Kimley»Horn

TECHNICAL MEMORANDUM

To: Amanda Acuna, Senior Planner, Lisa Kranitz, Assistant City Attorney, City of Gardena

From: Rita Garcia, Project Manager, and Ryan Chiene, Technical Manager

Date: November 30, 2021

Subject: Western SRO Apartments Project, City of Gardena – Air Quality Analysis

1.0 INTRODUCTION & PURPOSE

The purpose of this Technical Memorandum is to identify the air quality emissions associated with construction and operations of the proposed Western SRO Apartments project (project), located at 13126 Western Avenue, in the City of Gardena, California (City). This Technical Memorandum has been prepared to support an exemption from the California Environmental Quality Act (CEQA) in accordance with State CEQA Guidelines Section 15332 (In-Fill Development Projects). Specifically, this analysis addresses the project's potential effects relating to air quality referenced in State CEQA Guidelines Section 15332(d).

2.0 PROJECT DESCRIPTION

Project Location

The proposed project site is located northeast of the West 132nd Street at Western Avenue intersection, at 13126 South Western Avenue in the northern portion of the City of Gardena, County of Los Angeles, California. The assessor's parcel number (APN) for the project site is APN 6102-006-013. The site is bordered by light-industrial uses; there are single-family residences to the west on Manhattan Place.

Regional access to the project site is provided via Interstate 105 (I-105) from the north and Interstate 110 (I-110) from the east. Local access to the site is provided via Western Avenue and 132nd Street. The project site and surrounding area are characterized as built out and urbanized, with mainly industrial and residential land uses.

Project Characteristics

The project site is designated as Industrial and zoned General Industrial (M-1). The project site is currently developed with a convenience store (2,755 square feet) and autobody shop (9,981 square feet) with surface parking. The project proposes to demolish all on-site improvements and, in their place, construct a four-story, 121 unit single-room occupancy (SRO) residential development including 7 very low-income residential units. All units, including the very low-income units, would be 350 square feet. The project's total proposed floor area is 54,461 square feet with a proposed building height maximum of 50 feet. Further, the project proposes to provide 20,115 square feet of open space, exceeding the City's open space requirement of 10 square feet per unit.

The project would provide 122 parking spaces, of which 114 spaces would be provided in a freestanding six-level automated parking structure, and 8 covered parking spaces (6 standard and 2 compact) would be provided to the south of the parking structure on the ground level. Additionally, 40 bicycle parking spaces in a stacked rack system would be provided.

3.0 AIR QUALITY IMPACTS

SCAQMD Thresholds

The SCAQMD CEQA Air Quality Handbook provides significance thresholds for volatile organic compounds (VOC) (also referred to as reactive organic gases [ROG]), nitrogen oxides (NO_X), carbon monoxide (CO), sulfur oxides (SO_X), particulate matter 10 microns or less in diameter (PM_{10}), and particulate matter 2.5 microns or less in diameter ($PM_{2.5}$). The thresholds apply to both project construction and operation within the SCAQMD jurisdictional boundaries. If a project proposes development in excess of the SCAQMD established thresholds, as outlined in **Table 1: South Coast Air Quality Management District Significance Thresholds**, a significant air quality impact may occur, and additional analysis is warranted to fully assess the significance of impacts. However, ultimately the lead agency determines the thresholds of significance for impacts.

Table 1: South Coast Air Quality Management District Significance Thresholds		
	Mass Daily Thresholds (pounds per day)	
Pollutant	**Construction**	**Operations**
Nitrogen Oxides (NO_X)	100	55
Volatile Organic Compounds (VOC)[1]	75	55
Particulate Matter up to 10 Microns (PM_{10})	150	150
Particulate Matter up to 2.5 Microns ($PM_{2.5}$)	55	55
Sulphur Oxides (SO_X)	150	150
Carbon Monoxide (CO)	550	550
1. VOCs and ROGs are subsets of organic gases that are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. Although they represent slightly different subsets of organic gases, they are used interchangeably for the purposes of this analysis.		
Source: South Coast Air Quality Management District, *South Coast AQMD Air Quality Significance Thresholds*, April 2019.		

Construction Emissions

Construction associated with the proposed project would generate short-term emissions of criteria air pollutants. The criteria pollutants of primary concern are ozone-precursor pollutants (i.e., ROG and NO_X), PM_{10}, and $PM_{2.5}$. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur. Emissions would be considered a significant air quality impact if the volume of pollutants generated exceeds the SCAQMD's thresholds of significance.

Construction results in the temporary generation of emissions resulting from demolition, site preparation, site grading, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities as well as weather conditions and the appropriate application of water.

The duration of construction activities is estimated to be approximately 16 months, beginning in June 2022. Construction-generated emissions associated with the project were calculated using the California Air Resources Board (CARB)-approved California Emissions Estimator Model version 2020.4.0 (CalEEMod), which is designed to model emissions for land use development projects, based on typical construction requirements. See **Appendix A: Air Quality Emissions Data** for more information regarding the construction assumptions used in this analysis. Predicted maximum daily construction-generated emissions for the proposed project are identified in **Table 2: Project Construction Emissions**.

Table 2: Project Construction Emissions						
	Emissions (pounds per day)[1]					
Description	**ROG**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Maximum Daily Emissions[2]	12.22	12.39	10.53	0.02	2.91	1.61
SCAQMD Threshold	75	100	550	150	150	55
SCAQMD Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

1. SCAQMD Rule 403 Fugitive Dust applied. The Rule 403 reduction/credits include the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied. No mitigation was applied to construction equipment. Refer to **Appendix A** for Model Data Outputs.
2. To be conservative, the emissions provided here show the maximum daily emissions even though such emissions would not occur throughout the entirety of the construction phase.

Source: CalEEMod version 2020.4.0. Refer to **Appendix A** for model outputs.

Table 2 shows that construction pollutant emissions would remain below their respective thresholds with implementation of required SCAQMD Rule 403. The project would also be required to comply with SCAQMD Rules 402 and 1113, which prohibit nuisances and limit VOC content in paints, respectively. Compliance with SCAQMD Rules 402 and 1113 would further reduce specific construction-related emissions. As shown above, all criteria pollutant emissions would be below their respective thresholds and impacts would be less than significant.

Operational Emissions

Operational emissions are typically associated with mobile sources (i.e., motor vehicle use) and area sources (such as the use of landscape maintenance equipment, consumer products, and architectural coatings). Energy source emissions would be generated from electricity and natural gas usage. **Table 3: Operational Emissions** summarizes the operational emissions attributable to the proposed project. As shown in **Table 3**, the project's emissions would not exceed SCAQMD thresholds. Therefore, regional operations emissions would result in a less than significant long-term regional air quality impact. It is noted these emissions estimates are conservative, since no credit was taken for the existing land uses (i.e., convenience store and autobody shop) that would be displaced.

Table 3: Operational Emissions						
	Emissions (pounds per day)[1]					
Source	**ROG**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Area	6.38	2.42	40.42	0.11	5.04	5.04
Energy	0.04	0.34	0.15	0.00	0.03	0.03
Mobile	2.01	2.30	20.73	0.04	4.77	1.29
Total	8.43	5.06	61.29	0.16	9.84	6.36
SCAQMD Threshold	55	55	550	150	150	55
SCAQMD Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**
1. Emissions were calculated using the California Emissions Estimator Model version 2020.4.0 (CalEEMod), as recommended by the SCAQMD. Worst-case seasonal maximum daily emissions are reported.						
Source: CalEEMod version 2020.4.0. Refer to **Appendix A** for model outputs.						

Localized Construction Impacts

The nearest sensitive receptors to the project site are single-family residences located approximately 430 feet to the west of the site. To identify impacts to sensitive receptors, the SCAQMD recommends addressing Localized Significance Thresholds (LSTs) for construction. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with project-specific developments.

Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, **Table 4: Equipment-Specific Grading Rates** is used to determine the maximum daily disturbed acreage for comparison to LSTs. For this project, the appropriate source receptor area (SRA) for the localized significance thresholds is the Southwest Coastal LA County (SRA 3) area because since this SRA includes the project site. LSTs apply to NO_X, CO, PM_{10}, and $PM_{2.5}$. The SCAQMD has look-up tables for projects that disturb areas less than or equal to five acres in size. Based on the daily equipment modeled in CalEEMod, project construction is anticipated to disturb approximately 1.5 acres in a single day. As the LST guidance provides thresholds for projects disturbing 1-, 2-, and 5-acres in size and the thresholds increase with size of the site, the LSTs for a 1.5-acre threshold were interpolated and used for this analysis.

Table 4: Equipment-Specific Grading Rates					
Construction Phase	**Equipment Type**	**Equipment Quantity**	**Acres Graded per 8-Hour Day**	**Operating Hours per Day**	**Acres Graded per Day**
Grading	Tractor	1	0.5	8	0.5
	Graders	1	0.5	8	0.5
	Dozers	1	0.5	8	0.5
	Scrapers	0	1	8	0
				Total Acres Graded per Day	**1.5**
Source: CalEEMod version 2020.4.0.					

The SCAQMD's methodology indicates that "off-site mobile emissions from the project should not be included in the emissions compared to LSTs." Therefore, for purposes of the construction LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered. The nearest sensitive receptors to the project site are residences located approximately 430 feet (131 meters) to the west of the site. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. Therefore, LSTs for 100 meters were conservatively used in this analysis**. Table 5: Localized Significance of Construction Emissions**, presents the results of localized emissions during construction activity. **Table 5** shows that the emissions of these pollutants on the peak day of construction would not result in significant concentrations of pollutants at nearby sensitive receptors. Therefore, no significant impacts would occur concerning LSTs during construction activities.

Table 5: Localized Significance of Construction Emissions				
Source/Activity	**Emissions (pounds per day)[1,2]**			
	NO_X	**CO**	**PM_{10}**	**$PM_{2.5}$**
Demolition (2022)	6.41	7.47	0.59	0.36
Site Preparation (2022)	6.93	3.96	0.48	0.26
Grading (2022)	12.00	5.94	2.79	1.57
Building Construction (2022)	7.03	7.15	0.37	0.34
Building Construction (2023)	6.42	7.10	0.32	0.29
Paving (2023)	5.50	7.02	0.26	0.25
Architectural Coating (2023)	1.30	1.81	0.07	0.07
Maximum Daily Emissions	*12.39*	*10.53*	*2.91*	*1.61*
SCAQMD LST (for 1.5 acre at 100 meters)	123	1,377	33	11
Maximum Daily Emissions Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**
1. CalEEMod version 2020.4.0. Worst-case seasonal maximum daily emissions are reported.				

Table 5: Localized Significance of Construction Emissions				
Source/Activity	**Emissions (pounds per day)[1,2]**			
	NO_X	**CO**	**PM_{10}**	**$PM_{2.5}$**
2. SCAQMD Rule 403 Fugitive Dust applied for construction emissions. The Rule 403 reduction/credits include the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces three times daily; water all haul roads twice daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied. No mitigation was applied to construction equipment. Refer to **Appendix A** for Model Data Outputs.				

Localized Operational Impacts

According to the SCAQMD localized significance threshold methodology, operational LSTs apply to on-site sources. LSTs for receptors located at 100 meters for SRA 3 were conservatively used in this analysis. The 1-acre LST threshold was used for the 1-acre project site. The on-site operational emissions were calculated using CalEEMod and are compared to the LST thresholds in **Table 6: Localized Significance of Operational Emissions**. The operational emissions shown in **Table 6** include all on-site project-related stationary sources (i.e., area and energy sources). The table shows that the project would not generate localized emissions during project operations. Therefore, the project would result in a less than significant impact concerning LSTs during operational activities.

Table 6: Localized Significance of Operational Emissions				
Activity	**Emissions (pounds per day)[1]**			
	NO_X	**CO**	**PM_{10}**	**$PM_{2.5}$**
On-Site Emissions (Area and Energy Sources)	2.28	10.91	0.23	0.23
SCAQMD Localized Screening Threshold (adjusted for 1 acre at 100 meters)	*107*	*1,156*	*7*	*3*
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**
1. Emissions were calculated using the California Emissions Estimator Model version 2020.4.0 (CalEEMod), as recommended by the SCAQMD. Worst-case seasonal maximum daily emissions are reported.				
Source: CalEEMod version 2020.4.0. Refer to **Appendix A** for model outputs.				

Carbon Monoxide Hotspots

An analysis of CO "hot spots" is needed to determine whether a change in the level of service (LOS) of an intersection caused by the proposed project would have the potential to result in exceedances of the California Ambient Air Quality Standards or National Ambient Air Quality Standards. It has long been recognized that CO exceedances are caused by vehicular

emissions, primarily when vehicles are idling at intersections. Vehicle emissions standards have become increasingly stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations have steadily declined.

Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard. CO attainment was thoroughly analyzed as part of the SCAQMD's *2003 Air Quality Management Plan*. The *2003 Air Quality Management Plan* is the most recent AQMP that addresses CO concentrations. As part of the SCAQMD CO Hotspot analysis, the Wilshire Boulevard/Veteran Avenue intersection, one of the most congested intersections in Southern California with an average daily traffic (ADT) volume of approximately 100,000 vehicles per day, was modeled for CO concentrations. This modeling effort identified a CO concentration high of 4.6 parts per million (ppm), which is well below the 35-ppm federal standard. The South Coast Air Basin was re-designated as attainment in 2007 and is no longer addressed in the SCAQMD's AQMP.

The proposed project considered herein would not produce the volume of traffic required to generate a CO hot spot in the context of SCAQMD's 2003 CO hot-spot analysis. As the CO hotspots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection even as it accommodates 100,000 vehicles daily, it can be reasonably inferred that CO hotspots would not be experienced at any vicinity intersections from 658 daily vehicle trips attributable to the project. Therefore, impacts would be less than significant.

4.0 CONCLUSION

As is evidenced by the discussions presented above, the project's short-term construction and long-term operational air quality impacts would be less than significant. No mitigation measure is required. Therefore, pursuant to State CEQA Guidelines Section 15332(d), the project would not result in any significant effects relating to air quality.

Appendix A

Air Quality Emissions Data

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Western Ave SRO Apartments Project

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	121.00	Dwelling Unit	1.00	121,000.00	346

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Acreage based on Site Plan

Construction Phase - Schedule based on AQGHG Construction Questionnaire

Demolition -

Grading -

Vehicle Trips - Trip Rate based on Trip Generation Memo

Woodstoves - No wood burning per SCAQMD rules and regulations

Construction Off-road Equipment Mitigation - SCAQMD rule compliance

Water Mitigation -

Waste Mitigation - per AB 939

Area Mitigation -

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	5.00	67.00
tblConstructionPhase	NumDays	100.00	171.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	2.00	60.00
tblConstructionPhase	NumDays	5.00	22.00
tblConstructionPhase	NumDays	1.00	10.00
tblFireplaces	NumberGas	102.85	109.85
tblFireplaces	NumberWood	6.05	0.00
tblGrading	MaterialExported	0.00	1,000.00
tblLandUse	LotAcreage	3.18	1.00
tblVehicleTrips	ST_TR	4.91	5.44
tblVehicleTrips	SU_TR	4.09	5.44

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.1206	12.3747	10.8000	0.0229	5.4397	0.5205	5.9602	2.6026	0.4789	3.0815	0.0000	2,282.4499	2,282.4499	0.4512	0.0612	2,310.4533
2023	12.2153	7.1119	10.4430	0.0224	1.0557	0.3375	1.3844	0.2819	0.3196	0.5843	0.0000	2,245.9492	2,245.9492	0.3879	0.0575	2,272.7858
Maximum	**12.2153**	**12.3747**	**10.8000**	**0.0229**	**5.4397**	**0.5205**	**5.9602**	**2.6026**	**0.4789**	**3.0815**	**0.0000**	**2,282.4499**	**2,282.4499**	**0.4512**	**0.0612**	**2,310.4533**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.1206	12.3747	10.8000	0.0229	2.3912	0.5205	2.9117	1.1303	0.4789	1.6093	0.0000	2,282.4499	2,282.4499	0.4512	0.0612	2,310.4533
2023	12.2153	7.1119	10.4430	0.0224	1.0014	0.3375	1.3301	0.2686	0.3196	0.5710	0.0000	2,245.9492	2,245.9492	0.3879	0.0575	2,272.7858
Maximum	**12.2153**	**12.3747**	**10.8000**	**0.0229**	**2.3912**	**0.5205**	**2.9117**	**1.1303**	**0.4789**	**1.6093**	**0.0000**	**2,282.4499**	**2,282.4499**	**0.4512**	**0.0612**	**2,310.4533**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**47.77**	**0.00**	**42.25**	**51.50**	**0.00**	**40.52**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.3830	2.4211	40.4176	0.1089		5.0407	5.0407		5.0407	5.0407	714.0983	2,344.2101	3,058.3084	3.4001	0.0427	3,156.0208
Energy	0.0399	0.3406	0.1450	2.1700e-003		0.0275	0.0275		0.0275	0.0275		434.8442	434.8442	8.3300e-003	7.9700e-003	437.4282
Mobile	2.0453	2.1280	21.2541	0.0465	4.7351	0.0332	4.7684	1.2612	0.0308	1.2921		4,792.3978	4,792.3978	0.3078	0.1909	4,856.9720
Total	**8.4682**	**4.8897**	**61.8167**	**0.1576**	**4.7351**	**5.1014**	**9.8366**	**1.2612**	**5.0990**	**6.3603**	**714.0983**	**7,571.4521**	**8,285.5503**	**3.7163**	**0.2415**	**8,450.4210**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.1173	1.9373	10.7603	0.0122		0.2026	0.2026		0.2026	0.2026	0.0000	2,344.2101	2,344.2101	0.0619	0.0427	2,358.4659
Energy	0.0399	0.3406	0.1450	2.1700e-003		0.0275	0.0275		0.0275	0.0275		434.8442	434.8442	8.3300e-003	7.9700e-003	437.4282
Mobile	2.0453	2.1280	21.2541	0.0465	4.7351	0.0332	4.7684	1.2612	0.0308	1.2921		4,792.3978	4,792.3978	0.3078	0.1909	4,856.9720
Total	**5.2025**	**4.4059**	**32.1593**	**0.0609**	**4.7351**	**0.2633**	**4.9985**	**1.2612**	**0.2610**	**1.5222**	**0.0000**	**7,571.4521**	**7,571.4521**	**0.3780**	**0.2415**	**7,652.8661**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**38.56**	**9.89**	**47.98**	**61.39**	**0.00**	**94.84**	**49.18**	**0.00**	**94.88**	**76.07**	**100.00**	**0.00**	**8.62**	**89.83**	**0.00**	**9.44**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2022	6/28/2022	5	20	
2	Site Preparation	Site Preparation	6/29/2022	7/12/2022	5	10	
3	Grading	Grading	7/13/2022	10/4/2022	5	60	
4	Building Construction	Building Construction	10/5/2022	5/31/2023	5	171	
5	Paving	Paving	6/1/2023	7/1/2023	5	22	
6	Architectural Coating	Architectural Coating	6/1/2023	9/1/2023	5	67	

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Western Ave SRO Apartments Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Grading (Site Preparation Phase): 5

Acres of Grading (Grading Phase): 45

Acres of Paving: 0

Residential Indoor: 245,025; Residential Outdoor: 81,675; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	55.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	125.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	87.00	13.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5906	0.0000	0.5906	0.0894	0.0000	0.0894			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225		1,147.9025	1,147.9025	0.2119		1,153.2001
Total	**0.7094**	**6.4138**	**7.4693**	**0.0120**	**0.5906**	**0.3375**	**0.9281**	**0.0894**	**0.3225**	**0.4120**		**1,147.9025**	**1,147.9025**	**0.2119**		**1,153.2001**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0128	0.4619	0.1077	1.7100e-003	0.0481	3.4300e-003	0.0516	0.0132	3.2800e-003	0.0165		187.2133	187.2133	9.9400e-003	0.0297	196.3136
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0346	0.0253	0.3941	1.0200e-003	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		104.0127	104.0127	2.8200e-003	2.5000e-003	104.8288
Total	**0.0474**	**0.4871**	**0.5018**	**2.7300e-003**	**0.1599**	**4.1500e-003**	**0.1641**	**0.0428**	**3.9400e-003**	**0.0468**		**291.2260**	**291.2260**	**0.0128**	**0.0322**	**301.1424**

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Western Ave SRO Apartments Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2525	0.0000	0.2525	0.0382	0.0000	0.0382			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001
Total	**0.7094**	**6.4138**	**7.4693**	**0.0120**	**0.2525**	**0.3375**	**0.5900**	**0.0382**	**0.3225**	**0.3608**	**0.0000**	**1,147.9025**	**1,147.9025**	**0.2119**		**1,153.2001**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0128	0.4619	0.1077	1.7100e-003	0.0460	3.4300e-003	0.0494	0.0127	3.2800e-003	0.0159		187.2133	187.2133	9.9400e-003	0.0297	196.3136
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0346	0.0253	0.3941	1.0200e-003	0.1060	7.2000e-004	0.1067	0.0282	6.6000e-004	0.0289		104.0127	104.0127	2.8200e-003	2.5000e-003	104.8288
Total	**0.0474**	**0.4871**	**0.5018**	**2.7300e-003**	**0.1519**	**4.1500e-003**	**0.1560**	**0.0409**	**3.9400e-003**	**0.0448**		**291.2260**	**291.2260**	**0.0128**	**0.0322**	**301.1424**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367		942.5179	942.5179	0.3048		950.1386
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.5303**	**0.2573**	**0.7876**	**0.0573**	**0.2367**	**0.2940**		**942.5179**	**942.5179**	**0.3048**		**950.1386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0173	0.0126	0.1971	5.1000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		52.0064	52.0064	1.4100e-003	1.2500e-003	52.4144
Total	**0.0173**	**0.0126**	**0.1971**	**5.1000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**		**52.0064**	**52.0064**	**1.4100e-003**	**1.2500e-003**	**52.4144**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2267	0.0000	0.2267	0.0245	0.0000	0.0245			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367	0.0000	942.5179	942.5179	0.3048		950.1386
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.2267**	**0.2573**	**0.4840**	**0.0245**	**0.2367**	**0.2612**	**0.0000**	**942.5179**	**942.5179**	**0.3048**		**950.1386**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0173	0.0126	0.1971	5.1000e-004	0.0530	3.6000e-004	0.0533	0.0141	3.3000e-004	0.0144		52.0064	52.0064	1.4100e-003	1.2500e-003	52.4144
Total	**0.0173**	**0.0126**	**0.1971**	**5.1000e-004**	**0.0530**	**3.6000e-004**	**0.0533**	**0.0141**	**3.3000e-004**	**0.0144**		**52.0064**	**52.0064**	**1.4100e-003**	**1.2500e-003**	**52.4144**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.3138	0.0000	5.3138	2.5688	0.0000	2.5688			0.0000			0.0000
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759		1,364.8198	1,364.8198	0.4414		1,375.8551
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**5.3138**	**0.5173**	**5.8311**	**2.5688**	**0.4759**	**3.0447**		**1,364.8198**	**1,364.8198**	**0.4414**		**1,375.8551**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.7100e-003	0.3499	0.0816	1.2900e-003	0.0365	2.6000e-003	0.0391	0.0100	2.4900e-003	0.0125		141.8283	141.8283	7.5300e-003	0.0225	148.7224
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0277	0.0202	0.3153	8.2000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		83.2102	83.2102	2.2500e-003	2.0000e-003	83.8630
Total	**0.0374**	**0.3701**	**0.3969**	**2.1100e-003**	**0.1259**	**3.1700e-003**	**0.1291**	**0.0337**	**3.0200e-003**	**0.0367**		**225.0384**	**225.0384**	**9.7800e-003**	**0.0245**	**232.5855**

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Western Ave SRO Apartments Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2717	0.0000	2.2717	1.0982	0.0000	1.0982			0.0000			0.0000
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759	0.0000	1,364.8198	1,364.8198	0.4414		1,375.8551
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**2.2717**	**0.5173**	**2.7889**	**1.0982**	**0.4759**	**1.5741**	**0.0000**	**1,364.8198**	**1,364.8198**	**0.4414**		**1,375.8551**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.7100e-003	0.3499	0.0816	1.2900e-003	0.0348	2.6000e-003	0.0374	9.5900e-003	2.4900e-003	0.0121		141.8283	141.8283	7.5300e-003	0.0225	148.7224
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0277	0.0202	0.3153	8.2000e-004	0.0848	5.7000e-004	0.0853	0.0226	5.3000e-004	0.0231		83.2102	83.2102	2.2500e-003	2.0000e-003	83.8630
Total	**0.0374**	**0.3701**	**0.3969**	**2.1100e-003**	**0.1196**	**3.1700e-003**	**0.1227**	**0.0322**	**3.0200e-003**	**0.0352**		**225.0384**	**225.0384**	**9.7800e-003**	**0.0245**	**232.5855**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.9393	1,103.9393	0.3570		1,112.8652
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**		**1,103.9393**	**1,103.9393**	**0.3570**		**1,112.8652**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0256	0.6368	0.2183	2.5500e-003	0.0833	6.0700e-003	0.0893	0.0240	5.8000e-003	0.0298		273.6001	273.6001	9.1400e-003	0.0394	285.5777
Worker	0.3011	0.2198	3.4290	8.9000e-003	0.9725	6.2300e-003	0.9787	0.2579	5.7400e-003	0.2636		904.9105	904.9105	0.0245	0.0218	912.0104
Total	**0.3267**	**0.8566**	**3.6473**	**0.0115**	**1.0557**	**0.0123**	**1.0680**	**0.2819**	**0.0115**	**0.2934**		**1,178.5106**	**1,178.5106**	**0.0336**	**0.0612**	**1,197.5881**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422	0.0000	1,103.9393	1,103.9393	0.3570		1,112.8652
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**	**0.0000**	**1,103.9393**	**1,103.9393**	**0.3570**		**1,112.8652**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0256	0.6368	0.2183	2.5500e-003	0.0797	6.0700e-003	0.0858	0.0231	5.8000e-003	0.0289		273.6001	273.6001	9.1400e-003	0.0394	285.5777
Worker	0.3011	0.2198	3.4290	8.9000e-003	0.9217	6.2300e-003	0.9280	0.2455	5.7400e-003	0.2512		904.9105	904.9105	0.0245	0.0218	912.0104
Total	**0.3267**	**0.8566**	**3.6473**	**0.0115**	**1.0014**	**0.0123**	**1.0137**	**0.2686**	**0.0115**	**0.2801**		**1,178.5106**	**1,178.5106**	**0.0336**	**0.0612**	**1,197.5881**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946		1,104.6089	1,104.6089	0.3573		1,113.5402
Total	**0.6322**	**6.4186**	**7.0970**	**0.0114**		**0.3203**	**0.3203**		**0.2946**	**0.2946**		**1,104.6089**	**1,104.6089**	**0.3573**		**1,113.5402**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0150	0.4990	0.1933	2.4200e-003	0.0833	2.5100e-003	0.0858	0.0240	2.4000e-003	0.0264		260.3672	260.3672	8.7300e-003	0.0374	271.7404
Worker	0.2786	0.1942	3.1527	8.6100e-003	0.9725	5.8700e-003	0.9783	0.2579	5.4000e-003	0.2633		880.9731	880.9731	0.0219	0.0201	887.5051
Total	**0.2936**	**0.6932**	**3.3460**	**0.0110**	**1.0557**	**8.3800e-003**	**1.0641**	**0.2819**	**7.8000e-003**	**0.2897**		**1,141.3403**	**1,141.3403**	**0.0307**	**0.0575**	**1,159.2456**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946	0.0000	1,104.6089	1,104.6089	0.3573		1,113.5402
Total	**0.6322**	**6.4186**	**7.0970**	**0.0114**		**0.3203**	**0.3203**		**0.2946**	**0.2946**	**0.0000**	**1,104.6089**	**1,104.6089**	**0.3573**		**1,113.5402**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0150	0.4990	0.1933	2.4200e-003	0.0797	2.5100e-003	0.0822	0.0231	2.4000e-003	0.0255		260.3672	260.3672	8.7300e-003	0.0374	271.7404
Worker	0.2786	0.1942	3.1527	8.6100e-003	0.9217	5.8700e-003	0.9276	0.2455	5.4000e-003	0.2509		880.9731	880.9731	0.0219	0.0201	887.5051
Total	**0.2936**	**0.6932**	**3.3460**	**0.0110**	**1.0014**	**8.3800e-003**	**1.0098**	**0.2686**	**7.8000e-003**	**0.2764**		**1,141.3403**	**1,141.3403**	**0.0307**	**0.0575**	**1,159.2456**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466		1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6112**	**5.5046**	**7.0209**	**0.0113**		**0.2643**	**0.2643**		**0.2466**	**0.2466**		**1,036.0878**	**1,036.0878**	**0.3018**		**1,043.6331**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0576	0.0402	0.6523	1.7800e-003	0.2012	1.2100e-003	0.2024	0.0534	1.1200e-003	0.0545		182.2703	182.2703	4.5400e-003	4.1500e-003	183.6218
Total	**0.0576**	**0.0402**	**0.6523**	**1.7800e-003**	**0.2012**	**1.2100e-003**	**0.2024**	**0.0534**	**1.1200e-003**	**0.0545**		**182.2703**	**182.2703**	**4.5400e-003**	**4.1500e-003**	**183.6218**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466	0.0000	1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6112**	**5.5046**	**7.0209**	**0.0113**		**0.2643**	**0.2643**		**0.2466**	**0.2466**	**0.0000**	**1,036.0878**	**1,036.0878**	**0.3018**		**1,043.6331**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0576	0.0402	0.6523	1.7800e-003	0.1907	1.2100e-003	0.1919	0.0508	1.1200e-003	0.0519		182.2703	182.2703	4.5400e-003	4.1500e-003	183.6218
Total	**0.0576**	**0.0402**	**0.6523**	**1.7800e-003**	**0.1907**	**1.2100e-003**	**0.1919**	**0.0508**	**1.1200e-003**	**0.0519**		**182.2703**	**182.2703**	**4.5400e-003**	**4.1500e-003**	**183.6218**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.3004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**11.4921**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0544	0.0380	0.6160	1.6800e-003	0.1900	1.1500e-003	0.1912	0.0504	1.0600e-003	0.0515		172.1442	172.1442	4.2900e-003	3.9200e-003	173.4206
Total	**0.0544**	**0.0380**	**0.6160**	**1.6800e-003**	**0.1900**	**1.1500e-003**	**0.1912**	**0.0504**	**1.0600e-003**	**0.0515**		**172.1442**	**172.1442**	**4.2900e-003**	**3.9200e-003**	**173.4206**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.3004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**11.4921**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0544	0.0380	0.6160	1.6800e-003	0.1801	1.1500e-003	0.1813	0.0480	1.0600e-003	0.0490		172.1442	172.1442	4.2900e-003	3.9200e-003	173.4206
Total	**0.0544**	**0.0380**	**0.6160**	**1.6800e-003**	**0.1801**	**1.1500e-003**	**0.1813**	**0.0480**	**1.0600e-003**	**0.0490**		**172.1442**	**172.1442**	**4.2900e-003**	**3.9200e-003**	**173.4206**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.0453	2.1280	21.2541	0.0465	4.7351	0.0332	4.7684	1.2612	0.0308	1.2921		4,792.3978	4,792.3978	0.3078	0.1909	4,856.9720

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Western Ave SRO Apartments Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated	2.0453	2.1280	21.2541	0.0465	4.7351	0.0332	4.7684	1.2612	0.0308	1.2921		4,792.3978	4,792.3978	0.3078	0.1909	4,856.9720

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Western Ave SRO Apartments Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	658.24	658.24	658.24	2,249,306	2,249,306
Total	658.24	658.24	658.24	2,249,306	2,249,306

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.00337

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0399	0.3406	0.1450	2.1700e-003		0.0275	0.0275		0.0275	0.0275		434.8442	434.8442	8.3300e-003	7.9700e-003	437.4282
NaturalGas Unmitigated	0.0399	0.3406	0.1450	2.1700e-003		0.0275	0.0275		0.0275	0.0275		434.8442	434.8442	8.3300e-003	7.9700e-003	437.4282

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	3696.18	0.0399	0.3406	0.1450	2.1700e-003		0.0275	0.0275		0.0275	0.0275		434.8442	434.8442	8.3300e-003	7.9700e-003	437.4282
Total		**0.0399**	**0.3406**	**0.1450**	**2.1700e-003**		**0.0275**	**0.0275**		**0.0275**	**0.0275**		**434.8442**	**434.8442**	**8.3300e-003**	**7.9700e-003**	**437.4282**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	3.69618	0.0399	0.3406	0.1450	2.1700e-003		0.0275	0.0275		0.0275	0.0275		434.8442	434.8442	8.3300e-003	7.9700e-003	437.4282
Total		**0.0399**	**0.3406**	**0.1450**	**2.1700e-003**		**0.0275**	**0.0275**		**0.0275**	**0.0275**		**434.8442**	**434.8442**	**8.3300e-003**	**7.9700e-003**	**437.4282**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.1173	1.9373	10.7603	0.0122		0.2026	0.2026		0.2026	0.2026	0.0000	2,344.2101	2,344.2101	0.0619	0.0427	2,358.4659
Unmitigated	6.3830	2.4211	40.4176	0.1089		5.0407	5.0407		5.0407	5.0407	714.0983	2,344.2101	3,058.3084	3.4001	0.0427	3,156.0208

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.3958					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	3.4789	2.3060	30.4327	0.1084		4.9854	4.9854		4.9854	4.9854	714.0983	2,326.2353	3,040.3335	3.3829	0.0427	3,137.6138
Landscaping	0.3008	0.1151	9.9849	5.3000e-004		0.0553	0.0553		0.0553	0.0553		17.9748	17.9748	0.0173		18.4070
Total	**6.3830**	**2.4211**	**40.4176**	**0.1089**		**5.0407**	**5.0407**		**5.0407**	**5.0407**	**714.0983**	**2,344.2101**	**3,058.3084**	**3.4001**	**0.0427**	**3,156.0208**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.3958					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2132	1.8222	0.7754	0.0116		0.1473	0.1473		0.1473	0.1473	0.0000	2,326.2353	2,326.2353	0.0446	0.0427	2,340.0590
Landscaping	0.3008	0.1151	9.9849	5.3000e-004		0.0553	0.0553		0.0553	0.0553		17.9748	17.9748	0.0173		18.4070
Total	**3.1173**	**1.9373**	**10.7603**	**0.0122**		**0.2026**	**0.2026**		**0.2026**	**0.2026**	**0.0000**	**2,344.2101**	**2,344.2101**	**0.0619**	**0.0427**	**2,358.4659**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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Western Ave SRO Apartments Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Western Ave SRO Apartments Project

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	121.00	Dwelling Unit	1.00	121,000.00	346

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Acreage based on Site Plan

Construction Phase - Schedule based on AQGHG Construction Questionnaire

Demolition -

Grading -

Vehicle Trips - Trip Rate based on Trip Generation Memo

Woodstoves - No wood burning per SCAQMD rules and regulations

Construction Off-road Equipment Mitigation - SCAQMD rule compliance

Water Mitigation -

Waste Mitigation - per AB 939

Area Mitigation -

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	5.00	67.00
tblConstructionPhase	NumDays	100.00	171.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	2.00	60.00
tblConstructionPhase	NumDays	5.00	22.00
tblConstructionPhase	NumDays	1.00	10.00
tblFireplaces	NumberGas	102.85	109.85
tblFireplaces	NumberWood	6.05	0.00
tblGrading	MaterialExported	0.00	1,000.00
tblLandUse	LotAcreage	3.18	1.00
tblVehicleTrips	ST_TR	4.91	5.44
tblVehicleTrips	SU_TR	4.09	5.44

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.1223	12.3911	10.5269	0.0224	5.4397	0.5205	5.9602	2.6026	0.4789	3.0815	0.0000	2,234.7080	2,234.7080	0.4512	0.0627	2,263.1778
2023	12.2236	7.1556	10.1942	0.0220	1.0557	0.3375	1.3844	0.2819	0.3196	0.5843	0.0000	2,199.9425	2,199.9425	0.3882	0.0590	2,227.2232
Maximum	**12.2236**	**12.3911**	**10.5269**	**0.0224**	**5.4397**	**0.5205**	**5.9602**	**2.6026**	**0.4789**	**3.0815**	**0.0000**	**2,234.7080**	**2,234.7080**	**0.4512**	**0.0627**	**2,263.1778**

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Western Ave SRO Apartments Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.1223	12.3911	10.5269	0.0224	2.3912	0.5205	2.9117	1.1303	0.4789	1.6093	0.0000	2,234.7080	2,234.7080	0.4512	0.0627	2,263.1778
2023	12.2236	7.1556	10.1942	0.0220	1.0014	0.3375	1.3301	0.2686	0.3196	0.5710	0.0000	2,199.9425	2,199.9425	0.3882	0.0590	2,227.2232
Maximum	**12.2236**	**12.3911**	**10.5269**	**0.0224**	**2.3912**	**0.5205**	**2.9117**	**1.1303**	**0.4789**	**1.6093**	**0.0000**	**2,234.7080**	**2,234.7080**	**0.4512**	**0.0627**	**2,263.1778**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**47.77**	**0.00**	**42.25**	**51.50**	**0.00**	**40.52**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	6.3830	2.4211	40.4176	0.1089		5.0407	5.0407		5.0407	5.0407	714.0983	2,344.2101	3,058.3084	3.4001	0.0427	3,156.0208
Energy	0.0399	0.3406	0.1450	2.1700e-003		0.0275	0.0275		0.0275	0.0275		434.8442	434.8442	8.3300e-003	7.9700e-003	437.4282
Mobile	2.0098	2.2997	20.7274	0.0445	4.7351	0.0332	4.7684	1.2612	0.0308	1.2921		4,587.5032	4,587.5032	0.3164	0.1995	4,654.8552
Total	**8.4326**	**5.0614**	**61.2899**	**0.1556**	**4.7351**	**5.1014**	**9.8366**	**1.2612**	**5.0990**	**6.3603**	**714.0983**	**7,366.5575**	**8,080.6557**	**3.7249**	**0.2501**	**8,248.3042**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.1173	1.9373	10.7603	0.0122		0.2026	0.2026		0.2026	0.2026	0.0000	2,344.2101	2,344.2101	0.0619	0.0427	2,358.4659
Energy	0.0399	0.3406	0.1450	2.1700e-003		0.0275	0.0275		0.0275	0.0275		434.8442	434.8442	8.3300e-003	7.9700e-003	437.4282
Mobile	2.0098	2.2997	20.7274	0.0445	4.7351	0.0332	4.7684	1.2612	0.0308	1.2921		4,587.5032	4,587.5032	0.3164	0.1995	4,654.8552
Total	**5.1669**	**4.5776**	**31.6326**	**0.0589**	**4.7351**	**0.2634**	**4.9985**	**1.2612**	**0.2610**	**1.5222**	**0.0000**	**7,366.5575**	**7,366.5575**	**0.3866**	**0.2501**	**7,450.7493**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**38.73**	**9.56**	**48.39**	**62.18**	**0.00**	**94.84**	**49.18**	**0.00**	**94.88**	**76.07**	**100.00**	**0.00**	**8.84**	**89.62**	**0.00**	**9.67**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2022	6/28/2022	5	20	
2	Site Preparation	Site Preparation	6/29/2022	7/12/2022	5	10	
3	Grading	Grading	7/13/2022	10/4/2022	5	60	
4	Building Construction	Building Construction	10/5/2022	5/31/2023	5	171	
5	Paving	Paving	6/1/2023	7/1/2023	5	22	
6	Architectural Coating	Architectural Coating	6/1/2023	9/1/2023	5	67	

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Grading (Site Preparation Phase): 5

Acres of Grading (Grading Phase): 45

Acres of Paving: 0

Residential Indoor: 245,025; Residential Outdoor: 81,675; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	55.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	125.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	87.00	13.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5906	0.0000	0.5906	0.0894	0.0000	0.0894			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225		1,147.9025	1,147.9025	0.2119		1,153.2001
Total	**0.7094**	**6.4138**	**7.4693**	**0.0120**	**0.5906**	**0.3375**	**0.9281**	**0.0894**	**0.3225**	**0.4120**		**1,147.9025**	**1,147.9025**	**0.2119**		**1,153.2001**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0125	0.4806	0.1096	1.7100e-003	0.0481	3.4400e-003	0.0516	0.0132	3.2900e-003	0.0165		187.2682	187.2682	9.9300e-003	0.0297	196.3710
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0371	0.0279	0.3619	9.7000e-004	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		98.5133	98.5133	2.8500e-003	2.6700e-003	99.3813
Total	**0.0496**	**0.5085**	**0.4715**	**2.6800e-003**	**0.1599**	**4.1600e-003**	**0.1641**	**0.0428**	**3.9500e-003**	**0.0468**		**285.7815**	**285.7815**	**0.0128**	**0.0324**	**295.7523**

Mitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2525	0.0000	0.2525	0.0382	0.0000	0.0382			0.0000			0.0000
Off-Road	0.7094	6.4138	7.4693	0.0120		0.3375	0.3375		0.3225	0.3225	0.0000	1,147.9025	1,147.9025	0.2119		1,153.2001
Total	**0.7094**	**6.4138**	**7.4693**	**0.0120**	**0.2525**	**0.3375**	**0.5900**	**0.0382**	**0.3225**	**0.3608**	**0.0000**	**1,147.9025**	**1,147.9025**	**0.2119**		**1,153.2001**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0125	0.4806	0.1096	1.7100e-003	0.0460	3.4400e-003	0.0494	0.0127	3.2900e-003	0.0160		187.2682	187.2682	9.9300e-003	0.0297	196.3710
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0371	0.0279	0.3619	9.7000e-004	0.1060	7.2000e-004	0.1067	0.0282	6.6000e-004	0.0289		98.5133	98.5133	2.8500e-003	2.6700e-003	99.3813
Total	**0.0496**	**0.5085**	**0.4715**	**2.6800e-003**	**0.1519**	**4.1600e-003**	**0.1561**	**0.0409**	**3.9500e-003**	**0.0448**		**285.7815**	**285.7815**	**0.0128**	**0.0324**	**295.7523**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367		942.5179	942.5179	0.3048		950.1386
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.5303**	**0.2573**	**0.7876**	**0.0573**	**0.2367**	**0.2940**		**942.5179**	**942.5179**	**0.3048**		**950.1386**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0185	0.0140	0.1809	4.8000e-004	0.0559	3.6000e-004	0.0563	0.0148	3.3000e-004	0.0152		49.2567	49.2567	1.4200e-003	1.3400e-003	49.6907
Total	**0.0185**	**0.0140**	**0.1809**	**4.8000e-004**	**0.0559**	**3.6000e-004**	**0.0563**	**0.0148**	**3.3000e-004**	**0.0152**		**49.2567**	**49.2567**	**1.4200e-003**	**1.3400e-003**	**49.6907**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2267	0.0000	0.2267	0.0245	0.0000	0.0245			0.0000			0.0000
Off-Road	0.5797	6.9332	3.9597	9.7300e-003		0.2573	0.2573		0.2367	0.2367	0.0000	942.5179	942.5179	0.3048		950.1386
Total	**0.5797**	**6.9332**	**3.9597**	**9.7300e-003**	**0.2267**	**0.2573**	**0.4840**	**0.0245**	**0.2367**	**0.2612**	**0.0000**	**942.5179**	**942.5179**	**0.3048**		**950.1386**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0185	0.0140	0.1809	4.8000e-004	0.0530	3.6000e-004	0.0533	0.0141	3.3000e-004	0.0144		49.2567	49.2567	1.4200e-003	1.3400e-003	49.6907
Total	**0.0185**	**0.0140**	**0.1809**	**4.8000e-004**	**0.0530**	**3.6000e-004**	**0.0533**	**0.0141**	**3.3000e-004**	**0.0144**		**49.2567**	**49.2567**	**1.4200e-003**	**1.3400e-003**	**49.6907**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.3138	0.0000	5.3138	2.5688	0.0000	2.5688			0.0000			0.0000
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759		1,364.8198	1,364.8198	0.4414		1,375.8551
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**5.3138**	**0.5173**	**5.8311**	**2.5688**	**0.4759**	**3.0447**		**1,364.8198**	**1,364.8198**	**0.4414**		**1,375.8551**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.4700e-003	0.3641	0.0830	1.3000e-003	0.0365	2.6000e-003	0.0391	0.0100	2.4900e-003	0.0125		141.8698	141.8698	7.5200e-003	0.0225	148.7659
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0296	0.0223	0.2895	7.7000e-004	0.0894	5.7000e-004	0.0900	0.0237	5.3000e-004	0.0242		78.8107	78.8107	2.2800e-003	2.1400e-003	79.5051
Total	**0.0391**	**0.3864**	**0.3725**	**2.0700e-003**	**0.1259**	**3.1700e-003**	**0.1291**	**0.0337**	**3.0200e-003**	**0.0367**		**220.6805**	**220.6805**	**9.8000e-003**	**0.0247**	**228.2710**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.2717	0.0000	2.2717	1.0982	0.0000	1.0982			0.0000			0.0000
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759	0.0000	1,364.8198	1,364.8198	0.4414		1,375.8551
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**2.2717**	**0.5173**	**2.7889**	**1.0982**	**0.4759**	**1.5741**	**0.0000**	**1,364.8198**	**1,364.8198**	**0.4414**		**1,375.8551**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.4700e-003	0.3641	0.0830	1.3000e-003	0.0348	2.6000e-003	0.0374	9.5900e-003	2.4900e-003	0.0121		141.8698	141.8698	7.5200e-003	0.0225	148.7659
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0296	0.0223	0.2895	7.7000e-004	0.0848	5.7000e-004	0.0853	0.0226	5.3000e-004	0.0231		78.8107	78.8107	2.2800e-003	2.1400e-003	79.5051
Total	**0.0391**	**0.3864**	**0.3725**	**2.0700e-003**	**0.1196**	**3.1700e-003**	**0.1228**	**0.0322**	**3.0200e-003**	**0.0352**		**220.6805**	**220.6805**	**9.8000e-003**	**0.0247**	**228.2710**

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Western Ave SRO Apartments Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422		1,103.9393	1,103.9393	0.3570		1,112.8652
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**		**1,103.9393**	**1,103.9393**	**0.3570**		**1,112.8652**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0253	0.6631	0.2259	2.5500e-003	0.0833	6.0900e-003	0.0894	0.0240	5.8200e-003	0.0298		273.7029	273.7029	9.1100e-003	0.0395	285.6949
Worker	0.3224	0.2429	3.1483	8.4200e-003	0.9725	6.2300e-003	0.9787	0.2579	5.7400e-003	0.2636		857.0659	857.0659	0.0248	0.0233	864.6177
Total	**0.3476**	**0.9060**	**3.3742**	**0.0110**	**1.0557**	**0.0123**	**1.0681**	**0.2819**	**0.0116**	**0.2934**		**1,130.7687**	**1,130.7687**	**0.0339**	**0.0627**	**1,150.3126**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6863	7.0258	7.1527	0.0114		0.3719	0.3719		0.3422	0.3422	0.0000	1,103.9393	1,103.9393	0.3570		1,112.8652
Total	**0.6863**	**7.0258**	**7.1527**	**0.0114**		**0.3719**	**0.3719**		**0.3422**	**0.3422**	**0.0000**	**1,103.9393**	**1,103.9393**	**0.3570**		**1,112.8652**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0253	0.6631	0.2259	2.5500e-003	0.0797	6.0900e-003	0.0858	0.0231	5.8200e-003	0.0289		273.7029	273.7029	9.1100e-003	0.0395	285.6949
Worker	0.3224	0.2429	3.1483	8.4200e-003	0.9217	6.2300e-003	0.9280	0.2455	5.7400e-003	0.2512		857.0659	857.0659	0.0248	0.0233	864.6177
Total	**0.3476**	**0.9060**	**3.3742**	**0.0110**	**1.0014**	**0.0123**	**1.0138**	**0.2686**	**0.0116**	**0.2801**		**1,130.7687**	**1,130.7687**	**0.0339**	**0.0627**	**1,150.3126**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946		1,104.6089	1,104.6089	0.3573		1,113.5402
Total	**0.6322**	**6.4186**	**7.0970**	**0.0114**		**0.3203**	**0.3203**		**0.2946**	**0.2946**		**1,104.6089**	**1,104.6089**	**0.3573**		**1,113.5402**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0145	0.5224	0.1994	2.4200e-003	0.0833	2.5200e-003	0.0858	0.0240	2.4100e-003	0.0264		260.8064	260.8064	8.6900e-003	0.0375	272.2084
Worker	0.2993	0.2146	2.8978	8.1500e-003	0.9725	5.8700e-003	0.9783	0.2579	5.4000e-003	0.2633		834.5272	834.5272	0.0222	0.0215	841.4746
Total	**0.3138**	**0.7370**	**3.0972**	**0.0106**	**1.0557**	**8.3900e-003**	**1.0641**	**0.2819**	**7.8100e-003**	**0.2897**		**1,095.3336**	**1,095.3336**	**0.0309**	**0.0590**	**1,113.6830**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6322	6.4186	7.0970	0.0114		0.3203	0.3203		0.2946	0.2946	0.0000	1,104.6089	1,104.6089	0.3573		1,113.5402
Total	**0.6322**	**6.4186**	**7.0970**	**0.0114**		**0.3203**	**0.3203**		**0.2946**	**0.2946**	**0.0000**	**1,104.6089**	**1,104.6089**	**0.3573**		**1,113.5402**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0145	0.5224	0.1994	2.4200e-003	0.0797	2.5200e-003	0.0822	0.0231	2.4100e-003	0.0255		260.8064	260.8064	8.6900e-003	0.0375	272.2084
Worker	0.2993	0.2146	2.8978	8.1500e-003	0.9217	5.8700e-003	0.9276	0.2455	5.4000e-003	0.2509		834.5272	834.5272	0.0222	0.0215	841.4746
Total	**0.3138**	**0.7370**	**3.0972**	**0.0106**	**1.0014**	**8.3900e-003**	**1.0098**	**0.2686**	**7.8100e-003**	**0.2764**		**1,095.3336**	**1,095.3336**	**0.0309**	**0.0590**	**1,113.6830**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466		1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6112**	**5.5046**	**7.0209**	**0.0113**		**0.2643**	**0.2643**		**0.2466**	**0.2466**		**1,036.0878**	**1,036.0878**	**0.3018**		**1,043.6331**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0619	0.0444	0.5996	1.6900e-003	0.2012	1.2100e-003	0.2024	0.0534	1.1200e-003	0.0545		172.6608	172.6608	4.6000e-003	4.4400e-003	174.0982
Total	**0.0619**	**0.0444**	**0.5996**	**1.6900e-003**	**0.2012**	**1.2100e-003**	**0.2024**	**0.0534**	**1.1200e-003**	**0.0545**		**172.6608**	**172.6608**	**4.6000e-003**	**4.4400e-003**	**174.0982**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6112	5.5046	7.0209	0.0113		0.2643	0.2643		0.2466	0.2466	0.0000	1,036.0878	1,036.0878	0.3018		1,043.6331
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6112**	**5.5046**	**7.0209**	**0.0113**		**0.2643**	**0.2643**		**0.2466**	**0.2466**	**0.0000**	**1,036.0878**	**1,036.0878**	**0.3018**		**1,043.6331**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0619	0.0444	0.5996	1.6900e-003	0.1907	1.2100e-003	0.1919	0.0508	1.1200e-003	0.0519		172.6608	172.6608	4.6000e-003	4.4400e-003	174.0982
Total	**0.0619**	**0.0444**	**0.5996**	**1.6900e-003**	**0.1907**	**1.2100e-003**	**0.1919**	**0.0508**	**1.1200e-003**	**0.0519**		**172.6608**	**172.6608**	**4.6000e-003**	**4.4400e-003**	**174.0982**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.3004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**11.4921**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0585	0.0419	0.5662	1.5900e-003	0.1900	1.1500e-003	0.1912	0.0504	1.0600e-003	0.0515		163.0685	163.0685	4.3500e-003	4.1900e-003	164.4261
Total	**0.0585**	**0.0419**	**0.5662**	**1.5900e-003**	**0.1900**	**1.1500e-003**	**0.1912**	**0.0504**	**1.0600e-003**	**0.0515**		**163.0685**	**163.0685**	**4.3500e-003**	**4.1900e-003**	**164.4261**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.3004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**11.4921**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0585	0.0419	0.5662	1.5900e-003	0.1801	1.1500e-003	0.1813	0.0480	1.0600e-003	0.0490		163.0685	163.0685	4.3500e-003	4.1900e-003	164.4261
Total	**0.0585**	**0.0419**	**0.5662**	**1.5900e-003**	**0.1801**	**1.1500e-003**	**0.1813**	**0.0480**	**1.0600e-003**	**0.0490**		**163.0685**	**163.0685**	**4.3500e-003**	**4.1900e-003**	**164.4261**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.0098	2.2997	20.7274	0.0445	4.7351	0.0332	4.7684	1.2612	0.0308	1.2921		4,587.5032	4,587.5032	0.3164	0.1995	4,654.8552
Unmitigated	2.0098	2.2997	20.7274	0.0445	4.7351	0.0332	4.7684	1.2612	0.0308	1.2921		4,587.5032	4,587.5032	0.3164	0.1995	4,654.8552

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	658.24	658.24	658.24	2,249,306	2,249,306
Total	658.24	658.24	658.24	2,249,306	2,249,306

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

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4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0399	0.3406	0.1450	2.1700e-003		0.0275	0.0275		0.0275	0.0275		434.8442	434.8442	8.3300e-003	7.9700e-003	437.4282
NaturalGas Unmitigated	0.0399	0.3406	0.1450	2.1700e-003		0.0275	0.0275		0.0275	0.0275		434.8442	434.8442	8.3300e-003	7.9700e-003	437.4282

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	3696.18	0.0399	0.3406	0.1450	2.1700e-003		0.0275	0.0275		0.0275	0.0275		434.8442	434.8442	8.3300e-003	7.9700e-003	437.4282
Total		**0.0399**	**0.3406**	**0.1450**	**2.1700e-003**		**0.0275**	**0.0275**		**0.0275**	**0.0275**		**434.8442**	**434.8442**	**8.3300e-003**	**7.9700e-003**	**437.4282**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	3.69618	0.0399	0.3406	0.1450	2.1700e-003		0.0275	0.0275		0.0275	0.0275		434.8442	434.8442	8.3300e-003	7.9700e-003	437.4282
Total		**0.0399**	**0.3406**	**0.1450**	**2.1700e-003**		**0.0275**	**0.0275**		**0.0275**	**0.0275**		**434.8442**	**434.8442**	**8.3300e-003**	**7.9700e-003**	**437.4282**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.1173	1.9373	10.7603	0.0122		0.2026	0.2026		0.2026	0.2026	0.0000	2,344.2101	2,344.2101	0.0619	0.0427	2,358.4659
Unmitigated	6.3830	2.4211	40.4176	0.1089		5.0407	5.0407		5.0407	5.0407	714.0983	2,344.2101	3,058.3084	3.4001	0.0427	3,156.0208

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.3958					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	3.4789	2.3060	30.4327	0.1084		4.9854	4.9854		4.9854	4.9854	714.0983	2,326.2353	3,040.3335	3.3829	0.0427	3,137.6138
Landscaping	0.3008	0.1151	9.9849	5.3000e-004		0.0553	0.0553		0.0553	0.0553		17.9748	17.9748	0.0173		18.4070

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Western Ave SRO Apartments Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	6.3830	2.4211	40.4176	0.1089		5.0407	5.0407		5.0407	5.0407	714.0983	2,344.2101	3,058.3084	3.4001	0.0427	3,156.0208

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Western Ave SRO Apartments Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.3958					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2132	1.8222	0.7754	0.0116		0.1473	0.1473		0.1473	0.1473	0.0000	2,326.2353	2,326.2353	0.0446	0.0427	2,340.0590
Landscaping	0.3008	0.1151	9.9849	5.3000e-004		0.0553	0.0553		0.0553	0.0553		17.9748	17.9748	0.0173		18.4070
Total	**3.1173**	**1.9373**	**10.7603**	**0.0122**		**0.2026**	**0.2026**		**0.2026**	**0.2026**	**0.0000**	**2,344.2101**	**2,344.2101**	**0.0619**	**0.0427**	**2,358.4659**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Western Ave SRO Apartments Project

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	121.00	Dwelling Unit	1.00	121,000.00	346

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Acreage based on Site Plan

Construction Phase - Schedule based on AQGHG Construction Questionnaire

Demolition -

Grading -

Vehicle Trips - Trip Rate based on Trip Generation Memo

Woodstoves - No wood burning per SCAQMD rules and regulations

Construction Off-road Equipment Mitigation - SCAQMD rule compliance

Water Mitigation -

Waste Mitigation - per AB 939

Area Mitigation -

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	5.00	67.00
tblConstructionPhase	NumDays	100.00	171.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	NumDays	2.00	60.00
tblConstructionPhase	NumDays	5.00	22.00
tblConstructionPhase	NumDays	1.00	10.00
tblFireplaces	NumberGas	102.85	109.85
tblFireplaces	NumberWood	6.05	0.00
tblGrading	MaterialExported	0.00	1,000.00
tblLandUse	LotAcreage	3.18	1.00
tblVehicleTrips	ST_TR	4.91	5.44
tblVehicleTrips	SU_TR	4.09	5.44

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0760	0.7261	0.6237	1.3900e-003	0.2061	0.0324	0.2386	0.0885	0.0300	0.1184	0.0000	124.9274	124.9274	0.0269	2.7700e-003	126.4263
2023	0.4440	0.4929	0.7185	1.4900e-003	0.0643	0.0231	0.0874	0.0172	0.0215	0.0387	0.0000	134.0390	134.0390	0.0227	3.0800e-003	135.5242
Maximum	**0.4440**	**0.7261**	**0.7185**	**1.4900e-003**	**0.2061**	**0.0324**	**0.2386**	**0.0885**	**0.0300**	**0.1184**	**0.0000**	**134.0390**	**134.0390**	**0.0269**	**3.0800e-003**	**135.5242**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0760	0.7261	0.6237	1.3900e-003	0.1080	0.0324	0.1404	0.0432	0.0300	0.0731	0.0000	124.9273	124.9273	0.0269	2.7700e-003	126.4262
2023	0.4440	0.4929	0.7185	1.4900e-003	0.0610	0.0231	0.0841	0.0164	0.0215	0.0378	0.0000	134.0390	134.0390	0.0227	3.0800e-003	135.5241
Maximum	**0.4440**	**0.7261**	**0.7185**	**1.4900e-003**	**0.1080**	**0.0324**	**0.1404**	**0.0432**	**0.0300**	**0.0731**	**0.0000**	**134.0390**	**134.0390**	**0.0269**	**3.0800e-003**	**135.5241**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**37.50**	**0.00**	**31.11**	**43.62**	**0.00**	**29.34**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2022	8-31-2022	0.3553	0.3553
2	9-1-2022	11-30-2022	0.3464	0.3464
3	12-1-2022	2-28-2023	0.2700	0.2700
4	3-1-2023	5-31-2023	0.2648	0.2648
5	6-1-2023	8-31-2023	0.4922	0.4922
6	9-1-2023	9-30-2023	0.0046	0.0046
		Highest	0.4922	0.4922

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5562	0.0432	1.6285	1.4200e-003		0.0692	0.0692		0.0692	0.0692	8.0977	28.4174	36.5151	0.0403	4.8000e-004	37.6673
Energy	7.2700e-003	0.0622	0.0265	4.0000e-004		5.0300e-003	5.0300e-003		5.0300e-003	5.0300e-003	0.0000	154.2628	154.2628	8.3200e-003	2.1600e-003	155.1150
Mobile	0.3597	0.4247	3.8091	8.1900e-003	0.8450	6.0400e-003	0.8510	0.2254	5.6000e-003	0.2310	0.0000	765.5843	765.5843	0.0520	0.0332	776.7616
Waste						0.0000	0.0000		0.0000	0.0000	11.2985	0.0000	11.2985	0.6677	0.0000	27.9915
Water						0.0000	0.0000		0.0000	0.0000	2.5011	27.9977	30.4988	0.2593	6.3500e-003	38.8730
Total	**0.9231**	**0.5300**	**5.4641**	**0.0100**	**0.8450**	**0.0803**	**0.9253**	**0.2254**	**0.0799**	**0.3053**	**21.8973**	**976.2621**	**998.1595**	**1.0276**	**0.0421**	**1,036.4084**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5154	0.0372	1.2578	2.1000e-004		8.7500e-003	8.7500e-003		8.7500e-003	8.7500e-003	0.0000	28.4174	28.4174	2.4700e-003	4.8000e-004	28.6231
Energy	7.2700e-003	0.0622	0.0265	4.0000e-004		5.0300e-003	5.0300e-003		5.0300e-003	5.0300e-003	0.0000	154.2628	154.2628	8.3200e-003	2.1600e-003	155.1150
Mobile	0.3597	0.4247	3.8091	8.1900e-003	0.8450	6.0400e-003	0.8510	0.2254	5.6000e-003	0.2310	0.0000	765.5843	765.5843	0.0520	0.0332	776.7616
Waste						0.0000	0.0000		0.0000	0.0000	5.6492	0.0000	5.6492	0.3339	0.0000	13.9958
Water						0.0000	0.0000		0.0000	0.0000	2.0009	23.7593	25.7602	0.2075	5.1000e-003	32.4666
Total	**0.8823**	**0.5240**	**5.0934**	**8.8000e-003**	**0.8450**	**0.0198**	**0.8648**	**0.2254**	**0.0194**	**0.2448**	**7.6501**	**972.0238**	**979.6739**	**0.6042**	**0.0409**	**1,006.9621**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	4.42	1.14	6.78	12.09	0.00	75.32	6.54	0.00	75.73	19.81	65.06	0.43	1.85	41.21	2.97	2.84

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2022	6/28/2022	5	20	
2	Site Preparation	Site Preparation	6/29/2022	7/12/2022	5	10	
3	Grading	Grading	7/13/2022	10/4/2022	5	60	
4	Building Construction	Building Construction	10/5/2022	5/31/2023	5	171	
5	Paving	Paving	6/1/2023	7/1/2023	5	22	
6	Architectural Coating	Architectural Coating	6/1/2023	9/1/2023	5	67	

Acres of Grading (Site Preparation Phase): 5

Acres of Grading (Grading Phase): 45

Acres of Paving: 0

Residential Indoor: 245,025; Residential Outdoor: 81,675; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	55.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	125.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	87.00	13.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	17.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.9100e-003	0.0000	5.9100e-003	8.9000e-004	0.0000	8.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.0900e-003	0.0641	0.0747	1.2000e-004		3.3800e-003	3.3800e-003		3.2300e-003	3.2300e-003	0.0000	10.4136	10.4136	1.9200e-003	0.0000	10.4617
Total	**7.0900e-003**	**0.0641**	**0.0747**	**1.2000e-004**	**5.9100e-003**	**3.3800e-003**	**9.2900e-003**	**8.9000e-004**	**3.2300e-003**	**4.1200e-003**	**0.0000**	**10.4136**	**10.4136**	**1.9200e-003**	**0.0000**	**10.4617**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.3000e-004	4.8600e-003	1.0800e-003	2.0000e-005	4.7000e-004	3.0000e-005	5.1000e-004	1.3000e-004	3.0000e-005	1.6000e-004	0.0000	1.6986	1.6986	9.0000e-005	2.7000e-004	1.7812
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-004	2.9000e-004	3.7100e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1000e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9071	0.9071	3.0000e-005	2.0000e-005	0.9151
Total	**4.7000e-004**	**5.1500e-003**	**4.7900e-003**	**3.0000e-005**	**1.5700e-003**	**4.0000e-005**	**1.6100e-003**	**4.2000e-004**	**4.0000e-005**	**4.6000e-004**	**0.0000**	**2.6057**	**2.6057**	**1.2000e-004**	**2.9000e-004**	**2.6962**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.5200e-003	0.0000	2.5200e-003	3.8000e-004	0.0000	3.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.0900e-003	0.0641	0.0747	1.2000e-004		3.3800e-003	3.3800e-003		3.2300e-003	3.2300e-003	0.0000	10.4136	10.4136	1.9200e-003	0.0000	10.4616
Total	**7.0900e-003**	**0.0641**	**0.0747**	**1.2000e-004**	**2.5200e-003**	**3.3800e-003**	**5.9000e-003**	**3.8000e-004**	**3.2300e-003**	**3.6100e-003**	**0.0000**	**10.4136**	**10.4136**	**1.9200e-003**	**0.0000**	**10.4616**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.3000e-004	4.8600e-003	1.0800e-003	2.0000e-005	4.5000e-004	3.0000e-005	4.9000e-004	1.2000e-004	3.0000e-005	1.6000e-004	0.0000	1.6986	1.6986	9.0000e-005	2.7000e-004	1.7812
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-004	2.9000e-004	3.7100e-003	1.0000e-005	1.0400e-003	1.0000e-005	1.0500e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	0.9071	0.9071	3.0000e-005	2.0000e-005	0.9151
Total	**4.7000e-004**	**5.1500e-003**	**4.7900e-003**	**3.0000e-005**	**1.4900e-003**	**4.0000e-005**	**1.5400e-003**	**4.0000e-004**	**4.0000e-005**	**4.4000e-004**	**0.0000**	**2.6057**	**2.6057**	**1.2000e-004**	**2.9000e-004**	**2.6962**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6500e-003	0.0000	2.6500e-003	2.9000e-004	0.0000	2.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9000e-003	0.0347	0.0198	5.0000e-005		1.2900e-003	1.2900e-003		1.1800e-003	1.1800e-003	0.0000	4.2752	4.2752	1.3800e-003	0.0000	4.3098
Total	**2.9000e-003**	**0.0347**	**0.0198**	**5.0000e-005**	**2.6500e-003**	**1.2900e-003**	**3.9400e-003**	**2.9000e-004**	**1.1800e-003**	**1.4700e-003**	**0.0000**	**4.2752**	**4.2752**	**1.3800e-003**	**0.0000**	**4.3098**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	7.0000e-005	9.3000e-004	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2268	0.2268	1.0000e-005	1.0000e-005	0.2288
Total	**9.0000e-005**	**7.0000e-005**	**9.3000e-004**	**0.0000**	**2.7000e-004**	**0.0000**	**2.8000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2268**	**0.2268**	**1.0000e-005**	**1.0000e-005**	**0.2288**

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Western Ave SRO Apartments Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1300e-003	0.0000	1.1300e-003	1.2000e-004	0.0000	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9000e-003	0.0347	0.0198	5.0000e-005		1.2900e-003	1.2900e-003		1.1800e-003	1.1800e-003	0.0000	4.2752	4.2752	1.3800e-003	0.0000	4.3098
Total	**2.9000e-003**	**0.0347**	**0.0198**	**5.0000e-005**	**1.1300e-003**	**1.2900e-003**	**2.4200e-003**	**1.2000e-004**	**1.1800e-003**	**1.3000e-003**	**0.0000**	**4.2752**	**4.2752**	**1.3800e-003**	**0.0000**	**4.3098**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	7.0000e-005	9.3000e-004	0.0000	2.6000e-004	0.0000	2.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2268	0.2268	1.0000e-005	1.0000e-005	0.2288
Total	**9.0000e-005**	**7.0000e-005**	**9.3000e-004**	**0.0000**	**2.6000e-004**	**0.0000**	**2.6000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2268**	**0.2268**	**1.0000e-005**	**1.0000e-005**	**0.2288**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1594	0.0000	0.1594	0.0771	0.0000	0.0771	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0325	0.3601	0.1781	4.2000e-004		0.0155	0.0155		0.0143	0.0143	0.0000	37.1443	37.1443	0.0120	0.0000	37.4446
Total	**0.0325**	**0.3601**	**0.1781**	**4.2000e-004**	**0.1594**	**0.0155**	**0.1749**	**0.0771**	**0.0143**	**0.0914**	**0.0000**	**37.1443**	**37.1443**	**0.0120**	**0.0000**	**37.4446**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.9000e-004	0.0111	2.4600e-003	4.0000e-005	1.0800e-003	8.0000e-005	1.1500e-003	3.0000e-004	7.0000e-005	3.7000e-004	0.0000	3.8604	3.8604	2.0000e-004	6.1000e-004	4.0481
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.2000e-004	6.9000e-004	8.9100e-003	2.0000e-005	2.6300e-003	2.0000e-005	2.6500e-003	7.0000e-004	2.0000e-005	7.1000e-004	0.0000	2.1770	2.1770	6.0000e-005	6.0000e-005	2.1961
Total	**1.1100e-003**	**0.0118**	**0.0114**	**6.0000e-005**	**3.7100e-003**	**1.0000e-004**	**3.8000e-003**	**1.0000e-003**	**9.0000e-005**	**1.0800e-003**	**0.0000**	**6.0374**	**6.0374**	**2.6000e-004**	**6.7000e-004**	**6.2442**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0682	0.0000	0.0682	0.0330	0.0000	0.0330	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0325	0.3601	0.1781	4.2000e-004		0.0155	0.0155		0.0143	0.0143	0.0000	37.1443	37.1443	0.0120	0.0000	37.4446
Total	**0.0325**	**0.3601**	**0.1781**	**4.2000e-004**	**0.0682**	**0.0155**	**0.0837**	**0.0330**	**0.0143**	**0.0472**	**0.0000**	**37.1443**	**37.1443**	**0.0120**	**0.0000**	**37.4446**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.9000e-004	0.0111	2.4600e-003	4.0000e-005	1.0300e-003	8.0000e-005	1.1000e-003	2.8000e-004	7.0000e-005	3.6000e-004	0.0000	3.8604	3.8604	2.0000e-004	6.1000e-004	4.0481
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.2000e-004	6.9000e-004	8.9100e-003	2.0000e-005	2.4900e-003	2.0000e-005	2.5100e-003	6.6000e-004	2.0000e-005	6.8000e-004	0.0000	2.1770	2.1770	6.0000e-005	6.0000e-005	2.1961
Total	**1.1100e-003**	**0.0118**	**0.0114**	**6.0000e-005**	**3.5200e-003**	**1.0000e-004**	**3.6100e-003**	**9.4000e-004**	**9.0000e-005**	**1.0400e-003**	**0.0000**	**6.0374**	**6.0374**	**2.6000e-004**	**6.7000e-004**	**6.2442**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0216	0.2213	0.2253	3.6000e-004		0.0117	0.0117		0.0108	0.0108	0.0000	31.5465	31.5465	0.0102	0.0000	31.8016
Total	**0.0216**	**0.2213**	**0.2253**	**3.6000e-004**		**0.0117**	**0.0117**		**0.0108**	**0.0108**	**0.0000**	**31.5465**	**31.5465**	**0.0102**	**0.0000**	**31.8016**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-004	0.0211	6.9800e-003	8.0000e-005	2.5800e-003	1.9000e-004	2.7700e-003	7.4000e-004	1.8000e-004	9.3000e-004	0.0000	7.8197	7.8197	2.6000e-004	1.1300e-003	8.1624
Worker	9.3900e-003	7.8200e-003	0.1017	2.7000e-004	0.0300	2.0000e-004	0.0302	7.9800e-003	1.8000e-004	8.1600e-003	0.0000	24.8583	24.8583	7.1000e-004	6.8000e-004	25.0771
Total	**0.0102**	**0.0289**	**0.1087**	**3.5000e-004**	**0.0326**	**3.9000e-004**	**0.0330**	**8.7200e-003**	**3.6000e-004**	**9.0900e-003**	**0.0000**	**32.6780**	**32.6780**	**9.7000e-004**	**1.8100e-003**	**33.2395**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0216	0.2213	0.2253	3.6000e-004		0.0117	0.0117		0.0108	0.0108	0.0000	31.5465	31.5465	0.0102	0.0000	31.8016
Total	**0.0216**	**0.2213**	**0.2253**	**3.6000e-004**		**0.0117**	**0.0117**		**0.0108**	**0.0108**	**0.0000**	**31.5465**	**31.5465**	**0.0102**	**0.0000**	**31.8016**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-004	0.0211	6.9800e-003	8.0000e-005	2.4700e-003	1.9000e-004	2.6600e-003	7.2000e-004	1.8000e-004	9.0000e-004	0.0000	7.8197	7.8197	2.6000e-004	1.1300e-003	8.1624
Worker	9.3900e-003	7.8200e-003	0.1017	2.7000e-004	0.0285	2.0000e-004	0.0287	7.5900e-003	1.8000e-004	7.7700e-003	0.0000	24.8583	24.8583	7.1000e-004	6.8000e-004	25.0771
Total	**0.0102**	**0.0289**	**0.1087**	**3.5000e-004**	**0.0309**	**3.9000e-004**	**0.0313**	**8.3100e-003**	**3.6000e-004**	**8.6700e-003**	**0.0000**	**32.6780**	**32.6780**	**9.7000e-004**	**1.8100e-003**	**33.2395**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0341	0.3466	0.3832	6.2000e-004		0.0173	0.0173		0.0159	0.0159	0.0000	54.1126	54.1126	0.0175	0.0000	54.5501
Total	**0.0341**	**0.3466**	**0.3832**	**6.2000e-004**		**0.0173**	**0.0173**		**0.0159**	**0.0159**	**0.0000**	**54.1126**	**54.1126**	**0.0175**	**0.0000**	**54.5501**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.9000e-004	0.0283	0.0106	1.3000e-004	4.4200e-003	1.4000e-004	4.5600e-003	1.2800e-003	1.3000e-004	1.4100e-003	0.0000	12.7639	12.7639	4.3000e-004	1.8400e-003	13.3220
Worker	0.0149	0.0118	0.1605	4.5000e-004	0.0515	3.2000e-004	0.0518	0.0137	2.9000e-004	0.0140	0.0000	41.4916	41.4916	1.0900e-003	1.0700e-003	41.8368
Total	**0.0157**	**0.0401**	**0.1711**	**5.8000e-004**	**0.0559**	**4.6000e-004**	**0.0564**	**0.0150**	**4.2000e-004**	**0.0154**	**0.0000**	**54.2556**	**54.2556**	**1.5200e-003**	**2.9100e-003**	**55.1587**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0341	0.3466	0.3832	6.2000e-004		0.0173	0.0173		0.0159	0.0159	0.0000	54.1125	54.1125	0.0175	0.0000	54.5500
Total	**0.0341**	**0.3466**	**0.3832**	**6.2000e-004**		**0.0173**	**0.0173**		**0.0159**	**0.0159**	**0.0000**	**54.1125**	**54.1125**	**0.0175**	**0.0000**	**54.5500**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.9000e-004	0.0283	0.0106	1.3000e-004	4.2400e-003	1.4000e-004	4.3700e-003	1.2300e-003	1.3000e-004	1.3600e-003	0.0000	12.7639	12.7639	4.3000e-004	1.8400e-003	13.3220
Worker	0.0149	0.0118	0.1605	4.5000e-004	0.0488	3.2000e-004	0.0491	0.0130	2.9000e-004	0.0133	0.0000	41.4916	41.4916	1.0900e-003	1.0700e-003	41.8368
Total	**0.0157**	**0.0401**	**0.1711**	**5.8000e-004**	**0.0530**	**4.6000e-004**	**0.0535**	**0.0143**	**4.2000e-004**	**0.0147**	**0.0000**	**54.2556**	**54.2556**	**1.5200e-003**	**2.9100e-003**	**55.1587**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.7200e-003	0.0606	0.0772	1.2000e-004		2.9100e-003	2.9100e-003		2.7100e-003	2.7100e-003	0.0000	10.3392	10.3392	3.0100e-003	0.0000	10.4145
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7200e-003**	**0.0606**	**0.0772**	**1.2000e-004**		**2.9100e-003**	**2.9100e-003**		**2.7100e-003**	**2.7100e-003**	**0.0000**	**10.3392**	**10.3392**	**3.0100e-003**	**0.0000**	**10.4145**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-004	5.0000e-004	6.7600e-003	2.0000e-005	2.1700e-003	1.0000e-005	2.1800e-003	5.8000e-004	1.0000e-005	5.9000e-004	0.0000	1.7487	1.7487	5.0000e-005	4.0000e-005	1.7632
Total	**6.3000e-004**	**5.0000e-004**	**6.7600e-003**	**2.0000e-005**	**2.1700e-003**	**1.0000e-005**	**2.1800e-003**	**5.8000e-004**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**1.7487**	**1.7487**	**5.0000e-005**	**4.0000e-005**	**1.7632**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.7200e-003	0.0606	0.0772	1.2000e-004		2.9100e-003	2.9100e-003		2.7100e-003	2.7100e-003	0.0000	10.3391	10.3391	3.0100e-003	0.0000	10.4144
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7200e-003**	**0.0606**	**0.0772**	**1.2000e-004**		**2.9100e-003**	**2.9100e-003**		**2.7100e-003**	**2.7100e-003**	**0.0000**	**10.3391**	**10.3391**	**3.0100e-003**	**0.0000**	**10.4144**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-004	5.0000e-004	6.7600e-003	2.0000e-005	2.0600e-003	1.0000e-005	2.0700e-003	5.5000e-004	1.0000e-005	5.6000e-004	0.0000	1.7487	1.7487	5.0000e-005	4.0000e-005	1.7632
Total	**6.3000e-004**	**5.0000e-004**	**6.7600e-003**	**2.0000e-005**	**2.0600e-003**	**1.0000e-005**	**2.0700e-003**	**5.5000e-004**	**1.0000e-005**	**5.6000e-004**	**0.0000**	**1.7487**	**1.7487**	**5.0000e-005**	**4.0000e-005**	**1.7632**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3786					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4200e-003	0.0437	0.0607	1.0000e-004		2.3700e-003	2.3700e-003		2.3700e-003	2.3700e-003	0.0000	8.5534	8.5534	5.1000e-004	0.0000	8.5662
Total	**0.3850**	**0.0437**	**0.0607**	**1.0000e-004**		**2.3700e-003**	**2.3700e-003**		**2.3700e-003**	**2.3700e-003**	**0.0000**	**8.5534**	**8.5534**	**5.1000e-004**	**0.0000**	**8.5662**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8100e-003	1.4400e-003	0.0195	5.0000e-005	6.2400e-003	4.0000e-005	6.2800e-003	1.6600e-003	4.0000e-005	1.6900e-003	0.0000	5.0297	5.0297	1.3000e-004	1.3000e-004	5.0715
Total	**1.8100e-003**	**1.4400e-003**	**0.0195**	**5.0000e-005**	**6.2400e-003**	**4.0000e-005**	**6.2800e-003**	**1.6600e-003**	**4.0000e-005**	**1.6900e-003**	**0.0000**	**5.0297**	**5.0297**	**1.3000e-004**	**1.3000e-004**	**5.0715**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3786					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4200e-003	0.0437	0.0607	1.0000e-004		2.3700e-003	2.3700e-003		2.3700e-003	2.3700e-003	0.0000	8.5534	8.5534	5.1000e-004	0.0000	8.5662
Total	**0.3850**	**0.0437**	**0.0607**	**1.0000e-004**		**2.3700e-003**	**2.3700e-003**		**2.3700e-003**	**2.3700e-003**	**0.0000**	**8.5534**	**8.5534**	**5.1000e-004**	**0.0000**	**8.5662**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8100e-003	1.4400e-003	0.0195	5.0000e-005	5.9200e-003	4.0000e-005	5.9500e-003	1.5800e-003	4.0000e-005	1.6100e-003	0.0000	5.0297	5.0297	1.3000e-004	1.3000e-004	5.0715
Total	**1.8100e-003**	**1.4400e-003**	**0.0195**	**5.0000e-005**	**5.9200e-003**	**4.0000e-005**	**5.9500e-003**	**1.5800e-003**	**4.0000e-005**	**1.6100e-003**	**0.0000**	**5.0297**	**5.0297**	**1.3000e-004**	**1.3000e-004**	**5.0715**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3597	0.4247	3.8091	8.1900e-003	0.8450	6.0400e-003	0.8510	0.2254	5.6000e-003	0.2310	0.0000	765.5843	765.5843	0.0520	0.0332	776.7616
Unmitigated	0.3597	0.4247	3.8091	8.1900e-003	0.8450	6.0400e-003	0.8510	0.2254	5.6000e-003	0.2310	0.0000	765.5843	765.5843	0.0520	0.0332	776.7616

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	658.24	658.24	658.24	2,249,306	2,249,306
Total	658.24	658.24	658.24	2,249,306	2,249,306

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	82.2694	82.2694	6.9400e-003	8.4000e-004	82.6939
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	82.2694	82.2694	6.9400e-003	8.4000e-004	82.6939
NaturalGas Mitigated	7.2700e-003	0.0622	0.0265	4.0000e-004		5.0300e-003	5.0300e-003		5.0300e-003	5.0300e-003	0.0000	71.9933	71.9933	1.3800e-003	1.3200e-003	72.4212
NaturalGas Unmitigated	7.2700e-003	0.0622	0.0265	4.0000e-004		5.0300e-003	5.0300e-003		5.0300e-003	5.0300e-003	0.0000	71.9933	71.9933	1.3800e-003	1.3200e-003	72.4212

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.3491e+006	7.2700e-003	0.0622	0.0265	4.0000e-004		5.0300e-003	5.0300e-003		5.0300e-003	5.0300e-003	0.0000	71.9933	71.9933	1.3800e-003	1.3200e-003	72.4212
Total		**7.2700e-003**	**0.0622**	**0.0265**	**4.0000e-004**		**5.0300e-003**	**5.0300e-003**		**5.0300e-003**	**5.0300e-003**	**0.0000**	**71.9933**	**71.9933**	**1.3800e-003**	**1.3200e-003**	**72.4212**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.3491e+006	7.2700e-003	0.0622	0.0265	4.0000e-004		5.0300e-003	5.0300e-003		5.0300e-003	5.0300e-003	0.0000	71.9933	71.9933	1.3800e-003	1.3200e-003	72.4212
Total		**7.2700e-003**	**0.0622**	**0.0265**	**4.0000e-004**		**5.0300e-003**	**5.0300e-003**		**5.0300e-003**	**5.0300e-003**	**0.0000**	**71.9933**	**71.9933**	**1.3800e-003**	**1.3200e-003**	**72.4212**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	463893	82.2694	6.9400e-003	8.4000e-004	82.6939
Total		**82.2694**	**6.9400e-003**	**8.4000e-004**	**82.6939**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	463893	82.2694	6.9400e-003	8.4000e-004	82.6939

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Western Ave SRO Apartments Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total		**82.2694**	**6.9400e-003**	**8.4000e-004**	**82.6939**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5154	0.0372	1.2578	2.1000e-004		8.7500e-003	8.7500e-003		8.7500e-003	8.7500e-003	0.0000	28.4174	28.4174	2.4700e-003	4.8000e-004	28.6231
Unmitigated	0.5562	0.0432	1.6285	1.4200e-003		0.0692	0.0692		0.0692	0.0692	8.0977	28.4174	36.5151	0.0403	4.8000e-004	37.6673

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0379					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0435	0.0288	0.3804	1.3500e-003		0.0623	0.0623		0.0623	0.0623	8.0977	26.3791	34.4768	0.0384	4.8000e-004	35.5799
Landscaping	0.0376	0.0144	1.2481	7.0000e-005		6.9100e-003	6.9100e-003		6.9100e-003	6.9100e-003	0.0000	2.0383	2.0383	1.9600e-003	0.0000	2.0873
Total	**0.5562**	**0.0432**	**1.6285**	**1.4200e-003**		**0.0692**	**0.0692**		**0.0692**	**0.0692**	**8.0977**	**28.4174**	**36.5151**	**0.0403**	**4.8000e-004**	**37.6673**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0379					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	2.6700e-003	0.0228	9.6900e-003	1.5000e-004		1.8400e-003	1.8400e-003		1.8400e-003	1.8400e-003	0.0000	26.3791	26.3791	5.1000e-004	4.8000e-004	26.5358
Landscaping	0.0376	0.0144	1.2481	7.0000e-005		6.9100e-003	6.9100e-003		6.9100e-003	6.9100e-003	0.0000	2.0383	2.0383	1.9600e-003	0.0000	2.0873
Total	**0.5154**	**0.0372**	**1.2578**	**2.2000e-004**		**8.7500e-003**	**8.7500e-003**		**8.7500e-003**	**8.7500e-003**	**0.0000**	**28.4174**	**28.4174**	**2.4700e-003**	**4.8000e-004**	**28.6231**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	25.7602	0.2075	5.1000e-003	32.4666
Unmitigated	30.4988	0.2593	6.3500e-003	38.8730

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	7.88364 / 4.97012	30.4988	0.2593	6.3500e-003	38.8730
Total		**30.4988**	**0.2593**	**6.3500e-003**	**38.8730**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	6.30691 / 4.66694	25.7602	0.2075	5.1000e-003	32.4666
Total		**25.7602**	**0.2075**	**5.1000e-003**	**32.4666**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	5.6492	0.3339	0.0000	13.9958
Unmitigated	11.2985	0.6677	0.0000	27.9915

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	55.66	11.2985	0.6677	0.0000	27.9915
Total		**11.2985**	**0.6677**	**0.0000**	**27.9915**

Western Ave SRO Apartments Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	27.83	5.6492	0.3339	0.0000	13.9958
Total		**5.6492**	**0.3339**	**0.0000**	**13.9958**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Kimley»Horn

TECHNICAL MEMORANDUM

To: Amanda Acuna, Senior Planner, Lisa Kranitz, Assistant City Attorney, City of Gardena

From: Rita Garcia, Project Manager, and Ryan Chiene, Technical Manager

Date: November 30, 2021

Subject: Western SRO Apartments Project, City of Gardena – Noise Analysis

1.0 INTRODUCTION & PURPOSE

The purpose of this Technical Memorandum is to identify the noise impacts associated with construction and operations of the proposed Western SRO Apartments project (project), located at 13126 Western Avenue in the City of Gardena, California (City). This Technical Memorandum has been prepared to support an exemption from the California Environmental Quality Act (CEQA) in accordance with State CEQA Guidelines Section 15332 (In-Fill Development Projects). Specifically, this analysis addresses the project's potential effects related to noise referenced in State CEQA Guidelines Section 15332(d).

2.0 PROJECT DESCRIPTION

Project Location

The proposed project site is located northeast of the West 132nd Street at Western Avenue intersection, at 13126 South Western Avenue in the northern portion of the City of Gardena, County of Los Angeles, California. The assessor's parcel number (APN) for the project site is APN 6102-006-013. The site is bordered by light-industrial uses; there are single-family residences to the west on Manhattan Place.

Regional access to the project site is provided via Interstate 105 (I-105) from the north and Interstate 110 (I-110) from the east. Local access to the site is provided via Western Avenue and 132nd Street. The project site and surrounding area are characterized as built out and urbanized, with mainly industrial and residential land uses.

Project Characteristics

The project site is designated as Industrial and zoned General Industrial (M-1). The project site is currently developed with a convenience store (2,755 square feet) and autobody shop (9,981 square feet) with surface parking.The project proposes to demolish all on-site improvements and, in their place, construct a four-story, 121 unit single-room occupancy (SRO) residential development including 7 very low-income residential units. All units, including the very low-income units, would be 350 square feet. The project's total proposed floor area is 54,461 square feet with a proposed building height maximum of 50 feet. Further, the project proposes to provide 20,115 square feet of open space, exceeding the City's open space requirement of 10 square feet per unit.

The project would provide 122 parking spaces, of which 114 spaces would be provided in a freestanding six-level automated parking structure, and 8 covered parking spaces (6 standard and 2 compact) would be provided to the south of the parking structure on the ground level. Additionally, 40 bicycle parking spaces in a stacked rack system would be provided.

3.0 NOISE BACKGROUND

Sound is technically described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). The decibel scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound. The pitch of the sound is related to the frequency of the pressure vibration. Since the human ear is not equally sensitive to a given sound level at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Noise, on the other hand, is typically defined as unwanted sound. A typical noise environment consists of a base of steady ambient noise that is the sum of various distant and indistinguishable noise sources. Superimposed on this background noise is the sound from individual local sources. These can vary from an occasional aircraft or train passing by to virtually continuous noise from traffic on a major highway.

Several rating scales have been developed to analyze the adverse effect of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise as well as the time of day when the noise occurs. For example, the equivalent

continuous sound level (L_{eq}) is the average acoustic energy content of noise for a stated period of time; thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. The Day-Night Sound level (L_{dn}) is a 24-hour average L_{eq} with a 10 dBA "weighting" added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the nighttime. The Community Noise Equivalent Level (CNEL) is a 24-hour average L_{eq} with a 10 dBA weighting added to noise during the hours of 10:00 p.m. to 7:00 a.m. and an additional 5 dBA weighting during the hours of 7:00 p.m. to 10:00 p.m. to account for noise sensitivity in the evening and nighttime.

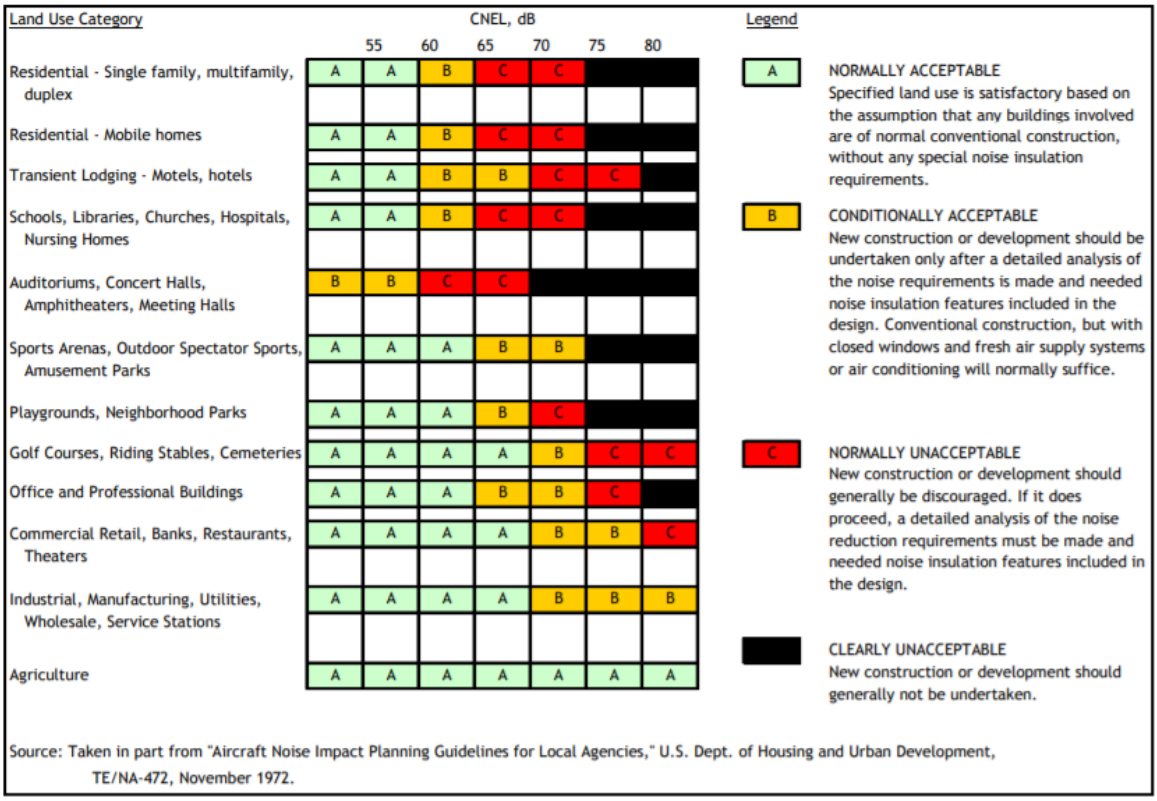
Regulatory Setting

City of Gardena General Plan

The *City of Gardena General Plan 2006 Noise Plan* (Noise Element) identifies noise-sensitive land uses and noise sources, defines areas of noise impact, and contains policies and programs to achieve and maintain noise levels compatible with various types of land uses. The Noise Element addresses noise which affects the community at large, rather than noise associated with site-specific conditions.

The Noise Element identifies land use guidelines to protect residential neighborhoods and noise-sensitive receptors such as schools and hospitals from potentially harmful noise sources. The noise and land use compatibly criteria are shown in **Exhibit 1: Land Use Compatibility for Community Noise Exposure**.

Exhibit 1: Land Use Compatibility for Community Noise Exposure.



Source: Gardena General Plan 2006 - Noise Plan, Figure N-1: Noise and Land Use Compatibility

City of Gardena Municipal Code

The following Gardena Municipal Code (GMC) sections are applicable to the proposed project.

GMC Section 8.36.040 Exterior Noise Standards. Stationary noise sources shall comply with the following exterior noise limits shown in **Table 1: Exterior Noise Limits**.

Table 1: Exterior Noise Limits

Type of Land Use	15-Minute Average Noise Level (L_{eq})		Maximum Noise Level (L_{max})	
	7 a.m. to 10 p.m.	10 p.m. to 7 a.m.	7 a.m. to 10 p.m.	10 p.m. to 7 a.m.
Residential	55 dB(A)	50 dB(A)	75 dB(A)	70 dB(A)
Residential portions of mixed-use	60 dB(A)	50 dB(A)	80 dB(A)	70 dB(A)
Commercial	65 dB(A)	60 dB(A)	85 dB(A)	80 dB(A)

Industrial or manufacturing	70 dB(A)	70 dB(A)	90 dB(A)	90 dB(A)
Source: City of Gardena, *Gardena Municipal Code Section* 8.36.040.				

GMC Section 8.36.050 Interior Noise Limits. Stationary noise sources will comply with the following interior noise limits shown in **Table 2: Interior Noise Limits**.

Table 2: Interior Noise Limits

Type of Land Use	15-Minute Average Noise Level (L_{eq})		Maximum Noise Level (L_{max})	
	7 a.m. to 10 p.m.	10 p.m. to 7 a.m.	7 a.m. to 10 p.m.	10 p.m. to 7 a.m.
Residential	45 dB(A)	40 dB(A)	65 dB(A)	60 dB(A)
Residential portions of mixed-use	45 dB(A)	40 dB(A)	70 dB(A)	60 dB(A)
Source: City of Gardena, *Gardena Municipal Code Section* 8.36.050.				

It is noted that GMC Section 8.36.040 and Section 8.36.050 state that should the measured ambient noise level exceed the standards in **Table 1** and **Table 2**, the allowable noise exposure standard shall be the ambient noise level. Further, GMC Section 8.36.080 establishes limited hours of construction activities. GMC Section 8.36.080 states that the aforementioned noise restrictions do not apply to noise associated with construction, repair, remodeling, grading or demolition of any real property, provided said activities do not take place between the hours of 6:00 p.m. and 7:00 a.m. on weekdays between the hours of 6:00 p.m. and 9:00 a.m. on Saturday or any time on Sunday or a federal holiday.

Existing Setting

Mobile noise sources, especially cars and trucks, are the most common and significant noise sources in most communities. Other noise sources are the various land uses (i.e., residential, commercial, institutional, and recreational and parks activities) throughout the City that generate stationary-source noise. The existing mobile noise sources in the project area are generated by motor vehicles traveling on Western Avenue and 132nd Street. The primary stationary noise sources in the project area are those associated with industrial operations bordering the project site, and the single-family residential uses to the west on Manhattan Place. Such noise sources include the use of mechanical equipment (e.g., heating, ventilation, and air conditioning [HVAC] equipment), idling vehicles, music playing, dogs barking, and people talking. The noise associated with these sources may represent a single-event noise occurrence or short-term noise.

4.0 NOISE IMPACTS

Construction Noise

Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., land clearing, grading, excavation, paving). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. During construction, exterior noise levels could affect sensitive receptors near the construction site.

Construction activities would include demolition, site preparation, grading, building construction, paving, and architectural coating. Such activities may require graders, dozers, and tractors during site preparation and grading; cranes, forklifts, generators, tractors, and welders during building construction; pavers, rollers, mixers, tractors, and paving equipment during paving; and air compressors during architectural coating. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 to 4 minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Typical noise levels associated with individual construction equipment are listed in **Table 3: Typical Construction Noise Levels**.

Table 3: Typical Construction Noise Levels

Equipment	Typical Noise Level (dBA) at 50 Feet from Source	Typical Noise Level (dBA) at 100 Feet from Source[1]
Air Compressor	80	74
Backhoe	80	74
Compactor	82	76
Concrete Mixer	85	79
Concrete Pump	82	76
Concrete Vibrator	76	70
Crane, Mobile	83	77
Dozer	85	79
Generator	82	76
Grader	85	79
Jack Hammer	88	82

Table 3: Typical Construction Noise Levels		
Equipment	**Typical Noise Level (dBA) at 50 Feet from Source**	**Typical Noise Level (dBA) at 100 Feet from Source[1]**
Loader	80	74
Paver	85	79
Pneumatic Tool	85	79
Pump	77	71
Roller	85	79
Saw	76	70
Shovel	82	76
Truck	84	78
1. Calculated using the inverse square law formula for sound attenuation: $dBA_2 = dBA_1+20Log(d_1/d_2)$ Where: dBA_2 = estimated noise level at receptor; dBA_1 = reference noise level; d_1 = reference distance; d_2 = receptor location distance.		
Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.		

GMC Section 8.36.080(G) indicates that noise associated with construction activity is considered exempt from noise regulations provided a permit has been obtained from the City as required, and construction activities do not take place between the hours of 6:00 p.m. and 7:00 a.m. on weekdays, between the hours of 6:00 p.m. and 9:00 a.m. on Saturdays, or at any time on Sunday or a federal holiday. The City does not administer noise level standards for construction activities. However, this analysis conservatively uses the Federal Transit Administration (FTA) threshold of 80 dBA (8-hour L_{eq}) for residential uses and 90 dBA (8-hour L_{eq}) for industrial uses to evaluate construction noise impacts.[1]

Following FTA's methodology for quantitative construction noise assessments, the Federal Highway Administration (FHWA's) Roadway Construction Noise Model (RCNM) was used to predict construction noise at the nearest receptors (i.e., residential uses to the west and industrial uses to the north, south, east, and west) consistent with the methodologies in the FTA *Transit Noise and Vibration Impact Assessment Manual* (September 2018) (FTA Noise and Vibration Manual). **Table 4: Project Construction Noise Levels** shows the estimated exterior construction noise levels at the nearest sensitive receptors.

[1] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, Table 7-2, Page 179, September 2018.

Table 4: Project Construction Noise Levels						
Construction Phase	**Receptor Location**			**Worst-Case Modeled Exterior Noise Level (dBA L_{eq})**	**Noise Threshold (dBA L_{eq})[2]**	**Exceeded?**
	Land Use	**Direction**	**Distance (feet) [1]**			
Demolition	Residential	West	430	64.9	80	No
	Industrial	East	72	80.4	90	No
Site Preparation	Residential	West	430	63.3	80	No
	Industrial	East	72	78.9	90	No
Grading	Residential	West	430	63.7	80	No
	Industrial	East	72	79.2	90	No
Building Construction	Residential	West	430	62.7	80	No
	Industrial	East	72	77.6	90	No
Paving	Residential	West	430	64.4	80	No
	Industrial	East	72	79.9	90	No
Architectural Coating	Residential	West	430	55.0	80	No
	Industrial	East	72	70.5	90	No

1. Per the methodology described in the FTA Noise and Vibration Manual (September 2018), distances are measured from the property line of the nearest receptors to the center of the project construction site.
2. The City does not have a quantitative noise threshold for construction. Therefore, the construction noise thresholds from the FTA Noise and Vibration Manual (September 2018) are conservatively used for this analysis.

Source: Federal Highway Administration, *Roadway Construction Noise Model,* 2006. Refer to **Appendix A: RCNM Modeling Results** for noise modeling results.

Following FTA methodology, when calculating construction noise, all equipment is assumed to operate at the center of the project site because equipment would operate throughout the site and not at a fixed location for extended periods of time. Therefore, the distances used in the RCNM model were 430 feet for the nearest residential uses to the west and 72 feet for the nearest non-residential (i.e., industrial) uses to the east.

As indicated in **Table 4**, project construction noise would not exceed the FTA noise threshold for residential and non-residential uses. In addition, although construction noise levels may exceed the existing ambient levels in the area (see **Table 1**), construction would be temporary and would not result in a permanent increase in ambient noise levels in the area. Project construction would also be prohibited between 6:00 p.m. and 7:00 a.m. on weekdays, between the hours of 6:00 p.m. and 9:00 a.m. on Saturdays, or at any time on Sunday or a federal holiday in compliance with GMC Section 8.36.080(G). Therefore, the project's construction noise levels would result in a less than significant impact.

Operational Noise – Stationary Sources

The project would create new sources of noise in the area. The primary noise sources associated with the project that could potentially impact sensitive uses include mechanical equipment (e.g., air conditioners, etc.), outdoor amenity/recreational areas, the parking structure and ground level parking spaces south of the parking structure (i.e., car door slamming, car radios, people talking, engine start-up, and car pass-by), dogs barking, and off-site traffic noise.

Mechanical Equipment. Potential stationary noise sources related to long-term project operations would include mechanical equipment (HVAC units and automated parking structure mechanisms). The nearest noise sensitive receptors to the project site are the single-family residences located approximately 225 feet to the west of the nearest proposed HVAC equipment. HVAC equipment typically generates noise levels of approximately 52 dBA at 50 feet from the source.[2] Noise has a decay rate due to distance attenuation, which is calculated based on the Inverse Square Law of sound propagation. Based upon the Inverse Square Law, sound levels decrease by 6 dBA for each doubling of distance from the source. As a result, HVAC equipment noise would attenuate to 38.9 dBA at the property line of the residences located approximately 225 feet from on-site mechanical equipment and would not exceed the City's most stringent exterior and interior standards of 50 dBA L_{eq} and 40 dBA L_{eq},[3] respectively, for residential uses. Therefore, the project's HVAC equipment noise levels would result in a less than significant impact. See the Parking Areas section below for a discussion concerning the noise level of the mechanisms used in the automated parking structure.

Outdoor Amenity and Recreational Areas. The proposed project would include a ground-level pool and courtyard area in the eastern portion of the project site, and common deck areas on the third and fourth floors. These areas could be accessed by groups of people intermittently for various occasions (e.g., birthday parties, barbecues, and other social gatherings, etc.). Noise generated by groups of people (i.e., crowds) is dependent on several factors including vocal effort, impulsiveness, and the random orientation of the crowd members. Crowd noise is estimated at 60 dBA at one meter (3.28 feet) away for raised normal speaking.[4] This noise level would have a +5 dBA adjustment for the impulsiveness of the noise source, and a -3 dBA adjustment for the random orientation of the crowd members.[5]

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2 Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, June 26, 2015.

3 Assuming an exterior-to-interior noise reduction of 25 dBA (HUD *Noise Guidebook,* 2009).

4 M.J. Hayne, et al, Prediction of Crowd Noise, Acoustics, November 2006.

5 Ibid.

Therefore, crowd noise would be approximately 62 dBA at one meter from the source.

Based on distance attenuation, crowd noise would be approximately 20.6 dBA at the property line of the closest sensitive receptors (i.e., single-family residences located approximately 385 feet from the nearest common deck area), which would not exceed the City's most stringent exterior and interior standards of 50 dBA L_{eq} and 40 dBA L_{eq},[6] respectively, for residential uses. Therefore, the project's outdoor amenity and recreational area noise levels would result in a less than significant impact.

Parking Areas. The project would include a freestanding six-level, 114 car automated parking structure in the northern portion of the project site, and 8 covered parking spaces (6 standard and 2 compact) to the south of the automated parking structure. The noise level of the mechanisms used in the automated parking structure would be approximately 52 dBA at 6.0 feet from the source.[7] The nearest off-site residential uses would be located approximately 390 feet from the automated parking structure. At this distance, noise levels from the automated parking structure mechanisms would be approximately 15.7 dBA at the property line of the closest sensitive receptors, which is inaudible and well below the City's exterior or interior noise standards of 50 dBA L_{eq} and 40 dBA L_{eq},[8] respectively, for residential uses. Therefore, the noise levels from the project's automated parking structure mechanisms would result in a less than significant impact.

Noise levels from the traffic associated with parking lots is typically not of sufficient volume to exceed community noise standards due to the instantaneous nature and infrequent activity in parking lots. However, the maximum sound levels generated by a car door slamming, engine starting up, and car pass-bys range from 53 to 61 dBA[9] and may be an annoyance to adjacent noise-sensitive receptors. Based on the inverse square law of sound propagation, exterior parking lot noise levels would range from approximately 34.9 dBA to 42.9 dBA at the property line of the closest residences to the west of the site. As such, noise levels from parking lot activities would not exceed the City's most stringent exterior and interior standards of 50 dBA L_{eq} and 40 dBA L_{eq},[10] respectively, for residential uses. It is also noted that parking lot noise is currently generated at the adjacent industrial uses bordering the project site under existing conditions. In addition, parking, driveway, and noise from on-site vehicle circulation would be consistent with existing noise in the vicinity and would be partially masked by background

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6 Assuming an exterior-to-interior noise reduction of 25 dBA (HUD *Noise Guidebook,* 2009).

7 Automated Robotic Parking, *Parking System FAQ's*, http://www.automatedroboticparking.com/frequently-asked-questions/, accessed November 17, 2021.

8 Assuming an exterior-to-interior noise reduction of 25 dBA (HUD *Noise Guidebook,* 2009).

9 Kariel, H. G., Noise in Rural Recreational Environments, Canadian Acoustics 19(5), 3-10, 1991.

10 Assuming an exterior-to-interior noise reduction of 25 dBA (HUD *Noise Guidebook,* 2009).

traffic noise from motor vehicles traveling along Western Avenue and West 132nd Street. Therefore, the project's parking lot noise levels would result in a less than significant impact.

Dog Run Noise. The project would include a dog run in the northwestern corner of the site along Western Avenue. The noise level from residents' dogs barking is approximately 60 dBA at 50 feet.[11] The nearest noise-sensitive receptors (single-family residences) would be approximately 370 feet from the proposed dog run area. At this distance, noise levels from the dog run would be approximately 42.6 dBA from the property line of the nearest sensitive receptors and would not exceed the City's most stringent exterior and interior standards of 50 dBA L_{eq} and 40 dBA L_{eq},[12] respectively, for residential uses. In addition, noise from the dog run area would be partially masked by background traffic noise from motor vehicles traveling along Western Avenue to the west of the project site. Therefore, the project's dog run noise levels would result in a less than significant impact.

Operational Noise – Mobile Sources

Project implementation would result in reduced traffic trips in the project area roadways. According to the *Summary of Project Trip Generation – Western SRO Apartments Project* (Kimley-Horn, 2021) (Traffic Analysis), the project would result in 658 daily trips with 43 a.m. peak hour trips and 53 p.m. peak hour trips, and a net trip reduction of 1,054 trips compared to the existing uses. In general, a 3-dBA increase in traffic noise is barely perceptible to people, while a 5-dBA increase is readily noticeable. Traffic volumes on area roadways would have to approximately double for the resulting traffic noise levels to generate a barely perceptible 3-dBA increase.[13] Due to the project's lower trip generation than the existing use, the project would not result in a doubling of existing traffic volumes, and thus, would not increase traffic noise on area roadways. Therefore, the project's traffic noise levels would result in a less than significant impact.

5.0 VIBRATION IMPACTS

Increases in ground-borne vibration levels attributable to the proposed project would be primarily associated with short-term construction-related activities. Once operational, the project would not be a source of ground-borne vibration.

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[11] Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, June 26, 2015.

[12] Assuming an exterior-to-interior noise reduction of 25 dBA (HUD *Noise Guidebook,* 2009).

[13] According to the California Department of Transportation, *Technical Noise Supplement to Traffic Noise Analysis Protocol* (September 2013), it takes a doubling of traffic to create a noticeable (i.e., 3 dBA) noise increase.

Construction Vibration

Construction on the project site could result in varying degrees of temporary ground-borne vibration, depending on the specific construction equipment used and the operations involved. The Federal Transit Administration (FTA) has published standard vibration velocities for construction equipment operations. In general, the FTA architectural damage criterion for continuous vibrations (i.e., 0.2 in/sec) appears to be conservative. The types of construction vibration impacts include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration source and receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment. For example, for a building that is constructed with reinforced concrete with no plaster, the FTA guidelines show that a vibration level of up to 0.20 in/sec is considered safe and would not result in any construction vibration damage. This analysis uses the FTA architectural damage criterion for continuous vibrations at non-engineered timber and masonry buildings of 0.2 inch-per-second peak particle velocity (PPV) and human annoyance criterion of 0.4 inch-per-second PPV in accordance with Caltrans guidance[14] to evaluate potential construction vibration impacts.

Table 5: Typical Construction Equipment Vibration Levels, lists vibration levels at 25 feet for typical construction equipment. The nearest off-site building/structure is the industrial building located approximately 25 feet to the north of project construction activities. Groundborne vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. As indicated in **Table 5**, based on FTA data, vibration velocities from typical heavy construction equipment operations that would be used during project construction range from 0.003 to 0.089 in/sec PPV at 25 feet from the activity source.

Table 5: Typical Construction Equipment Vibration Levels

Equipment	Peak Particle Velocity at 25 Feet (in/sec)
Large Bulldozer	0.089
Caisson Drilling	0.089

[14] California Department of Transportation, *Transportation and Construction Vibration Guidance Manual, Table 20,* September 2013.

Loaded Trucks	0.076
Rock Breaker	0.059
Jackhammer	0.035
Small Bulldozer/Tractors	0.003
Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, 2018.	

As shown in **Table 5**, at 25 feet the vibration velocities from construction equipment would be a maximum of 0.089 in/sec PPV, which is below the FTA's 0.20 in/sec PPV threshold for building damage and Caltrans' 0.4 in/sec PPV threshold for human annoyance. It is also acknowledged that construction activities would occur throughout the project site and would not be concentrated at the point closest to the nearest off-site structures. Therefore, the project's construction vibration levels would result in a less than significant impact.

Operational Vibration

Once operational, the proposed project would not include vibration-generating uses or operations. Therefore, the project would result in no impact concerning operational vibration.

6.0 CONCLUSION

As is evidenced by the discussions presented above, the project's short-term construction and long-term operational noise and vibration impacts would be less than significant. No mitigation measure is required. Therefore, pursuant to State CEQA Guidelines Section 15332(d), the project would not result in any significant effects relating to noise.

Appendix A

RCNM Modeling Results

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/21/2021
Case Description: Demolition

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residential - W	Residential	1.0	1.0	1.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	430.0	0.0
Excavator	No	40		80.7	430.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Calculated (dBA)				Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax
Concrete Saw	70.9	63.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	62.0	58.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	70.9	64.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Industrial - N	Industrial	1.0	1.0	1.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	72.0	0.0
Excavator	No	40		80.7	72.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Concrete Saw	86.4	79.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	77.5	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	86.4	80.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/21/2021
Case Description: Site Prep

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residential - W	Residential	1.0	1.0	1.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	430.0	0.0
Tractor	No	40	84.0		430.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Night	Day	Calculated (dBA) Evening	Night	Day Evening	Night

Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	63.0	59.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	65.3	61.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	65.3	63.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Industrial - N	Industrial	1.0	1.0	1.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	72.0	0.0
Tractor	No	40	84.0		72.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Dozer	78.5	74.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	80.8	76.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	80.8	78.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/21/2021
Case Description: Grading

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residential - W	Residential	1.0	1.0	1.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85.0		430.0	0.0
Excavator	No	40		80.7	430.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Grader	66.3	62.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	62.0	58.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	66.3	63.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Industrial - N	Industrial	1.0	1.0	1.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85.0		72.0	0.0
Excavator	No	40		80.7	72.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Grader	81.8	77.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	77.5	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	81.8	79.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/21/2021
Case Description: Building Construction

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residential - W	Residential	1.0	1.0	1.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	430.0	0.0
Tractor	No	40	84.0		430.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Crane	61.9	53.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	65.3	61.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	65.3	62.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Industrial - N	Industrial	1.0	1.0	1.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	72.0	0.0
Tractor	No	40	84.0		72.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Crane	77.4	69.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	80.8	76.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	80.8	77.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/21/2021
Case Description: Paving

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residential - W	Residential	1.0	1.0	1.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	430.0	0.0
Pavement Scarafier	No	20		89.5	430.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Night	Day	Calculated (dBA) Evening	Night	Day Evening	Night
Equipment	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq
Paver	58.5 55.5	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A
Pavement Scarafier	70.8 63.8	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A
Total	70.8 64.4	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A

**** Receptor #2 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Industrial - N	Industrial	1.0	1.0	1.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	72.0	0.0
Pavement Scarafier	No	20		89.5	72.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Paver	74.1	71.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pavement Scarafier	86.3	79.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	86.3	79.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 10/21/2021
Case Description: Architectural Coating

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residential - W	Residential	1.0	1.0	1.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	430.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Compressor (air)	59.0	55.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	59.0	55.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Industrial - N	Industrial	1.0	1.0	1.0

Equipment

Description	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)

Description	Impact Device	Usage (%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Compressor (air)	No	40	77.7	72.0	0.0	

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Compressor (air)	74.5	70.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	74.5	70.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

TECHNICAL MEMORANDUM

To: Amanda Acuna, Senior Planner, and Lisa Kranitz, Assistant City Attorney, City of Gardena

From: Rita Garcia, Project Manager, and Pranesh Tarikere, P.E. (TR 2728), Transportation Project Manager

Date: November 30, 2021

Subject: Western SRO Apartments Project, City of Gardena - Trip Generation and Vehicle Miles Traveled

1.0 INTRODUCTION & PURPOSE

The purpose of this Technical Memorandum is to identify the trip generation and vehicle miles traveled (VMT) associated with the proposed Western SRO Apartments Project (project), located at 13126 Western Avenue in the City of Gardena (City), California. This Technical Memorandum has been prepared to support an exemption from the California Environmental Quality Act (CEQA) in accordance with State CEQA Guidelines Section 15332 (In-Fill Development Projects). Specifically, this analysis addresses the project's potential effects relating to traffic referenced in State CEQA Guidelines Section 15332(d).

2.0 PROJECT DESCRIPTION

Project Location

The proposed project site is located northeast of the West 132nd Street at Western Avenue intersection, at 13126 South Western Avenue in the northern portion of the City of Gardena, County of Los Angeles, California. The project location is shown in its regional setting on **Attachment A**. The assessor's parcel number (APN) for the project site is APN 6102-006-013. The site is bordered by light-industrial uses; there are single-family residences to the west on Manhattan Place.

Regional access to the project site is provided via Interstate 105 (I-105) from the north and Interstate 110 (I-110) from the east. Local access to the site is provided via Western Avenue and 132nd Street. The project site is surrounded by light-industrial uses with single-family residential uses to the west, across Western Avenue.

Project Characteristics

The project site is designated as Industrial and zoned General Industrial (M-1). The project site is currently occupied with a convenience store (2,755 square feet) and autobody shop (9,981 square feet) with surface parking. The project proposes to demolish all on-site improvements and, in their place, construct a four-story, 121 unit single-room occupancy (SRO) residential development including 7 very low-income residential units. All units, including the very low-income units, would be 350 square feet. The project's total proposed floor area is 54,461 square feet with a proposed building height maximum of 50 feet. Further, the project proposes to provide 20,115 square feet of open space, exceeding the City's open space requirement of 10 square feet per unit. The project would provide 122 parking spaces, of which 114 spaces would be provided in a freestanding six-level automated parking structure, and 8 covered parking spaces (6 standard and 2 compact) would be provided to the south of the parking structure on the ground level. Additionally, 40 bicycle parking spaces in a stacked rack system would be provided. The proposed project's site plan is shown on **Attachment B**.

3.0 TRAFFIC IMPACTS

A trip generation analysis has been conducted to determine the net traffic volume that would be generated by the proposed project. The project's forecast trip generation was estimated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (10th Edition) trip rates for Multifamily Housing (Mid-Rise) (ITE Land Use 221). Trip credits for the existing land uses that would be displaced of Convenience Market (ITE Land Use 851) and Automobile Parts and Service Center (ITE Land Use 943) were applied to the project site.

The trip rates and estimated project trip generation are shown on **Attachment C**. After applying existing use trip credits for the displaced land uses, the project is estimated to generate approximately 1,054 less daily trips, including 108 less trips in the AM peak hour and 21 less trips in the PM peak hour, compared to existing conditions.

4.0 VEHICLE MILES TRAVELED ASSESSMENT

Senate Bill 743 (SB 743) was approved by the California legislature in September 2013. SB 743 requires changes to CEQA, specifically directing the Governor's Office of Planning and Research (OPR) to develop alternative metrics to the use of vehicular "level of service" (LOS) for evaluating transportation projects. OPR has prepared a technical advisory ("OPR Technical Advisory") for evaluating transportation impacts in CEQA and has

recommended that VMT replace LOS as the primary measure of transportation impacts. The Natural Resources Agency has adopted updates to State CEQA Guidelines to incorporate SB 743 that requires use of VMT for purposes of determining a significant transportation impact under CEQA. As of July 1, 2020, a VMT-based metric is used to evaluate transportation impacts under CEQA.

OPR Technical Advisory suggests that a City may screen out VMT impacts using project size, maps, transit availability, and provision of affordable housing to quickly identify when a project would be expected to cause a less than significant impact without conducting a detailed study. The City of Gardena *SB 743 Implementation Transportation Analysis Updates (June 2020)* provides guidance on appropriate screening thresholds that can be used to identify when a proposed land use project is anticipated to result in a less than significant impact without conducting a more detailed level analysis.

Screening thresholds consist of the following:

1. Project Type Screening;
2. Low VMT Area Screening; and
3. Transit Proximity Screening.

A land use project is required to meet only one of the above screening thresholds to be presumed to result in a less than significant impact under CEQA pursuant to SB 743. The Low VMT Area Screening threshold has been used for the project, as discussed below.

Low VMT Area Screening

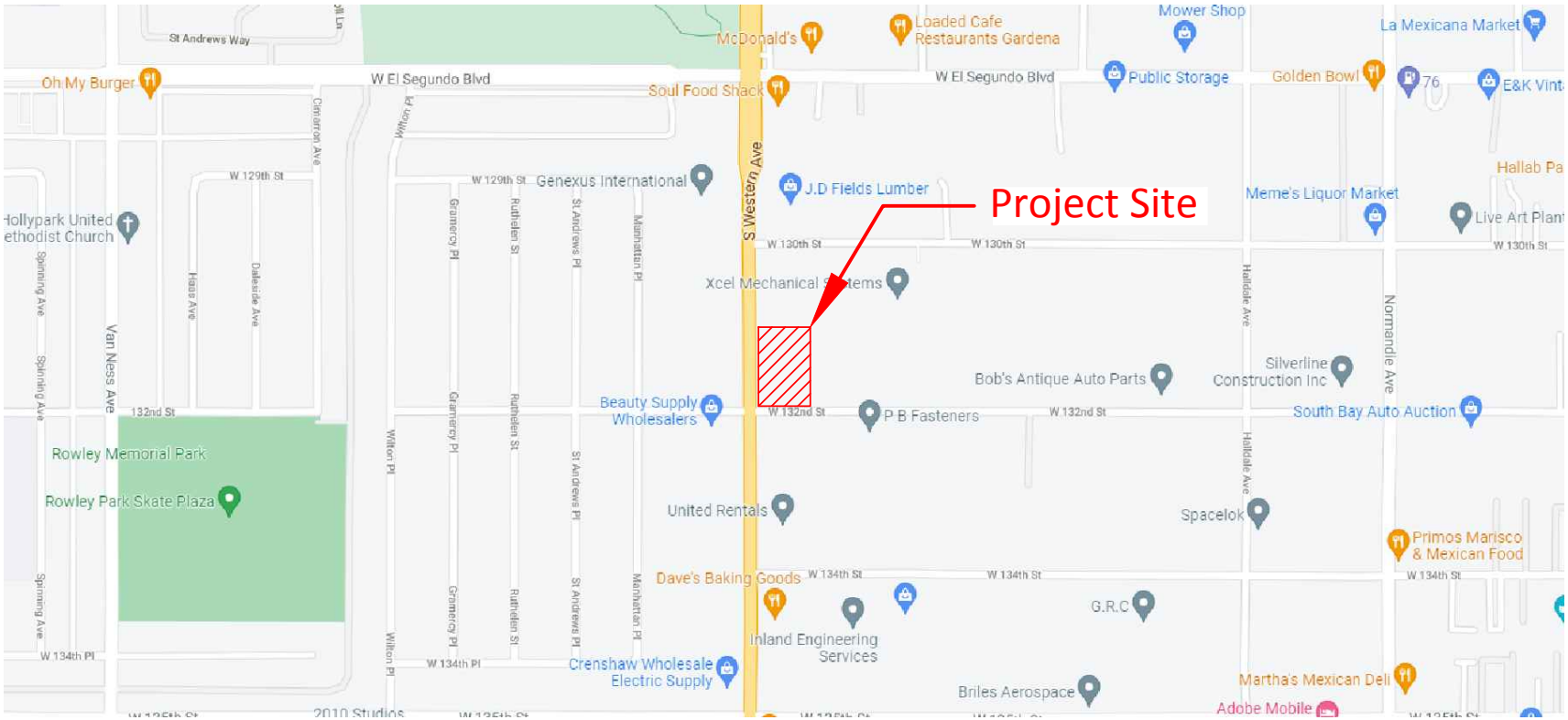
As described in the City Guidelines, residential and office projects located within a low VMT generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary.

Low VMT areas for residential projects are defined as TAZs that generate VMT on a per capita basis that are at least 15% lower than the regional average. **Attachment D** illustrates the project is located in a TAZ that has VMT at least 15% lower than the regional average. Further, the project is expected to generate fewer net new daily trips than the existing uses. Therefore, the project may be presumed to have a less than significant VMT impact.

5.0 CONCLUSION

As is evidenced by the discussions presented above, the project would generate fewer trips than the existing uses, resulting in a less than significant traffic impact concerning VMT, based on Low VMT Area screening. Therefore, pursuant to State CEQA Guidelines Section 15332(d), the project would not result in any significant effects relating to traffic.

NOT TO SCALE



ATTACHMENT A
VICINITY MAP

Kimley»Horn

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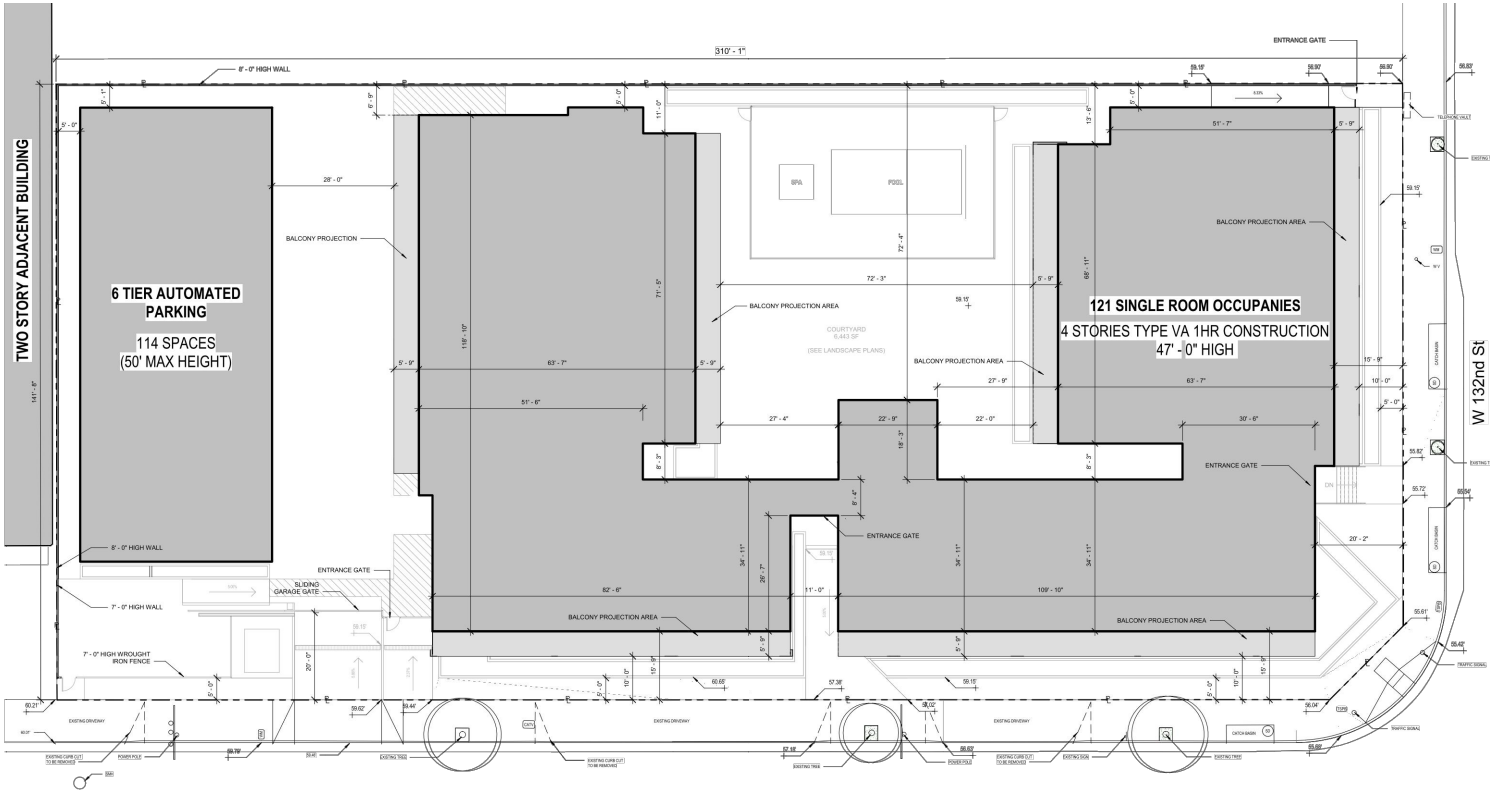


ATTACHMENT B
PROJECT SITE PLAN

Kimley»Horn

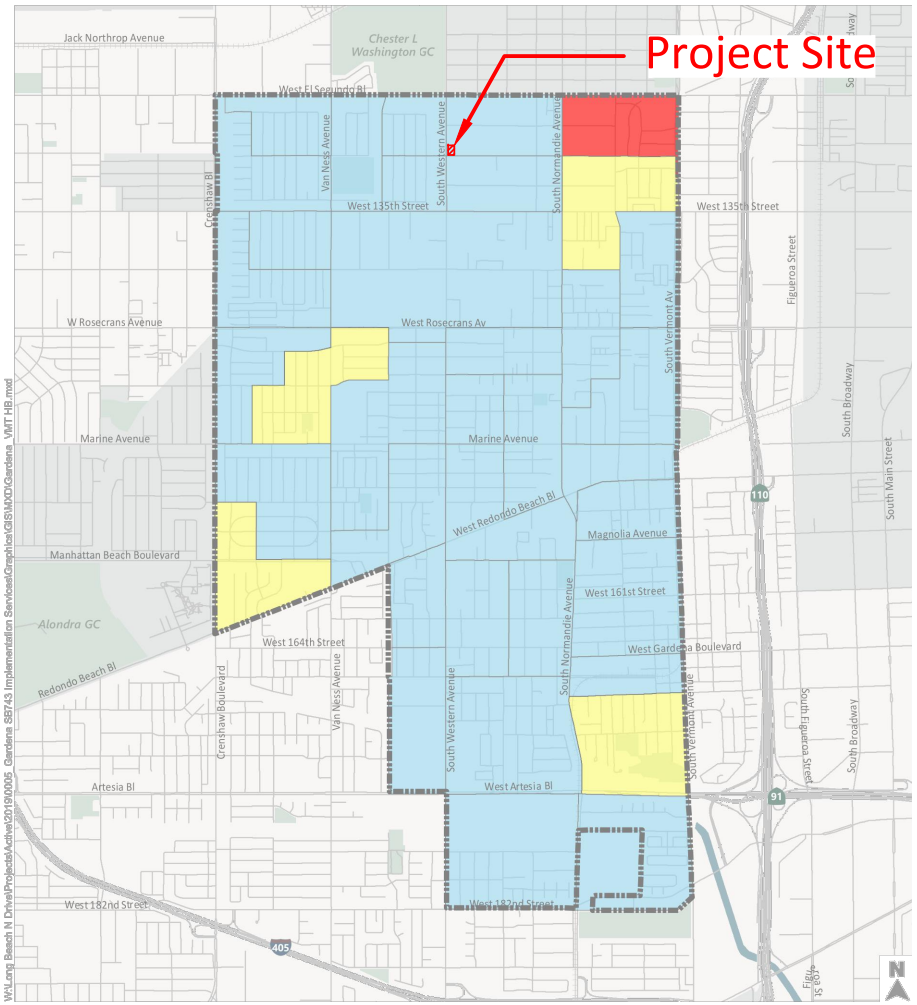
ATTACHMENT C
SUMMARY OF PROJECT TRIP GENERATION
WESTERN SRO APARTMENTS PROJECT

Land Use	ITE Code	Unit	Trip Generation Rates [1] Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Multifamily Housing (Mid-Rise)	221	DU	5.440	0.094	0.266	0.360	0.268	0.172	0.440
Convenience Market	851	KSF	762.280	31.270	31.270	62.540	25.046	24.064	49.110
Automobile Parts and Service Center	943	KSF	16.280	1.431	0.529	1.960	0.904	1.356	2.260

Land Use	Quantity	Unit	Trip Generation Estimates Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Existing Use									
Convenience Market	2.100	KSF	1,601	66	66	132	53	51	104
Pass-by Trips (51% PM) [2]			-53	0	0	0	-27	-26	-53
Automobile Parts and Service Center	10.080	KSF	164	14	5	19	9	14	23
Total Existing Trips			1,712	80	71	151	35	39	74
Proposed Use									
Multifamily Housing (Mid-Rise)	121	DU	658	11	32	43	32	21	53
Total Proposed Project Trips			658	11	32	43	32	21	53
Net Difference (Proposed Minus Existing)			-1,054	-69	-39	-108	-3	-18	-21

[1] Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition

[2] Source: Institute of Transportation Engineers (ITE) Trip Generation Handbook, 3rd Edition



NOT TO SCALE

ATTACHMENT D
SCAG MODEL (2012)
DAILY RESIDENTIAL HOME BASED VMT PER CAPITA

Kimley»Horn

December 16, 2021

Rita Garcia
Project Manager
Kimley-Horn
1100 West Town and Country Road, Suite 700
Orange, California 92868

Subject: Preliminary Results for a Cultural Resources Assessment of the SRO Apartments Project, Gardena, Los Angeles County, California (BCR Consulting Project No. KIM2120)

Dear Rita:

BCR Consulting LLC (BCR Consulting) is presenting you with the following preliminary results for a Cultural Resources Assessment of the SRO Apartments Project (Project) located in the City of Gardena (City), Los Angeles County, California. Final results will be submitted upon receipt of the South Central Coastal Information Center (SCCIC) records search results.

Research

Although the SCCIC records search results have not been completed, BCR Consulting has completed land-use history research for the Project site. The property comprises two historic period buildings that require evaluation for California Register of Historical Resources listing eligibility. Assessor records show that Building 1 comprises a 2,100 square foot convenience store building constructed in 1965 and located at 13126 Western Avenue. The site was originally occupied by Arnold's Dairy, and eventually by other convenience stores. It has not been associated with any important events or individuals. Building 2 is a 10,080 square foot industrial building constructed in 1976 and located at 13130 Western Avenue, southeast of Building 1. It was originally occupied by a wholesale hardware business and currently by J & D Towing Auto Body Repair and Auto Sales. Building 2 has not been associated with any important events or individuals.

Field Survey

BCR Consulting Staff Historian George Brentner, B.A. visited the Project site on October 20, 2021. The entire Project site is paved, therefore, there is no potential to identify archaeological resources. The two historic-period buildings are in place as indicated above. Digital photographs (context and detail views) have been taken of each building, and they have been described in field notes. Building 1 is a wood-frame convenience store with side-gable roof. It is in fair condition, and no alterations were visible. Building 2 is constructed of brick and has a flat roof. The facade is partially shaded by a tile-roof awning and is accessed by two glass and aluminum doors located above a raised entry. The building contains three truck loading docks. It isin good condition, and no alterations were visible. Neither of the two buildings exhibit any important or interesting architectural features.

Report and Department of Park and Recreation Forms

The Cultural Resources Report and Department of Park and Recreation (DPR) 523 Forms are being prepared. However, these cannot be finalized until the SCCIC records search results are received. Based on the known information, as summarized above, neither of the two historic-period buildings that occupy the subject property appear to be significant under CEQA. **As such, development constraints and mitigations related to cultural resources are not anticipated.**

Paleontological Overview

The geologic units underlying the Project area are mapped as Quaternary alluvium dating to the Pliocene-Holocene, which is potentially fossiliferous. Quaternary alluvial units are considered to be of high paleontological sensitivity. The Western Science Center does not have localities within the Project area, but does have numerous localities within similarly mapped alluvial sediments throughout the region. Pleistocene alluvial deposits in southern California are well documented and known to contain abundant fossil resources including those associated with Columbian mammoth (Mammuthus columbi), Pacific mastodon (Mammut pacificus), sabertooth cat (Smilodon fatalis), ancient horse (Equus sp.), and many other Pleistocene megafauna. Any fossils recovered from the Project area would be scientifically significant. Excavation activity associated with development of the area has the potential to impact the paleontologically sensitive Quaternary alluvial units and the Western Science Center recommends that a paleontological resource mitigation plan be put in place to monitor, salvage, and curate any recovered fossils associated with the current study area.

Sacred Lands File Search

The Sacred Lands File search results with the Native American Heritage Commission were negative.

If you have any questions or comments regarding this proposed scope of work, please contact me at 909-525-7078 or david.brunzell@yahoo.com.

Sincerely,

BCR Consulting LLC

David Brunzell, M.A./RPA
Principal Investigator/Archaeologist

Attachment A: Photos

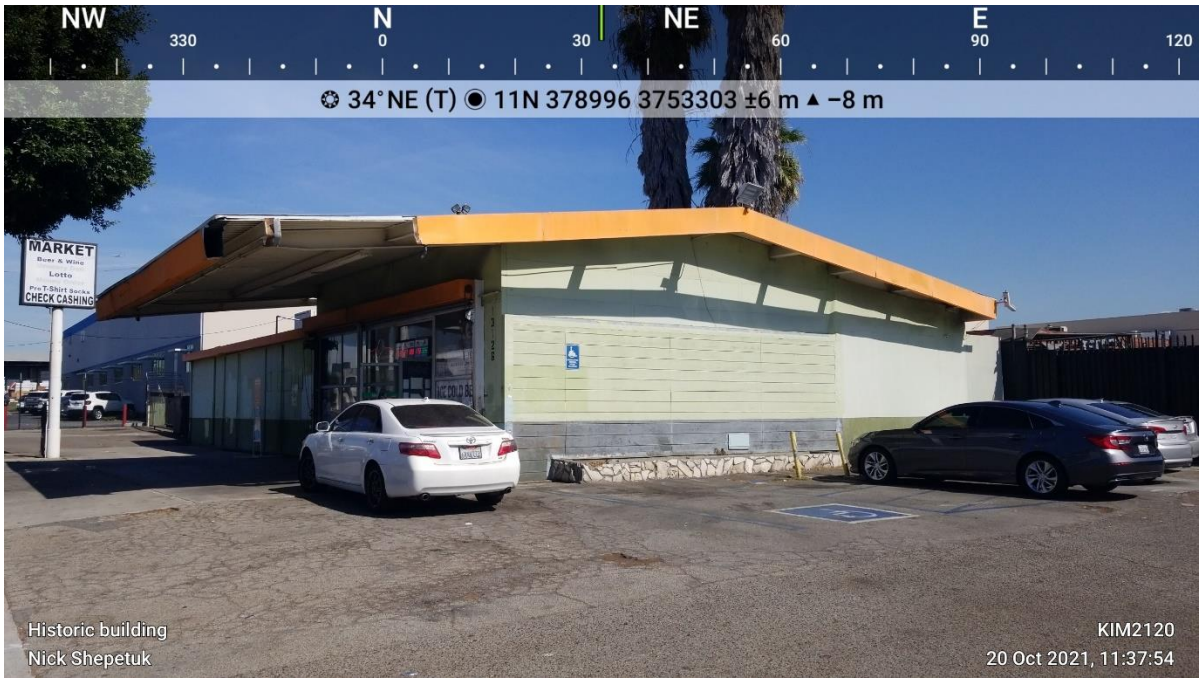


Photo 1: Convenience Store at 13126 Western Avenue

Photo 2: Industrial Building at 13130 Western Avenue