

# Appendix A

## Air Quality

**AIR QUALITY and GHG IMPACT ANALYSES**  
**8426 N KESTER AVENUE RESIDENTIAL PROJECT**  
**PANORAMA CITY (LOS ANGELES), CALIFORNIA**

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## BACKGROUND

The Project is located at 8426 N Kester Avenue. The site is currently occupied by residential uses which will be demolished as part of the Project. The Project proposes construction of 9 (nine), two story detached single family dwellings (small lots) with attached 2 car-garages. The lot size is 33,012 sf. Grading will balance on-site.

## AIR QUALITY IMPACT

### STANDARDS OF SIGNIFICANCE

The SCAQMD has designated significant emissions levels as surrogates for evaluating regional air quality impact significance independent of chemical transformation processes. Projects with daily emissions that exceed any of the following emission thresholds are recommended by the SCAQMD to be considered significant under CEQA guidelines.

**Daily Emissions Thresholds**

<b>Pollutant</b>	<b>Construction</b>	<b>Operations</b>
ROG	75	55
NO <sub>x</sub>	100	55
CO	550	550
PM-10	150	150
PM-2.5	55	55
SO <sub>x</sub>	150	150
Lead	3	3

Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev.

### CONSTRUCTION ACTIVITY IMPACTS

CalEEMod was developed by the SCAQMD to provide a model by which to calculate both construction emissions and operational emissions from a variety of land use projects. It calculates both the daily maximum and annual average emissions for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions.

The existing residential uses will be demolished as part of the Project. The Project proposes construction of 9, two story detached single family dwellings with attached 2 car-garages. The lot size is 33,012 sf. Estimated construction emissions were modeled using CalEEMod2020.4.0 to identify maximum daily emissions for each pollutant using default durations and equipment fleets found in CalEEMod for the proposed use.

**Construction Activity Equipment Fleet**

<b>Phase Name and Duration</b>	<b>Equipment</b>
Demolition (10 days) 796 sf	1 Concrete Saw
	1 Dozer
	2 Loader/Backhoes
Grading (2 days)	1 Grader
	1 Dozer
	1 Loader/Backhoe
Construction (100 days)	1 Crane
	2 Forklifts
	2 Loader/Backhoes
Paving (5 days)	1 Paver
	4 Cement Mixers
	1 Loader/Backhoe
	1 Roller
Painting (5 days)	1 Air Compressor

Utilizing the indicated equipment fleet and durations the following worst-case daily construction emissions are calculated by CalEEMod:

**Construction Activity Emissions  
Maximum Daily Emissions (pounds/day)**

<b>Maximal Construction Emissions</b>	<b>ROG</b>	<b>NOx</b>	<b>CO</b>	<b>SO<sub>2</sub></b>	<b>PM-10</b>	<b>PM-2.5</b>
<b>2022</b>	21.2	12.0	7.9	0.0	5.9	3.1
SCAQMD Thresholds	75	100	550	150	150	55

Peak daily construction activity emissions are estimated to be below SCAQMD CEQA thresholds without the need for added mitigation.

**LOCALIZED SIGNIFICANCE THRESHOLDS**

The SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. These analysis elements are called Localized Significance Thresholds (LSTs).

For the proposed project, the primary source of possible LST impact would be during construction. LSTs are applicable for a sensitive receptor where it is possible that an individual could remain for 24 hours such as a residence, hospital or convalescent facility.

LSTs are only applicable to the following criteria pollutants: oxides of nitrogen (NOx), carbon monoxide (CO), and particulate matter (PM-10 and PM-2.5). 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 and are developed based on the

ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor.

LST screening tables are available for 25, 50, 100, 200 and 500 meter source-receptor distances. For this project, there are adjacent residential uses such that the most conservative 25-meter distance was modeled.

The SCAQMD has issued guidance on applying CalEEMod to LSTs. LST pollutant screening level concentration data is currently published for 1, 2 and 5 acre sites for varying distances. For this project, the most stringent thresholds for a 1-acre site were applied.

The following thresholds and emissions are therefore determined (pounds per day):

**LST and Project Emissions (pounds/day)**

<b>LST 1 acre/25 meters E SF Valley</b>	<b>CO</b>	<b>NOx</b>	<b>PM-10</b>	<b>PM-2.5</b>
<b>LST Threshold</b>	498	80	4	3
<b>Max On-Site Emissions*</b>	8	12	3	2

CalEEMod Output in Appendix

\*Max On-Site Emissions excludes on-road truck haul for demo and include watering two times per day during two days of grading

LSTs were compared to the maximum daily construction activities. Emissions meet the LST for construction thresholds. LST impacts are less-than-significant.

**OPERATIONAL IMPACTS**

Operational emissions were calculated using CalEEMod2020.4.0 for an assumed project build-out year of 2023 as a target for full occupancy. The project would generate 85 weekday trips using default trip rates in CalEEMod for the proposed residential uses. In addition to mobile sources from vehicles, general development causes smaller amounts of “area source” air pollution to be generated from on-site energy consumption (primarily space heating, hot water and landscaping). These sources represent a minimal percentage of the total project NOx and CO burdens, and a few percent of other pollutants. The inclusion of such emissions adds negligibly to the total significant project-related emissions burden as shown below.

### Daily Operational Impacts

Source	Operational Emissions (lbs/day)					
	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM-10	PM-2.5
Area *	0.4	0.1	0.8	<0.1	<0.1	<0.1
Energy	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
Mobile	0.3	0.2	2.8	<0.1	0.6	0.2
<b>Total</b>	<b>0.7</b>	<b>0.4</b>	<b>3.6</b>	<b>&lt;0.1</b>	<b>0.6</b>	<b>0.2</b>
SCAQMD Threshold	55	55	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

Source: CalEEMod2020.4.0 Output in Appendix

\*natural gas hearths (no wood burning fireplaces)

The project would not cause any operational emissions to exceed their respective SCAQMD CEQA significance thresholds. Operational emission impacts are judged to be less than significant. No impact mitigation for operational activity emissions is considered necessary to support this finding.

### GHG EMISSIONS THRESHOLDS

On December 5, 2008, the SCAQMD Governing Board adopted an Interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans, etc.) of 10,000 Metric Tons (MT) CO<sub>2</sub> equivalent/year CO<sub>2</sub>e. In September 2010, the SCAQMD CEQA Significance Thresholds GHG Working Group released revisions which recommended a threshold of 3,000 MT CO<sub>2</sub>e for all land use projects. This 3,000 MT/year recommendation has been used as a guideline for this analysis. In the absence of an adopted numerical threshold of significance, project related GHG emissions in excess of the guideline level are presumed to trigger a requirement for enhanced GHG reduction at the project level.

### PROJECT GHG EMISSIONS GENERATION

#### Construction Activity GHG Emissions

The project is assumed to require less than one year for construction. During project construction, the CalEEMod2020.4.0 computer model predicts that the construction activities will generate the annual CO<sub>2</sub>e emissions identified below.

#### Construction Emissions (Metric Tons CO<sub>2</sub>e)

	CO <sub>2</sub> e
Year 2022	63.4
<b>Amortized</b>	<b>0.2</b>

CalEEMod Output provided in appendix

SCAQMD GHG emissions policy from construction activities is to amortize emissions over a 30-year lifetime. The amortized level is also provided. GHG impacts from construction are considered individually less-than-significant.

### Project Operational GHG Emissions

The input assumptions for operational GHG emissions calculations and the GHG conversion from consumption to annual regional CO<sub>2</sub>e emissions are summarized in the CalEEMod2020.4.0 output files found in the appendix of this report.

The total operational and annualized construction emissions for the proposed project are identified as follows:

<b>Operational Emissions</b>	
<b>Consumption Source</b>	
Area Sources	2.1
Energy Utilization	35.7
Mobile Source	98.1
Waste	5.4
Water	4.5
Construction	0.2
<b>Total</b>	<b>146.0</b>
Guideline Threshold	3,000
Exceeds Threshold?	No

Total project GHG emissions would be substantially below the proposed significance threshold of 3,000 MT suggested by the SCAQMD. Hence, the project would not result in generation of a significant level of greenhouse gases.

## **CALEEMOD2020.4.0 COMPUTER MODEL OUTPUT**

- **DAILY EMISISONS**
- **ANNUAL EMISSIONS**