# Memorandum

Date: November 18, 2024

To: Chris Yeager, Senior Planner

From: Peter Carlson, Carlson Strategic Land Solutions

Subject: 960 W. 16th Street Live/Work Project CEQA Exemption

Intracorp proposes constructing 38 Live/Work units on approximately 2.35 acres within the City of Costa Mesa located at 960 W. 16th Street. The project site is currently developed with an approximately 56,127 square foot unoccupied industrial/office building and associated surface parking. The proposed Project would demolish the existing building and parking area, and construct 38 new single family residential units with approximately 11,609 square feet of attached live/work office space. The Project site is considered infill, surrounded by existing residential and commercial development and served by existing utilities. Surrounding land uses include residential uses to the north, industrial uses to the east, Newport Beach utilities facility to the south across W. 16th Street, and Hampton Drive and residential uses to the west.

The Project site has a General Plan designation of Light Industrial with the Mesa West Bluffs Urban Plan mixed-use overlay and is zoned General Industrial with a Mesa West Bluffs Urban Plan Overlay. The Mesa West Bluffs Urban Plan permits Live/Work units at 15-20 units per acre. The proposed 38 units represent a density of approximately 16.2 du/ac.

## Project Design Features

Project Design Features (PDFs) are attributes of a project designed to avoid or minimize environmental impacts. The PDFs are part of the project description and commitments made by the project Applicant. The following PDFs have been incorporated into the proposed Project.

DF-1 The project will follow the SCAQMD rules and requirements for fugitive dust control, which include, but are not limited to the following:

1. All active construction areas shall be watered two (2) times daily.
2. Any visible deposition on any public roadway shall be swept or washed at the site access points within 30 minutes.
3. Any on-site stockpiles of debris, dirt or other dusty material shall be covered or watered twice daily.
4. All operations on any unpaved surface shall be suspended if winds exceed 15 mph.
5. Access points shall be washed or swept daily.
6. Construction sites shall be sandbagged for erosion control.
7. Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).

8. Cover all trucks hauling dirt, sand, soil, or other loose materials, and maintain at least 2 feet of freeboard space in accordance with the requirements of California Vehicle Code (CVC) section 23114.
9. Use gravel aprons at truck exits.
10. Replace the ground cover of disturbed areas as quickly possible.

DF-2 Construction equipment shall be maintained in proper tune.

DF-3 All construction vehicles shall be prohibited from excessive idling. Excessive idling is defined as five (5) minutes or longer.

DF-4 Minimize the simultaneous operation of multiple construction equipment units, to the maximum extent feasible.

DF-5 The use of heavy construction equipment and earthmoving activity shall be suspended during Air Alerts when the Air Quality Index reaches the "Unhealthy" level.

DF-6 Establish an electricity supply to the construction site and use electric-powered equipment instead of diesel-powered equipment or generators, where feasible.

DF-7 Establish staging areas for the construction equipment that are as distant as possible from adjacent residential homes.

DF-8 Utilize zero VOC and low VOC paints and solvents, where feasible.

DF-9 The project will comply with the mandatory requirements of the California Building Standards Code, Title 24, Part 6 (Energy Code) and Part 11 (CALGreen), including, but not limited to:
1. Install low flow fixtures and toilets, water efficient irrigation systems, drought tolerant/native landscaping, and reduce the amount of turf.
2. Provide the necessary infrastructure to support electric vehicle charging.
3. Provide solar installations/solar readiness zones per the prescribed Energy Design Ratings.

DF-10 The project will participate in local waste management recycling and composting programs.

DF-11 A liquid boot vapor barrier shall be installed under all live/work units.

## CEQA Compliance

The California Environmental Quality Act (CEQA) has determined that small infill projects are exempt from further CEQA review. The CEQA Guidelines Section 15354 defines a Categorical Exemption as:

> "Categorical exemption" means an exemption from CEQA for a class of projects based on a finding by the Secretary for Resources that the class of projects does not have a significant effect on the environment.

The proposed Project consists of the construction of 38 Live/Work units. Attachment A is the proposed site plan. The construction of the 38 Live/Work units on 2.35 acres falls within the umbrella established by CEQA Guidelines Section 15332, Class 32 Categorical Exemption.

> 15332. IN-FILL DEVELOPMENT PROJECTS
> Class 32 consists of projects characterized as in-fill development meeting the conditions described in this section.
>
> (a) The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations.
>
> (b) The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses.
>
> (c) The project site has no value as habitat for endangered, rare or threatened species.
>
> (d) Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.
>
> (e) The site can be adequately served by all required utilities and public services.
>
> Note: Authority cited: Section 21083, Public Resources Code. Reference: Section 21084, Public Resources Code.

Rationale:

To qualify for the Class 32 Infill Exemption, a project must meet the five requirements in the statute. In the case of the proposed Project, all five requirements are met, as follows:

1. General Plan and Zoning Consistency. The proposed Project is consistent with the General Plan designation and zoning. The Project site has a General Plan designation of Light Industrial with the Mesa West Bluffs Urban Plan mixed-use overlay and is zoned General Industrial with a Mesa West Bluffs Urban Plan Overlay. The Mesa West Bluffs Urban Plan permits Live/Work units at 15-20 units per acre. The proposed 38 live/work units represent a density of approximately 16.2 du/ac.

   The proposal is consistent with the General Plan policies pertaining to infill Live/Work development as well as the development standards.

2. City limits and less than 5 acres. The Project site is located within the incorporated boundaries of the City of Costa Mesa and at 2.35 acres is less than the 5-acre requirement. The Project site is surrounded by urban uses, including residential uses to the north, industrial uses to the east, Newport Beach utilities facility to the south across W. 16th Street, and Hampton Drive and residential uses to the west.

3. Endangered Species. The Project site does not have any biological resources to support rare, threatened, or endangered species. The Project site is void of native habitat. With the exception of a small strip of ornamental landscaping along the Project site frontage, the Project site is completely developed industrial/office property with a paved surface parking lot. Given the surrounding land uses, the Project site does not provide a corridor for wildlife movement. Therefore, the Project site does not provide valuable biological resources.

4. Traffic, Noise, AQ, and Water Quality. The Project would not cause significant impacts to traffic, noise, air quality, or water quality as discussed below.

   Traffic. Pursuant to Senate Bill 743 (SB 743) the number of vehicle miles travelled (VMT) is now used as the metric under CEQA to determine traffic impacts of a proposed project. Linscott, Law & Greenspan, Engineers prepared the memo, *Vehicle Miles Traveled (VMT) Screening Assessment for the Proposed 960 W. 16th Street Residential Project, Costa Mesa, CA* dated November 15, 2024, and included as Attachment B. As documented in the VMT memo, the proposed Project has been determined to have no VMT impact because the Project qualifies for the following two screening criteria: 1) located within a Transit Priority Area; and 2) located within a low VMT area of the City. Therefore, the proposed Project would not cause a significant VMT impact.

   Noise. Construction and operations create two potential noise sources. Construction operation includes the demolition of existing structures, grading and site preparation of the Project site, and vertical construction of the live/work units. Construction is a temporary impact and governed by the City's municipal code for permitted construction hours. Construction of the site would follow typical construction methods. No blasting or pile driving would occur. All demolished materials would be hauled off the Project site to a suitable landfill. Minimal grading of the Project site is necessary, with approximately five feet of overexcavation and recompaction to create suitable materials for construction. Vertical construction would be typical wood-frame construction and not generate excessive noise. Therefore, the proposed Project would not cause excessive noise generation and would comply with the City's noise ordinance, which limits construction hours.

   Operational noise would occur from new traffic generated by the proposed Project. As documented in the VMT study (Attachment B), the proposed Project would generate less than 50 peak hour trips, which is less than the City's threshold for conducting a traffic study. During the AM and PM peak hours, the Project would generate 40 and 47 trips respectively. The minimal amount of traffic added to the transportation network would

not result in an audible increase in operational traffic noise. Therefore, the proposed Project would not create a significant noise impact.

Air Quality. The Project would not cause significant Air Quality impacts during construction or operation of the Project. Below are several tables summarizing potential air quality impacts against thresholds established by the South Coast Air Quality Management District (SCAQMD). This analysis is presented in the report, *16th Street Residential Project Air Quality and Greenhouse Gas Analysis, City of Costa Mesa*, prepared by RK Engineering Group, dated November 8, 2024, and included in Attachment C.

Table 1 – Maximum Daily Emissions (lbs/day)

| Activity | Maximum Daily Emissions (lbs./day)[1] | | | | | |
|---|---|---|---|---|---|---|
| | VOC | $NO_x$ | CO | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ |
| Demolition | 2.49 | 24.98 | 21.82 | 0.05 | 3.41 | 1.33 |
| Site Preparation | 3.37 | 31.71 | 31.16 | 0.05 | 9.26 | 5.25 |
| Grading | 1.80 | 16.45 | 18.81 | 0.03 | 3.71 | 2.05 |
| Building Construction | 1.12 | 10.04 | 13.75 | 0.02 | 0.59 | 0.40 |
| Paving | 0.86 | 6.30 | 9.87 | 0.01 | 0.52 | 0.30 |
| Architectural Coating | 19.97 | 0.87 | 1.26 | 0.00 | 0.06 | 0.03 |
| **Maximum[1]** | **19.97** | **31.71** | **31.16** | **0.05** | **9.26** | **5.25** |
| SCAQMD Threshold | 75 | 100 | 550 | 150 | 150 | 55 |
| **Exceeds Threshold?** | **No** | **No** | **No** | **No** | **No** | **No** |

[1] Maximum daily emissions during summer or winter; includes both onsite and offsite project emissions.

Table 2 – Localized Construction Emissions (lbs/day)

| Activity | Maximum Daily Emissions (lbs./day)[1] | | | |
|---|---|---|---|---|
| | $NO_x$ | CO | $PM_{10}$ | $PM_{2.5}$ |
| Onsite Emissions | 31.64 | 30.18 | 9.03 | 5.20 |
| SCAQMD Localized Threshold[2] | 161.1 | 1,325.2 | 10.6 | 6.9 |
| **Exceeds Threshold?** | **No** | **No** | **No** | **No** |

[1] Maximum daily emissions during summer or winter; includes both onsite and offsite project emissions.
[2] Source: SCAQMD Mass Rate Localized Significance Thresholds for 3.5 acres/day in SRA-18 at 25 meters.

Table 3 – Regional Operational Emissions (lbs/day)

| Activity | Maximum Daily Emissions (lbs./day)[1] | | | | | |
|---|---|---|---|---|---|---|
| | VOC | $NO_x$ | CO | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ |
| Mobile Sources | 1.16 | 0.89 | 10.39 | 0.03 | 2.45 | 0.63 |
| Area Sources | 1.95 | 0.65 | 2.42 | 0.00 | 0.05 | 0.05 |
| Energy Sources | 0.02 | 0.37 | 0.16 | 0.00 | 0.03 | 0.03 |
| **Total** | **3.13** | **1.91** | **12.97** | **0.03** | **2.53** | **0.71** |
| SCAQMD Threshold | 55 | 55 | 550 | 150 | 150 | 55 |
| **Exceeds Threshold?** | **No** | **No** | **No** | **No** | **No** | **No** |

[1] Maximum daily emissions during summer or winter; includes both onsite and offsite project emissions.

Table 4 – Localized Operational Emissions (lbs/day)

| Activity | Maximum Daily Emissions (lbs./day)[1] | | | |
|---|---|---|---|---|
| | $NO_x$ | CO | $PM_{10}$ | $PM_{2.5}$ |
| Onsite Emissions | 2.03 | 3.10 | 0.20 | 0.11 |
| SCAQMD Localized Threshold[2] | 161.1 | 1,325.2 | 2.9 | 1.8 |
| **Exceeds Threshold?** | **No** | **No** | **No** | **No** |

[1] Maximum daily emissions during summer or winter.

[2] Source: SCAQMD Mass Rate Localized Significance Thresholds for 3.5 acres/day in SRA-18 at 25 meters.

Greenhouse gas emissions. The Project would not cause a significant Greenhouse Gas impact. Below are several tables summarizing potential GHG impacts against thresholds established by the South Coast Air Quality Management District (SCAQMD).

Table 5 – Construction Greenhouse Gas Emissions ($MTCO_2e$)

| Activity | Emissions ($MTCO_2e$)[1] | | |
|---|---|---|---|
| | Onsite | Offsite | Total |
| Demolition | 70.15 | 50.33 | 120.48 |
| Site Preparation | 74.72 | 3.19 | 77.91 |
| Grading | 66.00 | 6.79 | 72.79 |
| Building Construction | 190.94 | 24.39 | 215.33 |
| Paving | 14.75 | 2.77 | 17.52 |
| Architectural Coating | 1.46 | 0.38 | 1.84 |
| **Total** | **418.01** | **87.85** | **505.87** |
| **Amortized Over 30 Years[2]** | **13.93** | **2.93** | **16.86** |

[1] $MTCO_2e$ = metric tons of carbon dioxide equivalents (includes carbon dioxide, methane, nitrous oxide, and/or hydrofluorocarbons).
[2] The emissions are amortized over 30 years and added to the operational emissions, pursuant to SCAQMD recommendations.

Table 6 – Operational Greenhouse Gas Emissions ($MTCO_2e$)

| Emission Source | Unmitigated GHG Emissions ($MTCO_2e$/yr.)[1] |
|---|---|
| Mobile Sources | 414.26 |
| Area Sources | 9.74 |
| Energy Sources | 150.45 |
| Water | 4.65 |
| Waste | 9.36 |
| Refrigerant | 0.09 |
| Construction (30-Year Amortization) | 16.86 |
| **Total Annual Emissions** | **605.41** |
| SCAQMD Tier 3 Screening Threshold | 3,000 |
| **Exceeds Threshold?** | **No** |

[1] $MTCO_2e$/yr. = metric tons of carbon dioxide equivalents per year.

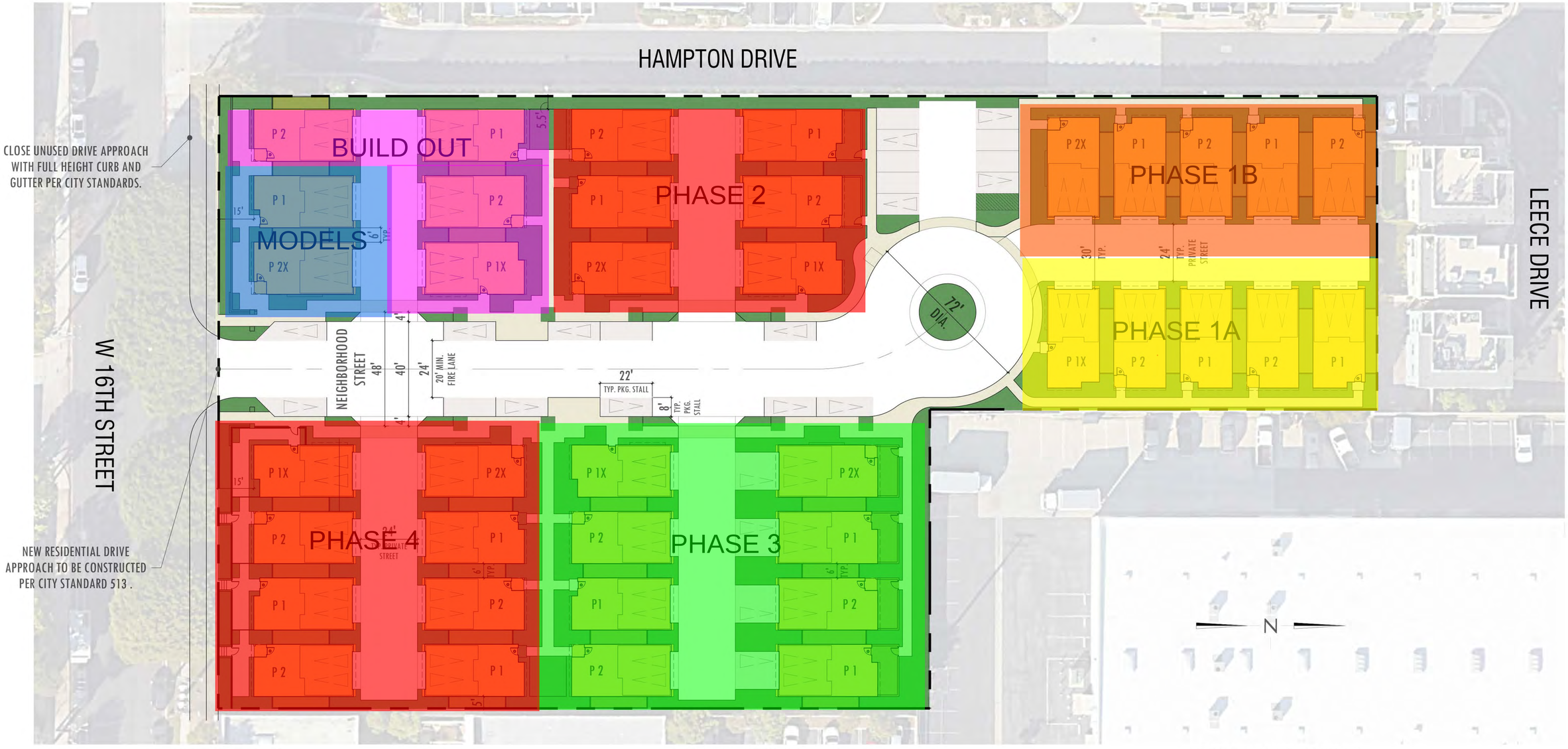
Water Quality. The Project site is nearly all impervious surface except for a small strip of landscaping along the frontage of W. 16th Street. Therefore, storm runoff leaves the project site and is collected by a storm drain system within W. 16th Street. The proposed Project will increase the amount of pervious surface, thereby reducing the amount of storm runoff. Therefore, no storm detention is required. To provide water quality treatment of storm runoff, the proposed Project will treat the initial storm runoff through a modular wetland system or similar water quality BMP, ensuring compliance with the MS4 requirements, prior to discharge into the existing storm drainage system in W. 16th Street. Therefore, the Project would not cause any water quality or hydrology impacts.

5. Public Utilities and Services. The Project site is served by existing public utilities in W. 16th Street. Access to the site is provided from existing W. 16th Street and accessible to both police and fire. The Project site is located in an urbanized area and not within a High Fire Hazard Zone.

Therefore, for the reasons stated above, the proposed Project is consistent with the Class 32 Categorical Exemption pursuant to CEQA Guidelines §15332.

Please contact me at pcarlson@carlsonsls.com or 949.289.3625, should you have any questions or comments.

# Attachment A




## SITE SUMMARY

| | |
|---|---|
| STE AREA | 100,188 S.F. |
| ACREAGE | 2.3 ACRES |
| TOTAL UNITS | 38 UNITS |
| TOTAL AREA | 85,645 S.F. |
| F.A.R. | 0.85 |
| NET DENSITY | 24.8 \ DUA |

## YIELD DATA

SMALL LOT - SINGLE-FAMILY DETACHED

| UNIT TYPE | YIELD | SQ. FT. | SQ.FT. YIELD |
|---|---|---|---|
| PLAN 1 (3 BED/2.5.5 BA/2 CAR) | 14 | 2,173 S.F. | 30,422 S.F. |
| PLAN 1X (END UNIT) | 5 | 2,173 S.F. | 10,865 S.F. |
| PLAN 2 (3 BED/2.5.5 BA/2 CAR) | 14 | 2,329 S.F. | 32,606 S.F. |
| PLAN 2X (END UNIT) | 5 | 2,329 S.F. | 11,645 S.F. |
| TOTAL | 38 | 2,250 S.F. AVG. | 85,538 S.F. |

## WORK SPACE MATRIX

| UNIT TYPE | YIELD | SQ. FT. | SQ.FT. YIELD |
|---|---|---|---|
| PLAN 1 WORK SPACE | 14 | 307 S.F. (NET) | 4,298 S.F. |
| PLAN 1X WORK SPACE | 5 | 307 S.F. (NET) | 1,535 S.F. |
| PLAN 2 WORK SPACE | 14 | 304 S.F. (NET) | 4,256 S.F. |
| PLAN 2X WORK SPACE | 5 | 304 S.F. (NET) | 1,520 S.F. |
| TOTAL | 38 | 305 S.F. AVG. | 11,609 S.F. |

960 W 16TH STREET
COSTA MESA, CALIFORNIA
PROJECT# 137-24127

SDK ATELIER

INTRACORP

SCHEMATIC DESIGN
OCTOBER 16TH, 2024

SCALE: 1" = 20'-0"
0 20' 40' 80'

SITE PLAN

1

# Attachment B

2 Executive Circle
Suite 250
Irvine, CA 92614
949.825.6175 T
949.825.5939 F
www.llgengineers.com

Pasadena
Irvine
San Diego

# TECHNICAL MEMORANDUM

| | | | |
|---|---|---|---|
| To: | Rick Puffer<br>Intracorp SW, LLC | Date: | November 15, 2024 |
| From: | Richard E. Barretto, P.E., Principal<br>Linscott, Law and Greenspan, Engineers | LLG Ref: | 2.24.4823.1 |
| Subject: | ***Vehicle Miles Traveled (VMT) Screening Assessment for the Proposed 960 W. 16th Street Residential Project, Costa Mesa, CA*** | | |

As requested, Linscott, Law & Greenspan, Engineers (LLG) is pleased to submit this Vehicle Miles Traveled (VMT) Screening Assessment Memorandum for the proposed 960 W. 16th Street Residential Project (hereinafter referred to as Project) in the City of Costa Mesa, California. This Screening Memorandum presents the VMT screening criteria, assessment methodology, and conclusion. The approach and methodology outlined in this Screening Memorandum is consistent with the *City of Costa Mesa Traffic Impact Analysis (TIA) Guidelines (dated October 2020)*, which provides additional detail on the language and analysis procedures described in this Screening Memorandum.

The following sections of this Technical Memorandum summarize the Project description, present City of Costa Mesa's VMT screening criteria, assessment methodology, and conclusion.

## PROJECT DESCRIPTION

The Project site is a 2.35-acre parcel of land that is currently development with a 56,127 SF warehousing/office/manufacturing building inclusive of 7,230 SF of mezzanine. Access to the subject property is currently provided via a full access unsignalized driveway located along W. 16th Street. ***Figure 1***, located at the rear of this letter report, presents a Vicinity Map, which illustrates the general location of the project and the surrounding street system. ***Figure 2*** presents the existing site aerial.

The proposed Project includes the construction of 38 single family detached residential homes with 11,609 SF of attached live/work offices space. Access is proposed via a full access unsignalized driveway located along W. 16th Street. The project site currently has two potential design options, but both options result in the same driveway access location and same number of units. Parking for the Project would be provided via 76 garage spaces and between seven (7) and seventeen (17) on-site surface parking spaces, depending on the design option. ***Figure 3A*** and ***3B*** presents the two proposed Project site plan options prepared by SDK|Atelier dated April 1, 2024**.**

## PROJECT SCREENING CRITERIA

Project screening is used to determine if a project will be required to conduct a detailed VMT analysis. The following section discusses the various screening methods outlined in the *City of Costa Mesa Traffic Impact Analysis (TIA) Guidelines (dated October 2020)*, and outlines whether the Project will screen-out, either in its entirety or partially, based on individual land uses.

The *City of Costa Mesa Traffic Impact Analysis (TIA) Guidelines (dated October 2020)* states that three types of screening that can be applied to screen projects from project-level assessment. These screening steps are summarized below:

Step 1: Transit Priority Area (TPA) Screening

The *City of Costa Mesa Traffic Impact Analysis (TIA) Guidelines (dated October 2020)* states:

> *"Projects located within a TPA[1] may be presumed to have a less than significant impact absent substantial evidence to the contrary. This presumption may NOT be appropriate if the project:*
>
> 1. *Has a Floor Area Ratio (FAR) of less than 0.75;*
>
>    Proposed Project FAR is 0.95.
>
> 2. *Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction;*
>
>    Proposed Project is providing 83 to 93 parking spaces depending on the proposed site plan option 1 vs option 2 and City of Costa Mesa Parking Code requirement is 190 parking spaces.
>
> 3. *Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Southern California Association of Governments [SCAG]); or*
>
>    This secondary screening step includes verification of the proposed project's consistency with the assumptions from the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).

[1] A TPA is defined as a ½ mile area around an existing major transit stop or an existing stop along a high-quality transit corridor per the definitions below:

- *Pub. Resources Code, § 21064.3* - 'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.
- *Pub. Resources Code, § 21155* - For purposes of this section, a 'high-quality transit corridor' means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

This consistency can be a land use review (e.g., are the proposed land uses already included in the RTP/SCS) or can be reviewed from a VMT/SP perspective (e.g., does the resulting land use increase or decrease the VMT/SP in the Traffic Analysis Zone (TAZ) compared to the RTP/SCS assumptions).

The Project is located within the Industrial designation area of the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) Maps as contained in Southern California Association of Governments' (SCAG) adopted Connect SoCal 2024 (dated May 2022) and may not be consistent with the land uses in the RTP/SCS, which assumed the site would be constructed as an Industrial use.

However, this can be reviewed from a VMT/SP perspective (e.g., does the resulting land use increase or decrease the VMT/SP in the Traffic Analysis Zone (TAZ) compared to the RTP/SCS assumptions). As is expected, replacing an Industrial use with a Residential use would result in integrating the zone into a Mixed-Used Land Use, as an urban, residential development that would reduce area VMT, consistent with the TPA designation. Connect SoCal recognizes that development within Priority Growth Areas, including TPAs, supports mode shift and shortened trip distances.

In addition, the Project's consistency has been evaluated with applicable goals, Objectives, and policies of the City of Costa Mesa General Plan sections of the Land Use and Conservation Elements, including:

- *Policy LU-4.6: Incorporate the principles of sustainability into land use planning, infrastructure, and development processes to reduce greenhouse gas emissions consistent with State goals.*
- *Policy CON-2.A.1: Promote efficient use of energy and conservation of available resources in the design, construction, maintenance, and operation of public and private facilities, infrastructure, and equipment.*
- *Policy CON-2.A.5: Promote environmentally sustainable development principles for buildings, neighborhoods, and infrastructure.*
- *Policy CON-4.A.1 Support regional policies and efforts that improve air quality to protect human and environmental health,*

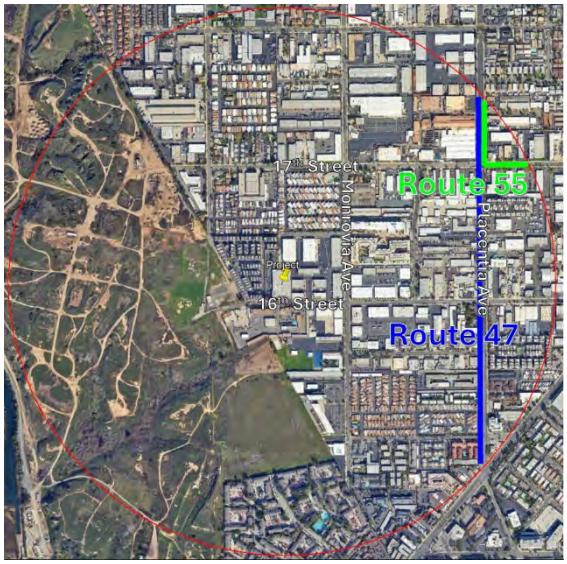
*and minimize disproportionate impacts on sensitive population groups.*

Furthermore, SCAG's Connect SoCal 2024 RTP/SCS integrates strategies for land use and transportation centered around sustainability, protecting and preserving existing transportation infrastructure, increasing capacity through improved systems managements, and providing more transportation choices, in order to help reduce greenhouse gas (GHG) emissions from transportation. The City's General Plan consistency, and thus the Project's consistency, with the RTP/SCS can be evaluated based on the following applicable objectives:

- *Objective LU-4A: Encourage new development and redevelopment that protects and improves the quality of Costa Mesa's natural environment and resources.*

4. *Replaces affordable residential units with a smaller number of moderate- or high- income residential units."*

Based on the above, two bus routes operate within the half-mile circle of the Project Site. ***OCTA Bus Route 47*** and ***OCTA Bus Route 55*** operate with a frequency of service interval of between 12 minutes and 26 minutes during the morning and afternoon peak commute periods[2], along Placentia Avenue as shown below:




Screenshot 1. TPA Screening

[2] Per *SCAG's Connect SoCal 2024 Mobility Technical Report* the morning peak is defined as 6 AM to 9 AM and the afternoon peak is defined as 3 PM to 7 PM. Therefore, the average headway is calculated by taking 420 minutes divided by the total number of bus trips at each bus stop in a ½ mile radius during those 7 hours. If the headway is less than 15 minutes, then the bus stop is considered a high-quality transit corridor.

*Based on the above the proposed Project will screen out under the TPA Screening criteria since it is within the TPA area.*

Step 2: Low VMT Area Screening

The second screening methodology is provided for residential and office land-use projects. The *City of Costa Mesa Traffic Impact Analysis (TIA) Guidelines (dated October 2020) states:*

> *"Residential and office projects located within a low VMT-generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, other employment-related and mixed-use land use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per service population that is similar to the existing land uses in the low VMT-area ."*

*Based on Screenshot 1, the proposed Project will screen out under the Low VMT Area Screening criteria since the Project site is located within a Low VMT Area.*

Step 3: Project Type Screening

The third screening methodology is for the type of project. The *City of Costa Mesa Traffic Impact Analysis (TIA) Guidelines (dated October 2020) states:*

> *"Some project types have been identified as having the presumption of a less than significant impact. The following uses can be presumed to have a less than significant impact absent substantial evidence to the contrary as their uses are local serving in nature:*
>
> - *Local-serving K-12 public schools*
> - *Local parks*
> - *Day care centers*
> - *Local-serving retail uses less than 50,000 square feet, including:*
>   - *Gas stations*
>   - *Banks*
>   - *Restaurants*
>   - *Shopping Center*
> - *Student housing projects or adjacent to college campuses*
> - *Local-serving assembly uses (places of worship, community organizations)*
> - *Community institutions (public libraries, fire stations, local government)*
> - *Assisted living facilities*

- *Senior housing (as defined by HUD)*
- *Projects generating less than 110 daily vehicle trip*[4]
    - *To confirm whether a Project generates 110 daily trips or less, the analyst should consult with City staff*

*Based on the above, the proposed Project will not screen out under the Project Type Screening criteria since the Project is forecast to generate 173 net new daily trips (Proposed vs. Existing/Entitled), which is higher than the threshold of 110 daily trips (see the last row of* ***Table 1 – Project Traffic Generation Rates and Forecast****, attached).*

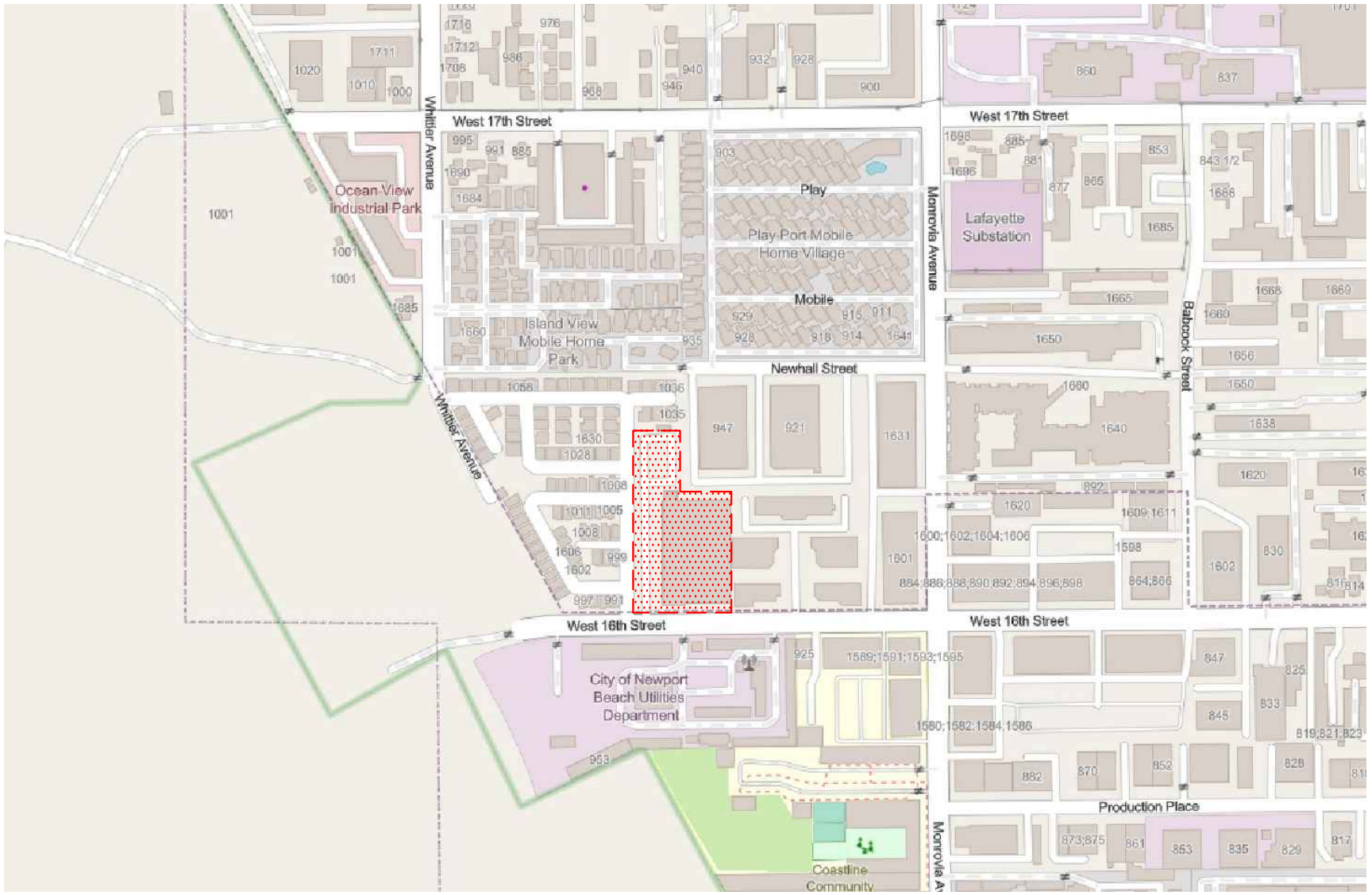
## CONCLUSION

Consistent with the *City of Costa Mesa Traffic Impact Analysis (TIA) Guidelines (dated October 2020)* and based on the VMT screening methodology, the Project meets the screening criteria since it is located within a TPA (HQTA) and is located within a low VMT area.

Therefore, in accordance with the *City of Costa Mesa Traffic Impact Analysis (TIA) Guidelines (dated October 2020),* the proposed Project is exempt from the preparation of any further VMT analysis and may be presumed to have a less than significant CEQA-related transportation impact.

We appreciate the opportunity to provide this Technical Memorandum. Should you have any questions regarding the memorandum, please contact us at (949) 825-6175.

Attachments




n:\4800\2244823 - 960 w 16th street residential, costa mesa\dwg\4823 f-1.dwg LDP 10:19:40 06-13-2024 aguilar

SOURCE: OPEN STREETS

KEY

= PROJECT SITE

NO SCALE

# FIGURE 1

## VICINITY MAP

960 W. 16TH STREET RESIDENTIAL, COSTA MESA


n:\4800\2244823 - 960 w 16th street residential, costa mesa\dwg\4823 f-2.dwg LDP 10:18:13 06-13-2024 aguilar

SOURCE: GOOGLE

KEY

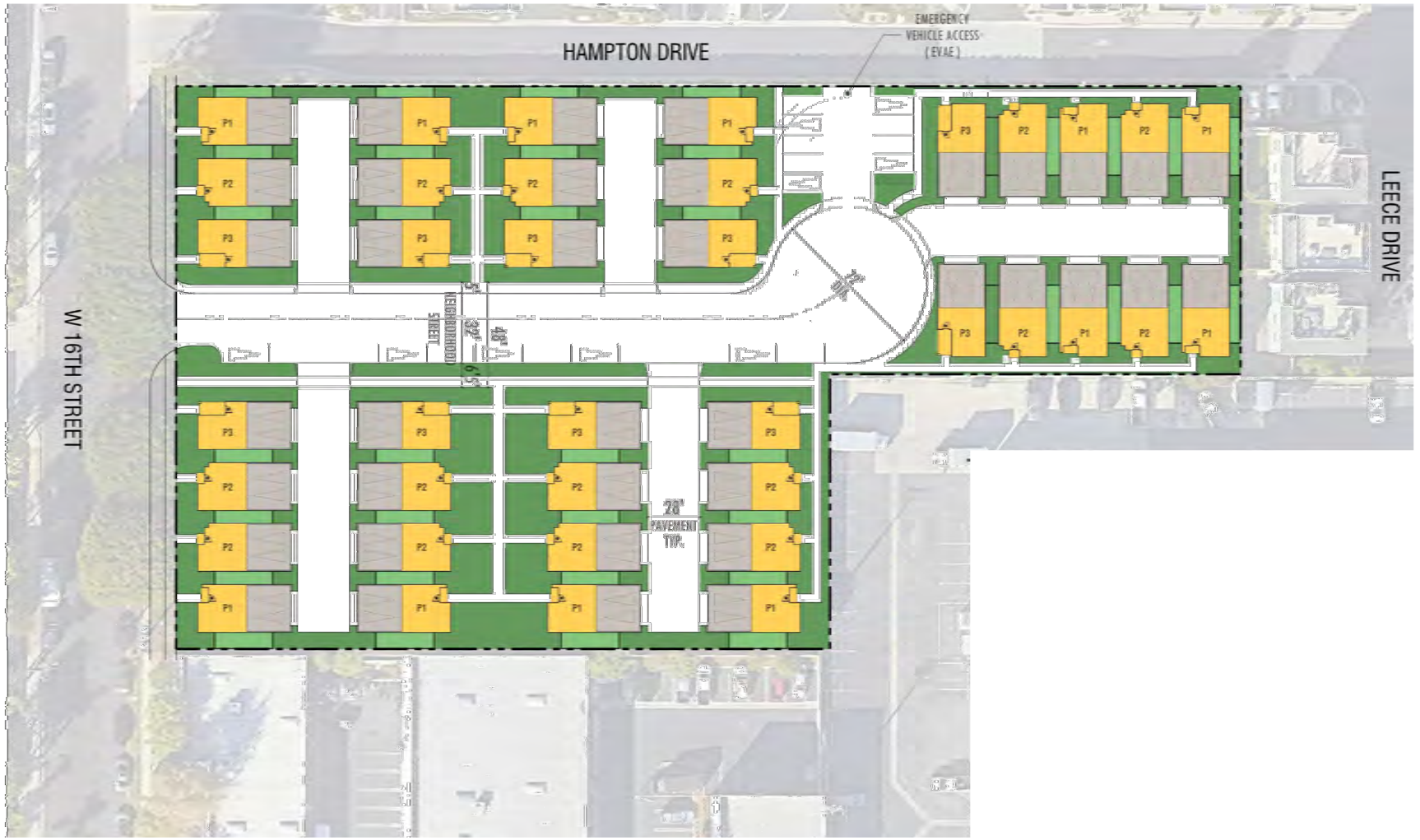
= PROJECT SITE

NO SCALE

# FIGURE 2

## EXISTING AERIAL PHOTOGRAPH

960 W. 16TH STREET RESIDENTIAL, COSTA MESA




n:\4800\2244823 - 960 w 16th street residential, costa mesa\dwg\4823 f-3a.dwg LDP 09:23:17 06-20-2024 kopulsky

SOURCE: SDK

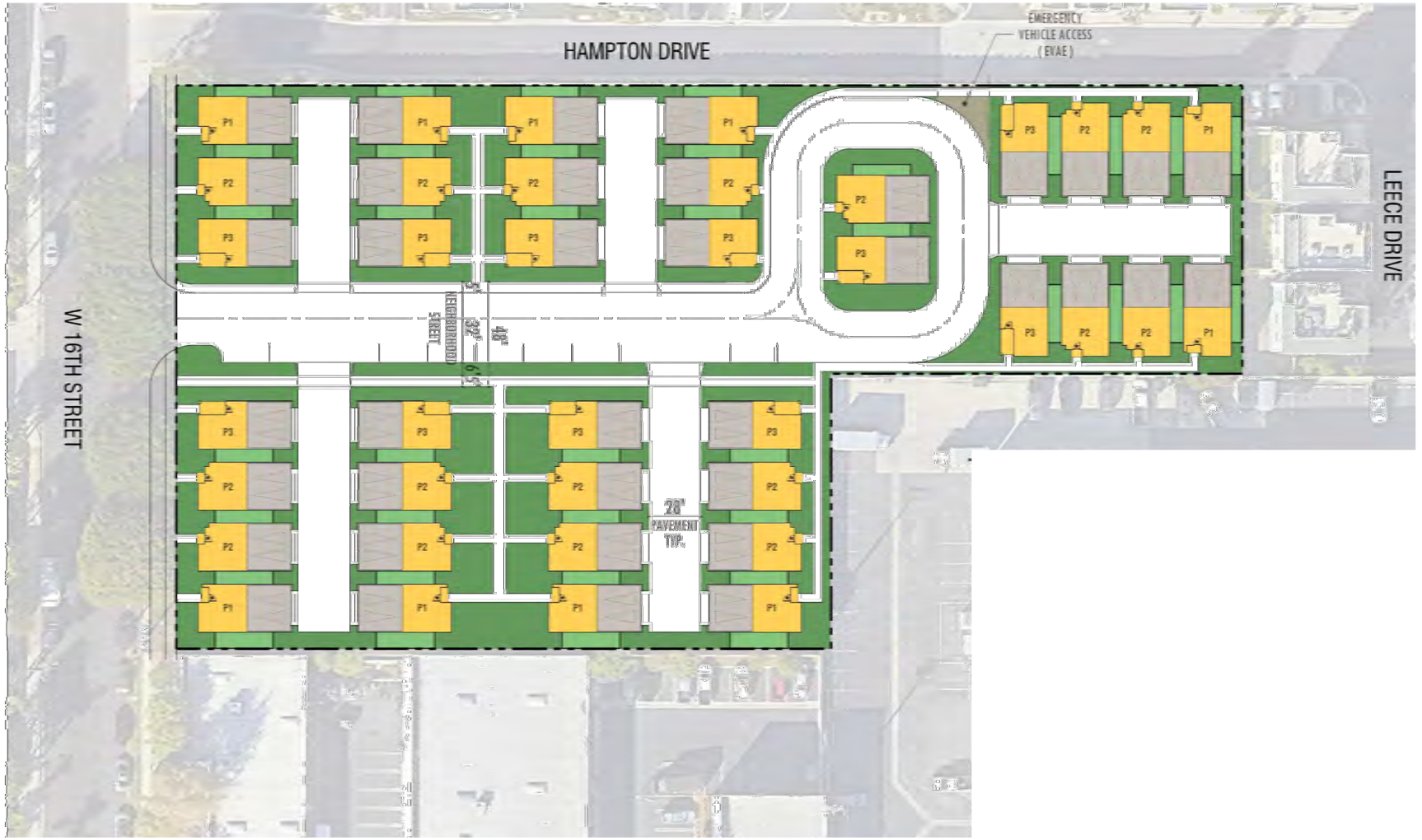
LLG

N NO SCALE

# FIGURE 3A

## PROPOSED SITE PLAN – OPTION 1

960 W. 16TH STREET RESIDENTIAL, COSTA MESA




n:\4800\2244823 - 960 w 16th street residential, costa mesa\dwg\4823 f-3b.dwg LDP 09:22:28 06-20-2024 kopulsky

SOURCE: SDK

LLG

N NO SCALE

# FIGURE 3B

## PROPOSED SITE PLAN – OPTION 2

960 W. 16TH STREET RESIDENTIAL, COSTA MESA

## TABLE 1

## PROJECT TRAFFIC GENERATION RATES AND FORECAST[6]

| ITE Land Use Code / Project Description | Daily | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|
| | | Enter | Exit | Total | Enter | Exit | Total |
| *Generation Rates:* | | | | | | | |
| ▪ ITE 140: Manufacturing (TE/TSF) | 4.75 | 76% | 24% | 0.68 | 31% | 69% | 0.74 |
| ▪ ITE 150: Warehousing (TE/TSF) | 1.17 | 77% | 23% | 0.17 | 28% | 72% | 0.18 |
| ▪ ITE 210: Single Family Detached Housing (TE/DU) | 9.43 | 26% | 74% | 0.70 | 63% | 37% | 0.94 |
| ▪ ITE 710: General Office Building (TE/TSF) | 10.84 | 88% | 12% | 1.52 | 17% | 83% | 1.44 |
| *Proposed Project* | | | | | | | |
| ▪ Residential Units (38 DU) | 358 | 7 | 20 | 27 | 23 | 13 | 36 |
| ▪ Live/Work Office (11,609 SF) | 126 | 16 | 2 | 18 | 3 | 14 | 17 |
| Employee Reduction[7] | -57 | -3 | -2 | -5 | -3 | -3 | -6 |
| ***Total Proposed Trips*** | ***427*** | ***20*** | ***20*** | ***40*** | ***23*** | ***24*** | ***47*** |
| *Existing/Entitled Land Use (Prior Tenant)* | | | | | | | |
| ▪ Office (16,652 SF) | 181 | 22 | 3 | 25 | 4 | 20 | 24 |
| ▪ Warehousing (37,721 SF) | 65 | 5 | 1 | 6 | 2 | 5 | 7 |
| ▪ Manufacturing (1,754 SF) | 8 | 1 | 0 | 1 | 0 | 1 | 1 |
| ***Total Existing Trips*** | ***254*** | ***28*** | ***4*** | ***32*** | ***6*** | ***26*** | ***32*** |
| **Net Difference Trip Generation Forecast: Proposed Project minus Existing Land Use** | **+173** | **-8** | **+16** | **+8** | **+17** | **-2** | **+15** |

Notes:
- TE/TSF = Trip ends per 1,000 SF of development
- TE/DU = Trip End per dwelling unit

6 Source: *Trip Generation*, 11th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2021).

7 An employee reduction has been applied due to the assumption that half of the 38 dwelling units could have 1 employee trip that would not occur since they live on-site and would not have to commute to work. In addition, it has been assumed that on a daily basis half of the 19 employees would stay home for lunch. This equates to a daily employee trip reduction of 57 trips, which translates to a 11.8% reduction. This 11.8% reduction was then applied to the AM and PM peak hours.

# Attachment C

**NOVEMBER 8, 2024**

Mr. Peter Carlson
CARLSON STRATEGIC LAND SOLUTIONS
27134A Paseo Espada, Suite 323
San Juan Capistrano, CA 92675

**SUBJECT: 16TH STREET RESIDENTIAL PROJECT AIR QUALITY AND GREENHOUSE GAS ANALYSIS, CITY OF COSTA MESA**

Dear Mr. Carlson:

## 1.0 INTRODUCTION

RK ENGINEERING GROUP, INC. (RK) is pleased to provide this Air Quality and Greenhouse Gas (GHG) Analysis for the proposed 16th Street Residential Project (hereinafter referred to as "project").

The purpose of this study is to determine whether the air quality and GHG emissions generated during construction and operation of the project would exceed the South Coast Air Quality Management District (SCAQMD) significance thresholds. The methodology used in this assessment is consistent with SCAQMD and City of Costa Mesa standards.

### 1.1 Site Location and Project Description

The project site is located at the northeast corner of West 16th Street and Hampton Drive, in the City of Costa Mesa. The project site is approximately 2.35 acres and is currently occupied by an existing 50,308-square-foot commercial structure and approximately 44,956 square feet of hardscape. **Exhibit A** shows the location map of the proposed project.

The project proposes to demolish the existing commercial structure and associated parking lot and construct thirty-eight (38) single-family homes.

Construction activities are expected to consist of demolition, site preparation, grading, building construction, paving, and architectural coating. The project will require the import of approximately 585 cubic yards of earthwork material for grading purposes.

**Exhibit B** shows the proposed site plan used for this analysis. **Table 1** summarizes the land use assumptions used for this analysis.

## Table 1 | Project Land Use Summary

| Project Land Use | CalEEMod Land Use Category | Quantity | Metric[1] |
|---|---|---|---|
| Single Family Dwelling Units | Single Family Housing | 38 | DU |
| Onsite Paved Surfaces | Parking Lot | 44.639 | TSF |

[1] DU = Dwelling unit.
TSF = Thousand square feet.

### 1.2 Sensitive Receptors

Sensitive receptors are considered land uses or other types of population groups that are more sensitive to air pollution exposure. Sensitive population groups include children, the elderly, the acutely and chronically ill, and those with cardio-respiratory diseases.

For CEQA purposes, the SCAQMD considers a sensitive receptor to be a location where a sensitive individual could remain for 24 hours or longer, such as residences, hospitals, and schools (etc.), as described in the Localized Significance Threshold Methodology (SCAQMD 2008a, page 3-2). There are several sensitive land uses adjacent to the project site, including the following.

A project site location map, including sensitive receptor locations, is provided in **Exhibit A**.

**Receptor-1** Existing residential land uses located to the west of the project site. The nearest residential receptor located at Receptor-1 (marked as circle "1" on **Exhibit A**) is located approximately 35 feet (~11 meters) west of the project site's western boundary, along the western side of Hampton Drive.

**Receptor-2** Existing residential land uses located to the north of the project site. The nearest residential receptor located at Receptor-2 (marked as circle "2" on **Exhibit A**) is located directly adjacent to the northern boundary of the project site.

For conservative localized analysis purposes, sensitive receptors are considered to be less than 25 meters from the project site.

### 1.3 Project Design Features (DF)

The following design features include several standard rules and requirements, best practices and building code requirements for reducing air quality and GHG emissions. Design features are assumed to be integrated into the project design and required as part of the conditions of approval of the project. Design features are not considered to be mitigation under CEQA.

**Construction Design Features**

**DF-1** The project will follow the SCAQMD rules and requirements for fugitive dust control, which include, but are not limited to the following:

1. All active construction areas shall be watered two (2) times daily.
2. Any visible deposition on any public roadway shall be swept or washed at the site access points within 30 minutes.
3. Any on-site stockpiles of debris, dirt or other dusty material shall be covered or watered twice daily.
4. All operations on any unpaved surface shall be suspended if winds exceed 15 mph.
5. Access points shall be washed or swept daily.
6. Construction sites shall be sandbagged for erosion control.
7. Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
8. Cover all trucks hauling dirt, sand, soil, or other loose materials, and maintain at least 2 feet of freeboard space in accordance with the requirements of California Vehicle Code (CVC) section 23114.
9. Use gravel aprons at truck exits.
10. Replace the ground cover of disturbed areas as quickly possible.

**DF-2** Construction equipment shall be maintained in proper tune.

**DF-3** All construction vehicles shall be prohibited from excessive idling. Excessive idling is defined as five (5) minutes or longer.

**DF-4** Minimize the simultaneous operation of multiple construction equipment units, to the maximum extent feasible.

**DF-5** The use of heavy construction equipment and earthmoving activity shall be suspended during Air Alerts when the Air Quality Index reaches the "Unhealthy" level.

**DF-6** Establish an electricity supply to the construction site and use electric-powered equipment instead of diesel-powered equipment or generators, where feasible.

**DF-7** Establish staging areas for the construction equipment that are as distant as possible from adjacent residential homes.

**DF-8** Utilize zero VOC and low VOC paints and solvents, where feasible.

**Operational Design Features**

**DF-9** The project will comply with the mandatory requirements of the California Building Standards Code, Title 24, Part 6 (Energy Code) and Part 11 (CALGreen), including, but not limited to:

1. Install low flow fixtures and toilets, water efficient irrigation systems, drought tolerant/native landscaping, and reduce the amount of turf.

2. Provide the necessary infrastructure to support electric vehicle charging.

3. Provide solar installations/solar readiness zones per the prescribed Energy Design Ratings.

**DF-10** The project will participate in local waste management recycling and composting programs.

## 2.0 MODELING PARAMETERS AND ASSUMPTIONS

The California Emissions Estimator Model Version 2022.1.1 (CalEEMod) was used to calculate criteria air pollutants and GHG emissions from the construction and operation of the project. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify criteria air pollutant and GHG emissions.

The model quantifies direct emissions from construction and operational activities (including vehicle use), as well as indirect emissions, such as GHG emissions from off-site energy generation, solid waste disposal, vegetation planting and/or removal, and water use. The model also identifies design features to reduce criteria pollutant and GHG emissions. The model was developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California Air Districts.

### 2.1 Construction Assumptions

Construction of the project is estimated to begin in the year 2025. Construction activities are expected to consist of demolition, site preparation, grading, building construction, paving, and architectural coating. The project will demolish the existing commercial structure and associated parking lot, resulting in approximately 5,573 tons of debris. In addition, the project will require the import of approximately 585 cubic yards of earthwork material for grading purposes. For the purposes of this analysis, construction phases are not expected to overlap.

The CalEEMod default construction equipment list is based on survey data and the size of the site. The parameters used to estimate construction emissions, such as the worker and vendor trips and trip lengths, utilize the CalEEMod defaults. The construction equipment list is shown in **Table 2**.

The project will be required to comply with several standard fugitive dust control measures, per SCAQMD Rule 403. The following key inputs are utilized in CalEEMod and are based upon data provided from SCAQMD:

- Water exposed area – 61% PM10 and PM2.5 reduction.
- Water unpaved roads twice daily – 55% PM10 and PM2.5 reduction.
- Limit vehicle speeds on unpaved roads to 25 mph – 44% PM10 and PM2.5 reduction.
- Sweep paved roads once per month – 9% PM10 and PM2.5 reduction.

## Table 2 | Construction Equipment Assumptions[1]

| Phase | Equipment | Number | Hours Per Day | Soil Disturbance Rate (Acres/8-Hour Day) | Off-Road Equipment Daily Disturbance Footprint (Acres) | Total Daily Disturbance Footprint (Acres) |
|---|---|---|---|---|---|---|
| Demolition | Concrete/Industrial Saws | 1 | 8 | 0.00 | 0.00 | 2.50 |
| | Excavators | 3 | 8 | 0.50 | 1.50 | |
| | Rubber Tired Dozers | 2 | 8 | 0.50 | 1.00 | |
| Site Preparation | Rubber Tired Dozers | 3 | 8 | 0.50 | 1.50 | 3.50 |
| | Tractors/Loaders/Backhoes | 4 | 8 | 0.50 | 2.00 | |
| Grading | Excavators | 1 | 8 | 0.50 | 0.50 | 3.00 |
| | Graders | 1 | 8 | 0.50 | 0.50 | |
| | Rubber Tired Dozers | 1 | 8 | 0.50 | 0.50 | |
| | Tractors/Loaders/Backhoes | 3 | 8 | 0.50 | 1.50 | |
| Building Construction | Cranes | 1 | 7 | 0.00 | 0.00 | 1.31 |
| | Forklifts | 3 | 8 | 0.00 | 0.00 | |
| | Generator Sets | 1 | 8 | 0.00 | 0.00 | |
| | Tractors/Loaders/Backhoes | 3 | 7 | 0.50 | 1.31 | |
| | Welders | 1 | 8 | 0.00 | 0.00 | |
| Paving | Cement and Mortar Mixers | 2 | 6 | 0.00 | 0.00 | 0.50 |
| | Pavers | 1 | 8 | 0.00 | 0.00 | |
| | Paving Equipment | 2 | 6 | 0.00 | 0.00 | |
| | Rollers | 2 | 6 | 0.00 | 0.00 | |
| | Tractors/Loaders/Backhoes | 1 | 8 | 0.50 | 0.50 | |
| Architectural Coating | Air Compressors | 1 | 6 | 0.00 | 0.00 | 0.00 |

[1] CalEEMod defaults.

## 2.2 Localized Construction Analysis Modeling Parameters

CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily disturbance activity possible for each piece of equipment. This report identifies the following parameters in the project design or applicable mitigation measures in order to compare CalEEMod reported emissions against the localized significance threshold lookup tables:

1. The off-road equipment list (including type of equipment, horsepower, and hours of operation) assumed for the day of construction activity with maximum emissions.
2. The maximum number of acres disturbed on the peak day.
3. Any emission control devices added onto off-road equipment.
4. Specific dust suppression techniques used on the day of construction activity with maximum emissions.

## 2.3 Operational Assumptions

Operational emissions occur over the life of the project and are considered "long-term" sources of emissions. Operational emissions include both direct and indirect sources. This section briefly describes the operational sources of emissions analyzed for the project.

### 2.3.1 Mobile Source Emissions

Mobile source emissions are the largest source of long-term air pollutants from the operation of the project. Mobile sources are direct sources of project emissions that are primarily attributed to tailpipe exhaust and road dust (tire, brake, clutch, and road surface wear) from motor vehicles traveling to and from the site.

Estimates of mobile source emissions require information on four parameters: trip generation, trip length, vehicle/fleet mix, and emission factors (quantity of emission for each mile traveled or time spent idling by each vehicle).

The trip generation rates used for this analysis are based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition. The proposed project consists of thirty-eight (38) single-family dwelling units. As such, ITE Land Use 210 – Single-Family Detached Housing most accurately reflects the proposed project land use. For trip lengths, the CalEEMod defaults are used.

The Emission Factors (EMFAC2021) 2021 model and off-model adjustments factors to account for the SAFE Vehicle Rule is used to estimate the mobile source emissions are embedded in the CalEEMod emissions model. No adjustments have been made to default emission factors.

To be conservative, this analysis has assumed that 2% of the total trips associated with the project will be heavy trucks with a gross vehicle weight rating (GVWR) of 10,000 pounds or greater. This includes LHD2, MHD, HHD, OBUS, UBUS, and SBUS vehicles. The adjusted vehicle mix is proportioned according to the default CalEEMod vehicle mix.

**Table 3** summarizes the adjusted vehicle mix used for the project.

## Table 3 | Operational Vehicle Mix[1]

| Vehicle Type | Vehicle Mix |
|---|---|
| Light Duty Automobile (LDA) | 50.67% |
| Light Duty Truck (LDTI) | 4.20% |
| Light Duty Truck (LDT2) | 23.48% |
| Medium Duty Truck (MDV) | 14.66% |
| Light Heavy Truck (LHD1) | 2.78% |
| Light Heavy Truck (LHD2) | 0.42% |
| Medium Heavy Truck (MHD) | 0.91% |
| Heavy Heavy Truck (HHD) | 0.33% |
| Other Bus (OBUS) | 0.04% |
| Urban Bus (UBUS) | 0.02% |
| Motorcycle (MCY) | 2.21% |
| School Bus (SBUS) | 0.06% |
| Motor Home (MH) | 0.22% |
| **Total** | **100%** |

[1] Adjusted fleet mix to include 2% total trucks over 10,000 lbs. GVWR (LHD2, MHD, HHD, OBUS, UBUS, SBUS, MH).

### 2.3.2 Energy Source Emissions

Energy usage includes both direct and indirect sources of emissions. Direct sources of emissions include on-site natural gas usage (non-hearth) for heating, while indirect emissions include electricity generated by offsite power plants. Natural gas use is measured in units of thousand British Thermal Units (kBTU) per size metric for each land use subtype and electricity use is measured in kilowatt hours (kWh) per size metric for each land use subtype.

CalEEMod divides building electricity and natural gas use into uses that are subject to Title 24 standards and those that are not. Lighting electricity usage is also calculated as a separate category in CalEEMod. For electricity, Title 24 uses include the major building envelope systems covered by Part 6 (California Energy Code) of Title 24, such as space heating, space cooling, water heating, and ventilation. Non-Title 24 uses include all other end uses, such as appliances, electronics, and other miscellaneous plug-in uses. Because some lighting is not considered as part of the building envelope energy budget, and since a separate mitigation measure is applicable to this end use, CalEEMod makes lighting a separate category.

For natural gas, uses are likewise categorized as Title 24 or Non-Title 24. Title 24 uses include building heating and hot water end uses. Non-Title 24 natural gas uses include cooking and appliances (including pool/spa heaters).

The baseline values are based on the California Energy Commission (CEC) sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies.

The project will be required to provide on-site renewable energy photovoltaic installations (solar panels), as prescribed by the 2022 Building Energy Efficiency Standards for Residential and Nonresidential Buildings.

The CalEEMod default estimate for the proposed project's energy usage is shown in **Table 4**.

## Table 4 | Electricity and Natural Gas Usage[1]

| Land Use | Electricity Usage (KWhr/yr)[2] | Natural Gas Usage (KBTU/yr)[2] |
|---|---|---|
| Single Family Housing | 262,015.51 | 1,456,743.15 |
| Parking Lot | 39,103.76 | -- |
| **Total** | **301,119.27** | **1,456,743.15** |

[1] CalEEMod defaults.
[2] KWhr/yr = kilowatt hours per year.
KBTU/yr = thousand British Thermal Units per year.

### 2.3.3 Area Source Emissions

Area source emissions are direct sources of emissions that fall under four categories: hearths, consumer products, architectural coatings, and landscaping equipment. Per SCAQMD Rule 445, no wood burning devices are allowed in new developments; therefore, no wood hearths are included in this project.

Consumer products are various solvents used in non-industrial applications which emit ROGs during their product use. These typically include cleaning supplies, kitchen aerosols, cosmetics, and toiletries.

### 2.3.4 Other Sources of Operational Emissions

- **Water.** Greenhouse gas emissions are generated from the upstream energy required to supply and treat the water used on the project site. Indirect emissions from water usage are counted as part of the project's overall impact.

- **Waste.** CalEEMod calculates the indirect GHG emissions associated with waste that is disposed of at a landfill. The program uses annual waste disposal rates from the California Department of Resources Recycling and Recovery (CalRecycle) data for individual land uses. The program quantifies the GHG emissions associated with the decomposition of the waste which generates methane based on the total amount of degradable organic carbon.

The project's estimated water usage and waste generation is reported in **Table 5**.

## Table 5 | Operational Water Usage and Waste Generation[1]

| Land Use | Water Usage (gallons/yr) | | | Waste Generation (tons/yr) |
|---|---|---|---|---|
| | Indoor | Outdoor | Total | |
| Single Family Housing | 1,425,974.70 | 277,968.31 | 1,703,943.01 | 29.98 |
| Parking Lot | -- | -- | -- | -- |
| **Total** | **1,425,974.70** | **277,968.31** | **1,703,943.01** | **29.98** |

[1] CalEEMod defaults.

## 3.0 SIGNIFICANCE THRESHOLDS

### 3.1 Air Quality Regional Significance Thresholds

The SCAQMD has established air quality emissions thresholds for criteria air pollutants for the purposes of determining whether a project may have a significant effect on the environment per Section 15002(g) of the Guidelines for implementing CEQA. By complying with the thresholds of significance, the project would be in compliance with the SCAQMD Air Quality Management Plan (AQMP) and the federal and state air quality standards.

**Table 6** lists the air quality significance thresholds for the six air pollutants analyzed in this report. Lead is not included as part of this analysis as the project is not expected to emit lead in any significant measurable quantity.

## Table 6 | SCAQMD Regional Significance Thresholds[1]

| Pollutant | Construction (lbs./day) | Operation (lbs./day) |
|---|---|---|
| $NO_X$ | 100 | 55 |
| VOC | 75 | 55 |
| $PM_{10}$ | 150 | 150 |
| $PM_{2.5}$ | 55 | 55 |
| $SO_X$ | 150 | 150 |
| CO | 550 | 550 |

[1] Source: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf.

### 3.2 Air Quality Localized Significance Thresholds

Air quality emissions were analyzed using the SCAQMD's Mass Rate Localized Significance Threshold (LST) Look-up Tables.

**Table 7** lists the Localized Significance Thresholds (LSTs) used to determine whether a project may generate significant adverse localized air quality impacts. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard. LSTs are developed based on the ambient concentrations of four applicable air pollutants for SRA-18 (North Orange County Coastal).

The nearest existing sensitive receptors are located along the northern boundary of the project site, less than 25 meters from potential areas of on-site construction and operational activity. Although receptors are located closer than 25 meters to the site, SCAQMD LST methodology states that projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters.

The daily disturbance area is calculated to be 3.5 acres, however LST thresholds are only based on 1, 2, and 5-acre sites. To be conservative, a linear trend was used to estimate the thresholds for 3.5 acres based on the established LST thresholds.

## Table 7 | SCAQMD Localized Significance Thresholds (LSTs)[1]

| Pollutant | Construction (lbs./day) | Operation (lbs./day) |
|---|---|---|
| $NO_X$ | 161.1 | 161.1 |
| CO | 1,325.2 | 1,325.2 |
| $PM_{10}$ | 10.4 | 2.9 |
| $PM_{2.5}$ | 6.9 | 1.8 |

[1] Source: SCAQMD Mass Rate Localized Significance Thresholds for 3.5 acres/day in SRA-18 at 25 meters.

### 3.3 GHG Significance Thresholds

#### 3.3.1 SCAQMD GHG Interim Significance Thresholds

The SCAQMD has published the Interim CEQA Greenhouse Gas (GHG) Significance Thresholds, December 2008, to assist local agencies with determining the impact of a project's GHG emissions. SCAQMD's objective in providing the GHG guidelines is to establish a performance standard that will ultimately contribute to reducing GHG emissions below 1990 levels, and thus achieve the requirements of the California Global Warming Solutions Act (AB 32).

In the absence of a formal threshold established by the State, SCAQMD's interim GHG threshold has been established for use by lead agencies in determining significance of GHG emissions in CEQA. SCAQMD guidance describes a five-tiered approach for determining significance. Tier 3 is the primary method used for development projects of this size and is the approach used in this analysis. The Tier 3 approach limits the amount of GHG emissions from residential and commercial development projects to 3,000 metric tons of $CO_2$ equivalents per year ($MTCO_2e/yr$).

If the project exceeds 3,000 $MTCO_2e/yr$, then the impact is considered significant, and mitigation measures would be required to reduce emissions below the threshold.

## 4.0 AIR QUALITY IMPACT ANALYSIS

### 4.1 Short-Term Air Quality Impacts – Construction

#### 4.1.1 Regional Emissions – Construction

Regional air quality emissions include both on-site and off-site emissions associated with construction of the project. As shown in **Table 8**, regional daily emissions of criteria pollutants are expected to be below the allowable thresholds of significance.

CalEEMod emissions outputs are provided in **Appendix A**.

## Table 8 | Regional Construction Emissions[1]

| Activity | Maximum Daily Emissions (lbs./day)[1] | | | | | |
|---|---|---|---|---|---|---|
| | VOC | $NO_x$ | CO | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ |
| Demolition | 2.49 | 24.98 | 21.82 | 0.05 | 3.41 | 1.33 |
| Site Preparation | 3.37 | 31.71 | 31.16 | 0.05 | 9.26 | 5.25 |
| Grading | 1.80 | 16.45 | 18.81 | 0.03 | 3.71 | 2.05 |
| Building Construction | 1.12 | 10.04 | 13.75 | 0.02 | 0.59 | 0.40 |
| Paving | 0.86 | 6.30 | 9.87 | 0.01 | 0.52 | 0.30 |
| Architectural Coating | 19.97 | 0.87 | 1.26 | 0.00 | 0.06 | 0.03 |
| **Maximum[1]** | **19.97** | **31.71** | **31.16** | **0.05** | **9.26** | **5.25** |
| SCAQMD Threshold | 75 | 100 | 550 | 150 | 150 | 55 |
| **Exceeds Threshold?** | **No** | **No** | **No** | **No** | **No** | **No** |

[1] Maximum daily emissions during summer or winter; includes both onsite and offsite project emissions.

The project must follow mandatory SCAQMD rules and requirements with regards to fugitive dust control, as described in Section 6.1.3. Compliance with the standard dust control measures is considered to be part of the conditions of approval for the project and built into the design features.

**Table 8** shows that the project's daily construction emissions will be below the applicable SCAQMD air quality standards and thresholds of significance. As a result, the project would not contribute substantially to an existing or projected air quality violation.

Furthermore, by complying with the SCAQMD standards, the project would not contribute to a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

**Therefore, the project's short-term construction impact on regional air resources will be less than significant.**

### 4.1.2 Localized Emissions – Construction

**Table 9** illustrates the construction-related localized emissions and compares the results to SCAQMD LST thresholds. As shown in **Table 9**, the emissions will be below the SCAQMD thresholds of significance for localized construction emissions. The project must follow all standard SCAQMD rules

and requirements with regards to fugitive dust control, as described in Section 6.1.3. Compliance with the dust control is considered a standard requirement and included as part of the project's design features.

**Therefore, the project's short-term construction impact on localized air resources will be less than significant.**

## Table 9 | Localized Construction Emissions

| Activity | Maximum Daily Emissions (lbs./day)[1] | | | |
|---|---|---|---|---|
| | $NO_X$ | CO | $PM_{10}$ | $PM_{2.5}$ |
| Onsite Emissions | 31.64 | 30.18 | 9.03 | 5.20 |
| SCAQMD Localized Threshold[2] | 161.1 | 1,325.2 | 10.6 | 6.9 |
| **Exceeds Threshold?** | **No** | **No** | **No** | **No** |

[1] Maximum daily emissions during summer or winter; includes both onsite and offsite project emissions.
[2] Source: SCAQMD Mass Rate Localized Significance Thresholds for 3.5 acres/day in SRA-18 at 25 meters.

### 4.2 Long-Term Air Quality Impacts – Operation

#### 4.2.1 Regional Emissions – Operation

Long-term unmitigated operational air pollutant impacts from the project are shown in **Table 10**. CalEEMod emissions outputs are provided in **Appendix A**.

The project's daily unmitigated operational emissions will be below the applicable SCAQMD regional air quality standards and thresholds of significance, and the project would not contribute substantially to an existing or projected air quality violation. Furthermore, by complying with the SCAQMD standards, the project would not contribute to a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

**Therefore, the project's long-term regional air quality impacts will be less than significant.**

## Table 10 | Regional Operational Emissions

| Activity | Maximum Daily Emissions (lbs./day)[1] | | | | | |
|---|---|---|---|---|---|---|
| | VOC | $NO_X$ | CO | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ |
| Mobile Sources | 1.16 | 0.89 | 10.39 | 0.03 | 2.45 | 0.63 |
| Area Sources | 1.95 | 0.65 | 2.42 | 0.00 | 0.05 | 0.05 |
| Energy Sources | 0.02 | 0.37 | 0.16 | 0.00 | 0.03 | 0.03 |
| **Total** | **3.13** | **1.91** | **12.97** | **0.03** | **2.53** | **0.71** |
| SCAQMD Threshold | 55 | 55 | 550 | 150 | 150 | 55 |
| **Exceeds Threshold?** | **No** | **No** | **No** | **No** | **No** | **No** |

[1] Maximum daily emissions during summer or winter; includes both onsite and offsite project emissions.

### 4.2.2 Localized Emissions – Operations

**Table 11** shows the localized operational emissions and compares the results to SCAQMD LST thresholds of significance. As shown in **Table 11**, the emissions will be below the SCAQMD thresholds of significance for localized operational emissions.

**Therefore, the project's long-term localized air quality impacts will be less than significant.**

## Table 11 | Localized Operational Emissions

| Activity | Maximum Daily Emissions (lbs./day)[1] | | | |
|---|---|---|---|---|
| | $NO_X$ | CO | $PM_{10}$ | $PM_{2.5}$ |
| Onsite Emissions | 2.03 | 3.10 | 0.20 | 0.11 |
| SCAQMD Localized Threshold[2] | 161.1 | 1,325.2 | 2.9 | 1.8 |
| **Exceeds Threshold?** | **No** | **No** | **No** | **No** |

[1] Maximum daily emissions during summer or winter.

[2] Source: SCAQMD Mass Rate Localized Significance Thresholds for 3.5 acres/day in SRA-18 at 25 meters.

# 5.0 GREENHOUSE GAS IMPACT ANALYSIS

## 5.1 Greenhouse Gas Emissions – Construction

Greenhouse gas emissions are estimated for on-site and off-site construction activity using CalEEMod. **Table 12** shows the construction greenhouse gas emissions, including equipment and worker vehicle emissions for all phases of construction.

CalEEMod GHG output calculations are provided in **Appendix A**.

### Table 12 | Construction Greenhouse Gas Emissions

| Activity | Emissions ($MTCO_2e$)[1] | | |
|---|---|---|---|
| | Onsite | Offsite | Total |
| Demolition | 70.15 | 50.33 | 120.48 |
| Site Preparation | 74.72 | 3.19 | 77.91 |
| Grading | 66.00 | 6.79 | 72.79 |
| Building Construction | 190.94 | 24.39 | 215.33 |
| Paving | 14.75 | 2.77 | 17.52 |
| Architectural Coating | 1.46 | 0.38 | 1.84 |
| **Total** | **418.01** | **87.85** | **505.87** |
| **Amortized Over 30 Years[2]** | **13.93** | **2.93** | **16.86** |

[1] $MTCO_2e$ = metric tons of carbon dioxide equivalents (includes carbon dioxide, methane, nitrous oxide, and/or hydrofluorocarbons).

[2] The emissions are amortized over 30 years and added to the operational emissions, pursuant to SCAQMD recommendations.

Because impacts from construction activities occur over a relatively short period of time, they contribute a relatively small portion of the overall lifetime project GHG emissions. Therefore, the SCAQMD recommends assessing construction GHG impacts by amortizing emissions over a 30-year project lifetime and adding them to the overall project operational emissions. Pursuant to SCAQMD recommendations, this study assesses construction related GHG emissions along with the project's operational emissions, as further discussed in the section below.

## 5.2 Greenhouse Gas Emissions – Operation

Greenhouse gas emissions are estimated for on-site and off-site operational activity using CalEEMod. **Table 13** shows the project's operational greenhouse gas emissions, along with the project's amortized construction emissions.

**Appendix A** provides the CalEEMod emissions outputs for this study.

## Table 13 | Operational Greenhouse Gas Emissions

| Emission Source | Unmitigated GHG Emissions ($MTCO_2e/yr.$)[1] |
|---|---|
| Mobile Sources | 414.26 |
| Area Sources | 9.74 |
| Energy Sources | 150.45 |
| Water | 4.65 |
| Waste | 9.36 |
| Refrigerant | 0.09 |
| Construction (30-Year Amortization) | 16.86 |
| **Total Annual Emissions** | **605.41** |
| SCAQMD Tier 3 Screening Threshold | 3,000 |
| **Exceeds Threshold?** | **No** |

[1] $MTCO_2e/yr.$ = metric tons of carbon dioxide equivalents per year.

As shown in **Table 13**, the proposed project's GHG emissions are not expected to exceed the SCAQMD Tier 3 Screening Threshold of 3,000 $MTCO_2e$ for residential projects.

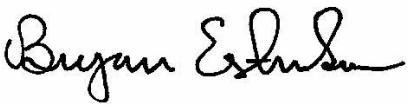
**Therefore, the proposed project's impact from GHG emissions will be less than significant.**

## 6.0 CONCLUSIONS

RK Engineering Group, Inc. has completed this Air Quality and Greenhouse Gas Impact Analysis for the proposed 16th Street Residential Project. Based upon this review, the proposed project's impact from air quality and greenhouse gas emissions is considered less than significant.

RK Engineering Group, Inc. appreciates this opportunity to work with the CARLSON STRATEGIC LAND SOLUTIONS on this project. If you have any questions regarding this review, or need further clarification, please contact us at (949) 474-0809.

Sincerely,
**RK ENGINEERING GROUP, INC.**



Bryan Estrada, AICP
Principal

Becca Morrison
Planner II

Attachments

# Exhibits

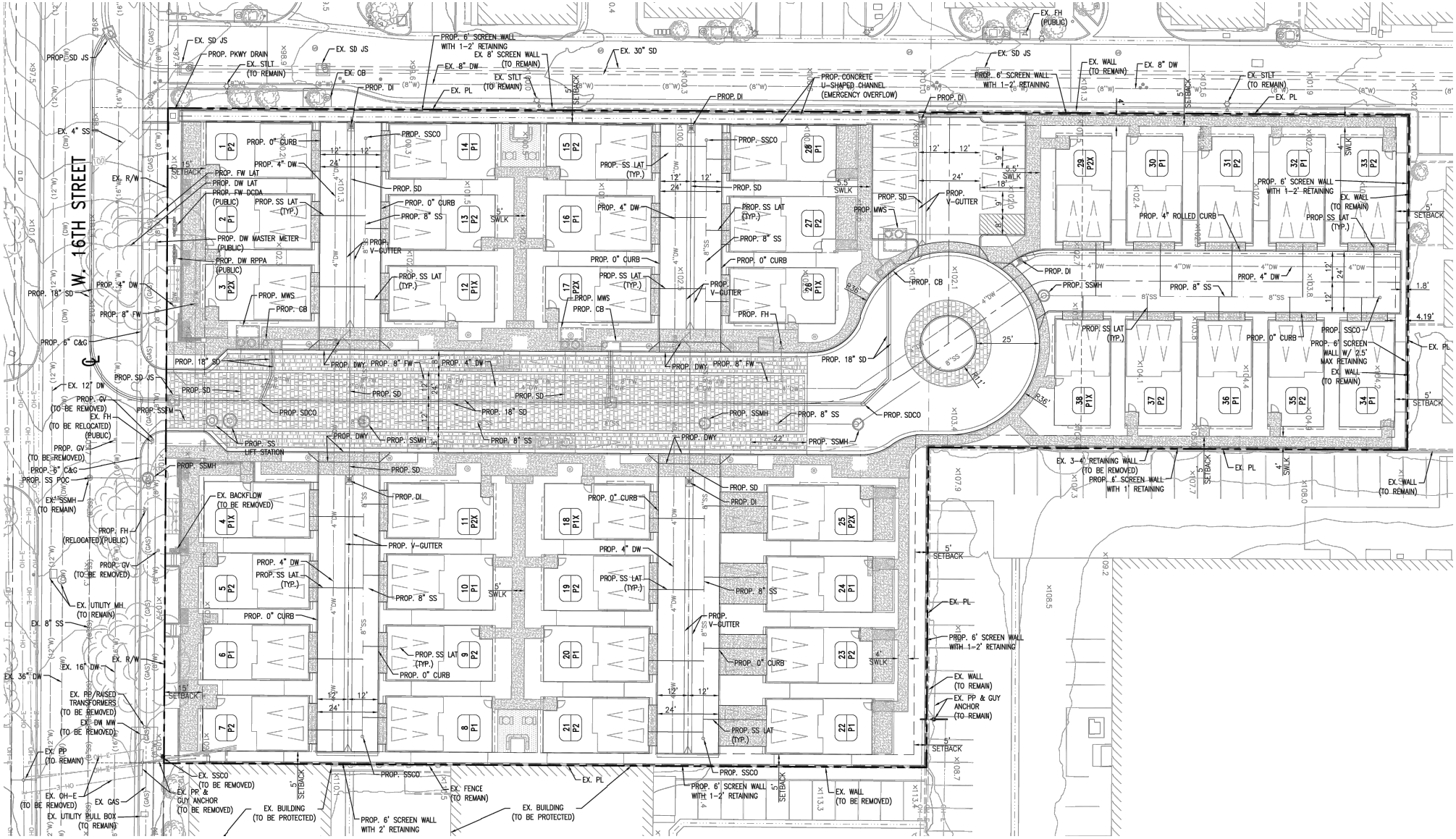

## Legend

1 = Sensitive Receptor Location

= Project Site Boundary

# Exhibit A

Location Map

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# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | 16th Street Residential Project |
| Construction Start Date | 1/1/2025 |
| Operational Year | 2025 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 2.50 |
| Precipitation (days) | 16.2 |
| Location | 33.63300009322788, -117.93838046874791 |
| County | Orange |
| City | Costa Mesa |
| Air District | South Coast AQMD |
| Air Basin | South Coast |
| TAZ | 5911 |
| EDFZ | 7 |
| Electric Utility | Southern California Edison |
| Gas Utility | Southern California Gas |
| App Version | 2022.1.1.28 |

## 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 | 38.0 | Dwelling Unit | 2.35 | 74,100 | 17,548 | 0.00 | 113 | — |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Parking Lot | 44.6 | 1000sqft | 1.02 | 0.00 | 0.00 | 0.00 | — | — |

### 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. | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 4.01 | 3.37 | 31.7 | 31.2 | 0.05 | 1.37 | 7.89 | 9.26 | 1.26 | 3.99 | 5.25 | — | 5,528 | 5,528 | 0.22 | 0.05 | 1.04 | 5,549 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 20.0 | 20.0 | 31.7 | 31.0 | 0.05 | 1.37 | 7.89 | 9.26 | 1.26 | 3.99 | 5.25 | — | 5,776 | 5,776 | 0.32 | 0.38 | 0.14 | 5,898 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 2.02 | 1.91 | 11.9 | 13.0 | 0.02 | 0.49 | 1.45 | 1.94 | 0.45 | 0.60 | 1.05 | — | 2,623 | 2,623 | 0.11 | 0.07 | 0.54 | 2,649 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.37 | 0.35 | 2.18 | 2.37 | < 0.005 | 0.09 | 0.27 | 0.35 | 0.08 | 0.11 | 0.19 | — | 434 | 434 | 0.02 | 0.01 | 0.09 | 439 |

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2025 | 4.01 | 3.37 | 31.7 | 31.2 | 0.05 | 1.37 | 7.89 | 9.26 | 1.26 | 3.99 | 5.25 | — | 5,528 | 5,528 | 0.22 | 0.05 | 1.04 | 5,549 |
| 2026 | 1.34 | 1.12 | 10.0 | 13.8 | 0.02 | 0.38 | 0.26 | 0.59 | 0.35 | 0.06 | 0.40 | — | 2,703 | 2,703 | 0.11 | 0.04 | 0.95 | 2,719 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 4.01 | 3.37 | 31.7 | 31.0 | 0.05 | 1.37 | 7.89 | 9.26 | 1.26 | 3.99 | 5.25 | — | 5,776 | 5,776 | 0.32 | 0.38 | 0.14 | 5,898 |
| 2026 | 20.0 | 20.0 | 10.0 | 13.7 | 0.02 | 0.38 | 0.26 | 0.59 | 0.35 | 0.06 | 0.40 | — | 2,694 | 2,694 | 0.11 | 0.04 | 0.02 | 2,710 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 1.54 | 1.27 | 11.9 | 13.0 | 0.02 | 0.49 | 1.45 | 1.94 | 0.45 | 0.60 | 1.05 | — | 2,623 | 2,623 | 0.11 | 0.07 | 0.54 | 2,649 |
| 2026 | 2.02 | 1.91 | 5.28 | 7.28 | 0.01 | 0.20 | 0.12 | 0.32 | 0.18 | 0.03 | 0.21 | — | 1,409 | 1,409 | 0.06 | 0.02 | 0.23 | 1,418 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2025 | 0.28 | 0.23 | 2.18 | 2.37 | < 0.005 | 0.09 | 0.27 | 0.35 | 0.08 | 0.11 | 0.19 | — | 434 | 434 | 0.02 | 0.01 | 0.09 | 439 |
| 2026 | 0.37 | 0.35 | 0.96 | 1.33 | < 0.005 | 0.04 | 0.02 | 0.06 | 0.03 | 0.01 | 0.04 | — | 233 | 233 | 0.01 | < 0.005 | 0.04 | 235 |

## 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. | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 3.31 | 3.13 | 1.83 | 13.0 | 0.03 | 0.10 | 2.44 | 2.54 | 0.10 | 0.62 | 0.71 | 18.9 | 4,320 | 4,339 | 2.09 | 0.10 | 10.5 | 4,432 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 3.10 | 2.93 | 1.89 | 10.1 | 0.03 | 0.10 | 2.44 | 2.53 | 0.09 | 0.62 | 0.71 | 18.9 | 4,209 | 4,228 | 2.09 | 0.11 | 0.79 | 4,312 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 3.13 | 3.00 | 1.31 | 11.3 | 0.03 | 0.05 | 2.37 | 2.42 | 0.05 | 0.60 | 0.65 | 18.9 | 3,449 | 3,468 | 2.08 | 0.10 | 4.76 | 3,555 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Unmit. | 0.57 | 0.55 | 0.24 | 2.07 | < 0.005 | 0.01 | 0.43 | 0.44 | 0.01 | 0.11 | 0.12 | 3.13 | 571 | 574 | 0.34 | 0.02 | 0.79 | 589 |

## 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 | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 1.27 | 1.16 | 0.81 | 10.4 | 0.03 | 0.01 | 2.44 | 2.45 | 0.01 | 0.62 | 0.63 | — | 2,592 | 2,592 | 0.11 | 0.09 | 9.99 | 2,631 |
| Area | 2.00 | 1.95 | 0.65 | 2.42 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | 0.00 | 806 | 806 | 0.02 | < 0.005 | — | 807 |
| Energy | 0.04 | 0.02 | 0.37 | 0.16 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 906 | 906 | 0.07 | < 0.005 | — | 909 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 2.73 | 16.3 | 19.0 | 0.28 | 0.01 | — | 28.1 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 16.2 | 0.00 | 16.2 | 1.61 | 0.00 | — | 56.5 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.53 | 0.53 |
| Total | 3.31 | 3.13 | 1.83 | 13.0 | 0.03 | 0.10 | 2.44 | 2.54 | 0.10 | 0.62 | 0.71 | 18.9 | 4,320 | 4,339 | 2.09 | 0.10 | 10.5 | 4,432 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 1.26 | 1.15 | 0.89 | 9.63 | 0.02 | 0.01 | 2.44 | 2.45 | 0.01 | 0.62 | 0.63 | — | 2,487 | 2,487 | 0.11 | 0.09 | 0.26 | 2,518 |
| Area | 1.79 | 1.76 | 0.63 | 0.27 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | 0.00 | 800 | 800 | 0.02 | < 0.005 | — | 801 |
| Energy | 0.04 | 0.02 | 0.37 | 0.16 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 906 | 906 | 0.07 | < 0.005 | — | 909 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 2.73 | 16.3 | 19.0 | 0.28 | 0.01 | — | 28.1 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 16.2 | 0.00 | 16.2 | 1.61 | 0.00 | — | 56.5 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.53 | 0.53 |
| Total | 3.10 | 2.93 | 1.89 | 10.1 | 0.03 | 0.10 | 2.44 | 2.53 | 0.09 | 0.62 | 0.71 | 18.9 | 4,209 | 4,228 | 2.09 | 0.11 | 0.79 | 4,312 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 1.23 | 1.12 | 0.88 | 9.69 | 0.02 | 0.01 | 2.37 | 2.38 | 0.01 | 0.60 | 0.61 | — | 2,468 | 2,468 | 0.11 | 0.09 | 4.23 | 2,502 |
| Area | 1.86 | 1.85 | 0.06 | 1.49 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | 0.00 | 58.8 | 58.8 | < 0.005 | < 0.005 | — | 58.8 |
| Energy | 0.04 | 0.02 | 0.37 | 0.16 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 906 | 906 | 0.07 | < 0.005 | — | 909 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Water | — | — | — | — | — | — | — | — | — | — | — | 2.73 | 16.3 | 19.0 | 0.28 | 0.01 | — | 28.1 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 16.2 | 0.00 | 16.2 | 1.61 | 0.00 | — | 56.5 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.53 | 0.53 |
| Total | 3.13 | 3.00 | 1.31 | 11.3 | 0.03 | 0.05 | 2.37 | 2.42 | 0.05 | 0.60 | 0.65 | 18.9 | 3,449 | 3,468 | 2.08 | 0.10 | 4.76 | 3,555 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.22 | 0.20 | 0.16 | 1.77 | < 0.005 | < 0.005 | 0.43 | 0.43 | < 0.005 | 0.11 | 0.11 | — | 409 | 409 | 0.02 | 0.02 | 0.70 | 414 |
| Area | 0.34 | 0.34 | 0.01 | 0.27 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | 0.00 | 9.73 | 9.73 | < 0.005 | < 0.005 | — | 9.74 |
| Energy | 0.01 | < 0.005 | 0.07 | 0.03 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 150 | 150 | 0.01 | < 0.005 | — | 150 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.45 | 2.70 | 3.15 | 0.05 | < 0.005 | — | 4.65 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 2.67 | 0.00 | 2.67 | 0.27 | 0.00 | — | 9.36 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.09 | 0.09 |
| Total | 0.57 | 0.55 | 0.24 | 2.07 | < 0.005 | 0.01 | 0.43 | 0.44 | 0.01 | 0.11 | 0.12 | 3.13 | 571 | 574 | 0.34 | 0.02 | 0.79 | 589 |

# 3. Construction Emissions Details

## 3.1. Demolition (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 2.86 | 2.40 | 22.2 | 19.9 | 0.03 | 0.92 | — | 0.92 | 0.84 | — | 0.84 | — | 3,425 | 3,425 | 0.14 | 0.03 | — | 3,437 |
| Demolition | — | — | — | — | — | — | 1.71 | 1.71 | — | 0.26 | 0.26 | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.35 | 0.30 | 2.74 | 2.46 | < 0.005 | 0.11 | — | 0.11 | 0.10 | — | 0.10 | — | 422 | 422 | 0.02 | < 0.005 | — | 424 |
| Demolition | — | — | — | — | — | — | 0.21 | 0.21 | — | 0.03 | 0.03 | — | — | — | — | — | — | — |
| 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 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.06 | 0.05 | 0.50 | 0.45 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 69.9 | 69.9 | < 0.005 | < 0.005 | — | 70.1 |
| Demolition | — | — | — | — | — | — | 0.04 | 0.04 | — | 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 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.06 | 0.05 | 0.06 | 0.73 | 0.00 | 0.00 | 0.20 | 0.20 | 0.00 | 0.05 | 0.05 | — | 189 | 189 | < 0.005 | 0.01 | 0.02 | 192 |
| 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 | 0.00 | 0.00 |
| Hauling | 0.21 | 0.04 | 2.72 | 1.17 | 0.01 | 0.03 | 0.56 | 0.59 | 0.03 | 0.16 | 0.18 | — | 2,161 | 2,161 | 0.17 | 0.35 | 0.12 | 2,270 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.09 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | 0.01 | 0.01 | — | 23.7 | 23.7 | < 0.005 | < 0.005 | 0.04 | 24.0 |
| 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 | 0.00 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 0.03 | 0.01 | 0.34 | 0.14 | < 0.005 | < 0.005 | 0.07 | 0.07 | < 0.005 | 0.02 | 0.02 | — | 266 | 266 | 0.02 | 0.04 | 0.24 | 280 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.02 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 3.92 | 3.92 | < 0.005 | < 0.005 | 0.01 | 3.97 |
| 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 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.06 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 44.1 | 44.1 | < 0.005 | 0.01 | 0.04 | 46.4 |

## 3.3. Site Preparation (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 3.94 | 3.31 | 31.6 | 30.2 | 0.05 | 1.37 | — | 1.37 | 1.26 | — | 1.26 | — | 5,295 | 5,295 | 0.21 | 0.04 | — | 5,314 |
| Dust From Material Movement | — | — | — | — | — | — | 7.67 | 7.67 | — | 3.94 | 3.94 | — | — | — | — | — | — | — |
| 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 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 3.94 | 3.31 | 31.6 | 30.2 | 0.05 | 1.37 | — | 1.37 | 1.26 | — | 1.26 | — | 5,295 | 5,295 | 0.21 | 0.04 | — | 5,314 |
| Dust From Material Movement | — | — | — | — | — | — | 7.67 | 7.67 | — | 3.94 | 3.94 | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.33 | 0.28 | 2.69 | 2.56 | < 0.005 | 0.12 | — | 0.12 | 0.11 | — | 0.11 | — | 450 | 450 | 0.02 | < 0.005 | — | 451 |
| Dust From Material Movement | — | — | — | — | — | — | 0.65 | 0.65 | — | 0.33 | 0.33 | — | — | — | — | — | — | — |
| 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 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.06 | 0.05 | 0.49 | 0.47 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 74.5 | 74.5 | < 0.005 | < 0.005 | — | 74.7 |
| Dust From Material Movement | — | — | — | — | — | — | 0.12 | 0.12 | — | 0.06 | 0.06 | — | — | — | — | — | — | — |
| 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 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.07 | 0.06 | 0.06 | 0.98 | 0.00 | 0.00 | 0.23 | 0.23 | 0.00 | 0.05 | 0.05 | — | 232 | 232 | < 0.005 | 0.01 | 0.88 | 236 |
| 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 | 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 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.07 | 0.06 | 0.07 | 0.85 | 0.00 | 0.00 | 0.23 | 0.23 | 0.00 | 0.05 | 0.05 | — | 221 | 221 | < 0.005 | 0.01 | 0.02 | 224 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 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 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.08 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | < 0.005 | < 0.005 | — | 19.0 | 19.0 | < 0.005 | < 0.005 | 0.03 | 19.3 |
| 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 | 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 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 3.15 | 3.15 | < 0.005 | < 0.005 | 0.01 | 3.19 |
| 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 | 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 | 0.00 | 0.00 |

## 3.5. Grading (2025) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 2.07 | 1.74 | 16.3 | 17.9 | 0.03 | 0.72 | — | 0.72 | 0.66 | — | 0.66 | — | 2,959 | 2,959 | 0.12 | 0.02 | — | 2,970 |
| Dust From Material Movement | — | — | — | — | — | — | 2.76 | 2.76 | — | 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 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.28 | 0.23 | 2.18 | 2.40 | < 0.005 | 0.10 | — | 0.10 | 0.09 | — | 0.09 | — | 397 | 397 | 0.02 | < 0.005 | — | 399 |
| Dust From Material Movement | — | — | — | — | — | — | 0.37 | 0.37 | — | 0.18 | 0.18 | — | — | — | — | — | — | — |
| 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 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.05 | 0.04 | 0.40 | 0.44 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 65.8 | 65.8 | < 0.005 | < 0.005 | — | 66.0 |
| Dust From Material Movement | — | — | — | — | — | — | 0.07 | 0.07 | — | 0.03 | 0.03 | — | — | — | — | — | — | — |
| 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 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.06 | 0.05 | 0.05 | 0.84 | 0.00 | 0.00 | 0.20 | 0.20 | 0.00 | 0.05 | 0.05 | — | 199 | 199 | < 0.005 | 0.01 | 0.75 | 202 |
| 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 | 0.00 | 0.00 |
| Hauling | 0.01 | < 0.005 | 0.13 | 0.06 | < 0.005 | < 0.005 | 0.03 | 0.03 | < 0.005 | 0.01 | 0.01 | — | 105 | 105 | 0.01 | 0.02 | 0.22 | 111 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.10 | 0.00 | 0.00 | 0.03 | 0.03 | 0.00 | 0.01 | 0.01 | — | 25.8 | 25.8 | < 0.005 | < 0.005 | 0.04 | 26.1 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.02 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 14.1 | 14.1 | < 0.005 | < 0.005 | 0.01 | 14.9 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.02 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 4.27 | 4.27 | < 0.005 | < 0.005 | 0.01 | 4.33 |
| 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 | 0.00 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 2.34 | 2.34 | < 0.005 | < 0.005 | < 0.005 | 2.46 |

## 3.7. 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 | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.35 | 1.13 | 10.4 | 13.0 | 0.02 | 0.43 | — | 0.43 | 0.40 | — | 0.40 | — | 2,398 | 2,398 | 0.10 | 0.02 | — | 2,406 |
| 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 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.35 | 1.13 | 10.4 | 13.0 | 0.02 | 0.43 | — | 0.43 | 0.40 | — | 0.40 | — | 2,398 | 2,398 | 0.10 | 0.02 | — | 2,406 |
| 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 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Road Equipment | 0.50 | 0.42 | 3.88 | 4.85 | 0.01 | 0.16 | — | 0.16 | 0.15 | — | 0.15 | — | 892 | 892 | 0.04 | 0.01 | — | 895 |
| 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 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.09 | 0.08 | 0.71 | 0.88 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 148 | 148 | 0.01 | < 0.005 | — | 148 |
| 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 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.06 | 0.05 | 0.05 | 0.77 | 0.00 | 0.00 | 0.18 | 0.18 | 0.00 | 0.04 | 0.04 | — | 182 | 182 | < 0.005 | 0.01 | 0.69 | 184 |
| Vendor | 0.01 | < 0.005 | 0.13 | 0.07 | < 0.005 | < 0.005 | 0.03 | 0.04 | < 0.005 | 0.01 | 0.01 | — | 130 | 130 | 0.01 | 0.02 | 0.35 | 135 |
| 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 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.05 | 0.05 | 0.66 | 0.00 | 0.00 | 0.18 | 0.18 | 0.00 | 0.04 | 0.04 | — | 173 | 173 | < 0.005 | 0.01 | 0.02 | 175 |
| Vendor | 0.01 | < 0.005 | 0.14 | 0.07 | < 0.005 | < 0.005 | 0.03 | 0.04 | < 0.005 | 0.01 | 0.01 | — | 130 | 130 | 0.01 | 0.02 | 0.01 | 135 |
| 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 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.02 | 0.02 | 0.02 | 0.26 | 0.00 | 0.00 | 0.07 | 0.07 | 0.00 | 0.02 | 0.02 | — | 65.1 | 65.1 | < 0.005 | < 0.005 | 0.11 | 66.0 |
| Vendor | < 0.005 | < 0.005 | 0.05 | 0.03 | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 48.2 | 48.2 | < 0.005 | 0.01 | 0.06 | 50.3 |
| 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 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.05 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 10.8 | 10.8 | < 0.005 | < 0.005 | 0.02 | 10.9 |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vendor | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 7.97 | 7.97 | < 0.005 | < 0.005 | 0.01 | 8.32 |
| 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 | 0.00 | 0.00 |

## 3.9. 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 | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.28 | 1.07 | 9.85 | 13.0 | 0.02 | 0.38 | — | 0.38 | 0.35 | — | 0.35 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| 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 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.28 | 1.07 | 9.85 | 13.0 | 0.02 | 0.38 | — | 0.38 | 0.35 | — | 0.35 | — | 2,397 | 2,397 | 0.10 | 0.02 | — | 2,405 |
| 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 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.61 | 0.51 | 4.72 | 6.22 | 0.01 | 0.18 | — | 0.18 | 0.17 | — | 0.17 | — | 1,149 | 1,149 | 0.05 | 0.01 | — | 1,153 |
| 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 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Off-Roa Equipment | 0.11 | 0.09 | 0.86 | 1.13 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 190 | 190 | 0.01 | < 0.005 | — | 191 |
| 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 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.05 | 0.04 | 0.72 | 0.00 | 0.00 | 0.18 | 0.18 | 0.00 | 0.04 | 0.04 | — | 178 | 178 | < 0.005 | 0.01 | 0.62 | 181 |
| Vendor | 0.01 | < 0.005 | 0.13 | 0.06 | < 0.005 | < 0.005 | 0.03 | 0.04 | < 0.005 | 0.01 | 0.01 | — | 127 | 127 | 0.01 | 0.02 | 0.33 | 133 |
| 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 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.05 | 0.05 | 0.62 | 0.00 | 0.00 | 0.18 | 0.18 | 0.00 | 0.04 | 0.04 | — | 170 | 170 | < 0.005 | 0.01 | 0.02 | 172 |
| Vendor | 0.01 | < 0.005 | 0.13 | 0.07 | < 0.005 | < 0.005 | 0.03 | 0.04 | < 0.005 | 0.01 | 0.01 | — | 127 | 127 | 0.01 | 0.02 | 0.01 | 133 |
| 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 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.02 | 0.02 | 0.02 | 0.31 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.02 | 0.02 | — | 82.4 | 82.4 | < 0.005 | < 0.005 | 0.13 | 83.5 |
| Vendor | < 0.005 | < 0.005 | 0.07 | 0.03 | < 0.005 | < 0.005 | 0.02 | 0.02 | < 0.005 | < 0.005 | 0.01 | — | 61.1 | 61.1 | < 0.005 | 0.01 | 0.07 | 63.8 |
| 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 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.06 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | < 0.005 | < 0.005 | — | 13.6 | 13.6 | < 0.005 | < 0.005 | 0.02 | 13.8 |
| Vendor | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 10.1 | 10.1 | < 0.005 | < 0.005 | 0.01 | 10.6 |
| 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 | 0.00 | 0.00 |

## 3.11. Paving (2026) - Unmitigated

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

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | —-65- | — | — | — | — | — | — | — | — | — |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.81 | 0.68 | 6.23 | 8.81 | 0.01 | 0.26 | — | 0.26 | 0.24 | — | 0.24 | — | 1,350 | 1,350 | 0.05 | 0.01 | — | 1,355 |
| Paving | 0.11 | 0.11 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.81 | 0.68 | 6.23 | 8.81 | 0.01 | 0.26 | — | 0.26 | 0.24 | — | 0.24 | — | 1,350 | 1,350 | 0.05 | 0.01 | — | 1,355 |
| Paving | 0.11 | 0.11 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.05 | 0.04 | 0.41 | 0.58 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 88.8 | 88.8 | < 0.005 | < 0.005 | — | 89.1 |
| Paving | 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 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.07 | 0.11 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 14.7 | 14.7 | < 0.005 | < 0.005 | — | 14.7 |
| Paving | < 0.005 | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.07 | 0.07 | 0.06 | 1.05 | 0.00 | 0.00 | 0.26 | 0.26 | 0.00 | 0.06 | 0.06 | — | 260 | 260 | < 0.005 | 0.01 | 0.91 | 264 |
| 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 | 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 | 0.00 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.07 | 0.07 | 0.07 | 0.91 | 0.00 | 0.00 | 0.26 | 0.26 | 0.00 | 0.06 | 0.06 | — | 248 | 248 | < 0.005 | 0.01 | 0.02 | 251 |
| 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 | 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 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.06 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | < 0.005 | < 0.005 | — | 16.5 | 16.5 | < 0.005 | < 0.005 | 0.03 | 16.7 |
| 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 | 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 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 2.74 | 2.74 | < 0.005 | < 0.005 | < 0.005 | 2.77 |
| 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 | 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 | 0.00 | 0.00 |

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

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.15 | 0.12 | 0.86 | 1.13 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 134 | 134 | 0.01 | < 0.005 | — | 134 |
| Architectural Coatings | 19.8 | 19.8 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.06 | 0.07 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 8.78 | 8.78 | < 0.005 | < 0.005 | — | 8.81 |
| Architectural Coatings | 1.30 | 1.30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 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 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 1.45 | 1.45 | < 0.005 | < 0.005 | — | 1.46 |
| Architectural Coatings | 0.24 | 0.24 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 0.00 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | 0.01 | 0.01 | 0.12 | 0.00 | 0.00 | 0.04 | 0.04 | 0.00 | 0.01 | 0.01 | — | 33.9 | 33.9 | < 0.005 | < 0.005 | < 0.005 | 34.3 |
| 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 | 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 | 0.00 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 2.26 | 2.26 | < 0.005 | < 0.005 | < 0.005 | 2.29 |
| 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 | 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 | 0.00 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.37 | 0.37 | < 0.005 | < 0.005 | < 0.005 | 0.38 |
| 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 | 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 | 0.00 | 0.00 |

# 4. Operations Emissions Details

## 4.1. Mobile Emissions by Land Use

### 4.1.1. Unmitigated

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

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | 1.27 | 1.16 | 0.81 | 10.4 | 0.03 | 0.01 | 2.44 | 2.45 | 0.01 | 0.62 | 0.63 | — | 2,592 | 2,592 | 0.11 | 0.09 | 9.99 | 2,631 |
| Parking Lot | 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 | 0.00 | 0.00 |
| Total | 1.27 | 1.16 | 0.81 | 10.4 | 0.03 | 0.01 | 2.44 | 2.45 | 0.01 | 0.62 | 0.63 | — | 2,592 | 2,592 | 0.11 | 0.09 | 9.99 | 2,631 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | 1.26 | 1.15 | 0.89 | 9.63 | 0.02 | 0.01 | 2.44 | 2.45 | 0.01 | 0.62 | 0.63 | — | 2,487 | 2,487 | 0.11 | 0.09 | 0.26 | 2,518 |
| Parking Lot | 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 | 0.00 | 0.00 |
| Total | 1.26 | 1.15 | 0.89 | 9.63 | 0.02 | 0.01 | 2.44 | 2.45 | 0.01 | 0.62 | 0.63 | — | 2,487 | 2,487 | 0.11 | 0.09 | 0.26 | 2,518 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | 0.22 | 0.20 | 0.16 | 1.77 | < 0.005 | < 0.005 | 0.43 | 0.43 | < 0.005 | 0.11 | 0.11 | — | 409 | 409 | 0.02 | 0.02 | 0.70 | 414 |
| Parking Lot | 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 | 0.00 | 0.00 |
| Total | 0.22 | 0.20 | 0.16 | 1.77 | < 0.005 | < 0.005 | 0.43 | 0.43 | < 0.005 | 0.11 | 0.11 | — | 409 | 409 | 0.02 | 0.02 | 0.70 | 414 |

## 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 | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | — | 382 | 382 | 0.02 | < 0.005 | — | 383 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | — | 57.0 | 57.0 | < 0.005 | < 0.005 | — | 57.2 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 439 | 439 | 0.03 | < 0.005 | — | 441 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | — | 382 | 382 | 0.02 | < 0.005 | — | 383 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | — | 57.0 | 57.0 | < 0.005 | < 0.005 | — | 57.2 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 439 | 439 | 0.03 | < 0.005 | — | 441 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | — | 63.2 | 63.2 | < 0.005 | < 0.005 | — | 63.5 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | — | 9.44 | 9.44 | < 0.005 | < 0.005 | — | 9.47 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 72.7 | 72.7 | < 0.005 | < 0.005 | — | 72.9 |

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

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Single Family Housing | 0.04 | 0.02 | 0.37 | 0.16 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 467 | 467 | 0.04 | < 0.005 | — | 468 |
| Parking Lot | 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 |
| Total | 0.04 | 0.02 | 0.37 | 0.16 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 467 | 467 | 0.04 | < 0.005 | — | 468 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | 0.04 | 0.02 | 0.37 | 0.16 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 467 | 467 | 0.04 | < 0.005 | — | 468 |
| Parking Lot | 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 |
| Total | 0.04 | 0.02 | 0.37 | 0.16 | < 0.005 | 0.03 | — | 0.03 | 0.03 | — | 0.03 | — | 467 | 467 | 0.04 | < 0.005 | — | 468 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | 0.01 | < 0.005 | 0.07 | 0.03 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 77.3 | 77.3 | 0.01 | < 0.005 | — | 77.5 |
| Parking Lot | 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 |
| Total | 0.01 | < 0.005 | 0.07 | 0.03 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 77.3 | 77.3 | 0.01 | < 0.005 | — | 77.5 |

## 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 | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Hearths | 0.07 | 0.04 | 0.63 | 0.27 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | 0.00 | 800 | 800 | 0.02 | < 0.005 | — | 801 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Consumer Product | 1.59 | 1.59 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.13 | 0.13 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.20 | 0.19 | 0.02 | 2.15 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 5.76 | 5.76 | < 0.005 | < 0.005 | — | 5.78 |
| Total | 2.00 | 1.95 | 0.65 | 2.42 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | 0.00 | 806 | 806 | 0.02 | < 0.005 | — | 807 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Hearths | 0.07 | 0.04 | 0.63 | 0.27 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | 0.00 | 800 | 800 | 0.02 | < 0.005 | — | 801 |
| Consumer Products | 1.59 | 1.59 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.13 | 0.13 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | 1.79 | 1.76 | 0.63 | 0.27 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | 0.00 | 800 | 800 | 0.02 | < 0.005 | — | 801 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Hearths | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | 0.00 | 9.07 | 9.07 | < 0.005 | < 0.005 | — | 9.08 |
| Consumer Products | 0.29 | 0.29 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | 0.02 | 0.02 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Landscape Equipm | 0.03 | 0.02 | < 0.005 | 0.27 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.65 | 0.65 | < 0.005 | < 0.005 | — | 0.66 |
| Total | 0.34 | 0.34 | 0.01 | 0.27 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | 0.00 | 9.73 | 9.73 | < 0.005 | < 0.005 | — | 9.74 |

## 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 | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | 2.73 | 16.3 | 19.0 | 0.28 | 0.01 | — | 28.1 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 2.73 | 16.3 | 19.0 | 0.28 | 0.01 | — | 28.1 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | 2.73 | 16.3 | 19.0 | 0.28 | 0.01 | — | 28.1 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 2.73 | 16.3 | 19.0 | 0.28 | 0.01 | — | 28.1 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | 0.45 | 2.70 | 3.15 | 0.05 | < 0.005 | — | 4.65 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.45 | 2.70 | 3.15 | 0.05 | < 0.005 | — | 4.65 |

## 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 | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | 16.2 | 0.00 | 16.2 | 1.61 | 0.00 | — | 56.5 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 16.2 | 0.00 | 16.2 | 1.61 | 0.00 | — | 56.5 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | 16.2 | 0.00 | 16.2 | 1.61 | 0.00 | — | 56.5 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 16.2 | 0.00 | 16.2 | 1.61 | 0.00 | — | 56.5 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | 2.67 | 0.00 | 2.67 | 0.27 | 0.00 | — | 9.36 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | — | — | — | — | — | — | — | — | — | — | — | 2.67 | 0.00 | 2.67 | 0.27 | 0.00 | — | 9.36 |

## 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 | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.53 | 0.53 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.53 | 0.53 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.53 | 0.53 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.53 | 0.53 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Single Family Housing | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.09 | 0.09 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.09 | 0.09 |

## 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 | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | 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 | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | 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 | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | 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 | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | 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 | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | 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 | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | 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 | 1/1/2025 | 3/4/2025 | 5.00 | 45.0 | — |
| Site Preparation | Site Preparation | 3/5/2025 | 4/16/2025 | 5.00 | 31.0 | — |
| Grading | Grading | 4/17/2025 | 6/24/2025 | 5.00 | 49.0 | — |

| | | | | | | |
|---|---|---|---|---|---|---|
| Building Construction | Building Construction | 6/25/2025 | 9/2/2026 | 5.00 | 311 | — |
| Paving | Paving | 9/3/2026 | 10/6/2026 | 5.00 | 24.0 | — |
| Architectural Coating | Architectural Coating | 10/7/2026 | 11/9/2026 | 5.00 | 24.0 | — |

## 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 | Concrete/Industrial Saws | Diesel | Average | 1.00 | 8.00 | 33.0 | 0.73 |
| Demolition | Excavators | Diesel | Average | 3.00 | 8.00 | 36.0 | 0.38 |
| Demolition | Rubber Tired Dozers | Diesel | Average | 2.00 | 8.00 | 367 | 0.40 |
| Site Preparation | Rubber Tired Dozers | Diesel | Average | 3.00 | 8.00 | 367 | 0.40 |
| Site Preparation | Tractors/Loaders/Backhoes | Diesel | Average | 4.00 | 8.00 | 84.0 | 0.37 |
| Grading | Excavators | Diesel | Average | 1.00 | 8.00 | 36.0 | 0.38 |
| Grading | Graders | Diesel | Average | 1.00 | 8.00 | 148 | 0.41 |
| Grading | Rubber Tired Dozers | Diesel | Average | 1.00 | 8.00 | 367 | 0.40 |
| Grading | Tractors/Loaders/Backhoes | Diesel | Average | 3.00 | 8.00 | 84.0 | 0.37 |
| Building Construction | Cranes | Diesel | Average | 1.00 | 7.00 | 367 | 0.29 |
| Building Construction | Forklifts | Diesel | Average | 3.00 | 8.00 | 82.0 | 0.20 |
| Building Construction | Generator Sets | Diesel | Average | 1.00 | 8.00 | 14.0 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | Diesel | Average | 3.00 | 7.00 | 84.0 | 0.37 |
| Building Construction | Welders | Diesel | Average | 1.00 | 8.00 | 46.0 | 0.45 |
| Paving | Cement and Mortar Mixers | Diesel | Average | 2.00 | 6.00 | 10.0 | 0.56 |
| Paving | Pavers | Diesel | Average | 1.00 | 8.00 | 81.0 | 0.42 |
| Paving | Paving Equipment | Diesel | Average | 2.00 | 6.00 | 89.0 | 0.36 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Paving | Rollers | Diesel | Average | 2.00 | 6.00 | 36.0 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | Diesel | Average | 1.00 | 8.00 | 84.0 | 0.37 |
| Architectural Coating | Air Compressors | Diesel | Average | 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 | 15.0 | 18.5 | LDA,LDT1,LDT2 |
| Demolition | Vendor | — | 10.2 | HHDT,MHDT |
| Demolition | Hauling | 31.0 | 20.0 | HHDT |
| Demolition | Onsite truck | — | — | HHDT |
| Site Preparation | — | — | — | — |
| Site Preparation | Worker | 17.5 | 18.5 | LDA,LDT1,LDT2 |
| Site Preparation | Vendor | — | 10.2 | HHDT,MHDT |
| Site Preparation | Hauling | 0.00 | 20.0 | HHDT |
| Site Preparation | Onsite truck | — | — | HHDT |
| Grading | — | — | — | — |
| Grading | Worker | 15.0 | 18.5 | LDA,LDT1,LDT2 |
| Grading | Vendor | — | 10.2 | HHDT,MHDT |
| Grading | Hauling | 1.51 | 20.0 | HHDT |
| Grading | Onsite truck | — | — | HHDT |
| Building Construction | — | — | — | — |
| Building Construction | Worker | 13.7 | 18.5 | LDA,LDT1,LDT2 |
| Building Construction | Vendor | 4.06 | 10.2 | HHDT,MHDT |
| Building Construction | Hauling | 0.00 | 20.0 | HHDT |
| Building Construction | Onsite truck | — | — | HHDT |

| | | | | |
|---|---|---|---|---|
| Paving | — | — | — | — |
| Paving | Worker | 20.0 | 18.5 | LDA,LDT1,LDT2 |
| Paving | Vendor | — | 10.2 | HHDT,MHDT |
| Paving | Hauling | 0.00 | 20.0 | HHDT |
| Paving | Onsite truck | — | — | HHDT |
| Architectural Coating | — | — | — | — |
| Architectural Coating | Worker | 2.74 | 18.5 | LDA,LDT1,LDT2 |
| Architectural Coating | Vendor | — | 10.2 | 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% |
| Sweep paved roads once per month | 9% | 9% |

## 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 | 150,053 | 50,018 | 0.00 | 0.00 | 2,678 |

## 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 (Ton of Debris) | Acres Paved (acres) |
|---|---|---|---|---|---|
| Demolition | 0.00 | 0.00 | 0.00 | 5,573 | — |
| Site Preparation | 0.00 | 0.00 | 46.5 | 0.00 | — |
| Grading | 585 | 0.00 | 49.0 | 0.00 | — |
| Paving | 0.00 | 0.00 | 0.00 | 0.00 | 1.44 |

### 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 | 0.42 | 0% |
| Parking Lot | 1.02 | 100% |

## 5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

| Year | kWh per Year | CO2 | CH4 | N2O |
|---|---|---|---|---|
| 2025 | 0.00 | 532 | 0.03 | < 0.005 |
| 2026 | 0.00 | 532 | 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 |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Single Family Housing | 358 | 360 | 322 | 129,011 | 3,438 | 3,456 | 3,091 | 1,237,608 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 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 | 38 |
| Propane Fireplaces | 0 |
| Electric Fireplaces | 0 |
| No Fireplaces | 0 |
| 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) |
|---|---|---|---|---|
| 150052.5 | 50,018 | 0.00 | 0.00 | 2,678 |

### 5.10.3. Landscape Equipment

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

| | | |
|---|---|---|
| Summer Days | day/yr | 250 |

## 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 | 262,016 | 532 | 0.0330 | 0.0040 | 1,456,743 |
| Parking Lot | 39,104 | 532 | 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 | 1,425,975 | 277,968 |
| Parking Lot | 0.00 | 0.00 |

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| Single Family Housing | 30.0 | — |
| Parking Lot | 0.00 | — |

## 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 consists of 38 single family dwelling units and approximately 44,639 square feet of paved surfaces on a site with a gross area of 2.348 acres. |
| Construction: Construction Phases | Construction phases are adjusted to reflect the expected construction schedule. |
| Operations: Vehicle Data | Trip rates are adjusted based on the ITE Trip Generation Manual, 11th Edition. |
| Operations: Fleet Mix | Fleet mix is adjusted to reflect a total of 2% heavy trucks (GVWR > 10,000 lbs.). |
| Operations: Hearths | Per SCAQMD Rule 445, no wood burning devices shall be allowed. |