to use as a nursery site or a wildlife corridor. While the project site does lie between two bodies of water (Lake Elizabeth and the lakes north of Alameda Creek), there is no connected open space near the project site that would be used by wildlife to migrate from one waterway to the other. Wildlife would not have to travel across the project site to access other natural areas. As such, the project site does not have the capability to function as a substantial wildlife corridor or wildlife nursery site. The project would have a **less than significant** impact on fish or wildlife movement or nursery sites.

e) Local Policies and Ordinances

The applicant has submitted an arborist report, which is available as part of the project application materials.¹³ There are 41 trees on the project site, 34 of which would be removed for the project. None of the trees qualify as “landmark” trees under the City’s Municipal Code, but almost all qualify as protected trees. Pursuant to Chapter 18.215 of the City of Fremont’s Municipal Code, a tree removal permit is required prior to removing, damaging, or relocating protected trees on private property. The project would include the planting of 69 new trees, which is anticipated to satisfy tree removal permit requirements. There are no other local policies or ordinances related to biological resources that could be applicable to the project site. The project would have a **less than significant** impact related to local biological resources policies or ordinances.

f) Conservation Plans

The project is located in a residential setting and there is no Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan that covers the project site. The project would have **no impact** related to conservation plans.

¹³ Morneau, Ray, March 7, 2023, *Certified Arborist’s Tree Inventory and Pre-Construction Report*. Available as part of the project application materials.

CULTURAL RESOURCES

An analysis of potential Cultural Resources impacts is underway and all topics under the Cultural Resources section will be addressed in the EIR.

ENERGY

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|---|--------------------------------|---------------------------------------|-------------------------------------|--------------------------|
| Would the project: | | | | |
| a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

a,b) Energy

The project would include short-term demolition and construction activities that would consume energy, primarily in the form of diesel fuel (e.g., mobile construction equipment), gasoline (e.g., vehicle trips by construction workers), and electricity (e.g., power tools). Energy would also be used for conveyance of water used in dust control, transportation and disposal of construction waste, and energy used in production and transport of construction materials.

During operation, energy demand from the project would include fuel consumed by residents' vehicles, and electricity consumed by the proposed structures, including lighting, water conveyance, heating and air conditioning.

Table 2 shows the project's estimated total construction energy consumption and annual energy consumption.

As shown in Table 2, project construction would require what equates to 4,941 Million British Thermal Units (MMBtu) of energy use. The project would implement construction management practices per City SDRs (See Air Quality Section). While focused on emissions and dust reduction, the construction management practices would also reduce energy consumption through anti-idling measures and proper maintenance of equipment. The project would comply with the 2022 requirements of the California Green Building Standards Code (CALGreen) to divert a minimum of 65 percent of construction and demolition debris. Therefore, the project would not involve the inefficient, wasteful, and unnecessary use of energy during construction, and the project's construction energy consumption.

As also shown in Table 2, project annual energy consumption would equate to 11,496 MMBtu of energy use. The project has proposed all-electric construction with no gas connections.

Table 2: Construction and Operational Energy Usage

| Source | Energy Consumption | |
|--|--------------------|---------------------|
| | Amount and Units | Converted to MMBtu |
| Construction Energy Use (Total) | | |
| Construction Worker Vehicle Trips (Gasoline) | 1,965 gallons | 216 MMBtu |
| Construction Equipment and Vendor/Hauling Trips (Diesel) | 43,044 gallons | 4,726 MMBtu |
| Total Construction Energy Use | | 4,941 MMBtu |
| Operational Vehicle Fuel Use (Gross Annual) | | |
| Gasoline | 75,420 gallons | 8,280 MMBtu |
| Diesel | 12,738 gallons | 1,398 MMBtu |
| Operational Built Environment (Gross Annual) | | |
| Electricity | 0.53 GWh | 1,818 MMBtu |
| Natural Gas Usage | 0 kBtu | 0 MMBtu |
| Total Gross Annual Operational Energy Use | | 11,496 MMBtu |

Note: The energy use reported in this table is gross operational energy use for the proposed project with no reduction to account for energy use of existing uses.

Source: Energy Calculations included as Attachment B

As detailed in the Air Quality and Greenhouse Gas Emissions Sections, the project is also consistent with regional and local climate actions plans. The project incorporates energy and energy-related efficiency measures meeting all applicable requirements, including water and waste efficiency. The project would be required to comply with all standards of Title 24 of the California Code of Regulations, and CALGreen, as applicable, aimed at the incorporation of energy-conserving design and construction.

The project is consistent with the type of development in the area and allowed under the land use designation, zoning, and State laws.

Therefore, although the project would incrementally increase energy consumption, it would not result in a significant impact related to energy consumption in a wasteful, inefficient, or unnecessary manner or otherwise conflict with energy plans. Project impacts related to energy resources would be **less than significant**.

GEOLOGY AND SOILS

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|---|--------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|
| Would the project: | | | | |
| a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | | |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| ii) Strong seismic ground shaking? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| iii) Seismic-related ground failure, including liquefaction? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| iv) Landslides? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in substantial soil erosion or the loss of topsoil? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

This section utilizes information from the Geotechnical Investigation prepared for the applicant by Quantum Geotechnical, Inc., dated August 28, 2023, which is available as part of the project application materials.

a) Seismic Hazards

The Hayward fault is located to the northeast, approximately 0.4 miles from the site. The project site is not within a mapped Alquist-Priolo Fault Zone or otherwise subject to potential fault rupture (**no impact**).

The strong ground motions that occur during earthquakes are capable of inducing landslides, generally where unstable slope conditions already exist. The primary factors influencing the stability of a slope are the nature of the underlying soil or bedrock and the geometry of the slope. The project site is level and is not located in a mapped landside hazard zone.¹⁴ Landslides, slope failure, and unstable slopes are not a potential hazard at the site (**no impact**).

Seismic shaking (or ground shaking) is a general term referring to all aspects of motion of the earth's surface resulting from an earthquake, and is normally the major cause of damage in seismic events. The extent of ground shaking is controlled by the magnitude and intensity of the earthquake, distance from the epicenter, and local geologic conditions. Although the Hayward fault is the closest fault, any of the regional faults are capable of producing significant ground shaking throughout the region including at the project site.

Depending on the characteristics of the soil, seismic activity can also result in seismic-related ground failure, such as liquefaction and seismic induced settlement. The project's Geotechnical Investigation considered soil characteristics related to seismic-related ground failure, as discussed below.

Liquefaction is the rapid transformation of saturated, loose, fine-grained sediment to a fluid-like state because of earthquake ground shaking. In the process, the soil undergoes transient loss of strength, which commonly causes ground displacement or ground failure to occur. Since saturated soils are a necessary condition for liquefaction, soil layers in areas where the groundwater table is near the surface have higher liquefaction potential than those in which the water table is located at greater depths. Damage caused by liquefaction and lateral spreading is generally most severe when liquefaction occurs within 15 to 20 feet of the ground surface. The California Department of Conservation's Geologic Survey maps the project site as not being in an area susceptible to liquefaction hazards.¹⁵ The Geotechnical Investigation estimated the groundwater table to be approximately 40 feet below the surface.

Based on soil composition at the project site, the settlement due to liquefaction is estimated to be 0.5 inches. Dynamic compaction due to seismic shaking is estimated to cause up to 1.5 inches of additional settlement. This potential differential settlement would need to be taken into account when designing foundations and gravity utilities.

¹⁴ City of Fremont, December 2011, *City of Fremont General Plan*, Safety Chapter, Diagram 10-4.

¹⁵ California Department of Conservation, California Geological Survey, Earthquake Zones of Required Investigation map, accessed 2/22/24 at: <https://maps.conservation.ca.gov/cgs/eqzapp/app/>

Because the Geotechnical Investigation identified the need for measures to address site-specific liquefaction and seismic induced settlement, the following SDR is required to be implemented:

SDR FMC 18.218.050(e): Geology and Soils. New development projects with the potential to expose people or structures to substantial adverse effects, including the risk of loss, injury, or death due to seismic activity and potential seismic-related ground shaking including liquefaction, if so determined by a site-specific geotechnical study prepared to the satisfaction of the city engineer or his/her designee, shall implement the following measures prior to or during project construction, as applicable.

- (A) The project geotechnical consultant shall review all geotechnical aspects of the project building and grading plans (i.e., site preparation and grading, site drainage improvements, and design parameters for foundations, and retaining walls). The consultant shall verify that their recommendations, including those regarding the need for further evaluation for potential liquefaction and the presence and lateral extent of any undocumented fill as well as laboratory testing for corrosive soil, have been properly conducted and any necessary design measures are incorporated into the construction plans. The results of the plan review shall be summarized by the geotechnical consultant in a letter and submitted to the city engineer prior to issuance of building permits for the project.
- (B) The project geotechnical consultant shall inspect, test (as needed), and approve all geotechnical aspects of project construction. The inspections shall include, but not necessarily be limited to: site preparation and grading, site surface and subsurface drainage improvements, and excavations for foundations and retaining walls prior to the placement of steel and concrete. The results of these inspections and the as-built conditions of the project shall be summarized by the project geotechnical consultant in a letter and submitted to the city building official/city engineer for review prior to final (as-built) project approval.

To further address and reduce impacts related to potential seismic activity and liquefaction, all grading, foundations, and structures for the proposed project would be required to be engineered and designed in conformance with applicable geotechnical and soil stability standards as required by the California Building Code (CBC), as adopted by the City.

The project would implement SDR FMC 18.218.050(e): Geology and Soils to minimize impacts due to seismic related activity and site-specific seismic hazards, and project impacts related to strong seismic ground shaking and seismic-related ground failure including liquefaction would be ***less than significant***.

b) Soil Erosion

Construction activities, particularly grading and site preparation, can result in erosion and loss of topsoil if not properly managed. Because the site is greater than one acre in size, the project would be subject to a National Pollution Discharge Elimination System (NPDES) permit from the Regional Water Quality Control Board (RWQCB). The construction contractors would be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) and an Erosion Control Plan. The SWPPP must describe the site, the project, erosion and sediment controls, runoff water quality monitoring, means of waste disposal, control of post-construction sediment and erosion control measures, maintenance responsibilities, and management controls. Inspection of construction sites before and after storms would be required to identify stormwater discharge, and to identify and implement

necessary controls. Compliance with the SWPPP and Erosion Control Plan during demolition and construction such as straw wattles, silt fencing, concrete washouts, and inlet protection during construction would reduce impacts resulting from loss of topsoil. Soil erosion after construction would be controlled by implementation of approved landscape and irrigation plans. For the above reasons, the proposed project would result in **less than significant** impacts related to soil erosion.

c) Unstable soil

Undocumented fill was found at depths of 3.5 to 8 feet below ground surface. The presence of undocumented fill would require the implementation of SDR FMC 18.218.050(e): Geology and Soils (see subsection a, above). The Geotechnical Investigation recommends replacing any undocumented fill with engineered fill. Below the undocumented fill, layers of soft clay approximately 5 feet thick were found at varying depths across the project site. This type of soil could lead to settlement due to the weight of buildings, however the structural load of two-story buildings is estimated to cause less than 0.25 inches of settlement, which was determined not to affect surface design. The project would implement SDR FMC 18.218.050(e): Geology and Soils to minimize instability of soils due to undocumented fill, and the proposed project would result in **less than significant** impacts related to unstable soil.

d) Expansive Soil

The project site is underlain by mostly soft native silts and clays, and loose clayey sands. These site soils have low plasticity and expansion potential and would not substantially increase in volume during wet conditions. The plasticity level would be taken into account during project foundation design, if necessary, per SDR FMC 18.218.050(e): Geology and Soils. The proposed project would result in **less than significant** impacts related to expansive soil.

e) Septic Tanks

The project would be served by municipal wastewater facilities, and no septic tanks or alternative wastewater disposal systems are proposed or required. The project would have **no impact** related to septic tanks.

f) Unique Paleontological Resource or Geologic Feature

The project site is generally flat and already fully developed; there are no unique geologic features at the site. There are no known paleontological resources in the immediate vicinity. The project site is underlain by Holocene-age alluvial fan and fluvial deposits, which are generally considered too young to contain significant fossils.¹⁶ There are no recorded vertebrate or invertebrate fossils that have been found within Holocene-age soils in Alameda County.¹⁷ There is no excavation proposed, so the project would not substantially disturb native soil more than 5 feet below the surface, however the depth of undocumented fill is not fully characterized and the process of removing or conditioning the fill may minimally disturb adjacent native soils. The project would be required to implement SDR FMC 18.218.050(d)(2) in the event of accidental discovery of paleontological resources:

¹⁶ Helley and Graymer, 1997, Quaternary Geology of Alameda County and Surrounding Areas, California.

¹⁷ University of California Museum of Paleontology (UCMP) Online Database. UCMP specimen search portal, <https://ucmpdb.berkeley.edu/>, accessed March 2024.

SDR FMC 18.218.050(d)(2): Accidental Discovery of Cultural Resources. The following requirements shall be met to address the potential for accidental discovery of cultural resources during ground disturbing excavation:

- (A) The project proponent shall include a note on any plans that require ground disturbing excavation that there is a potential for exposing buried cultural resources.
- (B) The project proponent shall retain a professional archaeologist to provide a preconstruction briefing to supervisory personnel of any excavation contractor to alert them to the possibility of exposing buried cultural resources, including significant prehistoric archaeological resources. The briefing shall discuss any cultural resources, including archaeological objects, that could be exposed, the need to stop excavation at the discovery, and the procedures to follow regarding discovery protection and notification of the project proponent and archaeological team.
- (C) In the event that any human remains or historical, archaeological or paleontological resources are discovered during ground disturbing excavation, the provisions of CEQA Guidelines Sections 15064.5(e) and (f), and of subsection (c)(2)(D) of this section, requiring cessation of work, notification, and immediate evaluation shall be followed.
- (D) If resources are discovered during ground disturbing activities that may be classified as historical, unique archaeological, or tribal cultural resources, ground disturbing activities shall cease immediately, and the planning manager shall be notified. The resources will be evaluated by a qualified archaeologist and, in the planning manager's discretion, a tribal cultural monitor. If the resources are determined to be historical, unique archaeological, or tribal cultural resources, then a plan for avoiding the resources shall be prepared. If avoidance is infeasible, then all significant cultural materials recovered shall be, as necessary and at the discretion of the consulting archaeologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards. Any plan for avoidance or mitigation shall be subject to the approval of the planning manager.
- (E) As used herein, "historical resource" means a historical resource as defined by CEQA Guidelines Section 15064.5(a); "unique archaeological resource" means unique archaeological resource as defined by Cal. Pub. Res. Code § 21083.2(g); and "tribal cultural resource" means tribal cultural resource as defined by Cal. Pub. Res. Code § 21074. Collectively, these terms describe "significant cultural materials."

The project would implement SDR FMC 18.218.050(d)(2): Accidental Discovery of Cultural Resources, and the impact of the project on paleontological resources would be ***less than significant***.

GREENHOUSE GAS EMISSIONS

| <i>ENVIRONMENTAL ISSUES</i> | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|--|--------------------------------|---------------------------------------|-------------------------------------|--------------------------|
| Would the project: | | | | |
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

a) Greenhouse Gas Emissions

BAAQMD determined that greenhouse gas (GHG) emissions and global climate change represent cumulative impacts. Construction and operation of the proposed project would be additional sources of GHG emissions, primarily through consumption of fuel for transportation and energy usage on an ongoing basis.

State Assembly Bill 32 (AB 32) required California state and local governments to reduce GHG emissions to 1990 levels by 2020. State Senate Bill 32 (SB 32) was subsequently adopted to require that there be a further reduction in GHG emissions to 40% below the 1990 levels by 2030.

In April 2022, BAAQMD issued new GHG emissions thresholds consistent with SB 32, revising the quantified threshold to a checklist of compliance, requiring consistency with either criterion A or B as follows:

A. Projects must include, at a minimum, the following project design elements:

1. Buildings

- a. The project would not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).
- b. The project would not result in any wasteful, inefficient, or unnecessary electrical usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.

2. Transportation

- a. Achieve compliance with electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.
- b. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor’s Office of Planning and Research’s Technical Advisory on Evaluating Transportation Impacts in CEQA:

- i. Residential projects: 15 percent below the existing VMT per capita
- ii. Office projects: 15 percent below the existing VMT per employee
- iii. Retail projects: no net increase in existing VMT

B. Be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).

In 2023, the City adopted Climate Ready Fremont, an update to the City's Climate Action Plan, to address major sources of GHG emissions to meet the goals of reducing GHG emissions by 55 percent below the 2005 baseline and becoming carbon neutral by 2045, meeting and exceeding SB 32 targets. Climate Ready Fremont includes eight focus areas, each of which includes has strategies, measures, and actions designed to reduce GHG emissions and adapt to the impacts of climate change: Buildings and Energy (shortened to "BU"), Infrastructure and Equipment (IN), Land Use and Mobility (LU), Materials and Waste (MW), Natural and Urban Landscapes (NL), Adaptation and Resiliency (AR), Green and Circular Economy (GE), and Public Participation and Engagement (PE).¹⁸

Climate Ready Fremont is a qualified GHG reduction strategy, and project consistency with it can be used to demonstrate a project impact with respect to GHG emissions would be less than significant under the BAAQMD thresholds criterion B above. While there is not currently a checklist for development projects, the following actions identified in Climate Ready Fremont would currently be relevant to this proposed project:

BU-C-2.1 Adopt a City reach code that requires new residential construction to be all electric.

Supports – While this code is not yet adopted, the project proposes all-electric energy, with no natural gas connections or appliances.

IN-C-5.2 Continue to enhance pedestrian and bicycle infrastructure to support an increase in these forms of transportation.

Supports – The following pedestrian and bicycle improvements are proposed with the project:

- The project would install complete streets improvements such as wider sidewalks, reduced curb return radii, and enhanced street landscaping on Peralta Boulevard adjacent to its frontage as identified in the City of Fremont SR-84 Relinquishment Measure BB Scoping Study.
- The existing curb ramp along the project frontage would be upgraded to be ADA compliant.
- The project would make a fair share contribution to a rectangular rapid flashing beacon at the Peralta/Acacia Street crosswalk.

¹⁸ City of Fremont, adopted Oct 2023, Climate Ready Fremont, available at <https://www.fremont.gov/about/sustainability/climate-action-plan>.

IN-C-12.1 Require new development projects to use renewable diesel in diesel-powered construction equipment; ensure that all relevant diesel equipment complies with the U.S. Environmental Protection Agency (EPA) Tier 4 final emissions standards.

Supports – While the city-wide requirement is not yet in place, the applicant has committed to using Tier 4 construction equipment due to the presence of sensitive receptors near the project site.

NL-C-1.2 Require contractors to procure and use compost to meet the California Water Efficient Landscape Ordinance (WELo) requirements in new and renovated landscapes.

Supports – The proposed landscaping plans indicate compliance with WELo requirements.

NL-C-5.1 Require drought tolerant, water conserving, and/or native landscaping in new development and redevelopment projects.

Supports – The proposed landscaping plans show drought tolerant landscaping.

NL-C-5.5 Require weather-adjusting smart irrigation controllers and/or rain sensors in new development projects.

Supports – The applicant would comply with the City's requirement for smart irrigation controllers.

BU-C-2.5 Encourage new development to use high albedo material for walls, surfaces, driveways, parking lots, walkways, patios, and roofing.

Supports – The light-colored concrete walkways and driveways, light gold decomposed granite at bike racks, and light beige pavers at the entry are all high albedo materials. The biggest low albedo material is the black asphalt, which would be shaded much of the time by proposed trees and homes.

NL-C-3.3 Encourage planting native, local climate adapted, and drought-tolerant tree species in new development and redevelopment, replacing trees when proposed for removal, and planting trees to shade buildings and reduce energy requirements.

Supports – The proposed landscaping plans show drought tolerant tree species.

As indicated above, the project would support relevant actions of the City's qualified greenhouse gas reduction plan, Climate Ready Fremont, meeting criterion B of BAAQMD's thresholds. The project would have a ***less than significant*** impact with respect to greenhouse gas emissions.

b) Greenhouse Gas Reduction Plan

Regional Climate Action Plan and Climate Ready Fremont

See the Air Quality section for an analysis of the project's consistency with the regional CAP. Additionally with respect to GHG emissions, the CAP includes the goal to reduce Bay Area GHG emissions 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050. This is consistent with the target reductions intended to be met by BAAQMD thresholds and Climate Ready Fremont. As demonstrated under topic a) above, the project would support Climate Ready Fremont,

meeting BAAQMD thresholds (criterion B) and would therefore be consistent with the GHG emissions reduction goal of the regional CAP.

Climate Change Scoping Plan

The California Air Resources Board's (CARB) Climate Change Scoping Plan outlines the State's strategies to reduce GHG emissions in accordance with the targets established under AB 32 and SB 32. The Scoping Plan is applicable to State agencies and is not directly applicable to cities/counties and individual projects. However, new regulations adopted by the State agencies outlined in the Scoping Plan result in GHG emissions reductions at the local level. As a result, local jurisdictions benefit from reductions in transportation emissions rates, increases in water efficiency in the building and landscape codes, and other statewide actions that affect a local jurisdiction's emissions inventory from the top down. Statewide strategies to reduce GHG emissions include the LCFS and changes in the corporate average fuel economy standards (e.g., Pavley I and Pavley California Advanced Clean Cars program). The proposed project would adhere to the programs and regulations identified by the Scoping Plan and implemented by State, regional, and local agencies to achieve the statewide GHG reduction goals of AB 32 and SB 32. For example, new buildings under the proposed project would meet the applicable CALGreen and Building Energy Efficiency standards and be built for all-electric energy use.

CARB works with the metropolitan planning organizations, which in the Bay Area includes the Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC), to align their regional transportation, housing, and land use plans to reduce vehicle miles traveled and demonstrate the region's ability to attain its GHG reduction targets.

Sustainable Communities Strategy – Plan Bay Area 2050

Adopted in October 2021 by the MTC and ABAG, Plan Bay Area 2050 includes the region's Sustainable Communities Strategy (SCS) and the Regional Transportation Plan. Plan Bay Area 2050 provides transportation and environmental strategies to continue to meet the regional GHG reduction targets set by CARB. The Plan Bay Area land use concept plan for the region concentrates the majority of new population and employment growth in the region in Growth Geographies. Growth Geographies are generally areas where there are existing services and infrastructure to accommodate growth.¹⁹

The Plan Bay Area 2050 Consistency Checklist is provided to help assess consistency of a development project.²⁰ This project site is not within an identified "Growth Geography" or otherwise in a priority development, priority production, or priority transit area in which development is specifically encouraged.²¹ However, the project does support relevant energy and housing strategies, as discussed below in **Table 3** and would not otherwise obstruct any other strategies.

¹⁹ ABAG/MTC, 2021, *Plan Bay Area 2050*, https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf.

²⁰ ABAG/MTC, *Checklist: Plan Bay Area 2050 Consistency for Development Projects*, available at: <https://mtc.ca.gov/digital-library/5023230-checklist-plan-bay-area-2050-consistency-development-projects>. Accessed on March 6, 2023.

²¹ ABAG/MTC, *Plan Bay Area 2050 Growth Geographies*, <https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=af347b881594468a94ea85a67e972679>. Accessed on March 6, 2023.

Table 3: Project Consistency with the Plan Bay Area 2050 Strategies

| Strategy | Project Consistency |
|---|--|
| EN4: Maintain urban growth boundaries. Using urban growth boundaries and other existing environmental protections, focus new development within the existing urban footprint or areas otherwise suitable for growth, as established by local jurisdictions. | The project site is located in the City boundaries and redevelops a previously developed site that is surrounded by existing development and suitable for growth as established by the City through its General Plan and zoning. |
| H4: Build adequate affordable housing to ensure homes for all. Construct enough deed restricted affordable homes to fill the existing gap in housing for the unhoused community and to meet the needs of low-income households. | The project proposes to construct three deed restricted affordable homes. |
| H5: Integrate affordable housing into all major housing projects. Require a baseline of 10-20% of new market-rate housing developments of five units or more to be affordable to low-income households. | The project proposes to construct and set aside 3 of the 27 homes as affordable units, representing 11% of the proposed housing development. |

Conclusions

As discussed above, the project would be consistent with applicable GHG reduction plans, policies, and regulations, and the impact due to the project would be ***less than significant***.

HAZARDS AND HAZARDOUS MATERIALS

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|---|--------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|
| Would the project: | | | | |
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

a, b) Routine Use of Hazardous Materials and Accidental Release

During Construction

Construction of the project would involve the routine management of some hazardous materials that could pose a threat to human health or the environment if not properly managed or if accidentally released. This may include the use of fuels, lubricants, and other hazardous materials associated with heavy construction and associated equipment. All construction activities are required to conform with Title 49 of the Code of Federal Regulations, US Department of Transportation, State of California, and local laws, ordinances, and procedures related to the routine handling of typical construction hazardous materials and the project would have a **less than significant** impact.

During Operations

Proposed residential uses would be anticipated to utilize small amounts of typical household hazardous materials, such as cleaning products and landscape chemicals. A project of this type would not be expected to store or use such chemicals at reportable quantities (i.e., not more than 55 gallons of a liquid, 200 cubic feet of a gas, or 500 pounds of a solid). With the use of small quantities of typical household hazardous materials consistent with manufacturers' labeling, the project would have a **less than significant** impact.

c) Hazardous Materials Near Schools

Parkmont Elementary School is approximately 0.15 miles southeast of the project site. The proposed residential development would not be considered one that generates hazardous emissions or handles hazardous materials, and construction-period hazardous materials usage would be limited and follow applicable regulations (see above). The project would have a **less than significant** impact in regard to hazardous materials near a school.

d) Hazardous Materials Site

Ninyo & Moore performed a Phase I Environmental Site Assessment on behalf of the project applicant at the project site in January 2023 (available as part of the project application materials). The Phase I Environmental Site Assessment details that the project site is not a hazardous materials site as listed on the "Cortese List" pursuant to Government Code Section 65962.5, and there is no known or suspected existing site contamination that would create a significant hazard to the public or the environment. The project site was utilized as an orchard prior to the construction of the existing church, and while agricultural chemicals can contaminate soils, no historical evidence was found indicating that the project site was ever used as a location to mix, stage, manufacture, or store such chemicals at amounts that would cause an accumulation greater than the normal concentration used for cultivated fields, and the associated risk level would be low. The project would have a **less than significant** impact related to accidental release or a hazardous materials site.

e) Airport Hazard

The project site is not located within two miles of any public airport, or in the vicinity of a private airstrip. The Hayward Executive Airport, located approximately 10 miles away, is the closest airport to the project site. As such, there are no associated airport land use plans applicable to the site, and the project would not result in a safety hazard for people living at the site. **No impacts** due to the project would occur.

f) Emergency Response Plan

As a requirement of SDR FMC 18.218.050(c): Construction Management Plan (see Air Quality section), a construction period traffic control plan would be developed and implemented by the construction contractor to maintain access to adjacent properties and emergency access to and through the area, and to minimize traffic disruption and congestion, and traffic safety hazards. The need for traffic lane reductions due to construction would be short-term, temporary and localized, and adequately managed through standard traffic management practices and the traffic control plan. The project would not change any streets in the project vicinity or otherwise affect area emergency response and evacuation. Compliance with these City standards ensures that the project's impacts related to emergency response and evacuation planning are ***less than significant***.

g) Wildland Fire

As discussed in the Wildfire section of this Initial Study Checklist, the project site is not located in or near an area with significant wildfire risk. The project exposure of people or structures to a significant risk of loss, injury, or death involving wildland fires would be ***less than significant***.

HYDROLOGY AND WATER QUALITY

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|--|--------------------------------|---------------------------------------|-------------------------------------|--------------------------|
| Would the project: | | | | |
| a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: | | | | |
| i) Result in substantial on- or offsite erosion or siltation; | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| iv) Impede or redirect flood flows? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

a, e) Water Quality and Discharge

Construction activities associated with the project could adversely affect water quality through the potential discharge of construction materials and wastes to the stormwater collection system. The delivery, handling, and storage of construction materials and wastes, as well as use of construction equipment, could also introduce the risk of stormwater contamination.

Any project that would disturb an area larger than one acre would be required to obtain an NPDES General Construction Permit from the State Water Resources Control Board (SWRCB). The terms of this permit require applicants to prepare a Stormwater Pollution Prevention Plan (SWPPP) to demonstrate that project development would not cause any increase in sedimentation, turbidity, or hazardous material concentrations within downstream receiving waters. Design requirements and implementation measures for erosion and sedimentation controls would be set forth in the applicant's SWPPP, in accordance with SWRCB design standards, and with the City's Municipal Code (Chapter 18.205 "Grading and Erosion Control").

Federal Clean Water Act regulations require municipalities to obtain NPDES permits which outline programs and activities to control surface stormwater pollution. Municipalities, such as the City of Fremont, must eliminate or reduce "non-point" pollution, consisting of all types of substances generated as a result of urbanization (e.g. pesticides, fertilizers, automobile fluids, sewage, litter, etc.), to the "maximum extent practicable" (as required by Clean Water Act Section 402(p)(3)(iii)). Clean Water Act Section 402(p) and USEPA regulations (40 CFR 122.26) specify a municipal program of "best management practices" to control stormwater pollutants. Best Management Practices (BMP) refers to any kind of procedure or device designed to minimize the quantity of pollutants that enter the storm drain system.

The RWQCB adopted a Municipal Regional Permit (MRP) on October 14, 2009, as the NPDES permit for all Bay Area municipalities. It has since been reissued multiple times. The current permit is MRP 3 (Order Nos. R2-2022-0018 and R2-2023-019). In the MRP, the RWQCB made further revisions to Provision C.3 which require that most projects that create or replace as little as 5,000 square feet of impervious area, treat runoff. The C.3 requirements are intended to protect water quality by minimizing pollutants in runoff, and to prevent downstream erosion by designing the project site to minimize imperviousness, detain runoff, and infiltrate runoff where feasible; treating runoff prior to discharge from the site; ensuring runoff does not exceed pre-project peaks and durations; and maintaining treatment facilities. The Clean Water Program of Alameda County has prepared a C.3 Guidebook incorporating the new MRP requirements to assist project applicants with a Low Impact Development (LID) approach to stormwater treatment design. Project applicants must prepare and implement a Stormwater Control Plan containing treatment and source control measures that meet the "maximum extent practicable" standard as specified in the NPDES permit and the C.3 Guidebook. Project applicants must also prepare a Stormwater Facility Operation and Maintenance Plan and execute agreements to ensure the stormwater treatment and flow-control facilities are maintained in perpetuity.

Through compliance with construction period and post-construction requirements related to implementation of the NPDES permit C.3 requirements, including project preparation and implementation of a Stormwater Control Plan and Stormwater Facility Operation and Maintenance Plan, the long-term water quality impacts from project operation would be ***less than significant***.

b) Groundwater Recharge and Supplies

Groundwater is found an average of 40 feet below the ground surface and would not be affected by proposed excavation.²² The project does not propose Following construction, the project would not substantially deplete groundwater and would not have a substantial impact on groundwater recharge. Therefore, the proposed project would have a *less than significant* impact on groundwater.

c) Drainage Pattern Alteration

The project site is relatively flat and would remain so under the proposed project. Stormwater flows from the site currently drain to the existing stormwater drain system on Peralta Boulevard and Temple Way and would continue to do so with the project. The project would increase the amount of on-site permeable surface from about 22% to about 27%. and would use bioretention areas to decrease the flow of runoff from the site to meet C.3 requirements. Therefore, the project would not substantially alter the existing drainage pattern or otherwise result in erosion, siltation, flooding, or runoff exceeding the capacity of the stormwater system and the impact would be *less than significant*.

d) Inundation

Based on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs), no portion of the project site is located within 100-year flood hazard boundaries, a Special Flood Hazard Area (100-year floodplain), or other Areas of Flood Hazard (e.g., the 500-year [or 2%] flood zone).²³

Areas that are highly susceptible to tsunami inundation tend to be low-lying coastal areas such as tidal flats, marshlands, and former Bay margins that have been artificially filled. The project site is not located within a tsunami inundation area.²⁴

The majority of Fremont’s urbanized areas are at risk of inundation as a result of dam failures. Three dams have the potential to flood the city. These dams are located in the upper reaches of the Alameda Creek watershed and include:

- Calaveras - 100,000 acre-feet capacity - owned by City/County of San Francisco
- Del Valle - 77,100 acre-feet capacity - owned by California Department of Water Resources
- James H Turner - 50,500 acre-feet capacity - owned by City/County of San Francisco

It would take an estimated 90 minutes (James H Turner) to 160 minutes (Del Valle) for flood waters to reach the mouth of Niles Canyon where they could spread into populated areas.

Seiches are standing waves created on rivers, reservoirs, ponds, and lakes when seismic waves from an earthquake pass through an area. Seiches can have similar effects to a tsunami and could affect the City of Fremont by causing either of the reservoirs (Del Valle and Turner) in the hills to overtop

²² Quantum Geotechnical, Inc., August 28, 2023, Geotechnical Investigation Proposed Residential Development at 38134 Temple Way. Available as part of the project application materials

²³ Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map (FIRM), accessed on 2/22/24, available at <https://msc.fema.gov/portal/search?AddressQuery=38134%20Temple%20Way%2C%20Fremont%2C%20CA>

²⁴ California Geological Survey, Tsunami Hazard Area Map, available at: https://maps.conservation.ca.gov/cgs/informationwarehouse/ts_evacuation/.

their dams, leading to inundation or flooding in Niles Canyon and other portions of the city. However, it would take an estimated 90 minutes to 160 minutes for waters from these reservoirs in the hills to reach the mouth of Niles Canyon, where they could spread into populated areas. The General Plan EIR determined that inundation by the dams is unlikely and a relatively low risk due to the structural engineering of the dams and compliance with federal and state laws enacted to enhance dam safety.²⁵ Additionally, the project would not handle substantial amounts of hazardous substances such that inundation would lead to significant pollutant release.

Sea level rise of 16 inches by 2050, and 55 inches by 2100, has been predicted by the San Francisco Bay Conservation and Development Commission (BCDC). The project site is over 5 miles from the bay and approximately 57-60 inches above mean sea level and therefore the increase in sea level associated with the predicted 2100 rise would not result in flooding of the project site.²⁶

Therefore, the proposed project would not result in the risk of release of pollutants due to inundation by a tsunami, seiche, or flooding and the project impact in this regard would be ***less than significant***.

²⁵ City of Fremont prepared by Lamphier-Gregory, July 2011, Fremont General Plan Update Environmental Impact Report (SCH#2010082060), pp. 4-249 and 4-258.

²⁶ National Oceanic and Atmospheric Administration Office for Coastal Management, Sea Level Rise Viewer, available at: <https://coast.noaa.gov/slr/>. Accessed on March 10, 2024.

LAND USE AND PLANNING

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|--|--------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|
| Would the project: | | | | |
| a) Physically divide an established community? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

a) *Physical Division of a Community*

The project would add residential units on a currently developed lot to a residential neighborhood. The project would have **no impact** with respect to dividing an established community.

b) *Conflict with Land Use Plan*

The project site's General Plan land use classification is Low Density Residential; its zoning designation is R-1-6. With the required State Affordable Housing Density Bonus, the project would be consistent with the General Plan and zoning designation. Requested variations from base zoning or General Plan requirements are allowable under the applicable local and State regulations and would therefore not represent conflicts with applicable plans. Therefore, the project would be consistent with the land use plans and policies for the site and would have a **less than significant** impact with respect to conflicts with land use plans.

MINERAL RESOURCES

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|--|--------------------------------|---------------------------------------|------------------------------|-------------------------------------|
| Would the project: | | | | |
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

a, b) Mineral Resources

According to the United State Geological Society mineral resources maps, there are no known mineral resources of importance to the state or region on the site or within the surrounding area.²⁷ Therefore, **no impact** to such resources would result from the project and no mitigation is necessary.

²⁷ U.S. Geological Survey, Mineral Resources Data System: U.S. Geological Survey, Reston, Virginia. Accessed 2/21/2024 at <https://mrdata.usgs.gov>.

NOISE

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|---|--------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|
| Would the project result in: | | | | |
| a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Generation of excessive groundborne vibration or groundborne noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

a) Excessive Noise

Temporary Noise

Temporary noise impacts resulting from construction generally depend on the noise generated by various pieces of construction equipment, the timing and duration of noise generating activities, and the distance between construction noise sources and noise-sensitive receptors.

Significant construction noise impacts primarily occur when construction activities occur during noise-sensitive times of the day (early morning, evening, and nighttime hours) where construction occurs in areas immediately adjoining noise-sensitive land uses. The project site is surrounded by residences, which are considered a noise-sensitive use.

FMC Section 18.218.050 provides SDRs related to construction noise.

SDR FMC 18.218.050(g): Noise. To reduce the potential for noise impacts during construction, the following requirements shall be implemented:

- (A) Construction equipment shall be well maintained and used judiciously to be as quiet as practical.
- (B) Construction, excavating, grading, and filling activities (including the loading and unloading of materials, truck movements, and warming of equipment motors) shall be limited as provided in Section 18.160.010.

- (C) All internal combustion engine-driven equipment shall be equipped with mufflers, which are in good condition and appropriate for the equipment.
- (D) The contractor shall utilize “quiet” models of air compressors and other stationary noise sources where technology exists.
- (E) Loading, staging areas, stationary noise generating equipment, etc., shall be located as far as feasible from sensitive receptors.
- (F) The contractor shall comply with Air Resource Board idling prohibitions of unnecessary idling of internal combustion engines.
- (G) Signs shall be posted at the construction site that include permitted construction days and hours, a day and evening contact number for the job site, and a contact number for the project sponsor in the event of noise complaints. The applicant shall designate an on-site complaint and enforcement manager to track and respond to noise complaints.
- (H) Temporary noise barriers, such as solid plywood fences, shall be installed around construction sites adjacent to operational businesses, residences or noise-sensitive land uses, unless an existing wall or other barrier provides equivalent noise attenuation.

Per FMC Section 18.160.010, construction activity for projects located within 500 feet of residences, lodging facilities, nursing homes or inpatient hospitals (e.g., the project) shall be limited to the weekday hours of 7:00 a.m. to 7:00 p.m., and Saturday or holiday hours of 9:00 a.m. to 6:00 p.m. Sunday construction is not allowed. The City Manager’s designee has the authority to modify these construction hours if (among other factors), modified construction hours are, “reasonably foreseeable to result in an equal or superior level of comfortable enjoyment of life and property by the community.”

Permanent Noise

The project proposes residential uses, which would have noise levels consistent with surrounding residential uses and would be required to comply with applicable noise standards in FMC Chapter 9.25.

Perceptible increases in ambient noise levels generally are a change of 3 dBA-5 dBA²⁸ or more, as this level has been found to be the threshold for what is perceptible to the human ear in outdoor environments, and this is utilized as the threshold for determining the impact of increases in traffic noise.²⁹ Generally, a doubling to tripling in average daily traffic volumes would result in ambient noise level increase of 3 to 5 dBA. The project would generate an estimated 255 new weekday daily trips, including approximately 19 weekday a.m. peak hour trips and 25 weekday p.m. peak hour trips. Based on traffic counts in the vicinity of the project, project traffic would represent a very small (approximately 1.3%) daily traffic increase on the adjacent Peralta Boulevard and less than a

²⁸ “dBA” is an A-weighted decibel, which is a standard expression of the relative loudness of sounds as perceived by the human ear.

²⁹ City of Fremont prepared by Lamphier-Gregory, July 2011, Fremont General Plan Update Environmental Impact Report (SCH#2010082060), pp. 4-145 and 4-181.

doubling (82% increase) of daily traffic on the low-volume Temple Way.³⁰ Project contribution to traffic increases would be the same or smaller as project traffic takes different routes along roadways farther from the project site. Therefore, vehicle trips generated by the project would not result in significant increases in traffic noise level on roadways.

The project would implement SDR FMC 18.218.050(g): Noise to minimize construction noise and the project's impact on noise levels, both temporary and permanent, would be **less than significant**.

b) Excessive Vibration

Groundborne noise and vibration can result from heavy construction practices utilizing pile drivers or hoe-rams. No such activities are planned for project construction. Construction truck traffic traveling at low speed (25 mph or less) would access the site via Temple Way, where residential structures are within about 25 feet of the roadways. Groundborne vibration from a loaded truck at low speed would be less than 0.08 in/sec Peak Particle Velocity (PPV) at a distance of 25 feet.³¹ Vibration levels may be intermittently perceptible but would be well below a level of 0.30 in/sec PPV that could cause damage to normal structures.

Residential use would not be a source of substantial vibration. The project's impact on vibration, both temporary and permanent, would be **less than significant**.

c) Airport Noise

The project site is approximately 10 miles from the Hayward Executive Airport, 13 miles from the San Jose International Airport, 16 miles from Oakland International Airport, and 20 miles from San Francisco International Airport. The project site is not within an Airport Influence Area of any of these surrounding airports, and implementation of the project would not expose people living in the project area to excessive airport or aircraft noise levels. There would be **no impact** from the project in relation to airport noise.

³⁰ Hexagon Transportation Consultants, Inc., October 27, 2023, *Transportation Impact Analysis for Single-Family Residential Development at 38134 Temple Way in Fremont California*, Figures 4 and 6. Available as part of the project application materials and will be attached to the EIR. Peak hour trip counts were converted to average daily trips per ITE Trip Generation, 11th Edition, Average Rates for Single Family Detached Housing (ITE 210).

³¹ United States Department of Transportation, Office of Planning and Environment, Federal Transit Administration, September 2018, *Transit Noise and Vibration Impact Assessment Manual*.

POPULATION AND HOUSING

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|---|--------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|
| Would the project: | | | | |
| 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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

a) **Substantial Population Growth**

The project site is proposed to be developed with 27 single-family units. Based on an average household size in Fremont of 2.92 persons per household, the project would result in an estimated 79 new residents on the project site and in Fremont.³² The project has coordinated with ACWD to upgrade the water main along the project’s Temple Way frontage, but this upgrade is within an already-developed neighborhood (and not an area for unplanned growth) and is intended to accommodate the project’s increased demand. The project would not otherwise extend or upgrade the capacity of infrastructure.

The City of Fremont’s 2023-2031 Regional Housing Needs Assessment (RHNA) allocation is 12,897 units, with 3,640 very low-income units and 1,996 moderate income units needed. While the project site is not identified in the Fremont General Plan 2023-2031 Housing Element as a potential site for meeting RHNA development goals, it would provide 27 housing units, including 2 very low income and 1 moderate income unit towards the City’s RHNA goals. The Fremont General Plan projected a population growth to 256,000 residents by 2035, and the population in 2023 was estimated to be 229,467.^{33, 34} The estimated 79 new residents would be within the population growth projected in the General Plan and located on a residentially-zoned site, and would therefore not represent substantial unplanned population growth. The impact of the project with respect to unplanned population growth would be **less than significant**.

³² California Department of Finance, Demographic Research Unit, E-5 Population and Housing Estimates for Cities, Counties, and the State, January 2021-2023, with 2020 Benchmark. Available at: <https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2023/>

³³ City of Fremont, *City of Fremont General Plan*, December 2011, Introduction, page i-24.

³⁴ California Department of Finance, Demographic Research Unit, E-5 Population and Housing Estimates for Cities, Counties, and the State, January 2021-2023, with 2020 Benchmark. Available at: <https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2023/>

b) Displacement of Housing or People

The project involves the demolition of a vacant church and does not involve displacement of people or housing. The project would have **no impact** with respect to displacement of people and housing.

PUBLIC SERVICES

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|---|--------------------------------|---------------------------------------|-------------------------------------|--------------------------|
| Would the project: | | | | |
| a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: | | | | |
| Fire protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Police protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Schools? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Parks? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Other public facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

a) **Public Services**

Fire protection

The Fremont Fire Department currently provides fire protection to the project site, and would continue to do so in the future. The nearest fire stations are Station 6 located at 4355 Central Avenue (1.6 miles from the project site) and Station 1 located at 4200 Mowry Avenue (1.9 miles from the project site). No new or physically altered stations or facilities would be required. Therefore, the impact of the project would be ***less than significant***.

Police protection

The Fremont Police Department currently provides police protection to the project site and would continue to do so in the future. The Fremont Police Department employs 202 sworn officers with a ratio of about 0.88 officers per 1,000 Fremont residents.³⁵ The project would increase the population by approximately 79 residents, which could result in a minor associated increase in the demand for police protection services and would have a negligible effect on officer ratios. The

³⁵ City of Fremont, 2023, Fremont Police Department 2022 Annual Report.

demand for services from the project would be typical of demand from surrounding residential uses. No new or physically altered stations or facilities would be required. Therefore, the impact of the project would be ***less than significant***.

Schools

The Fremont Unified School District currently operates 29 elementary schools, 5 middle schools, and 6 high schools. The public schools for the project area are Parkmont Elementary, Centerville Middle and Washington High. Based on relevant student generation rates, the 79 proposed residential units would be estimated to add about 29 elementary grade students, 7 junior high school students and about 17 high school students to the Fremont Unified School District.³⁶ This number of students is not enough to by itself require construction of new public schools. The school district in general, as well as the three project area schools specifically, currently enroll below full capacity.³⁷ The project applicant would be required to pay all applicable school impact mitigation fees established by the school district prior to the issuance of any building permits. Under Government Code Section 65995, the payment of these fees is deemed to be full and complete mitigation for project-related impacts on school facilities. The impact of the project related to schools would be ***less than significant***.

Parks

As discussed in the Recreation section, while the project could result in some small increase in use of recreational facilities including parks, it would not in itself have the potential to result in substantial physical deterioration or the need for new parks. The impact of the project related to parks would be ***less than significant***.

Other public facilities

The project would result in an increase in population of approximately 79 residents, which could result in a minor associated increase in the demand for other public facilities, but the increased demand would be minor and would not require new or expanded facilities. The impact of the project related to other public facilities would be ***less than significant***.

Additionally, as with all development projects in the City of Fremont, the project would be required to pay Development Impact Fees, which are intended to fund and sustain improvements that are needed as a result of cumulative new development. Under this program, the required Capital Facility Fee helps pay for services in such categories as City Administration facilities, City Services Maintenance Center and Corporation Yard, and Libraries.

³⁶ Koppel & Gruber Public Finance, March 10, 2022, *Fremont Unified School District 2022 School Fee Justification Study*, Table 3.

³⁷ Fremont Unified School District, November 2021, *2021/22 Demographics and Enrollment Projections*.

RECREATION

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|--|--------------------------------|---------------------------------------|-------------------------------------|--------------------------|
| Would the project: | | | | |
| a) 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

a, b) Recreation

Park and recreation facilities in and around Fremont include neighborhood and community parks, regional parks, and destination/specialty use parks, multi-use trails, outdoor amenities such as playgrounds and sports fields, and indoor recreation centers. The City released a Draft Parks & Recreation Master Plan in February 2022, which includes a goal of having a park or recreational facility within a 10-minute walk of every resident, and a service ratio goal of 5.0 acres of developed/active parks for every 1,000 residents in Fremont. In 2021, the park inventory was at 5.16 acres of current or planned developed/active parks for every 1,000 residents, which meets the service ratio goal. The subgoals of 1.00 acres of neighborhood parks and 1.50 acres of community parks per 1,000 residents did not meet their service area goals, with total park acres of 0.91 and 1.48 per 1,000 residents, respectively.³⁸

The applicant is requesting a waiver of the required 1,600 square feet of common open space on the project site to accommodate the increased density of units. The closest community park to the project site, Centerville Community Park, is an approximately 22-minute walk. The Shin Historical Park and Arboretum is an approximately 13-minute walk.

Future development of the proposed new lots would generate a small incremental need for additional parkland, adding to the existing deficiency of neighborhood and community parkland acreage, and would increase the use of existing parks and recreational facilities. Fremont Municipal Code Section 18.290.090 requires land dedication and/or park in-lieu fees.

Payment of the required park in-lieu fees would address the impact of the project on park and recreational facilities. The project would not 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, and would have a **less than significant** impact related to parks or other recreational facilities.

³⁸ City of Fremont, Feb 2022, DRAFT Parks and Recreation Master Plan, Available at <https://www.fremont.gov/government/departments/parks-planning-design/park-planning/parks-master-plan>.

TRANSPORTATION

An analysis of potential Transportation impacts is underway and all topics under the Transportation section will be addressed in the EIR.

TRIBAL CULTURAL RESOURCES

An analysis of potential Tribal Cultural Resources impacts is underway and all topics under the Tribal Cultural Resources section will be addressed in the EIR.

UTILITIES AND SERVICE SYSTEMS

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|--|--------------------------------|---------------------------------------|-------------------------------------|--------------------------|
| Would the project: | | | | |
| a) Require or result in the relocation or construction of construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Result in a determination by the wastewater treatment provider that 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

a) *New or Expanded Utility Facilities*

The project would result in redevelopment of a site already provided with utilities and services. Per coordination with relevant providers, adjacent overhead electrical lines would be undergrounded to joint poles and the Temple Way water main along the project's frontage would be upgraded from 6- to 8-inch to accommodate the project demand. Certified professionals have prepared utility plans for the project, which are reviewed by City staff, and utility providers would provide will-serve letters prior to issuance of construction permits. No capacity concerns have been raised that are not being addressed by the planned improvements. The project would comply with the City's

requirements for waste and recycling. The potential for the proposed project, including proposed utility/service system information, to result in environmental impacts has been assessed in this document and no significant impacts were identified. Therefore, the impact of the project on utilities and service systems would be **less than significant**.

b) Water Supply

Drinking water is provided to the project site by Alameda County Water District (ACWD). ACWD is the provider for Fremont, Newark, and Union City, with water sourced from the State Water Project, Hetch Hetchy reservoir, and Alameda Creek Watershed Runoff. ACWD has a maximum daily production of 50 million gallons per day, and has an average daily production of 33 million gallons per day.³⁹ The size of the project does not trigger a need for a project-specific Water Supply Assessment under Senate Bill 610, which means the project can rely on the local urban water management plan. The project would be required to conform to all current utility-related regulations including compliance with applicable water conservation measures, including low-flow faucets and toilets per CalGreen Code and low-water use landscaping and a high-efficiency irrigation system in accordance with the California Model Water Efficient Landscape Ordinance. The project would have a **less than significant** impact on water supply, and no mitigation is necessary.

c) Wastewater

The City of Fremont is serviced by Union Sanitary District for collection and treatment of wastewater. The Alvarado Treatment Plant currently has the capacity to treat 33 million gallons per day, with an average day treating 22.23 million gallons.⁴⁰ The wastewater created by the project would be a tiny fraction of the remaining capacity. The project would have a **less than significant** impact with respect to wastewater and no mitigation is required.

d-e) Solid Waste

During construction, the project would be required to comply with Article VII of Fremont Municipal Code Chapter 8.40, which requires construction and demolition debris be diverted or recycled per the current version of CalGreen. During operations, the project would be served by the City's franchised waste hauler, Republic Services, in compliance with the applicable standards governing solid wastes and recyclables, and would comply with all applicable waste reduction regulations. The project would have a **less than significant** impact with respect to solid waste and no mitigation is required.

³⁹ Alameda County Water District, ACWD Fact Sheet, available at <https://www.acwd.org/93/Fact-Sheet>, accessed on 2/20/24.

⁴⁰ Union Sanitary District website, <https://www.unionsanitary.ca.gov/about-us/about-us/mission-facts-history>, accessed on 2/20/24.

WILDFIRE

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
|---|--------------------------------|---------------------------------------|------------------------------|-------------------------------------|
| If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project: | | | | |
| a) Substantially impair an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Require the installation 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

a-d) Wildfire Risk and Emergency Response

The project site is within the developed residential area of Fremont, which is not within a state responsibility area.. The nearest state responsibility area is in the hills more than three miles east/northeast of the project site, with the closest very high fire hazard severity zone within a state responsibility area about 4 miles to the east/southeast. Cal Fire has not recommended any portion of the City of Fremont as a very high fire hazard severity zones, and there are none in local responsibility areas within 5 miles of the project site.⁴¹

To acknowledge the risk of wildfire in the Fremont hills due to the interface of residential and open space land uses, the City designates much of the hills (generally east of Mission Boulevard in the

⁴¹ California Department of Forestry and Fire Protection, Fire Hazard Severity Zone Viewers in State Responsibility Area. Available at: <https://experience.arcgis.com/experience/03beab8511814e79a0e4eabf0d3e7247/https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=988d431a42b242b29d89597ab693d008>.

vicinity of the project site) as a Hazardous Fire Area requiring special development controls.⁴² The closest identified Hazardous Fire Area requiring special development controls is approximately 1.2 miles from the project site. The project is not within an area subject to substantial wildfire risk and would have ***no impact*** related to wildfire.

⁴² City of Fremont, adopted Dec 2011, General Plan Safety Element, pp. 10-29 through 10-31.

MANDATORY FINDINGS OF SIGNIFICANCE

As indicated throughout this document, there are some environmental topics that will be addressed in an EIR to be prepared subsequently. Because the section relies on conclusions from all topics, it will also be addressed in the EIR.

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This document was prepared in consultation with City of Fremont staff, including James Willis, Senior Planner.

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EMISSIONS MODELING

ATTACHMENT A

to the
38134 Temple Way Residential Project Initial Study

38134 Temple Way Custom Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

| Data Field | Value |
|-----------------------------|--|
| Project Name | 38134 Temple Way |
| Construction Start Date | 10/1/2024 |
| Operational Year | 2025 |
| Lead Agency | City of Fremont |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 4.20 |
| Precipitation (days) | 24.2 |
| Location | 38134 Temple Way, Fremont, CA 94536, USA |
| County | Alameda |
| City | Fremont |
| Air District | Bay Area AQMD |
| Air Basin | San Francisco Bay Area |
| TAZ | 1635 |
| EDFZ | 1 |
| Electric Utility | Pacific Gas & Electric Company |
| Gas Utility | Pacific Gas & Electric |
| App Version | 2022.1.1.26 |

1.2. Land Use Types

| Land Use Subtype | Size | Unit | Lot Acreage | Building Area (sq ft) | Landscape Area (sq ft) | Special Landscape Area (sq ft) | Population | Description |
|-----------------------|------|---------------|-------------|-----------------------|------------------------|--------------------------------|------------|-------------|
| Single Family Housing | 27.0 | Dwelling Unit | 2.30 | 71,619 | 32,067 | — | 76.0 | — |

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Un/Mit. | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | CO2e |
|---------------------|------|------|------|---------|-------|-------|-------|--------|--------|--------|------|-------|-------|------|---------|-------|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 101 | 3.85 | 13.2 | 0.02 | 0.04 | 0.12 | 0.15 | 0.04 | 0.03 | 0.06 | — | 2,362 | 2,362 | 0.09 | 0.03 | 2,375 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.34 | 5.78 | 16.3 | 0.05 | 0.11 | 3.78 | 3.89 | 0.11 | 1.61 | 1.72 | — | 6,059 | 6,059 | 0.28 | 0.58 | 6,240 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 2.82 | 2.76 | 9.38 | 0.02 | 0.03 | 0.15 | 0.16 | 0.03 | 0.04 | 0.05 | — | 1,683 | 1,683 | 0.07 | 0.02 | 1,692 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.51 | 0.50 | 1.71 | < 0.005 | 0.01 | 0.03 | 0.03 | 0.01 | 0.01 | 0.01 | — | 279 | 279 | 0.01 | < 0.005 | 280 |

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Year | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | CO2e |
|----------------------|------|------|------|------|-------|-------|-------|--------|--------|--------|------|-------|-------|------|------|-------|
| Daily - Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 0.27 | 3.85 | 13.2 | 0.02 | 0.04 | 0.10 | 0.14 | 0.04 | 0.02 | 0.06 | — | 2,362 | 2,362 | 0.09 | 0.03 | 2,375 |

| | | | | | | | | | | | | | | | | |
|----------------------|------|------|------|---------|---------|---------|------|---------|---------|---------|---|-------|-------|---------|---------|-------|
| 2026 | 101 | 3.85 | 13.2 | 0.02 | 0.04 | 0.12 | 0.15 | 0.04 | 0.03 | 0.06 | — | 2,359 | 2,359 | 0.09 | 0.03 | 2,372 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2024 | 0.34 | 5.78 | 16.3 | 0.05 | 0.11 | 3.78 | 3.89 | 0.11 | 1.61 | 1.72 | — | 6,059 | 6,059 | 0.28 | 0.58 | 6,240 |
| 2025 | 0.27 | 3.87 | 13.1 | 0.02 | 0.04 | 0.10 | 0.14 | 0.04 | 0.02 | 0.06 | — | 2,356 | 2,356 | 0.09 | 0.03 | 2,368 |
| 2026 | 0.27 | 3.86 | 13.1 | 0.02 | 0.04 | 0.10 | 0.14 | 0.04 | 0.02 | 0.06 | — | 2,353 | 2,353 | 0.09 | 0.03 | 2,365 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2024 | 0.05 | 0.68 | 2.51 | < 0.005 | 0.01 | 0.15 | 0.16 | 0.01 | 0.04 | 0.05 | — | 551 | 551 | 0.02 | 0.02 | 558 |
| 2025 | 0.19 | 2.76 | 9.38 | 0.02 | 0.03 | 0.07 | 0.10 | 0.03 | 0.02 | 0.05 | — | 1,683 | 1,683 | 0.07 | 0.02 | 1,692 |
| 2026 | 2.82 | 0.77 | 2.65 | < 0.005 | 0.01 | 0.02 | 0.03 | 0.01 | 0.01 | 0.01 | — | 470 | 470 | 0.02 | 0.01 | 472 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2024 | 0.01 | 0.12 | 0.46 | < 0.005 | < 0.005 | 0.03 | 0.03 | < 0.005 | 0.01 | 0.01 | — | 91.2 | 91.2 | < 0.005 | < 0.005 | 92.5 |
| 2025 | 0.04 | 0.50 | 1.71 | < 0.005 | 0.01 | 0.01 | 0.02 | 0.01 | < 0.005 | 0.01 | — | 279 | 279 | 0.01 | < 0.005 | 280 |
| 2026 | 0.51 | 0.14 | 0.48 | < 0.005 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 77.8 | 77.8 | < 0.005 | < 0.005 | 78.2 |

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Un/Mit. | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | CO2e |
|---------------------|------|------|------|------|-------|-------|-------|--------|--------|--------|------|-------|-------|------|------|-------|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 3.14 | 1.62 | 18.4 | 0.05 | 0.03 | 4.23 | 4.26 | 0.03 | 1.07 | 1.10 | 11.4 | 5,076 | 5,088 | 1.33 | 0.19 | 5,197 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 2.97 | 1.88 | 14.8 | 0.04 | 0.03 | 4.23 | 4.26 | 0.03 | 1.07 | 1.10 | 11.4 | 4,795 | 4,806 | 1.34 | 0.21 | 4,902 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | |
|--------------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|------|------|-------|
| Unmit. | 3.02 | 1.79 | 15.3 | 0.04 | 0.03 | 4.16 | 4.19 | 0.03 | 1.06 | 1.08 | 11.4 | 4,821 | 4,833 | 1.34 | 0.20 | 4,934 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.55 | 0.33 | 2.80 | 0.01 | 0.01 | 0.76 | 0.77 | 0.01 | 0.19 | 0.20 | 1.89 | 798 | 800 | 0.22 | 0.03 | 817 |

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Sector | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | CO2e |
|---------------------|------|------|------|---------|---------|-------|---------|---------|--------|---------|------|-------|-------|---------|---------|-------|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 1.19 | 1.61 | 16.8 | 0.05 | 0.03 | 4.23 | 4.26 | 0.03 | 1.07 | 1.10 | — | 4,770 | 4,770 | 0.14 | 0.18 | 4,845 |
| Area | 1.95 | 0.01 | 1.53 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | 0.00 | 4.10 | 4.10 | < 0.005 | < 0.005 | 4.11 |
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 298 | 298 | 0.05 | 0.01 | 301 |
| Water | — | — | — | — | — | — | — | — | — | — | 1.84 | 4.70 | 6.53 | 0.19 | < 0.005 | 12.6 |
| Waste | — | — | — | — | — | — | — | — | — | — | 9.57 | 0.00 | 9.57 | 0.96 | 0.00 | 33.5 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.51 |
| Total | 3.14 | 1.62 | 18.4 | 0.05 | 0.03 | 4.23 | 4.26 | 0.03 | 1.07 | 1.10 | 11.4 | 5,076 | 5,088 | 1.33 | 0.19 | 5,197 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 1.16 | 1.88 | 14.8 | 0.04 | 0.03 | 4.23 | 4.26 | 0.03 | 1.07 | 1.10 | — | 4,493 | 4,493 | 0.15 | 0.20 | 4,555 |
| Area | 1.81 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 298 | 298 | 0.05 | 0.01 | 301 |
| Water | — | — | — | — | — | — | — | — | — | — | 1.84 | 4.70 | 6.53 | 0.19 | < 0.005 | 12.6 |
| Waste | — | — | — | — | — | — | — | — | — | — | 9.57 | 0.00 | 9.57 | 0.96 | 0.00 | 33.5 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.51 |
| Total | 2.97 | 1.88 | 14.8 | 0.04 | 0.03 | 4.23 | 4.26 | 0.03 | 1.07 | 1.10 | 11.4 | 4,795 | 4,806 | 1.34 | 0.21 | 4,902 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | |
|---------|------|---------|------|---------|---------|------|---------|---------|------|---------|------|-------|-------|---------|---------|-------|
| Mobile | 1.15 | 1.78 | 14.6 | 0.04 | 0.03 | 4.16 | 4.19 | 0.03 | 1.06 | 1.08 | — | 4,517 | 4,517 | 0.14 | 0.19 | 4,585 |
| Area | 1.88 | 0.01 | 0.75 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | 0.00 | 2.02 | 2.02 | < 0.005 | < 0.005 | 2.03 |
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 298 | 298 | 0.05 | 0.01 | 301 |
| Water | — | — | — | — | — | — | — | — | — | — | 1.84 | 4.70 | 6.53 | 0.19 | < 0.005 | 12.6 |
| Waste | — | — | — | — | — | — | — | — | — | — | 9.57 | 0.00 | 9.57 | 0.96 | 0.00 | 33.5 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.51 |
| Total | 3.02 | 1.79 | 15.3 | 0.04 | 0.03 | 4.16 | 4.19 | 0.03 | 1.06 | 1.08 | 11.4 | 4,821 | 4,833 | 1.34 | 0.20 | 4,934 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.21 | 0.32 | 2.66 | 0.01 | 0.01 | 0.76 | 0.77 | 0.01 | 0.19 | 0.20 | — | 748 | 748 | 0.02 | 0.03 | 759 |
| Area | 0.34 | < 0.005 | 0.14 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | 0.00 | 0.33 | 0.33 | < 0.005 | < 0.005 | 0.34 |
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 49.3 | 49.3 | 0.01 | < 0.005 | 49.8 |
| Water | — | — | — | — | — | — | — | — | — | — | 0.30 | 0.78 | 1.08 | 0.03 | < 0.005 | 2.09 |
| Waste | — | — | — | — | — | — | — | — | — | — | 1.59 | 0.00 | 1.59 | 0.16 | 0.00 | 5.55 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.08 |
| Total | 0.55 | 0.33 | 2.80 | 0.01 | 0.01 | 0.76 | 0.77 | 0.01 | 0.19 | 0.20 | 1.89 | 798 | 800 | 0.22 | 0.03 | 817 |

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | CO2e |
|---------------------|------|------|------|------|-------|-------|-------|--------|--------|--------|------|-------|-------|------|------|-------|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.25 | 2.27 | 14.6 | 0.02 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 2,497 | 2,497 | 0.10 | 0.02 | 2,505 |

| | | | | | | | | | | | | | | | | |
|---------------------|---------|---------|------|---------|---------|------|---------|---------|---------|---------|---|-------|-------|---------|---------|-------|
| Demolition | — | — | — | — | — | 0.89 | 0.89 | — | 0.13 | 0.13 | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.12 | 0.80 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 137 | 137 | 0.01 | < 0.005 | 137 |
| Demolition | — | — | — | — | — | 0.05 | 0.05 | — | 0.01 | 0.01 | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | 0.02 | 0.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 22.7 | 22.7 | < 0.005 | < 0.005 | 22.7 |
| Demolition | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.46 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 102 | 102 | < 0.005 | < 0.005 | 104 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.02 | 1.40 | 0.53 | 0.01 | 0.02 | 0.28 | 0.30 | 0.02 | 0.08 | 0.10 | — | 1,086 | 1,086 | 0.06 | 0.17 | 1,138 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | 0.02 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 5.65 | 5.65 | < 0.005 | < 0.005 | 5.73 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | 0.08 | 0.03 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | 0.01 | — | 59.5 | 59.5 | < 0.005 | 0.01 | 62.4 |

| | | | | | | | | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---|------|------|---------|---------|------|
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.94 | 0.94 | < 0.005 | < 0.005 | 0.95 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 9.85 | 9.85 | < 0.005 | < 0.005 | 10.3 |

3.3. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | CO2e |
|-----------------------------|---------|------|------|---------|---------|-------|---------|---------|---------|---------|------|-------|-------|---------|---------|-------|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.26 | 1.33 | 15.0 | 0.03 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 2,716 | 2,716 | 0.11 | 0.02 | 2,725 |
| Dust From Material Movement | — | — | — | — | — | 0.62 | 0.62 | — | 0.07 | 0.07 | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | 0.01 | 0.12 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 22.3 | 22.3 | < 0.005 | < 0.005 | 22.4 |
| Dust From Material Movement | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | |
|-----------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---|------|------|---------|---------|------|
| Off-Road Equipment | < 0.005 | < 0.005 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 3.70 | 3.70 | < 0.005 | < 0.005 | 3.71 |
| Dust From Material Movement | — | — | — | — | — | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.02 | 0.27 | 0.00 | 0.00 | 0.06 | 0.06 | 0.00 | 0.01 | 0.01 | — | 61.4 | 61.4 | < 0.005 | < 0.005 | 62.3 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.51 | 0.51 | < 0.005 | < 0.005 | 0.52 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.08 | 0.08 | < 0.005 | < 0.005 | 0.09 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

3.5. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | CO2e |
|----------|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|-----|-----|------|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | |
|-----------------------------|---------|---------|------|---------|---------|------|---------|---------|---------|---------|---|-------|-------|---------|---------|-------|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.23 | 1.20 | 14.2 | 0.02 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 2,454 | 2,454 | 0.10 | 0.02 | 2,462 |
| Dust From Material Movement | — | — | — | — | — | 2.78 | 2.78 | — | 1.34 | 1.34 | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | 0.02 | 0.23 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 40.3 | 40.3 | < 0.005 | < 0.005 | 40.5 |
| Dust From Material Movement | — | — | — | — | — | 0.05 | 0.05 | — | 0.02 | 0.02 | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.04 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 6.68 | 6.68 | < 0.005 | < 0.005 | 6.70 |
| Dust From Material Movement | — | — | — | — | — | 0.01 | 0.01 | — | < 0.005 | < 0.005 | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---|-------|-------|---------|---------|-------|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.37 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 81.9 | 81.9 | < 0.005 | < 0.005 | 83.0 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.07 | 4.55 | 1.74 | 0.02 | 0.07 | 0.91 | 0.98 | 0.07 | 0.25 | 0.32 | — | 3,524 | 3,524 | 0.18 | 0.56 | 3,695 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 1.36 | 1.36 | < 0.005 | < 0.005 | 1.38 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | 0.07 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.02 | < 0.005 | < 0.005 | 0.01 | — | 57.9 | 57.9 | < 0.005 | 0.01 | 60.8 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.22 | 0.22 | < 0.005 | < 0.005 | 0.23 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 9.59 | 9.59 | < 0.005 | < 0.005 | 10.1 |

3.7. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | CO2e |
|---------------------|------|------|------|------|-------|-------|-------|--------|--------|--------|------|-------|-------|------|------|-------|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.24 | 3.74 | 12.8 | 0.02 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 2,201 | 2,201 | 0.09 | 0.02 | 2,209 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---|------|------|---------|---------|------|
| Off-Road Equipment | 0.02 | 0.36 | 1.22 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 211 | 211 | 0.01 | < 0.005 | 212 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | 0.07 | 0.22 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 34.9 | 34.9 | < 0.005 | < 0.005 | 35.1 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.36 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 79.6 | 79.6 | < 0.005 | < 0.005 | 80.7 |
| Vendor | < 0.005 | 0.10 | 0.04 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | 0.01 | 0.01 | — | 78.2 | 78.2 | < 0.005 | 0.01 | 81.7 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | 0.03 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 7.69 | 7.69 | < 0.005 | < 0.005 | 7.80 |
| Vendor | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.49 | 7.49 | < 0.005 | < 0.005 | 7.84 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 1.27 | 1.27 | < 0.005 | < 0.005 | 1.29 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.24 | 1.24 | < 0.005 | < 0.005 | 1.30 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

3.9. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | CO2e |
|---------------------|---------|------|------|---------|---------|-------|-------|---------|--------|--------|------|-------|-------|---------|---------|-------|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.24 | 3.74 | 12.8 | 0.02 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 2,201 | 2,201 | 0.09 | 0.02 | 2,209 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.24 | 3.74 | 12.8 | 0.02 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 2,201 | 2,201 | 0.09 | 0.02 | 2,209 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.17 | 2.67 | 9.12 | 0.02 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 1,572 | 1,572 | 0.06 | 0.01 | 1,578 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.49 | 1.66 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 260 | 260 | 0.01 | < 0.005 | 261 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.02 | 0.37 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 84.2 | 84.2 | < 0.005 | < 0.005 | 85.5 |
| Vendor | < 0.005 | 0.09 | 0.04 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | 0.01 | 0.01 | — | 76.9 | 76.9 | < 0.005 | 0.01 | 80.5 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | |
|---------------------|---------|---------|------|---------|---------|---------|---------|---------|---------|---------|---|------|------|---------|---------|------|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.33 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 78.1 | 78.1 | < 0.005 | < 0.005 | 79.1 |
| Vendor | < 0.005 | 0.10 | 0.04 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | 0.01 | 0.01 | — | 76.9 | 76.9 | < 0.005 | 0.01 | 80.4 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.02 | 0.02 | 0.23 | 0.00 | 0.00 | 0.06 | 0.06 | 0.00 | 0.01 | 0.01 | — | 56.1 | 56.1 | < 0.005 | < 0.005 | 57.0 |
| Vendor | < 0.005 | 0.07 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.02 | < 0.005 | < 0.005 | < 0.005 | — | 54.9 | 54.9 | < 0.005 | 0.01 | 57.4 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | 0.04 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 9.30 | 9.30 | < 0.005 | < 0.005 | 9.44 |
| Vendor | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 9.09 | 9.09 | < 0.005 | < 0.005 | 9.51 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

3.11. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | CO2e |
|---------------------|------|------|------|------|-------|-------|-------|--------|--------|--------|------|-------|-------|------|------|-------|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.24 | 3.74 | 12.8 | 0.02 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 2,201 | 2,201 | 0.09 | 0.02 | 2,208 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.24 | 3.74 | 12.8 | 0.02 | 0.04 | — | 0.04 | 0.04 | — | 0.04 | — | 2,201 | 2,201 | 0.09 | 0.02 | 2,208 |

| | | | | | | | | | | | | | | | | |
|---------------------|---------|---------|------|---------|---------|---------|---------|---------|---------|---------|---|------|------|---------|---------|------|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.68 | 2.32 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 401 | 401 | 0.02 | < 0.005 | 402 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.12 | 0.42 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 66.3 | 66.3 | < 0.005 | < 0.005 | 66.5 |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.02 | 0.35 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 82.6 | 82.6 | < 0.005 | < 0.005 | 83.9 |
| Vendor | < 0.005 | 0.09 | 0.04 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | 0.01 | 0.01 | — | 75.6 | 75.6 | < 0.005 | 0.01 | 79.2 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.03 | 0.03 | 0.31 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 76.6 | 76.6 | < 0.005 | < 0.005 | 77.7 |
| Vendor | < 0.005 | 0.10 | 0.04 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | 0.01 | 0.01 | — | 75.6 | 75.6 | < 0.005 | 0.01 | 79.1 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | < 0.005 | 0.05 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 14.0 | 14.0 | < 0.005 | < 0.005 | 14.2 |
| Vendor | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 13.8 | 13.8 | < 0.005 | < 0.005 | 14.4 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---|------|------|---------|---------|------|
| Worker | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 2.32 | 2.32 | < 0.005 | < 0.005 | 2.36 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 2.28 | 2.28 | < 0.005 | < 0.005 | 2.38 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

3.13. Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | CO2e |
|---------------------|---------|------|------|---------|---------|-------|---------|---------|--------|---------|------|-------|-------|---------|---------|-------|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.13 | 1.77 | 8.32 | 0.01 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 1,244 | 1,244 | 0.05 | 0.01 | 1,248 |
| Paving | 0.08 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | 0.05 | 0.23 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 34.1 | 34.1 | < 0.005 | < 0.005 | 34.2 |
| Paving | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | 0.01 | 0.04 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 5.64 | 5.64 | < 0.005 | < 0.005 | 5.66 |
| Paving | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | |
|---------------------|---------|---------|---------|------|------|---------|---------|------|---------|---------|---|------|------|---------|---------|------|
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.03 | 0.54 | 0.00 | 0.00 | 0.12 | 0.12 | 0.00 | 0.03 | 0.03 | — | 127 | 127 | < 0.005 | < 0.005 | 129 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 3.26 | 3.26 | < 0.005 | < 0.005 | 3.31 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.54 | 0.54 | < 0.005 | < 0.005 | 0.55 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

3.15. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | CO2e |
|-------------------------|------|------|------|---------|---------|-------|---------|---------|--------|---------|------|-------|------|------|---------|------|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.02 | 0.65 | 0.96 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 134 | 134 | 0.01 | < 0.005 | 134 |
| Architect ural Coatings | 101 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | |
|-------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---|------|------|---------|---------|------|
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | 0.02 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 3.66 | 3.66 | < 0.005 | < 0.005 | 3.67 |
| Architect ural Coatings | 2.76 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.61 | 0.61 | < 0.005 | < 0.005 | 0.61 |
| Architect ural Coatings | 0.50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | < 0.005 | 0.07 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | < 0.005 | < 0.005 | — | 16.5 | 16.5 | < 0.005 | < 0.005 | 16.8 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.42 | 0.42 | < 0.005 | < 0.005 | 0.43 |

| | | | | | | | | | | | | | | | | |
|---------|---------|---------|---------|------|------|---------|---------|------|---------|---------|---|------|------|---------|---------|------|
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.07 | 0.07 | < 0.005 | < 0.005 | 0.07 |
| Vendor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Hauling | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | CO2e |
|-----------------------|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|------|------|------|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | 298 | 298 | 0.05 | 0.01 | 301 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 298 | 298 | 0.05 | 0.01 | 301 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | 298 | 298 | 0.05 | 0.01 | 301 |

| | | | | | | | | | | | | | | | | |
|-----------------------|---|---|---|---|---|---|---|---|---|---|---|------|------|------|---------|------|
| Total | — | — | — | — | — | — | — | — | — | — | — | 298 | 298 | 0.05 | 0.01 | 301 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | 49.3 | 49.3 | 0.01 | < 0.005 | 49.8 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 49.3 | 49.3 | 0.01 | < 0.005 | 49.8 |

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | CO2e |
|-----------------------|------|------|------|------|-------|-------|-------|--------|--------|--------|------|-------|------|------|------|------|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Source | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | CO2e |
|------------------------|------|------|------|---------|---------|-------|---------|---------|--------|---------|------|-------|------|---------|---------|------|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Hearths | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Consumer Products | 1.53 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.28 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.14 | 0.01 | 1.53 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 4.10 | 4.10 | < 0.005 | < 0.005 | 4.11 |
| Total | 1.95 | 0.01 | 1.53 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | 0.00 | 4.10 | 4.10 | < 0.005 | < 0.005 | 4.11 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Hearths | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Consumer Products | 1.53 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.28 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | 1.81 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Hearths | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 | 0.00 | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Consumer Products | 0.28 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | |
|-----------------------|------|---------|------|---------|---------|---|---------|---------|---|---------|------|------|------|---------|---------|------|
| Architect Coatings | 0.05 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscap e Equipme nt | 0.01 | < 0.005 | 0.14 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.33 | 0.33 | < 0.005 | < 0.005 | 0.34 |
| Total | 0.34 | < 0.005 | 0.14 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | 0.00 | 0.33 | 0.33 | < 0.005 | < 0.005 | 0.34 |

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | CO2e |
|-----------------------|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|------|---------|------|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | 1.84 | 4.70 | 6.53 | 0.19 | < 0.005 | 12.6 |
| Total | — | — | — | — | — | — | — | — | — | — | 1.84 | 4.70 | 6.53 | 0.19 | < 0.005 | 12.6 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | 1.84 | 4.70 | 6.53 | 0.19 | < 0.005 | 12.6 |
| Total | — | — | — | — | — | — | — | — | — | — | 1.84 | 4.70 | 6.53 | 0.19 | < 0.005 | 12.6 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | 0.30 | 0.78 | 1.08 | 0.03 | < 0.005 | 2.09 |
| Total | — | — | — | — | — | — | — | — | — | — | 0.30 | 0.78 | 1.08 | 0.03 | < 0.005 | 2.09 |

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | CO2e |
|-----------------------|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|------|------|------|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | 9.57 | 0.00 | 9.57 | 0.96 | 0.00 | 33.5 |
| Total | — | — | — | — | — | — | — | — | — | — | 9.57 | 0.00 | 9.57 | 0.96 | 0.00 | 33.5 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | 9.57 | 0.00 | 9.57 | 0.96 | 0.00 | 33.5 |
| Total | — | — | — | — | — | — | — | — | — | — | 9.57 | 0.00 | 9.57 | 0.96 | 0.00 | 33.5 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | 1.59 | 0.00 | 1.59 | 0.16 | 0.00 | 5.55 |
| Total | — | — | — | — | — | — | — | — | — | — | 1.59 | 0.00 | 1.59 | 0.16 | 0.00 | 5.55 |

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | CO2e |
|---------------------|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|-----|-----|------|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | |
|-----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------|
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.51 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.51 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.51 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.51 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.08 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.08 |

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Equipment Type | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | CO2e |
|---------------------|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|-----|-----|------|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Equipment Type | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | CO2e |
|---------------------|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|-----|-----|------|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Equipment Type | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | CO2e |
|---------------------|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|-----|-----|------|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Vegetation | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | CO2e |
|---------------------|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|-----|-----|------|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | CO2e |
|---------------------|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|-----|-----|------|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Species | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | CO2e |
|---------------------|-----|-----|----|-----|-------|-------|-------|--------|--------|--------|------|-------|------|-----|-----|------|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

5. Activity Data

5.1. Construction Schedule

| Phase Name | Phase Type | Start Date | End Date | Days Per Week | Work Days per Phase | Phase Description |
|-----------------------|-----------------------|------------|------------|---------------|---------------------|-------------------|
| Demolition | Demolition | 10/1/2024 | 10/29/2024 | 5.00 | 20.0 | — |
| Site Preparation | Site Preparation | 10/30/2024 | 11/3/2024 | 5.00 | 3.00 | — |
| Grading | Grading | 11/4/2024 | 11/12/2024 | 5.00 | 6.00 | — |
| Building Construction | Building Construction | 11/13/2024 | 4/3/2026 | 5.00 | 363 | — |
| Paving | Paving | 4/6/2026 | 4/17/2026 | 5.00 | 10.0 | — |
| Architectural Coating | Architectural Coating | 4/20/2026 | 5/1/2026 | 5.00 | 10.0 | — |

5.2. Off-Road Equipment

5.2.1. Unmitigated

| Phase Name | Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|------------------|--------------------------|-----------|--------------|----------------|---------------|------------|-------------|
| Demolition | Rubber Tired Dozers | Diesel | Tier 4 Final | 3.00 | 8.00 | 84.0 | 0.37 |
| Demolition | Rubber Tired Dozers | Diesel | Tier 4 Final | 1.00 | 8.00 | 367 | 0.40 |
| Demolition | Concrete/Industrial Saws | Diesel | Tier 4 Final | 1.00 | 8.00 | 33.0 | 0.73 |
| Site Preparation | Graders | Diesel | Tier 4 Final | 1.00 | 8.00 | 148 | 0.41 |

| | | | | | | | |
|-----------------------|----------------------------|--------|--------------|------|------|------|------|
| Site Preparation | Scrapers | Diesel | Tier 4 Final | 1.00 | 8.00 | 423 | 0.48 |
| Site Preparation | Tractors/Loaders/Back hoes | Diesel | Tier 4 Final | 1.00 | 7.00 | 84.0 | 0.37 |
| Grading | Graders | Diesel | Tier 4 Final | 1.00 | 8.00 | 148 | 0.41 |
| Grading | Rubber Tired Dozers | Diesel | Tier 4 Final | 1.00 | 8.00 | 367 | 0.40 |
| Grading | Tractors/Loaders/Back hoes | Diesel | Tier 4 Final | 2.00 | 7.00 | 84.0 | 0.37 |
| Building Construction | Cranes | Diesel | Tier 4 Final | 1.00 | 8.00 | 367 | 0.29 |
| Building Construction | Forklifts | Diesel | Tier 4 Final | 2.00 | 7.00 | 82.0 | 0.20 |
| Building Construction | Generator Sets | Diesel | Tier 4 Final | 1.00 | 8.00 | 14.0 | 0.74 |
| Building Construction | Tractors/Loaders/Back hoes | Diesel | Tier 4 Final | 1.00 | 6.00 | 84.0 | 0.37 |
| Building Construction | Welders | Diesel | Tier 4 Final | 3.00 | 8.00 | 46.0 | 0.45 |
| Paving | Tractors/Loaders/Back hoes | Diesel | Tier 4 Final | 1.00 | 8.00 | 84.0 | 0.37 |
| Paving | Pavers | Diesel | Tier 4 Final | 1.00 | 8.00 | 81.0 | 0.42 |
| Paving | Paving Equipment | Diesel | Tier 4 Final | 1.00 | 8.00 | 89.0 | 0.36 |
| Paving | Rollers | Diesel | Tier 4 Final | 2.00 | 8.00 | 36.0 | 0.38 |
| Paving | Cement and Mortar Mixers | Diesel | Tier 4 Final | 1.00 | 8.00 | 10.0 | 0.56 |
| Architectural Coating | Air Compressors | Diesel | Tier 4 Final | 1.00 | 6.00 | 37.0 | 0.48 |

5.3. Construction Vehicles

5.3.1. Unmitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|------------|-----------|-----------------------|----------------|---------------|
| Demolition | — | — | — | — |
| Demolition | Worker | 12.5 | 11.7 | LDA,LDT1,LDT2 |
| Demolition | Vendor | — | 8.40 | HHDT,MHDT |
| Demolition | Hauling | 15.2 | 20.0 | HHDT |

| | | | | |
|-----------------------|--------------|------|------|---------------|
| Demolition | Onsite truck | — | — | HHDT |
| Site Preparation | — | — | — | — |
| Site Preparation | Worker | 7.50 | 11.7 | LDA,LDT1,LDT2 |
| Site Preparation | Vendor | — | 8.40 | HHDT,MHDT |
| Site Preparation | Hauling | 0.00 | 20.0 | HHDT |
| Site Preparation | Onsite truck | — | — | HHDT |
| Grading | — | — | — | — |
| Grading | Worker | 10.0 | 11.7 | LDA,LDT1,LDT2 |
| Grading | Vendor | — | 8.40 | HHDT,MHDT |
| Grading | Hauling | 49.3 | 20.0 | HHDT |
| Grading | Onsite truck | — | — | HHDT |
| Building Construction | — | — | — | — |
| Building Construction | Worker | 9.72 | 11.7 | LDA,LDT1,LDT2 |
| Building Construction | Vendor | 2.89 | 8.40 | HHDT,MHDT |
| Building Construction | Hauling | 0.00 | 20.0 | HHDT |
| Building Construction | Onsite truck | — | — | HHDT |
| Paving | — | — | — | — |
| Paving | Worker | 15.0 | 11.7 | LDA,LDT1,LDT2 |
| Paving | Vendor | — | 8.40 | HHDT,MHDT |
| Paving | Hauling | 0.00 | 20.0 | HHDT |
| Paving | Onsite truck | — | — | HHDT |
| Architectural Coating | — | — | — | — |
| Architectural Coating | Worker | 1.94 | 11.7 | LDA,LDT1,LDT2 |
| Architectural Coating | Vendor | — | 8.40 | HHDT,MHDT |
| Architectural Coating | Hauling | 0.00 | 20.0 | HHDT |
| Architectural Coating | Onsite truck | — | — | HHDT |

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

| Control Strategies Applied | PM10 Reduction | PM2.5 Reduction |
|---|----------------|-----------------|
| Water unpaved roads twice daily | 55% | 55% |
| Limit vehicle speeds on unpaved roads to 25 mph | 44% | 44% |

5.5. Architectural Coatings

| Phase Name | Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|-----------------------|--|--|--|--|-----------------------------|
| Architectural Coating | 145,028 | 48,343 | 0.00 | 0.00 | — |

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

| Phase Name | Material Imported (Cubic Yards) | Material Exported (Cubic Yards) | Acres Graded (acres) | Material Demolished (Building Square Footage) | Acres Paved (acres) |
|------------------|---------------------------------|---------------------------------|----------------------|---|---------------------|
| Demolition | 0.00 | 0.00 | 0.00 | 26,378 | — |
| Site Preparation | 0.00 | 0.00 | 4.50 | 0.00 | — |
| Grading | 0.00 | 2,365 | 6.00 | 0.00 | — |
| Paving | 0.00 | 0.00 | 0.00 | 0.00 | 0.30 |

5.6.2. Construction Earthmoving Control Strategies

| Control Strategies Applied | Frequency (per day) | PM10 Reduction | PM2.5 Reduction |
|----------------------------|---------------------|----------------|-----------------|
| Water Exposed Area | 2 | 61% | 61% |
| Water Demolished Area | 2 | 36% | 36% |

5.7. Construction Paving

| Land Use | Area Paved (acres) | % Asphalt |
|----------|--------------------|-----------|
|----------|--------------------|-----------|

| | | |
|-----------------------|------|------|
| Single Family Housing | 0.30 | 100% |
|-----------------------|------|------|

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

| Year | kWh per Year | CO2 | CH4 | N2O |
|------|--------------|-----|------|---------|
| 2024 | 0.00 | 204 | 0.03 | < 0.005 |
| 2025 | 0.00 | 204 | 0.03 | < 0.005 |
| 2026 | 0.00 | 204 | 0.03 | < 0.005 |

5.9. Operational Mobile Sources

5.9.1. Unmitigated

| Land Use Type | Trips/Weekday | Trips/Saturday | Trips/Sunday | Trips/Year | VMT/Weekday | VMT/Saturday | VMT/Sunday | VMT/Year |
|---------------------|---------------|----------------|--------------|------------|-------------|--------------|------------|-----------|
| Total all Land Uses | 255 | 255 | 255 | 93,075 | 5,993 | 5,993 | 5,993 | 2,187,263 |

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

| Hearth Type | Unmitigated (number) |
|--------------------------|----------------------|
| Single Family Housing | — |
| Wood Fireplaces | 0 |
| Gas Fireplaces | 0 |
| Propane Fireplaces | 0 |
| Electric Fireplaces | 0 |
| No Fireplaces | 27 |
| Conventional Wood Stoves | 0 |

| | |
|---------------------------|---|
| Catalytic Wood Stoves | 0 |
| Non-Catalytic Wood Stoves | 0 |
| Pellet Wood Stoves | 0 |

5.10.2. Architectural Coatings

| Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|--|--|--|--|-----------------------------|
| 145028.475 | 48,343 | 0.00 | 0.00 | — |

5.10.3. Landscape Equipment

| Season | Unit | Value |
|-------------|--------|-------|
| Snow Days | day/yr | 0.00 |
| Summer Days | day/yr | 180 |

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

| Land Use | Electricity (kWh/yr) | CO2 | CH4 | N2O | Natural Gas (kBTU/yr) |
|-----------------------|----------------------|-----|--------|--------|-----------------------|
| Single Family Housing | 532,774 | 204 | 0.0330 | 0.0040 | 0.00 |

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

| Land Use | Indoor Water (gal/year) | Outdoor Water (gal/year) |
|-----------------------|-------------------------|--------------------------|
| Single Family Housing | 958,793 | 445,284 |

5.13. Operational Waste Generation

5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|-----------------------|------------------|-------------------------|
| Single Family Housing | 17.8 | — |

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

| Land Use Type | Equipment Type | Refrigerant | GWP | Quantity (kg) | Operations Leak Rate | Service Leak Rate | Times Serviced |
|-----------------------|---|-------------|-------|---------------|----------------------|-------------------|----------------|
| Single Family Housing | Average room A/C & Other residential A/C and heat pumps | R-410A | 2,088 | < 0.005 | 2.50 | 2.50 | 10.0 |
| Single Family Housing | Household refrigerators and/or freezers | R-134a | 1,430 | 0.12 | 0.60 | 0.00 | 1.00 |

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

| Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|----------------|-----------|-------------|----------------|---------------|------------|-------------|
|----------------|-----------|-------------|----------------|---------------|------------|-------------|

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

| Equipment Type | Fuel Type | Number per Day | Hours per Day | Hours per Year | Horsepower | Load Factor |
|----------------|-----------|----------------|---------------|----------------|------------|-------------|
|----------------|-----------|----------------|---------------|----------------|------------|-------------|

5.16.2. Process Boilers

| Equipment Type | Fuel Type | Number | Boiler Rating (MMBtu/hr) | Daily Heat Input (MMBtu/day) | Annual Heat Input (MMBtu/yr) |
|----------------|-----------|--------|--------------------------|------------------------------|------------------------------|
|----------------|-----------|--------|--------------------------|------------------------------|------------------------------|

5.17. User Defined

| Equipment Type | Fuel Type |
|----------------|-----------|
|----------------|-----------|

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

| Vegetation Land Use Type | Vegetation Soil Type | Initial Acres | Final Acres |
|--------------------------|----------------------|---------------|-------------|
|--------------------------|----------------------|---------------|-------------|

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

| Biomass Cover Type | Initial Acres | Final Acres |
|--------------------|---------------|-------------|
|--------------------|---------------|-------------|

5.18.2. Sequestration

5.18.2.1. Unmitigated

| Tree Type | Number | Electricity Saved (kWh/year) | Natural Gas Saved (btu/year) |
|-----------|--------|------------------------------|------------------------------|
|-----------|--------|------------------------------|------------------------------|

8. User Changes to Default Data

| Screen | Justification |
|----------------------------------|---|
| Land Use | Project site is 2.3 acres. 6 units at 2,421 sf + 4 units at 2,580 sf + 9 units at 2,661 sf + 8 units at 2,853 sf = 71,619 sf. |
| Construction: Off-Road Equipment | Applicant has committed to using Tier 4 equipment |
| Operations: Hearths | The development will be all electric. |
| Operations: Energy Use | Development will be all electric. Converted default Natural gas usage to MMBtu and then to kWh for electricity to add to default electricity usage. |

| | |
|-----------------------------------|---|
| Construction: Construction Phases | Construction estimated by applicant to be 1 month grading and site prep, 20 months total. |
| Construction: Paving | Internal roadway would be asphalt |

ENERGY CALCULATIONS

ATTACHMENT B

to the
38134 Temple Way Residential Project Initial Study

Construction Energy Use

To support the Energy Analysis for the following project: 38134 Temple Way

Construction Equipment/Vehicles

| | # of Vehicles | Hrs per Day | Horse-power | Load Factor | Days in Phase | horsepower-hour/BSFC per day | horsepower-hour per phase | fuel used per vehicle | Fuel Used (gallons) |
|--|---------------|-------------|-------------|-------------|---------------|------------------------------|---------------------------|-----------------------|------------------------|
| Demolition | | | | | | | | | |
| Rubber Tired Dozers | 3 | 8 | 84 | 0.37 | 20 | 248.64 | 4972.80 | 292.40 | 877 |
| Concrete Saws | 1 | 8 | 367 | 0.4 | 20 | 1174.40 | 23488.00 | 1242.52 | 1,243 |
| Rubber Tired Dozers | 1 | 8 | 33 | 0.73 | 20 | 192.72 | 3854.40 | 226.64 | 227 |
| Site Preparation | | | | | | | | | |
| Graders | 1 | 8 | 148 | 0.41 | 3 | 485.44 | 1456.32 | 77.04 | 77 |
| Scrapers | 1 | 8 | 423 | 0.48 | 3 | 1624.32 | 4872.96 | 257.78 | 258 |
| Tractors/Loaders/Backhoes | 1 | 7 | 84 | 0.37 | 3 | 217.56 | 652.68 | 38.38 | 38 |
| Grading / Excavation | | | | | | | | | |
| Graders | 1 | 8 | 148 | 0.41 | 6 | 485.44 | 2912.64 | 154.08 | 154 |
| Rubber Tired Dozers | 1 | 8 | 367 | 0.4 | 6 | 1174.40 | 7046.40 | 372.75 | 373 |
| Tractors/Loaders/Backhoes | 2 | 7 | 84 | 0.37 | 6 | 217.56 | 1305.36 | 76.76 | 154 |
| Building - Exterior | | | | | | | | | |
| Cranes | 1 | 8 | 367 | 0.29 | 363 | 851.44 | 309072.72 | 16349.95 | 16,350 |
| Forklifts | 2 | 7 | 82 | 0.2 | 363 | 114.80 | 41672.40 | 2450.34 | 4,901 |
| Generator Sets | 1 | 8 | 14 | 0.74 | 363 | 82.88 | 30085.44 | 1769.02 | 1,769 |
| Tractors/Loaders/Backhoes | 1 | 6 | 84 | 0.37 | 363 | 186.48 | 67692.24 | 3980.30 | 3,980 |
| Welders | 3 | 8 | 46 | 0.45 | 363 | 165.60 | 60112.80 | 3534.63 | 10,604 |
| Building - Interior / Architectural Coating | | | | | | | | | |
| Air Compressors | 1 | 6 | 37 | 0.48 | 10 | 106.56 | 1065.60 | 62.66 | 63 |
| Paving | | | | | | | | | |
| Cement and Mortar Mixers | 1 | 8 | 10 | 0.56 | 10 | 44.80 | 448.00 | 26.34 | 26 |
| Pavers | 1 | 8 | 81 | 0.42 | 10 | 272.16 | 2721.60 | 160.03 | 160 |
| Paving Equipment | 1 | 8 | 89 | 0.36 | 10 | 256.32 | 2563.20 | 150.72 | 151 |
| Rollers | 2 | 8 | 36 | 0.38 | 10 | 109.44 | 1094.40 | 64.35 | 129 |
| Tractors/Loaders/Backhoes | 1 | 8 | 84 | 0.37 | 10 | 248.64 | 2486.40 | 146.20 | 146 |
| Total Fuel Used for Construction Equipment/Vehicles | | | | | | | | | 41,678 (diesel) |

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors [1] used in the above calculations are (in gallons per horsepower-hour/BSFC)

0.0588 <100 horsepower
0.0529 >100 horsepower

Worker Trips

| Phase | MPG [2] | Trips | Trip Length (miles) | Total Miles per Day | Days in Phase | Total Miles in Phase | Fuel Used (gallons) |
|--|---------|-------|---------------------|---------------------|---------------|----------------------|-------------------------|
| Demolition | 24 | 12.5 | 11.7 | 146.25 | 20 | 2925 | 122 |
| Site Prep Phase | 24 | 7.5 | 11.7 | 87.75 | 3 | 263.25 | 11 |
| Grading Phase | 24 | 10 | 11.7 | 117 | 6 | 702 | 29 |
| Paving | 24 | 15 | 11.7 | 175.5 | 10 | 1755 | 73 |
| Building Construction | 24 | 9.72 | 11.7 | 113.724 | 363 | 41281.812 | 1,720 |
| Architectural Coating | 24 | 1.94 | 11.7 | 22.698 | 10 | 226.98 | 9 |
| Total Fuel Used for Construction Worker Trips | | | | | | | 1,965 (gasoline) |

Construction Energy Use, Continued

Vendor Trips

| Phase | MPG [2] | Trips | Trip Length (miles) | Total Miles per Day | Days in Phase | Total Miles in Phase | Fuel Used (gallons) |
|---|---------|-------|---------------------|---------------------|---------------|----------------------|-----------------------|
| Demolition | 7.4 | 0 | 8.4 | 0 | 20 | 0 | 0 |
| Site Prep Phase | 7.4 | 0 | 8.4 | 0 | 3 | 0 | 0 |
| Grading Phase | 7.4 | 0 | 8.4 | 0 | 6 | 0 | 0 |
| Paving | 7.4 | 0 | 8.4 | 0 | 10 | 0 | 0 |
| Building Construction | 7.4 | 2.89 | 8.4 | 24.276 | 363 | 8812.188 | 1,191 |
| Architectural Coating | 7.4 | 0 | 8.4 | 0 | 10 | 0 | 0 |
| Total Fuel Used for Vendor Trips | | | | | | | 1,191 (diesel) |

Hauling Trips

| Phase | MPG [2] | Trips | Trip Length (miles) | Total Miles per Day | Days in Phase | Total Miles in Phase | Fuel Used (gallons) |
|--|---------|-------|---------------------|---------------------|---------------|----------------------|---------------------|
| Demolition | 7.4 | 15.2 | 20 | 304 | 20 | 6080 | 41 |
| Site Prep Phase | 7.4 | 0 | 20 | 0 | 3 | 0 | 0 |
| Grading Phase | 7.4 | 49.3 | 20 | 986 | 6 | 5916 | 133 |
| Paving | 7.4 | 0 | 20 | 0 | 10 | 0 | 0 |
| Building Construction | 7.4 | 0 | 20 | 0 | 363 | 0 | 0 |
| Architectural Coating | 7.4 | 0 | 20 | 0 | 10 | 0 | 0 |
| Total Fuel Used for Hauling Trips | | | | | | | 174 (diesel) |

Total Construction Fuel Use

Total

| |
|-------------------------|
| gallons |
| 43,044 (diesel) |
| 1,965 (gasoline) |

Conversion Factor [3] 109,786 Btu/gallon

Fuel Use Converted to MMBtu

| | |
|--------------|-----------------------|
| 4,726 | MMBtu (from diesel) |
| 216 | MMBtu (from gasoline) |

Sum of above

| | |
|--------------------------------------|--------------------|
| Total Construction Energy Use | 4,941 MMBtu |
|--------------------------------------|--------------------|

Operational Energy Use

Operational Vehicular Fuel Use

| | |
|------------------|-----------|
| Gross Annual VMT | 2,187,263 |
|------------------|-----------|

| Fleet Class | Fleet Mix | VMT per Class | Fuel Economy [4] | Fuel Consumption (gallons) | |
|---------------------------|-------------|---------------|------------------|----------------------------|------------------------------|
| Light Duty Auto (LDA) | 0.527470112 | 1153715.9 | 30.9 | 37337.08 | |
| Light Duty Truck 1 (LDT1) | 0.043469407 | 95079.025 | 26.63 | 3570.37 | |
| Light Duty Truck 2 (LDT2) | 0.2227422 | 487195.77 | 24.36 | 19999.83 | |
| Medium Duty Vehicle (MDV) | 0.121659935 | 266102.27 | 20.2 | 13173.38 | |
| Motorcycle (MCY) | 0.022699963 | 49650.79 | 37.06 | 1339.74 | Total Gasoline 75,420 |
| Light Heavy Duty 1 (LHD1) | 0.024413552 | 53398.859 | 18.23 | 2929.17 | gallons |
| Light Heavy Duty 2 (LHD2) | 0.005811769 | 12711.867 | 16.24 | 782.75 | |
| Medium Heavy Duty (MHD) | 0.013973179 | 30563.018 | 9.43 | 3241.04 | |
| Heavy Heavy Duty (HHD) | 0.013404457 | 29319.073 | 6.42 | 4566.83 | |
| Other Bus (OBUS) | 0.000830598 | 1816.7363 | 8.26 | 219.94 | |
| Urban Bus (UBUS) | 0.000909748 | 1989.8582 | 5.17 | 384.89 | |
| School Bus (SBUS) | 0.000450445 | 985.24166 | 7.25 | 135.90 | |
| Motorhome (MH) | 0.002164648 | 4734.6543 | 9.91 | 477.77 | Total Diesel 12,738 |

Note that the above numbers represent gross fuel consumption.

| | |
|------------------------------------|------------------------------------|
| Conversion Factor [3] | 109,786 Btu/gallon |
| Fuel Use Converted to MMBtu | 8,280 MMBtu (from gasoline) |
| | 1,398 MMBtu (from diesel) |

Operational Built Environment

| Type of Energy | Annual Usage | Units | Converted to MMBtu |
|----------------|--------------|--------|--------------------|
| Electricity | 5.33E+05 | kWh | 1817.90 |
| Natural Gas | | 0 kBtu | 0.00 |

Sum of above

| | |
|--|---------------------|
| Total Annual Operational Energy Use | 11,496 MMBtu |
|--|---------------------|