Appendix Q

Noise and Vibration Technical Report

Azusa Greens Redevelopment Project

Noise and Vibration Technical Report

April 2025 | 03697.00019.001

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ACRONYMS AND ABBREVIATIONS

ADT	average daily trips
ANSI	American National Standards Institute
APN	Assessor's Parcel Number
CadnaA	DataKustic Computer Aided Noise Abatement model
Caltrans	California Department of Transportation
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
City	City of Azusa
CNEL	Community Noise Equivalent Level
County	County of Los Angeles
CY	cubic yard
dB	decibel
dBA	A-weighted decibel
DWL	Light Industrial District
FTA	Federal Transit Administration
HVAC	heating, ventilation, and air conditioning
Hz	hertz
kHz	kilohertz
L_{DN}	Day Night sound level
L_{EQ}	time-averaged noise level
LLG	Linscott, Law and Greenspan
L_V	vibration velocity level
mph	miles per hour
NIOSH	National Institute for Occupational Safety and Health
PPV	peak particle velocity
µPa	micro-Pascals
NSLU	noise-sensitive land use
RCNM	Roadway Construction Noise Model
SF	square foot/feet
SPL	sound pressure level
S_{WL}	Sound Power Level

ACRONYMS AND ABBREVIATIONS (cont.)

TIS	Transportation Impact Study
TRU	transport refrigeration unit
USDOT	U.S. Department of Transportation
VdB	vibration velocity in decibels

EXECUTIVE SUMMARY

This report assesses potential construction and operational noise impacts associated with Azusa Greens Redevelopment Project (Project) located in the City of Azusa (City), California. The Project would redevelop a portion of the Azusa Greens Golf Course. The Project involves three components: a proposed industrial site, a proposed age-restricted residential community site, and a reconfigured nine-hole golf course and driving range.

Project construction would require the use of heavy construction requirements which are sources of noise. The highest daytime construction noise levels are expected to occur during grading. Noise from heavy construction equipment, including noise from potential nighttime work for pouring concrete, would not exceed thresholds for the protection of human hearing; however, construction equipment noise would exceed the threshold for increases over existing ambient noise. The addition of Project construction truck trips to exiting traffic would not result in a noticeable increase in ambient noise levels. Project temporary construction noise impacts would be potentially significant. Mitigation measures to require construction noise best management practices, notification of potentially affected residences, and to complete sound walls prior to nighttime concrete pouring would not reduce Project temporary construction noise impacts to less than significant. The impact would be significant and unavoidable.

Operational noise sources for the industrial site would include ventilation and refrigeration equipment on the Project's rooftop, trucks circulating on the site, transport refrigeration units (TRUs) used on the site, and loading docks (truck idling and truck backup alarms). Operational noise produced on the industrial site would exceed the City daytime and nighttime noise standards measured at the multi-family residential property north of the industrial site. Implementation of a mitigation measure to require a sound wall between the industrial building loading dock area and the apartment building would reduce daytime and nighttime noise levels to below the City standards. Operational noise sources for the residential site would include building heating, ventilation, and air conditioning systems. Operational noise produced on the residential site would not exceed the City nighttime noise standards measured at single-family residential properties near the residential site. Noise generated by Project traffic would not substantially increase noise levels on nearby roadways. Project long-term operational noise impacts would be less than significant with mitigation incorporated.

Project construction could result in ground-borne vibrations from vibratory rollers and from the use of concrete trucks at night adversely affecting nearby residents and potentially damaging nearby buildings. Mitigation would prohibit the use of vibratory rollers in dynamic mode near buildings and require concrete trucks on the Project site to be routed away from occupied residences. Project operations would not be a significant source of vibrations. Project vibration impacts would be less than significant with mitigation incorporated.

The Project site is not located within the influence area or the noise contours for any nearby airports. Therefore, persons residing or working in the Project area would not be exposed to substantial noise from airports or aircraft.

The Project's proposed land uses would be compatible with the City's noise compatibility standards.

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1.0 INTRODUCTION

This report assesses the potential noise and vibration impacts that would be associated with the construction and operation of the Azusa Greens Redevelopment Project (Project). The analysis includes a description of existing conditions in the Project vicinity, an assessment of potential impacts associated with Project construction, and an evaluation of Project operational impacts. This report has been prepared to support environmental review in accordance with the California Environmental Quality Act (CEQA; California Public Resources Code [PRC] §21000 et seq.) and CEQA Guidelines (California Code of Regulations [CCR], Title 14, §15000 et seq.).

1.1 PROJECT LOCATION

The City of Azusa (City) is located in the eastern portion of Los Angeles County (County), approximately 27 miles northeast of Downtown Los Angeles. The approximately 92.12-acre Project site is located at 919 Sierra Madre Avenue, Azusa, CA 91702. The Project site is comprised of seven Assessor's Parcel Numbers (APNs): 8617-001-005; 0864-013-030; 8617-001-013; 8617-013-001; 8717-011-001; 8684-043-002; and 8684-013-014. See Figure 1, *Regional Location*, and Figure 2, *Aerial Photograph*.

1.2 PROJECT DESCRIPTION

The Project would redevelop a portion of the Azusa Greens Golf Course and maintain the remainder of the land as a functioning nine-hole golf course and driving range. The Project involves three components: a proposed industrial site, a proposed age-restricted residential community site, and a reconfigured nine-hole golf course and driving range.

1.2.1 Industrial Site

The approximately 19.33-acre industrial site would be located on APN 8617-001-005. As part of the Project, the applicant is seeking approval of a Tentative Parcel Map for six separate parcels on the industrial site, one for each proposed industrial building. The industrial site encompasses the existing golf holes 3, 4, 5, and 6 of the Azusa Greens Country Club. The industrial site is bounded by West 10th Street to the south, industrial and residential uses to the east, Sierra Madre Avenue to the north, and North Todd Avenue to the west. The industrial site would include four access driveways along North Todd Avenue and four access driveways along West 10th Street.

The Project would demolish the existing golf-related improvements on holes number 3 through 6 and would install six new, tilt-up concrete Class A industrial buildings totaling 353,075 square feet (SF). The industrial buildings would include ancillary office space on two floors totaling 38,600 SF. Building 1 would total 33,598 SF including 5,000 SF of office space, Building 2 would total 45,716 SF including 5,600 SF of office space, Building 3 would total 53,422 SF including 7,000 SF of office space, Building 4 would total 54,342 SF including 7,000 SF of office space, Building 5 would total 109,507 SF including 8,000 SF of office space, and Building 6 would total 56,490 SF including 6,000 SF of office space. The industrial buildings would be approximately 38 feet in height above the finished floor. Potential uses of the Project's industrial buildings could include light manufacturing, warehouse retail, repair services, and other uses permitted within the City's West End Light Industrial District (DWL) zone.

While future tenants of these industrial buildings are unknown, this analysis conservatively assumes 95 percent of the industrial building space would be general light industrial (approximately 298,751 SF), and 5 percent of the industrial building space would be refrigerated warehouse (approximately 15,724 SF). See Figure 3, *Industrial Site Plan*.

1.2.2 Age-Restricted Residential Community Site

The approximately 19.82-acre age-restricted residential community site (residential site) encompasses the existing golf holes 1, 18, and 8, as well as a small portion of hole 17 of the Azusa Greens Country Club. The Project would demolish the existing golf-related improvements and construct 38 residential buildings (32 single-story duplexes, four single-story triplexes, and two three-story stacked flat buildings), a leasing/clubhouse building, and a cabana. The residential buildings would total 330,101 SF and 230 dwelling units, and the leasing/clubhouse and cabana would total 10,932 SF. See Table 1, *Proposed Residential Buildings*, for an overview of the buildings on the residential community site.

Table 1
PROPOSED RESIDENTIAL BUILDINGS

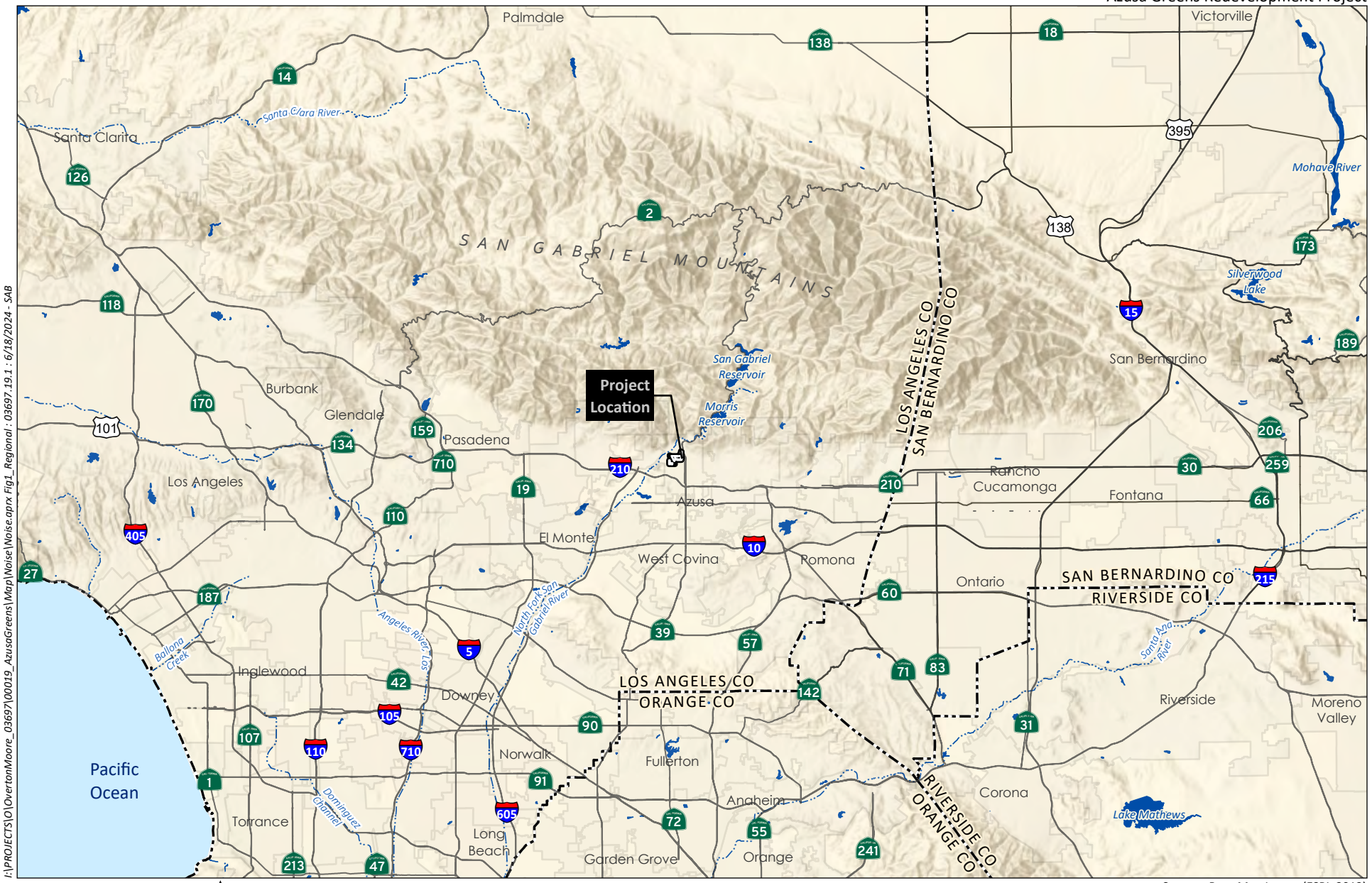
Building Letter	Building Type	Number of Buildings	Number of Dwelling Units (Total)	Building Square Footage (Total)
A	Stacked Flats	1	83	103,647
B	Stacked Flats	1	71	87,777
C	Duplex	7	14	28,868
E	Duplex	11	22	36,113
F	Duplex	14	28	52,892
G	Triplex	4	12	20,804
--	Leasing/Clubhouse	1	--	9,360
--	Cabana	1	--	1,572
	Total	**40**	**230**	**341,033**

The Leasing/Clubhouse building would include meeting areas, fitness rooms, an outdoor pool and spa, outdoor recreation areas, dining areas, and more. Outdoor recreation areas would include a pool/spa area with a Cabana building containing restrooms and pool mechanical equipment, a dog park, two bocce ball courts, outdoor seating area, a synthetic turf fitness lawn, and outdoor lawn/landscape area between buildings.

The residential site would be accessed by two entrance driveways located at the southern end of the proposed site along Sierra Madre Avenue. The main Project entrances would connect and lead to an entry gate and turnaround. The residential site would include 245 uncovered parking spaces, 57 covered parking spaces, 39 spaces in four detached garage buildings, and 108 spaces in garages attached to duplex and triplex units. See Figure 4, *Residential Site Plan*.

1.2.3 Golf Course Site

The 52.97-acre golf course site would be comprised of the existing Azusa Greens Country Club holes 9 through 17, the existing golf clubhouse, the existing parking lot, and the existing golf driving range. The Azusa Greens clubhouse would be lightly renovated and maintained in working order. The golf holes would be re-numbered 1 through 9 to create a nine-hole golf course. To accommodate the flow of the 9-



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Source: Base Map Layers (ESRI, 2013)

HELIX Environmental Planning

Regional Location

Figure 1

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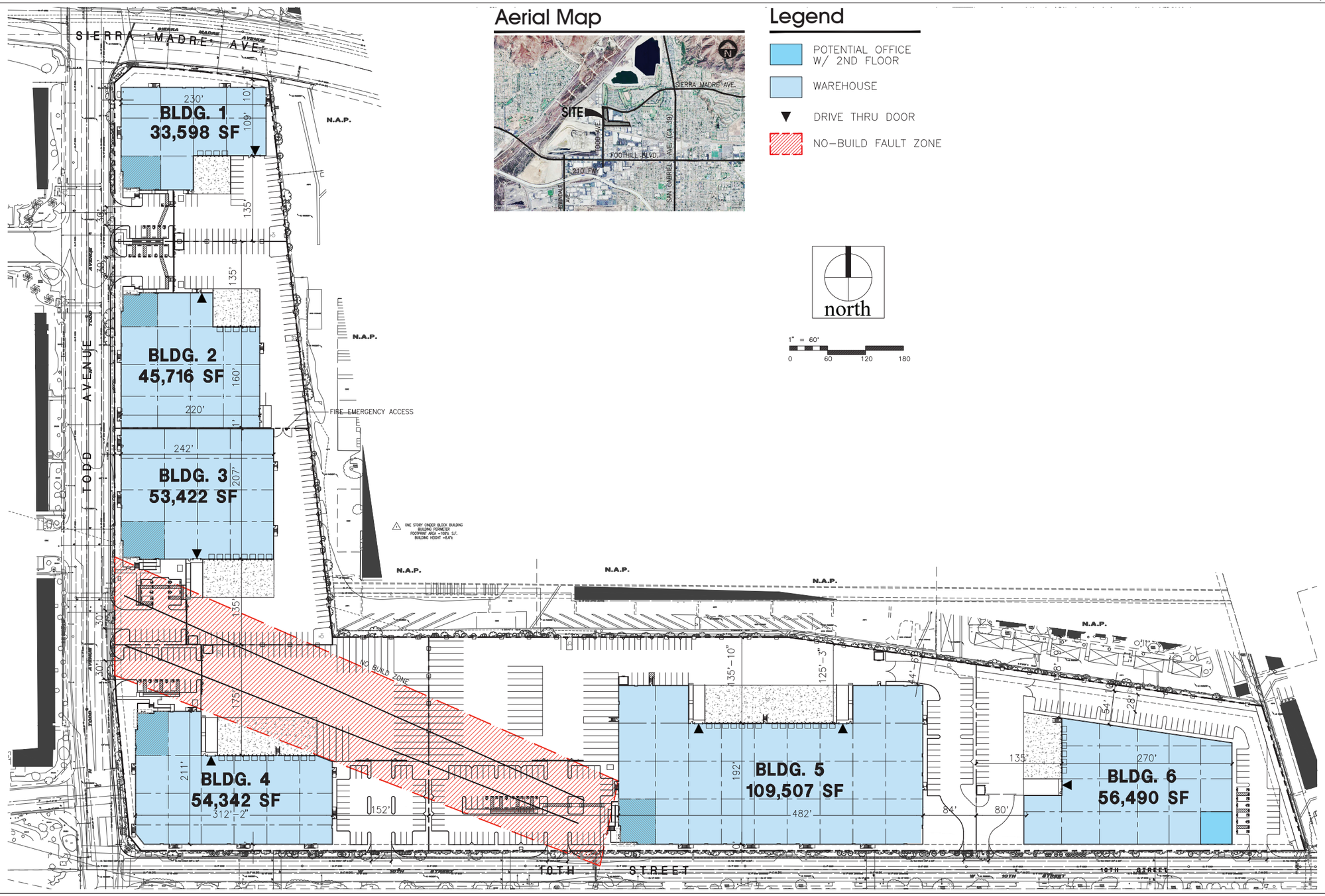
Source: Aerial (Maxar, 2021)

HELIX Environmental Planning

Aerial Photograph

Figure 2



Aerial Map

Legend

- POTENTIAL OFFICE W/ 2ND FLOOR
- WAREHOUSE
- DRIVE THRU DOOR
- NO-BUILD FAULT ZONE

north

1" = 60'

0 60 120 180

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Source: HPA Architects, 2024

HELIX Environmental Planning

Industrial Site Plan

Figure 3

Source: Overton Moore Properties, 2025

Residential Site Plan

Figure 4

hole course, hole 8 would be shortened from its existing configuration, and the tee box for hole 7 would be relocated. The driving range would also be adjusted along the boundary with the proposed residential site.

The light clubhouse renovation would feature an updated interior site plan that relocates the golf check-in area to the east, updating two of the entries on the north-facing frontage of the building and adding one new set of doors on the east-facing side of the building. The clubhouse, parking lot, and driving range would be accessed by an existing entrance driveway along Sierra Madre Avenue. Internal drive aisles would be located throughout the parking lot to access the clubhouse. The parking lot would include 158 parking stalls and 8 drop-off spaces.

1.2.4 Construction Activities and Phasing

The Project is anticipated to be completed in three phases. Phase 1 would be construction of the industrial site, anticipated to commence in November 2025 and be complete in December 2026. Phase 2 would be construction of the age-restricted residential community site, anticipated to commence in January 2026 and be complete in September 2027. Phase 3 would be the golf course reconfiguration and golf clubhouse renovation, anticipated to commence in January 2026 and be complete in approximately one month. Project construction activities for Phase 1 and Phase 2 would include site preparation, grading, installation of underground utilities, building construction, paving, and architectural coating (e.g., painting). Construction activities for Phase 3 would include grading for the relocated 7th hole tee area and 8th hole green, renovation of the golf clubhouse, and clubhouse painting.

Some nighttime construction activities are proposed to facilitate proper concrete curing during hot weather. Proposed nighttime construction work could occur up to ten nights for the pouring of building foundation slabs and tilt-up walls in the industrial site, and up to four nights for the pouring of foundation slabs for buildings A and B in the residential site. Nighttime pours would typically begin at 12:00 a.m. with pouring completed by mid-morning and concrete finishing work continuing into the afternoon. Nighttime construction would require approval with the Project via conditions of approval in accordance with Azusa Municipal Code Section 46-409.

1.3 NOISE DESCRIPTORS AND TERMINOLOGY

1.3.1 Noise Descriptors

All noise level or sound level values presented herein are expressed in terms of decibels (dB), with A-weighting (dBA) to approximate the hearing sensitivity of humans. Time-averaged noise levels are expressed by the symbol L_{EQ}, with a specified duration. The Community Noise Equivalent Level (CNEL) is a 24-hour average, where noise levels during the evening hours of 7:00 p.m. to 10:00 p.m. have an added 5 dBA weighting, and noise levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. have an added 10 dBA weighting. This is similar to the Day Night sound level (L_{DN}), which is a 24-hour average with an added 10 dBA weighting on the same nighttime hours but no added weighting on the evening hours. Sound levels expressed in CNEL and L_{DN} are always based on dBA. These metrics are used to express noise levels for both measurement and municipal regulations, as well as for land use guidelines and enforcement of noise ordinances.

1.3.2 Noise Terminology

1.3.2.1 Sound, Noise, and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is defined as loud, unexpected, or annoying sound. In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determine the sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

1.3.2.2 Frequency

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz (kHz), or thousands of Hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

1.3.2.3 Sound Pressure Levels and Decibels

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (µPa). One µPa is approximately one hundred billionth (0.00000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 µPa. Because of this wide range of values, sound is rarely expressed in terms of µPa. Instead, a logarithmic scale is used to describe sound pressure level (SPL) in terms of dBA. The threshold of hearing for the human ear is about 0 dBA, which corresponds to 20 µPa.

1.3.2.4 Addition of Decibels

Because decibels are logarithmic units, SPL cannot be added or subtracted through standard arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3 dBA increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than from one source under the same conditions. For example, if one automobile produces an SPL of 70 dBA when it passes an observer, two cars passing simultaneously would not produce 140 dBA—rather, they would combine to produce 73 dBA. Under the decibel scale, three sources of equal loudness together produce a sound level 5 dBA louder than one source.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear can discern 1 dBA changes in sound levels, when exposed to steady, single-frequency (“pure-tone”) signals in the mid-frequency (1,000 Hz to 8,000 Hz) range. In typical noisy environments, changes in noise of 1 to 2 dBA are generally not perceptible. It is widely accepted, however, that people begin to detect sound level increases of 3 dBA in typical noisy environments. Further, a 5 dBA increase is generally perceived as a distinctly noticeable increase, and a 10 dBA increase is generally perceived as a doubling of loudness.

No known studies have directly correlated the ability of a healthy human ear to discern specific levels of change in traffic noise over a 24-hour period. Many ordinances, however, specify a change of 3 CNEL as the significant impact threshold. This is based on the concept of a doubling in noise energy resulting in a 3 dBA change in noise, which is the amount of change in noise necessary for the increase to be perceptible to the average healthy human ear.

1.4 GROUND-BORNE VIBRATION DESCRIPTORS AND TERMINOLOGY

Ground-borne vibration consists of rapidly fluctuating motions or waves transmitted through the ground with an average motion of zero. The rumbling sound caused by the vibration of room surfaces due to ground-borne vibration is called ground-borne noise. Ground-borne noise is highly dependent on the characteristics of the structure subject to vibration. Therefore, this analysis focuses on ground-borne vibrations. Sources of ground-borne vibrations include natural phenomena and anthropogenic causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions). Peak particle velocity (PPV) is defined as the maximum instantaneous positive or negative peak of the vibration wave. Decibels are also used to compress the range of numbers required to describe vibration. Vibration velocity level (L_V) with units of VdB (referenced to one-micro-inch per second velocity) are commonly used in evaluating human reactions to vibrations. For the purposes of this analysis, a PPV descriptor with units of inches per second is used to evaluate construction-generated vibration for building damage, and L_V with units of VdB is used to evaluate human reactions.

1.5 NOISE AND VIBRATION SENSITIVE LAND USES

Noise-sensitive land uses (NSLUs) are land uses that may be subject to stress and/or interference from excessive noise, such as residential dwellings, schools, transient lodging (hotels), hospitals, educational facilities, and libraries. Industrial and commercial land uses are generally not considered sensitive to noise. Noise receptors are individual locations that may be affected by noise. The closest existing NSLUs to the industrial site are multi-family residential properties east and northeast of the southeast corner of the industrial site, see Figure 5, *Industrial Site Receiver Locations*. The closest existing NSLUs to the residential site are single-family residential properties adjacent to the residential site's western property line, see Figure 6, *Residential Site Receiver Locations*. As a residential development, the residential site would be a new NSLU.

Land uses in which ground-borne vibration could potentially interfere with operations or equipment, such as research, hospitals, and university research operations (Caltrans 2020), are considered "vibration-sensitive." The degree of sensitivity depends on the specific equipment that would be affected by the ground-borne vibration. In addition, excessive levels of ground-borne vibration of either a regular or an intermittent nature can result in annoyance to residential uses, schools, or transient lodging. Land uses in the Project area that are subject to annoyance from vibration include the residences described above.

1.6 REGULATORY FRAMEWORK

1.6.1 California Noise Control Act

The California Noise Control Act is a section within the California Health and Safety Code that describes excessive noise as a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also finds that there is a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the State to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

1.6.2 California Building Code

The California Building Code sets forth building design and construction requirements relating to fire and life safety, structural safety, and access compliance. Title 24, Part 2, Section 1206, Sound Transmission, requires interior noise levels in habitable rooms not to exceed 45 dB. The 45 dB requirement may be measured as either the L_{DN} or CNEL, as used in the applicable general plan noise element.

1.6.3 City of Azusa General Plan

The City's General Plan Natural Environment Chapter contains the following Goals, Policies, and Implementation Programs related to noise that would be applicable to the Project (City 2004):

Goals

1. Maintain community noise levels that meet health guidelines and allow for a high quality of life.

Policies

1.1 Integrate noise considerations in the City's land use planning and project approval process (Implementation Programs N10 and N12).

1.2 Protect those areas of the City where the existing noise environments are considered unacceptable or "noise sensitive" (Implementation Programs N4 and N12).

Noise Implementation Programs

N1 **Noise as an Evaluation Factor for New Developments**: Include noise impacts as an evaluation factor in the consideration of the siting, design, and construction of new residential, commercial, industrial developments or public/semipublic facilities such as parks, schools, convalescent homes, assisted living facilities and hospitals. (Table N-1 [Reproduced in this report as Table 2, *Land Use Compatibility for Community Noise Environments*]).

Azusa Greens Redevelopment Project

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0 350 Feet

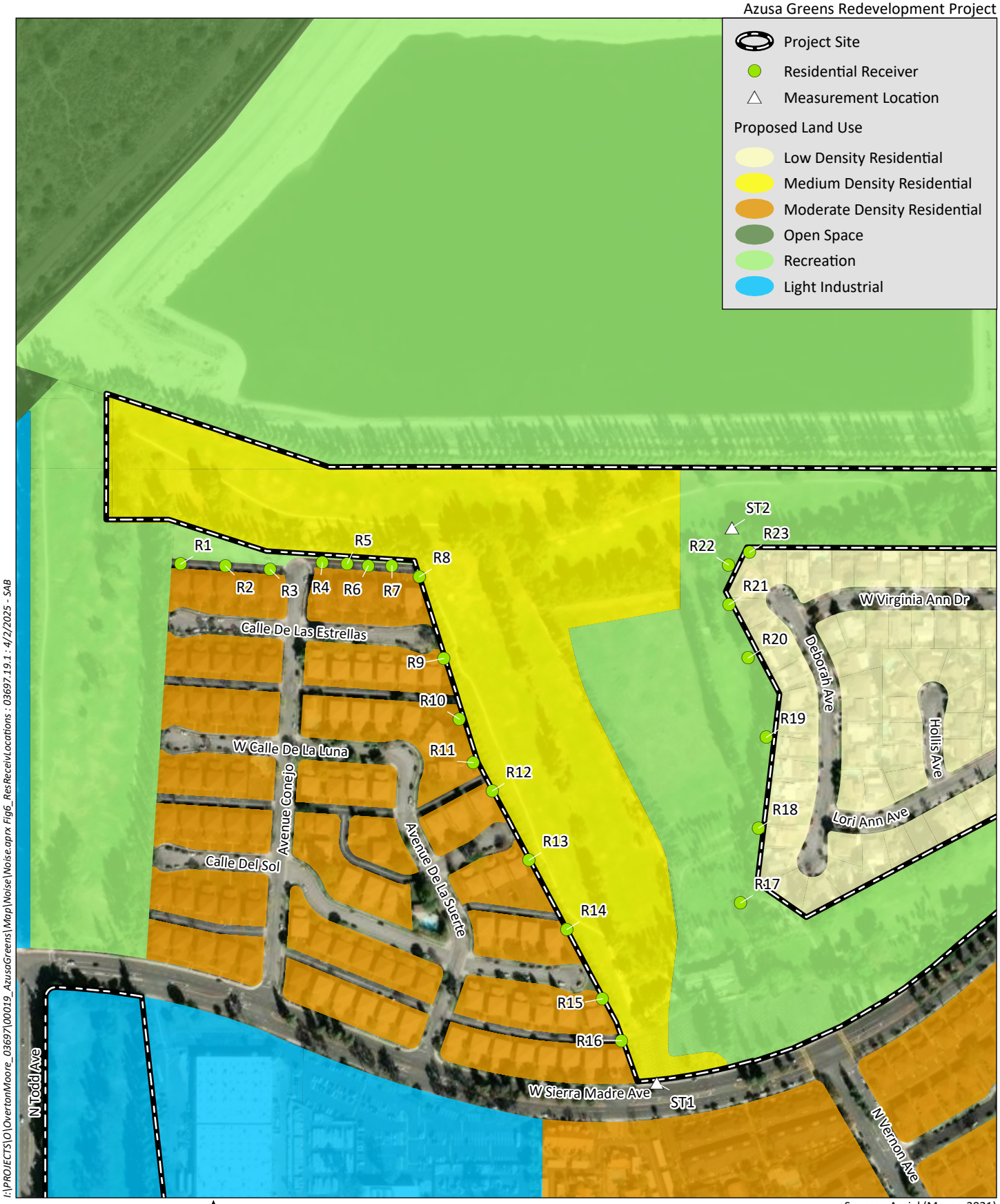
Source: Aerial (Maxar, 2021)

HELIX Environmental Planning

Industrial Site Receiver Locations

Figure 5

Azusa Greens Redevelopment Project



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0 350 Feet

Source: Aerial (Maxar, 2021)

HELIX Environmental Planning

Residential Site Receiver Locations

Figure 6

Table 2
LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENTS

Land Use Category	Exterior Noise Exposure (CNEL)						
	50-55	55-60	60-65	65-70	70-75	75-80	80+
Residential – Low Density Single Family, Duplex, Mobile Homes							
Residential – Multiple Family							
Transient Lodging – Motels, Hotels							
Schools, Libraries, Churches, Hospitals, Nursing Homes							
Auditoriums, Concert Halls, Amphitheaters							
Sports Arena, Outdoor Spectator Sports							
Playgrounds, Neighborhood Parks							
Golf Courses, Riding Stables, Water Recreation, Cemeteries							
Office Buildings, Businesses, Commercial, and Professional							
Industrial Manufacturing, Utilities, Agriculture							

Normally Acceptable[1] | **Conditionally Acceptable[2]** | **Normally Unacceptable[3]** | **Clearly Unacceptable[4]**

Source: City 2004

1 Normally Acceptable: Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

2 Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice. Outdoor environment will seem noisy.

3 Normally Unacceptable: New construction or development should generally be discouraged. If new construction does proceed, a detailed analysis of the noise reduction requirements must be made with needed noise insulation features included in the design. Outdoor areas must be shielded.

4 Clearly Unacceptable: New construction or development should generally not be undertaken. Construction costs to make the indoor environment acceptable would be prohibitive and the outdoor environment would not be usable.

CNEL = Community Noise Equivalent Level

N4 **Address Noise Sensitive Land Uses:** Noise sensitive uses are to be specifically addressed in decisions affecting the location of commercial, institutional, and industrial land uses or activities that typically generate excessive noise.

N10 **Use Noise Contour Maps to Determine Acceptable Noise Levels for Development:** If new development is proposed for an area shown on Noise Element Contour Maps to be within the "Conditionally Acceptable," "Normally Unacceptable," or "Clearly Unacceptable" noise range for the proposed land use (as shown in Table N-1 [reproduced as Table 2, above]), require acoustical analysis and implementation of provisions to reduce exposure to noise, such as window to reduce exposure to noise, such as window glazing and other forms of sound insulation.

N12 **Acoustical Analysis for Commercial, Institutional, and/or Industrial Adjacent Development**: Require an acoustical analysis for commercial, institutional, or industrial developments that directly adjoin an existing residential use or residential zone.

1.6.4 City of Azusa Municipal Code

The City Municipal Code contains the following ordinances related to noise that would be applicable to the Project:

Chapter 46. – Offenses and Miscellaneous Provisions; Article IX. – Offences Against Public Peace; Division 2. – Noise Standards

Section 46-401. - Purpose.

This section implements the policies of the noise element of the general plan, and provides standards for noise mitigation that are intended to protect the community health, safety, and general welfare by limiting exposure to the unhealthful effects of noise.

Section 46-404. - Designated noise zones.

The properties hereinafter described, whether within or without the city, are hereby assigned to the following noise zones:

Noise Zone 1: All residential properties;

Noise Zone 2: All professional office and public institutional properties;

Noise Zone 3: All commercial properties with the exception of professional office properties; and

Noise Zone 4: All industrial properties.

Section 46-405. - Exterior noise standards.

(a) The following noise standards, unless otherwise specifically indicated, shall apply to all real property within a designated noise zone [reproduced in this report as Table 3, *Exterior Noise Standards*]:

Table 3
EXTERIOR NOISE STANDARDS

Noise Zone	Noise Level	Time Period
1	55 dBA	7:00 a.m.—10:00 p.m.
1	50 dBA	10:00 p.m.—7:00 a.m.
2	55 dBA	Anytime
3	60 dBA	Anytime
4	70 dBA	Anytime

Section 46-406. - Exterior noise levels prohibited.

It shall be unlawful for any person at any location within the incorporated area of the city to create any noise, or to allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured on any residential, public institutional, professional, commercial or industrial property, either within or without the city, to exceed the applicable noise standards:

(1) For a cumulative period of more than 30 minutes in any hour;

(2) Plus five dBA for a cumulative period of more than 15 minutes in any hour;

(3) Plus ten dBA for a cumulative period of more than five minutes in any hour;

(4) Plus 15 dBA for a cumulative period of more than one minute in any hour; or

(5) Plus 20 dBA for any period of time.

Section 46-407. - Interior noise standard.

(a) The following noise standards, unless otherwise specifically indicated, shall apply to all real property with a designated noise zone [reproduced in this report as Table 4, *Interior Noise Standards*]:

Table 4
INTERIOR NOISE STANDARDS

Noise Zone	Noise Level	Time Period
1	55 dBA	7:00 a.m.—10:00 p.m.
1	45 dBA	10:00 p.m.—7:00 a.m.
2, 3, 4	55 dBA	Anytime

(b) In the event the alleged offensive noise consists entirely of impact noise, simple tone noise, speech, music, or any combination thereof, each of the above noise levels shall be reduced by 5 dBA.

Section 46-408. - Interior levels of noise prohibited.

It shall be unlawful for any person at any location within the incorporated area of the city to create any noise, or to allow the creation of any noise on property owned, leased, occupied, or otherwise

controlled by such person, which causes the noise level when measured within any other structure on any residential, public institutional, commercial, or industrial property to exceed:

(1) The noise standard for a cumulative period of more than five minutes in any hour;

(2) The noise standards plus five dBA for a cumulative period of more than one minute in any hour; or

(3) The noise standard plus ten dBA for any period of time.

In the event the ambient noise level exceeds either of the first two noise limit categories above, the cumulative period applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level exceeds the third noise level, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level. Each of the noise limits specified above shall be reduced by five dBA for impact or predominant tone noises, or for noises consisting of speech or music. In the event that the noise source and the affected property are within different noise zones, the noise standards of the affected property shall apply.

Section 46-409. – Construction.

In order to allow construction schedules to take advantage of the weather and normal daylight hours, and to ensure that nearby residents as well as nonresidential activities are not disturbed by the early morning or late night activities, the city has established the following limits on construction, in compliance with the table below [not reproduced in this report] or as required by conditions of approval.

Construction is generally permitted Monday through Saturday, 7:00 a.m. to 6:00 p.m. Extended construction hours and workdays may be allowed by the review authority.

Section 46-411. - Limitation on truck deliveries.

Truck deliveries to a commercial or industrial parcel adjacent to a conforming residential use shall be limited to the hours between 7:00 a.m. and 7:00 p.m., unless the director authorizes other delivery times based on the determination that there is either no feasible alternative, or there are overriding transportation and traffic management benefits to scheduling deliveries at night.

Section 46-413. – Exemptions.

The following activities shall be exempt from the provisions of this chapter:

(1) School bands, school athletics, and school entertainment events, provided such events are conducted on school property or authorized by the city;

(2) Activities otherwise lawfully conducted in public parks, public playgrounds, and public or private school grounds;

(3) Any mechanical device, apparatus, or equipment used, related to, or connected with emergency machinery, vehicle, or work;

(4) Noise sources associated with construction, repair, remodeling, or grading of any real property; provided a permit has been obtained from the city; and provided said activities take place between the hours enumerated in section 46-409.

(5) Noise sources associated with the maintenance of real property provided said activities take place between the hours of 8:00 a.m. and 8:00 p.m. on any day except Sunday or between the hours of 9:00 a.m. and 5:00 p.m. on Sunday or a federal holiday;

(6) Noise sources associated with the authorized collection of solid waste.

(7) Any activity or equipment to the extent that design regulation thereof has been pre-empted by state or federal laws.

Chapter 88 – Development Code

Chapter 88.31. - Operational Standards.

88.31.010. - Purpose and Applicability.

A. Purpose. This chapter provides standards that regulate various aspects of the operation of an approved land use, for the protection of public health, safety, and welfare.

B. Applicability. The requirements of this chapter shall apply to all development and land uses.

Section 88.31.020. - Noise Standards.

A. Purpose. This section implements the policies of the noise element of the general plan, and provides standards for noise mitigation that are intended to protect the community health, safety, and general welfare by limiting exposure to the unhealthful effects of noise.

B. Applicability. No use, activity, or process shall exceed the maximum allowable noise levels established by this section, except for the following noise sources:

1. Emergencies. Public safety warning devices (e.g., ambulance, fire, and police sirens), sound for alerting persons to the existence of an emergency, or the performance of authorized emergency work;

2. State or Federal Preempted Activities. Any activity regulated by state or federal law;

3. Public Health and Safety Activities. Construction, maintenance, and/or repair operations by public agencies and/or utility companies or their contractors that are serving public interests, and/or protecting the public health, safety, and general welfare;

4. Parks. Public agency sanctioned recreational activities and programs conducted in public parks; and

5. Solid Waste Collection. The authorized collection of solid waste.

C. Noise Source Standards.

1. Noise Level Limitations. No use, activity, or process within the city shall generate noise in excess of the levels identified by Tables 3-3 [reproduced in this report as Table 5, *Maximum Allowable Noise Level by Receiving Land Use*] and 3-4 [reproduced in this report as Table 6, *Noise Standards for Short-Duration Events Near Residential Areas*], as the noise is measured at the property line of a noise sensitive land use identified in Tables 3-3 and 3-4.

   a. If the measured ambient noise level exceeds the applicable noise level standard in any category shown in Table 3-3 [reproduced in this report as Table 5], the applicable standards shall be adjusted to equal the ambient noise level.

   b. If the intruding noise source is continuous and cannot reasonably be discontinued or stopped to allow measurement of the ambient noise level, the noise level measured while the source is in operation shall be compared directly to the applicable noise level standards identified in Table 3-3 [reproduced in this report as Table 5].

   Notwithstanding the above requirements, no person shall allow or cause the generation of any noise of a type, volume, pitch, tone, repetition, or duration that would be found to be a nuisance by a reasonable person beyond the boundaries of the property where the noise is generated.

Table 5
MAXIMUM ALLOWABLE NOISE LEVEL BY RECEIVING LAND USE

Noise Sensitive Land Use	Outdoor Activity Areas[1, 2] (dBA L_{DN})	Interior Spaces (dBA L_{DN})	Interior Spaces (dBA L_{EQ})
Residential	65	45	N.A.
Transient Lodging	65	45	N.A.
Hospitals, extended care	65	45	N.A.
Theater, auditorium	*[3]	45	35
Meeting facility, public or private	65	45	40
Offices	65	45	45
School, library, museum	65	45	45
Playground, park	70	N.A.	N.A.

[1] Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.

[2] Where it is not possible to reduce noise in outdoor activity areas to 65 dB L_{DN}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 70 dB L_{DN}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

[3] Subject to an acoustical analysis in compliance with subsection C.2.

dBA = A-weighted decibel; L_{DN} = Day Night sound level; L_{EQ} = time-averaged noise level; N.A. = not applicable.

Table 6
NOISE STANDARDS FOR SHORT-DURATION EVENTS NEAR RESIDENTIAL AREAS

Sound Level	Maximum Allowable Level Day/Evening (7 a.m. to 10 p.m.)[1]	Maximum Allowable Level Night (10 p.m. to 7 a.m.)[1]
Hourly L_{EQ} (dBA)	50	45
Maximum Level (dBA)	70	65
Maximum Level for Impulsive Noise (dBA)	65	60

[1] If the offensive noise contains a steady, audible tone (e.g., a screech or hum), is a repetitive noise (e.g., hammering), or contains speech or music, the maximum allowable sound level shall be reduced by five dBA.

dBA = A-weighted decibel; L_{EQ} = time-averaged noise level.

2. Acoustical Analysis Required. Where the director determines that a proposed project may generate noise in excess of any limit established by Table 3-3 [reproduced in this report as Table 5], and/or where the use may generate noise in outdoor areas in excess of 60 dBA, the land use permit application for the use shall include an acoustical analysis by a qualified professional approved by the director.

    a. Contents. The analysis shall determine the potential for stationary source noise impacts to neighboring land uses, include field measurements to determine more precise locations for existing and projected future noise levels (based on traffic projections in the circulation element of the general plan or as otherwise accepted by the city), and recommend appropriate mitigation measures.

    b. Preferred Mitigation Measures for Receptor Sites. When development is subject to high noise levels requiring mitigation, the following measures shall be considered and preference shall be given where feasible in the following order:

        (1) Site layout, including setbacks, open space separation and shielding of noise-sensitive uses with non-noise-sensitive uses;

        (2) Acoustical treatment of buildings; or

        (3) Structural measures such as constructed of earth berms and/or wood or concrete barriers; provided that no sound wall shall be located adjacent to a public street.

2.0 ENVIRONMENTAL SETTING

The Project site is currently developed with 16 holes of an 18-hole golf course and associated amenities including a clubhouse, parking lot, and driving range. The clubhouse, which is assumed to be non-operational as part of the baseline condition, is 10,032 SF and contains a kitchen and food service area, restrooms, retail area, and other operational facilities supporting the golf course use. Concrete paths throughout the golf course provide for golf cart circulation with three designated crossings at Sierra Madre Avenue, which bisects the golf course. Small, concrete structures provide restrooms throughout the course.

2.1 SURROUNDING LAND USES

The area around the Project site is dominated by industrial and residential uses. Industrial land uses are located west and south of the site. Specifically, these industrial uses occur within the Light Industrial General Plan land use designation and DWL zone. Two water conservation basins are located north of the site within the Recreation land use and zoning designation. Hodge Elementary School and Northside Park are also located at the southern edge of the southeastern portion of the golf course site.

Single-family and multi-family residential land uses are located north, east, and south of the site as well as interspersed throughout the Project site. These residential uses have land use and zoning designations varying between low-density, medium-density, and moderate-density residential.

2.2 EXISTING NOISE ENVIRONMENT

The existing noise environment is dominated by traffic noise from local streets, noise from industrial businesses (trucks, loading docks, building mechanical systems), and typical suburban residential noise (e.g., landscape maintenance equipment, dogs, etc.). There is some noise from aircraft overflights in the Project area.

2.2.1 Noise Survey

One long-term (24-hour) and three short-term (15-minute) noise measurements were taken on or near the Project site to document existing conditions in the vicinity. The long-term noise measurement (LT-1) was recorded within the industrial site's southeastern edge, near West 10th Street and the apartments northeast and east of the industrial site. The first short-term measurement (ST-1) was recorded along Sierra Madre Avenue, at the approximate location of the residential site's proposed driveway. The second short-term measurement (ST-2) was recorded within the golf course site, near the proposed 7th hole tee box and 8th hole green realignment. The third short-term measurement (ST-3) was recorded at the industrial site's northern edge near Sierra Madre Avenue. Traffic counts were taken during measurements ST-1 and ST-3 for passenger cars, medium trucks and buses, and heavy trucks that passed the street near the noise meter during the measurement. The measured noise levels are shown in Table 7, *Noise Measurement Results.* Measurement locations are shown on Figure 5 and Figure 6. The noise measurement survey sheets are included in Appendix A, *Noise Survey*, to this report.

Table 7
NOISE MEASUREMENT RESULTS

Measurement LT-1	
Date:	March 26 to March 27, 2024
Time:	12:55 p.m. (March 26) – 2:10 p.m. (March 27)
Location:	Within the industrial site's southeastern edge, near West 10th Street.
Measured Noise Level:	55.2 CNEL; 54.9 L_{DN}
Measurement ST-1	
Date:	March 26, 2024
Time:	10:57 a.m. – 11:12 a.m.
Location:	Sierra Madre Avenue, at the approximate location of the residential site's proposed driveway.
Measured Noise Level:	66.2 dBA L_{EQ}
Notes:	Primarily traffic noise on local streets, occasional light aircraft overflight.

Traffic Count	105 cars; 2 medium trucks/buses; 3 heavy trucks
Measurement ST-2	
Date:	March 26, 2024
Time:	11:35 a.m. – 11:50 a.m.
Location:	Within the golf course site, near the proposed 7th hole tee box and 8th hole green realignment.
Measured Noise Level:	45.2 dBA L_{EQ}
Notes:	Heavy earthmoving equipment audible to the north, occasional light aircraft overflight.
Measurement ST-3	
Date:	March 26, 2024
Time:	12:15 p.m. – 12:30 p.m.
Location:	Industrial site's northern edge near Sierra Madre Avenue.
Measured Noise Level:	57.0 dBA L_{EQ}
Notes:	Primarily traffic noise on local streets, heavy trucks within adjacent industrial business.
Traffic Count	111 cars; 0 medium trucks/buses; 4 heavy trucks

dBA = A-weighted decibel; L_{EQ} = time-averaged noise level; L_{DN} = Day Night noise level

3.0 ANALYSIS, METHODOLOGY, AND ASSUMPTIONS

3.1 METHODOLOGY

3.1.1 Ambient Noise Survey

The following equipment was used to measure existing noise levels at the Project site:

- Piccolo II Noise Meter
- Larson Davis Model CA250 Calibrator
- Windscreen and tripod for the noise meter

The sound level meter was calibrated prior to the noise measurements to ensure accuracy. All sound level measurements conducted and presented in this report were made with a sound level meter that conforms to the American National Standards Institute (ANSI) specifications for sound level meters (ANSI SI.4-1983 R2006). All instruments were maintained with National Institute of Standards and Technology traceable calibration per the manufacturers' standards.

3.1.2 Noise Modeling Software

Modeling of the exterior noise environment for this report was accomplished using Computer Aided Noise Abatement (CadnaA) version 2022. CadnaA is a model-based computer program developed by DataKustik for predicting noise impacts in a wide variety of conditions. CadnaA assists in the calculation, presentation, assessment, and mitigation of noise exposure. It allows for the input of Project-related information, such as noise source data, barriers, structures, and topography to create a detailed model, and uses the most up-to-date calculation standards to predict outdoor noise impacts. The latest site plans provided by the Project applicant (see Figure 3 and Figure 4), were used. CadnaA traffic noise prediction is based on the data and methodology used in the Traffic Noise Model released by the U.S. Department of Transportation (USDOT).

Peak-hour traffic volumes were estimated based on the assumption that approximately 10 percent of the average daily traffic would occur during a peak hour. The one-hour L_{EQ} noise level is calculated utilizing peak-hour traffic. Peak hour L_{EQ} can be converted to CNEL using the following equation, where $L_{EQ}(h)pk$ is the peak hour L_{EQ}, *P* is the peak hour volume percentage of the average daily trips (ADT), *d* and *e* are divisions of the daytime fraction of ADT to account for daytime and evening hours, and *N* is the nighttime fraction of ADT:

$$CNEL = L_{EQ}(h)pk + 10log10\ 4.17/P + 10log10(d + 4.77e + 10N)$$

The model-calculated one-hour L_{EQ} noise output is, therefore, approximately equal to the CNEL when peak-hour traffic volumes are typical (around 10 percent of ADT) (California Department of Transportation [Caltrans] 2013).

Project construction noise was analyzed using the Roadway Construction Noise Model (RCNM; USDOT 2008), which utilizes estimates of sound levels from standard construction equipment.

3.2 ASSUMPTIONS

3.2.1 Construction

Construction activities for the industrial site and residential site would include site preparation, grading and installation of underground utilities, building construction, architectural coating (e.g., painting), and paving. Construction activities for the golf course site would include grading for the relocated 7th hole tee area and 8th hole green, renovation of the golf course clubhouse, and clubhouse painting.

The Project would not require demolition activities. The most intensive daytime use of heavy construction equipment would occur during site preparation (e.g., clearing and grubbing) and grading using typical earthmoving equipment including dozers, excavators, graders, and scrapers. The most intensive nighttime use of heavy construction equipment would occur during concrete pouring for the Project's industrial buildings and residential stacked flat buildings, when the primary noise source would be from a concrete pump truck and multiple concrete mixer trucks. Construction equipment noise was evaluated using the RCNM and methodology from the Federal Transit Administration's (FTA's) *Transit Noise and Vibration Impact Assessment Manual*, Option A for a quantitative construction noise assessment. Using this method, equipment is assumed to operate at the center or centerline of the Project site, and the two noisiest pieces of construction equipment are assumed to operate concurrently in close proximity to each other (FTA 2018 pp. 177-178).

Project construction truck hauling trips were estimated as part of the Project Air Quality and Greenhouse Gas Emissions analysis. Phase 1 (industrial site) would require: approximately 2 one-way truck trips per workday for the export of vegetation and debris during site preparation; approximately 58 one-way truck trips per workday for vendor deliveries during building construction; and approximately 87 one-way truck trips per workday for the import of aggregate, asphalt, and concrete during paving, based on 12 inches of uncompressed depth and 16 cubic yards (CY) per tandem trailer load. Phase 2 (residential site) would require: approximately 2 one-way truck trips per workday for the export of vegetation and debris during site preparation; approximately 22 one-way truck trips per workday for the export of soil (totaling 8,610 CY) during grading; approximately 28 one-way truck trips per day for vendor deliveries during building construction; and 39 one-way trips per workday for the

import of aggregate, asphalt, and concrete during paving, based on 12 inches of uncompressed depth and 16 cubic yards (CY) per tandem trailer load (HELIX 2025).

3.2.2 Operations

Anticipated operational noise sources for the industrial site would include trucks with backup alarms; transport refrigeration units (TRUs; typically, a diesel-powered refrigeration unit mounted on the truck trailer or box); rooftop heating, ventilation, and air conditioning (HVAC) systems; rooftop-mounted refrigeration condenser units; and vehicular traffic. Anticipated operational noise sources for the residential site would include rooftop and ground-mounted HVAC systems and vehicular traffic.

3.2.2.1 Building Mechanical Equipment

Industrial Site Building Mechanical Equipment

The Project would use commercial-sized HVAC units located on the rooftop of each building for the proposed office space. Specific planning data for the future HVAC systems was not available at the time of this analysis. Standard HVAC planning assumes approximately one ton of HVAC for every 350 to 500 SF of occupied office space (American Society of Heating, Refrigeration, and Air Conditioning Engineers [ASHRAE] 2012). For the purposes of this analysis, one Carrier 50PG 12-ton HVAC unit, which has a sound power level (S_{WL}) of 80.0 dBA (Carrier 2008), was assumed for each of the Project office spaces in the industrial buildings (see Figure 3). The HVAC systems were assumed to be mounted on the Project building roof and would be surrounded by standard parapet walls approximately four feet high. The manufacturer's noise data for the HVAC units is provided below in Table 8, *Industrial Building HVAC Noise Data*.

Table 8
INDUSTRIAL BUILDING HVAC NOISE DATA

63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	Overall Noise Level in A-weighted Scale (dBA)[1]
90.4	83.1	80.9	77.8	75.2	70.0	66.1	57.6	80.0

Source: Carrier 2008
[1] Sound Power Levels (S_{WL})
Note: Noise levels in decibels (dB) measured at octave frequencies
Hz = Hertz; kHz = kilohertz

The Project would include stationary commercial-sized refrigeration units for the refrigerated warehouse space (up to five percent of the Project's industrial building space). The location of the refrigerated warehouse space within the Project buildings was not known at the time of this analysis. To be conservative, six rooftop refrigeration condensers were assumed, one located on the roof of each industrial building, and would be surrounded by standard parapet walls approximately four feet high. For this analysis, Hussman Proto-Air 3280 refrigeration systems were assumed, which have a S_{WL} of 89.3 dBA when operating at the maximum speed of 1,150 revolutions per minute (Hussmann 2015). Noise data for the rooftop refrigeration condenser unit and associated fan is shown in Table 9, *Industrial Building Refrigeration Unit Fan Noise Data*.

Table 9
INDUSTRIAL BUILDING REFRIGERATION UNIT FAN NOISE DATA

Fan Type	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	Overall Noise Level (dBA)[1]
Single Fan 1,150 RPM	90.6	93.6	89.6	86.6	84.6	79.6	75.6	89.3

Source: Hussmann 2015
[1] Sound Power Levels (S_{WL})
Hz = Hertz; kHz = kilohertz; RPM = revolutions per minute

Residential Site Building Mechanical Equipment

The Project would use one residential-sized HVAC unit for each apartment or duplex, with the air conditioning condenser located on the rooftop of the building or on the ground next to the building, and a commercial-sized HVAC unit located on the ground next to the proposed clubhouse. Specific details on planned HVAC units were not available at the time of this analysis. A typical system for multi-family building dwelling units would be a Carrier model 38BRC-024-34 2-ton split system, which has a sound power level rating of 76 dBA (Carrier 2005). The manufacturer's noise data for the HVAC units is provided below in Table 10, *Residential Building HVAC Noise Data*. The commercial HVAC system for the clubhouse was assumed to be a Carrier 50PG 12-ton HVAC unit; see Table 8, above.

Table 10
RESIDENTIAL BUILDING HVAC NOISE DATA

125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	Overall Noise Level (dBA)[1]
55.5	62.5	68.0	70.0	67.0	61.5	57.5	76.0

Source: Carrier 2005
[1] Sound Power Levels (S_{WL}) in dBA
S_{WL} = sound power level; Hz = Hertz; kHz = kilohertz

Industrial Site Delivery Trucks

Operation of the Project would involve diesel-powered heavy trucks for the delivery of goods to the Project site. The Project would be operational for 24 hours per day. According to the Project's Transportation Impact Study (TIS), 88 one-way truck trips would occur each day, with 4 one-way truck trips during the peak hour entering or exiting the site (Linscott, Law and Greenspan [LLG] 2024).

The Project industrial buildings would all have loading docks:

- Building 1 – 4 Docks
- Building 2 – 5 Docks
- Building 3 – 8 Docks
- Building 4 – 11 Docks
- Building 5 – 15 Docks
- Building 6 – 6 Docks

Delivery trucks access the site via driveways on North Todd Avenue and West 10th Street. To be conservative, modeling of peak hour noise assumed one delivery truck per hour for each of the six industrial buildings (six peak hour truck trips, two more per hour than estimated in the TIS). Each truck was assumed to circulate on the Project site at an average speed of 10 miles per hour (mph), then reverse to a loading bay at 3 mph. Each truck was assumed to idle at the loading bay for the maximum allowable time of five minutes, in accordance with CCR Title 13, Section 2485. Truck noise typically emanates from three sources: the exhaust stack, the engine compartment, and the tire-pavement interface. For trucks circulating around the Project site, truck noise was modeled using TNM road sources, which split noise between two heights: 5 feet and 12 feet (FTA 2024). At low speeds and when idling, truck engine noise dominates over other truck noise sources (FTA 2004, p. 13). These heights represent the engine noise and exhaust stack, respectively. Therefore, noise from trucks idling at loading docks was modeled at a height of 5 feet above ground, the heavy truck engine noise source height used in the TNM methodology (FTA 2024, p. 14).

Some trucks would generate noise from the use of TRUs (typically, a diesel-powered refrigeration unit mounted on the truck trailer or box). Specific TRU noise would vary from unit to unit. Typical noise from a TRU was modeled as producing 101.5 dBA S_{WL}, based on data from a Canadian study, which reported measured noise from 16 TRUs (RWDI Consulting Engineers and Scientists 2017). The average S_{WL} by octave band is shown in Table 11, *TRU Noise Data*. TRUs were modeled at an average height of 9.5 feet above ground, based on images of typical TRUs mounted on truck trailers (California Air Resources Board 2025). To be conservative, modeling of TRUs does not account for reductions in noise due to directivity of the noise source (noise measured along the axis of the truck trailer is higher than noise measured 90 degrees from the trailer axis). Only trucks transporting goods to and from the Project's refrigerated warehouse space (five percent of the total Project warehouse space) would be anticipated to be equipped with an operating TRU. Because the location of the refrigerated warehouse space within the Project building was unknown at the time of this analysis, the modeled truck going to each industrial building during the peak hour area was assumed to be equipped with an operating TRU (six TRUs operating on the site during the peak hour). Each TRU was assumed to operate at a 50 percent duty cycle during the analyzed peak noise hour.

Table 11
TRU NOISE DATA

31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	Overall Noise Level (dBA)[1]
97	111	105	102	97	96	94	89	83	101.5

Source: RWDI Consulting Engineers and Scientists 2017
[1] Sound Power Levels (SWL) in dBA
SWL = sound power level; Hz = Hertz; kHz = kilohertz

There are no California or federal regulations which require on-road trucks to be equipped with backup warning devices. However, backup alarms are commonly used on local delivery trucks and van fleets due to safety/liability concerns. The most common truck backup alarm is a pulsing single tone, typically at one kHz. Recently, in response to noise complaints, backup alarms, which produce a less intrusive pulsing broad-spectrum noise, have been introduced. To be conservative, all trucks were assumed to be equipped with a traditional one kHz backup alarm, mounted on the back of the truck at a height of three feet. Backup alarms were modeled with typical noise levels of 109.7 dBA measured at a distance of 4 feet.

3.2.2.2 Vehicular Traffic

Modeled traffic noise from the roadways in the Project vicinity were based on volumes provided by the Project's TIS (LLG 2024) for four scenarios: Existing (2023); Existing Plus Project; Future (Project opening year 2027; existing traffic plus approved and planned projects, plus estimated growth); and Future Plus Project (existing traffic plus approved and planned projects, plus Project, plus estimated growth). The mix of cars and trucks on the analyzed roadways was not provided in the TIS. Therefore, all analyzed road segments were assumed to carry a mix typical of suburban areas: 96 percent cars and light trucks, 3 percent medium trucks; and 1 percent heavy-duty trucks. Trip generation rates and trip distribution were also provided in the TIS: the industrial site would generate 1,719 ADT (including 88 truck trips), the residential site would generate 831 ADT, and the golf course site would generate 273 ADT (LLG 2024). Project-affected road segments were modeled assuming all vehicles traveling at the posted speed limit of 40 mph for Todd Avenue and Sierra Madre Avenue, and 35 mph for West Foothill Boulevard, Vernon Avenue, North San Gabriel Avenue, and North Azusa Avenue. Table 12, *PM Peak Hour Traffic Volumes*, shows the p.m. peak hour traffic volumes used in the modeling for the analyzed roadway segments. Traffic noise modeling does not account for reductions in noise levels due to terrain or structures.

Table 12
PM PEAK HOUR TRAFFIC VOLUMES

Roadway Segment	Existing (2023)	Existing (2023) + Project	Future (2027)	Future (2027) + Project
Todd Avenue				
Sierra Madre Avenue to West 10th Street	894	945	908	959
West 10th Street to West Foothill Boulevard	1,046	1,316	1,064	1,334
Sierra Madre Avenue				
Todd Avenue to Residential Site Driveway	910	945	924	959
Residential Site Driveway to Vernon Avenue	879	928	892	941
Vernon Avenue to North San Gabriel Avenue	889	894	905	910
West Foothill Boulevard				
Todd Avenue to Vernon Avenue	1,621	1,715	1,785	1,879
Vernon Avenue to North San Gabriel Avenue	1,523	1,662	1,688	1,827
North San Gabriel Avenue to North Azusa Avenue	1,489	1,558	1,648	1,717
Vernon Avenue				
Sierra Madre Avenue to West Foothill Boulevard	357	402	365	410
North San Gabriel Avenue				
Sierra Madre Avenue to West Foothill Boulevard	335	336	339	340
West Foothill Boulevard to East 6th Street	816	891	870	943
North Azusa Avenue				
Sierra Madre Ave to West Foothill Boulevard	507	508	576	577
West Foothill Boulevard to East 6th Street	513	542	565	594

Source: LLG 2024

3.3 GUIDELINES FOR THE DETERMINATION OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, implementation of the Project would result in a significant adverse impact if it would:

Threshold 1: *Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the City General Plan or noise ordinance.*

Per the City Municipal Code Section 46-413, construction noise is exempt from the provisions of City Noise Ordinances provided a permit has been obtained from the City, and provided construction activities take place between the hours of 7:00 a.m. to 6:00 p.m. Monday through Saturday (except on City recognized holidays). As noted in Section 1.2.4, conditions of Project approval would be required to allow Project construction activity (concrete pours) outside of these hours. Chapter 88.31 of the City Development Code contains operation standards for land development and does not apply to Project construction activities. Because the City Code does not contain any standards applicable to construction noise levels, construction noise would be potentially significant if it would exceed levels set by the National Institute for Occupational Safety and Health (NIOSH; 29 CFR 1926, Subpart D, § 1956.52) for the protection of construction workers without personal hearing protective equipment—90 dBA L_{EQ} 8-hour, measured at any off-site NSLU. In addition, CEQA case law establishes that a project's noise impact analysis must consider the increase in ambient noise levels (King and Gardiner Farms v. County of Kern). Neither the City nor any state regulatory agency has established criteria for determining the significance of an increase in ambient noise levels resulting from temporary and short-term construction noise. Therefore, temporary Project construction noise measured at off-site NSLUs would be significant if it would result in a perceived doubling of loudness, estimated to be an increase of 10 dBA above exterior ambient noise levels (Caltrans 2013). This threshold provides a reasonable balance between the need to operate noise-generating equipment for most temporary construction activities and the desire to protect NSLUs from temporary disturbances.

As discussed in Section 1.6.4, per the City Municipal Code Section 46-405, noise generated on the Project site would be significant if it would generate exterior noise levels exceeding 55 dBA L_{EQ} daytime (7:00 a.m. to 10:00 p.m.) or 50 dBA L_{EQ} nighttime (10:00 a.m. to 10:00 p.m.) measured at a residential property line; or exceeding 70 dBA L_{EQ} at any time measured at an industrial property line. Per the City Municipal Code Section 46-407, noise generated on the Project site would also be significant if it would generate interior noise levels exceeding 55 dBA L_{EQ} daytime (7:00 a.m. to 10:00 p.m.) or 45 dBA L_{EQ} nighttime (10:00 a.m. to 10:00 p.m.) measured within a residential building habitable space. Per the City Development Code Section 88.31.020, noise generated on the Project site would be significant if it would generate exterior noise levels of 65 L_{DN} measured at a residential property line.

As described above, CEQA case law requires consideration of the increase in ambient noise levels resulting from a project. The City has not established standards for determining the significance of permanent increases in ambient noise resulting from a development project. Therefore, the standards of significance used in this analysis for operational noise are based on recommendations from the Federal Interagency Committee on Noise (FICON). These thresholds for acceptable increases in ambient noise levels are based on human reactions to aircraft noise but are equally applicable to human reactions to changes in urban ambient noise levels. Impacts would be significant if the Project's contribution to existing ambient noise levels, measured at ground level within an NSLU, would result in (FICON 1992):

- An increase of 5 dBA or more where the existing ambient noise level is less than 60 CNEL; or
- An increase of 3 dBA or more where the existing ambient noise level is between 60 and 65 CNEL; or
- An increase of 1.5 dBA or more where the existing ambient noise level is more than 65 CNEL.

Threshold 2: *Generate excessive ground-borne vibration levels.*

The City has not adopted thresholds of significance for ground-borne vibration. Therefore, based on guidance from the FTA, ground-borne vibration would be potentially significant if the Project would result in ground-borne vibration which exceeds architectural damage potential criteria for non-engineered timber and masonry buildings of 0.2 inch per second PPV, for continuous/frequent intermittent construction sources (such as impact pile drivers, vibratory pile drivers, and heavy construction equipment) (FTA 2018). In addition, ground-borne vibration which would occur at night would be potentially significant if the Project would result in ground-borne vibration which exceeds 75 VdB L_V (the approximate barely perceivable threshold for occasional events) in buildings where people normally sleep (FTA 2018).

Threshold 3: *For a project located within the vicinity of a private airstrip or an airport land use plan, or where such a plan has not been adopted, within two miles of a public use airport or private airstrip, expose people residing or working in the project area to excessive noise.*

Excessive noise exposure is defined as noise levels that exceed the standards in the City General Plan Noise Element for the associated land use.

Threshold 4: *Conflicts with land use compatibility criteria for new land uses.*

As described in Section 1.6.3, the City's General Plan specifies exterior noise levels up to 65 CNEL as normally acceptable for multi-family residential uses and up to 75 CNEL as normally acceptable for industrial uses (City 2004).

4.0 IMPACTS

4.1 ISSUE 1: INCREASE IN AMBIENT NOISE LEVELS

Would the project generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the City General Plan or noise ordinance?

4.1.1 Temporary Construction Noise

4.1.1.1 Construction Off-Road Equipment

Construction of the Project would require the use of heavy off-road equipment for site clearing, grading, installation of underground utilities/infrastructure, construction of new buildings, and paving. The magnitude of the noise impact would depend on the type of construction activity, equipment, duration of each construction phase, distance between the noise source and receiver, and any intervening structures. Construction would generate elevated noise levels that may disrupt NSLUs in the area. As described in Section 1.5, above, the closest existing NSLUs to the Project's industrial site are multi-family

residential properties east and northeast of the southeast corner of the Project industrial site. The closest existing NSLUs to the Project's residential site are single-family residential properties adjacent to the western property line.

Heavy off-road construction equipment would not all operate at the same time or location and would not be in constant use during the 8-hour operating day. Further, not all the pieces of equipment would be used near off-site residential property lines. The most intensive daytime use of heavy construction equipment would be from earth-moving activities during grading. The most intensive nighttime use of heavy construction equipment would be from concrete pouring. Construction equipment noise was evaluated using methodology from the FTA's *Transit Noise and Vibration Impact Assessment Manual*, Option A for a quantitative construction noise assessment. Using this method, equipment is assumed to operate at the center of the Project, and the two noisiest pieces of construction equipment are assumed to operate concurrently in close proximity to each other (FTA 2018 pp. 177-178). The results of the hourly average construction equipment noise levels calculated using the RCNM are compared to the NIOSH threshold in Table 13, *Construction Equipment Hourly Average Noise Levels*.

Table 13
CONSTRUCTION EQUIPMENT HOURLY AVERAGE NOISE LEVELS

Activity Description	Two Noisiest Off-Road Equipment	Distance Centerline to NSLU (feet)	dBA L_{EQ} at NSLU	Threshold	Exceed Threshold?
Residential site daytime grading	Grader, Scraper	180	72.3	90	No
Industrial site daytime grading	Grader, Scraper	160	73.3	90	No
Residential site nighttime concrete pouring	Concrete mixer truck, Concrete mixer truck	180	66.7	90	No
Industrial site nighttime concrete pouring	Concrete mixer truck, Concrete mixer truck	160	67.7	90	No

Source: RCNM; Threshold: NIOSH 29 CFR 1926, Subpart D, § 1956.52
dBA = A-weighted decibel; L_{EQ} = time-averaged noise level; NSLU = noise sensitive land use

The Project would be required to obtain a grading or construction permit for all construction activities, and nighttime construction activities would require a Project condition of approval in accordance with the City Municipal Code Section 46-409.

As described in Section 3.3, above, CEQA case law establishes that a noise impact analysis must consider the increase over ambient noise levels resulting from a project. Ambient noise is described using CNEL. The CNEL for the residential site can be estimated assuming the short-term ST2 measurement (45.2 dBA L_{EQ}), described in Section 2.2.1, is typical of existing daytime noise on the residential site away from traffic noise on Sierra Madre Avenue. Assuming 45.2 dBA L_{EQ} daytime noise, a 5 dBA evening noise weighting (40.2 dBA L_{EQ}), and a 10 dBA nighttime noise weighting (35.2 dBA L_{EQ}), the resulting existing residential site ambient noise level is 45.2 dBA. For the industrial site, the LT1 24-hour measurement was 55.2 CNEL, located about 160 feet north of West 10th Street. Adjusting this measured noise level for distance, the existing ambient noise level is 48.5 CNEL at the closest existing residential outdoor area or building façade to the residential site (about 348 feet from West 10th Street). Assuming eight hours of continuous construction equipment use and applying the CNEL weighting for evening/nighttime noise levels, the calculated increase over existing ambient noise resulting from Project construction is

compared to the 10 dBA increase threshold in Table 14, *Construction Equipment Increase over Existing Ambient Noise Levels*.

Table 14
CONSTRUCTION EQUIPMENT INCREASE OVER EXISTING AMBIENT NOISE LEVELS

Activity Description	Construction Equipment Noise at NSLU (CNEL)	Existing Ambient Noise Level at NSLU (CNEL)	Increase (dBA)	Threshold (dBA)	Exceed Threshold?
Residential site daytime grading	67.5	45.2	22.3	10	Yes
Industrial site daytime grading	68.5	48.5	20.0	10	Yes
Residential site nighttime concrete pouring	71.9	45.2	26.7	10	Yes
Industrial site nighttime concrete pouring	72.9	48.5	24.4	10	Yes

Source: RCNM

dBA = A-weighted decibel; CNEL = Community Noise Equivalent Level; NSLU = noise sensitive land use

As shown in Tables 13 and 14, although on-site Project construction equipment would not result in average noise levels exceeding the safety-based NIOSH threshold, on-site Project construction equipment use would result in temporary increases of ambient noise levels over existing levels exceeding the 10 dBA increase threshold. Therefore, Project construction activity would generate a substantial temporary increase in ambient noise levels in the vicinity of the Project.

4.1.2 Construction Truck Traffic Noise

As discussed in Section 3.2.1, peak Project construction truck trips are anticipated to be 87 one-way truck trips per day, resulting in approximately 11 trucks per hour for the import of aggregate, asphalt, and concrete during Phase 1 paving. It is anticipated that Project construction truck traffic would access the site via North Todd Avenue, a City designated truck route. Per the TIS, based on traffic counts taken in 2023, North Todd Avenue between West 10th Street and West Foothill Boulevard has a p.m. peak traffic volume of 1,046 vehicles. Modeling with CadnaA indicates that an additional 11 heavy truck trips per hour would temporarily increase the hourly noise level along that roadway from 68.0 dBA to 68.3 dBA, measured at the closest NSLU approximately 40 feet from the roadway centerline. This increase in noise levels of 0.3 dBA would be well below the just perceivable 3 dBA increase level for noisy outdoor environments. Therefore, construction truck traffic would not generate a substantial temporary increase in ambient noise levels.

4.1.3 Operation Noise

4.1.3.1 Industrial Site Noise Generation

The Project anticipates industrial site operation could occur 24 hours per day, seven days per week. As a light industrial land use, which could include warehouse uses, operation of the Project may involve nighttime truck deliveries. Per City Municipal Code Section 46-411, truck deliveries to a commercial or industrial parcel adjacent to a conforming residential use shall be limited to the hours between 7:00 a.m. and 7:00 p.m., unless the City authorizes other delivery times for the Project. The Project

applicant has submitted a minor use permit application as part of the proposed Project to allow operations 24 hours per day, seven days per week on the industrial site. If the minor use permit is granted, the requirements of City Municipal Code Section 46-411 would be satisfied.

The proposed industrial site would also include truck entry driveways, loading dock areas, rooftop HVAC units, and rooftop refrigeration condensers that would generate noise. The primary noise sources for the loading dock areas are delivery truck engines idling, truck backup alarms, and TRU engines, as described in Section 3.2.2. Operation of all noise-generating components on the industrial site were modeled using CadnaA. The Project buildings and an existing 6-foot-high sound wall between the existing industrial buildings (Rainbird Corporation) and apartments north of the Project site were included in the model. As described in Section 1.5, the closest existing NSLUs to the Project industrial site are multi-family residential properties east and northeast of the southeast portion of the industrial site, near Project Building 6. Additional NSLUs include single-family residences across Sierra Madre Avenue, approximately 170 feet northeast of Project Building 1. Ten receivers were placed in the model along the property lines of the single-family residences near Building 1 and the multi-family residential properties near Building 6 (R1 through R10). Nine receivers were placed in the model along the industrial business property line west and north of the Project industrial site (I1 through I9). See Figure 5 for the modeled industrial site receiver locations.

The calculated peak hour noise level results are compared to the City's noise standard for the maximum permissible level measured five feet above ground level at the receiving property boundary in Table 15, *Industrial Site Operational Hourly Noise*. The CadnaA modeling output tables are included in Appendix C, *CadnaA Input and Output Tables*, to this report.

Table 15
INDUSTRIAL SITE OPERATIONAL HOURLY NOISE

Receiver Number	Land Use	Project Noise (dBA L_{EQ})	City Noise Limit Day/Night (dBA)[1]	*Exceed Standard?*
R1	Residential	44.8	55/50	*No*
R2	Residential	48.2	55/50	*No*
R3	Residential	48.4	55/50	*No*
R4	Residential	54.9	55/50	***Yes (Night)***
R5	Residential	57.5	55/50	***Yes***
R6	Residential	49.1	55/50	*No*
R7	Residential	41.1	55/50	*No*
R8	Residential	39.5	55/50	*No*
R9	Residential	34.3	55/50	*No*
R10	Residential	32.4	55/50	*No*
I1	Industrial	61.2	70/70	*No*
I2	Industrial	61.7	70/70	*No*
I3	Industrial	58.4	70/70	*No*
I4	Industrial	59.0	70/70	*No*
I5	Industrial	53.4	70/70	*No*
I6	Industrial	57.3	70/70	*No*
I7	Industrial	57.0	70/70	*No*
I8	Industrial	61.3	70/70	*No*

Receiver Number	Land Use	Project Noise (dBA L_{EQ})	City Noise Limit Day/Night (dBA)[1]	*Exceed Standard?*
I9	Industrial	60.4	70/70	*No*

Source: CadnaA
[1] Noise limit from City Noise Ordinance Section 46-405.
dBA = A-weighted decibel; L_{EQ} = time-averaged noise level

The Project is anticipated to operate 24 hours per day, seven days per week. As shown in Table 15, the City's daytime limit of 55 dBA L_{EQ} would be exceeded at receiver R5, and the City's nighttime limit of 50 dBA L_{EQ} would be exceeded at receivers R4 and R5 (north of the Project Building 6 loading dock area, see Figure 5), resulting in a potentially significant impact.

Existing ambient noise in the multi-family residential area north of the Project industrial site Buildings 5 and 6 was modeled using a road source on West 10th Street calibrated to the measured CNEL at measurement location LT1 (see Section 2.2.1, above, for a discussion of the noise survey). Without the Project, existing ambient noise is calculated to be 51.3 CNEL at receiver location R5 (the modeled residential receiver most affected by Project industrial site operational noise). Accounting for reductions in traffic noise from the Project industrial buildings, traffic noise at receiver R5 would be 45.3 CNEL. The calculated 24-hour noise level for Project industrial site operational noise combined with existing traffic noise (including the CNEL nighttime 10 dBA and evening 5 dBA weighting) would be 64.3 CNEL for receiver R5, below the City's limit of 65 L_{DN} per City Development Code Section 88.31.020.[1]

As discussed in Section 3.3, impacts would also be significant where the Project's contribution to existing noise would exceed 5 dBA where the existing ambient noise level is less than 60 CNEL. Therefore, the addition of Project industrial site operational noise to the existing 51.3 CNEL would result in 64.3 CNEL, an increase of 13 dBA, exceeding the 5 dBA threshold and resulting in a potentially significant impact.

4.1.3.2 Residential Site Noise Generation

The proposed Project residential site HVAC units, as described in Section 3.2.2, were modeled using CadnaA. The Project buildings and surrounding buildings were included in the model. As described in Section 1.5, the closest existing NSLUs to the residential site are single-family residential properties adjacent to the residential site's western property line. There were 23 receivers placed in the model along the property lines of the closest single-family residences around the residential site. See Figure 6 for the modeled residential site receiver locations.

The calculated peak hour noise level results are compared to the City's noise standard for the maximum permissible level measured at the receiving property boundary in Table 16, *Unmitigated Residential Site Operational Hourly Noise*. The CadnaA modeling output tables are included in Appendix C to this report.

[1] Compared to L_{DN}, CNEL is calculated with an additional 5 dBA weighting for evening hours from 7:00 p.m. to 10 p.m. Therefore, CNEL is always slightly higher than L_{DN}.

Table 16
UNMITIGATED RESIDENTIAL SITE OPERATIONAL HOURLY NOISE

Receiver Number	Land Use	Project Noise (dBA L_{EQ})	City Noise Limit Day/Night (dBA)[1]	*Exceed Standard?*
R1	Residential	27.8	55/50	*No*
R2	Residential	29.3	55/50	*No*
R3	Residential	30.9	55/50	*No*
R4	Residential	33.7	55/50	*No*
R5	Residential	31.9	55/50	*No*
R6	Residential	30.3	55/50	*No*
R7	Residential	32.7	55/50	*No*
R8	Residential	29.5	55/50	*No*
R9	Residential	31.1	55/50	*No*
R10	Residential	32.5	55/50	*No*
R11	Residential	30.2	55/50	*No*
R12	Residential	33.4	55/50	*No*
R13	Residential	34.0	55/50	*No*
R14	Residential	34.5	55/50	*No*
R15	Residential	33.0	55/50	*No*
R16	Residential	22.0	55/50	*No*
R17	Residential	24.3	55/50	*No*
R18	Residential	23.9	55/50	*No*
R19	Residential	24.0	55/50	*No*
R20	Residential	24.8	55/50	*No*
R21	Residential	25.3	55/50	*No*
R22	Residential	25.1	55/50	*No*
R23	Residential	24.4	55/50	*No*

Source: CadnaA
[1] Noise limit from City Noise Ordinance Section 46-405.
dBA = A-weighted decibel; L_{EQ} = time-averaged noise level

As shown in Table 16, the City's daytime limit of 55 dBA L_{EQ} or nighttime limit of 50 dBA L_{EQ} would not be exceeded at any modeled receiver location (see Figure 6 for modeled receiver locations).

Based on the site survey short-term noise measurement at location ST2 (45.2 dBA L_{EQ}, see Section 2.2.1) and modeling of traffic noise using CadnaA and the existing conditions traffic volumes described in Section 3.2.2, existing ambient noise levels for NSLUs around the Project residential site range from 60 L_{DN} near Sierra Madre Avenue to 45 L_{DN} in the northern portion of the residential site away from the street. The addition of 22 dBA L_{EQ} to 34.5 dBA L_{EQ} for Project HVAC noise would not result in a noticeable increase in ambient noise levels. For example, at receiver R14, noise from Project HVAC systems would be 34.5 dBA L_{EQ} (one hour), or 40.9 L_{DN} when conservatively assuming all Project HVAC systems would run steadily for 24 hours. When adding this HVAC noise to the traffic noise level at receiver R14 of 54.2 L_{DN}, the resulting noise level would be 54.4 L_{DN}. Therefore, residential site noise would not result in noise levels exceeding the City's limit of 65 L_{DN} per City Development Code Section 88.31.020. Additionally, residential site noise would not result in increases in ambient noise exceeding the threshold of 5 dBA where the existing ambient noise level is less than 60 CNEL. The impact of operational noise generated on the residential site would be less than significant.

4.1.3.3 Off-Site Transportation Noise Generation

As discussed in Section 3.3, impacts would be significant where the Project's contribution to traffic noise would exceed: 5 dBA where the existing ambient noise level is less than 60 CNEL; 3 dBA where the existing ambient noise level is between 60 and 65 CNEL; or 1.5 dBA where the existing ambient noise level is more than 65 CNEL.

The Project would generate vehicular traffic along nearby roadways. As described in Section 3.2.2, CadnaA was used to calculate the peak p.m. hour noise for Existing (2023); Existing Plus Project; Future (Project opening year 2027; existing traffic plus approved and planned projects, plus estimated growth), and Future Plus Project (existing traffic plus approved and planned projects, plus Project, plus estimated growth) scenarios along Project-affected roadways. As noted in Section 3.2.2, traffic noise levels presented in this analysis are based on traffic volumes provided in the Project's TIS (LLG 2024). Traffic noise modeling includes Project-generated trips for all components: industrial site, residential site, and the golf course. The off-site roadway modeling represents a conservative analysis that does not consider topography or attenuation provided by existing structures. The results of the off-site transportation noise modeling are shown in Table 17, *Existing Off-Site Traffic Noise Levels*, and Table 18, *Future Off-Site Traffic Noise Levels*. The CadnaA modeling output tables are included in Appendix C to this report.

Table 17
EXISTING OFF-SITE TRAFFIC NOISE LEVELS

Roadway Segment	Distance to Nearest NSLU (feet)	Existing (2023) (dBA L_{EQ})	Existing (2023) + Project (dBA L_{EQ})	Project-Generated Increase (dBA L_{EQ})
Todd Avenue				
Sierra Madre Ave to West 10th Street	67[1]	64.0	64.2	0.2
West 10th Street to West Foothill Boulevard	40	68.1	69.1	1.0
Sierra Madre Avenue				
Todd Avenue to Project Residential Site Driveway	70	64.2	64.3	0.1
Project Residential Site Driveway to Vernon Avenue	70	64.5	64.8	0.3
Vernon Avenue to North San Gabriel Avenue	70	64.2	64.2	<0.1
West Foothill Boulevard				
Todd Avenue to Vernon Avenue	58[1]	66.3	66.6	0.3
Vernon Avenue to North San Gabriel Avenue	55	65.8	66.2	0.4
North San Gabriel Avenue to North Azusa Avenue	72[1]	65.2	65.4	0.2
Vernon Avenue				
Sierra Madre Avenue to West Foothill Boulevard	42	60.4	60.9	0.5
North San Gabriel Avenue				
Sierra Madre Ave to West Foothill Boulevard	52	59.8	59.9	0.1
West Foothill Boulevard to East 6th Street	70	61.4	61.7	0.3

Roadway Segment	Distance to Nearest NSLU (feet)	Existing (2023) (dBA L_{EQ})	Existing (2023) + Project (dBA L_{EQ})	Project-Generated Increase (dBA L_{EQ})
North Azusa Avenue				
Sierra Madre Ave to West Foothill Boulevard	62	60.7	60.7	<0.1
West Foothill Boulevard to East 6th Street	40	63.2	63.5	0.3

Source: CadnaA

[1] No NSLU along this road segment, distance to the closest commercial or industrial building shown.

Table 18
FUTURE OFF-SITE TRAFFIC NOISE LEVELS

Roadway Segment	Distance to Nearest NSLU (feet)	Future (2027) (dBA L_{EQ})	Future (2027) + Project (dBA L_{EQ})	Project-Generated Increase (dBA L_{EQ})
Todd Avenue				
Sierra Madre Ave to West 10th Street	67[1]	64.1	64.3	0.2
West 10th Street to West Foothill Boulevard	40	68.1	69.1	1.0
Sierra Madre Avenue				
Todd Avenue to Project Residential Site Driveway	70	64.2	64.4	0.2
Project Residential Site Driveway to Vernon Avenue	70	64.6	64.8	0.2
Vernon Avenue to North San Gabriel Avenue	70	64.3	64.3	<0.1
West Foothill Boulevard				
Todd Avenue to Vernon Avenue	58[1]	66.7	67.0	0.1
Vernon Avenue to North San Gabriel Avenue	55	66.2	66.6	0.4
North San Gabriel Avenue to North Azusa Avenue	72[1]	65.6	65.8	0.2
Vernon Avenue				
Sierra Madre Avenue to West Foothill Boulevard	42	60.5	61.0	0.5
North San Gabriel Avenue				
Sierra Madre Ave to West Foothill Boulevard	52	60.0	60.0	<0.1
West Foothill Boulevard to East 6th Street	70	61.7	62.0	0.3
North Azusa Avenue				
Sierra Madre Ave to West Foothill Boulevard	62	61.2	61.2	<0.1
West Foothill Boulevard to East 6th Street	40	63.6	63.9	0.3

Source: CadnaA

[1] No NSLU along this road segment, distance to the closest commercial or industrial building shown.

As shown in Table 17 and Table 18, the maximum traffic noise increase because of the addition of Project traffic on any analyzed road segment would be 1.0 dBA on Todd Avenue between West 10th Street and West Foothill Boulevard for the Future (2027 Plus Project) scenario. Therefore, the increase in traffic noise resulting from the addition of Project-related traffic would be less than the most restrictive 1.5 dBA increase threshold and would not result in a perceptible increase in ambient noise levels. Noise impacts from Project-generated traffic would be less than significant.

4.1.4 Significance of Impacts

Project construction equipment noise would result in temporary increases over ambient noise levels from both the industrial site and residential site, resulting in a potentially significant impact. Project construction and operation off-site traffic noise impacts would be less than significant. Operation noise generated on the residential site would not exceed the City's Municipal Code standards and would not result in substantial increases over ambient noise levels; therefore, the impact would be less than significant. Project on-site generated operation noise for the industrial site would exceed the City's Municipal Code standards and result in substantial increases over ambient noise levels, resulting in a potentially significant impact.

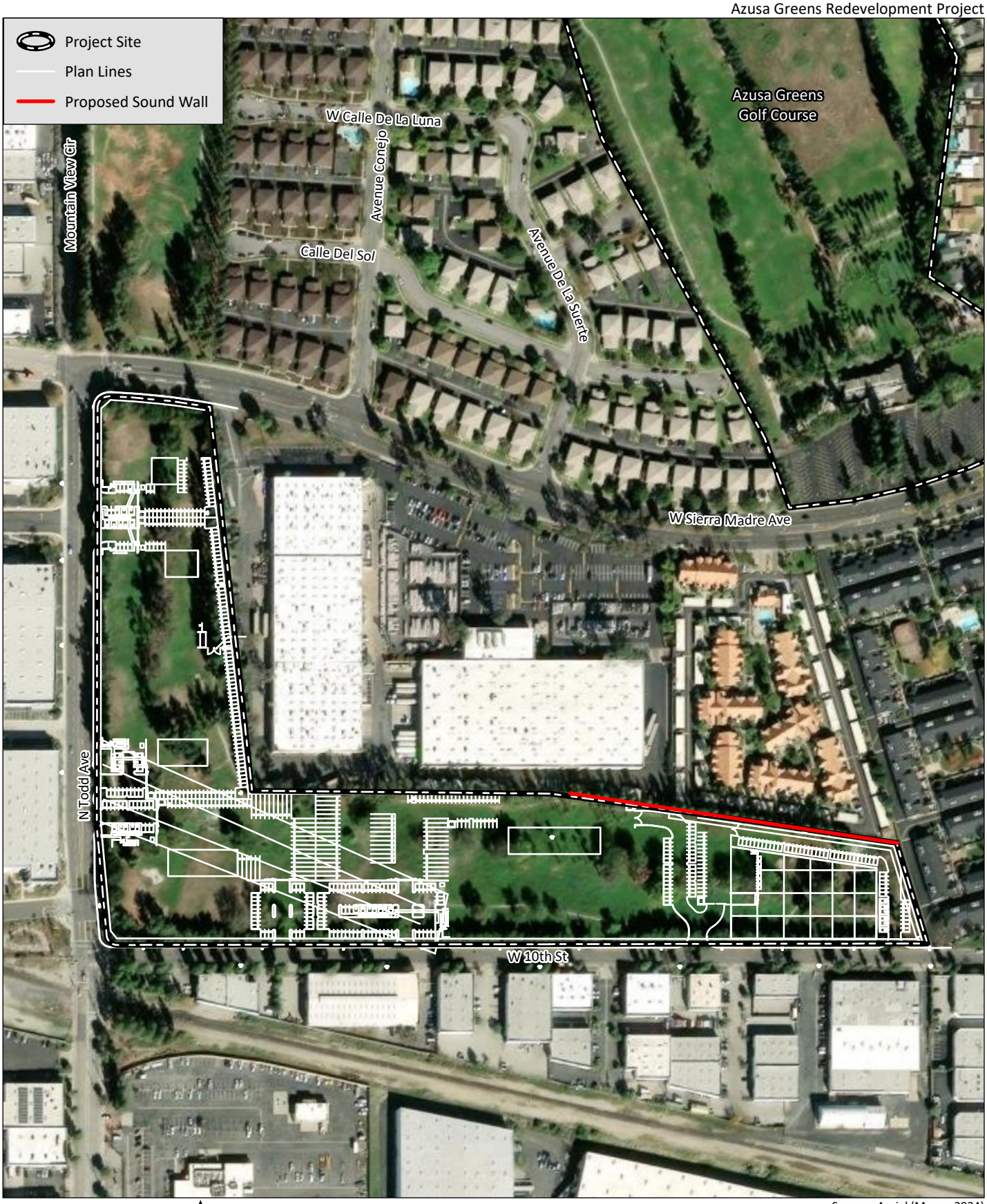
4.1.5 Mitigation Framework

To reduce daytime and nighttime noise from Project industrial site operations received at residential properties north of the Project industrial site Building 6 location, mitigation measure NOI-1 would require the Project to include a sound wall a minimum of eight feet high extending approximately 750 feet along the Project property line north of Buildings 5 and 6. See Figure 7, *Sound Wall Location*.

Potential mitigation measures to reduce the severity of impacts from Project construction noise would include implementation of standard construction noise best management practices required by mitigation measure NOI-2 and erecting temporary construction noise barriers. To be effective, noise barriers must block the line of sight between a noise source and a receiver. Due to the size of the Project site, the mobile nature of construction equipment, and the fact that the residential receivers near the Project site are two-story buildings with window and balconies on the second floors facing the Project site, effective temporary noise barriers would not be feasible and would not provide the more than 10 dBA of noise attenuation required to reduce construction levels to within 10 dBA of existing ambient noise. Construction of the sound wall required by mitigation measure NOI-1 would provide some attenuation of nighttime concrete pouring noise from the Project industrial site buildings 5 and 6 but would not sufficiently reduce noise levels measured at nearby residential second floor balconies and windows. Mitigation measure NOI-3 would require the sound wall from mitigation measure NOI-1 to be completed prior to nighttime concrete pouring on the industrial site. Mitigation measure NOI-4 would require notification of nearby residents of impending approved nighttime construction work and establish a noise complaint procedure.

NOI-1 **Industrial Site Noise Barrier**. The applicant shall construct a sound wall with a minimum height of eight feet along the industrial site property line, extending from the oblique property line corner north of Building 5 to the property line corner northeast of Building 6, approximately 750 feet in length.

The sound attenuation wall shall be solid and may be constructed of masonry, wood, plastic, fiberglass, steel, or a combination of those materials, provided there are no cracks or gaps,



Source: Aerial (Maxar, 2024)

HELIX Environmental Planning

Sound Wall Location

Figure 7

through or below the wall. Any seams or cracks must be filled or caulked. The noise barrier shall meet a minimum Sound Transmission Class (STC) rating of 22 to adequately ensure noise reduction. Standard concrete masonry unit walls with no cracks, holes, or gaps provide an STC rating of 43 or better, well above the 22 STC minimum, and would satisfy the requirements of this measure. If alternative sound wall materials are proposed, the applicant shall provide evidence of a minimum STC rating of 22 to the City for approval prior to installation.

The City shall verify the inclusion of the noise barrier in the Project plans and specifications prior to building permit approval. Compliance with this measure shall be verified prior to issuance of an occupancy permit for the industrial portion of the Project.

NOI-2 **Construction Noise Best Management Practices**. Prior to issuance of any Project construction permit, the City shall confirm that the construction specifications stipulate the following construction noise measures and best management practices shall be implemented by the applicant or designated contractor for all Project construction activity:

- Post a publicly visible sign at the primary Project construction entrance listing the permitted normal construction days and hours. The sign shall also include a listing of telephone numbers to be used during regular construction hours and off-hours to contact both the City and the construction contractor regarding noise complaints; and

- All construction equipment shall have appropriate sound muffling devices, which are properly maintained and used at all times such equipment is in operation; and

- Construction staging areas shall be located the maximum distance possible from the nearest residences to the Project site; and

- Portable equipment (e.g., air compressors; welders, generators) shall be located the maximum distance practical from the nearest residences to the Project site and shall be electrically powered (from the grid) whenever available.

NOI-3 **Industrial Site Sound Wall Timing**. Prior to completing any nighttime construction work (construction occurring outside of the hours of 7:00 a.m. to 6:00 p.m. Monday through Saturday) on the industrial site, the applicant shall complete installation of the sound wall required by mitigation measure NOI-1. Prior to commencing nighttime construction work, the applicant shall provide proof to the City, and the City shall verify that the sound wall required by mitigation measure NOI-1 has been installed.

NOI-4 **Nighttime Construction Notification**. The Project applicant or designated contractor shall obtain permits for Project construction activities from the City. The City shall ensure all permits contain nighttime work requirements and noise complaint requirements described below for construction occurring outside of the hours of 7:00 a.m. to 6:00 p.m. Monday through Saturday.

If, due to weather conditions (e.g., high temperatures), pouring of concrete at night is required, the Project applicant or designated contractor shall provide written notification of

nighttime/weekend concrete work to all residences located within 300 feet of the parcel upon which the nighttime/weekend work is planned. The notification shall:

- Be delivered a minimum of 48 hours prior to commencement of nighttime work;
- Include the days and hours of upcoming concrete pouring nighttime work; and
- Include noise complaint contact information, including phone numbers and email addresses to register noise complaints with both the construction contractor and the City.

The City and the construction contractor shall log all received noise complaints. The construction contractor shall submit to the City a daily log of all noise complaints received, including the date and time of the complaint and address of the complainant (if provided). The City shall work with the construction contractor to respond to noise complaints and limit nighttime work and locations of noise-generating equipment to the extent feasible.

4.1.6 Significance After Mitigation

Due to the sound shadow effect of noise barriers, noise near the modeled sound wall would not represent the highest level received on the residential property. With implementation of mitigation measure NOI-1 requiring installation of a sound wall, modeling of the wall and noise sources in CadnaA shows that the highest noise levels near receivers R4 and R5 would be approximately 40 feet back from the noise barrier, and would be 48.4 and 48.9 dBA L_{EQ}, respectively. These reduced noise levels would not exceed the City's 55 dBA L_{EQ} daytime or 50 dBA L_{EQ} nighttime limit for noise received by residential land uses. The 24-hour noise level at receiver R5 would be 55.6 CNEL, or 56.0 CNEL with existing traffic noise. This represents an increase of 4.7 dBA, below the threshold of 5 dBA. Therefore, operation noise impacts would be reduced to less than significant.

While mitigation measures NOI-2, NOI-3, and NOI-4 would help lower Project construction noise levels received at nearby NSLUs and establish procedures for resident construction notifications, noise would not be reduced such that the temporary increase in noise levels would not exceed 10 dBA above existing ambient noise levels. Therefore, the Project would generate a substantial temporary increase in ambient noise levels in the vicinity of the Project, and the impact would be significant and unavoidable.

4.2 THRESHOLD 2: GROUNDBORNE VIBRATION

Would the project result in generation of excessive ground-borne vibration levels?

4.2.1 Construction Vibration

Typical ground-borne vibration levels produced by common construction equipment at a distance of 25 feet are shown in Table 19, *Construction Equipment Vibrations* (FTA 2018).

Table 19
CONSTRUCTION EQUIPMENT VIBRATIONS

Equipment	PPV at 25 feet (inches per second)	L_V at 25 feet (VdB)
Pile Driver, Impact	0.644	104
Pile Drive, Vibratory	0.170	93
Large Vibratory Roller	0.210	94
Large Dozer	0.089	87
Loaded Truck, Off-Road	0.076	86
Jackhammer	0.035	79
Small Dozer	0.003	58

Source: FTA 2018

PPV = peak particle velocity; L_V = vibration velocity level

Construction activities known to generate excessive ground-borne vibration, such as pile driving, would not be conducted by the Project. The piece of construction equipment with the highest typical vibration level that would be used during Project construction activities would be a vibratory roller used for gravel or pavement compaction. A vibratory roller could be used up to 15 feet from the closest off-site structure (a single-family residence on the west side of the Project residential site).

For human reactions, a loaded concrete truck operating off-road could travel as close as 25 feet from the nearest single-family residence on the west side of the Project residential site during nighttime concrete pouring. A loaded concrete truck could create approximately 86 VdB L_V at 25 feet exceeding the FTA criteria of 75 VdB for buildings where people normally sleep.

For building damage, a large vibratory roller would create approximately 0.452 inch per second PPV at 15 feet (FTA 2018), which would exceed the 0.2 inch per second PPV threshold for damage to non-engineered timber and masonry buildings.[2] A large dozer would create approximately 0.191 inch per second PPV at 15 feet (FTA 2018), which would not exceed the 0.2 inch per second PPV threshold for damage to non-engineered timber and masonry buildings. Vibrations from all other off-road equipment anticipated to be used during Project construction would produce lower ground-borne vibrations than a large dozer (refer to Table 19).

Therefore, temporary impacts associated with vibratory roller use on the Project site would be potentially significant due to potential building damage. Temporary impacts associated with nighttime use of loaded concrete trucks traveling off-road on the project site would be potentially significant due to the potential for sleep disturbance in residential buildings close to the Project site.

4.2.2 Operational Vibration

Land uses that may generate substantial operational vibration include heavy industrial or mining operations that would require the use of vibratory equipment. The proposed industrial land use would not include equipment that would generate substantial vibration. Loaded trucks traveling at highway speeds have the potential to create significant vibrations if the pavement is in poor condition (e.g., potholes, large cracks). Loaded trucks circulating slowly in Project driveways, parking lots, and loading

[2] Equipment PPV = Reference PPV * $(25/D)^n$(in/sec), where Reference PPV is PPV at 25 feet, D is distance from equipment to the receptor in feet, and n= 1.5 (the value related to the attenuation rate through the ground); formula from FTA 2018. VdB = 20 * Log ($PPV/4/10^{-6}$).

dock areas do not have the potential to result in substantial ground-borne vibrations (FTA 2018). Therefore, Project operational vibration impacts would be less than significant.

4.2.3 Significance of Impacts

Long-term operation of the Project would not generate excessive ground-borne vibration levels. Construction of the Project could result in temporary vibrations exceeding building damage thresholds and residential sleep disturbance thresholds, and the impact would be potentially significant.

4.2.4 Mitigation Framework

Mitigation NOI-05 would require vibratory rollers to be used in static mode only (no vibrations) when operating within 30 feet of any off-site building; and require that trucks operating at night on the Project site during concrete pouring not be operated off-pavement closer than 75 feet from any occupied residential building.

NOI-5 **Construction Vibration**. The applicant or designated contractor shall ensure all vibratory rollers are used in static mode only (no vibrations) when operating within 30 feet of any off-site building. During nighttime concrete pouring activities, the applicant or designated contractor shall also ensure that loaded heavy trucks do not travel on unpaved surfaces on the Project site within 75 feet of any occupied residence. The City shall ensure these restrictions are reflected on applicable construction permit documents prior to City approval.

4.2.5 Significance After Mitigation

With implementation of mitigation measure NOI-5, construction or long-term operation of the Project would not generate excessive ground-borne vibration, and the impact would be less than significant.

4.3 THRESHOLD 3: AIRPORT NOISE EXPOSURE

For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The closest airports to Project site are the San Gabriel Valley Airport (previously El Monte Airport), located approximately 7 miles southwest of the Project site and the Brackett Field Airport, located approximately 8 miles southeast of the Project site. According to the County's Airport Land Use Plan, the 70 CNEL noise contours for these airports occur within the airport properties; therefore, the Project site is well outside of the airport noise contours for the San Gabriel Valley Airport and the Brackett Field Airport and noise from airport activity would attenuate to compatible levels at the Project site given the distance of the airports from the Project site (Los Angeles County Airport Land Use Commission 1991). In addition, the Airport Land Use Compatibility Plan for the Brackett Field Airport was updated in 2015, and the Project site is not located within the Brackett Field Airport influence area or any of the published airport noise contours for this airport (Los Angeles County Airport Land Use Commission 2015). Therefore, although aircraft may be audible in the airspace around the Project site, persons residing or working in the Project area would not be exposed to excessive noise levels from aircraft or airports.

4.3.1 Significance of Impacts

The Project would not expose people residing or working in the Project area to excessive noise levels from aircraft or airports, and the impact would be less than significant.

4.3.2 Mitigation Framework

The Project would not expose people residing or working in the Project area to excessive noise levels from aircraft or airports, the impact would be less than significant, and no mitigation measures would be required.

4.3.3 Significance After Mitigation

The Project would not expose people residing or working in the Project area to excessive noise levels from aircraft or airports, and the impact would be less than significant.

4.4 THRESHOLD 4: LAND USE COMPATIBILITY

Would the project result in conflicts with land use compatibility criteria for new land uses?

Section XI, Land Use, of Appendix G of the CEQA Guidelines includes a threshold regarding whether a Project would cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

As described in Section 1.6.3, the City's General Plan Natural Environment Chapter specifies exterior noise levels up to 65 CNEL as normally acceptable for multi-family residential uses and up to 75 CNEL as normally acceptable for industrial uses (City 2004).

CadnaA was used to model the anticipated traffic noise at the Project site using the Future Plus Project traffic volumes described in Section 3.2.2. For the closest Project residential building to Sierra Madre Avenue, a duplex approximately 240 feet north of the roadway centerline, the calculated exterior noise level would be 58.4 CNEL. The 15-minute noise measurement at location ST1 (on the sidewalk of Sierra Madre Avenue) was 66.2 dBA L_{EQ}, very close to the 66.5 dBA L_{EQ} peak hour traffic noise calculated by the model. The 15-minute noise measurement at location ST2 (on the golf course, approximately 1,500 feet north of Sierra Madre Avenue) was 45.2 dBA L_{EQ}, close to the 42.7 dBA L_{EQ} peak hour traffic noise calculated by the model. These exterior noise levels on the residential site would not exceed the City's multi-family residential maximum normally acceptable limit of 65 CNEL.

For the closest Project industrial building to North Todd Avenue, Building 3 approximately 55 feet east of the roadway centerline, the calculated exterior noise level would be 65.7 CNEL. In addition, the measured 24-hour noise level for location LT1, on the west end of the industrial site, was 55.2 CNEL. These exterior noise levels on the industrial site would not exceed the City's industrial maximum normally acceptable limit of 75 CNEL. Therefore, the Project's land uses would be compatible with the City's General Plan noise standards.

5.0 LIST OF PREPARERS

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Shelby Bocks	Project Environmental Planner
Yara Fisher, AICP	Principal Planner/Project Manager

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Appendix A

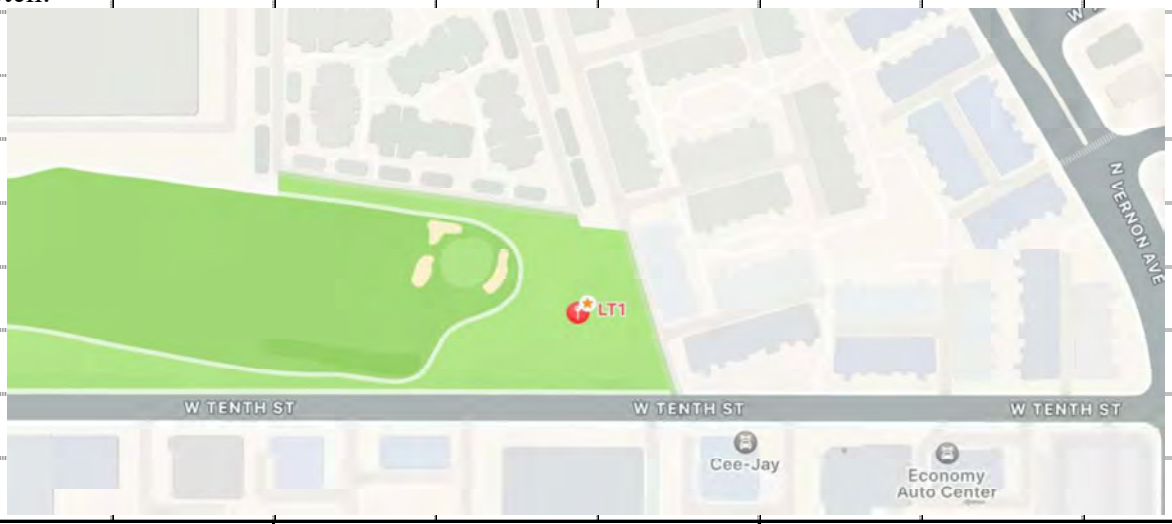
Noise Survey

Site Survey

Job # 03697.00019.001	Project Name: Azusa Greens Redevelopment		
Date: 3/26/2024	Site #: LT-1	Engineer: *Victor Ortiz*	
Address: 900 block of W 10th St			
Meter: Piccolo II	Serial #: P0222050214	Calibrator: CAL150	Serial #: 2754

Notes:

Sketch:



Temp: 61 °F	Wind Spd: Calm/Light	Humidity: 41 %
Start of Measurement: 12:55 PM	End of Measurement: 2:10 PM	See attached

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

No Calibration Analysis Will Be Provided

Picture:

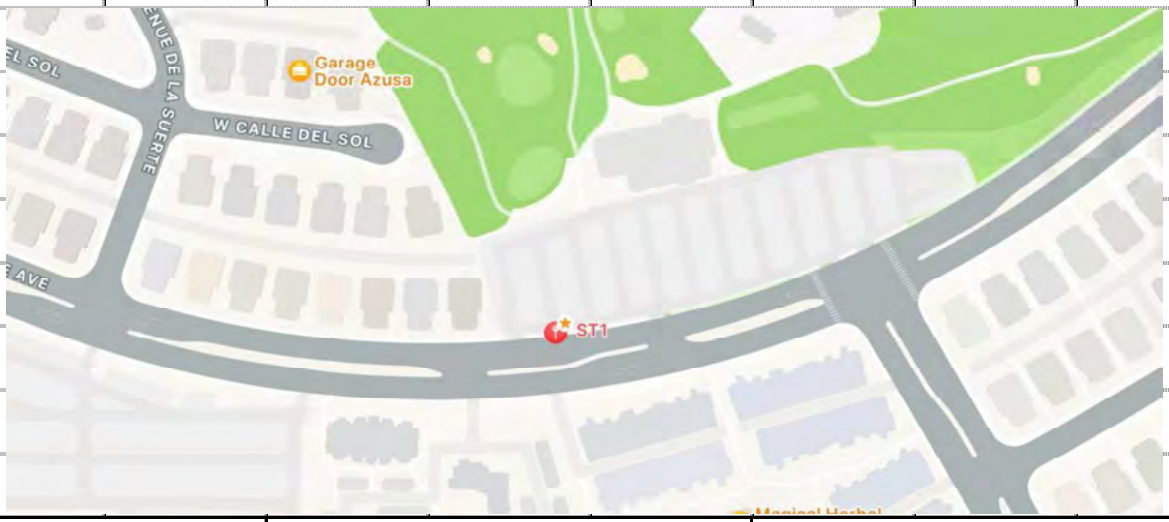
Azusa Greens Redevelopment
Measurement LT1 CNEL Calculation

CNEL:	55.2	
Hour	Hourly Noise Level	
2:00 PM	52.5	dBA L_{EQ}
3:00 PM	53.3	dBA L_{EQ}
4:00 PM	52.3	dBA L_{EQ}
5:00 PM	52.1	dBA L_{EQ}
6:00 PM	52.3	dBA L_{EQ}
7:00 PM	50.9	dBA L_{EQ}
8:00 PM	48.9	dBA L_{EQ}
9:00 PM	49.1	dBA L_{EQ}
10:00 PM	47.4	dBA L_{EQ}
11:00 PM	43.1	dBA L_{EQ}
12:00 AM	45.3	dBA L_{EQ}
1:00 AM	40.4	dBA L_{EQ}
2:00 AM	43.6	dBA L_{EQ}
3:00 AM	40.5	dBA L_{EQ}
4:00 AM	43.0	dBA L_{EQ}
5:00 AM	46.6	dBA L_{EQ}
6:00 AM	55.4	dBA L_{EQ}
7:00 AM	51.0	dBA L_{EQ}
8:00 AM	47.2	dBA L_{EQ}
9:00 AM	49.6	dBA L_{EQ}
10:00 AM	48.1	dBA L_{EQ}
11:00 AM	47.8	dBA L_{EQ}
12:00 PM	48.3	dBA L_{EQ}
1:00 PM	49.2	dBA L_{EQ}

Site Survey

Job # 03697.00019.001	Project Name: Azusa Greens Redevelopment		
Date: 3/26/2024	Site #: ST-1	Engineer: *Victor Ortiz*	
Address: 919 W. Sierra Madre (Sidewalk in front of Azusa Greens parking lot)			
Meter: Piccolo II	Serial #: P0222050214	Calibrator: CAL150	Serial #: 2754
Notes: Primary noise source is traffic with occasional aircraft (small prop-planes).			

Sketch:



Temp: 59 °F	Wind Spd: Calm	Humidity: 41 %
Start of Measurement: 10:57 AM	End of Measurement: 11:12 AM	66.2 dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)
	2 eastbound 0 westbound	3 eastbound 0 westbound
54 eastbound		
51 westbound		
Noise Measurement for Information Only		
No Through Roadways		
No Calibration Analysis Will Be Provided		

Picture:

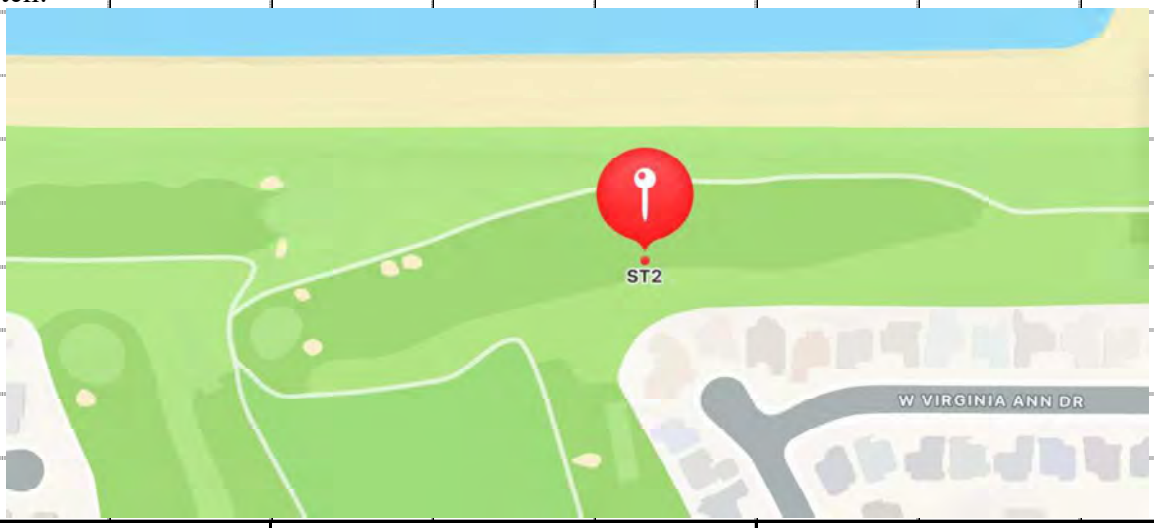
Site Survey

Job # 03697.00019.001		Project Name: Azusa Greens Redevelopment	
Date: 3/26/2024	Site #: ST-2	Engineer: *Victor Ortiz*	
Address: 919 W. Sierra Madre (fairway of hole 8)			
Meter: Piccolo II	Serial #: P0222050214	Calibrator: CAL150	Serial #: 2754

Notes: Noise sources were mixed ambient. Heavy duty operations audible to the north.

Birds, golfers, and small aircraft.

Sketch:



Temp: 60 °F	Wind Spd: Calm/Light	Humidity: 51 %
Start of Measurement: 11:35 AM	End of Measurement: 11:50 AM	45.2 dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

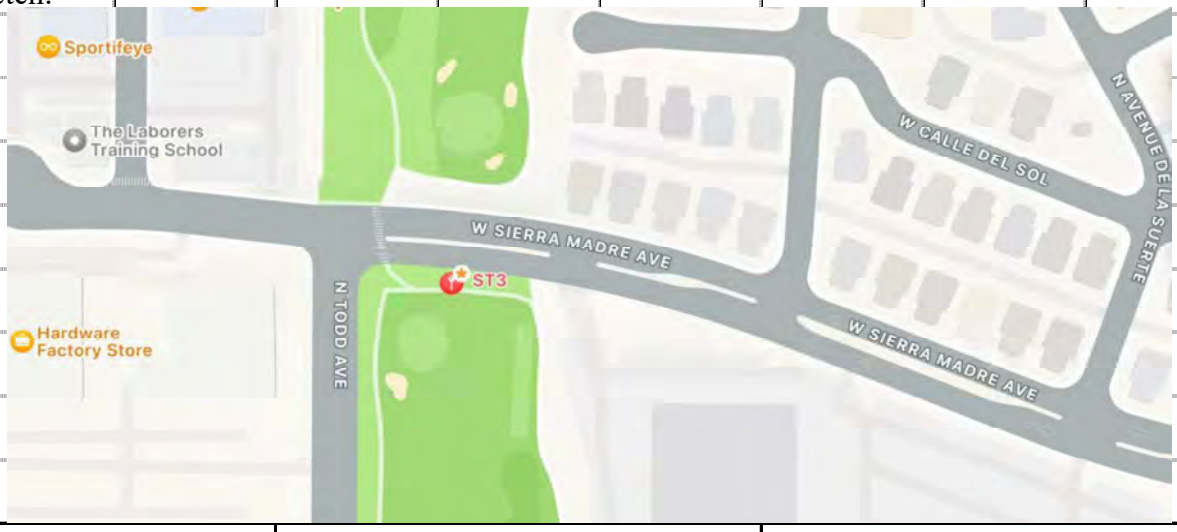
No Calibration Analysis Will Be Provided

Picture:

Site Survey

Job # 03697.00019.001		Project Name: Azusa Greens Redevelopment	
Date: 3/26/2024	Site #: ST-3	Engineer: *Victor Ortiz*	
Address: W. Sierra Madre near N. Todd Ave.			
Meter: Piccolo II	Serial #: P0222050214	Calibrator: CAL150	Serial #: 2754
Notes: Primary noise source is traffic. HHDT at adjacent industrial site.			
Distant industrial sounds: squeaking truck brakes, thuds of containers.			

Sketch:



Temp: 61 °F	Wind Spd: Calm/Light	Humidity: 47 %
Start of Measurement: 12:15 PM	End of Measurement: 12:30 PM	57.0 dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)
48 eastbound		
63 westbound		2 eastbound 2 westbound
Noise Measurement for Information Only		
No Through Roadways		
No Calibration Analysis Will Be Provided		

Picture:

Appendix B

RCNM Output

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 2/10/2025
Case Description: Azusa Greens Residential Grading

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential	Residential	60	60	60

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		180	0
Scraper	No	40		83.6	180	0

Results

Calculated (dBA)

Equipment		*Lmax	Leq
Grader		73.9	69.9
Scraper		72.5	68.5
	Total	73.9	72.3

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 2/10/2025
Case Description: Azusa Greens Industrial Grading

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential	Residential	60	60	60

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		160	0
Scraper	No	40		83.6	160	0

Results

Calculated (dBA)

Equipment		*Lmax	Leq
Grader		74.9	70.9
Scraper		73.5	69.5
	Total	74.9	73.3

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 2/10/2025
Case Description: Azusa Greens Residential Concrete

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential	Residential	60	60	60

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Mixer Truck	No	40		78.8	180	0
Concrete Mixer Truck	No	40		78.8	180	0

Results

Calculated (dBA)

Equipment	*Lmax	Leq
Concrete Mixer Truck	67.7	63.7
Concrete Mixer Truck	67.7	63.7
Total	67.7	66.7

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 2/10/2025
Case Description: Azusa Greens Industrial Concrete

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential	Residential	60	60	60

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Mixer Truck	No	40		78.8	160	0
Concrete Mixer Truck	No	40		78.8	160	0

Results

	Calculated (dBA)	
Equipment	*Lmax	Leq
Concrete Mixer Truck	68.7	64.7
Concrete Mixer Truck	68.7	64.7
Total	68.7	67.7

*Calculated Lmax is the Loudest value.

Appendix C

CadnaA Input/Output Tables

Azusa Greens Redevelopment
Industrial Site CadnaA Local Sound Levels Library

Name	ID	Type	1/3 Oktave Spectrum (dB)											
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin
Hussman Proto-Air 3280 Condensor	RFRG	Li			90.6	93.6	89.6	86.6	84.6	79.6	75.6		89.3	97.2
Carrier 50PG HVAC	HVAC1	Li			90.4	83.1	80.9	77.8	75.2	70	66.1	57.6	80.2	91.9
Transport Refrigeration Unit	TRU	Li		97	111	105	102	97	96	94	89	83	101.5	112.8
Backup Alarm	ALRM	Li							106.6				106.6	106.6
Truck Idling	IDLE	Li							96				96	96

Azusa Greens Redevelopment
Industrial Site CadnaA Point Sources

Name	Sel.	M.	ID	Result. PWL			Lw / Li			Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
				Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night						X	Y	Z
				(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(ft^2)		(min)	(min)	(min)	(dB)	(Hz)		(ft)		(ft)	(ft)	(ft)
HVAC		+	HVAC	80.2	80.2	80.2	Lw	HVAC1		0	0	0							0		(none)	3.67	g	1360720.9	12396244.55	37.73
HVAC		+	HVAC	80.2	80.2	80.2	Lw	HVAC1		0	0	0							0		(none)	3.67	g	1360722.3	12396050.37	37.73
HVAC		+	HVAC	80.2	80.2	80.2	Lw	HVAC1		0	0	0							0		(none)	3.67	g	1360720.51	12395673.71	37.73
HVAC		+	HVAC	80.2	80.2	80.2	Lw	HVAC1		0	0	0							0		(none)	3.67	g	1360735.25	12395394.8	37.73
HVAC		+	HVAC	80.2	80.2	80.2	Lw	HVAC1		0	0	0							0		(none)	3.67	g	1361493.53	12395212.14	37.73
HVAC		+	HVAC	80.2	80.2	80.2	Lw	HVAC1		0	0	0							0		(none)	3.67	g	1362362.13	12395200.39	37.73
Refrigeration Condensor		+	RFRG	89.3	89.3	89.3	Lw	RFRG		0	0	0							0		(none)	4.72	g	1362195.53	12395322.32	38.78
Refrigeration Condensor		+	RFRG	89.3	89.3	89.3	Lw	RFRG		0	0	0							0		(none)	4.72	g	1361703.65	12395355.78	38.78
Refrigeration Condensor		+	RFRG	89.3	89.3	89.3	Lw	RFRG		0	0	0							0		(none)	4.72	g	1360921.35	12395319.43	38.78
Refrigeration Condensor		+	RFRG	89.3	89.3	89.3	Lw	RFRG		0	0	0							0		(none)	4.72	g	1360881.23	12395672.24	38.78
Refrigeration Condensor		+	RFRG	89.3	89.3	89.3	Lw	RFRG		0	0	0							0		(none)	4.72	g	1360879.68	12395993.04	38.78
Refrigeration Condensor		+	RFRG	89.3	89.3	89.3	Lw	RFRG		0	0	0							0		(none)	4.72	g	1360853.08	12396297.85	38.78
Truck Idling		+	IDLE	96	96	96	Lw	IDLE		0	0	0				5	0	0	0		(none)	5	r	1360855.64	12396245.47	5
Truck Idling		+	IDLE	96	96	96	Lw	IDLE		0	0	0				5	0	0	0		(none)	5	r	1360882	12396050.86	5
Truck Idling		+	IDLE	96	96	96	Lw	IDLE		0	0	0				5	0	0	0		(none)	5	r	1360876.19	12395607.15	5
Truck Idling		+	IDLE	96	96	96	Lw	IDLE		0	0	0				5	0	0	0		(none)	5	r	1360915.2	12395392.31	5
Truck Idling		+	IDLE	96	96	96	Lw	IDLE		0	0	0				5	0	0	0		(none)	5	r	1361766.66	12395420.33	5
Truck Idling		+	IDLE	96	96	96	Lw	IDLE		0	0	0				5	0	0	0		(none)	5	r	1362119.09	12395322.66	5
TRU at Docks		+	TRU	101.5	101.5	101.5	Lw	TRU		0	0	0				30	0	0	0		(none)	9.5	r	1360855.43	12396246.97	9.5
TRU at Docks		+	TRU	101.5	101.5	101.5	Lw	TRU		0	0	0				30	0	0	0		(none)	9.5	r	1360881.97	12396049.27	9.5
TRU at Docks		+	TRU	101.5	101.5	101.5	Lw	TRU		0	0	0				30	0	0	0		(none)	9.5	r	1360875.97	12395608.16	9.5
TRU at Docks		+	TRU	101.5	101.5	101.5	Lw	TRU		0	0	0				30	0	0	0		(none)	9.5	r	1360915.56	12395390.18	9.5
TRU at Docks		+	TRU	101.5	101.5	101.5	Lw	TRU		0	0	0				30	0	0	0		(none)	9.5	r	1361766.77	12395417.99	9.5
TRU at Docks		+	TRU	101.5	101.5	101.5	Lw	TRU		0	0	0				30	0	0	0		(none)	9.5	r	1362120.79	12395322.21	9.5

Azusa Greens Redevelopment

Industrial Site CadnaA Line Sources

Name	Sel.	M.	ID	Result. PWL			Result. PWL'			Lw / Li		Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.
				Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night			
				(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(ft^2)		(min)	(min)	(min)	(dB)	(Hz)	
TRU Circulation		+	TRUC	101.5	101.5	101.5	82	82	82	Lw	TRU		0	0	0				0.33	0	0	0		(none)
TRU Circulation		+	TRUC	101.5	101.5	101.5	81.4	81.4	81.4	Lw	TRU		0	0	0				0.38	0	0	0		(none)
TRU Circulation		+	TRUC	101.5	101.5	101.5	81.4	81.4	81.4	Lw	TRU		0	0	0				0.38	0	0	0		(none)
TRU Circulation		+	TRUC	101.5	101.5	101.5	80.7	80.7	80.7	Lw	TRU		0	0	0				0.45	0	0	0		(none)
TRU Circulation		+	TRUC	101.5	101.5	101.5	77.6	77.6	77.6	Lw	TRU		0	0	0				0.92	0	0	0		(none)
TRU Circulation		+	TRUC	101.5	101.5	101.5	82.3	82.3	82.3	Lw	TRU		0	0	0				0.33	0	0	0		(none)
Backup Alarm		+	ALARM	106.6	106.6	106.6	92.4	92.4	92.4	Lw	ALRM		0	0	0				0.33	0	0	0		(none)
Backup Alarm		+	ALARM	106.6	106.6	106.6	92.2	92.2	92.2	Lw	ALRM		0	0	0				0.33	0	0	0		(none)
Backup Alarm		+	ALARM	106.6	106.6	106.6	92.4	92.4	92.4	Lw	ALRM		0	0	0				0.33	0	0	0		(none)
Backup Alarm		+	ALARM	106.6	106.6	106.6	91.4	91.4	91.4	Lw	ALRM		0	0	0				0.33	0	0	0		(none)
Backup Alarm		+	ALARM	106.6	106.6	106.6	92.5	92.5	92.5	Lw	ALRM		0	0	0				0.33	0	0	0		(none)
Backup Alarm		+	ALARM	106.6	106.6	106.6	93.9	93.9	93.9	Lw	ALRM		0	0	0				0.33	0	0	0		(none)

Azusa Greens Redevelopment

Industrial Site CadnaA Road Sources

Name	Sel.	M.	ID	Lme			Count Data		exact Count Data						Speed Limit		SCS	Surface		Gradient	Mult. Reflection		
				Day	Evening	Night	DTV	Str.class.	M			p (%)			Auto	Truck	Dist.	Dstro	Type		Drefl	Hbuild	Dist.
				(dBA)	(dBA)	(dBA)			Day	Evening	Night	Day	Evening	Night	(mph)	(mph)		(dB)		(%)	(dB)	(ft)	(ft)
Bldg 1 Truck Entry		+		45.7	0	0			1	0	0	100	0	0	10		0	0	1	0	0		
Bldg 1 Truck Reverse		+		51.2	0	0			1	0	0	100	0	0	3		0	0	1	0	0		
Bldg 2 Truck Entry		+		45.7	0	0			1	0	0	100	0	0	10		0	0	1	0	0		
Bldg 2 Truck Reverse		+		51.2	0	0			1	0	0	100	0	0	3		0	0	1	0	0		
Bldg 3 Truck Entry		+		45.7	0	0			1	0	0	100	0	0	10		0	0	1	0	0		
Bldg 3 Truck Reverse		+		51.2	0	0			1	0	0	100	0	0	3		0	0	1	0	0		
Bldg 4 Truck Entry		+		45.7	0	0			1	0	0	100	0	0	10		0	0	1	0	0		
Bldg 4 Truck Reverse		+		51.2	0	0			1	0	0	100	0	0	3		0	0	1	0	0		
Bldg 5 Truck Entry		+		45.7	0	0			1	0	0	100	0	0	10		0	0	1	0	0		
Bldg 5 Truck Reverse		+		43.6	0	0			1	0	0	100	0	0	3		0	0	1	0	0		
Bldg 6 Truck Entry		+		45.7	0	0			1	0	0	100	0	0	10		0	0	1	0	0		
Bldg 6 Truck Reverse		+		43.6	0	0			1	0	0	100	0	0	3		0	0	1	0	0		

Azusa Greens Redevelopment

Industrial Site CadnaA Recievers, Unmitigated

Name	Sel.	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
				Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
				(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
R1				45.2	33.2	0	0		x	Total	4.99	r	1360979.28	12396486.37	5
R2				48.2	33.2	0	0		x	Total	4.99	r	1361034.22	12396479.03	5
R3				48.4	33.5	0	0		x	Total	4.99	r	1361096.5	12396463.15	5
R4				54.9	34	0	0		x	Total	5	r	1361979.15	12395475.6	5
R4A				53.5	34.7	0	0		x	Total	5	r	1362000.9	12395520.75	5
R5				57.5	35	0	0		x	Total	5	r	1362088.2	12395457.89	5
R5A				55.8	34.4	0	0		x	Total	5	r	1362096.72	12395504.15	5
R6				49.1	34	0	0		x	Total	5	r	1362218.25	12395436.52	5
R6A				48.1	34.1	0	0		x	Total	5	r	1362225.45	12395483.83	5
R7				41.1	32.4	0	0		x	Total	5	r	1362349.53	12395415.15	5
R7A				41.6	33.1	0	0		x	Total	5	r	1362354.9	12395463.7	5
R8				39.5	31.4	0	0		x	Total	5	r	1362485.65	12395393.03	5
R8A				39.1	32	0	0		x	Total	5	r	1362475.23	12395442.95	5
R9				34.3	29.5	0	0		x	Total	5	r	1362514.56	12395294.2	5
R10				32.4	29.4	0	0		x	Total	5	r	1362545.65	12395182.11	5
I1				61.2	38.9	0	0		x	Total	5	r	1360956.8	12396223.84	5
I2				61.7	39.2	0	0		x	Total	5	r	1360968.43	12396109.47	5
I3				58.4	37	0	0		x	Total	5	r	1361013.62	12395646.34	5
I4				59	38.4	0	0		x	Total	5	r	1361023.39	12395555.97	5
I5				53.4	34.9	0	0		x	Total	5	r	1361373.66	12395519.22	5
I6				57.3	37.7	0	0		x	Total	5	r	1361075.86	12395523.81	5
I7				57	36.7	0	0		x	Total	5	r	1361622.91	12395513.06	5
I8				61.3	36.9	0	0		x	Total	5	r	1361749.08	12395511.53	5
I9				60.4	36.8	0	0		x	Total	5	r	1361839.46	12395497.38	5

Azusa Greens Redevelopment

Industrial Site CadnaA Recievers, Mitigated

Name	Sel.	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
				Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
				(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
R1				44.8	33.2	0	0		x	Total	4.99	r	1360979.28	12396486.37	5
R2				48.2	33.2	0	0		x	Total	4.99	r	1361034.22	12396479.03	5
R3				48.4	33.5	0	0		x	Total	4.99	r	1361096.5	12396463.15	5
R4				43	28	0	0		x	Total	5	r	1361979.15	12395475.6	5
R4A				48.4	34.7	0	0		x	Total	5	r	1362000.9	12395520.75	5
R5				43.1	29.5	0	0		x	Total	5	r	1362088.2	12395457.89	5
R5A				48.9	34.4	0	0		x	Total	5	r	1362096.72	12395504.15	5
R6				38.2	29.5	0	0		x	Total	5	r	1362218.25	12395436.52	5
R6A				40.9	34.1	0	0		x	Total	5	r	1362225.45	12395483.83	5
R7				36.1	27.5	0	0		x	Total	5	r	1362349.53	12395415.15	5
R7A				38.6	33.1	0	0		x	Total	5	r	1362354.9	12395463.7	5
R8				35.1	25.8	0	0		x	Total	5	r	1362485.65	12395393.03	5
R8A				37.1	32	0	0		x	Total	5	r	1362475.23	12395442.95	5
R9				34.2	29.5	0	0		x	Total	5	r	1362514.56	12395294.2	5
R10				32.2	29.4	0	0		x	Total	5	r	1362545.65	12395182.11	5
I1				61.2	38.9	0	0		x	Total	5	r	1360956.8	12396223.84	5
I2				61.7	39.2	0	0		x	Total	5	r	1360968.43	12396109.47	5
I3				58.4	37	0	0		x	Total	5	r	1361013.62	12395646.34	5
I4				59	38.4	0	0		x	Total	5	r	1361023.39	12395555.97	5
I5				53.4	34.9	0	0		x	Total	5	r	1361373.66	12395519.22	5
I6				57.3	37.7	0	0		x	Total	5	r	1361075.86	12395523.81	5
I7				57	36.7	0	0		x	Total	5	r	1361622.91	12395513.06	5
I8				48.8	30.1	0	0		x	Total	5	r	1361749.08	12395511.53	5
I9				46.4	29.8	0	0		x	Total	5	r	1361839.46	12395497.38	5

Azusa Greens Redevelopment

Residential Site CadnaA Local Sound Levels Library

Name	ID	Type	1/3 Oktave Spectrum (dB)											
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin
Carrier 38BRC-024-34	AC	Li				55.5	62.5	68	70	67	61.5	58.5	73.5	74.1
Carrier 50PG HVAC	HVAC1	Li			90.4	83.1	80.9	77.8	75.2	70	66.1	57.6	80.2	91.9

Azusa Greens Redevelopment
Residential Site CadnaA Point Sources

Name	Sel.	M.	ID	Result. PWL			Lw / Li		Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height		Coordinates		
				Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night						X	Y	Z
				(dBA)	(dBA)	(dBA)			dB(A)	dB(A)	dB(A)	dB(A)		(ft^2)		(min)	(min)	(min)	(dB)	(Hz)		(ft)		(ft)	(ft)	(ft)
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1360914.31	12397938.15	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1360915.76	12397857.01	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1360916.21	12397848.55	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1360914.49	12397767.85	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1360915.87	12397756.17	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1360914.87	12397676.09	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361017.74	12397840.31	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361030.19	12397766.9	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361029.64	12397753.42	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361029.74	12397686.37	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361134.97	12397748.32	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361130	12397669.64	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361140.18	12397836.11	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361125.17	12397762.04	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361240.07	12397798.3	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361253.42	12397699.57	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361253.91	12397679.15	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361232.52	12397613.69	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361340.06	12397685.42	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361342.12	12397585.98	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361354.5	12397769.83	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361340.9	12397694.02	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361457.49	12397744.79	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361469.01	12397669.03	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361464.09	12397657.13	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361447.59	12397583.34	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361570.79	12397737.86	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361588.4	12397664.83	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361599.42	12397655.34	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361612.32	12397579.58	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361846.05	12397245.27	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361782.06	12397228.93	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361871.54	12397226.49	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361931.71	12397251.84	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361943.62	12397259.17	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362032.3	12397302.2	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361831.58	12397086.84	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361907.75	12397094.24	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361921.98	12397108.73	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361981.14	12397135.13	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361993.71	12397141.21	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362060.42	12397174.3	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362118.61	12397058.14	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362052.77	12397027.71	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362041.71	12397020.05	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361983.04	12396993.11	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361956.97	12397013.55	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361886.22	12396977	3.28

HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1361949.79	12396850.87	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362020.82	12396885.29	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362039.24	12396881.41	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362098.15	12396909.04	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362109.6	12396914.92	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362167.63	12396964.75	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362224.49	12396851.93	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362153.82	12396826.2	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362143.14	12396817.92	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362086.51	12396786.33	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362076.74	12396776.83	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362005.09	12396742.36	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362081.12	12396598.98	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362139.68	12396647.6	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362140.92	12396674.93	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362200.61	12396704.15	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362210.85	12396709.55	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362268.35	12396747.82	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362286.08	12396577.15	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362195.26	12396541.01	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362184.87	12396536.78	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362126.39	12396502.53	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362257.38	12396429.16	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	r	1362181.99	12396418.98	3.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361713.28	12397663.19	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361721.65	12397635.77	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361747.26	12397641.12	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361729.89	12397667.01	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361742.03	12397671.14	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361749.99	12397675.12	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361761.61	12397678.18	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361771.1	12397681.24	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361783.64	12397683.69	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361795.87	12397689.19	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361807.5	12397691.94	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361816.68	12397695.31	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361825.85	12397698.67	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361839.62	12397702.96	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361842.37	12397695	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361845.74	12397686.74	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361847.88	12397680.93	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361850.32	12397672.37	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361853.38	12397664.72	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361856.75	12397655.54	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361860.42	12397645.45	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361863.78	12397631.68	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361866.23	12397623.42	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361870.82	12397613.94	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361873.57	12397604.76	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361876.02	12397594.06	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361879.39	12397583.04	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361881.84	12397574.9	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361885.31	12397562.95	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361888.39	12397553.7	39.28

HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361891.86	12397542.52	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361895.72	12397531.73	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361897.64	12397521.71	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361903.43	12397509.38	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361906.51	12397498.2	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361909.21	12397488.18	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361912.68	12397475.85	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361914.6	12397467.37	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361917.69	12397454.65	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361896.1	12397446.56	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361879.14	12397440.39	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361858.41	12397434.62	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361844.33	12397429.28	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361823.45	12397422.96	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361805.97	12397418.11	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361793.35	12397418.11	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361787.03	12397439.96	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361805	12397448.7	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361826.37	12397452.1	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361851.62	12397457.93	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361874.93	12397464.72	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361872.98	12397487.55	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361863.76	12397504.54	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361858.41	12397525.91	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361854.04	12397541.93	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361847.73	12397561.84	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361844.82	12397574.95	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361838.02	12397595.35	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361832.68	12397620.11	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361823.94	12397640.99	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361815.68	12397657.99	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361797.72	12397657.02	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361776.35	12397650.71	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361733.13	12397639.05	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361758.87	12397646.82	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361836.08	12397608.94	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361848.22	12397553.59	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361863.27	12397517.17	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361907.95	12397451.13	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361834.14	12397427.33	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361840.93	12397454.04	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1361796.75	12397444.81	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362116.76	12397708.35	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362129.1	12397707.19	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362143.36	12397707.96	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362154.92	12397707.96	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362165.71	12397707.96	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362179.59	12397707.96	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362189.99	12397707.58	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362203.1	12397706.81	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362218.9	12397707.19	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362235.47	12397707.58	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362118.31	12397514.1	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362131.41	12397515.64	39.28

HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362149.52	12397514.87	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362164.17	12397516.03	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362174.58	12397515.26	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362190.38	12397514.49	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362199.63	12397514.49	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362209.26	12397514.49	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362220.06	12397514.1	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362222.37	12397551.49	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362209.26	12397551.87	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362193.85	12397550.72	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362176.12	12397551.49	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362163.4	12397551.87	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362149.52	12397552.26	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362130.64	12397553.8	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362117.54	12397554.18	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362222.37	12397539.92	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362221.21	12397527.59	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362117.54	12397536.07	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362119.46	12397524.51	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362266.69	12397674.82	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362250.12	12397674.82	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362230.08	12397675.2	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362212.35	12397676.36	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362191.15	12397675.59	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362179.97	12397676.36	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362163.78	12397677.13	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362115.61	12397696.79	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362117.15	12397684.45	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362252.04	12397706.81	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362117.15	12397672.89	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362117.15	12397659.79	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362115.99	12397644.37	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362115.99	12397629.34	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362115.99	12397617.01	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362117.15	12397598.51	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362116.76	12397590.03	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362117.92	12397579.24	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362116.76	12397565.75	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362266.69	12397704.88	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362154.92	12397663.64	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362155.69	12397652.85	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362154.92	12397640.13	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362154.53	12397626.26	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362154.15	12397613.92	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362154.15	12397600.82	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362155.31	12397590.8	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362155.31	12397581.93	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362156.46	12397564.59	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362243.57	12397692.16	39.28
HVAC			HVAC	64.8	64.8	64.8	Lw	AC		0	0	0							0	500	(none)	3.28	g	1362204.25	12397533.37	39.28
HVAC			HVAC	74.6	74.6	74.6	Lw	HVAC1		0	0	0							0	500	(none)	4	r	1361941.99	12397520.07	4

Azusa Greens Redevelopment
Residential Site CadnaA Recievers

Name	Sel.	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
				Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
				(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
R1				27.8	27.8	0	0		x	Total	5	r	1361052.16	12397539.05	5
R2				29.3	29.3	0	0		x	Total	5	r	1361170.71	12397531.11	5
R3				30.9	30.9	0	0		x	Total	5	r	1361289.27	12397521.33	5
R4				33.7	33.7	0	0		x	Total	5	r	1361425.55	12397539.05	5
R5				31.9	31.9	0	0		x	Total	5	r	1361489.72	12397534.77	5
R6				30.3	30.3	0	0		x	Total	5	r	1361548.38	12397529.27	5
R7				32.7	32.7	0	0		x	Total	5	r	1361610.72	12397526.83	5
R8				29.5	29.5	0	0		x	Total	5	r	1361681.61	12397499.33	5
R9				31.1	31.1	0	0		x	Total	5	r	1361743.82	12397281.69	5
R10				32.5	32.5	0	0		x	Total	5	r	1361783.97	12397121.76	5
R11				30.2	30.2	0	0		x	Total	5	r	1361819.86	12397007.29	5
R12				33.4	33.4	0	0		x	Total	5	r	1361866.91	12396932.11	5
R13				34	34	0	0		x	Total	5	r	1361962.94	12396748.28	5
R14				34.5	34.5	0	0		x	Total	5	r	1362060.51	12396562.02	5
R15				33	33	0	0		x	Total	5	r	1362153.13	12396380.43	5
R16				22.2	22.2	0	0		x	Total	5	r	1362204.33	12396268.74	5
R17				24.3	24.3	0	0		x	Total	5	r	1362521.87	12396628.18	5
R18				23.9	23.9	0	0		x	Total	5	r	1362569.96	12396824.85	5
R19				24	24	0	0		x	Total	5	r	1362593.12	12397066.78	5
R20				24.8	24.8	0	0		x	Total	5	r	1362548.63	12397274.64	5
R21				25.3	25.3	0	0		x	Total	5	r	1362497.34	12397417.94	5
R22				25.1	25.1	0	0		x	Total	5	r	1362497.34	12397521.74	5
R23				24.4	24.4	0	0		x	Total	5	r	1362554.37	12397554.09	5

Azusa Greens Redevelopment
Off-site CadnaA Road Sources, Existing

Name	Sel.	M.	ID	Lme			Count Data		exact Count Data						Speed Limit		SCS	Surface		Gradient	Mult. Reflection		
				Day	Evening	Night	DTV	Str.class.	M			p (%)			Auto	Truck	Dist.	Dstro	Type		Drefl	Hbuild	Dist.
				(dBA)	(dBA)	(dBA)			Day	Evening	Night	Day	Evening	Night	(mph)	(mph)		(dB)		(%)	(dB)	(ft)	(ft)
Todd Ave - Sierra Madre to W 10th				62.2	0	0			894	0	0	4	0	0	40		0	0	1	0	0		
Todd Ave - W 10th to W Foothill Blvd				62.8	0	0			1046	0	0	4	0	0	40		0	0	1	0	0		
Sierra Madre Ave - Todd Ave to Project				62.2	0	0			910	0	0	4	0	0	40		0	0	1	0	0		
Sierra Madre Ave - Project to Vernon				62.1	0	0			879	0	0	4	0	0	40		0	0	1	0	0		
Sierra Madre Ave - Vernon to San Gabriel				62	0	0			889	0	0	4	0	0	40		0	0	1	0	0		
W Foothill Blvd - Todd Rd to Vernon Ave				63.2	0	0			1621	0	0	4	0	0	35		0	0	1	0	0		
W Foothill Blvd - Vernon Ave to San Gabriel				62.9	0	0			1523	0	0	4	0	0	35		0	0	1	0	0		
W Foothill Blvd - San Gabriel to Azusa				62.8	0	0			1489	0	0	4	0	0	35		0	0	1	0	0		
Vernon Ave - Sierra Madre to Foothill				56.6	0	0			357	0	0	4	0	0	35		0	0	1	0	0		
N San Gabriel Ave - Sierra Madre to Foothill				55.2	0	0			335	0	0	4	0	0	35		0	0	1	0	0		
N San Gabriel Ave - Foothill to 6th				60.2	0	0			816	0	0	4	0	0	35		0	0	1	0	0		
N Azusa Ave - Sierra Madre to Foothill				58.1	0	0			507	0	0	4	0	0	35		0	0	1	0	0		
N Azusa Ave - Foothill to 6th				58.2	0	0			513	0	0	4	0	0	35		0	0	1	0	0		

Azusa Greens Redevelopment

Off-site CadnaA Road Sources, Existing + Project

Name	Sel.	M.	ID	Lme			Count Data		exact Count Data						Speed Limit		SCS	Surface		Gradient	Mult. Reflection		
				Day	Evening	Night	DTV	Str.class.	M			p (%)			Auto	Truck	Dist.	Dstro	Type		Drefl	Hbuild	Dist.
				(dBA)	(dBA)	(dBA)			Day	Evening	Night	Day	Evening	Night	(mph)	(mph)		(dB)		(%)	(dB)	(ft)	(ft)
Todd Ave - Sierra Madre to W 10th				63	0	0			945	0	0	4	0	0	40		0	0	1	0	0		
Todd Ave - W 10th to W Foothill Blvd				63	0	0			1316	0	0	4	0	0	40		0	0	1	0	0		
Sierra Madre Ave - Todd Ave to Project				62.5	0	0			945	0	0	4	0	0	40		0	0	1	0	0		
Sierra Madre Ave - Project to Vernon				62	0	0			928	0	0	4	0	0	40		0	0	1	0	0		
Sierra Madre Ave - Vernon to San Gabriel				62.6	0	0			894	0	0	4	0	0	40		0	0	1	0	0		
W Foothill Blvd - Todd Rd to Vernon Ave				63.2	0	0			1715	0	0	4	0	0	35		0	0	1	0	0		
W Foothill Blvd - Vernon Ave to San Gabriel				62.9	0	0			1662	0	0	4	0	0	35		0	0	1	0	0		
W Foothill Blvd - San Gabriel to Azusa				62.8	0	0			1558	0	0	4	0	0	35		0	0	1	0	0		
Vernon Ave - Sierra Madre to Foothill				56.6	0	0			402	0	0	4	0	0	35		0	0	1	0	0		
N San Gabriel Ave - Sierra Madre to Foothill				56.3	0	0			336	0	0	4	0	0	35		0	0	1	0	0		
N San Gabriel Ave - Foothill to 6th				60.2	0	0			891	0	0	4	0	0	35		0	0	1	0	0		
N Azusa Ave - Sierra Madre to Foothill				58.1	0	0			508	0	0	4	0	0	35		0	0	1	0	0		
N Azusa Ave - Foothill to 6th				58.2	0	0			542	0	0	4	0	0	35		0	0	1	0	0		

Azusa Greens Redevelopment
Off-site CadnaA Road Sources, Future

Name	Sel.	M.	ID	Lme			Count Data		exact Count Data						Speed Limit		SCS	Surface		Gradient	Mult. Reflection		
				Day	Evening	Night	DTV	Str.class.	M			p (%)			Auto	Truck	Dist.	Dstro	Type		Drefl	Hbuild	Dist.
				(dBA)	(dBA)	(dBA)			Day	Evening	Night	Day	Evening	Night	(mph)	(mph)		(dB)		(%)	(dB)	(ft)	(ft)
Todd Ave - Sierra Madre to W 10th				62.2	0	0			908	0	0	4	0	0	40		0	0	1	0	0		
Todd Ave - W 10th to W Foothill Blvd				62.9	0	0			1064	0	0	4	0	0	40		0	0	1	0	0		
Sierra Madre Ave - Todd Ave to Project				62.3	0	0			924	0	0	4	0	0	40		0	0	1	0	0		
Sierra Madre Ave - Project to Vernon				62.2	0	0			892	0	0	4	0	0	40		0	0	1	0	0		
Sierra Madre Ave - Vernon to San Gabriel				62.2	0	0			905	0	0	4	0	0	40		0	0	1	0	0		
W Foothill Blvd - Todd Rd to Vernon Ave				63.6	0	0			1785	0	0	4	0	0	35		0	0	1	0	0		
W Foothill Blvd - Vernon Ave to San Gabriel				63.3	0	0			1688	0	0	4	0	0	35		0	0	1	0	0		
W Foothill Blvd - San Gabriel to Azusa				63.2	0	0			1648	0	0	4	0	0	35		0	0	1	0	0		
Vernon Ave - Sierra Madre to Foothill				56.7	0	0			365	0	0	4	0	0	35		0	0	1	0	0		
N San Gabriel Ave - Sierra Madre to Foothill				56.4	0	0			339	0	0	4	0	0	35		0	0	1	0	0		
N San Gabriel Ave - Foothill to 6th				60.5	0	0			870	0	0	4	0	0	35		0	0	1	0	0		
N Azusa Ave - Sierra Madre to Foothill				58.7	0	0			576	0	0	4	0	0	35		0	0	1	0	0		
N Azusa Ave - Foothill to 6th				58.6	0	0			565	0	0	4	0	0	35		0	0	1	0	0		

Azusa Greens Redevelopment

Off-site CadnaA Road Sources, Future + Project

Name	Sel.	M.	ID	Lme			Count Data		exact Count Data						Speed Limit		SCS	Surface		Gradient	Mult. Reflection		
				Day	Evening	Night	DTV	Str.class.	M			p (%)			Auto	Truck	Dist.	Dstro	Type		Drefl	Hbuild	Dist.
				(dBA)	(dBA)	(dBA)			Day	Evening	Night	Day	Evening	Night	(mph)	(mph)		(dB)		(%)	(dB)	(ft)	(ft)
Todd Ave - Sierra Madre to W 10th				62.5	0	0			959	0	0	4	0	0	40		0	0	1	0	0		
Todd Ave - W 10th to W Foothill Blvd				63.9	0	0			1334	0	0	4	0	0	40		0	0	1	0	0		
Sierra Madre Ave - Todd Ave to Project				62.5	0	0			959	0	0	4	0	0	40		0	0	1	0	0		
Sierra Madre Ave - Project to Vernon				62.4	0	0			941	0	0	4	0	0	40		0	0	1	0	0		
Sierra Madre Ave - Vernon to San Gabriel				62.2	0	0			910	0	0	4	0	0	40		0	0	1	0	0		
W Foothill Blvd - Todd Rd to Vernon Ave				63.8	0	0			1879	0	0	4	0	0	35		0	0	1	0	0		
W Foothill Blvd - Vernon Ave to San Gabriel				63.7	0	0			1827	0	0	4	0	0	35		0	0	1	0	0		
W Foothill Blvd - San Gabriel to Azusa				63.4	0	0			1717	0	0	4	0	0	35		0	0	1	0	0		
Vernon Ave - Sierra Madre to Foothill				57.2	0	0			410	0	0	4	0	0	35		0	0	1	0	0		
N San Gabriel Ave - Sierra Madre to Foothill				56.4	0	0			340	0	0	4	0	0	35		0	0	1	0	0		
N San Gabriel Ave - Foothill to 6th				60.8	0	0			943	0	0	4	0	0	35		0	0	1	0	0		
N Azusa Ave - Sierra Madre to Foothill				58.7	0	0			577	0	0	4	0	0	35		0	0	1	0	0		
N Azusa Ave - Foothill to 6th				58.8	0	0			594	0	0	4	0	0	35		0	0	1	0	0		

Azusa Greens Redevelopment

Off-site CadnaA Traffic Recievers, Existing

Name	Sel.	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
				Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
				(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
O1				64	-67.1	0	0		x	Total	4.99	r	1360493.41	12395777.46	5
O2				68.1	-64	0	0		x	Total	4.99	r	1360616.81	12393431.87	5
O3				64.2	-67	0	0		x	Total	4.99	r	1361001.86	12396372.18	5
O4				64.5	-66.2	0	0		x	Total	4.99	r	1362483.79	12396018.66	5
O5				64.2	-66.8	0	0		x	Total	4.99	r	1363122.96	12396376.94	5
O6				66.3	-65.7	0	0		x	Total	4.99	r	1362446.17	12392933.86	5
O7				65.8	-65.9	0	0		x	Total	4.99	r	1364763.62	12392810.37	5
O8				65.2	-65.3	0	0		x	Total	4.99	r	1365625.46	12392927.99	5
O9				60.4	-65.6	0	0		x	Total	4.99	r	1363250.11	12394762.05	5
O10				59.8	-65.8	0	0		x	Total	4.99	r	1365384.21	12396030.89	5
O11				61.4	-67.9	0	0		x	Total	4.99	r	1365323.8	12392368.87	5
O12				60.7	-66.4	0	0		x	Total	4.99	r	1365895.25	12395758.31	5
O13				63.2	-64.6	0	0		x	Total	4.99	r	1365755.35	12392518.86	5

Azusa Greens Redevelopment

Off-site CadnaA Traffic Recievers, Existing + Project

Name	Sel.	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
				Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
				(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
O1				64.2	-67.1	0	0		x	Total	4.99	r	1360493.41	12395777.46	5
O2				69.1	-64	0	0		x	Total	4.99	r	1360616.81	12393431.87	5
O3				64.3	-67	0	0		x	Total	4.99	r	1361001.86	12396372.18	5
O4				64.8	-66.2	0	0		x	Total	4.99	r	1362483.79	12396018.66	5
O5				64.2	-66.8	0	0		x	Total	4.99	r	1363122.96	12396376.94	5
O6				66.6	-65.7	0	0		x	Total	4.99	r	1362446.17	12392933.86	5
O7				66.2	-65.9	0	0		x	Total	4.99	r	1364763.62	12392810.37	5
O8				65.4	-65.3	0	0		x	Total	4.99	r	1365625.46	12392927.99	5
O9				60.9	-65.6	0	0		x	Total	4.99	r	1363250.11	12394762.05	5
O10				59.9	-65.8	0	0		x	Total	4.99	r	1365384.21	12396030.89	5
O11				61.7	-67.9	0	0		x	Total	4.99	r	1365323.8	12392368.87	5
O12				60.7	-66.4	0	0		x	Total	4.99	r	1365895.25	12395758.31	5
O13				63.5	-64.6	0	0		x	Total	4.99	r	1365755.35	12392518.86	5

Azusa Greens Redevelopment

Off-site CadnaA Traffic Recievers, Future

Name	Sel.	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
				Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
				(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
O1				64.1	-67.1	0	0		x	Total	4.99	r	1360493.41	12395777.46	5
O2				68.2	-64	0	0		x	Total	4.99	r	1360616.81	12393431.87	5
O3				64.2	-67	0	0		x	Total	4.99	r	1361001.86	12396372.18	5
O4				64.6	-66.2	0	0		x	Total	4.99	r	1362483.79	12396018.66	5
O5				64.3	-66.8	0	0		x	Total	4.99	r	1363122.96	12396376.94	5
O6				66.7	-65.7	0	0		x	Total	4.99	r	1362446.17	12392933.86	5
O7				66.2	-65.9	0	0		x	Total	4.99	r	1364763.62	12392810.37	5
O8				65.6	-65.3	0	0		x	Total	4.99	r	1365625.46	12392927.99	5
O9				60.5	-65.6	0	0		x	Total	4.99	r	1363250.11	12394762.05	5
O10				60	-65.8	0	0		x	Total	4.99	r	1365384.21	12396030.89	5
O11				61.7	-67.9	0	0		x	Total	4.99	r	1365323.8	12392368.87	5
O12				61.2	-66.4	0	0		x	Total	4.99	r	1365895.25	12395758.31	5
O13				63.6	-64.6	0	0		x	Total	4.99	r	1365755.35	12392518.86	5

Azusa Greens Redevelopment

Off-site CadnaA Traffic Recievers, Future + Project

Name	Sel.	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
				Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
				(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
O1				64.1	-67.1	0	0		x	Total	4.99	r	1360493.41	12395777.46	5
O2				69.1	-64	0	0		x	Total	4.99	r	1360616.81	12393431.87	5
O3				64.4	-67	0	0		x	Total	4.99	r	1361001.86	12396372.18	5
O4				64.8	-66.2	0	0		x	Total	4.99	r	1362483.79	12396018.66	5
O5				64.3	-66.8	0	0		x	Total	4.99	r	1363122.96	12396376.94	5
O6				67	-65.7	0	0		x	Total	4.99	r	1362446.17	12392933.86	5
O7				66.6	-65.9	0	0		x	Total	4.99	r	1364763.62	12392810.37	5
O8				65.8	-65.3	0	0		x	Total	4.99	r	1365625.46	12392927.99	5
O9				61	-65.6	0	0		x	Total	4.99	r	1363250.11	12394762.05	5
O10				60	-65.8	0	0		x	Total	4.99	r	1365384.21	12396030.89	5
O11				62	-67.9	0	0		x	Total	4.99	r	1365323.8	12392368.87	5
O12				61.2	-66.4	0	0		x	Total	4.99	r	1365895.25	12395758.31	5
O13				63.9	-64.6	0	0		x	Total	4.99	r	1365755.35	12392518.86	5