#### **TECHNICAL MEMORANDUM**

То:	Andrew Coyne, City of Temple City
From:	Jessie Fan, Project Manager
Date:	July 15, 2022
Subject:	Pacific Las Tunas Mixed-Use Development Project – Class 32 Categorical Exemption

#### 1.0 INTRODUCTION & PURPOSE

Kimley-Horn and Associates, Inc. has been retained to evaluate the Pacific Las Tunas Mixed-Use Development Project (the "Project") concerning California Environmental Quality Act (CEQA) compliance. This Technical Memorandum (TM) was prepared to present the findings of the CEQA compliance review, as described below. This TM was also prepared to present the recommendations concerning the appropriate CEQA compliance documentation.

The Project's CEQA compliance review relied on the following documentation:

- Conceptual Site Plan; see Appendix A: Conceptual Site Plans.
- Kimley-Horn, Pacific Las Tunas Mixed-Use Development Project –Noise and Vibration Analysis. May 2022; see Appendix B: Noise and Vibration Analysis.
- Kimley-Horn, *Pacific Las Tunas Mixed-Use Development Project Air Quality Analysis.* May 2022; see **Appendix C: Air Quality Analysis**.

#### 2.0 STATUTORY AUTHORITY & REQUIREMENTS

#### **CEQA Guidelines Section 15061 – Review for Exemption**

Once it has determined that an activity is a project subject to CEQA, it is then determined whether a project is exempt from CEQA. Pursuant to CEQA Guidelines Section 15061, a project is exempt from CEQA if:

- 1) The project is exempt by statute; see CEQA Guidelines Article 18, commencing with Section 15260.
- 2) The project is exempt pursuant to a Categorical Exemption (see CEQA Guidelines Article 19, commencing with Section 15300) and the application of that CE is not barred by one of the exceptions set forth in CEQA Guidelines Section 15300.2.
- 3) The activity is covered by the commonsense exemption that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can

be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.

- 4) The project will be rejected or disapproved by a public agency.
- 5) The project is exempt pursuant to the provisions of Article 12.5 Exemptions for Agricultural Housing, Affordable Housing, and Residential Infill Projects.

#### **CEQA Guidelines Article 19 - Categorical Exemptions**

CEQA Guidelines Article 19 includes a list of classes of projects, which have been determined not to have a significant effect on the environment and, therefore, are exempt from CEQA. The class of projects that is relevant to the Project is presented below.

<u>CEQA Guidelines Section 15332 – Infill Development</u>. Class 32 consists of projects characterized as in-fill development meeting the conditions described below.

- (a) The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations.
- (b) The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses.
- (c) The project site has no value as habitat for endangered, rare, or threatened species.
- (d) Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.
- (e) The site can be adequately served by all required utilities and public services.

<u>CEQA Guidelines Section 15300.2 - Exceptions</u>. The following conditions are exceptions that bar the application of a Categorical Exemption:

- (a) Location. Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located – a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply all instances, except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.
- (b) *Cumulative Impact*. All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.
- (c) *Significant Effect*. A Categorical Exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.

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- (d) Scenic Highways. A Categorical Exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified EIR.
- (e) *Hazardous Waste Sites*. A Categorical Exemption shall not be used for a project located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code.
- (f) *Historical Resources*. A Categorical Exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource.

#### 3.0 **PROJECT DESCRIPTION**

Pacific Las Tunas Place, LLC (the Applicant) proposes a new mixed-use development (Project) on an approximately 1.17-acre (51,000 square feet) site (Project Site) located at 9465 Las Tunas Drive within the City of Temple City (City). The Project Site is bound by Woodruff Avenue to the north, Cloverly Avenue to the east, Oak Avenue to the west, and Las Tunas Drive to the south. The Project Site is currently developed and consists of a 22,689 square-foot commercial mini-mall (Los Angeles County Assessor's Parcel Number [APNs] 8587-008-017).

The four-story Project would develop 46 residential condominiums and 5,800 square feet of ground floor retail/office space. A detailed description of the Project Site characteristics and Project are provided below.

#### **Project Location and Surrounding Uses**

As shown in **Figure 1: Regional Vicinity Map**, the Project Site is located in the San Gabriel Valley between the Interstate 210 (I-210) and the Interstate 10 (I-10) Freeways. The Project Site is located in the central area of the City at the southeastern corner of Cloverly Avenue and Las Tunas Drive. The Project Site currently consists of multiple commercial uses in a two-story building and associated paved surface parking. The Project Site has a General Plan land use designation of Mixed Use<sup>1</sup> and is zoned Mixed-Use Medium (MU-M).<sup>2</sup>

<sup>&</sup>lt;sup>1</sup> City of Temple City, Mid-Century General Plan Land Use Map, 2017. Available at <u>https://templecitypw.maps.arcgis.com/apps/View/index.html?appid=d440c69abdbb42e0aad024714fcd</u> <u>de6f</u>. Accessed February 23, 2022.

<sup>&</sup>lt;sup>2</sup> City of Temple City, Temple City Updated Zoning, 2020. Available at <u>https://templecitypw.maps.arcgis.com/apps/View/index.html?appid=cffc8ef0aff74b428d6d1cf85983ed5</u> <u>e</u>. Accessed February 23, 2022.



FIGURE 1: REGIONAL VICINITY MAP Pacific Las Tunas Mixed-Use Project

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There are currently five street trees planted along Las Tunas Drive, along with other ornamental trees and landscaping on other frontages and in the surface parking lot. Light poles, garbage receptacles, and 2-hour parking spots are located within the existing frontage along Las Tunas Drive. One light pole is located within the existing frontages of Las Tunas Drive and Clovery Avenue with smaller light poles along Las Tunas Drive. There are two existing fire hydrants within the existing frontage along Las Tunas Drive.

The Project Site is in an urbanized area that is developed with a mix of multi-family, single-family, and commercial uses. The surrounding land uses include both single- and multi-family residential to the north; commercial to the south; high-density residential and commercial to the east; and mixed use, commercial, and multi-family residential to the west. Another commercial center and associated surface parking lot is located directly adjacent to the Project Site to the west. A United States Post Office is located northwest of the Project Site.

A Los Angeles County Metropolitan Transportation Authority (Metro) 78 bus stop providing service from Downtown Los Angeles to South Arcadia via Las Tunas Drive is located approximately 300 feet west of the Project Site at the intersection of Las Tunas Drive and Oak Avenue. This bus stop provides access to the greater Los Angeles Area by connecting to the A Line, B Line, D Line, and E Line of the Metro Rail System.

#### **Project Characteristics**

The Project would replace the existing two-story building and surface parking lot with a four-story 58-foot mixed-use building and one level of subterranean parking. The Project would include 46 residential condominium dwelling units (71,536 square feet), a recreational room and gym (2,054 square feet), a ground floor lobby (1,046 square feet), and ground floor retail/office space (5,800 square feet), resulting in a total developed floor area of approximately 80,436 square feet and a floor area ratio (FAR) of 1.577:1.

The Project would provide 22 one-bedroom units, 21 two-bedroom units, and 3 three-bedroom units. The Project's commercial component would consist of 3,300 square feet for retail/office uses and 2,500 square feet for café/restaurant uses. The Project would be required to provide 4,600 square feet of common open space and private open space across the Project Site. The Project would provide a total of 15,428 square feet of open space, which includes a 3,620-square-foot residential courtyard on the second floor podium deck, a private 8,228-square-foot wraparound balcony for residents on the second floor, and private 110-square-foot balconies for 32 residential units (totaling 3,520 square feet). Of the total open space proposed, 7,640 square feet will be landscaped, including areas in front of the first floor retail uses on Las Tunas Drive and Cloverly Avenue, the residential courtyard, and the residential wraparound balcony. Outdoor gathering areas would be limited to the residential courtyard areas, which would serve as a passive gathering space for residents and guests. No special events are anticipated to occur in the residential courtyard.

Parking would be provided on the ground floor and the mezzanine level. The Project would provide 51 vehicle parking spaces for the commercial uses on the ground floor. The Project would provide 92 vehicle parking spaces for the residential uses, 13 of which would be on the ground floor and 79 of which would be on the mezzanine level. Signage and secure gate access would separate resident parking from retail and guest parking. The Project would provide a total of 143 parking spaces, or 7 more spaces than required. The Project would install a significantly higher ratio of electric vehicle (EV) chargers to residential parking stalls than what is required by the California Green Building Standards (CALGreen) Code and would install one EV charger per residential unit, plus additional chargers for guest parking. The Project would also provide 24 bicycle parking spaces for residential uses and 12 bicycle parking spaces for commercial uses.

Vehicular access (ingress and egress) to the Project Site would be provided via one driveway on Las Tunas Drive and one driveway on Cloverly Avenue. Vehicular access from Las Tunas Drive and Cloverly Avenue would be for residential and commercial. Circulation within the Project Site would be provided with two-way vehicular movement within the parking area, the right-in/right-out ingress/egress at Las Tunas Drive and ingress/egress access in both directions at Cloverly Avenue. The Project Site plans are provided in **Attachment A: Conceptual Site Plans** of this TM.

As shown in Attachment A of this report, the ground floor would include the residential lobby/entrance that would front Las Tunas Drive, and retail/office space fronting Las Tunas Drive and Cloverly Avenue with parking behind. The utilities and storage to support the residential and retail use would also be located on the mezzanine level. Exterior building lighting and landscape lighting would be provided for security purposes. Canopy signage is anticipated to be included for the commercial spaces.

The Project's landscape design would incorporate an assortment of landscaping elements which highlight the articulation of the building. Tall, vertical evergreen trees and shrubs would be strategically placed to complement the height of building, as well as the adjacent properties/buildings and character of the neighborhood. Multiple green spaces have been designed for both passive and programmed use which will enliven the areas surrounding retail spaces and create private sanctuary space for residents. The residential garden would include a percolating water feature for visual and audible interest, as well as a trellis and several trees to provide residents with shade and privacy. The use of wire-framed vine plantings along bare, exterior first-floor walls would provide an appealing vertical element, which softens the height of the development at the ground level. Additional landscaping would be placed to adequately screen the development's operational facilities, such as mechanical equipment, exterior storage areas, loading docks, and loading areas.

#### Construction

Project construction is anticipated to begin as early as 2023, pending Project consideration and approval, and would be completed in 2025. Construction of the Project is estimated to require

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approximately 28 months. Project construction would include the demolition of existing structures, grading to prepare the Project Site for the new construction, excavation to accommodate the subterranean parking level, concrete pouring for the building foundation, building construction, and architectural coatings. Demolition activities would include the removal of the existing uses and surface parking on-site and would require the use of haul trucks. Heavy-duty equipment, vendor supply trucks and concrete trucks would be used during construction of foundations and the parking structure. Landscaping and architectural coating would occur during the finishing activities. The Project would export approximately 250 cubic yards of soil during the grading/excavation phase, in addition to the 22,689 square feet (equivalent) of building demolition (building walls, etc.) and 26,935 square feet (equivalent) of hardscape (pavement material).

#### 4.0 FINDINGS CONCERNING CEQA COMPLIANCE

Kimley-Horn has completed the Project's CEQA compliance review and summarized the findings below.

#### **Exemption Justification Under Class 32 – Infill Development**

Land Use Consistency. The Project Site has a General Plan land use designation of Mixed Use<sup>3</sup> and is zoned Mixed-Use Medium (MU-M).<sup>4</sup> The MU-M Zone is addressed in Temple City Municipal Code (TCMC) Title 9, Chapter 1 – Zoning Code. The MU designation is appropriate for mixed commercial and residential projects and is intended for "a range of commercial uses, such as retail, restaurants, personal services and offices" and housing, which is permitted but not required. The Project proposes a mixed-use development, which would include residential condominiums and ground floor retail/office space; therefore, the Project would be consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations.

<u>Location and Size</u>. The Project Site totals approximately 1.17 acres and is located entirely within the City's limits. Land uses surrounding the Project Site include single-family and multi-family residential and commercial to the north, commercial to the south, single-family residential and commercial to the east, and commercial to the west. Therefore, the Project would occur entirely within City limits on a Project Site that is no more than five acres substantially surrounded by urban uses.

<u>Biological Resources</u>. The Project Site is completely developed with existing onsite uses and contains ornamental landscaping within the parking lot. The Project Site is bordered by existing commercial and residential development and well-utilized roadways. There are no regional resources or habitats nearby that could contain sensitive species, and all nearby habitat is disturbed with little-to-no native vegetation. Therefore, the Project would not result in any

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<sup>&</sup>lt;sup>3</sup> City of Temple City, Mid-Century General Plan Land Use Map.

<sup>&</sup>lt;sup>4</sup> City of Temple City, Temple City Updated Zoning.

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significant effects relating to biological resources. The Project Site would have no value as a habitat for endangered, rare, or threatened species.

<u>Traffic</u>. The City adopted Transportation Study Guidelines for Vehicle Miles Traveled and Level of Service Assessment in October 2020. As shown in **Table 1: Summary of Project Trip Generation**, the Project would not generate more than 100 total trips in the AM and/or PM peak hour; therefore, a Transportation Study is not required for the Project.

Table 1: Summary of Project Trip Generation									
	Quantity	Daily AM Peak Hour				ur PM Peak Hour			
Land Use			In	Out	Total	In	Out	Total	
Multifamily	46 DU	209	4	13	17	11	7	18	
Housing (Mid-									
Rise)									
Strip Retail Plaza	3,300 square	180	5	3	8	11	11	22	
(< 40,000 square	feet								
feet)									
High-Turnover	2,500 square	268	13	11	24	14	9	23	
(Sit-Down)	feet								
Restaurant									
Project T	rips	657	22	27	49	36	27	63	

The City's Transportation Study Guidelines include three types of screening that may be applied to screen projects from a detailed, project-level vehicle miles traveled (VMT) assessment. The California Office of Planning and Research (OPR) guidance and the City's Transportation Study Guidelines allow residential and office projects that are located within a low VMT-generating area to be presumed to have a less than significant VMT impact. Low VMT is defined as areas of the City where the VMT falls below the City's adopted threshold of significance, which in the City's case, would be the average VMT for the San Gabriel Valley Council of Governments (SGVCOG) as measured by VMT per capita, VMT per employee, or VMT per service population.<sup>5</sup> Based on the SGVCOG's VMT Evaluation Tool Report, the Project meets the criteria of being in a Low VMT Area, and therefore is screened from further VMT analysis. Further, the retail component of the Project would be less than 50,000 square feet, and would therefore be local-serving. Therefore, the retail use is also considered to have a less than significant VMT impact. Impacts related to transportation would be less than significant.

<sup>&</sup>lt;sup>5</sup> City of Temple City, Planning Commission Staff Report, May 26, 2020. Available at <u>https://www.ci.temple-city.ca.us/DocumentCenter/View/14495/PL-20-2389-Citywide-attachment-4</u>. Accessed April 27, 2022.

<u>Noise</u>. As concluded in the Project's Noise and Vibration Analysis (see **Appendix B**), the Project's construction and operational noise and vibration levels would not exceed any City or Federal Transit Administration standards. The Project would result in less than significant construction and operational noise and vibration impacts. Therefore, the Project's approval would not result in any significant effects relating to noise and vibration pursuant to CEQA Guidelines Section 15332(d).

<u>Air Quality</u>. As concluded in the Project's Air Quality Analysis (see **Appendix C**), the Project's construction and operational emissions would not exceed any South Coast Air Quality Management District (SCAQMD) standards, California Ambient Air Quality Standards (CAAQS), or National Ambient Air Quality Standards (NAAQS). The Project would result in less than significant construction and operational air quality impacts, and no mitigation is required. Notwithstanding, the Project would be subject to compliance with SCAQMD Rules 402, 403, and 1113, which prohibit nuisances, require dust control measures, and limit Volatile Organic Compounds (VOCs) (a content in paints), respectively. Compliance with SCAQMD rules would further minimize the Project's construction-related emissions. Therefore, the Project's approval would not result in any significant effects relating to air quality pursuant to CEQA Guidelines Section 15332(d).

<u>Water Quality.</u> The Project's construction-related activities would include excavation and grading, which would displace soils and temporarily increase the potential for soils to be subject to wind and water erosion. Construction-related erosion effects would be addressed through compliance with the National Pollutant Discharge Elimination System (NPDES) Program's Construction General Permit. The Construction General Permit requires development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) and monitoring plan, which must include erosion-control and sediment-control best management practices (BMPs) that would meet or exceed measures required by the Construction General Permit to control potential construction-related pollutants.

During Project construction, stormwater runoff would flow to existing stormwater infrastructure. The Project would be subject to TCMC Section 8-3-2: New Development and Construction requirements, which requires that stormwater runoff containing sediment, construction waste or other pollutants from the construction site shall be reduced to the maximum extent practicable through the use of best management practices (BMPs). Following compliance with NPDES and City requirements, the Project's construction-related activities would not violate any water quality standards or otherwise substantially degrade surface or groundwater quality.

Stormwater discharge is generated by rainfall that runs off the land and impervious surfaces, and can include pollutants of concern which would affect stormwater quality. The Project is not anticipated to produce any pollutants that would result in a violation of water quality standards or waste discharge requirements. Any pollutants or waste would be discharged according to all appropriate local, State, and federal rules and regulations. Therefore, Project operation would not violate any water quality standards or waste discharge requirements.

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Therefore, the Project's approval would not result in any significant effects relating to water quality pursuant to CEQA Guidelines Section 15332(d).

<u>Utilities and Public Services</u>. The Project would occur within an urbanized area where service is already provided. Additionally, the Project would be consistent with the site's intended land uses, as concluded in the *Land Use* Section above; thus, the demands for utilities and public services associated with the property have been accounted for. The Project Site can be adequately served by all required utilities and public services. Therefore, the Project's approval would not result in any significant effects relating to utilities and public services pursuant to CEQA Guidelines Section 15332(d).

#### **Exceptions to Categorical Exemptions**

As previously noted, a project is exempt from CEQA pursuant to a Categorical Exemption provided the application of that Categorical Exemption is not barred by one of the exceptions set forth in CEQA Guidelines Section 15300.2. The following demonstrates the Project does not meet any of the exceptions that would bar a Categorical Exemption.

<u>Exception A, Location</u>. The Project would qualify for a Categorical Exemption under Class 32; therefore, because this exception pertains to Classes 3, 4, 5, 6, and 11, it is not applicable to the proposed Project.

<u>Exception B, Cumulative Impact</u>. Other proposed projects within the Project area would be required to demonstrate consistency with the City's General Plan policies and TCMC regulations. There are no successive projects similar to the Project proposed on the Project Site. Additionally, as concluded above, the Project would result in no environmental impact or less than significant impacts. Therefore, no significant cumulative impact would occur.

<u>Exception C, Significant Effect</u>. The proposed Project is not expected to have a significant effect on the environment due to unusual circumstances; see *Exemption Justification* above for biological resources, traffic, noise and vibration, air quality, and water quality.

<u>Exception D, Scenic Highways</u>. There are no State-designated scenic highways in the Project site vicinity.<sup>6</sup> The closest State-designated scenic highway is State Route 2 (Angeles Crest Highway), located approximately 15.4 miles north of the Project Site. Moreover, there are no scenic resources present on the Project Site. Therefore, the Project would not damage scenic resources within a State scenic highway.

<sup>&</sup>lt;sup>6</sup> California Department of Transportation, California State Scenic Highway System Map. Available at <u>https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aa</u> <u>caa</u>. Accessed February 22, 2022.

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<u>Exception E, Hazardous Waste Sites</u>. Government Code Section 65962.5 refers to the Hazardous Waste and Substances Site List, commonly known as the Cortese List, maintained by the Department of Toxic Substances Control. The Project Site is not included on the Cortese List.<sup>7</sup>

<u>Exception D, Historical Resources</u>. The existing building on-site was built in 1987, which does not meet the 45-year age threshold for a historical resource as defined by the Office of Historic Preservation.<sup>8</sup> Further, the Project Site and the existing building on-site was not identified as eligible for potential local landmark designation or as appearing eligible for listing in the California Register of Historic Resources.<sup>9</sup> Therefore, the existing commercial building on-site is not considered a historic resources for the purposes of CEQA. The Project would not cause a substantial adverse change in the significance of a historical resource.

#### 5.0 CONCLUSION

As is evidenced by the discussions presented above, the Project qualifies as being exempt from CEQA under Class 32. Moreover, it has been determined that the Project is not barred from the application of a Categorical Exemption, pursuant to CEQA Guidelines Section 15300.2. Therefore, it has been determined that the Project would not have a significant effect on the environment, and a Categorical Exemption is the appropriate CEQA documentation.

<sup>&</sup>lt;sup>7</sup> Department of Toxic Substance Control, Hazardous Waste and Substances Site List. Available at <u>https://www.envirostor.dtsc.ca.gov/public/search?cmd=search&reporttype=CORTESE&site\_type=CSITES\_ FUDS&status=ACT,BKLG,COM&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST. Accessed February 22, 2022.</u>

<sup>&</sup>lt;sup>8</sup> Office of Historic Preservation, Instructions for Recording Historical Resources, March 1995.

<sup>&</sup>lt;sup>9</sup> Historic Resources Group, City of Temple City Historic Resources Survey, May 2012. Available at <u>http://www.templecity.us/DocumentCenter/View/839/Historical-Resources-Survey?bidId=</u>. Accessed April 27, 2022.

### Appendix A

**Conceptual Site Plans** 

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### SCALE: 1/16" = 1'-0"



FILE: 200718SCH001 DRAWN: T.F. S Ο S Ш Зü < Ι Ξ W. VALLEY BLVD 626•571•8000 Ο ۲ ECT: **N** ARC 140 PH: ∢ PLACE TUNAS PROJECT: PACIFIC LAS <sup>-</sup> MIXED USE 9465 LAS TUNAS DR., TEMPLE CITY, CA 91780 JOB NO: 210125 A-1.3

#### SITE / 2ND FLOOR PLAN SCALE: 1/16" = 1'-0"



S L A	A R C H I T E C	140 W. VALLEY BLVD., STE 215, SAN GABRIEL, CA 91776 PH: 6.56.571.80000
		9465 LAS TUNAS DR., TEMPLE CITY, CA 91780

SRD AND 4TH FLOOR PLAN



FILE: 200718SCH001 DRAWN: T.F. S Ο S Ш Зü ъ, < à Ι STE W. VALLEY BLVD 626•571•8000 Ο ۲ TECT: S ARCHI 140 PH: ∢ PLACE PROJECT: PACIFIC LAS TUNAS F MIXED USE 9465 LAS TUNAS DR., 1780 JOB NO: 210125 A-1.5









1 BEDROOM TYPE: A-2 (1,147 SF)

1 BEDROOM TYPE: A-3 (1,332 SF)



2 BEDROOM TYPE: B-2 (1,540 SF)

3 BEDROOM TYPE: C-1 (1,750 SF)





NAME

1 TILE WALL

15 CANOPY



1					
PL 2 3 3 4 1 3 2 3 3 4 1 5 5 5 5 5 5 5 5 5 5 5 5 5					
ADJACENT NEIGHBOR EXTERIOR FINISH SCHEDU MAME DESCRIPTON COLOR INTLE WALL PRER CEMENT PANEL ARCHITECTUR WALL STURG SPEER CEMENT PANEL ARCHITECTUR WALL STUCCO EMACTIVE V/ ANTO DESCRIPTION WALL STUCCO EMACTIVE V/ ANTO DESCRIPTION MALL STUCCO EMACTIVE V/ ANTO DESCRIPANEL MALL STUCCO EMACTIVE V/ ANTO DESCRIPTION MA	LE           REMARKS         2ND           AL BLOCK TUSCAN         BY "NICHHA" OR EQ           OF DEMARTS         BY "NICHHA" OR EQ           OF BROWNS         BY "NICHHA" OR EQ           BEBRE         BY "DUNN EDWARDS"           BY "DUNN EDWARDS"         BY "DUNN EDWARDS"	FLOOR = 434 SF. / 2,278 SF. = 0.191 = 19.1% FLOOR = 532 SF. / 2,387 SF. = 0.223 = 22.3%	S 8 2 8 5 5		1
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### Appendix B

Noise and Vibration Analysis

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#### **MEMORANDUM**

То:	Andrew Coyne, City of Temple City
From:	Ryan Chiene, Hayley Rundle, and Simran Singh, Kimley-Horn and Associates, Inc.
Date:	May 5, 2022
Subject:	Pacific Las Tunas Place Mixed Use Development – Noise and VibrationAnalysis

#### Purpose

The purpose of this memorandum is to identify the noise impacts associated with construction and operations of the Pacific Las Tunas Place Mixed-Use Development Project ("Project"), located in the City of Temple City, California. This memorandum has been prepared to support an exemption from the California Environmental Quality Act (CEQA) in accordance with Section 15332 (In-Fill Development Projects) of the CEQA Guidelines. Specifically, this analysis addresses the noise impacts referenced in CEQA Guidelines Section 15332(d).

#### **Project Location**

The Project Site is located on one 1.17-acre parcel (Los Angeles County Assessor's Parcel Number [APNs] 8587-008-017) at 9465 Las Tunas Drive within the City of Temple City (City). The Project Site is bound by Woodruff Avenue to the north, Cloverly Avenue to the east, Oak Avenue to the west, and Las Tunas Drive to the south. The Project Site is currently developed and consists of a 22,690 square-foot commercial mini-mall.

#### **Project Description**

The Project would replace the existing two-story building and surface parking lot with a four-story 58foot mixed-use building and one level of subterranean parking. The Project would include 46 residential condominium dwelling units (71,536 square feet), a recreational room and gym (2,054 square feet), a ground floor lobby (1,046 square feet), and ground floor retail/office space (5,800 square feet), resulting in a total developed floor area of approximately 80,436 square feet and a floor area ratio (FAR) of 1.577:1. The Project would provide 22 one-bedroom units, 21 two-bedroom units, and 3 three-bedroom units. The Project would be required to provide 4,600 square feet of common open space and private open space across the Project Site. The Project would provide a total of 15,428 square feet of open space, which includes a 3,620-square-foot residential courtyard on the second floor podium deck, a private 8,228-square-foot wraparound balcony for residents on the second floor, and private 110-square-foot balconies for 32 residential units (totaling 3,520 square feet). The

Project's commercial component would consist of 3,300 square feet for retail/office uses and 2,500 square feet for café/restaurant uses. Construction is anticipated to commence in March 2023 and be completed by June 2025.

#### **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 7:00 a.m. and an additional 5 dBA weighting during the hours of 7:00 p.m. to 7:00 a.m. and an additional 5 dBA weighting during the hours of 7:00 p.m. to 7:00 p.m. to 7:00 a.m. and an additional 5 dBA weighting during the hours of 7:00 p.m. to 7:00 p.m. to

#### **Regulatory Setting**

#### City of Temple City General Plan

The Noise Element of the *City of Temple City General Plan* (General Plan) contains noise and land use compatibility standards for various land uses throughout the City; refer to <u>Table 1: Land Use</u> <u>Compatibility with Community Noise Environments</u>. These standards and criteria are used in the land use planning process to reduce future noise and land use incompatibilities. The standards shown in the table are the primary tool that allows the City to ensure integrated planning for compatibility between land uses and outdoor noise.

Table 1: Land Use Compatibility with Community Noise Environments								
Land Use C	ategories and Uses	Compatible Land Use Zones						
Categories	Uses	CNEL <55	55-60	60-65	65-70	70-75	75-80	CNEL > 80
Residential	Single Family, Duplex, Multiple Family	А	А	В	В	С	D	D
	Mobile Home	Α	Α	В	С	С	D	D
Commercial Regional, Village District, Special	Hotel, Motel, Transient Lodging	А	А	А	А	В	В	С
Commercial, Industrial, Institutional	Office Building, Research and Development, Professional Offices, City Office Building	А	A	А	В	В	С	D
Commercial Recreation, Institutional Civic Center	Ampitheater, Concert Hall, Auditorium, Meeting Hall	В	В	С	С	D	D	D
Commercial Recreation	Children's Amusement Park, Miniature Golf Course, Go- Cart Track, Equestrian Center, Sports Club	A	A	A	В	В	D	D
Commercial General, Special Industrial Institutional	Automobile Service Station, Auto Dealership, Manufacturing, Warehousing, Wholesale, Utilities	A	A	A	A	В	В	В
	Parks	Α	Α	Α	В	С	D	D
Open Space	Golf Course, Cemetaries, Nature Center, Wildfire Reserves, Wildlife Habitat	А	А	А	А	В	С	С
Agriculture	Agriculture	Α	Α	Α	Α	Α	Α	А
Agriculture         Agriculture         Agriculture         A <t< td=""></t<>								
Zone C Normally Incompatible: New construction or development should generally be discouraged. If new construction or								

development does process, a detailed analysis of noise reduction requirements must be made and needed noise insulation features included in the design.

Zone D Clearly Incompatible: New construction or development should generally not be undertaken.

Source: City of Temple City, Temple City General Plan, Land Use Compatibility with Community Noise Environments, 2017.

The General Plan also contains the following goals and policies that are applicable to the Project:

**Goal H 5: Noise Environment.** Ambient noise levels that are compatible with Temple City's small-town character and are not disruptive to residents' quality of life.

**H 5.1 Noise Standards.** Require noise attenuation for new development where the projected exterior or interior noise levels exceed those shown in the Future Noise Level Contours Map and the Land Use Compatibility with Community Noise Environments.

**H 5.2 Compatible Uses.** Restrict the development of sensitive receptors in areas where current or future noise levels (mobile or stationary source) exceed regulatory standards.

**H 5.3 Acoustical Study.** Require an acoustical study for all new sensitive receptors located in areas within the 65 dBA noise contour based on projections of future noise conditions resulting from the Plan's traffic increases to ensure indoor levels will not exceed City standards.

**H 5.4 Noise Attenuation.** Require measures which attenuate exterior and interior noise to acceptable levels be incorporated into all development projects where current or future noise levels may be unacceptable, and consider noise attenuation in the City's Site Plan Review process.

**H 5.5 Mixed-Use and Residential Noise Isolation.** Require that mixed-use buildings that demonstrate adequate isolation of noise between residential and non-residential uses through building design and construction materials and techniques.

**H 5.6 Noise Generating Uses.** Require that high-noise generating uses, such as bars, nightclubs, entertainment venues and other uses characterized by high levels of patronage and activity be designed and constructed consistent with the City's noise standards to isolate noise to the interiors and limit perceptible exterior noise.

**Goal H 6: Mobile Noise Sources.** Minimized impacts of transportation and motor vehicle trafficgenerated noise on the community.

**H 6.1 Excessive Motor Vehicle Noise.** Encourage traffic-calming road design, engineering, and construction methods, where appropriate, to decrease excessive motor vehicle noise on major corridors.

**H 6.2 Non-motorized Transportation.** Encourage non-motorized transportation alternatives for local trips to reduce peak traffic volume and transportation-related noise sources.

**Goal H7: Stationary Noise Sources.** Minimized impacts of non-transportation and motor vehiclegenerated noise on the community.

**H 7.2 Sound-Amplifying Equipment.** Continue to regulate the use of sound-amplifying equipment to prevent impacts on sensitive receptors.

**H 7.3 Construction Hours.** Continue to enforce restrictions on the hours of construction activity to minimize impacts of noise and vibration on adjoining uses.

**H 7.4 Construction Noise.** Require construction and development projects to assess potential construction noise and vibration impacts on nearby uses and mitigate impacts on the community.

#### City of Temple City Municipal Code

The following sections of the Temple City Municipal Code (TCMC) are applicable to the Project:

#### Section 4-1A-1: Unnecessary Noises:

No person shall make, cause or suffer or permit to be made upon any premises, owned, occupied or controlled by him any unnecessary noises or sounds which are physically annoying to persons of ordinary sensitiveness or which are so harsh or so prolonged or unnatural or unusual in their use, time or place as to occasion physical discomfort to the inhabitants of any neighborhood.

#### Section 9-1P-1: Exemptions:

- A. Facilities owned or operated by or for a governmental agency.
- B. Capital improvement projects of a governmental agency.
- C. The maintenance or repair of public properties.
- D. Construction operation, maintenance, and repairs of equipment, apparatus, or facilities of the parks and recreation department, public works projects, or essential public services and facilities, including those of public utilities subject to the regulatory jurisdiction of the California public utilities commission.
- E. Public safety personnel in the course of executing their official duties, including, but not limited to, sworn peace officers, emergency personnel and public utility personnel. This exemption includes, without limitation, sound emanating from all equipment used by such personnel, whether stationary or mobile.
- F. Public or private schools and school sponsored activities.
- G. Construction projects requiring a building permit are exempt from noise regulations, provided that such construction activities occur on weekdays between 7:00 a.m. and 7:00 p.m., and Saturdays between 8:00 a.m. to 4:00 p.m. No construction work is allowed on Sundays or federal holidays.
- H. Property maintenance, including, but not limited to, the operation of lawn mowers, leaf blowers, etc., provided such maintenance occurs between the hours of 7:00 a.m. and 7:00 p.m.
- J. Heating and air conditioning equipment.
- K. Safety, warning and alarm devices, including, but not limited to, house and car alarms, and other warning devices that are designed to protect the public health, safety, and welfare.

- N. The discharge of firearms consistent with all state and federal laws.
- M. Any activity as to which the city council or planning commission has issued an exception based on hardship, or to execute phase-in requirements.
- N. Involuntary noise.
- O. Isolated singular noises (not exceeding two (2) seconds) not repeated within sixty (60) minutes.
- P. Matters preempted by state or federal law.
- Q. Matters involving the reasonable exercise of constitutional guarantees unless outweighed by compelling governmental interests or appropriate exercise of the police power.
- R. Emergency work as defined under section 9-1I-2 of this article.
- S. Noise as to which there is specific consent from all affected persons. (Ord. 19-1036)

#### Section 9-1P-3: General Sound Level Standards:

A person must not create any sound, or allow the creation of any sound, on any property that causes the exterior sound level on any other occupied property to exceed the sound level standards set forth by the following standards in <u>Table 2: Temple City Noise Standards</u>:

Table 2: Temple City Noise Standards								
Zone	7:00 A.M. to 10:00 P.M.	10:00 P.M. to 7:00 A.M.						
Residential	55 dBA	45 dBA						
Commercial	65 dBA	55 dBA						
Industrial	75 dBA	75 dBA						

At the boundary line between two (2) of the above zones, the noise level of the quieter zone will be used.

#### Section 9-1P-5: Special Sound Source Standards:

The general sound level standards set forth in section 9-1P-3 of this article apply to sound emanating from all sources, including the following special sound sources, and the person creating, or allowing the creation of, the sound is subject to the requirements of that section. The following special sound sources are also subject to the following additional standards, the failure to comply with which constitute separate violations of this article.

B. Power Tools and Equipment: A person must not operate any power tools or equipment between the hours of 10:00 p.m. and 7:00 a.m. such that the power tools or equipment are audible to the human ear inside an inhabited dwelling other than a dwelling in which the power tools or equipment may be located. A person must not operate any power tools or

equipment at any other time such that the power tools or equipment are audible to the human ear at a distance greater than one hundred feet (100') from the power tools or equipment.

#### **Existing Environmental Setting**

Mobile sources of noise, especially cars and trucks, are the most common and significant sources of noise in the City. Other sources of noise 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 Las Tunas Drive. The primary sources of stationary noise in the Project vicinity are those associated with the surrounding commercial and residential uses. Such noise sources include idling vehicles, music playing, mechanical equipment (e.g., air conditioning equipment), dogs barking, and people talking and are typical of urban areas. The noise associated with these sources may represent a single-event noise occurrence or short-term noise.

#### **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 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, including earth movers, material handlers, can reach high levels. Typical noise levels associated with individual construction equipment are listed in <u>Table 3: Typical Construction Noise Levels</u>.

Following the methodology for quantitative construction noise assessments in the Federal Transit Administration's (FTA's) *Transit Noise and Vibration Impact Assessment Manual* (September 2018) (FTA Noise and Vibration Manual), the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) was used to predict construction noise at the nearest receptors (i.e., the residential uses to the north and northeast, and the commercial uses directly west of the active Project construction zone). <u>Table 4: Project Construction Noise Levels</u> shows the estimated exterior construction noise levels at the nearest receptors.

Table 3: Typical Construction Noise Levels					
Equipmont	Typical Noise Level (dBA) at				
Equipment	50 feet from Source				
Air Compressor	81				
Backhoe	80				
Compactor	82				
Concrete Mixer	85				
Concrete Pump	82				
Concrete Vibrator	76				
Crane, Mobile	83				
Dozer	85				
Generator	82				
Grader	85				
Jack Hammer	88				
Loader	80				
Paver	85				
Pneumatic Tool	85				
Pump	77				
Roller	85				
Saw	76				
Shovel	82				
Truck	84				
Source: Federal Transit Administration, Transit Noise and Vibration Im	pact Assessment Manual, September 2018.				

Table 4: Project Construction Noise Levels							
Construction	Receptor Location			Worst Case	Noise		
Phase	Land Use	Direction	Distance (feet) <sup>1</sup>	Exterior Noise Level (dBA Leq)	Threshold (dBA L <sub>eq</sub> ) <sup>2</sup>	Exceeded?	
	Residential	North	110	78.7	80	No	
Demolition	Residential	Northeast	200	73.5	80	No	
	Commercial	West	100	79.5	85	No	
	Residential	North	110	75.2	80	No	
Site Preparation	Residential	Northeast	200	70.0	80	No	
	Commercial	West	100	76.0	85	No	
	Residential	North	110	78.4	80	No	
Grading	Residential	Northeast	200	73.2	80	No	
	Commercial	West	100	79.2	85	No	
	Residential	North	110	78.5	80	No	
Building	Residential	Northeast	200	73.3	80	No	
CONSTRUCTION	Commercial	West	100	79.3	85	No	
Daviaa	Residential	North	110	78.3	80	No	
Paving	Residential	Northeast	200	73.1	80	No	

Table 4: Project Construction Noise Levels							
Construction Phase	Receptor Location			Worst Case	Noise		
	Land Use	Direction	Distance Exterior Noise (dBA Leq) (feet) <sup>1</sup> Level (dBA Leq)		Threshold (dBA L <sub>eq</sub> ) <sup>2</sup>	Exceeded?	
	Commercial	West	100	79.1	85	No	
Architectural Coating	Residential	North	110	66.8	80	No	
	Residential	Northeast	200	61.6	80	No	
	Commercial	West	100	67.7	85	No	

Notes:

1. Per the methodology described in the FTA Noise and Vibration Manual (September 2018), distances are measured from 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 <u>Appendix A: RCNM Modeling Results</u> for noise modeling results.

Following FTA methodology, when calculating construction noise, all equipment is assumed to operate at the center of the Project because equipment would operate throughout the Project Site and not at a fixed location for extended periods of time. Therefore, the distances used in the RCNM model were 110 feet for the multifamily residential uses located to the north, 200 feet for single-family residential uses to the northeast, and 100 feet for commercial uses to the west. As shown in Table 4, the highest anticipated construction noise level of 79.5 dBA (during the demolition phase) would not exceed the FTA noise threshold of 80 dBA for residential uses and/or 85 dBA for commercial uses. In addition, compliance with TCMC Section 9-1P-1 would further minimize impacts from construction noise, as construction activies are exempt from the the noise standards providing that such activities take place on weekdays between the hours of 7:00 a.m. to 7:00 p.m. and Saturdays between 8:00 a.m. to 4:00 p.m. except Sundays and Federal holidays. Therefore, because Project construction noise levels would not exceed FTA noise thread Sundays and Project construction would comply with the City's allowable construction hours, noise impacts would be less than significant in this regard.

#### **Operational Noise**

Implementation of the Project would create new sources of noise in the Project vicinity. The primary noise sources associated with the Project that could potentially impact nearby sensitive uses include mechanical equipment (e.g., air conditioners, etc.), typical stationary noise from residential uses (e.g., dogs barking, use of landscape equipment, people talking, etc.), parking lot noise, noise generated by truck deliveries and trash/recycling collection, and off-site traffic noise.

#### **Mechanical Equipment**

Mechanical equipment (e.g., heating, ventilation, and air conditioning [HVAC] equipment) typically generates noise levels of approximately 52 dBA at 50 feet.<sup>1</sup> Sound levels decrease by 6 dBA for each doubling of distance from the source.<sup>2</sup> The nearest sensitive receptors (multifamily residences to the north) would be located as close as 10 feet from the HVAC equipment at the Project Site. As such, HVAC noise emanating from the Project Site may be audible at the nearest sensitive receptors. However, HVAC equipment noise is exmept from the City's noise standards per TCMC Section 9-1P-1. In addition, it is noted that on-site HVAC equipment would not likely operate continuously throguhtout the day/night and currently operates on the rooftops at the existing commercial uses at the Project Site. Therefore, impacts from mechanical equipment would be less than significant.

#### **Residential Stationary Noise**

The Project would also result in stationary noise that is typical of residential uses/neighborhoods, including the use of landscaping equipment, dogs barking, music playing, people talking, etc. These noise sources can generate noise levels up to 65 dBA at a distance of 50 feet.<sup>3</sup> However, noise events from these stationary sources are generally sporadic, short in duration, and do not last for extended periods of time. In addition, stationary noise is currently generated by residences to the north and east. Therefore, residential stationary noise levels from the Project would not result in a noticeable increase in ambient noise levels and would be required to comply with noise provisions set forth in the TCMC. Impacts would be less than significant impact.

#### Parking Noise

The Project would provide 143 parking stalls, located throughout the ground floor and mezzanine level of the Project Site. Traffic associated with parking lots is typically not of sufficient volume to exceed community noise standards, which are based on a time-averaged scale such as the CNEL scale. The instantaneous maximum sound levels generated by a car door slamming, engine starting up, and

<sup>&</sup>lt;sup>1</sup> Elliott H. Berger, Rick Neitzel1, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, June 26, 2015.

<sup>&</sup>lt;sup>2</sup> Cyril M. Harris, *Noise Control in Buildings*, 1994.

<sup>&</sup>lt;sup>3</sup> Elliott H. Berger, Rick Neitzel1, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, June 26, 2015.

car pass-bys range from 53 to 61 dBA.<sup>4</sup> Conversations in parking areas may also be an annoyance to adjacent sensitive receptors. Sound levels of speech typically range from 33 dBA at 50 feet for normal speech to 50 dBA at 50 feet for very loud speech.<sup>5</sup> All parking would occur within the building, which would provide further noise shielding. It should be noted that parking lot noises are instantaneous noise levels compared to noise standards in the hourly  $L_{eq}$  or 24-hour CNEL metrics, which are averaged over the entire duration of a time period. As a result, actual noise levels over time resulting from parking lot activities would be far lower than the reference levels identified above and are not expected to exceed the City's noise standards at off-site uses. Therefore, noise impacts from parking lots would be less than significant.

#### Truck Deliveries and Trash/Recycling Collection

The Project would involve occasional deliveries and weekly trash/recycling collection from slowmoving trucks during normal daytime hours. Low speed truck noise results from a combination of engine, exhaust, and tire noise as well as the intermittent sounds of back-up alarms and releases of compressed air associated with truck air-brakes. Medium-sized delivery trucks and trash collection trucks typically generate noise levels of 75 dBA at distance of 50 feet.<sup>6</sup> The nearest noise-sensitive receptors (multi-family uses to the north of the Project Site) would be located approximately 100 feet north of the trash/recycling area in the southern portion of the Project Site. At this distance and accounting for existing/intervening perimeter walls, noise levels from truck deliveries and trash/recycling collection trucks would be approximately 61.5 dBA.<sup>7</sup> It is noted, however, that noise events from trash/recycling truck pickups and truck deliveries would be infrequent and instantaneous, and therefore, would result in much lower noise levels when averaged in the hourly Leg or 24-hour CNEL metrics (i.e., the standards which the City utilizes to analyze noise impacts and land use compatibility). In addition, it is noted that truck deliveries and weekly trash/recycling collection would occur during normal daytime hours and currently take place at the existing commercial uses on-site. Therefore, noise levels from truck deliveries and trash/recycling collection associated with the Project are not expected to create a noticeable increase over existing ambient noise levels and/or exceed the City's 55 dBA and 65 dBA noise standards for residential and commercial uses, respectively. A less than significant impact would occur in this regard.

<sup>&</sup>lt;sup>4</sup> Kariel, H. G., *Noise in Rural Recreational Environments*, Canadian Acoustics 19(5), 3-10, 1991.

<sup>&</sup>lt;sup>5</sup> Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden. Noise Navigator Sound Level Database with Over 1700 Measurement Values, 2015.

<sup>&</sup>lt;sup>6</sup> Elliott H. Berger, Rick Neitzel, and Cynthia A. Kladden, *Noise Navigator Sound Level Database with Over 1700 Measurement Values*, 2015.

<sup>&</sup>lt;sup>7</sup> Federal Highway Administration, *Roadway Construction Noise Model User's Guide Final Report*, January 2006. Calculated with 100-foot distance from trash/recycling area and assumes a 5.0 dBA reduction from intervening perimeter walls.

#### Off-Site Mobile Traffic Noise

Project implementation would result in an increase of traffic trips to Project area roadways. The Project would generate approximately 657 daily vehicle trips.<sup>8</sup> 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 Project area roadways would have to approximately double for the resulting traffic noise levels to generate a barely perceptible 3-dBA increase.<sup>9</sup> According to the *City of Temple City Daily Traffic Counts*,<sup>10</sup> Las Tunas Drive between Encinita Avenue and Temple City Boulevard has approximately 26,838 ADT. The Project would result in approximately 657 net daily trips, which is not enough to double the existing traffic volumes on Las Tunas Drive or Cloverly Avenue (the primary access roadways to the Project Site). Therefore, the Project would not generate enough traffic to result in a noticeable 3-dBA increase in ambient noise levels. Impacts would be less than significant.

#### On-Site Mobile Traffic Noise<sup>11</sup>

According to the General Plan, the Project Site is located within the 65 CNEL and 70 CNEL future noise contours for Las Tunas Drive.<sup>12</sup> The 70 CNEL future noise contour extends approximately 160 feet from the Las Tunas Drive centerline onto the Project Site, and the 65 CNEL future noise contour extends from the 70 CNEL contour to the northern site boundary. Based on standard construction practices and the outdoor-to-indoor attenuation rate of 25 dBA, interior noise levels at the proposed residential dwellings would not exceed the City's and California Building Code's 45 dBA CNEL and would interior noise standard in compliance with General Plan Policy H 5.3.<sup>13</sup> Therefore, impacts would be less than significant.

#### **Vibration Impacts**

Increases in ground-borne vibration levels attributable to the Project would be primarily associated with short-term construction-related activities. Construction on the Project Site would have the

<sup>&</sup>lt;sup>8</sup> The Project's daily vehicle trips are based on Institute of Transportation Engineers (ITE) Trip Generation Manual, 11<sup>th</sup> Edition. The daily vehicle trips are gross and do not account for the removal of the existing commercial uses on-site.

<sup>&</sup>lt;sup>9</sup> 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.

<sup>&</sup>lt;sup>10</sup> City of Temple City, Economic Development Department, *Traffic Counts – Las Tunas Between Encinitas & Temple City*, April 2010.

<sup>&</sup>lt;sup>11</sup> The California Supreme Court in a December 2015 opinion (*California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal. 4th 369 [No. S 213478]) confirmed that CEQA, with several specific exceptions, is concerned with the impacts of a project on the environment, not the effects the existing environment may have on a project. Therefore, this section is not required under CEQA and is included for informational purposes only. The evaluation of the significance of project impacts in the following discussion is provided to ensure compliance with City and State Building Code noise standards.

<sup>&</sup>lt;sup>12</sup> City of Temple City, Temple City General Plan, Hazards Element, Future Noise Contours, 2017.

<sup>&</sup>lt;sup>13</sup> United States Department of Housing and Urban Development, *Noise Guidebook*, 2009, available at *https://www.hudexchange.info/resource/313/hud-noise-guidebook/* 

potential to result in varying degrees of temporary ground-borne vibration, depending on the specific construction equipment used and the operations involved.

The 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 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<sup>14</sup> to evaluate potential construction vibration impacts.

<u>Table 5: Typical Construction Equipment Vibration Levels</u>, lists vibration levels at 25 feet for typical construction equipment. The nearest off-site building/structure is the commercial retail use to the west adjoining/attached to the on-site commercial building proposed for demolition, and the multifamily residences located approximately 10 feet north of the Project Site boundary and 15 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 the table, 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 source of activity.

Table 5: Typical Construction Equipment Vibration Levels							
Equipment	Peak Particle Velocity at 25 Feet (in/sec)	Peak Particle Velocity at 15 Feet (in/sec)					
Large Bulldozer	0.089	0.192					
Caisson Drilling	0.089	0.192					
Loaded Trucks	0.076	0.164					
Rock Breaker	0.059	0.127					
Jackhammer	0.035	0.0075					
Small Bulldozer/Tractors	0.003	0.007					
Source: Federal Transit Administration, Transit Admini	ansit Noise and Vibration Impact Assessi	ment Manual, 2018.					

<sup>&</sup>lt;sup>14</sup> California Department of Transportation, *Transportation and Construction Vibration Guidance Manual, Table 20*, September 2013.
As shown in <u>Table 5</u>, at 15 feet the vibration velocities from construction equipment would reach approximately 0.192 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 some construction activity may occur right at the property line/adjoining commercial building to the west. However, demolition activities along the western property line (up against the commercial building to the west) would be done by hand to reduce the potential for construction vibration impacts. As indicated above, the use of heavy construction equipment would occur no closer than 15 feet from the nearest off-site buildings for build-up construction and would not create construction vibration impacts. Once operational, the Project would not include vibration-generating uses or operations. Therefore, vibration impacts associated with the Project would be less than significant.

#### Conclusion

Project implementation would result in less than significant short-term and long-term noise and vibration impacts. Therefore, the Project would not result in significant effects related to Section 15332(d) of the CEQA Guidelines.

Appendix A

**RCNM Modeling Results** 

### Roadway Construction Noise Model (RCNM), Version 1.1

Report date:05/02/2022Case Description:Demolition
**** Receptor #1 ****
Baselines (dBA) Description Land Use Daytime Evening Night
Residential - N Residential 55.0 55.0 45.0
Equipment
Spec Actual Receptor Estimated Impact Usage Lmax Lmax Distance Shielding Description Device (%) (dBA) (dBA) (feet) (dBA)
Concrete Saw No 20 89.6 110.0 0.0   Excavator No 40 80.7 110.0 0.0   Dozer No 40 85.0 110.0 0.0
Results
Noise Limits (dBA) Noise Limit Exceedance (dBA)
Calculated (dBA) Day Evening Night Day Evening Night
Equipment Lmax Leq
Concrete Saw 82.7 75.7 N/A
Excavator 73.9 69.9 N/A
Dozer 78.2 74.2 N/A
Total 82.7 78.7 N/A
**** Receptor #2 ****
Baselines (dBA) Description Land Use Daytime Evening Night
Residential - NE Residential 55.0 55.0 45.0
Equipment
Spec Actual Receptor Estimated Impact Usage Lmax Lmax Distance Shielding Description Device (%) (dBA) (dBA) (feet) (dBA)

Concrete Saw Excavator Dozer	No 20 89.6 200.0 0.0   No 40 80.7 200.0 0.0   No 40 85.0 200.0 0.0
	Results
	Noise Limits (dBA) Noise Limit Exceedance (dBA)
	Calculated (dBA) Day Evening Night Day Evening Night
Equipment Lmax Leq	Lmax Leq Lmax Leq Lmax Leq Lmax Leq Lmax Leq Lmax Leq
Concrete Saw	77.5 70.5 N/A
Excavator	68.7 64.7 N/A
Dozer	73.0 69.0 N/A
Total N/A	77.5 73.5 N/A
	**** Receptor #3 ****
Description	Baselines (dBA) Land Use Daytime Evening Night
Commercial -	W Commercial 65.0 65.0 55.0
	Equipment
Impa Description	Spec Actual Receptor Estimated act Usage Lmax Lmax Distance Shielding Device (%) (dBA) (dBA) (feet) (dBA)
Concrete Saw Excavator Dozer	No 20 89.6 100.0 0.0   No 40 80.7 100.0 0.0   No 40 85.0 100.0 0.0
	Results
	Noise Limits (dBA) Noise Limit Exceedance (dBA)
	Calculated (dBA) Day Evening Night Day Evening Night
Equipment Lmax Leq	Lmax Leq Lmax Leq Lmax Leq Lmax Leq Lmax Leq Lmax Leq
Concrete Saw	83.6 76.6 N/A
Excavator	74.7 70.7 N/A
N/A Dozer	79.0 75.0 N/A

N/A

### Roadway Construction Noise Model (RCNM), Version 1.1

Report date: Case Descript	05 tion:	5/02/2022 Site Prep	2										
	**	** Recep	otor #1 **	***									
Description	Land	Base Use	elines (dE Daytime	BA) Even	ing N	ight							
Residential - 1	N Resid	dential	55.0	55.0	45.0								
		Equipme	ent										
Imp. Description	Sp act Usag Device	ec Actu ge Lmax (%) (0	ual Rec x Lmax 1BA) (d	eptor Dis BA)	Estima stance (feet)	ted Shieldi (dB	ing A)						
Dozer Tractor	No 4 No 4	0 0 84.0	81.7	110.0 110.0	0. 0.	0 0							
		Results											
			No	oise Lin	nits (dB	A)		Noi	se Limit	Exceed	ance (d	BA)	
	Calcula	ted (dBA	L) D	ay	Eveni	ing	Night		Day	Ever	ning	Nigh	t
Equipment Lmax L10	]	Lmax I	L10 I	Lmax	L10	Lmax	L10	Lmax	L10	Lmax	L10	Lmax	L10
Dozer	74.	8 73.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor N/A	77.	2 76.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A N/A	ul 77.2	78.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	**	** Recep	otor #2 **	***									
Description	Land	Base Use	elines (dE Daytime	BA) Even	ning N	light							
Residential -	NE Coi	nmercial	55.	0 5	5.0 4	5.0							
		Equipme	ent										
Imp Description	Sp act Usag Device	ec Acture e Lmax (%) (0	ual Rec x Lmax 1BA) (d	eptor Dis BA)	Estima stance (feet)	ted Shieldi (dB	ing A)						
Dozer Tractor	No 4 No 4	0 0 84.0	81.7	200.0 200.0	0. 0.	0 0							

		F	Results	S										
		-		N	oise Lir	nits (dE	BA)		Noi	se Limit	Exceed	ance (d	BA)	
		Calculate	ed (dB	A) D	Day	Even	ing	Night		Day	Ever	ning	Nigh	t
Equipmo Lmax	ent L10	L	max	L10	Lmax	L10	Lmax	L10	Lmax	L10	Lmax	L10	Lmax	L10
Dozer N/A		69.6	68.6	5 N/A	N/A	. N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor N/A		72.0	71.(	) N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	Tota	1 72.0	73.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

\*\*\*\* Receptor #3 \*\*\*\*

Baselines (dBA)DescriptionLand UseDaytimeEveningNightCommercial - WCommercial65.065.055.0

Equipment

\_\_\_\_\_

Spec Actual Receptor Estimated Impact Usage Lmax Lmax Distance Shielding Description Device (%) (dBA) (dBA) (feet) (dBA)

Dozer	No	40	81.7	100.0	0.0
Tractor	No	40	84.0	100.0	0.0

Results

			Noise Limits (dBA)								Noise Limit Exceedance (dBA)						
		Calculated (dBA)		A) Da	Day		Evening			Day	Evening		Nigh	t			
Equipment Lmax L10	L1	max ]	L10 I	.max	L10	Lmax	L10	Lmax	L10	Lmax	L10	Lmax	L10				
Dozer N/A		75.6	74.7	N/A	N/A	N/A	. N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
Tractor N/A		78.0	77.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
N/A	Total	l 78.0	79.0	N/A	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

Case Descri	: ption:	05/0 G1	2/2022 rading											
		****	Recepto	r#1 ***	**									
Description	L	and Us	Baselin e Da	nes (dBA aytime	A) Evenii	ng Nig	ght							
Residenital	- N 1	Resider	ntial	55.0	55.0	45.0								
		E	quipmen	t										
Imp Description	act U Devie	Spec sage ce (%)	Actual Lmax ) (dBA	Recep Lmax A) (dBA	tor Es Distan A) (f	stimated nce Sl Yeet)	d nielding (dBA)	5						
Excavator	No	40	8	).7	110.0	0.0	)							
Grader	No No	40 40	85.0	1 7 1	10.0	0.0								
Tractor	No	40	84.0	1	10.0	0.0								
		P	ogulta											
		K	esuits											
				Nois	se Limi	ts (dBA	<b>A</b> )		Nois	e Limit E	Exceeda	nce (dE	BA)	
	Cal		  d (dBA)	Nois Da	se Limi y	ts (dBA Evenin	A) 	 Night	Nois	e Limit F  Day	Exceeda Even	ince (dE ing	BA)  Night	
Equipment Lmax Lec	Cal 	culated Lulated	 1 (dBA) Lee	Nois Da Ja	se Limi y nax I	ts (dBA Evenin Leq L	ng max	Night Leq I	Nois 	e Limit F Day Leq I	Exceeda Even Lmax	ing Leq	3A)  Night Lmax	Leq
Equipment Lmax Lec Excavator	Cal 	Ln 73.9	 d (dBA)  hax Lee 	Nois Day q Lı N/A	se Limi y nax I N/A	ts (dBA Evenin Leq L N/A	A) ng .max N/A	Night Leq I N/A	Nois    N/A	e Limit F Day Leq I N/A	Exceeda Even Lmax N/A	ing Leq N/A	3A) Night Lmax N/A	Leq N/A
Equipment Lmax Leg Excavator N/A Grader	Cal 	Ln 73.9	 d (dBA)  hax Leo  69.9 74.2	Nois Day A Lı N/A N/A	se Limi y nax I N/A N/A	ts (dBA Evenin Leq L N/A N/A	A) .max N/A N/A	Night Leq I N/A N/A	Nois Lmax N/A N/A	e Limit F Day Leq I N/A N/A	Exceeda Even Lmax N/A N/A	ing Leq N/A N/A	BA) Night Lmax N/A N/A	Leq N/A N/A
Equipment Lmax Lec Excavator N/A Grader N/A Dozer N/A	Cal 	 Ln 73.9 78.2 74.8	 d (dBA)   69.9 74.2 70.8	Nois Day A Lı N/A N/A N/A	se Limi y nax I N/A N/A N/A	ts (dBA Evenin Leq L N/A N/A N/A	A) ng max N/A N/A N/A	Night Leq I N/A N/A N/A	Nois Lmax N/A N/A N/A	e Limit F Day Leq I N/A N/A N/A	Exceeda Even Lmax N/A N/A N/A	ing Leq N/A N/A N/A	BA) Night Lmax N/A N/A N/A	Leq N/A N/A N/A
Equipment Lmax Lec Excavator N/A Grader N/A Dozer N/A Tractor N/A	Cal 	Ln 73.9 78.2 74.8 77.2	 d (dBA)   69.9 74.2 70.8 73.2	Nois Day A Lı N/A N/A N/A N/A N/A	se Limi y max I N/A N/A N/A N/A	ts (dBA Evenin Leq L N/A N/A N/A N/A	ng max N/A N/A N/A N/A	Night Leq I N/A N/A N/A N/A	Nois Lmax N/A N/A N/A N/A	e Limit F Day Leq I N/A N/A N/A N/A N/A	Exceeda Even Lmax N/A N/A N/A N/A	ince (dE ing Leq N/A N/A N/A N/A	BA) Night Lmax N/A N/A N/A N/A	Leq N/A N/A N/A N/A

### \*\*\*\* Receptor #2 \*\*\*\*

Baselines (dBA) Description Land Use Daytime Evening Night ------Residential - NE Residential 55.0 55.0 45.0

> Equipment -----Spec Actual Receptor Estimated

Impa Description	act U Devi	sage ce (%)	Lmax ) (dBA	Lmax A) (dBA	Dista A) (	nce S feet)	hieldin (dBA)	g )						
Excavator Grader Dozer Tractor	No No No No		85.0 81 84.0	0.7 .7 20 .7 20	200.0 00.0 00.0 00.0 00.0	0.0 0.0 0.0 0.0	0							
		R	esults											
				Noi	se Lim	its (dBA	A)		Noi	se Limit	Exceeda	ance (dl	BA)	
	Ca	lculated	d (dBA)	Da	у	Eveni	ng	Night		Day	Even	ing	Night	-
Equipment Lmax Leq		Ln	nax Le	eq Li	max ]	Leq I	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator		68.7	64.7	N/A	N/A	A N/A	A N/A	A N/A	A N/A	A N/A	A N/A	N/A	N/A	N/A
Grader		73.0	69.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer		69.6	65.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor		72.0	68.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A Tot N/A	tal	73.0	73.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		****	Recepto	or #3 ***	**									
Description	La	and Use	Baseli e Da	nes (dBA aytime	A) Evenii	ng Ni	ght							
Commercial	- W	Comr	nercial	65.0	65	5.0 55	5.0							
		E	quipmer	ıt										
Impa Description	act U Devi	Spec sage ce (%)	Actual Lmax ) (dBA	Recep Lmax A) (dBA	tor E Dista A) (	Estimate ince S feet)	d hieldin (dBA)	g )						
Excavator Grader Dozer Tractor	No No No No		85.0 81 84.0	0.7 1 .7 10 10	100.0 00.0 00.0 00.0 00.0	0.0 0.0 0.0 0.0	0							
		R	esults											
				Noi	se Lim	its (dBA	A)		Noi	se Limit	Exceeda	ance (dl	BA)	
	Ca	lculated	d (dBA)	Da	у	Eveni	ng	Night		Day	Even	ing	Night	
Equipment Lmax Leq		Ln	nax Le	q Li	max ]	Leq I	Ĺ max	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq

Excavator	r	74.7	70.7	N/A										
N/A														
Grader		79.0	75.0	N/A										
N/A														
Dozer		75.6	71.7	N/A										
N/A														
Tractor		78.0	74.0	N/A										
N/A														
1	Total ′	79.0	79.2	N/A										
N/A														

Report date: Case Description	05/02/2022 Building Cons	truction						
	**** Receptor #1	****						
Description	Baselines Land Use Daytin	(dBA) ne Evening	Night					
Residenital - N	Residential 55.	0 55.0 45	5.0					
	Equipment							
Description	Spec A Impact Usage L Device (%)	Actual Recep max Lmax (dBA) (dBA	tor Estimate Distance S A) (feet)	d hielding (dBA)				
Crane Generator Tractor Welder / Torch All Other Equipr	No 16 No 50 No 40 8 No 40 nent > 5 HP No	80.6 11 80.6 11 4.0 11 73.0 50 85.0	10.0 0.0 110.0 0.0 10.0 0.0 110.0 0 110.0 0 110.0	) 0.0 0.0				
	Results							
	Results	Noise Limit	s (dBA)	Nois	se Limit Exce	eedance (dI	BA)	
	Results  Calculated (dBA)	Noise Limita Day 1	s (dBA) Evening	Noi: Night	se Limit Exco Day E	eedance (dl	BA)  Night	
Equipment Lmax Leq	Results  Calculated (dBA)  Lmax Leq	Noise Limits Day 1 Lmax Le	s (dBA) Evening eq Lmax I	Nois Night Leq Lmax	se Limit Exco Day E Leq Lma	eedance (dł Cvening ax Leq	BA) Night Lmax	Leq
Equipment Lmax Leq Crane	Results  Calculated (dBA)  Lmax Leq 73.7 65.7	Noise Limit Day I Lmax Lo N/A N/A	s (dBA) Evening eq Lmax I N/A N/A	Nois Night Leq Lmax N/A N/A	se Limit Exco Day E Leq Lma N/A N	eedance (df Evening ax Leq /A N/A	BA) Night Lmax N/A	Leq N/A
Equipment Lmax Leq Crane N/A Generator	Results Calculated (dBA) Lmax Leq 73.7 65.7 73.8 70.8	Noise Limit Day l Lmax Le N/A N/A N/A N/A	s (dBA) Evening eq Lmax I N/A N/A N/A N/A	Nois Night Leq Lmax N/A N/A N/A N/A	se Limit Exco Day E Leq Lma N/A N/	eedance (df Evening ax Leq /A N/A N/A N/A	BA) Night Lmax N/A N/A	Leq N/A N/A
Equipment Lmax Leq Crane N/A Generator N/A Tractor N/A	Results  Calculated (dBA) Lmax Leq 73.7 65.7 73.8 70.8 77.2 73.2	Noise Limit Day I Lmax Le N/A N/A N/A N/A N/A N/A	s (dBA) Evening eq Lmax I N/A N/A N/A N/A N/A N/A	Nois Night Leq Lmax N/A N/A N/A N/A N/A N/A	se Limit Exco Day E Leq Lma N/A N N/A N N/A N	eedance (df Evening ax Leq /A N/A N/A N/A	BA) Night Lmax N/A N/A N/A	Leq N/A N/A N/A
Equipment Lmax Leq  Crane N/A Generator N/A Tractor N/A Welder / Torch N/A	Results Calculated (dBA) Lmax Leq 73.7 65.7 73.8 70.8 77.2 73.2 66.2 62.2	Noise Limit Day I Lmax Le N/A N/A N/A N/A N/A N/A N/A N/A	s (dBA) Evening eq Lmax I N/A N/A N/A N/A N/A N/A	Nois Night Leq Lmax N/A N/A N/A N/A N/A N/A	se Limit Exce Day E Leq Lma N/A N/A N/A N N/A N	eedance (df Evening Ax Leq /A N/A N/A N/A /A N/A	BA) Night Lmax N/A N/A N/A N/A	Leq N/A N/A N/A
Equipment Lmax Leq Crane N/A Generator N/A Tractor N/A Welder / Torch N/A Welder / Torch N/A N/A All Other Equipr	Results Calculated (dBA) Lmax Leq 73.7 65.7 73.8 70.8 77.2 73.2 66.2 62.2 ment > 5 HP 78.2	Noise Limits Day I Lmax Le N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	s (dBA) Evening eq Lmax I N/A N/A N/A N/A N/A N/A A N/A N/A N/A N/A	Nois Night Leq Lmax N/A N/A N/A N/A N/A N/A X/A N/A N/A	se Limit Exce Day E Leq Lma N/A N/A N/A N/A N/A N/A	eedance (df Evening ax Leq /A N/A N/A N/A N/A N/A N/A N/A	BA) Night Lmax N/A N/A N/A N/A A N/A	Leq N/A N/A N/A A N/A

\*\*\*\* Receptor #2 \*\*\*\*

	Equipment
Description	Spec Actual Receptor Estimated Impact Usage Lmax Lmax Distance Shielding Device (%) (dBA) (dBA) (feet) (dBA)
Crane Generator Tractor Welder / Torch All Other Equipr	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
	Results
	Noise Limits (dBA) Noise Limit Exceedance (dBA)
	Calculated (dBA) Day Evening Night Day Evening Night
Equipment Lmax Leq	Lmax Leq Lmax Leq Lmax Leq Lmax Leq Lmax Leq
Crane N/A Generator N/A Tractor N/A Welder / Torch N/A N/A N/A Total N/A	68.5 60.6 N/A
Description I	Land Use Daytime Evening Night
Commercial - W	Commercial 65.0 65.0 55.0
	Equipment
Description	Spec Actual Receptor Estimated Impact Usage Lmax Lmax Distance Shielding Device (%) (dBA) (dBA) (feet) (dBA)
Crane Generator Tractor Welder / Torch All Other Equipr	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

Results

		Noise Lin	mits (dBA)	No	Noise Limit Exceedance (dBA)					
	Calculated (dBA)	Day	Evening	Night	Day	Evening	Night			
Equipment Lmax Leq	Lmax Le	q Lmax	Leq Lmax	Leq Lmax	Leq	Lmax Leq	Lmax Leq			
Crane	74.5 66.6	N/A N/A	N/AN/A	N/A N/A	N/A	N/A N/A	N/A N/A			
Generator N/A	74.6 71.6	N/A N/	A N/A N/	A N/A N/A	A N/A	N/AN/A	A N/A N/A			
Tractor N/A	78.0 74.0	N/A N/A	N/A N/A	A N/A N/A	N/A	N/A N/A	N/A N/A			
Welder / Torch N/A N/A	67.0 63.0	) N/A	N/A N/A	N/A N/A 1	N/A N	/A N/A N	I/A N/A			
All Other Equipm	ment > 5 HP 79.0	76.0 N	I/A N/A N	I/A N/A N	/A N/A	N/A N/.	A N/A N/A			
Total N/A	79.0 79.3	N/A 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

Case Description	05/02/ n: Pav	2022 ing											
	**** R	leceptor	#1 ****	*									
Description	Land Use	Baseline Day	s (dBA time	) Evening	g Nigi	ht							
Residential - N	Residenti	ial 5:	5.0	55.0	45.0								
	Equ	ipment											
Description	Impact Dev	Spec Usage vice (%	Actua Lmax ) (dE	l Rece Lmax 3A) (dł	eptor Dis BA)	Estimate tance S (feet)	ed Shieldin (dBA	lg .)					
Vibratory Concr Paver Roller Tractor All Other Equipt	ete Mixer No No nent > 5 H	No 50 20 0 40 IP N	20 77 80 84.0 60 50	87.2 0.0 85.0	0.0 110.0 110.0 110.0 110.0	110.0 0.0 0.0 0.0 110.0	0.0	) ).0					
	Res	ults											
			No	oise Lim	its (dB	A)		Nois	se Limit	Exceed	ance (d	BA)	
	Calculate	 ed (dBA)	No D	oise Lim ay	iits (dB Even	A) ing	Night	Nois	se Limit Day	Exceed Ever	ance (d	BA)  Nigh	t
Equipment Lmax Leq	Calculate	d (dBA) max Le	D q l	bise Lim ay Lmax	iits (dB Even: Leq	A) ing Lmax	Night Leq	Nois  Lmax	se Limit Day Leq	Exceed Ever Lmax	ance (d ning Leq	BA) Nigh Lmax	t Leq
Equipment Lmax Leq 	Calculate  Lı  ete Mixer	d (dBA) max Le 73.2	No D oq 1 	bise Lim ay Lmax N/A	its (dB Even Leq N/A	A) ing Lmax N/A	Night Leq N/A	Nois Lmax N/A	se Limit Day Leq N/A	Exceed Ever Lmax N/A	ance (d ning Leq N/A	BA) Nigh Lmax N/A	t Leq N/A
Equipment Lmax Leq Vibratory Concre N/A N/A Paver	Calculate Lı Lı ete Mixer 70.4	 d (dBA) max Le  73.2 67.4	No D oq I 66.2 N/A	oise Lim ay Lmax N/A N/A	iits (dB Even Leq N/A	A) ing Lmax M/A N/A	Night Leq N/A N/A	Nois Lmax  N/A N/A	se Limit Day Leq N/A N/A	Exceed Ever Lmax N/A N/A	ance (d ning Leq N/A N/A	BA) Nigh Lmax N/A	t Leq N/A N/A
Equipment Lmax Leq 	Calculate L1  ete Mixer 70.4 73.2	 d (dBA) max Le 73.2 67.4 66.2	No D oq I 66.2 N/A N/A	oise Lim ay Lmax N/A N/A N/A	iits (dB Even Leq N/A N/A N/A	A) ing Lmax N/A N/A N/A	Night Leq N/A N/A N/A	Nois Lmax N/A N/A N/A	se Limit Day Leq N/A N/A N/A	Exceed Ever Lmax N/A N/A N/A	ance (d ning Leq N/A N/A N/A	BA) Nigh Lmax N/A N/A N/A	t Leq N/A N/A N/A
Equipment Lmax Leq Vibratory Concr N/A N/A Paver N/A Roller N/A Tractor N/A	Calculate L1  ete Mixer 70.4 73.2 77.2	 d (dBA) max Le 73.2 67.4 66.2 73.2	No D oq I 66.2 N/A N/A N/A	bise Lim ay Lmax N/A N/A N/A N/A	iits (dB Even Leq N/A N/A N/A N/A	A) ing Lmax N/A N/A N/A N/A	Night Leq N/A N/A N/A N/A	Nois Lmax N/A N/A N/A N/A N/A	se Limit Day Leq N/A N/A N/A N/A	Exceed Ever Lmax N/A N/A N/A N/A	ance (di ning Leq N/A N/A N/A N/A	BA) Nigh Lmax N/A N/A N/A N/A	t Leq N/A N/A N/A N/A
Equipment Lmax Leq 	Calculate L1 t ete Mixer 70.4 73.2 77.2 ment > 5 H	 d (dBA) max Le 73.2 67.4 66.2 73.2 IP 78.2	No D oq 1 66.2 N/A N/A N/A N/A 75.1	bise Lim ay Lmax N/A N/A N/A N/A N/A	iits (dB Even Leq N/A N/A N/A N/A N/A	A) ing Lmax N/A N/A N/A N/A N/A	Night Leq N/A N/A N/A N/A	Nois Lmax N/A N/A N/A N/A N/A	se Limit Day Leq N/A N/A N/A N/A N/A	Exceeda Ever Lmax N/A N/A N/A N/A N/A	ance (di ning Leq N/A N/A N/A N/A A N/A	BA) Nigh Lmax N/A N/A N/A N/A N/A	t Leq N/A N/A N/A N/A A N/A

\*\*\*\* Receptor #2 \*\*\*\*

#### Equipment \_\_\_\_\_ Spec Actual Receptor Estimated Impact Usage Lmax Lmax Distance Shielding Device (%) (dBA) (dBA) Description (feet) (dBA) ---------------\_\_\_\_\_ \_\_\_\_\_ No 20 Vibratory Concrete Mixer 80.0 200.0 0.0 50 77.2 200.0 Paver No 0.0 Roller No 20 80.0 200.0 0.0 Tractor No 40 84.0 200.0 0.0 All Other Equipment > 5 HP 0.0 No 50 85.0 200.0

Results

			No	ise Lim	its (dB	A)		Nois	se Limit	Exceeda	ance (d	BA)	
(	Calculate	d (dBA)	Da	ay	Even	ing	Night		Day	Ever	ing	Night	t
Equipment Lmax Leq	Lı	nax Le	q L	.max	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Vibratory Concret N/A N/A	te Mixer	68.0	61.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver N/A	65.2	62.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller N/A	68.0	61.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor N/A	72.0	68.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipm N/A N/A	ent > 5 H	IP 73.0	69.9	N/.	A N/	'A N/.	A N/.	A N/A	A N/A	N/2	A N/2	A N/A	N/A
Total N/A	73.0	73.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

\*\*\*\* Receptor #3 \*\*\*\*

Baselines (dBA) Description Land Use Daytime Evening Night ------Commercial - W Commercial 65.0 65.0 55.0

Equipment

		Spec	Actual	Receptor	Estimate	ed
Impa	act Us	sage L	.max L	max Dis	stance S	Shielding
Description	Devic	æ (%)	(dBA)	(dBA)	(feet)	(dBA)
Vibratory Concrete Mi	xer	No	20	80.0	100.0	0.0
Paver	No	50	77.2	100.0	0.0	
Roller	No	20	80.0	100.0	0.0	
Tractor	No	40 8	34.0	100.0	0.0	
All Other Equipment >	5 HP	No	50	85.0	100.0	0.0

Results

			No	ise Lim	its (dB	A)		Nois	se Limit	Exceed	ance (d	BA)	
	Calculate	d (dBA)	Da	ıy	Eveni	ng	Night		Day	Ever	ning	Nigh	t
Equipment Lmax Leq	Lr	nax Le	q L	max ]	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Vibratory Concre N/A N/A	te Mixer	74.0	67.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver N/A	71.2	68.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller N/A	74.0	67.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor N/A	78.0	74.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
All Other Equipm	hent $> 5$ H	IP 79.0	76.0	N/2	A N/	A N/.	A N/	A N/2	A N/A	N/2	A N/	A N/A	A N/A
Total N/A	79.0	79.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Report date: Case Description:	05/02/2022 Architectural Coa	ting					
	**** Receptor #1 **	**					
Description Lan	Baselines (dB d Use Daytime	A) Evening Night					
Residential - N Re	sidential 55.0	55.0 45.0					
	Equipment						
Impact Description De	Spec Actual F Usage Lmax Lm vice (%) (dBA)	Receptor Estimated hax Distance Sh (dBA) (feet)	l iielding (dBA)				
Compressor (air)	No 40 77	7.7 110.0 0	0.0				
	Results						
	No	ise Limits (dBA)	Ν	oise Limit	Exceedance (	dBA)	
Calcu	lated (dBA) Da	ay Evening	Night	Day	Evening	Nigh	t
Equipment Lmax Leq	Lmax Leq L	max Leq Lmax	Leq Lmax	x Leq	Lmax Leq	Lmax	Leq
Compressor (air) N/A Total 7( N/A	70.8 66.8 N ).8 66.8 N/A	J/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A	N/A I N/A	N/A N/A N/A N/A	N/A N N/A	I/A N/A N/A
:	**** Receptor #2 **	**					
Description La	Baselines (dB nd Use Daytime	A) Evening Night					
Residential - NE R	Residential 55.0	55.0 45.0					
	Equipment						
Impact Description De	Spec Actual F Usage Lmax Lm vice (%) (dBA)	Receptor Estimated hax Distance Sh (dBA) (feet)	l iielding (dBA)				
Compressor (air)	No 40 77	7.7 200.0 0	0.0				
	Degulta						
	Results						

	Calculated (d	BA)	Day	Eve	ning	Nigł	nt	Day	Eve	ening	Nigh	t
Equipment Lmax Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (a N/A Total	ir) 65.6 65.6 61.	61.6 .6 N	N/A //A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N N/A	J/A N/A N/A
N/A	**** Re	eceptor #	<u>-</u> 3 ****									
Description	B Land Use	Baselines Dayti	(dBA) me Eve	ning N	Night							
In Description	Equij  Spec pact Usage Device (%	pment  Actua Lmax 6) (dE	l Recep Lmax 3A) (dBA	tor Es Distan A) (fe	timated ace Sh eet)	l iielding (dBA)						
Compressor (a	ir) No Resu	40 lts -	77.7	100.0	) 0	).0						
	_		Noise Li	imits (dl	BA)		No	oise Lim	it Excee	dance (	dBA)	
	Calculated (d	BA)	Day	Eve	ning	Nigł	nt	Day	Eve	ening	Nigh	t
Equipment Lmax Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (a N/A Total	ir) 71.6 71.6 67.	67.7 .7 N	N/A //A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N/A	N/A N N/A	I/A N/A N/A

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: Case Descript	05/05/2022 ion: Trash/Truck	Delivery/Pick uj	þ			
	**** Receptor	<i>4</i> 1 ****				
Description	Baseline Land Use Day	s (dBA) time Evening	Night			
Residential - N	N Commercial	55.0 55.0	45.0			
	Equipment					
Impa Description I	Spec Actual ct Usage Lmax L Device (%) (dBA)	Receptor Estir max Distance (dBA) (feet	nated e Shielding t) (dBA)			
Dump Truck	No 40 7	6.5 100.0	5.0			
	Results					
		Noise Limits (	dBA)	Noise Lin	nit Exceedance (	dBA)
	Calculated (dBA)	Day Ev	ening Nig	ht Day	Evening	Night
Equipment Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq	Lmax Leq
Dump Truck N/A Tota	65.4 61.5 1 65.4 61.5 1	N/A N/A J/A N/A N/	N/A N/A A N/A N/A	N/A N/A A N/A N/A	N/A N/A A N/A N/A	N/A N/A N/A N/A N/A

### Appendix C

Air Quality Analysis

# Kimley »Horn

### **MEMORANDUM**

То:	Andrew Coyne, City of Temple City
From:	Ryan Chiene and Hayley Rundle, Kimley-Horn and Associates, Inc.
Date:	May 4, 2022
Subject:	Pacific Las Tunas Place Mixed-Use Development Project – Air Quality Analysis

#### Purpose

The purpose of this memorandum is to identify the air quality emissions associated with construction and operations of the Pacific Las Tunas Place Mixed-Use Development Project ("Project"), located in the City of Temple City, California. This memorandum has been prepared to support an exemption from the California Environmental Quality Act (CEQA) in accordance with CEQA Guidelines Section 15332 (In-Fill Development Projects). Specifically, this analysis addresses the air quality impacts referenced in CEQA Guidelines Section 15332(d).

#### **Project Location**

The Project Site is located on one 1.17-acre parcel (Los Angeles County Assessor's Parcel Number [APN] 8587-008-017) at 9465 Las Tunas Drive within the City of Temple City (City). The Project Site is bound by Woodruff Avenue to the north, Cloverly Avenue to the east, Oak Avenue to the west, and Las Tunas Drive to the south. The Project Site is currently developed and consists of a 22,690 square-foot commercial mini-mall.

#### **Project Description**

The Project would replace the existing two-story building and surface parking lot with a four-story 58foot mixed-use building and one level of subterranean parking. The Project would include 46 residential condominium dwelling units (71,536 square feet), a recreational room and gym (2,054 square feet), a ground floor lobby (1,046 square feet), and ground floor retail/office space (5,800 square feet), resulting in a total developed floor area of approximately 80,436 square feet and a floor area ratio (FAR) of 1.577:1. The Project would provide 22 one-bedroom units, 21 two-bedroom units, and 3 three-bedroom units. The Project would be required to provide 4,600 square feet of common open space and private open space across the Project Site. The Project would provide a total of 15,428 square feet of open space, which includes a 3,620-square-foot residential courtyard on the second floor podium deck, a private 8,228-square-foot wraparound balcony for residents on the second floor, and private 110-square-foot balconies for 32 residential units (totaling 3,520 square feet). The Project's commercial component would consist of 3,300 square feet for retail/office uses and 2,500 square feet for café/restaurant uses. Construction is anticipated to commence in March 2023 and be completed by June 2025.

#### **Air Quality Impacts**

#### SCAQMD Thresholds

The South Coast Air Quality Management District (SCAQMD) is the regulatory agency responsible for improving air quality for large areas of Los Angeles, Orange, Riverside, and San Bernardino Counties. The Project Site is located within the South Coast Air Basin, which is a distinct geographic subarea within SCAQMD's jurisdiction. 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<sub>X</sub>), carbon monoxide (CO), sulfur oxides (SO<sub>X</sub>), particulate matter 10 microns or less in diameter (PM<sub>10</sub>), and particulate matter 2.5 microns or less in diameter (PM<sub>2.5</sub>). The thresholds apply to both project construction and operation within the SCAQMD jurisdictional boundaries. If the SCAQMD thresholds are exceeded, a potentially significant impact could result. However, ultimately the City, as the Lead Agency under CEQA, determines the thresholds of significance for impacts. If a project proposes development in excess of the established thresholds, as outlined in <u>Table 1: South</u> <u>Coast Air Quality Management District Significance Thresholds</u>, a significant air quality impact may occur and additional analysis is warranted to fully assess the significance of impacts.

Table 1: South Coast Air Quality Management District Significance Thresholds							
Dollutant	Mass Daily Thresholds (pounds per day)						
Pollutant	Construction	Operations					
Nitrogen Oxides (NO <sub>x</sub> )	100	55					
Volatile Organic Compounds (VOC) <sup>1</sup>	75	55					
Particulate Matter up to 10 Microns (PM <sub>10</sub> )	150	150					
Particulate Matter up to 2.5 Microns (PM <sub>2.5</sub> )	55	55					
Sulphur Oxides (SO <sub>x</sub> )	150	150					
Carbon Monoxide (CO)	550	550					
Notes:							
1 VOCs and BOCs are subsets of erganic gases that a	are emitted from the incomplet	a combustion of hydrocarbons or					

 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, SCAQMD 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 within the Project area include ozoneprecursor pollutants (i.e., ROG and NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but 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 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

Page 2

disturbance associated with site preparation activities as well as weather conditions and the appropriate application of water.

The duration of construction activities for the Project is estimated to be approximately 28 months, beginning in March 2023 and finishing in June 2025. The Project would demolish existing uses on-site to construct 46 residential condominium dwelling units (71,536 square feet), a recreational room and gym (2,054 square feet), a ground floor lobby (1,046 square feet), and ground floor retail/office space (5,800 square feet), resulting in a total developed floor area of approximately 80,436 square feet.

Construction-generated emissions associated with the Project were calculated using the CARBapproved California Emissions Estimator Model (CalEEMod), which is designed to model emissions for land use development projects, based on typical construction requirements. See <u>Appendix A: Air</u> <u>Quality Data</u> for more information regarding the construction assumptions used in this analysis. Predicted maximum daily construction-generated emissions for the proposed project are identified in <u>Table 2: Project Construction Emissions</u>.

Table 2: Project Construction Emissions									
Emissions (pounds per day) <sup>1</sup>									
construction rear	ROG	NOx	со	SO <sub>2</sub>	PM10	PM <sub>2.5</sub>			
2023	2.34	22.86	20.54	0.05	5.86	3.33			
2024	1.69	14.27	18.66	0.04	1.43	0.80			
2025	5.15	14.44	20.63	0.04	1.53	0.81			
Maximum Emissions	5.15	22.86	20.63	0.05	5.86	3.33			
SCAQMD Threshold	75	100	550	150	150	55			
SCAQMD Threshold Exceeded?	No	No	No	No	No	No			
•• •									

Notes:

 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.

Source: CalEEMod version 2020.4.0. Refer to <u>Appendix A</u> for model outputs.

<u>Table 2</u> shows that construction pollutant emissions would remain below their respective thresholds. While impacts would be considered less than significant, the Project would also be subject to SCAQMD Rules 402, 403, and 1113, which prohibit nuisances, require dust control measures, and limit VOC content in paints, respectively. Compliance with the standard SCAQMD rules would further reduce specific construction-related emissions. As shown above, all criteria pollutant emissions would remain 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, hearths, consumer products, and architectural coatings). Energy source emissions would be generated from electricity and natural gas

(non-hearth) usage. <u>Table 3: Project Operational Emissions</u> summarizes the operational emissions attributable to the Project. As shown in <u>Table 3</u>, the Project's emissions would not exceed SCAQMD thresholds. Therefore, regional operational emissions would result in a less than significant long-term regional air quality impact.

Table 3: Project Operational Emissions										
Courses	Emissions (pounds per day) <sup>1</sup>									
Source	ROG	NOx	СО	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>				
Area	1.29	<1	3.21	<1	<1	<1				
Energy	<1	<1	<1	<1	<1	<1				
Mobile	1.53	1.34	13.32	<1	3.00	<1				
Total	2.87	2.49	16.75	<1	3.10	<1				
SCAQMD Threshold	55	55	550	150	150	55				
SCAQMD Threshold Exceeded?	No	No	No	No	No	No				
Notes:										

1. Emissions were calculated using the California Emissions Estimator Model (CalEEMod) version 2020.4.0, as recommended by the SCAQMD. Worst-case seasonal maximum daily emissions are reported.

Source: CalEEMod version 2020.4.0. Refer to <u>Appendix A</u> for model outputs.

#### Localized Construction Impacts

The nearest sensitive receptors to the Project are multi-family residences located 10 feet to the north and single-family residences located approximately 70 feet to the northeast of the Project 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 level proposed projects.

Because CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, <u>Table 4: Equipment-Specific Grading Rates</u> 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 East San Gabriel Valley (SRA 9) area since this area includes the Project Site. LSTs apply to NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. The SCAQMD produced look-up tables for projects that disturb areas less than or equal to 5 acres in size. Based on the daily equipment modeled in CalEEMod, project construction is anticipated to disturb approximately 2.5 acres in a single day. As such, the LSTs for a maximum daily disturbance of 2.5 acres were used in 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				
	Crawler Tractor	3	0.5	8	1.5				
	Graders	1	0.5	8	0.5				
Grading	Rubber-Tired Dozers	1	0.5	8	0.5				
	Scrapers	0	1.0	0	0				
			Total Acres	Graded per Day	2.5				
Source: CalEEMo	od version 2020.4.0.								

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 receptor to the Project Site is the multi-family residences located 10 feet (approximately 3 meters) to the north of the Project Site. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. Therefore, as recommended by the SCAQMD, LSTs for receptors located at 25 meters were used in this analysis for receptors closer than 25 meters. <u>Table 5: Localized Significance of Emissions</u>, presents the results of localized emissions during construction activity. Emissions of these pollutants on the peak day of construction would not result in significant concentrations of pollutants at nearby sensitive receptors. Therefore, significant impacts would not occur concerning LSTs during construction activities.

Table 5: Localized Significance of Emissions				
Source / Activity		Emissions (po	unds per day) <sup>1</sup>	
Source/ Activity	NOx	СО	PM <sub>10</sub>	PM <sub>2.5</sub>
Construction Emissions				
Demolition 2023	21.48	19.64	1.82	1.05
Site Preparation 2023	18.86	12.91	5.72	3.30
Grading 2023	17.93	14.75	3.40	1.98
Paving 2023	8.79	12.19	0.44	0.40
Building Construction 2024	13.44	16.17	0.61	0.58
Building Construction 2025	12.47	16.08	0.53	0.50
Architectural Coating 2025	1.15	1.81	0.05	0.05
Maximum Daily Emissions	21.48	19.64	5.72	3.30
SCAQMD Localized Screening Threshold (2.5 acres of disturbance at 25 meters)	141	1,083	8	6
Exceed SCAQMD Threshold?	No	No	No	No

# Kimley *Whorn*

Table 5: Localized Significance of Emissions				
Source (Activity		Emissions (po	unds per day) <sup>1</sup>	
Source/Activity	NOx	СО	PM <sub>10</sub>	PM <sub>2.5</sub>
Operational Emissions				
On-Site Emissions (Area + Energy Sources)	1.14	3.41	0.10	0.10
SCAQMD Localized Screening Threshold (2.5 acres of disturbance at 25 meters)	141	1,083	2	1
Exceed SCAQMD Threshold?	No	No	No	No
Source: CalEEMod version 2020 4.0. Refer to Appendix	A for model dat			

#### Localized Operational Impacts

According to the SCAQMD localized significance threshold methodology, LSTs apply to on-site sources. LSTs for receptors located at 25 meters for SRA 9 were conservatively used in this analysis. The 1-acre LST threshold was used for the 1.17-acre Project Site. The operational emissions shown in Table 5 include all on-site Project-related stationary sources (i.e., area and energy sources). The maximum daily emissions of these pollutants during operations would not result in significant concentrations of pollutants at nearby sensitive receptors. Therefore, significant impacts would not occur concerning LSTs during operational activities.

#### Carbon Monoxide Hot Spots

An analysis of CO "hot spots" is needed to determine whether the change in the level of service (LOS) of an intersection from the Project would have the potential to result in exceedances of the California Ambient Air Quality Standards (CAAQS) or National Ambient Air Quality Standards (NAAQS). 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. An analysis prepared for CO attainment in the South Coast Air Basin by the SCAQMD can assist in evaluating the potential for CO exceedances. CO attainment was thoroughly analyzed as part of the SCAQMD's 2003 Air Quality Management Plan. The Basin was re-designated as attainment in 2007 and is no longer addressed in the SCAQMD's Air Quality Management Plan (AQMP). The 2003 AQMP 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

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below the 35 ppm federal standard. The 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 Project would generate 657 daily vehicle trips.<sup>1</sup> 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 in the Project vicinity. Therefore, impacts would be less than significant.

#### Conclusion

Project implementation would result in less than significant construction and operational air quality impacts. No mitigation measures would be required. Therefore, the Project's approval would not result in any significant effects relating to air quality pursuant to State CEQA Guidelines Section 15332(d).

<sup>&</sup>lt;sup>1</sup> The Project's daily vehicle trips are based on Institute of Transportation Engineers (ITE) Trip Generation Manual, 11<sup>th</sup> Edition. The daily vehicle trips are gross and do not account for the removal of the existing commercial uses on-site.

Appendix A

CalEEMod Modeling Results

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

#### **Temple City Pacific Las Tunas Mixed Use Development**

Los Angeles-South Coast County, Summer

#### **1.0 Project Characteristics**

#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	143.00	Space	1.29	57,200.00	0
City Park	0.35	Acre	0.35	15,428.00	0
Condo/Townhouse	46.00	Dwelling Unit	2.88	46,000.00	132
Strip Mall	3.30	1000sqft	0.08	3,300.00	0
High Turnover (Sit Down Restaurant)	2.50	1000sqft	0.06	2,500.00	0

#### **1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2025
Utility Company	Southern California Edison				
CO2 Intensity (Ib/MWhr)	390.98	CH4 Intensity (Ib/MWhr)	0.033	N2O Intensity (Ib/MWhr)	).004

#### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site is 1.17-acre; however, lot acreage is based on CalEEMod defaults.

Construction Phase - Based on construction schedule from client.

Off-road Equipment - Decreasing equipment amount to reflect small size of the site

Trips and VMT -

Demolition -

Grading -

Vehicle Trips - Trip gen numbers to reflect ITE 11th edition trip gen rates, city park = open space included with condos

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

Woodstoves - No wood fireplaces per SCAQMD regulations.

Construction Off-road Equipment Mitigation - SCAQMD rule compliance

Mobile Land Use Mitigation -

Area Mitigation - California mandating electric landscape equipment starting in 2024.

Water Mitigation -

- Waste Mitigation Per AB 939
- Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	18.00
tblConstructionPhase	NumDays	5.00	21.00
tblConstructionPhase	NumDays	8.00	23.00
tblConstructionPhase	NumDays	18.00	152.00
tblConstructionPhase	NumDays	230.00	380.00
tblConstructionPhase	NumDays	18.00	106.00
tblFireplaces	NumberGas	39.10	46.00
tblFireplaces	NumberWood	2.30	0.00
tblLandUse	LandUseSquareFeet	15,246.00	15,428.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	8.14	4.54
tblVehicleTrips	ST_TR	42.04	54.45

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

tblVehicleTrips	ST_TR	122.40	107.20
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	6.28	4.54
tblVehicleTrips	SU_TR	20.43	54.45
tblVehicleTrips	SU_TR	142.64	107.20
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	7.32	4.54
tblVehicleTrips	WD_TR	44.32	54.45
tblVehicleTrips	WD_TR	112.18	107.20

### 2.0 Emissions Summary

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

#### 2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	со	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/e	day							lb/c	day		
2023	2.3394	22.8591	20.5449	0.0463	13.2500	1.0070	14.1202	6.7735	0.9370	7.5740	0.0000	4,559.387 7	4,559.387 7	1.0896	0.1084	4,618.914 9
2024	1.6887	14.2677	18.6550	0.0366	0.8530	0.6211	1.4741	0.2289	0.5842	0.8130	0.0000	3,565.340 9	3,565.340 9	0.6315	0.0653	3,600.580 4
2025	5.1510	14.4457	20.6344	0.0405	0.9983	0.5875	1.5858	0.2674	0.5556	0.8230	0.0000	3,950.926 9	3,950.926 9	0.6448	0.0661	3,986.731 6
Maximum	5.1510	22.8591	20.6344	0.0463	13.2500	1.0070	14.1202	6.7735	0.9370	7.5740	0.0000	4,559.387 7	4,559.387 7	1.0896	0.1084	4,618.914 9

#### Mitigated Construction

	ROG	NOx	СО	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/e	day							lb/d	day		
2023	2.3394	22.8591	20.5449	0.0463	4.9930	1.0070	5.8632	2.5320	0.9370	3.3325	0.0000	4,559.387 7	4,559.387 7	1.0896	0.1084	4,618.914 9
2024	1.6887	14.2677	18.6550	0.0366	0.8096	0.6211	1.4307	0.2182	0.5842	0.8024	0.0000	3,565.340 9	3,565.340 9	0.6315	0.0653	3,600.580 4
2025	5.1510	14.4457	20.6344	0.0405	0.9473	0.5875	1.5348	0.2549	0.5556	0.8105	0.0000	3,950.926 9	3,950.926 9	0.6448	0.0661	3,986.731 6
Maximum	5.1510	22.8591	20.6344	0.0463	4.9930	1.0070	5.8632	2.5320	0.9370	3.3325	0.0000	4,559.387 7	4,559.387 7	1.0896	0.1084	4,618.914 9

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

	ROG	NOx	со	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	55.30	0.00	48.61	58.66	0.00	46.30	0.00	0.00	0.00	0.00	0.00	0.00

#### 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	со	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/o	day							lb/c	lay		
Area	2.5907	0.9908	15.4061	0.0419		1.9221	1.9221		1.9221	1.9221	271.4754	980.9837	1,252.459 1	1.2944	0.0179	1,290.140 8
Energy	0.0391	0.3438	0.2110	2.1300e- 003		0.0270	0.0270		0.0270	0.0270		426.9650	426.9650	8.1800e- 003	7.8300e- 003	429.5022
Mobile	1.5382	1.3491	13.3722	0.0280	2.9914	0.0206	3.0120	0.7969	0.0191	0.8160		2,931.921 3	2,931.921 3	0.2073	0.1253	2,974.455 5
Total	4.1680	2.6837	28.9893	0.0720	2.9914	1.9697	4.9611	0.7969	1.9682	2.7651	271.4754	4,339.869 9	4,611.345 3	1.5099	0.1510	4,694.098 5

#### 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/e	day							lb/c	lay		
Area	1.2949	0.7978	3.2149	5.0000e- 003		0.0774	0.0774		0.0774	0.0774	0.0000	978.9169	978.9169	0.0221	0.0179	984.7922
Energy	0.0391	0.3438	0.2110	2.1300e- 003		0.0270	0.0270		0.0270	0.0270		426.9650	426.9650	8.1800e- 003	7.8300e- 003	429.5022
Mobile	1.5349	1.3442	13.3195	0.0279	2.9765	0.0205	2.9970	0.7929	0.0190	0.8119		2,917.723 6	2,917.723 6	0.2066	0.1249	2,960.104 4
Total	2.8689	2.4858	16.7455	0.0350	2.9765	0.1249	3.1014	0.7929	0.1235	0.9163	0.0000	4,323.605 5	4,323.605 5	0.2369	0.1506	4,374.398 8

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

	ROG	NOx	со	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	31.17	7.37	42.24	51.37	0.50	93.66	37.49	0.50	93.73	66.86	100.00	0.37	6.24	84.31	0.30	6.81

### **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	3/1/2023	3/24/2023	5	18	
2	Site Preparation	Site Preparation	3/27/2023	4/24/2023	5	21	
3	Grading	Grading	5/1/2023	5/31/2023	5	23	
4	Paving	Paving	6/1/2023	12/29/2023	5	152	
5	Building Construction	Building Construction	1/1/2024	6/13/2025	5	380	
6	Architectural Coating	Architectural Coating	2/1/2025	6/30/2025	5	106	

Acres of Grading (Site Preparation Phase): 21

Acres of Grading (Grading Phase): 23

Acres of Paving: 1.29

Residential Indoor: 93,150; Residential Outdoor: 31,050; Non-Residential Indoor: 8,700; Non-Residential Outdoor: 2,900; Striped Parking Area: 3,432 (Architectural Coating – sqft)

#### 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	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	3	8.00	97	0.37

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

Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
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	6	15.00	0.00	185.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	66.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

#### 3.1 Mitigation Measures Construction

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

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

**Clean Paved Roads** 

# 3.2 Demolition - 2023

	ROG	NOx	СО	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/d	lay		
Fugitive Dust			, , ,		2.2243	0.0000	2.2243	0.3368	0.0000	0.3368		, , ,	0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975	1 1 1 1	0.9280	0.9280		3,746.984 0	3,746.984 0	1.0494		3,773.218 3
Total	2.2691	21.4844	19.6434	0.0388	2.2243	0.9975	3.2218	0.3368	0.9280	1.2648		3,746.984 0	3,746.984 0	1.0494		3,773.218 3

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

# 3.2 Demolition - 2023

#### 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/d	day		
Hauling	0.0223	1.3412	0.3580	6.0100e- 003	0.1799	8.4600e- 003	0.1884	0.0493	8.0900e- 003	0.0574		660.5118	660.5118	0.0364	0.1049	692.6785
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	0.0480	0.0335	0.5436	1.4800e- 003	0.1677	1.0100e- 003	0.1687	0.0445	9.3000e- 004	0.0454		151.8919	151.8919	3.7800e- 003	3.4600e- 003	153.0181
Total	0.0703	1.3746	0.9015	7.4900e- 003	0.3476	9.4700e- 003	0.3570	0.0938	9.0200e- 003	0.1028		812.4037	812.4037	0.0402	0.1084	845.6967

	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/o	day							lb/c	lay		
Fugitive Dust					0.8241	0.0000	0.8241	0.1248	0.0000	0.1248		1 1 1	0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280	0.0000	3,746.984 0	3,746.984 0	1.0494		3,773.218 3
Total	2.2691	21.4844	19.6434	0.0388	0.8241	0.9975	1.8216	0.1248	0.9280	1.0528	0.0000	3,746.984 0	3,746.984 0	1.0494		3,773.218 3

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

# 3.2 Demolition - 2023

#### **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/c	day		
Hauling	0.0223	1.3412	0.3580	6.0100e- 003	0.1718	8.4600e- 003	0.1802	0.0473	8.0900e- 003	0.0554		660.5118	660.5118	0.0364	0.1049	692.6785
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	0.0480	0.0335	0.5436	1.4800e- 003	0.1589	1.0100e- 003	0.1599	0.0423	9.3000e- 004	0.0433		151.8919	151.8919	3.7800e- 003	3.4600e- 003	153.0181
Total	0.0703	1.3746	0.9015	7.4900e- 003	0.3307	9.4700e- 003	0.3401	0.0896	9.0200e- 003	0.0987		812.4037	812.4037	0.0402	0.1084	845.6967

## 3.3 Site Preparation - 2023

	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/e	day							lb/d	day		
Fugitive Dust					13.1047	0.0000	13.1047	6.7350	0.0000	6.7350			0.0000			0.0000
Off-Road	1.8234	18.8613	12.9067	0.0264		0.8693	0.8693		0.7997	0.7997		2,558.730 9	2,558.730 9	0.8276		2,579.419 5
Total	1.8234	18.8613	12.9067	0.0264	13.1047	0.8693	13.9740	6.7350	0.7997	7.5347		2,558.730 9	2,558.730 9	0.8276		2,579.419 5

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

# 3.3 Site Preparation - 2023

#### 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/d	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	0.0416	0.0290	0.4711	1.2900e- 003	0.1453	8.8000e- 004	0.1462	0.0385	8.1000e- 004	0.0393		131.6397	131.6397	3.2800e- 003	3.0000e- 003	132.6157
Total	0.0416	0.0290	0.4711	1.2900e- 003	0.1453	8.8000e- 004	0.1462	0.0385	8.1000e- 004	0.0393		131.6397	131.6397	3.2800e- 003	3.0000e- 003	132.6157

	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/o	day							lb/c	day		
Fugitive Dust		, , ,			4.8553	0.0000	4.8553	2.4953	0.0000	2.4953			0.0000			0.0000
Off-Road	1.8234	18.8613	12.9067	0.0264		0.8693	0.8693		0.7997	0.7997	0.0000	2,558.730 9	2,558.730 9	0.8276		2,579.419 5
Total	1.8234	18.8613	12.9067	0.0264	4.8553	0.8693	5.7246	2.4953	0.7997	3.2950	0.0000	2,558.730 9	2,558.730 9	0.8276		2,579.419 5

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

# 3.3 Site Preparation - 2023

# **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/d	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	0.0416	0.0290	0.4711	1.2900e- 003	0.1377	8.8000e- 004	0.1386	0.0367	8.1000e- 004	0.0375		131.6397	131.6397	3.2800e- 003	3.0000e- 003	132.6157
Total	0.0416	0.0290	0.4711	1.2900e- 003	0.1377	8.8000e- 004	0.1386	0.0367	8.1000e- 004	0.0375		131.6397	131.6397	3.2800e- 003	3.0000e- 003	132.6157

## 3.4 Grading - 2023

	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/e	day							lb/c	lay		
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.691 0	2,872.691 0	0.9291		2,895.918 2
Total	1.7109	17.9359	14.7507	0.0297	7.0826	0.7749	7.8575	3.4247	0.7129	4.1377		2,872.691 0	2,872.691 0	0.9291		2,895.918 2

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

# 3.4 Grading - 2023

# 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/d	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	0.0480	0.0335	0.5436	1.4800e- 003	0.1677	1.0100e- 003	0.1687	0.0445	9.3000e- 004	0.0454		151.8919	151.8919	3.7800e- 003	3.4600e- 003	153.0181
Total	0.0480	0.0335	0.5436	1.4800e- 003	0.1677	1.0100e- 003	0.1687	0.0445	9.3000e- 004	0.0454		151.8919	151.8919	3.7800e- 003	3.4600e- 003	153.0181

	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/e	day							lb/d	lay		
Fugitive Dust					2.6241	0.0000	2.6241	1.2689	0.0000	1.2689			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129	0.0000	2,872.691 0	2,872.691 0	0.9291		2,895.918 2
Total	1.7109	17.9359	14.7507	0.0297	2.6241	0.7749	3.3990	1.2689	0.7129	1.9818	0.0000	2,872.691 0	2,872.691 0	0.9291		2,895.918 2

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

# 3.4 Grading - 2023

## 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/e	day							lb/c	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	0.0480	0.0335	0.5436	1.4800e- 003	0.1589	1.0100e- 003	0.1599	0.0423	9.3000e- 004	0.0433		151.8919	151.8919	3.7800e- 003	3.4600e- 003	153.0181
Total	0.0480	0.0335	0.5436	1.4800e- 003	0.1589	1.0100e- 003	0.1599	0.0423	9.3000e- 004	0.0433		151.8919	151.8919	3.7800e- 003	3.4600e- 003	153.0181

#### 3.5 Paving - 2023

	ROG	NOx	СО	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/e	day							lb/d	day		
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357	1 1 1	0.4025	0.4025		1,805.430 4	1,805.430 4	0.5673		1,819.612 2
Paving	0.0000		1 1 1 1 1			0.0000	0.0000		0.0000	0.0000		       	0.0000			0.0000
Total	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025		1,805.430 4	1,805.430 4	0.5673		1,819.612 2

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

# 3.5 Paving - 2023

#### 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/o	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	0.0640	0.0447	0.7248	1.9800e- 003	0.2236	1.3500e- 003	0.2249	0.0593	1.2400e- 003	0.0605		202.5226	202.5226	5.0400e- 003	4.6200e- 003	204.0242
Total	0.0640	0.0447	0.7248	1.9800e- 003	0.2236	1.3500e- 003	0.2249	0.0593	1.2400e- 003	0.0605		202.5226	202.5226	5.0400e- 003	4.6200e- 003	204.0242

	ROG	NOx	СО	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/e	day							lb/d	day		
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025	0.0000	1,805.430 4	1,805.430 4	0.5673		1,819.612 2
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025	0.0000	1,805.430 4	1,805.430 4	0.5673		1,819.612 2

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

# 3.5 Paving - 2023

### **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/d	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	0.0640	0.0447	0.7248	1.9800e- 003	0.2119	1.3500e- 003	0.2132	0.0564	1.2400e- 003	0.0577		202.5226	202.5226	5.0400e- 003	4.6200e- 003	204.0242
Total	0.0640	0.0447	0.7248	1.9800e- 003	0.2119	1.3500e- 003	0.2132	0.0564	1.2400e- 003	0.0577		202.5226	202.5226	5.0400e- 003	4.6200e- 003	204.0242

### 3.6 Building Construction - 2024

	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/c	lay		
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.698 9	2,555.698 9	0.6044		2,570.807 7
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.698 9	2,555.698 9	0.6044		2,570.807 7

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

# 3.6 Building Construction - 2024

#### 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/d	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	0.0201	0.6923	0.2620	3.3000e- 003	0.1153	3.5000e- 003	0.1188	0.0332	3.3400e- 003	0.0365		355.0943	355.0943	0.0121	0.0511	370.6272
Worker	0.1970	0.1316	2.2262	6.3500e- 003	0.7377	4.2700e- 003	0.7420	0.1957	3.9300e- 003	0.1996		654.5477	654.5477	0.0151	0.0142	659.1455
Total	0.2171	0.8239	2.4881	9.6500e- 003	0.8530	7.7700e- 003	0.8608	0.2289	7.2700e- 003	0.2361		1,009.642 0	1,009.642 0	0.0272	0.0653	1,029.772 7

	ROG	NOx	СО	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/o	day							lb/d	day		
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133	1 1 1	0.5769	0.5769	0.0000	2,555.698 9	2,555.698 9	0.6044		2,570.807 7
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.698 9	2,555.698 9	0.6044		2,570.807 7

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

# 3.6 Building Construction - 2024

#### Mitigated Construction Off-Site

	ROG	NOx	СО	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/c	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	0.0201	0.6923	0.2620	3.3000e- 003	0.1104	3.5000e- 003	0.1139	0.0320	3.3400e- 003	0.0353		355.0943	355.0943	0.0121	0.0511	370.6272
Worker	0.1970	0.1316	2.2262	6.3500e- 003	0.6992	4.2700e- 003	0.7035	0.1862	3.9300e- 003	0.1901		654.5477	654.5477	0.0151	0.0142	659.1455
Total	0.2171	0.8239	2.4881	9.6500e- 003	0.8096	7.7700e- 003	0.8174	0.2182	7.2700e- 003	0.2255		1,009.642 0	1,009.642 0	0.0272	0.0653	1,029.772 7

#### 3.6 Building Construction - 2025

	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/o	day							lb/d	lay		
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1

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

# 3.6 Building Construction - 2025

#### 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/d	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	0.0195	0.6890	0.2572	3.2300e- 003	0.1153	3.5100e- 003	0.1188	0.0332	3.3500e- 003	0.0366		348.7012	348.7012	0.0122	0.0502	363.9727
Worker	0.1842	0.1182	2.0748	6.1300e- 003	0.7377	4.0700e- 003	0.7418	0.1957	3.7500e- 003	0.1994		638.5319	638.5319	0.0136	0.0132	642.8141
Total	0.2038	0.8073	2.3319	9.3600e- 003	0.8530	7.5800e- 003	0.8606	0.2289	7.1000e- 003	0.2360		987.2331	987.2331	0.0258	0.0635	1,006.786 8

	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/e	day							lb/d	day		
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276	1 1 1	0.4963	0.4963	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1

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

# 3.6 Building Construction - 2025

#### **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/c	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	0.0195	0.6890	0.2572	3.2300e- 003	0.1104	3.5100e- 003	0.1139	0.0320	3.3500e- 003	0.0354		348.7012	348.7012	0.0122	0.0502	363.9727
Worker	0.1842	0.1182	2.0748	6.1300e- 003	0.6992	4.0700e- 003	0.7033	0.1862	3.7500e- 003	0.1900		638.5319	638.5319	0.0136	0.0132	642.8141
Total	0.2038	0.8073	2.3319	9.3600e- 003	0.8096	7.5800e- 003	0.8172	0.2182	7.1000e- 003	0.2253		987.2331	987.2331	0.0258	0.0635	1,006.786 8

## 3.7 Architectural Coating - 2025

	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/e	day							lb/d	day		
Archit. Coating	3.3727					0.0000	0.0000	1 1 1	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e- 003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	3.5436	1.1455	1.8091	2.9700e- 003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319

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

# 3.7 Architectural Coating - 2025

#### 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/d	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	0.0363	0.0233	0.4087	1.2100e- 003	0.1453	8.0000e- 004	0.1461	0.0385	7.4000e- 004	0.0393		125.7714	125.7714	2.6700e- 003	2.6100e- 003	126.6149
Total	0.0363	0.0233	0.4087	1.2100e- 003	0.1453	8.0000e- 004	0.1461	0.0385	7.4000e- 004	0.0393		125.7714	125.7714	2.6700e- 003	2.6100e- 003	126.6149

	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/e	day							lb/c	lay		
Archit. Coating	3.3727	1 1 1	1			0.0000	0.0000	1 1 1	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e- 003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	3.5436	1.1455	1.8091	2.9700e- 003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319

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

# 3.7 Architectural Coating - 2025

#### **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/d	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	0.0363	0.0233	0.4087	1.2100e- 003	0.1377	8.0000e- 004	0.1385	0.0367	7.4000e- 004	0.0374		125.7714	125.7714	2.6700e- 003	2.6100e- 003	126.6149
Total	0.0363	0.0233	0.4087	1.2100e- 003	0.1377	8.0000e- 004	0.1385	0.0367	7.4000e- 004	0.0374		125.7714	125.7714	2.6700e- 003	2.6100e- 003	126.6149

# 4.0 Operational Detail - Mobile

## 4.1 Mitigation Measures Mobile

Implement NEV Network

#### 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/c	lay		
Mitigated	1.5349	1.3442	13.3195	0.0279	2.9765	0.0205	2.9970	0.7929	0.0190	0.8119		2,917.723 6	2,917.723 6	0.2066	0.1249	2,960.104 4
Unmitigated	1.5382	1.3491	13.3722	0.0280	2.9914	0.0206	3.0120	0.7969	0.0191	0.8160		2,931.921 3	2,931.921 3	0.2073	0.1253	2,974.455 5

# 4.2 Trip Summary Information

	Aver	age Daily Trip Ra	te	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Condo/Townhouse	208.84	208.84	208.84	713,638	710,070
Enclosed Parking with Elevator	0.00	0.00	0.00		
Strip Mall	179.69	179.69	179.69	341,868	340,158
High Turnover (Sit Down Restaurant)	268.00	268.00	268.00	365,239	363,412
Total	656.53	656.53	656.53	1,420,744	1,413,641

# 4.3 Trip Type Information

		Miles			Trip %			Trip Purpos	e %
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
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43

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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335
Condo/Townhouse	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335
Enclosed Parking with Elevator	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335
Strip Mall	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335
High Turnover (Sit Down Restaurant)	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335

# 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/o	day							lb/c	lay		
NaturalGas Mitigated	0.0391	0.3438	0.2110	2.1300e- 003		0.0270	0.0270		0.0270	0.0270		426.9650	426.9650	8.1800e- 003	7.8300e- 003	429.5022
NaturalGas Unmitigated	0.0391	0.3438	0.2110	2.1300e- 003		0.0270	0.0270		0.0270	0.0270		426.9650	426.9650	8.1800e- 003	7.8300e- 003	429.5022

## 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**

	NaturalGa s Use	ROG	NOx	СО	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/o	day							lb/c	day		
City Park	0	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
Condo/Townhous e	2036.86	0.0220	0.1877	0.0799	1.2000e- 003		0.0152	0.0152		0.0152	0.0152		239.6309	239.6309	4.5900e- 003	4.3900e- 003	241.0549
Enclosed Parking with Elevator	0	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
High Turnover (Sit Down Restaurant)	1577.6	0.0170	0.1547	0.1299	9.3000e- 004		0.0118	0.0118		0.0118	0.0118		185.6003	185.6003	3.5600e- 003	3.4000e- 003	186.7033
Strip Mall	14.737	1.6000e- 004	1.4400e- 003	1.2100e- 003	1.0000e- 005		1.1000e- 004	1.1000e- 004		1.1000e- 004	1.1000e- 004		1.7338	1.7338	3.0000e- 005	3.0000e- 005	1.7441
Total		0.0391	0.3438	0.2110	2.1400e- 003		0.0270	0.0270		0.0270	0.0270		426.9650	426.9650	8.1800e- 003	7.8200e- 003	429.5022

## 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

#### Mitigated

	NaturalGa s Use	ROG	NOx	со	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/d	day							lb/d	day		
City Park	0	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
Condo/Townhous e	2.03686	0.0220	0.1877	0.0799	1.2000e- 003		0.0152	0.0152		0.0152	0.0152		239.6309	239.6309	4.5900e- 003	4.3900e- 003	241.0549
Enclosed Parking with Elevator	0	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
High Turnover (Sit Down Restaurant)	1.5776	0.0170	0.1547	0.1299	9.3000e- 004		0.0118	0.0118		0.0118	0.0118		185.6003	185.6003	3.5600e- 003	3.4000e- 003	186.7033
Strip Mall	0.014737	1.6000e- 004	1.4400e- 003	1.2100e- 003	1.0000e- 005		1.1000e- 004	1.1000e- 004		1.1000e- 004	1.1000e- 004		1.7338	1.7338	3.0000e- 005	3.0000e- 005	1.7441
Total		0.0391	0.3438	0.2110	2.1400e- 003		0.0270	0.0270		0.0270	0.0270		426.9650	426.9650	8.1800e- 003	7.8200e- 003	429.5022

# 6.0 Area Detail

#### 6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

Use only Natural Gas Hearths

#### 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/c	lay		
Mitigated	1.2949	0.7978	3.2149	5.0000e- 003		0.0774	0.0774		0.0774	0.0774	0.0000	978.9169	978.9169	0.0221	0.0179	984.7922
Unmitigated	2.5907	0.9908	15.4061	0.0419	<b></b>	1.9221	1.9221	<b></b>     	1.9221	1.9221	271.4754	980.9837	1,252.459 1	1.2944	0.0179	1,290.140 8

# 6.2 Area by SubCategory

**Unmitigated** 

	ROG	NOx	со	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/d	day							lb/c	lay		
Architectural Coating	0.0980					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.0467					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.3308	0.9470	11.5994	0.0417		1.9010	1.9010		1.9010	1.9010	271.4754	974.1177	1,245.593 0	1.2878	0.0179	1,283.109 0
Landscaping	0.1152	0.0438	3.8067	2.0000e- 004		0.0211	0.0211		0.0211	0.0211		6.8661	6.8661	6.6300e- 003		7.0318
Total	2.5907	0.9908	15.4060	0.0419		1.9221	1.9221		1.9221	1.9221	271.4754	980.9837	1,252.459 1	1.2944	0.0179	1,290.140 8

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

### 6.2 Area by SubCategory

#### 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/d	day		
Architectural Coating	0.0980					0.0000	0.0000		0.0000	0.0000		1 1 1	0.0000			0.0000
Consumer Products	1.0467					0.0000	0.0000		0.0000	0.0000		, , , , ,	0.0000			0.0000
Hearth	0.0893	0.7631	0.3247	4.8700e- 003		0.0617	0.0617		0.0617	0.0617	0.0000	974.1177	974.1177	0.0187	0.0179	979.9063
Landscaping	0.0610	0.0347	2.8902	1.3000e- 004		0.0157	0.0157		0.0157	0.0157		4.7993	4.7993	3.4600e- 003		4.8859
Total	1.2949	0.7978	3.2149	5.0000e- 003		0.0774	0.0774		0.0774	0.0774	0.0000	978.9169	978.9169	0.0221	0.0179	984.7922

# 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

# 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

# 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
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#### **Boilers**

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

#### **User Defined Equipment**

Equipment Type Number

# **11.0 Vegetation**

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

### **Temple City Pacific Las Tunas Mixed Use Development**

Los Angeles-South Coast County, Winter

# **1.0 Project Characteristics**

#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	143.00	Space	1.29	57,200.00	0
City Park	0.35	Acre	0.35	15,428.00	0
Condo/Townhouse	46.00	Dwelling Unit	2.88	46,000.00	132
Strip Mall	3.30	1000sqft	0.08	3,300.00	0
High Turnover (Sit Down Restaurant)	2.50	1000sqft	0.06	2,500.00	0

#### **1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2025
Utility Company	Southern California Edison				
CO2 Intensity (Ib/MWhr)	390.98	CH4 Intensity (Ib/MWhr)	0.033	N2O Intensity ( (Ib/MWhr)	).004

#### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site is 1.17-acre; however, lot acreage is based on CalEEMod defaults.

Construction Phase - Based on construction schedule from client.

Off-road Equipment - Decreasing equipment amount to reflect small size of the site

Trips and VMT -

Demolition -

Grading -

Vehicle Trips - Trip gen numbers to reflect ITE 11th edition trip gen rates, city park = open space included with condos

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

Woodstoves - No wood fireplaces per SCAQMD regulations.

Construction Off-road Equipment Mitigation - SCAQMD rule compliance

Mobile Land Use Mitigation -

Area Mitigation - California mandating electric landscape equipment starting in 2024.

Water Mitigation -

- Waste Mitigation Per AB 939
- Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	18.00
tblConstructionPhase	NumDays	5.00	21.00
tblConstructionPhase	NumDays	8.00	23.00
tblConstructionPhase	NumDays	18.00	152.00
tblConstructionPhase	NumDays	230.00	380.00
tblConstructionPhase	NumDays	18.00	106.00
tblFireplaces	NumberGas	39.10	46.00
tblFireplaces	NumberWood	2.30	0.00
tblLandUse	LandUseSquareFeet	15,246.00	15,428.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	8.14	4.54
tblVehicleTrips	ST_TR	42.04	54.45

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

tblVehicleTrips	ST_TR	122.40	107.20
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	6.28	4.54
tblVehicleTrips	SU_TR	20.43	54.45
tblVehicleTrips	SU_TR	142.64	107.20
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	7.32	4.54
tblVehicleTrips	WD_TR	44.32	54.45
tblVehicleTrips	WD_TR	112.18	107.20

# 2.0 Emissions Summary

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

# 2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	со	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/d	day							lb/c	day		
2023	2.3415	22.9217	20.5059	0.0463	13.2500	1.0070	14.1202	6.7735	0.9370	7.5740	0.0000	4,552.076 0	4,552.076 0	1.0895	0.1087	4,611.706 7
2024	1.7033	14.3139	18.4851	0.0363	0.8530	0.6211	1.4741	0.2289	0.5842	0.8130	0.0000	3,531.501 0	3,531.501 0	0.6317	0.0664	3,567.070 9
2025	5.1683	14.4929	20.4456	0.0401	0.9983	0.5875	1.5858	0.2674	0.5556	0.8230	0.0000	3,911.396 8	3,911.396 8	0.6450	0.0673	3,947.564 1
Maximum	5.1683	22.9217	20.5059	0.0463	13.2500	1.0070	14.1202	6.7735	0.9370	7.5740	0.0000	4,552.076 0	4,552.076 0	1.0895	0.1087	4,611.706 7

#### Mitigated Construction

	ROG	NOx	СО	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/e	day							lb/d	day		
2023	2.3415	22.9217	20.5059	0.0463	4.9930	1.0070	5.8632	2.5320	0.9370	3.3325	0.0000	4,552.076 0	4,552.076 0	1.0895	0.1087	4,611.706 7
2024	1.7033	14.3139	18.4851	0.0363	0.8096	0.6211	1.4307	0.2182	0.5842	0.8024	0.0000	3,531.501 0	3,531.501 0	0.6317	0.0664	3,567.070 9
2025	5.1683	14.4929	20.4456	0.0401	0.9473	0.5875	1.5348	0.2549	0.5556	0.8105	0.0000	3,911.396 8	3,911.396 8	0.6450	0.0673	3,947.564 1
Maximum	5.1683	22.9217	20.5059	0.0463	4.9930	1.0070	5.8632	2.5320	0.9370	3.3325	0.0000	4,552.076 0	4,552.076 0	1.0895	0.1087	4,611.706 7

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

	ROG	NOx	со	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	55.30	0.00	48.61	58.66	0.00	46.30	0.00	0.00	0.00	0.00	0.00	0.00

#### 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	со	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/d	day							lb/c	lay		
Area	2.5907	0.9908	15.4061	0.0419		1.9221	1.9221		1.9221	1.9221	271.4754	980.9837	1,252.459 1	1.2944	0.0179	1,290.140 8
Energy	0.0391	0.3438	0.2110	2.1300e- 003		0.0270	0.0270		0.0270	0.0270		426.9650	426.9650	8.1800e- 003	7.8300e- 003	429.5022
Mobile	1.5002	1.4564	13.3198	0.0269	2.9914	0.0206	3.0120	0.7969	0.0191	0.8160		2,809.968 4	2,809.968 4	0.2154	0.1310	2,854.386 7
Total	4.1300	2.7910	28.9369	0.0709	2.9914	1.9697	4.9611	0.7969	1.9682	2.7651	271.4754	4,217.917 0	4,489.392 4	1.5180	0.1567	4,574.029 6

#### 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 1.2949 0.7978 3.2149 5.0000e- 0.0774 0.0774 0.0774 0.0774											lb/c	lay		
Area	1.2949	0.7978	3.2149	5.0000e- 003		0.0774	0.0774		0.0774	0.0774	0.0000	978.9169	978.9169	0.0221	0.0179	984.7922
Energy	0.0391	0.3438	0.2110	2.1300e- 003		0.0270	0.0270		0.0270	0.0270		426.9650	426.9650	8.1800e- 003	7.8300e- 003	429.5022
Mobile	1.4969	1.4511	13.2701	0.0267	2.9765	0.0205	2.9970	0.7929	0.0190	0.8119		2,796.387 3	2,796.387 3	0.2147	0.1305	2,840.647 1
Total	2.8309	2.5927	16.6960	0.0339	2.9765	0.1250	3.1014	0.7929	0.1235	0.9164	0.0000	4,202.269 2	4,202.269 2	0.2450	0.1562	4,254.941 4

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

	ROG	NOx	со	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	31.45	7.10	42.30	52.20	0.50	93.66	37.49	0.50	93.73	66.86	100.00	0.37	6.40	83.86	0.30	6.98

# **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	3/1/2023	3/24/2023	5	18	
2	Site Preparation	Site Preparation	3/27/2023	4/24/2023	5	21	
3	Grading	Grading	5/1/2023	5/31/2023	5	23	
4	Paving	Paving	6/1/2023	12/29/2023	5	152	
5	Building Construction	Building Construction	1/1/2024	6/13/2025	5	380	
6	Architectural Coating	Architectural Coating	2/1/2025	6/30/2025	5	106	

Acres of Grading (Site Preparation Phase): 21

Acres of Grading (Grading Phase): 23

Acres of Paving: 1.29

Residential Indoor: 93,150; Residential Outdoor: 31,050; Non-Residential Indoor: 8,700; Non-Residential Outdoor: 2,900; Striped Parking Area: 3,432 (Architectural Coating – sqft)

#### 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	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	3	8.00	97	0.37

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

Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
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	6	15.00	0.00	185.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	66.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

# **3.1 Mitigation Measures Construction**

Replace Ground Cover

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

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

**Clean Paved Roads** 

# 3.2 Demolition - 2023

	ROG	NOx	СО	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/o	day		
Fugitive Dust			, , ,		2.2243	0.0000	2.2243	0.3368	0.0000	0.3368		, , ,	0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280		3,746.984 0	3,746.984 0	1.0494		3,773.218 3
Total	2.2691	21.4844	19.6434	0.0388	2.2243	0.9975	3.2218	0.3368	0.9280	1.2648		3,746.984 0	3,746.984 0	1.0494		3,773.218 3

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

# 3.2 Demolition - 2023

### 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/d	day		
Hauling	0.0209	1.4003	0.3629	6.0200e- 003	0.1799	8.4800e- 003	0.1884	0.0493	8.1100e- 003	0.0574		661.2080	661.2080	0.0363	0.1050	693.4066
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	0.0516	0.0370	0.4996	1.4100e- 003	0.1677	1.0100e- 003	0.1687	0.0445	9.3000e- 004	0.0454		143.8840	143.8840	3.8300e- 003	3.7000e- 003	145.0818
Total	0.0725	1.4373	0.8625	7.4300e- 003	0.3476	9.4900e- 003	0.3571	0.0938	9.0400e- 003	0.1028		805.0920	805.0920	0.0402	0.1087	838.4884

	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/o	day							lb/c	lay		
Fugitive Dust			1		0.8241	0.0000	0.8241	0.1248	0.0000	0.1248		1 1 1	0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280	0.0000	3,746.984 0	3,746.984 0	1.0494		3,773.218 3
Total	2.2691	21.4844	19.6434	0.0388	0.8241	0.9975	1.8216	0.1248	0.9280	1.0528	0.0000	3,746.984 0	3,746.984 0	1.0494		3,773.218 3

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

# 3.2 Demolition - 2023

### **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/d	day		
Hauling	0.0209	1.4003	0.3629	6.0200e- 003	0.1718	8.4800e- 003	0.1802	0.0473	8.1100e- 003	0.0554		661.2080	661.2080	0.0363	0.1050	693.4066
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	0.0516	0.0370	0.4996	1.4100e- 003	0.1589	1.0100e- 003	0.1599	0.0423	9.3000e- 004	0.0433		143.8840	143.8840	3.8300e- 003	3.7000e- 003	145.0818
Total	0.0725	1.4373	0.8625	7.4300e- 003	0.3307	9.4900e- 003	0.3402	0.0896	9.0400e- 003	0.0987		805.0920	805.0920	0.0402	0.1087	838.4884

## 3.3 Site Preparation - 2023

	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/e	day							lb/d	day		
Fugitive Dust		1 1 1			13.1047	0.0000	13.1047	6.7350	0.0000	6.7350		1 1 1	0.0000			0.0000
Off-Road	1.8234	18.8613	12.9067	0.0264		0.8693	0.8693		0.7997	0.7997		2,558.730 9	2,558.730 9	0.8276		2,579.419 5
Total	1.8234	18.8613	12.9067	0.0264	13.1047	0.8693	13.9740	6.7350	0.7997	7.5347		2,558.730 9	2,558.730 9	0.8276		2,579.419 5

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

# 3.3 Site Preparation - 2023

## 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	0.0447	0.0321	0.4330	1.2200e- 003	0.1453	8.8000e- 004	0.1462	0.0385	8.1000e- 004	0.0393		124.6995	124.6995	3.3200e- 003	3.2000e- 003	125.7376			
Total	0.0447	0.0321	0.4330	1.2200e- 003	0.1453	8.8000e- 004	0.1462	0.0385	8.1000e- 004	0.0393		124.6995	124.6995	3.3200e- 003	3.2000e- 003	125.7376			

	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/o	day							lb/c	lay		
Fugitive Dust		1 1 1	1 1 1		4.8553	0.0000	4.8553	2.4953	0.0000	2.4953			0.0000			0.0000
Off-Road	1.8234	18.8613	12.9067	0.0264		0.8693	0.8693	1 1 1	0.7997	0.7997	0.0000	2,558.730 9	2,558.730 9	0.8276		2,579.419 5
Total	1.8234	18.8613	12.9067	0.0264	4.8553	0.8693	5.7246	2.4953	0.7997	3.2950	0.0000	2,558.730 9	2,558.730 9	0.8276		2,579.419 5

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

# 3.3 Site Preparation - 2023

# **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	0.0447	0.0321	0.4330	1.2200e- 003	0.1377	8.8000e- 004	0.1386	0.0367	8.1000e- 004	0.0375		124.6995	124.6995	3.3200e- 003	3.2000e- 003	125.7376			
Total	0.0447	0.0321	0.4330	1.2200e- 003	0.1377	8.8000e- 004	0.1386	0.0367	8.1000e- 004	0.0375		124.6995	124.6995	3.3200e- 003	3.2000e- 003	125.7376			

## 3.4 Grading - 2023

	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/e	day							lb/d	day		
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.691 0	2,872.691 0	0.9291		2,895.918 2
Total	1.7109	17.9359	14.7507	0.0297	7.0826	0.7749	7.8575	3.4247	0.7129	4.1377		2,872.691 0	2,872.691 0	0.9291		2,895.918 2

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

# 3.4 Grading - 2023

## 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	0.0516	0.0370	0.4996	1.4100e- 003	0.1677	1.0100e- 003	0.1687	0.0445	9.3000e- 004	0.0454		143.8840	143.8840	3.8300e- 003	3.7000e- 003	145.0818			
Total	0.0516	0.0370	0.4996	1.4100e- 003	0.1677	1.0100e- 003	0.1687	0.0445	9.3000e- 004	0.0454		143.8840	143.8840	3.8300e- 003	3.7000e- 003	145.0818			

	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/e	day							lb/c	lay		
Fugitive Dust					2.6241	0.0000	2.6241	1.2689	0.0000	1.2689			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129	0.0000	2,872.691 0	2,872.691 0	0.9291		2,895.918 2
Total	1.7109	17.9359	14.7507	0.0297	2.6241	0.7749	3.3990	1.2689	0.7129	1.9818	0.0000	2,872.691 0	2,872.691 0	0.9291		2,895.918 2
### EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

## 3.4 Grading - 2023

## **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/e	day							lb/d	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	0.0516	0.0370	0.4996	1.4100e- 003	0.1589	1.0100e- 003	0.1599	0.0423	9.3000e- 004	0.0433		143.8840	143.8840	3.8300e- 003	3.7000e- 003	145.0818
Total	0.0516	0.0370	0.4996	1.4100e- 003	0.1589	1.0100e- 003	0.1599	0.0423	9.3000e- 004	0.0433		143.8840	143.8840	3.8300e- 003	3.7000e- 003	145.0818

#### 3.5 Paving - 2023

	ROG	NOx	СО	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/e	day							lb/d	day		
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357	, , ,	0.4025	0.4025		1,805.430 4	1,805.430 4	0.5673		1,819.612 2
Paving	0.0000		1 1 1 1			0.0000	0.0000		0.0000	0.0000		 - - - -	0.0000			0.0000
Total	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025		1,805.430 4	1,805.430 4	0.5673		1,819.612 2

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

## 3.5 Paving - 2023

## Unmitigated Construction Off-Site

	ROG	NOx	СО	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/d	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	0.0688	0.0493	0.6662	1.8700e- 003	0.2236	1.3500e- 003	0.2249	0.0593	1.2400e- 003	0.0605		191.8453	191.8453	5.1100e- 003	4.9300e- 003	193.4424
Total	0.0688	0.0493	0.6662	1.8700e- 003	0.2236	1.3500e- 003	0.2249	0.0593	1.2400e- 003	0.0605		191.8453	191.8453	5.1100e- 003	4.9300e- 003	193.4424

	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/e	day							lb/c	lay		
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025	0.0000	1,805.430 4	1,805.430 4	0.5673		1,819.612 2
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025	0.0000	1,805.430 4	1,805.430 4	0.5673		1,819.612 2

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

## 3.5 Paving - 2023

## **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/e	day							lb/d	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	0.0688	0.0493	0.6662	1.8700e- 003	0.2119	1.3500e- 003	0.2132	0.0564	1.2400e- 003	0.0577		191.8453	191.8453	5.1100e- 003	4.9300e- 003	193.4424
Total	0.0688	0.0493	0.6662	1.8700e- 003	0.2119	1.3500e- 003	0.2132	0.0564	1.2400e- 003	0.0577		191.8453	191.8453	5.1100e- 003	4.9300e- 003	193.4424

### 3.6 Building Construction - 2024

	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/c	lay		
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.698 9	2,555.698 9	0.6044		2,570.807 7
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.698 9	2,555.698 9	0.6044		2,570.807 7

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

# 3.6 Building Construction - 2024

### 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/d	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	0.0193	0.7249	0.2703	3.3000e- 003	0.1153	3.5200e- 003	0.1188	0.0332	3.3600e- 003	0.0366		355.7058	355.7058	0.0121	0.0512	371.2774
Worker	0.2124	0.1453	2.0480	6.0100e- 003	0.7377	4.2700e- 003	0.7420	0.1957	3.9300e- 003	0.1996		620.0963	620.0963	0.0153	0.0151	624.9858
Total	0.2317	0.8702	2.3183	9.3100e- 003	0.8530	7.7900e- 003	0.8608	0.2289	7.2900e- 003	0.2361		975.8021	975.8021	0.0274	0.0664	996.2632

	ROG	NOx	СО	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/o	day							lb/d	lay		
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133	1 1 1	0.5769	0.5769	0.0000	2,555.698 9	2,555.698 9	0.6044		2,570.807 7
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.698 9	2,555.698 9	0.6044		2,570.807 7

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

# 3.6 Building Construction - 2024

#### 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/d	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	0.0193	0.7249	0.2703	3.3000e- 003	0.1104	3.5200e- 003	0.1139	0.0320	3.3600e- 003	0.0354		355.7058	355.7058	0.0121	0.0512	371.2774
Worker	0.2124	0.1453	2.0480	6.0100e- 003	0.6992	4.2700e- 003	0.7035	0.1862	3.9300e- 003	0.1901		620.0963	620.0963	0.0153	0.0151	624.9858
Total	0.2317	0.8702	2.3183	9.3100e- 003	0.8096	7.7900e- 003	0.8174	0.2182	7.2900e- 003	0.2255		975.8021	975.8021	0.0274	0.0664	996.2632

#### 3.6 Building Construction - 2025

	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/e	day							lb/c	lay		
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276	1 1 1	0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1

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

# 3.6 Building Construction - 2025

### 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/d	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	0.0188	0.7215	0.2654	3.2400e- 003	0.1153	3.5300e- 003	0.1188	0.0332	3.3700e- 003	0.0366		349.3125	349.3125	0.0122	0.0504	364.6216
Worker	0.1993	0.1305	1.9102	5.8100e- 003	0.7377	4.0700e- 003	0.7418	0.1957	3.7500e- 003	0.1994		604.9961	604.9961	0.0138	0.0141	609.5498
Total	0.2180	0.8520	2.1756	9.0500e- 003	0.8530	7.6000e- 003	0.8606	0.2289	7.1200e- 003	0.2360		954.3085	954.3085	0.0260	0.0645	974.1713

	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/e	day							lb/d	day		
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276	1 1 1	0.4963	0.4963	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1

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

## 3.6 Building Construction - 2025

#### **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/c	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	0.0188	0.7215	0.2654	3.2400e- 003	0.1104	3.5300e- 003	0.1139	0.0320	3.3700e- 003	0.0354		349.3125	349.3125	0.0122	0.0504	364.6216
Worker	0.1993	0.1305	1.9102	5.8100e- 003	0.6992	4.0700e- 003	0.7033	0.1862	3.7500e- 003	0.1900		604.9961	604.9961	0.0138	0.0141	609.5498
Total	0.2180	0.8520	2.1756	9.0500e- 003	0.8096	7.6000e- 003	0.8172	0.2182	7.1200e- 003	0.2253		954.3085	954.3085	0.0260	0.0645	974.1713

#### 3.7 Architectural Coating - 2025

	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/e	day							lb/d	day		
Archit. Coating	3.3727					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e- 003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	3.5436	1.1455	1.8091	2.9700e- 003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319

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

# 3.7 Architectural Coating - 2025

### 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/d	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	0.0393	0.0257	0.3763	1.1400e- 003	0.1453	8.0000e- 004	0.1461	0.0385	7.4000e- 004	0.0393		119.1659	119.1659	2.7200e- 003	2.7800e- 003	120.0628
Total	0.0393	0.0257	0.3763	1.1400e- 003	0.1453	8.0000e- 004	0.1461	0.0385	7.4000e- 004	0.0393		119.1659	119.1659	2.7200e- 003	2.7800e- 003	120.0628

	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/e	day							lb/c	lay		
Archit. Coating	3.3727	1 1 1	1			0.0000	0.0000	1 1 1	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e- 003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	3.5436	1.1455	1.8091	2.9700e- 003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319

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

# 3.7 Architectural Coating - 2025

#### **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/d	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	0.0393	0.0257	0.3763	1.1400e- 003	0.1377	8.0000e- 004	0.1385	0.0367	7.4000e- 004	0.0374		119.1659	119.1659	2.7200e- 003	2.7800e- 003	120.0628
Total	0.0393	0.0257	0.3763	1.1400e- 003	0.1377	8.0000e- 004	0.1385	0.0367	7.4000e- 004	0.0374		119.1659	119.1659	2.7200e- 003	2.7800e- 003	120.0628

# 4.0 Operational Detail - Mobile

## 4.1 Mitigation Measures Mobile

Implement NEV Network

#### 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/d	day		
Mitigated	1.4969	1.4511	13.2701	0.0267	2.9765	0.0205	2.9970	0.7929	0.0190	0.8119		2,796.387 3	2,796.387 3	0.2147	0.1305	2,840.647 1
Unmitigated	1.5002	1.4564	13.3198	0.0269	2.9914	0.0206	3.0120	0.7969	0.0191	0.8160		2,809.968 4	2,809.968 4	0.2154	0.1310	2,854.386 7

# 4.2 Trip Summary Information

	Aver	age Daily Trip Ra	te	Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Condo/Townhouse	208.84	208.84	208.84	713,638	710,070
Enclosed Parking with Elevator	0.00	0.00	0.00		
Strip Mall	179.69	179.69	179.69	341,868	340,158
High Turnover (Sit Down Restaurant)	268.00	268.00	268.00	365,239	363,412
Total	656.53	656.53	656.53	1,420,744	1,413,641

# 4.3 Trip Type Information

		Miles			Trip %			Trip Purpos	e %
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
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43

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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335
Condo/Townhouse	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335
Enclosed Parking with Elevator	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335
Strip Mall	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335
High Turnover (Sit Down Restaurant)	0.540171	0.064547	0.189075	0.126673	0.023412	0.006384	0.010926	0.008089	0.000929	0.000597	0.025155	0.000706	0.003335

# 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/o	day							lb/c	lay		
NaturalGas Mitigated	0.0391	0.3438	0.2110	2.1300e- 003		0.0270	0.0270		0.0270	0.0270		426.9650	426.9650	8.1800e- 003	7.8300e- 003	429.5022
NaturalGas Unmitigated	0.0391	0.3438	0.2110	2.1300e- 003		0.0270	0.0270		0.0270	0.0270		426.9650	426.9650	8.1800e- 003	7.8300e- 003	429.5022

## 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**

	NaturalGa s Use	ROG	NOx	со	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/d	day							lb/d	day		
City Park	0	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
Condo/Townhous e	2036.86	0.0220	0.1877	0.0799	1.2000e- 003		0.0152	0.0152		0.0152	0.0152		239.6309	239.6309	4.5900e- 003	4.3900e- 003	241.0549
Enclosed Parking with Elevator	0	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
High Turnover (Sit Down Restaurant)	1577.6	0.0170	0.1547	0.1299	9.3000e- 004		0.0118	0.0118		0.0118	0.0118		185.6003	185.6003	3.5600e- 003	3.4000e- 003	186.7033
Strip Mall	14.737	1.6000e- 004	1.4400e- 003	1.2100e- 003	1.0000e- 005		1.1000e- 004	1.1000e- 004		1.1000e- 004	1.1000e- 004		1.7338	1.7338	3.0000e- 005	3.0000e- 005	1.7441
Total		0.0391	0.3438	0.2110	2.1400e- 003		0.0270	0.0270		0.0270	0.0270		426.9650	426.9650	8.1800e- 003	7.8200e- 003	429.5022

## 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

#### Mitigated

	NaturalGa s Use	ROG	NOx	со	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/d	day							lb/e	day		
City Park	0	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
Condo/Townhous e	2.03686	0.0220	0.1877	0.0799	1.2000e- 003		0.0152	0.0152		0.0152	0.0152		239.6309	239.6309	4.5900e- 003	4.3900e- 003	241.0549
Enclosed Parking with Elevator	0	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
High Turnover (Sit Down Restaurant)	1.5776	0.0170	0.1547	0.1299	9.3000e- 004		0.0118	0.0118		0.0118	0.0118		185.6003	185.6003	3.5600e- 003	3.4000e- 003	186.7033
Strip Mall	0.014737	1.6000e- 004	1.4400e- 003	1.2100e- 003	1.0000e- 005		1.1000e- 004	1.1000e- 004		1.1000e- 004	1.1000e- 004		1.7338	1.7338	3.0000e- 005	3.0000e- 005	1.7441
Total		0.0391	0.3438	0.2110	2.1400e- 003		0.0270	0.0270		0.0270	0.0270		426.9650	426.9650	8.1800e- 003	7.8200e- 003	429.5022

# 6.0 Area Detail

## 6.1 Mitigation Measures Area

Use Electric Lawnmower

Use Electric Leafblower

Use Electric Chainsaw

Use only Natural Gas Hearths

#### 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/d	lay		
Mitigated	1.2949	0.7978	3.2149	5.0000e- 003		0.0774	0.0774	, , ,	0.0774	0.0774	0.0000	978.9169	978.9169	0.0221	0.0179	984.7922
Unmitigated	2.5907	0.9908	15.4061	0.0419		1.9221	1.9221	<b></b> ! ! !	1.9221	1.9221	271.4754	980.9837	1,252.459 1	1.2944	0.0179	1,290.140 8

# 6.2 Area by SubCategory

**Unmitigated** 

	ROG	NOx	со	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/c	day							lb/c	day		
Architectural Coating	0.0980					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.0467					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.3308	0.9470	11.5994	0.0417		1.9010	1.9010		1.9010	1.9010	271.4754	974.1177	1,245.593 0	1.2878	0.0179	1,283.109 0
Landscaping	0.1152	0.0438	3.8067	2.0000e- 004		0.0211	0.0211		0.0211	0.0211		6.8661	6.8661	6.6300e- 003		7.0318
Total	2.5907	0.9908	15.4060	0.0419		1.9221	1.9221		1.9221	1.9221	271.4754	980.9837	1,252.459 1	1.2944	0.0179	1,290.140 8

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

### 6.2 Area by SubCategory

#### 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/o	day		
Architectural Coating	0.0980					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.0467					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0893	0.7631	0.3247	4.8700e- 003		0.0617	0.0617		0.0617	0.0617	0.0000	974.1177	974.1177	0.0187	0.0179	979.9063
Landscaping	0.0610	0.0347	2.8902	1.3000e- 004		0.0157	0.0157		0.0157	0.0157		4.7993	4.7993	3.4600e- 003		4.8859
Total	1.2949	0.7978	3.2149	5.0000e- 003		0.0774	0.0774		0.0774	0.0774	0.0000	978.9169	978.9169	0.0221	0.0179	984.7922

# 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

## 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

# 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
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#### **Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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#### **User Defined Equipment**

Equipment Type Number

# **11.0 Vegetation**