APPENDIX G

Noise and Vibration Study

STOCKER STREET CREATIVE PROJECT

Noise & Vibration Impact Study

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The City of Los Angeles Department of City Planning

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taha
environmental planners

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1.0 SUMMARY OF FINDINGS

Terry A. Hayes Associates Inc. (TAHA) has completed a noise and vibration impact analysis for the proposed Stocker Street Creative Project (Project). A summary of potential impacts is provided in **Table 1-1**. Project design features and mitigation measures are listed after the table.

TABLE 1-1: SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Mitigation Measures	Significance After Mitigation
Would the Project result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? **Potentially Significant Impact – Construction** **Potentially Significant Impact – Operation**	**N-1** through **N-4**	Less-Than-Significant with Mitigation Incorporated – Construction Less-Than-Significant with Mitigation Incorporated – Operations
Would the Project result in the generation of excessive ground-borne vibration or ground-borne noise levels? **Potentially Significant Impact – Construction Vibration Damage** **Less-Than-Significant Impact – Construction Vibration Annoyance and Operation**	**N-5**	Less-Than-Significant with Mitigation Incorporated – Construction Vibration Damage No Mitigation Required – Construction Vibration Annoyance and Operations
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. **No Impact**	None	No Impact

SOURCE: TAHA, 2024.

Project Design Features

PDF-NOI-1 A 40-foot temporary construction noise barrier will be installed along the Project's northern property line.

Mitigation Measures

N-1 Power construction equipment (including combustion engines), fixed or mobile, shall be equipped with state-of-the-art noise shielding and muffling devices (consistent with manufacturers' standards). All equipment shall be properly maintained to assure that no additional noise, due to worn or improperly maintained parts, would be generated.

N-2 A temporary construction noise barrier, or equivalent noise reduction strategy, shall be installed on the northern property line that is capable of reducing noise by 10 dBA or greater as needed at affected residences.

N-3 Noise and vibration construction activities whose specific location on the Project site may be flexible (e.g., operation of compressors and generators) shall be conducted as far away as possible from the nearest sensitive land uses, and natural and/or manmade barriers (e.g., intervening construction trailers) shall be used to screen propagation of noise from such activities towards these land uses. The construction contractor shall locate construction staging areas away from noise-sensitive uses.

N-4 Amplified sound shall not be permitted after 10:00 pm and special events with no amplified sound equipment shall not be permitted after 12:00 am without further study. The applicant shall prepare an acoustical study to predict operational noise levels of outdoor gathering spaces once the acoustical equipment layout and anticipated event hours and occupancy have been identified. The acoustical study shall predict noise levels based on amplified sound equipment locations, equipment maximum noise level, number of pieces of equipment, and occupancy of each of the outdoor gathering spaces. The acoustical study shall identify any additional mitigation measures to ensure ambient noise levels at sensitive receptors would not result in an incremental increase in community noise equivalent level of 5 dBA or more at surrounding sensitive receptors. Noise reduction methods that may be implemented include, but are not limited to:

- Time restrictions on operation of amplified sound and events.
- Design features, such as solid barriers to reduce noise at off-site sensitive receptors.
- Restrictions on decibel levels of amplified sound equipment.

N-5 Prior to commencement of construction activity, a qualified structural engineer licensed in California shall survey the existing foundation and other structural aspects of the Sanchez Ranch Adobe. The survey shall provide a shoring design to protect the identified land uses from potential damage. The qualified structural engineer shall submit a pre-construction survey letter establishing baseline conditions at the historic buildings. These baseline conditions shall be forwarded to the lead agency and to the mitigation monitor prior to issuance of any foundation only or building permit. At the conclusion of vibration causing activities, the qualified structural engineer shall issue a follow-on letter describing damage, if any, to the historic buildings. The letter shall include recommendations for any repair, as may be necessary, in conformance with the Secretary of the Interior Standards. Repairs to shall be undertaken and completed in conformance with all applicable codes including the California Historical Building Code (Part 8 of Title 24) prior to issuance of any temporary or permanent certificate of occupancy for the new building.

2.0 INTRODUCTION

2.1 PURPOSE OF REPORT

The purpose of this report is to evaluate the potential noise and vibration impacts associated with the Project in accordance with the California Environmental Quality Act (CEQA). Included in this report is a description of the existing noise environment within the Project site area, an estimation of future noise and vibration levels at surrounding sensitive land uses associated with construction and operation of the Project, a description of the potential significant impacts, and the inclusion of mitigation measures to address any identified potential significant impacts.

2.2 PROJECT DESCRIPTION

The Project consists of the demolition of five substantially unoccupied office buildings, totaling approximately 123,354 square feet and the construction of a campus for studio and sound stage production, totaling approximately 256,758 square feet exclusive of the parking garage (114,405 square feet), on an approximately five-acre site that slopes about approximately 35 feet northwest to northeast.

- Building A would be a three-story office building that would include retail space and a food court on the first floor.
- Building B would be a seven-story building with studio production support facilities on the first two floors and office space above. The roof (partial 7th floor) would include an enclosed restaurant with an adjacent open/garden area that would provide outdoor seating for the restaurant and be used for special events.
- Building C would be a one-story security office that would include a restroom, breakroom and surveillance monitors and computer equipment.
- Building D would be a one-story building with studio sound stages and back-of-house facilities.
- Building E would be a one-story building with a basement and mezzanine with studio sound stages, a mill shop for set production.
- Building F would be a five-story, open parking garage with 344 parking stalls, (including eight Americans with Disabilities Act (ADA) stalls and 79 electric vehicles charging stalls) a retail/community room at street level, and back-of-house facilities. Five additional car parking spaces, including one ADA stall would be provided within the Upper Service Plaza Level. Parking spaces for the restaurant would only be available after 6:00 pm, the rest of the time it would be used by tenants of Buildings A and B.
- There would also be an open space area between Buildings A, B, and F designed for community gatherings and special events.

Vehicular access for visitors and tenants would be provided from Santa Rosalia Drive to the existing alley along the northern property line and then to the parking structure/garage (Building F). All vehicular access would be controlled through a ticketed gateway prior to entering the parking garage. Access to the existing alley from Don Felipe Drive would be limited to emergency vehicles and occasional VIP access.

Delivery trucks and studio trailers would access the Project site from a right turn in only via a truck-only entry driveway off Stocker Street. The truck entry driveway would be wide enough for two semi-trucks to pull off Stocker Street, if necessary. All trucks entering from Stocker Street would exit on

Santa Rosalia Drive via the existing fire road along the northern property line. No traffic would exit Stocker Street; only emergency vehicles and occasional VIP vehicles would exit on Don Felipe Drive.

The Project would operate a movie production studio containing a mix of uses, including restaurant and retail uses open to the public. The proposed studio would have operations 24 hours per day, seven days per week, but generally occur nine months per year. Staff members would manage studio and stage operations daily from 9:00 am to 6:00 pm.

Public visitors to the campus would have (controlled) access to Building A and Building F and the Green Plaza during daytime hours. The rooftop restaurant would be open to on-site employees during daytime hours and open to the public after 6:00 pm. Access to Building D and Building E and the Upper Service Plaza Level would be restricted to on-site office tenants, movie production talent and staff, and delivery vehicles during all hours of operation. The food court in Building A would operate 12 hours per day from 8:00 am to 8:00 pm. The community room located in Building F would be open for public use between 8:00 am and 8:00 pm.

Special events for both building tenants and the public would occasionally occur within the Green Plaza. Additionally, the restaurant and green space on the rooftop of Building B could be utilized for private special events. Sound amplifying equipment during special events would be prohibited between the hours of 10:00 pm and 7:00 am.

Figure 2-1, *Regional and Site Location,* shows the regional and project location and **Figure 2-2**, *Site Plan,* shows the site plan.



Source: TAHA, 2024.

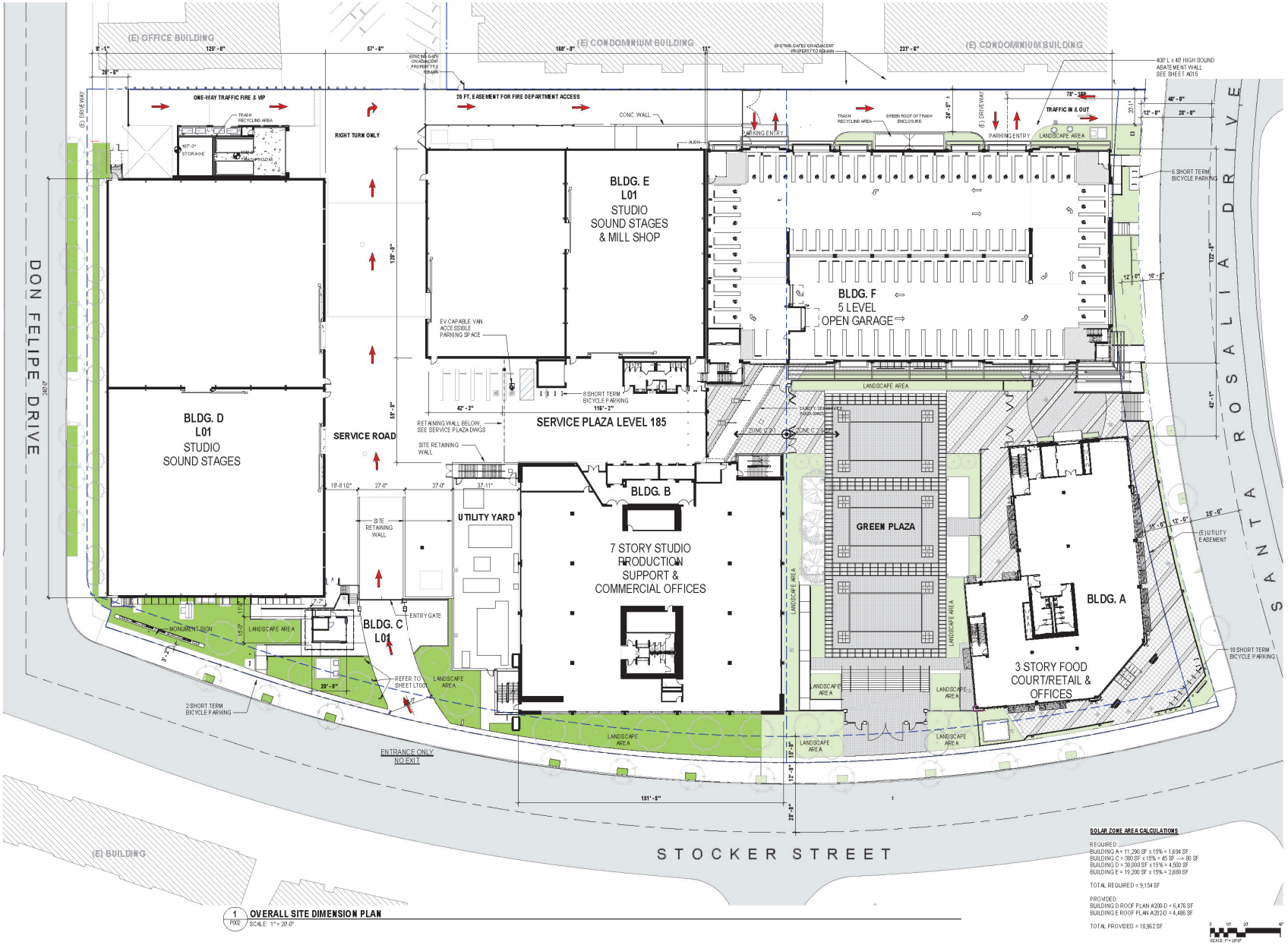
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FIGURE 2-1

REGIONAL AND SITE LOCATION



Source: JGM Inc, 2025.

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FIGURE 2-2

SITE PLAN

3.0 NOISE AND VIBRATION

This section describes the characteristics and effects of noise and vibration, the applicable regulatory setting, the existing setting, and evaluates noise and vibration levels associated with the Project.

3.1 NOISE AND VIBRATION BASICS

3.1.1 Noise Principles and Descriptors

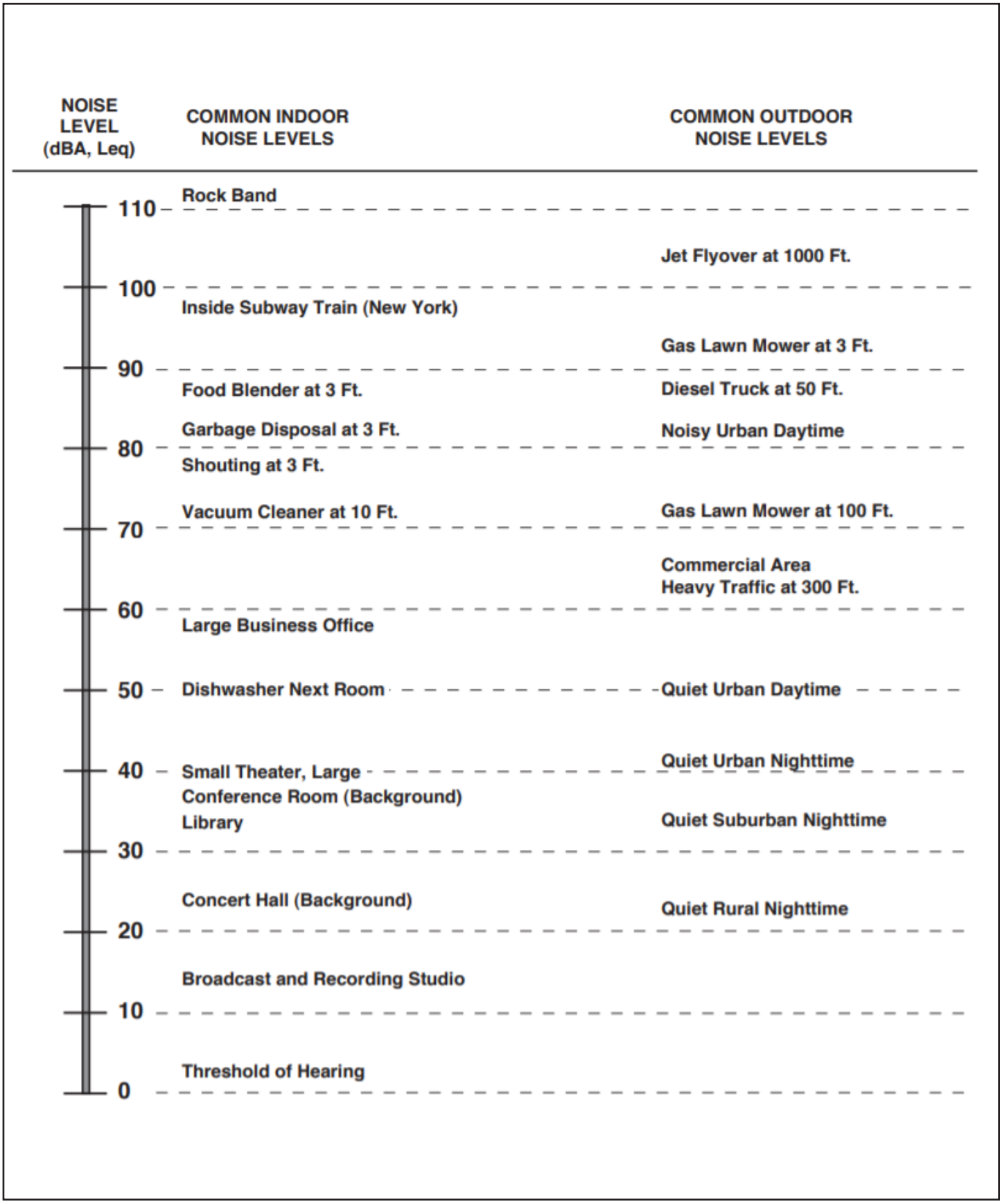
The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determine the sound level and characteristics of the noise perceived by the receiver.

Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) that is measured in decibels (dB), which is the standard unit of sound amplitude measurement and reflects the way people perceive changes in sound amplitude.[1] The dB scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound, with 0 dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of feeling pain. Pressure waves traveling through air exert a force registered by the human ear as sound.[2]

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but, rather, a broad band of frequencies varying in levels of magnitude. When all of the audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequencies spanning 20 to 20,000 Hz. The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum.[3]

The typical human ear is not equally sensitive to the frequency range from 20 to 20,000 Hz. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that deemphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to these extremely low and extremely high frequencies. This method of frequency filtering or weighting is referred to as A-weighting, expressed in units of A-weighted decibels (dBA), which is typically applied to community noise measurements.[4] Some representative common outdoor and indoor noise sources and their corresponding A-weighted noise levels are shown in **Figure 3-1**, *Decibel Scale and Common Noise Sources*.

[1]All sound levels measured in decibel (dB), as identified in the noise calculation worksheets included in Appendix A, are relative to $2x10^{-5}$ N/m^2.
[2]California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.1.3*, September 2013.
[3]California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.1.3*, September 2013.
[4]California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.1.3*, September 2013.



Source: California Department of Transportation, Technical Noise Supplement, October 1998.

FIGURE 3-1
A-WEIGHTED DECIBEL SCALE

3.1.2 Noise Exposure and Community Noise

Community noise exposure is typically measured over a period of time; a noise level is a measure of noise at a given instant in time. Community noise varies continuously over a period of time with respect to the sound sources contributing to the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with many unidentifiable individual contributors. Single-event noise sources, such as aircraft flyovers, sirens, etc., may cause sudden changes in background noise level.[5] However, generally, background noise levels change gradually throughout the day, corresponding with the addition and subtraction of distant noise sources, such as changes in traffic volume.

These successive additions of sound to the community noise environment change the community noise level from moment to moment, requiring the noise exposure to be measured over periods of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts. The following noise descriptors are used to characterize environmental noise levels over time.[6]

L_{eq}: The equivalent sound level over a specified period of time, typically, 1 hour (L_{eq}). The L_{eq} may also be referred to as the energy-average sound level.

L_{max}: The maximum, instantaneous noise level experienced during a given period of time.

L_{min}: The minimum, instantaneous noise level experienced during a given period of time.

L_x: The noise level exceeded a percentage of a specified time period. For instance, L_{50} and L_{90} represent the noise levels that are exceeded 50 percent and 90 percent of the time, respectively.

L_{dn}: The average A-weighted noise level during a 24-hour day, obtained after an addition of 10 dBA to measured noise levels between the hours of 10:00 pm and 7:00 am to account for nighttime noise sensitivity. The L_{dn} is also termed the day-night average noise level (DNL).

CNEL: The Community Noise Equivalent Level (CNEL) is the time average A-weighted noise level during a 24-hour day that includes an addition of 5 dBA to measured noise levels between the hours of 7:00 pm and 10:00 pm and an addition of 10 dBA to noise levels between the hours of 10:00 pm and 7:00 am to account for noise sensitivity in the evening and nighttime, respectively.

3.1.3 Effects of Noise on People

Noise is generally loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity that is a nuisance or disruptive. The effects of noise on people can be placed into four general categories:

- Subjective effects (e.g., dissatisfaction, annoyance);
- Interference effects (e.g., communication, sleep, and learning interference);
- Physiological effects (e.g., startled response); and
- Physical effects (e.g., hearing loss).

[5]California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.2.1*, September 2013.
[6]California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, *Section 2.2.2*, September 2013.

Although exposure to high noise levels has been demonstrated to cause physical and physiological effects, the principal human responses to typical environmental noise exposure are related to subjective effects and interference with activities. Interference effects interrupt daily activities and include interference with human communication activities, such as normal conversations, watching television, telephone conversations, and interference with sleep.

The World Health Organization's Guidelines for Community Noise details the adverse health effects of high noise levels, which include hearing impairment, speech intelligibility, sleep disturbance, physiological functions (e.g., hypertension and cardiovascular effects), mental illness, performance of cognitive tasks, social and behavioral effects (e.g., feelings of helplessness, aggressive behavior), and annoyance.[7]

With regard to the subjective effects, the responses of individuals to similar noise events are diverse and influenced by many factors, including the type of noise, the perceived importance of the noise, the appropriateness of the noise to the setting, the duration of the noise, the time of day and the type of activity during which the noise occurs, and individual noise sensitivity. Overall, there is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction on people. A wide variation in individual thresholds of annoyance exists, and different tolerances to noise tend to develop based on an individual's past experiences with noise. Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted (i.e., comparison to the ambient noise environment). In general, the more a new noise level exceeds the previously existing ambient noise level, the less acceptable the new noise level will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships generally occur:[8]

- Except in carefully controlled laboratory experiments, a change of 1 dBA in ambient noise levels cannot be perceived;
- Outside of the laboratory, a change of 3 dBA in ambient noise levels is considered to be a barely perceivable difference;
- A change of 5 dBA in ambient noise levels is considered to be a readily perceivable difference; and
- A change of 10 dBA in ambient noise levels is subjectively heard as doubling of the perceived loudness.

These relationships between change in noise level and human hearing response occur in part because of the logarithmic nature of sound and the dB scale. Because the dBA scale is based on logarithms, two noise sources do not combine in a simple additive fashion, but, rather, logarithmically. Under the dBA scale, a doubling of sound energy corresponds to a 3-dBA increase. In other words, when two sources are each producing sound of the same loudness, the resulting sound level at a given distance would be approximately 3 dBA higher than one of the sources under the same conditions. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA. Under the dB scale, three sources of equal loudness together produce a sound level of approximately 5 dBA louder than one source, and

[7]World Health Organization Team, edited by Berglund, Birgitta; Lindvall, Thomas; Schwela, Dietrich H, *Guidelines for Community Noise*, 1999.
[8]California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.2.1*, 2013.

10 sources of equal loudness together produce a sound level of approximately 10 dBA louder than the single source.[9]

3.1.4 Noise Attenuation

When noise propagates over a distance, the noise level reduces with distance depending on the type of noise source and the propagation path. Noise from a localized source (i.e., point source) propagates uniformly outward in a spherical pattern, referred to as "spherical spreading." The rate of sound attenuation for a point source, such as a piece of mechanical or electrical equipment (e.g., air conditioner) or idling vehicle (e.g., bulldozer), is 6 dBA per doubling of distance from the noise source to the receptor over acoustically "hard" sites and 7.5 dBA per doubling of distance from the noise source to the receptor over acoustically "soft" sites.[10] Hard sites are those with a reflective surface between the source and the receiver, such as asphalt or concrete surfaces or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the reduction in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source. Soft sites have an absorptive ground surface, such as soft dirt, grass, or scattered bushes and trees, which in addition to geometric spreading, provides an excess ground attenuation value of 1.5 dBA (per doubling distance).[11] For example, an outdoor condenser fan that generates a sound level of 60 dBA at a distance of 50 feet from a point source at an acoustically hard site would attenuate to 54 dBA at a distance of 100 feet from the point source and attenuate to 48 dBA at 200 feet from the point source.

Roadways and highways consist of several localized noise sources on a defined path, and hence are treated as "line" sources, which approximate the effect of several point sources.[12] Noise from a line source propagates over a cylindrical surface, often referred to as "cylindrical spreading."[13] Line sources (e.g., traffic noise from vehicles) attenuate at a rate between 3 dBA for hard sites and 4.5 dBA for soft sites for each doubling of distance from the reference measurement.[14] Therefore, noise due to a line source attenuates less with distance than that of a point source with increased distance.

Structures (e.g., buildings and solid walls) and natural topography (e.g., hills and berms) that obstruct the line-of-sight between a noise source and a receptor further reduce the noise level if the receptor is located within the "shadow" of the obstruction, such as behind a sound wall. This type of sound attenuation is known as "barrier insertion loss." If a receptor is located behind the wall but still has a view of the source (i.e., the line-of-sight is not fully blocked), barrier insertion loss would still occur but to a lesser extent. Additionally, a receptor located on the same side of the wall as a noise source may actually experience an increase in the perceived noise level as the wall can reflect noise back to the receptor, thereby compounding the noise. Noise barriers can provide noise level reductions ranging from approximately 5 dBA (where the barrier just breaks the line-of-sight between the source

[9]California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol, Section 2.2.1.1*, September 2013.
[10]California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, *Section 2.1.4.2*, September 2013.
[11]California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, *Section 2.1.4.2*, September 2013.
[12]California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, *Section 2.1.4.1*, September 2013.
[13]California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, *Section 2.1.4.1*, September 2013.
[14]California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, *Section 2.1.4.1*, September 2013.

and receiver) to an upper range of 20 dBA with a larger barrier.[15] Additionally, structures with closed windows can further attenuate exterior noise by a minimum of 20 dBA to 30 dBA.[16]

Receptors located downwind from a noise source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels.[17] Atmospheric temperature inversion (i.e., increasing temperature with elevation) can increase sound levels at long distances. Other factors such as air temperature, humidity, and turbulence can, under the right conditions, also have substantial effects on noise levels.[18]

3.1.5 Vibration Fundamentals

Vibration can be interpreted as energy transmitted in waves through the ground or man-made structures, which generally dissipate with distance from the vibration source. Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Since energy is lost during its transfer from one particle to another, vibration becomes less perceptible with increasing distance from the source.

As described in the Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment Manual*, groundborne vibration can be a serious concern for nearby neighbors of a transit system route or maintenance facility, causing buildings to shake and rumbling sounds to be heard.[19] In contrast to airborne noise, groundborne vibration is not a common environmental problem, as it is unusual for vibration from sources such as rubber-tired buses and trucks to be perceptible, even in locations close to major roads. Some common sources of groundborne vibration are trains, heavy trucks traveling on rough roads, and certain construction activities, such as blasting, pile-driving, and operation of heavy earth-moving equipment.[20] Groundborne vibration generated by man-made activities (e.g., road traffic, construction operations) typically weakens with greater horizontal distance from the source of the vibration.

Several different methods are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal in inches per second (in/sec), and is most frequently used to describe vibration impacts to buildings.[21] The root mean square (RMS) amplitude is defined as the average of the squared amplitude of the signal and is most frequently used to describe the effect of vibration on the human body.[22] Decibel notation (VdB) is commonly used to express RMS vibration velocity amplitude. The relationship of PPV to RMS velocity is expressed in terms of the "crest factor," defined as the ratio of the PPV amplitude to the RMS amplitude. PPV is typically a factor of 1.7 to six times greater than RMS vibration velocity; FTA uses a crest factor of four.[23] The decibel notation VdB acts to compress the range of numbers required to describe vibration. Typically, groundborne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration include buildings where vibration would interfere with operations within the building or cause damage (especially older

[15]California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, *Section 2.1.4.2*, September 2013.
[16]California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, *Section 2.1.4.2*, September 2013.
[17]California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, *Section 2.1.4.3*, September 2013.
[18]California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, *Section 2.1.4.3*, September 2013.
[19]Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, *Section 7*, September 2018. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf.
[20]Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, *Section 7*, September 2018.
[21]Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, *Section 5.1*, September 2018.
[22]Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, *Section 5.1*, September 2018.
[23]Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual, Section 5.1*, September 2018.

masonry structures), locations where people sleep, and locations with vibration sensitive equipment.[24]

Groundborne noise specifically refers to the rumbling noise emanating from the motion of building room surfaces due to the vibration of floors and walls; it is perceptible only inside buildings.[25] The relationship between groundborne vibration and groundborne noise depends on the frequency of the vibration and the acoustical absorption characteristics of the receiving room. For typical buildings, groundborne vibration that causes low frequency noise (i.e., the vibration spectrum peak is less than 30 Hz) results in a groundborne noise level that is approximately 50 dB lower than the velocity level. For groundborne vibration that causes mid-frequency noise (i.e., the vibration spectrum peak is 30 to 60 Hz), the groundborne noise level will be approximately 35 to 37 dB lower than the velocity level.[26] Therefore, for typical buildings, the groundborne noise decibel level is lower than the groundborne vibration velocity level at low frequencies.

3.2 REGULATORY FRAMEWORK

There are several plans, regulations, and programs that include policies, requirements, and guidelines regarding Noise at the federal, state, regional, and local levels. As described below, these plans, guidelines, and laws include the following:

- Noise Control Act of 1972
- Federal Transportation Administration Vibration Standards
- Occupational Safety and Health Act of 1970
- Office of Planning and Research Guidelines for Noise Compatible Land Use
- California Department of Transportation Vibration/Groundborne Noise Standards
- Los Angeles County Airport Land Use Commission Comprehensive Land Use Plan
- Los Angeles Municipal Code
- City of Los Angeles General Plan Noise Element

3.2.1 Federal

Noise Control Act of 1972

Under the authority of the Noise Control Act of 1972, the United States Environmental Protection Agency (USEPA) established noise emission criteria and testing methods published in Parts 201 through 205 of Title 40 of the Code of Federal Regulations (CFR) that apply to some transportation equipment (e.g., interstate rail carriers, medium trucks, and heavy trucks) and construction equipment. In 1974, USEPA issued guidance levels for the protection of public health and welfare in residential areas of an outdoor L_{dn} of 55 dBA and an indoor L_{dn} of 45 dBA.[27] These guidance levels are not standards or regulations and were developed without consideration of technical or economic feasibility. There are no federal noise standards that directly regulate environmental noise related to the construction or operation of the Project. Moreover, the federal noise standards are not reflective of urban environments that range by land use, density, proximity to commercial or industrial centers, etc. As such, for purposes of determining acceptable sound levels to determine and evaluate intrusive noise sources and increases, this document utilizes the City of Los Angeles Noise Regulations, discussed below.

[24]Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, *Sections 6.1*, *6.2*, and *6.3*, September 2018.
[25]Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, *Section 5.4*, September 2018.
[26]Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, *Table 6-3 and Table 6-14*, pages 126 and 146, September 2018.
[27]United States Environmental Protection Agency, *EPA Identifies Noise Levels Affecting Health and Welfare*, April 1974. https://archive.epa.gov/epa/aboutepa/epa-identifies-noise-levels-affecting-health-and-welfare.html.

Federal Transit Administration Vibration Standards

There are no federal vibration standards or regulations adopted by any agency that are applicable to evaluating vibration impacts from land use development projects such as the Project. However, the Federal Transit Administration (FTA) has adopted vibration criteria for use in evaluating vibration impacts from construction activities.[28] The vibration damage criteria adopted by the FTA are shown in **Table 3-1**, *Construction Vibration Damage Criteria***.**

TABLE 3-1: CONSTRUCTION VIBRATION DAMAGE CRITERIA

Building Category	PPV (inches/second)
I. Reinforced-concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12
SOURCE: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.	

Occupational Safety and Health Act of 1970

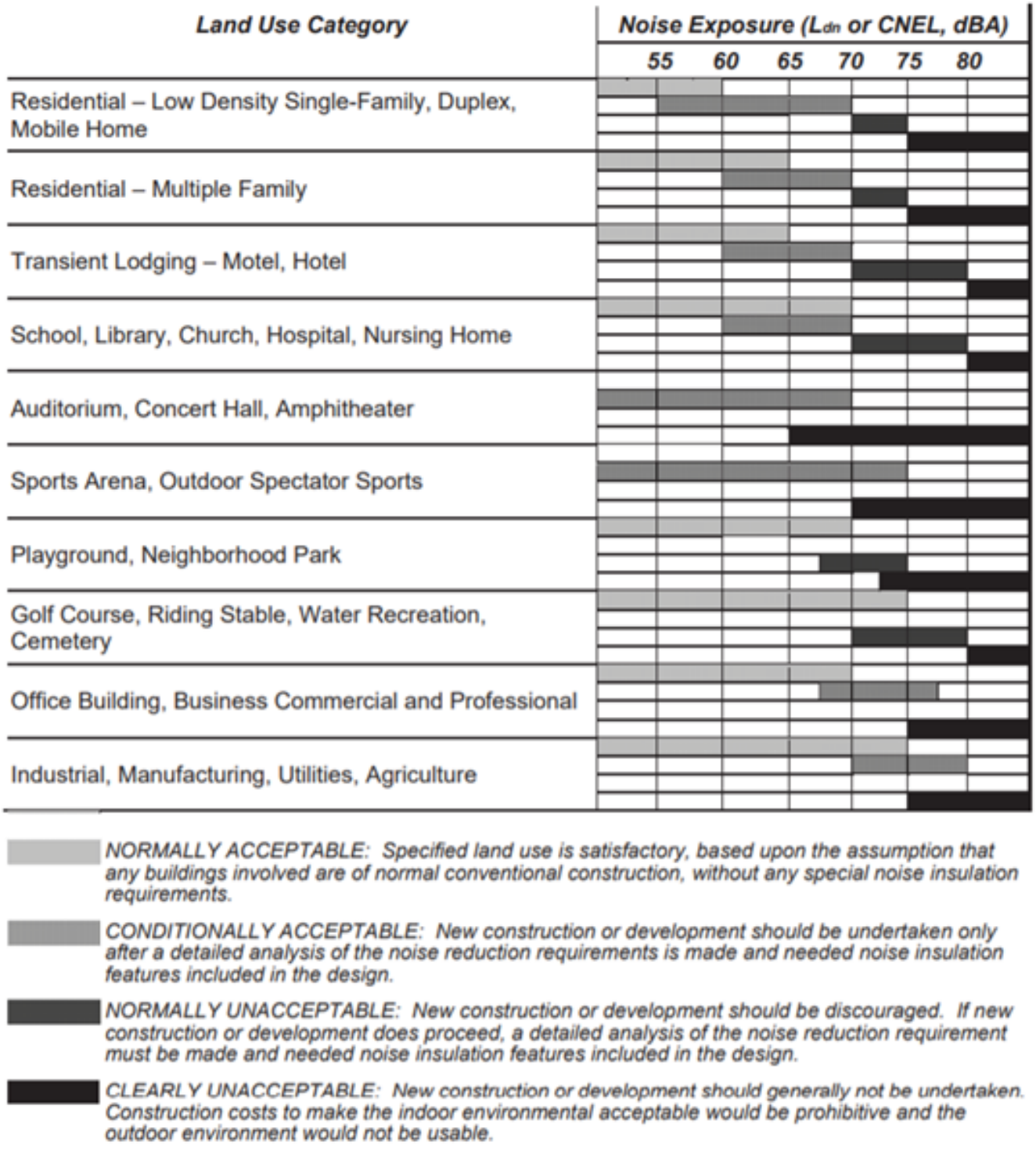
Under the Occupational Safety and Health Act of 1970 (29 U.S.C. §1919 et seq.), the Occupational Safety and Health Administration (OSHA) has adopted regulations designed to protect workers against the effects of occupational noise exposure. These regulations list permissible noise level exposure as a function of the amount of time during which the worker is exposed. The regulations further specify a hearing conservation program that involves monitoring noise to which workers are exposed, ensuring that workers are made aware of overexposure to noise, and periodically testing the workers' hearing to detect any degradation.[29]

3.2.2 State

Office of Planning and Research for Noise Compatible Land Use

The State of California has not adopted statewide standards for environmental noise, but the Governor's Office of Planning and Research (OPR) has established guidelines for evaluating the compatibility of various land uses as a function of community noise exposure, as presented in **Figure 3-2***, Guidelines for Noise Compatible Land Use*.[30] The purpose of these guidelines is to maintain acceptable noise levels in a community setting for different land use types. Noise levels are divided into four general categories, which vary in range according to land use type: "normally acceptable," "conditionally acceptable," "normally unacceptable," and "clearly unacceptable." The City has developed its own compatibility guidelines in the Noise Element of the General Plan based in part on OPR Guidelines. California Government Code Section 65302 requires each county and city in the State to prepare and adopt a comprehensive long-range general plan for its physical development, with Section 65302(f) requiring a noise element to be included in the general plan. The noise element must: (1) identify and appraise noise problems in the community; (2) recognize Office of Noise Control guidelines; and (3) analyze and quantify current and projected noise levels.

[28]Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, Table 7-5, page 186, September 2018.
[29]United States Department of Labor, *OSH Act of 1970.* https://www.osha.gov/laws-regs/oshact/completeoshact.
[30]State of California, Governor's Office of Planning and Research, *General Plan 2017 Guidelines*, page 377. http://opr.ca.gov/docs/OPR_COMPLETE_7.31.17.pdf.



Source: State of California Governor's Office of Planning and Research, General Plan Guidelines, 2003.

FIGURE 3-2

GUIDELINES FOR NOISE COMPATIBLE LAND USE

The purpose of these guidelines is to maintain acceptable noise levels in a community setting for different land use types. Noise levels are divided into four general categories, which vary in range according to land use type: "normally acceptable," "conditionally acceptable," "normally unacceptable," and "clearly unacceptable." The City has developed its own compatibility guidelines in the Noise Element of the General Plan based in part on OPR Guidelines. California Government Code Section 65302 requires each county and city in the State to prepare and adopt a comprehensive long-range general plan for its physical development, with Section 65302(f) requiring a noise element to be included in the general plan. The noise element must identify and appraise noise problems in the community and analyze and quantify current and projected noise levels.

The State has also established noise insulation standards for new multi-family residential units, hotels, and motels. These requirements are collectively known as the California Noise Insulation Standards (Title 24, California Code of Regulations). The noise insulation standards set forth an interior standard of 45 dBA CNEL in any habitable room. The standards require an acoustical analysis demonstrating that dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to exterior noise levels greater than 60 dBA CNEL. Title 24 standards are typically enforced by local jurisdictions through the building permit application process.

California Department of Transportation Vibration/Groundborne Noise Standards

The State of California has not adopted Statewide standards or regulations for evaluating vibration or groundborne noise impacts from land use development projects such as the proposed Project. Although the State has not adopted any vibration standard, the California Department of Transportation (Caltrans), *Transportation and Construction Vibration Guidance Manual,* recommends the following vibration thresholds that are more practical than those provided by the FTA, as shown in **Table 3-2***, Guidelines Vibration Damage Potential Threshold Criteria.*

TABLE 3-2: GUIDELINES VIBRATION DAMAGE POTENTIAL THRESHOLD CRITERIA

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources /a/	Continuous/Frequent Intermittent Sources /b/
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.20	0.10
Historic and some old buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial/commercial buildings	2.00	0.50

/a/ Transient sources create a single, isolated vibration event, such as blasting or drop balls.
/b/ Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.
SOURCE: California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, 2013.

3.2.3 Regional

Los Angeles County Airport Land Use Commission Comprehensive Land Use Plan

In Los Angeles County, the Regional Planning Commission has the responsibility for acting as the Airport Land Use Commission and for coordinating the airport planning of public agencies within the county. The Airport Land Use Commission coordinates planning for the areas surrounding public use airports. The Comprehensive Land Use Plan provides for the orderly expansion of Los Angeles County's public use airports and the area surrounding them. It is intended to provide for the adoption of land use measures that will minimize the public's exposure to excessive noise and safety hazards. In formulating the Comprehensive Land Use Plan, the Los Angeles County Airport Land Use

Commission has established provisions for safety, noise insulation, and the regulation of building height within areas adjacent to each of the public airports in the County.

3.2.4 Local

Los Angeles Municipal Code

The City of Los Angeles Noise Regulations are provided in Chapter XI of the Los Angeles Municipal Code (LAMC). LAMC Section 111.02 provides procedures and criteria for the measurement of the sound level of "offending" noise sources. In accordance with the LAMC, a noise source that causes a noise level increase of 5 dBA over the existing average ambient noise level as measured at an adjacent property line creates a noise violation. This standard applies to radios, television sets, air conditioning, refrigeration, heating, pumping and filtering equipment, powered equipment intended for repetitive use in residential areas, and motor vehicles driven on-site. To account for people's increased tolerance for short-duration noise events, the Noise Regulations provide a 5 dBA allowance for a noise source that causes noise lasting more than five minutes but less than 15 minutes in any one-hour period, and an additional 5 dBA allowance (for a total of 10 dBA) for a noise source that causes noise lasting five minutes or less in any one-hour period.[31]

The LAMC provides that in cases where the actual ambient conditions are not known, the City's presumed daytime (7:00 am to 10:00 pm) and nighttime (10:00 pm to 7:00 am) minimum ambient noise levels as defined in LAMC Section 111.03 should be used. The presumed ambient noise levels for these areas where the actual ambient conditions are not known as set forth in the LAMC Section 111.03 are provided in **Table 3-3**, *Presumed Existing Ambient Noise Levels*. For example, for residential-zoned areas, the presumed ambient noise level is 50 dBA during the daytime and 40 dBA during the nighttime.

TABLE 3-3: PRESUMED EXISTING AMBIENT NOISE LEVEL

		dBA	
Type	**Zones**	**Daytime (7:00 am to 10:00 pm)**	**Nighttime (10:00 pm to 7:00 am)**
Residential	A1, A2, RA, RE, RS, RD, RW1, RW2, R1, R2, R3, R4, and R5	50	40
Commercial	P, PB, CR, C1, C1.5, C2, C4, C5, and CM	60	55
Industrial	M1, MR1, and MR2	60	55
	M2 and M3	65	65

SOURCE: Los Angeles Municipal Code, Section 111.03.

LAMC Section 112.01 limits noise from amplified voice and music and prohibits the operation of such devices (e.g., radio, musical instrument, phonograph, television receiver, or other machine) or other sounds in such a manner as to disturb the peace, quiet, and comfort of neighbors. Specifically, noise from such uses or operation which is audible at a distance in excess of 150 feet from the property line of the noise source within a residential zone of the City or within 500 feet thereof, is prohibited.

LAMC Section 112.02 limits increases in noise levels from air conditioning, refrigeration, heating, pumping and filtering equipment. Such equipment may not be operated in such manner as to create any noise which would cause the noise level on the premises of any other occupied property, or, if a condominium, apartment house, duplex, or attached business, within any adjoining unit, to exceed the ambient noise level by more than 5 dB.

[31]Los Angeles Municipal Code, *Chapter XI*, *Article I*, *Section 111.02-(b)*.

LAMC Section 112.05 sets a maximum noise level for construction equipment of 75 dBA at a distance of 50 feet when operated within 500 feet of a residential zone. Compliance with this standard shall not apply where compliance therewith is technically infeasible.[32] LAMC Section 41.40 prohibits construction between the hours of 9:00 pm and 7:00 am Monday through Friday, 6:00 pm and 8:00 am on Saturday, and at any time on Sunday (i.e., construction is allowed Monday through Friday between 7:00 am to 9:00 pm; and Saturdays and federal holidays between 8:00 am to 6:00 pm). In general, the City's Department of Building and Safety enforces Noise Ordinance provisions relative to equipment and the Los Angeles Police Department enforces provisions relative to noise generated by people.

LAMC Section 112.06 set a maximum noise level of 95 dBA for sound amplifying equipment or similar devices in a place of public entertainment at any point that is normally occupied by a customer, unless a conspicuous and legible sign is located outside such place stating "WARNING: SOUND LEVELS WITHIN MAY CAUSE HEARING IMPAIREMENT".

LAMC Section 113.01 prohibits collecting or disposing of rubbish or garbage, operating any refuse disposal truck, or collecting, loading, picking up, transferring, unloading, dumping, discarding, or disposing of any rubbish or garbage, as such terms are defined in LAMC Section 66.00, within 200 feet of any residential building between the hours of 9:00 pm and 6:00 am of the following day, unless a permit therefore has been duly obtained beforehand from the Board of Police Commissioners.

LAMC Section 114.03 prohibits loading and unloading of any vehicle or operation of dollies, carts, forklifts and other wheel equipment which causes any impulsive sound, raucous, or unnecessary noise within 200 feet of any residential building between the hours of 10:00 pm and 7:00 am.

Section 91.1207.14.2 prohibits interior noise levels attributable to exterior sources from exceeding 45 dBA in any habitable room. The noise metric shall be either the day-night average sound level (L_{dn}) or the CNEL, consistent with the noise element of the local general plan.

City of Los Angeles General Plan Noise Element

The Noise Element of the City's General Plan policies include the CNEL guidelines for land use compatibility as shown in **Table 3-4**, *Guidelines for Noise Compatible Land Use***,** and includes a number of goals, objectives, and policies for land use planning purposes. The overall purpose of the Noise Element is to guide policymakers in making land use determinations and in preparing noise ordinances that would limit exposure of citizens to excessive noise levels.[33] The following objectives and policies from the Noise Element apply to the Project.

Objective 2 (Non-airport): Reduce or eliminate non-airport related intrusive noise, especially relative to noise sensitive uses.

Policy 2.2: Enforce and/or implement applicable city, state, and federal regulations intended to mitigate proposed noise producing activities, reduce intrusive noise and alleviate noise that is deemed a public nuisance.

Objective 3 (Land Use Development): Reduce or eliminate noise impact associated with proposed development of land and changes in land use.

Policy 3.1: Develop land use policies and programs that will reduce or eliminate potential and existing noise impacts.

[32]In accordance with the City's Noise Ordinances, "technically feasible" means that the established noise limitations can be complied with at a project site, with the use of mufflers, shields, sound barriers, and/or other noise reduction devices or techniques employed during the operation of equipment.

[33]City of Los Angeles, *General Plan*, *Noise Element,* adopted February 3, 1999. https://planning.lacity.org/odocument/b49a8631-19b2-4477-8c7f-08b48093cddd/Noise_Element.pdf.

TABLE 3-4: GUIDELINES FOR NOISE COMPATIBLE LAND USE

	Community Noise Exposure : Day-Night Average Exterior Sound Level (dBA, CNEL)						
Land Use Category	**50**	**55**	**60**	**65**	**70**	**75**	**80**
Residential Single-Family Duplex, Mobile Home	A	C	C	C	N	U	U
Residential Multi-Family	A	A	C	C	N	U	U
Transient Lodging, Motel, Hotel	A	A	C	C	N	U	U
Schools, Library, Church, Hospital, Nursing Home	A	A	C	C	N	N	U
Auditorium, Concert Hall, Amphitheater	C	C	C	C/N	U	U	U
Sports Arena, Outdoor Spectator Sports	C	C	C	C	C/U	U	U
Playground, Neighborhood Park	A	A	A	A/N	N	N/U	U
Golf Course, Riding Stable, Water Recreation, Cemetery	A	A	A	A	N	A/N	U
Office Building, Business, Commercial and Professional	A	A	A	A/C	C	C/N	N
Agriculture, Industrial, Manufacturing, Utilities	A	A	A	A	A/C	C/N	N

A = 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.
C = Conditionally Acceptable - New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply system or air conditioning will normally suffice.
N = Normally Unacceptable - New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
U = Clearly Unacceptable - New construction or development should generally not be undertaken.
SOURCE: City of Los Angeles, *General Plan*, *Noise Element*, February 1999.

Exhibit I of the Noise Element also contains guidelines for noise compatible land uses.[34] **Table 3-4**, above, summarizes these guidelines, which are based on OPR Guidelines from 1990.

City of Los Angeles Construction Noise and Vibration Thresholds and Methodology

In August 2024, the City of Los Angeles released updated guidance on construction noise and vibration thresholds and methodology. The construction noise thresholds are as follows:

- For construction activities occurring between 7:00 a.m. and 7:00 p.m. the threshold for daytime noise sensitive uses at the property line with outdoor uses or the exterior of the building is 80 dBA, L_{eq} 8-hour.
- For construction occurring between 7:00 p.m. and 7:00 a.m. Monday through Friday, and between 6:00 p.m. and 8:00 a.m. on Saturdays and anytime on Sundays or national holidays the threshold is a 5 dBA increase over the ambient noise level at the property line with outdoor uses or the exterior of the building.
    - The absolute threshold is 55 dBA, L_{eq} for sensitive uses within older buildings that have operable windows;
    - 65 dBA, L_{eq} for sensitive uses with windows closed that are not operable and single-glazed; and

[34] City of Los Angeles, *General Plan, Noise Element*, page I-1, 1999.

- 70 dBA L_{eq} for sensitive uses that have newer construction and have been designed to ensure an interior noise level of 45 dBA.

- Mat pour activities that require an extended pour that are required to occur during nighttime hours for less than five days are exempt.

The vibration annoyance thresholds are as follows:

- Daytime construction activities are permitted to occur with no numerical threshold.

- Nighttime construction activities occurring 7:00 p.m. and 7:00 a.m. Monday through Friday, and between 6:00 p.m. and 8:00 a.m. on Saturdays and anytime on Sundays or national holidays is held to an 80 VdB threshold at the exterior of a vibration sensitive building.

The vibration damage thresholds are defined by one of four building categories:

- Fragile Buildings which are extremely susceptible to vibration damage and would include, but not be limited to, existing unreinforced masonry buildings, existing wood-frame multi-story buildings with soft, weak or open front walls, and existing non-ductile concrete buildings. Vibration damage threshold of 0.1 inches per second PPV

- Historic Buildings which are considered potential historic resources pursuant to CEQA. Vibration damage threshold of 0.25 inches per second PPV

- Older Residential Structures which are 50 or more years in age. Vibration damage threshold of 0.3 inches per second PPV

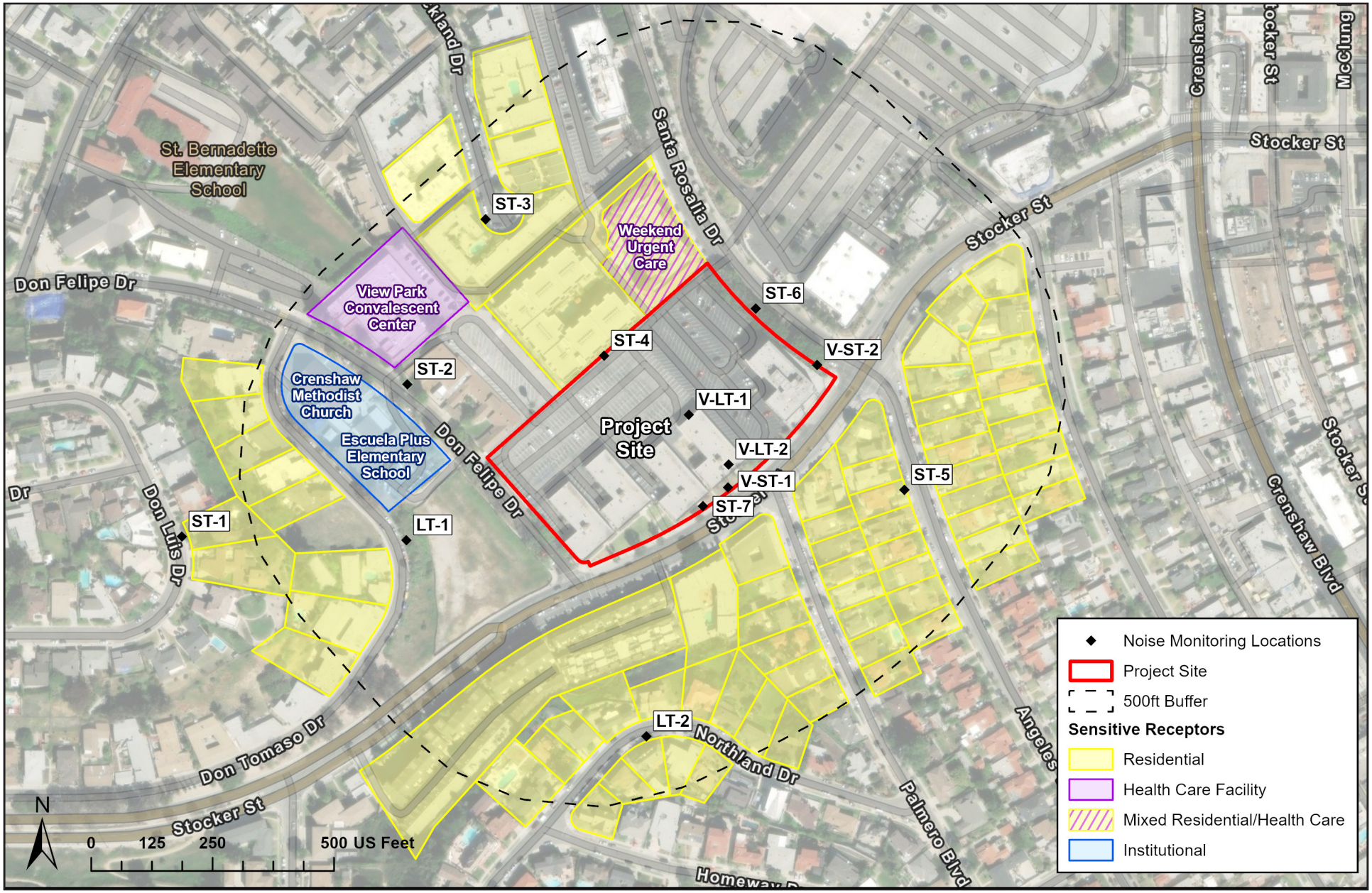
- New Residential Structures and Modern Industrial/Commercial Buildings which are less than 50 years in age. Vibration damage threshold of 0.5 inches per second PPV

3.3 EXISTING SETTING

3.3.1 Noise and Vibration Environment

Existing Ambient Noise Levels

The existing ambient noise environment near the Project site is predominantly characterized by vehicular traffic and to a lesser extent by occasional aircraft flyovers and other typical urban noise sources. Noise levels were monitored at short-term (ST) sites ST-1 to ST-5 on October 31, 2023 from 11:00 am to 1:00 pm and on November 1, 2023 between 12:30 pm and 1:30 pm in 15-minute increments. This time of day represents a typical construction time without the added noise source of peak hour traffic. Monitored noise levels ranged at short-term sites ranged from 52.7 to 71.8 dBA, L_{eq} during the daytime. Two 24-hour long-term (LT) sites were set up at LT-1 and LT-2 to capture nighttime noise. The long-term measurements represent multiple times of day when the proposed project would be in operation, including evening and nighttime hours. Long-term noise levels ranged from 59.9 dBA, CNEL along Don Tomaso Drive and 57.6 dBA, CNEL along Northland Drive. The monitoring locations are shown in **Figure 3-3**, *Noise Monitoring Locations and Sensitive Receptors*, and monitored noise levels are shown in **Table 3-5**, *Existing Ambient Noise Levels*.



Source: TAHA, 2024.

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TAHA 2022-019

Stocker Street Creative
Noise & Vibration Impact Study

CITY OF LOS ANGELES

FIGURE 3-3

NOISE MONITORING LOCATIONS AND SENSITIVE RECEPTORS

TABLE 3-5: EXISTING AMBIENT NOISE LEVELS			
		Measured Noise Levels	
Noise Site	Noise Monitoring Location	(dBA, L_{eq})	(dBA, CNEL)
ST-1	Residence (4108 Don Luis Dr.)	52.7	50.7 /a/
ST-2	Sanchez Ranch Adobe (3725 Don Felipe Dr.)	57.9	56.9 /a/
ST-3	Residences (Lockland Dr. Cul De Sac)	47.9	45.9 /a/
ST-4	Project site northern property line	53.0	51.0 /a/
ST-5	Residence (4197 Angeles Vista Blvd.)	56.9	54.9 /a/
ST-6	Project site along Santa Rosalia Dr.	67.1	65.1 /a/
ST-7	Project site along Stocker St.	71.8	69.8 /a/
LT-1	Residence (3857 Don Tomaso Dr.)	56.6	59.9
LT-2	Residence (3668 Northland Dr.)	52.6	57.6
VENEKLASEN ASSOCIATES MEASUREMENTS			
V-LT-1	Project site interior	--	59.9
V-LT-2	Project site fronting Stocker St.	--	59.9
V-ST-1	Stocker St.	69.0	--
V-ST-2	Santa Rosalia Dr.	66.0	--

/a/ The CNEL noise levels for short-term (ST) measurements were estimated based on FTA procedures for calculating CNEL from short-term L_{eq} measurements.
SOURCE: TAHA, 2023; Veneklasen Associates, 2023.

Existing ambient nighttime noise levels for the hours of 7:00 pm to 10:00 pm are shown in **Table 3-6**, *Existing Ambient Noise Nighttime Noise Levels*. Noise levels during nighttime hours ranged from 51.4 dBA, L_{eq} to 52.2 dBA, L_{eq} at LT-1 along Don Tomaso Street and 48.8 dBA, L_{eq} to 52.6 dBA, L_{eq} at LT-2 along Northland Drive.

TABLE 3-6: EXISTING AMBIENT NIGHTTIME NOISE LEVELS		
	Measured Noise Levels (dBA, L_{eq})	
Time	LT-1	LT-2
7:00 pm to 8:00 pm	52.2	52.6
8:00 pm to 9:00 pm	51.4	48.8
9:00 pm to 10:00 pm	51.4	51.5
Average Nighttime Noise Level	51.7	51.0

SOURCE: TAHA, 2024.

Noise measurements were also completed by Veneklasen Associates on August 20, 2023 for the purposes of determining compliance with the California Green Building Code (CalGreen) acoustical requirements. Two long-term 48-hour measurements (V-LT-1 and V-LT-2) were completed on the Project site, one fronting Stocker Street and one facing the interior of the Project site. Two short-term measurements (V-ST-1 and V-ST-2) were completed over a period of 4-hours, one along Stocker Street and one along Santa Rosalia Drive. Veneklasen Associates measurements are shown in **Table 3-5**, above.

Existing Ground-Borne Vibration Levels

Based on field observations, the primary source of existing groundborne vibration in the vicinity of the Project site is vehicular travel (e.g., standard cars, refuse trucks, delivery trucks, construction trucks, school buses, buses) on local roadways. According to the FTA *Transit Noise and Vibration*

Impact Assessments guidance, typical road traffic-induced vibration levels are unlikely to be perceptible by people outside of the road right-of-way.[35] Trucks and buses typically generate groundborne vibration velocity levels of approximately 63 VdB at 50 feet, which can reach levels of 72 VdB when trucks and buses pass over bumps in the road. Per the FTA, 75 VdB is the dividing line between barely perceptible vibration to distinctly perceptible.[36] Therefore, existing ground vibration in the vicinity of the Project site is generally below the perceptible level.

3.3.2 Sensitive Receptors

Noise- and vibration-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Noise-sensitive uses include residences, transient lodgings (hotels), schools, libraries, churches, hospitals, nursing homes, auditoriums, concert halls, amphitheaters, playgrounds, and parks. Similarly, the Noise Element defines noise-sensitive land uses as single-family and multi-unit dwellings, long-term care facilities (including convalescent and retirement facilities), dormitories, motels, hotels, transient lodging, and other residential uses; houses of worship; hospitals; libraries; schools; auditoriums; concert halls; outdoor theaters; nature and wildlife preserves; and parks.[37] These uses are generally considered more sensitive to noise than commercial and industrial land uses. LAMC Sections 112.04 and 41.40 indicate that 500 feet is an appropriate screening distance for assessing construction-related noise impacts in an urban environment. Special uses, such as recording studios, should be provided with special consideration as they require quiet as an essential function of their business. No such uses have been identified within 500 feet of the Project vicinity. Sensitive receptors within 500 feet of the Project site are included in **Table 3-7**, *Sensitive Receptors,* and shown in **Figure 3-3**, above.

TABLE 3-7: SENSITIVE RECEPTORS

Sensitive Receptor
Multi-family residences adjacent to the north
Baldwin Hills Urgent Care
Residences adjacent to the south
Escuela Plus Elementary School
Residences to the south
Multi-family residences to the southwest
View Park Convalescent Center
Single- and Multi-family residences to the west
Multi-family residences to the north
Single-family residences to the south
Single-family residences to the southeast
Crenshaw Methodist Church
Single-family residences to the east
Single- and Multi-family residences to the west
Single-family residences to the south
Single-family residences to the southeast
Multi-family residences to the north

SOURCE: TAHA, 2024.

[35]Federal Transit Administration, *Transit Noise and Vibration Impact Assessment, page 112*, September 2018.
[36]Federal Transit Administration, *Transit Noise and Vibration Impact Assessment, Table 5-5*, September 2018.
[37]City of Los Angeles, *General Plan, Noise Element*, Chapter IV, page 4-1.

3.4 METHODOLOGY AND SIGNIFICANCE THRESHOLDS

3.4.1 Methodology

On-Site Construction Noise

Noise levels associated with typical construction equipment were obtained from the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM).[38] This model predicts noise from construction based on a compilation of empirical data and the application of acoustical propagation formulas. Maximum equipment noise levels were adjusted based on anticipated percent of use. Combined construction activity noise levels were estimated by combining anticipated equipment for each activity using RCNM. The projected noise level during the construction period at receptors was calculated by using formula (1) which includes equipment usage, distance, and ground factor adjustments to the construction source sound level. Formula (2) is used to calculate the individual noise level for the loudest piece of construction equipment, which is the same as formula (1), but with an additional adjustment for time usage over 8-hours. The noise level from formula (1) and formula (2) were then combined using formula (3) to generate a combined construction noise level, which is the logarithmic sum of the construction equipment noise levels. According to Caltrans guidance, air temperature and humidity affect molecular absorption differently depending on the frequency spectrum and can vary significantly over long distances in a complex manner. Molecular absorption in air also reduces noise levels with distance. According to Caltrans, this process only accounts for about 1 dBA per 1,000 feet, which is an inaudible and negligible difference in noise levels. Noise levels have been estimated using a decrease of 6 dBA over hard surfaces for each doubling of the distance.

(1) $L_{eq(8\text{-}hour)} = L_{max}$ *at 50 feet – 20log (D/50) + 10log (UF) + 10Glog(D/50)*

Where:

> $L_{eq(8\text{-}hour)}$ *= calculated noise level,* $L_{eq(8\text{-}hr)}$*, at a receptor from the operation of a single piece of equipment, dBA.*
>
> L_{max} *at 50 feet = noise emission level of the construction equipment at the reference distance of 50 feet, dBA (from Table 1).*
>
> *D = distance from the receptor to the construction equipment, feet. To represent the average construction noise level, as construction equipment would move around the project site, the distance (D) is to be from the approximate center of the project site to the receptor location (maximum 500 feet from the interior of the Project site).*
>
> *UF = usage factor is the percentage of time during a construction noise operation that a piece of construction equipment is operating at full power.*
>
> *G = a constant that accounts for topography and ground effects. For general assessment, assumed G = 0 assuming free-field conditions and without ground effects. If ground effects are of specific importance, use the FTA procedure for calculating G.*

[38]Federal Highway Administration, *Roadway Construction Noise Model*, Version 1.1, August 2008.

(2) $L_{eq(8\text{-}hr)} = L_{max}$ at 50 feet - 20log(D/50) + 10log(UF) + 10log(T/8) + 10Glog(D/50)

Where:

$L_{eq(8\text{-}hr)}$ = calculated noise level, Leq(8-hr), at a receptor from the operation of a single loudest piece of equipment, dBA.

L_{max} at 50 feet = noise emission level of the construction equipment at the reference distance of 50 feet, dBA.

D = distance from the receptor to the construction equipment, feet.

UF = usage factor is the percentage of time during a construction noise operation that a piece of construction equipment is operating at full power.

T = number of hours (within an 8-hour period) that the loudest equipment would be operating at the distance "D" above.

G = a constant that accounts for topography and ground effects.

(3) $L_{eq(8\text{-}hr)}$ total = 10log [∑all sources $10L_{eq(8\text{-}hr)}/10$]

Where:

$L_{eq(8\text{-}hr)}$ = calculated noise level, $L_{eq(8\text{-}hr)}$, at a receptor from the operation of a single loudest piece of equipment, dBA.

Off-Site Construction Haul Trucks

Off-site construction haul truck noise was assessed using the FHWA Traffic Noise Model Version 3.1 (TNM 3.1). TNM 3.1 is a computer model which incorporates acoustical algorithms to model roadway noise. Key inputs to the traffic noise model were roadway widths, traffic mix, and speed. Incremental increases in noise levels were estimated using TNM by adding haul truck volumes to Existing AM (2024) conditions along Stocker Street and Santa Rosalia Drive. The greatest number of hourly haul truck trips would occur during the excavation and grading phase, which would require approximately 60 daily truck round trips (120 one-way trips) or 24 haul trucks per hour during the AM Peak Hour.

On-Site Stationary Noise Sources (Operation)

On-site stationary noise sources were assessed using SoundPLAN Essential 4.1. SoundPLAN is a three-dimensional modeling software which allows the user to construct a project and add stationary noise sources where they are planned based on Project site plans. The model takes into account buildings, noise source heights, sensitive receptor distances and heights and includes a comprehensive reference noise level library created from numerous noise studies around the world. Stationary sources of noise that were assessed includes the rooftop restaurant outdoor dining, Building A outdoor dining, rooftop green patio, the green plaza, mechanical equipment, such as heating, ventilation, and air conditioning (HVAC), service plaza loading and unloading activity, and on-site vehicle movements. The mill shop would include the use of noise generating equipment such as power tools, but would be located on a semi-subterranean level. The mill shop is discussed qualitatively.

Outdoor gathering space noise was assessed for typical and special event operation. The primary source of noise would be conversational noise. Standard operation assumes a voice level of approximately 65 dBA at 3 feet for a person speaking at a normal voice level. Special event noise assumes a voice level of approximately 77 dBA at 3 feet for a person speaking with a raised voice along

with speaker noise associated with amplified sound. The speaker noise level was assumed to be 95 dBA, which is the maximum noise level permitted by the LAMC Section 112.06 (Places of Public Entertainment). Group conversational noise was calculated based on the anticipated occupancy of each outdoor gathering space as shown in **Table 3-8**, *Outdoor Gathering Space Occupancy*. The group conversational noise level for each outdoor gathering space was calculated with 50 percent of the total occupants speaking. Anticipated hours of operation for outdoor gathering spaces are 8:00 am to 2:00 am. Special event noise at outdoor gathering spaces was calculated based on the maximum occupancy, amplified sound and anticipated event activity between 3:00 pm. and 2:00 am.

TABLE 3-8: OUTDOOR GATHERING SPACE OCCUPANCY

Outdoor Gathering Space	Typical Occupancy /a/	Standard Occupancy Reference Conversational Noise Level	Maximum Occupancy	Maximum Occupancy Reference Conversational Noise Level
Rooftop Restaurant Outdoor Dining	40	78	80	93
Building A Outdoor Dining	40	78	80	93
Rooftop Green Patio	63	80	250	98
Green Plaza	150	84	600	107

/a/ Assumes 50% occupancy rate of maximum for dining areas and 25% for green roof and green plaza.
SOURCE: TAHA, 2024.

Parking activity noise was calculated utilizing guidance provided by the FTA Transit Noise and Vibration Impact Assessment Guidance. A reference noise level of 56.4 dBA, L_{eq} at 50 feet for a 1,000-car parking garage was used as the basis of the analysis. The noise level was adjusted based on the number of peak hour trips resulting in a noise level of 51.5 dBA, L_{eq} at 50 feet. Parking noise was predicted at sensitive receptors using the noise distance attenuation formula (1).[39]

On-Site Roadway Noise (Operation)

Noise generated by internal circulation of vehicles along the access roads were calculated utilizing the FHWA Traffic Noise Model Version 3.1 (TNM 3.1). TNM 3.1 is a computer model which incorporates acoustical algorithms to model roadway noise. Key inputs to the traffic noise model were roadway widths, traffic mix, and speed. The three modeled access roads include the truck access road from the Project driveway along Stocker Street, truck exit road along the northern property line, and the parking structure access road from the Project driveway along Santa Rosalia Drive. Noise levels were modeled at adjacent sensitive receptors because these receptors would have the highest potential for noise increases to occur.

Off-Site Roadway Noise (Operation)

Operational mobile noise was assessed using the FHWA TNM 3.1. Noise levels were modeled for Existing (2024) conditions; Future without Project (2029) conditions and Future with Project (2029) conditions.

Construction Vibration

Construction vibration was assessed for construction equipment and off-site haul trucks. Vibration impacts due to construction activity are evaluated by identifying sources, estimating vibration levels at receptors, and comparing the vibration levels to applicable vibration significance thresholds. Vibration levels were estimated using example vibration levels and propagation formulas provided

[39]Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, September 2018.

by FTA.[40] Vibration damage is assessed using Formula (5) and vibration annoyance is assessed using Formula (4).

(4) *Vibration Damage Attenuation Formula:* $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

Where:

PPV_{equip} *= Peak particles velocity in inches per second of the equipment adjusted for distance*

PPV_{ref} *= Reference vibration level in inches per second at 25 feet*

D = Distance from the equipment to the receptor in feet

(5) *Vibration Annoyance Attenuation Formula:* $L_{vdistance} = L_{vref} - 30 \times LOG(D/25)$

Where:

$L_{vdistanc}$ *= the rms velocity level adjusted for distance in VdB*

L_{vref} *= Reference vibration level at 25 feet in VdB*

D = Distance from the equipment to the receptor in feet

Operational Vibration

Operational vibration is qualitatively discussed as the Project would not include significant sources of operational vibration, such as mobile industrial equipment or permanent heavy-duty mobile equipment. Mechanical equipment would be limited to HVAC equipment, which would not generate perceptible vibration.

3.4.2 Significance Thresholds

In accordance with the State CEQA Guidelines Appendix G, the Project would have a significant impact related to noise and vibration if it would:

- Result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Result in the generation of excessive ground-borne vibration or ground-borne noise levels; and/or
- 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.

Noise Significance Thresholds

A project would normally have a significant impact on noise levels from construction if:

Construction Noise

- Construction activities would occur within 500 feet of a noise-sensitive use and outside the allowed hours in the LAMC. The allowable hours of construction in the LAMC include 7:00 am to 9:00 pm. Monday through Friday and 8:00 am to 6:00 pm on Saturday.
- Average equipment noise levels over an 8-hour period would exceed 80 dBA, L_{eq} at the property line of sensitive uses with outdoor uses or the exterior of the building.

[40]Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, September 2018.

Operational Noise

A project would normally have a significant impact on noise levels from operation if:

- The Project (on-site and off-site sources) causes the ambient noise levels measured at the property line of affected noise-sensitive uses to increase by 3 dBA in CNEL to or within the "normally unacceptable" or "clearly unacceptable" category (see **Figure 3-2** for a description of these categories); or
- The Project (on-site and off-site sources) causes the ambient noise levels measured at the property line of affected noise-sensitive uses to increase by 5 dBA in CNEL or greater for noise levels within the "conditionally acceptable" or "normally acceptable" category.

Vibration Significance Thresholds

The Project would result in a significant impact if vibration levels would exceed the limits below:

- Project construction activities cause ground-borne vibration levels to exceed 0.1 inches per second PPV at fragile buildings.
- Project construction activities cause ground-borne vibration levels to exceed .25 inches per second PPV at historic buildings.
- Project construction activities cause ground-borne vibration levels to exceed 0.3 inches per second PPV at older residential structures 50 years of age or more.
- Project construction activities cause ground-borne vibration levels to exceed 0.5 inches per second PPV at new residential structures.
- Project construction activities cause ground-borne vibration levels to exceed 0.5 inches per second PPV at modern industrial/commercial buildings.

3.5 ENVIRONMENTAL IMPACTS

3.5.1 Would the Project result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? (Less-Than-Significant Impact with Mitigation Incorporated during Construction and Operations)

Impact Analysis

Construction. The Project would be constructed in a similar manner as other urban infill projects located in the City. Construction would typically begin with demolition of existing buildings and site preparation, followed by excavation, grading, and foundation work, construction of the buildings and project features, paving and finishing work such as landscaping and painting. A mix of typical construction equipment would be used during construction such as backhoes, graders, gradall forklifts, and dozers. A full list of anticipated construction equipment is included in **Table 3-9**, *Construction Equipment Noise Level Ranges*. **Table 3-9** shows noise levels associated with various pieces of construction equipment. Construction noise levels were calculated using the FHWA RCNM. Noise levels would fluctuate depending on equipment type, horsepower, and atmospheric conditions, among other factors. Construction equipment is expected to generate noise levels ranging from approximately 70.0 dBA L_{eq} to 82.6 dBA L_{eq} at a distance of 50 feet, and noise produced by construction equipment would be reduced over distance at a rate of about 6 dB per doubling of distance. Noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Project Design Feature PDF-NOI-1 would prevent excessive exposure of sensitive receptors along the northern property line via installation of a 40-foot-tall temporary construction noise barrier.

TABLE 3-9: CONSTRUCTION EQUIPMENT NOISE LEVEL RANGES	
Construction Equipment	**Noise Levels at 50 feet (dBA)**
Aerial Lift	67.7
Auger Drill Rig	77.4
Backhoe	73.6
Compressor (air)	73.7
Concrete Mixer Truck	74.8
Concrete Saw	82.6
Crane	72.6
Dozer	77.7
Excavator	76.7
Flat Bed Truck	70.3
Front End Loader	75.1
Generator	77.6
Gradall (forklift)	79.4
Paver	74.2
Pickup Truck	71.0
Roller	73.0
Welder/Torch	70.0
SOURCE: Federal Highway Administration, *Roadway Construction Noise Model (RCNM) Version 1.1*, 2008.	

Construction activities typically require the use of numerous pieces of noise-generating equipment. The noise levels shown in **Table 3-10**, *Construction Noise Level By Phase,* take into account the likelihood that multiple pieces of construction equipment would be operating simultaneously and the typical overall noise levels that would be expected for each phase of construction over a standard 8-hour workday. Construction equipment would typically be dispersed throughout the site and would generally not present a concentrated noise source. Construction noise was predicted based on the distance from the center of the nearest work zone to the sensitive receptor. Additionally, the loudest piece of equipment was modeled near the perimeter of the project site and combined with the construction noise from the center of the work zone. When considered as an entire process with multiple pieces of equipment, building construction activity would be the loudest phase of construction and would generate a noise level of approximately 91.4 dBA L_{eq} at 50 feet.

Table 3-11, *Construction Noise Levels (Maximum and Intermittent) – Unmitigated,* presents the estimated noise levels at the sensitive receptors nearest to the Project site as well as the incremental increase in noise associated with Project construction. A reference construction noise level of 91.4 dBA was used to model noise of the loudest construction phase (building construction) at sensitive receptors. The most noise-intensive construction activities would occur during the early phases of construction (e.g., demolition, excavation and grading, exterior building construction). The majority of the latter phases of construction would occur interior to the Project site or within the newly constructed building, and result in lower noise levels than exterior construction. As part of the project, a 40-foot temporary construction noise barrier would be installed along the northern property line to reduce noise levels (PDF-NOI-1). Standard construction noise barriers provide approximately 10 dBA of reduction at the receptor.

TABLE 3-10: CONSTRUCTION NOISE LEVEL BY PHASE		
Noise Source	**Number of Pieces of Equipment**	**Noise Level (dBA) L_{eq} at 50 Feet /a/**
DEMOLITION AND CLEARING		
Backhoe	4	79.6
Compressor (air)	2	76.7
Concrete Saw	2	85.6
Dozer	2	80.7
Excavator	2	79.7
Forklift	2	82.4
Generator	2	80.6
Demolition and Clearing Combined Noise Level		*90.0*
SITE PREPARATION		
Auger Drill Rig	1	77.4
Excavator	2	79.7
Backhoe	2	76.6
Compressor (air)	2	76.7
Generator	2	80.6
Dozer	1	77.7
Site Preparation Combined Noise Level		*86.2*
GRADING		
Backhoe	4	79.6
Excavator	2	73.0
Grader	1	80.7
Roller	1	76.2
Dozer	2	80.6
Compactor	1	76.7
Generator	2	79.6
Compressor (air)	2	73.0
Grading and Combined Noise Level		*86.4*
BUILDING CONSTRUCTION		
Auger Drill Rig	1	77.4
Backhoe	4	79.6
Crane	3	77.4
Excavator	2	79.7
Gradall (forklift)	4	84.2
Cement and Mortar Mixers	3	79.6
Compactor	1	76.2
Generator	5	84.6
Compressor (air)	5	84.6
Welders	10	80.0
Building Construction Combined Noise Level		*91.4*
ARCHITECTURAL COATING		
Compressor (air)	2	76.7
Generator	2	80.6
Aerial Lifts	2	70.7
Architectural Coating Combined Noise Level		*82.4*
PAVING		
Backhoe	4	76.7
Cement and Mortar Mixers	2	79.6
Compactor	1	82.4
Compressor (air)	2	74.2
Excavator	1	77.0
Generator	2	73.0
Gradall (forklift)	2	76.2
Paver	1	80.6
Roller	1	76.7
Paving Combined Noise Level		*87.9*

/a/ Logarithmic sum of multiple pieces of equipment.
SOURCE: Federal Highway Administration, *Roadway Construction Noise Model (RCNM) Version 1.1*.

TABLE 3-11: CONSTRUCTION NOISE LEVELS (MAXIMUM AND INTERMITTENT) - UNMITIGATED

Sensitive Receptors	Distance from Center of Nearest Construction Zone (Feet)	Distance from Loudest Equipment Near Project Site Perimeter (Feet)	Intervening Building /a/	Existing Ambient Noise Level (dBA, L_{eq})	Construction Noise Level (dBA, $L_{eq(8\text{-hour})}$)	Exceed Threshold (80 dBA, $L_{eq(8\text{-hour})}$)
Multi-family residences adjacent to the north	160	20	0	53.0	88.3	Yes
Baldwin Hills Urgent Care	160	20	0	67.1	88.3	Yes
Residences adjacent to the south	160	100	0	71.8	81.9	Yes
Escuela Plus Elementary School	300	190	0	58.0	76.5	No
Residences to the south	290	200	0	57.0	76.7	No
Multi-family residences to the southwest	270	190	0	71.8	77.3	No
View Park Convalescent Center	360	280	0	58.0	74.7	No
Single- and Multi-family residences to the west	370	290	0	56.6	74.4	No
Multi-family residences to the north	360	280	4.5	48.0	70.2	No
Single-family residences to the south	380	290	0	57.6	74.2	No
Single-family residences to the southeast	400	310	0	57.0	73.8	No
Crenshaw Methodist Church	370	270	0	58.0	74.5	No
Single-family residences to the east	350	340	0	57.0	74.8	No
Single- and Multi-family residences to the west	580	500	0	52.7	70.5	No
Single-family residences to the south	500	430	4.5	52.6	67.3	No
Single-family residences to the southeast	500	420	4.5	52.6	67.3	No
Multi-family residences to the north	500	420	4.5	48.0	67.3	No

/a/ Includes a reduction of 4.5 dBA for the first intervening row of buildings and 1.5 dBA for each subsequent row.
SOURCE: TAHA, 2025.

Construction activity would comply with the allowable hours of construction in the LAMC, including 7:00 am to 9:00 pm. Monday through Friday, 8:00 am to 6:00 pm on Saturday or federal holiday, and no construction activity on Sundays. The City of Los Angeles has adopted a construction noise threshold of 80 dBA L_{eq} over an 8-hour period. Construction noise levels would exceed 80 dBA, $L_{eq(8\text{-}hour)}$ at residences to the south of the project site. Therefore, without mitigation, the proposed project would result in a significant impact related to on-site construction noise.

Haul trucks associated with construction activity would potentially increase noise levels along the haul route. The anticipated haul route is Stocker Street coming from the Interstate 405 Freeway or eastbound to the Interstate 110 Freeway. The greatest number of hourly haul truck trips would occur during the excavation and grading phase, which would require approximately 60 daily trucks round trips (120 one-way trips) or 24 haul trucks per hour during the AM Peak Hour. Incremental increases in noise levels were estimated using TNM by adding haul truck volumes to Existing (2024) conditions along Stocker Street and Santa Rosalia Drive.

As shown in **Table 3-12**, *Haul Truck Noise Analysis*, the existing noise levels on Stocker Street and Santa Rosalia Drive were calculated to be approximately 71.3 dBA L_{eq} and 64.4 dBA L_{eq}, respectively. The addition of 24 haul truck trips per hour on each roadway during the AM Peak Hour would result in a noise level of approximately 71.8 dBA L_{eq} on Stocker Street and 65.9 dBA L_{eq} on Santa Rosalia Drive. The maximum incremental increase of 1.5 dBA L_{eq}. Although haul truck pass-by noise may result in temporary increases in noise, the hourly increase would be less than the 5 dBA significance criteria. Therefore, the Project would result in a less-than-significant impact related to haul truck noise.

TABLE 3-12: HAUL TRUCK NOISE ANALYSIS

Roadway Segment	Estimated dBA, L_{eq}		
	Existing (2024)	Baseline (2024) + Haul Trucks	Haul Truck Impact
Stocker St. between west of Project site to Santa Rosalia Dr.	71.3	71.8	0.5
Santa Rosalia Dr. between Marlton Ave. and Stocker St.	64.4	65.9	1.5

SOURCE: TAHA, 2024.

Operations. The operational analysis assesses noise related to mechanical equipment, outdoor gathering spaces, trash pick-up, service plaza loading and unloading, parking and on-site vehicle movements, and off-site vehicle movements. A significant impact would result if the ambient noise level measured at the property line of the affected uses increases by 3 dBA CNEL to or within 70 to 75 dBA CNEL, or any 5 dBA or more increase in noise level.

Mechanical Equipment. Mechanical equipment (e.g., HVAC equipment, mill shop) would be designed to be located within an enclosure. Mechanical sources of noise would be located in the subterranean parking garage or on the rooftops. Mechanical equipment located in the subterranean parking garage would not result in off-site noise. Similarly, the mill shop would not generate noise at above-ground sensitive receptors as it would be located in a semi-subterranean level and would be separated from the adjacent residential use by the building walls of the soundstage Building E. HVAC equipment would be located on the rooftop of each building and would be screened from view. HVAC equipment located would be required to comply with LAMC Section 112.02 which limits noise level increases at sensitive receptors due to HVAC noise to 5 dBA or less. HVAC equipment typically generates noise levels of approximately 60 dBA at 50 feet.[41] HVAC noise levels were modeled in SoundPLAN to predict noise levels at off-site sensitive receptors which are shown in **Figure 3-4,** *SoundPLAN Modeling Receivers*.

[41]Cowan, James P., *Handbook of Environmental Acoustics*, 1994.



Source: TAHA, 2024.

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FIGURE 3-4

SOUNDPLAN MODELING RECEIVERS

For informational purposes, the maximum hourly increase in noise over an average nighttime noise level of 52.0 dBA, L_{eq} would be approximately 0.6 dBA, L_{eq}, which would not be an audible increase in noise. The threshold for operational noise is the change in the existing noise level (dBA, CNEL) over a 24-hour period. As shown in **Table 3-13**, *HVAC Noise Analysis*, HVAC equipment would generate a maximum incremental increase of 0.6 dBA, CNEL at Receptor 6. An increase of 3 dBA CNEL in the 24-hour CNEL ambient noise level within the normally unacceptable range would not occur nor would a 5 dBA CNEL increase. Therefore, the Project would result in a less-than-significant impact related to mechanical equipment noise.

TABLE 3-13: HVAC NOISE ANALYSIS

Sensitive Receptor (Figure 3-3)	Existing Ambient Noise Level (dBA, CNEL	HVAC Hourly Noise Level (dBA, L_{eq})	HVAC Noise Level (dBA, CNEL) /a/	New Ambient Noise Level (dBA, CNEL)	Noise Level Increase (dBA, CNEL)
1	50.7	36.4	40.5	51.1	0.4
2	59.9	39.3	43.4	60.0	0.1
3	58.0	38.6	42.7	58.1	0.1
4	56.0	40.1	44.2	56.3	0.3
5	56.0	40.0	44.1	56.3	0.3
6	56.0	43.8	47.9	56.6	0.6
7	65.1	42.7	46.8	56.5	0.5
8	59.9	40.8	44.9	60.0	0.1
9	59.9	42.0	46.1	60.1	0.2
10	59.9	42.1	46.2	60.1	0.2
11	57.6	41.3	45.4	57.9	0.3
12	57.6	36.6	40.7	57.7	0.1
13	57.6	37.7	41.8	57.7	0.1
14	57.6	39.1	43.2	57.8	0.2
15	59.9	42.7	46.8	60.1	0.2
16	59.9	40.8	44.9	60.0	0.1
17	57.6	40.1	44.2	57.8	0.2
18	57.6	37.6	41.7	57.7	0.1

/a/ Assumes operation of HVAC equipment between 8:00 am and 2:00 am.
SOURCE: SoundPLAN Version 4.1; TAHA, 2024.

Outdoor Gathering Spaces. The Project would include one rooftop restaurant with outdoor dining, rooftop garden, outdoor dining for Building A and a green plaza between Buildings A and B. The primary source of noise during typical project operations would be people conversing. In social situations, people often talk at distances of approximately three feet. A typical normal voice level at this distance is approximately 65 dBA and a raised voice level is approximately 77 dBA.[42] A master Conditional Use Permit for the Project site would secure approval for a full line of alcohol, live entertainment, and dancing allowed on the Project site. This would allow areas of the project site to function as hosting venues for community gatherings and special events. During special events, live entertainment and amplified sound may be utilized on the patio. Amplified sound would comply with LAMC Section 112.06, which limits amplified sound in places of public entertainment to 95 dBA. This noise level has been used as the reference noise level and input into SoundPLAN. SoundPLAN was used to predict noise levels, which accounted for the location and height of the noise sources and sensitive receptors.

[42]SoundPLAN Essential, Version 4.1.

The analysis of outdoor gathering spaces considers two scenarios: standard operation and special event use. Standard operation is modeled primarily with conversational noise while special event use includes conversational noise and live amplified sound. Group conversational noise levels for each outdoor gathering space are shown in **Table 3-8**, above. Noise levels during standard operation would range from 78 to 84 dBA and noise levels during special events would range from 93 to 107 dBA. The noise level during special events includes amplified sound with speakers set to 95 dBA per the requirements of LAMC Section 112.06. The two scenarios represent a range of potential noise levels that may occur during operation of the outdoor gathering spaces. Special event noise represents the "worst-case" scenario related to project operations. The reference noise levels were input into the SoundPLAN model to predict noise levels at off-site sensitive receptors. Representative receptors were chosen to reflect the varied topography and areas of exposure surrounding the Project site as shown in **Figure 3-3**. The predicted noise levels account for noise reduction provided by the proposed structures on the Project site. Predicted noise levels at off-site sensitive receptors are shown in **Table 3-14***, Outdoor Gathering Space Noise Analysis*. For informational purposes, the maximum hourly increase in noise over an average nighttime noise level of 52.0 dBA, L_{eq} would be approximately 0.3 dBA, L_{eq} during standard operation and 10.6 dBA, L_{eq} during special events. Standard operation would not result in an audible increase in noise during nighttime hours, but special event noise would be audible. The threshold for operational noise is the change in the existing noise level (dBA, CNEL) over a 24-hour period. Standard operation of the outdoor gathering spaces would not result in increases over existing ambient noise levels. Noise during special events would result in a maximum increase of 6.8 dBA, CNEL at Receptor 15 resulting in a new ambient noise level of 66.7 dBA, CNEL for Receptor 15 during special events.

Receptor 15 is considered residential-low density single-family per **Figure 3-2** and the normally unacceptable range is 70 to 75 dBA, CNEL. The new ambient noise level of 66.7 dBA, CNEL would not be within the normally unacceptable range. An increase of 3 dBA CNEL in the 24-hour CNEL ambient noise level within the normally unacceptable range would not occur. However, an increase greater than 5 dBA CNEL would occur during special events. Therefore, the Project would result in a potentially significant impact related to outdoor gathering space noise.

Service Plaza Trash Pick-up, Studio Trailers, Loading and Unloading. Trash collection trucks would access the Project Site from Santa Rosalia Drive to the project access driveway. Trash storage would be located in the ground level of the parking structure. Storage bins would be brought to the street for compaction in waste collection trucks. The Project would be serviced multiple times per week. Based on measured noise levels from typical loading dock facilities and trash compactors, delivery/trash collection trucks and trash compacters could generate noise levels of approximately 71 dBA, L_{eq} and 66 dBA, L_{eq}, respectively, at a distance of 50 feet.[43] Noise generated by trash trucks would only be generated on trash days and for approximately 5-minutes during the trash pick-up event. Over the 24-hour period of a day this noise level would not be a significant contributor to the average 24-hour noise level due to the brief and intermittent nature of the trash pick-up event. The overall change would be less than 1 dB.

Delivery trucks and studio trailers would access the Project site from a right-turn in only via a truck-only entry driveway off Stocker Street. Noise associated with the trucks would be intermittent. Loading and unloading would occur at a service plaza located between Buildings B and E. As noted above, a typical loading dock facility generates a noise level of approximately 71 dBA, L_{eq} at 50 feet. LAMC Section 114.03 prohibits loading and unloading of any vehicle or operation of dollies, carts, forklifts and other wheel equipment which causes any impulsive sound, raucous, or unnecessary noise within 200 feet of any residential building between the hours of 10:00 pm and 7:00 am.

[43]RK Engineering Group Inc., *Wal-Mart/Sam's Club Reference Noise Level Study*, 2003.

TABLE 3-14: OUTDOOR GATHERING SPACE NOISE ANALYSIS

Sensitive Receptor (Figure 3-3)	Existing Ambient Noise Level (dBA, CNEL)	Outdoor Gathering Spaces Hourly Noise Level (dBA, L_{eq}) /a/	Outdoor Gathering Spaces Noise Level (dBA, CNEL) /b/	New Ambient Noise Level (dBA, CNEL)	Noise Level Increase (dBA, CNEL)
STANDARD OPERATION					
1	50.7	19.1	23.1	50.7	0.0
2	59.9	20.0	24.0	59.9	0.0
3	58.0	17.5	21.5	58.0	0.0
4	56.0	16.9	21.0	56.0	0.0
5	56.0	17.3	21.3	56.0	0.0
6	56.0	16.3	20.4	56.0	0.0
7	56.0	31.8	35.8	56.0	0.0
8	59.9	26.2	30.2	59.9	0.0
9	59.9	32.5	36.5	59.9	0.0
10	59.9	36.4	40.4	59.9	0.0
11	57.6	34.5	37.3	57.6	0.0
12	57.6	26.9	30.9	57.6	0.0
13	57.6	29.2	33.2	57.6	0.0
14	57.6	31.9	35.9	57.6	0.0
15	59.9	39.8	43.8	60.0	0.1
16	59.9	34.2	38.2	59.9	0.0
17	57.6	34.9	38.9	57.7	0.1
18	57.6	30.7	34.7	57.6	0.0
SPECIAL EVENT USE					
1	50.7	42.3	45.7	51.9	1.2
2	59.9	42.4	45.8	60.1	0.2
3	58.0	40.4	43.8	58.2	0.2
4	56.0	40.3	43.7	56.3	0.3
5	56.0	40.6	44.0	56.3	0.3
6	56.0	41.1	44.5	56.3	0.3
7	56.0	56.0	59.4	61.1	5.1
8	59.9	46.1	49.5	60.3	0.4
9	59.9	53.7	57.1	61.7	1.8
10	59.9	60.1	63.5	65.1	5.2
11	57.6	54.1	57.5	60.6	3.0
12	57.6	48.8	52.2	58.7	1.1
13	57.6	51.1	54.5	59.3	1.7
14	57.6	53.2	56.6	60.2	2.6
15	59.9	62.2	65.6	66.7	6.8
16	59.9	53.0	56.4	61.5	1.6
17	57.6	58.2	61.6	63.1	5.5
18	57.6	53.4	56.8	60.2	2.6

/a/ Noise levels were modeled for multi-story buildings where present. The noise levels presented are the loudest modeled noise level for each receptor.
/b/ The CNEL noise level was calculated based on anticipated hours of operations. Typical daily use includes noise generated by the rooftop patios and green plaza between 8:00 am and 2:00 am. Special event use includes noise generated during typical daily use during the hours of 8:00 am to 3:00 pm and special event noise with amplified sound between 3:00 pm and 2:00 am.
SOURCE: SoundPLAN, *Version 4.1*; TAHA, 2024.

Loading dock activity has been assumed to occur between the hours of 7:00 am and 10:00 pm. The predicted noise levels account for noise reduction provided by the proposed structures on the Project site. For informational purposes, the maximum hourly increase in noise during daytime hours would be approximately 1.2 dBA, L_{eq}, which would not be an audible increase in noise. The threshold for operational noise is the change in the existing noise level (dBA, CNEL) over a 24-hour period. As shown in **Table 3-15**, *Service Plaza Noise Analysis,* the service plaza would result in a maximum increase of 0.9 dBA, CNEL at Receptor 11. An increase of 3 dBA CNEL in the 24-hour CNEL ambient noise level within the normally unacceptable range would not occur nor would a 5 dBA CNEL increase. Therefore, the Project would result in a less-than-significant impact related to service plaza noise.

TABLE 3-15: SERVICE PLAZA NOISE ANALYSIS

Sensitive Receptor (Figure 3-3)	Existing Ambient Noise Level (dBA, CNEL)	Service Plaza Hourly Noise Level (dBA, L_{eq}) /a/	Service Plaza Noise Level (dBA, CNEL) /b/	New Ambient Noise Level (dBA, CNEL)	Noise Level Increase (dBA, CNEL)
1	50.7	31.4	30.8	50.7	0.0
2	59.9	31.4	30.8	59.9	0.0
3	58.0	26.1	25.6	58.0	0.0
4	56.0	27.0	26.5	56.0	0.0
5	56.0	28.2	27.6	56.0	0.0
6	56.0	36.3	35.7	56.0	0.0
7	56.0	42.7	42.1	56.2	0.2
8	59.9	30.0	29.4	59.9	0.0
9	59.9	52.9	52.3	60.6	0.7
10	59.9	41.9	41.3	60.0	0.1
11	57.6	52.0	51.4	58.5	0.9
12	57.6	43.1	42.5	57.7	0.1
13	57.6	45.2	44.6	57.8	0.2
14	57.6	47.5	46.9	58.0	0.4
15	59.9	34.9	34.3	59.9	0.0
16	59.9	30.4	29.8	59.9	0.0
17	57.6	29.5	16.7	57.6	0.0
18	57.6	25.3	24.8	57.6	0.0

/a/ Noise levels were modeled from the center of the parking structure to the nearest receptor.
/b/ The CNEL noise level was calculated based on anticipated hours of operations. Hours of operation are assumed to be between 7:00 am and 10:00 pm. Loading and unloading activity would not be permitted before 7:00 am or after 10:00 pm.
SOURCE: SoundPLAN, *Version 4.1*; TAHA, 2024.

On-site Vehicle Movements. Parking would primarily be provided in a five-story open parking garage with 380 parking stalls. Street parking for vehicles visiting the project site would be provided along Don Felipe Drive and Santa Rosalia Drive. Street parking would be prohibited along Stocker Street. Vehicular access to the parking garage would be provided via a driveway along the northern property line which would be accessed from Santa Rosalia Drive. Delivery trucks will access the project site from a right-turn in only via the main entry driveway off Stocker Street. Truck activity and deliveries are anticipated to be approximately six truck trips per day.

Sources of noise related to parking would include vehicles accelerating, doors slamming, car alarms, and people talking. Parking noise was calculated based on anticipated trip hours of 8:00 am to 11:00 pm would be approximately 49.2 dBA, CNEL at 50 feet over day. For informational purposes, the maximum hourly increase in noise during daytime hours would be approximately 0.9 dBA, L_{eq}, which would not be an audible increase in noise.

The threshold for operational noise is the change in the existing noise level (dBA, CNEL) over a 24-hour period. As shown in **Table 3-16**, *Parking Activity Noise Analysis*, parking activity would generate a maximum incremental increase of 0.5 dBA, CNEL at Receptor 7 adjacent to the north of the proposed parking structure. An increase of 3 dBA CNEL in the 24-hour CNEL ambient noise level within the normally unacceptable range would not occur nor would a 5 dBA CNEL increase. Therefore, the Project would result in a less-than-significant impact related to parking activity noise.

TABLE 3-16: PARKING ACTIVITY NOISE ANALYSIS

Sensitive Receptor (Figure 3-3)	Existing Ambient Noise Level (dBA, CNEL)	Parking Activity Noise Level (dBA, L_{eq}) /a/	Parking Activity Noise Level (dBA, CNEL)	New Ambient Noise Level (dBA, CNEL)	Noise Level Increase (dBA, CNEL)
1	50.7	25.7	26.3	50.7	0.0
2	59.9	28.0	28.6	59.9	0.0
3	58.0	28.7	29.3	58.0	0.0
4	56.0	29.2	29.8	56.0	0.0
5	56.0	31.5	32.1	56.0	0.0
6	56.0	45.5	46.1	56.4	0.4
7	56.0	46.4	47.0	56.5	0.5
8	59.9	28.5	29.1	59.9	0.0
9	59.9	31.5	32.1	59.9	0.0
10	59.9	33.4	34.0	59.9	0.0
11	57.6	30.4	31.0	57.6	0.0
12	57.6	28.4	29.0	57.6	0.0
13	57.6	27.0	27.6	57.6	0.0
14	57.6	26.0	26.6	57.6	0.0
15	59.9	33.7	34.3	59.9	0.0
16	59.9	32.8	33.4	59.9	0.0
17	57.6	30.8	31.4	57.6	0.0
18	57.6	28.6	29.2	57.6	0.0

/a/ Noise levels were modeled for multi-story buildings where present. The noise levels presented are the loudest modeled noise level for each receptor.
/b/ The CNEL noise level was calculated based on anticipated hours of operations. Hours of operation are assumed to be between 8:00 am and 2:00 am.
SOURCE: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, September 2018; TAHA, 2024.

The roadways used for on-site circulation would also potentially generate noise at off-site sensitive receptors. Vehicles travelling along internal roadways would be travelling at low speeds. Noise levels were modeled at adjacent sensitive receptors because these receptors would have the highest potential for noise increases to occur. The predicted noise levels account for noise reduction provided by the proposed structures on the Project site. Other sensitive receptors would not experience substantial changes in noise as a result of intervening buildings on the Project site and distance from the internal roadways. For informational purposes, the maximum hourly increase in noise during daytime hours would be approximately 10.1 dBA, L_{eq} at Receptor 7 during the PM peak hour. However, this assumes that all truck trips would occur within this hour and would be leaving the Project site during the PM peak hour, which is not likely to regularly occur. The threshold for operational noise is the change in the existing noise level (dBA, CNEL) over a 24-hour period. As shown in **Table 3-17**, *On-Site Vehicle Circulation Noise Analysis,* on-site vehicle circulation noise would generate a maximum incremental increase of 1.5 dBA, CNEL at Receptor 7 adjacent to the north of the Project site. An increase of 3 dBA CNEL in the 24-hour CNEL ambient noise level within the normally unacceptable range would not occur nor would a 5 dBA CNEL increase. Therefore, the Project would result in a less-than-significant impact related to on-site vehicle circulation noise.

TABLE 3-17: ON-SITE VEHICLE CIRCULATION NOISE ANALYSIS					
Sensitive Receptor (Figure 3-3)	**Existing Ambient Noise Level (dBA, CNEL)**	**On-Site Roadway Noise Level (dBA, L_{eq})**	**On-Site Roadway Noise Level (dBA, CNEL)**	**New Ambient Noise Level (dBA, CNEL)**	**Noise Level Increase (dBA, CNEL)**
6	56.0	62.1	48.6	56.7	0.7
7	56.0	62.7	52.1	57.5	1.5
9	59.9	50.5	37.0	59.9	0.0
10	59.9	49.4	36.3	59.9	0.0
SOURCE: Federal Highway Administration, *Traffic Noise Model Version 3.1*; TAHA, 2024.					

Composite On- Site Noise Level Impacts from Project Operations. In addition to considering the potential noise impacts resulting from individual on-site stationary noise, including mechanical equipment noise, rooftop patio noise, green plaza noise, service plaza loading and unloading noise. A combined noise level was calculated using SoundPLAN at sensitive receptors. The composite noise level includes all on-site stationary source noise. As shown in **Table 3-18**, *Composite On-Site Noise Levels at Sensitive Receptors*, Receptor 15 adjacent to the south of the Project site would experience the maximum increase in noise of approximately 6.8 dBA CNEL and a predicted noise level of 66.7 dBA CNEL, which is still within the "conditionally acceptable" range of noise for residential uses. As shown above, the proposed project includes a variety of operational noise sources that would be contained within the building structures or passive sources that generate low levels of noise. It is anticipated that Project activities would occasionally be audible at adjacent land uses (e.g., mechanical equipment, parking activity, service plaza, or outdoor gathering spaces), but these activities would not increase the permanent CNEL at the property line of affected uses by 3 dBA CNEL to or within the 70 to 75 dBA or incrementally increase the permanent CNEL by more than 5 dBA during standard operation. However, an increase of 5 dBA CNEL or more would occur during special events at four sensitive receptors. Therefore, the Project would result in a potentially significant impact related to operational noise.

Off-site Vehicle Movements. Off-site noise sources that would be generated by the Project include delivery trucks, studio trailers and worker vehicle trips traveling on local roadways. The Project would generate approximately 3,183 daily vehicle trips, of which 270 would be AM peak hour trips, and 361 would be PM peak hour trips. **Table 3-19**, *Estimated Off-Site Mobile Source Noise Levels*, shows roadway noise levels for Existing (2024), Future No Project (2029) and Future Plus Project (2029) conditions. **Table 3-20***, Change in Off-Site Mobile Source Noise Levels,* shows the noise level change from the increase in traffic. As shown in **Table 3-20**, the roadway noise increase attributed to the Project would be a maximum of 1.4 dBA, CNEL on the local roadway network and is not anticipated to result in a perceptible change in sound level for a person with normal hearing sensitivity. Some sensitive receptors would experience a decrease in off-site noise as a result of the introduction of Project buildings on the Project site that would serve as a barrier to roadway noise. Off-site noise would not increase the permanent CNEL at the property line of affected uses by 3 dBA CNEL to or within the 70 to 75 dBA or incrementally increase the permanent CNEL by more than 5 dBA. Therefore, off-site noise associated with the Project would in a less-than-significant impact.

TABLE 3-18: COMPOSITE ON-SITE NOISE LEVELS AT SENSITIVE RECEPTORS				
Sensitive Receptor (Figure 3-3)	**Existing Ambient Noise Level (dBA, CNEL)**	**Composite Noise Level (dBA, CNEL)**	**New Ambient Noise Level (dBA, CNEL)**	**Noise Level Increase (dBA, CNEL)**
STANDARD OPERATION				
1	50.7	41.1	51.2	0.5
2	59.9	43.8	60.0	0.1
3	58.0	43.0	58.1	0.1
4	56.0	44.4	56.3	0.3
5	56.0	44.4	56.3	0.3
6	56.0	52.5	57.6	1.6
7	56.0	54.5	58.3	2.3
8	59.9	45.2	60.0	0.1
9	59.9	53.5	60.8	0.9
10	59.9	48.6	60.2	0.3
11	57.6	52.5	58.8	1.2
12	57.6	45.0	57.8	0.2
13	57.6	46.7	57.9	0.3
14	57.6	48.7	58.1	0.5
15	59.9	48.8	60.2	0.3
16	59.9	46.1	60.1	0.2
17	57.6	45.5	57.9	0.3
18	57.6	42.7	57.7	0.1
SPECIAL EVENT USE				
1	50.7	47.0	52.2	1.5
2	59.9	47.9	60.2	0.3
3	58.0	46.4	58.3	0.3
4	56.0	47.1	56.5	0.5
5	56.0	47.2	56.5	0.5
6	56.0	53.1	57.8	1.8
7	65.1	60.6	61.9	5.9
8	59.9	50.9	60.4	0.5
9	59.9	58.7	62.3	2.4
10	59.9	63.7	65.2	5.3
11	57.6	58.7	61.2	3.6
12	57.6	53.0	58.9	1.3
13	57.6	55.2	59.6	2.0
14	57.6	57.3	60.4	2.8
15	59.9	65.7	66.7	6.8
16	59.9	56.8	61.6	1.7
17	57.6	61.7	63.1	5.5
18	57.6	57.0	60.3	2.7
SOURCE: TAHA, 2024.				

TABLE 3-19: ESTIMATED OFF-SITE MOBILE SOURCE NOISE LEVELS

Sensitive Receptor (Figure 3-3)	Nearest Roadway	Estimated dBA, CNEL at 50 Feet			
		Existing (2024)	Future No Project (2029)	Future Plus Project (2029)	Project Only Trips (2029)
1	Stocker St.	55.4	56.1	56.0	41.8
2	Stocker St.	58.3	59.0	59.1	44.8
3	Don Felipe Dr.	53.9	54.6	54.5	39.2
4	Don Felipe Dr.	54.7	55.4	55.4	40.4
5	Don Felipe Dr.	52.9	53.5	53.5	39.5
6	Stocker St./Don Felipe Dr./Santa Rosalia Dr.	52.8	53.4	49.7	38.4
7	Stocker St./Don Felipe Dr./Santa Rosalia Dr.	55.3	55.8	53.9	44.0
8	Stocker St.	63.9	64.5	64.6	50.4
9	Stocker St.	63.4	64.1	64.2	50.5
10	Stocker St.	64.2	64.9	65.1	51.7
11	Stocker St.	59.3	60.0	60.1	46.4
12	Stocker St.	56.4	57.0	57.1	43.6
13	Stocker St.	54.7	55.3	55.4	41.8
14	Stocker St.	53.8	54.5	54.6	40.9
15	Stocker St.	62.8	63.4	64.2	54.0
16	Stocker St.	60.2	60.8	61.2	49.5
17	Palmero Blvd.	56.9	57.5	57.8	46.0
18	Angeles Vista Blvd.	54.9	55.4	55.6	43.6

SOURCE: TAHA, 2025.

TABLE 3-20: CHANGE IN OFF-SITE MOBILE SOURCE NOISE LEVELS

Sensitive Receptor (Figure 3-3)	Nearest Roadway Segment	Estimated dBA, CNEL at 50 Feet	
		Future No Project vs. Future Plus Project (2029)	Existing (2024) vs. Future Plus Project (2029)
1	Stocker St.	0.0	0.7
2	Stocker St.	0.1	0.7
3	Don Felipe Dr.	-0.1	0.6
4	Don Felipe Dr.	0.0	0.6
5	Don Felipe Dr.	-0.1	0.6
6	Stocker St./Don Felipe Dr./Santa Rosalia Dr.	-3.8	-3.1
7	Stocker St./Don Felipe Dr./Santa Rosalia Dr.	-1.9	-1.4
8	Stocker St.	0.1	0.8
9	Stocker St.	0.2	0.8
10	Stocker St.	0.2	0.9
11	Stocker St.	0.1	0.8
12	Stocker St.	0.1	0.8
13	Stocker St.	0.1	0.8
14	Stocker St.	0.1	0.8
15	Stocker St.	0.7	1.4
16	Stocker St.	0.4	1.0
17	Palmero Blvd.	0.3	0.9
18	Angeles Vista Blvd.	0.3	0.8

SOURCE: TAHA, 2024.

Composite Operational Noise Level Impacts from Project Operations

Operational noise, such as noise from mechanical equipment, outdoor gathering spaces, trash pick-up, service plaza loading and unloading, drop off zone trips, parking and on-site vehicle movements, and off-site vehicle movements are not expected to cause ambient noise levels at noise sensitive receptor to noticeably increase. **Table 3-21**, *Composite Noise Levels On-Site and Off-Site Operational Noise Levels at Sensitive Receptors* includes the composite noise level for the combination of on-site sources of noise and off-site mobile noise at each analyzed sensitive receptor. An increase of 3 dBA CNEL in the 24-hour CNEL ambient noise level within the normally unacceptable range would not occur nor. However, a 5 dBA CNEL increase would occur at four sensitive receptors.

Project Design Features

The following project design features would be incorporated as part of the Project:

PDF-NOI-1 A 40-foot temporary construction noise barrier will be installed along the Project's northern property line.

Mitigation Measures

N-1 Power construction equipment (including combustion engines), fixed or mobile, shall be equipped with state-of-the-art noise shielding and muffling devices (consistent with manufacturers' standards). All equipment shall be properly maintained to assure that no additional noise, due to worn or improperly maintained parts, would be generated.

N-2 A temporary construction noise barrier, or equivalent noise reduction strategy, shall be installed on the northern property line that is capable of reducing noise by 10 dBA or greater as needed at affected residences.

N-3 Noise and vibration construction activities whose specific location on the Project site may be flexible (e.g., operation of compressors and generators) shall be conducted as far away as possible from the nearest sensitive land uses, and natural and/or manmade barriers (e.g., intervening construction trailers) shall be used to screen propagation of noise from such activities towards these land uses. The construction contractor shall locate construction staging areas away from noise-sensitive uses.

N-4 Amplified sound shall not be permitted after 10:00 pm and special events with no amplified sound equipment shall not be permitted after 12:00 am without further study. The applicant shall prepare an acoustical study to predict operational noise levels of outdoor gathering spaces once the acoustical equipment layout and anticipated event hours and occupancy have been identified. The acoustical study shall predict noise levels based on amplified sound equipment locations, equipment maximum noise level, number of pieces of equipment, and occupancy of each of the outdoor gathering spaces. The acoustical study shall identify any additional mitigation measures to ensure ambient noise levels at sensitive receptors would not result in an incremental increase in community noise equivalent level of 5 dBA or more at surrounding sensitive receptors. Noise reduction methods that may be implemented include, but are not limited to:

- Time restrictions on operation of amplified sound and events.
- Design features, such as solid barriers to reduce noise at off-site sensitive receptors.
- Restrictions on decibel levels of amplified sound equipment.

TABLE 3-21: COMPOSITE ON-SITE AND OFF-SITE OPERATIONAL NOISE LEVELS AT SENSITIVE RECEPTORS

Sensitive Receptor (Figure 3-3)	Existing Ambient Noise Level (dBA, CNEL)	Composite On-Site Noise Level (dBA, CNEL)	Off-Site Mobile Noise Level (dBA, CNEL)	Composite Operational Noise Level (dBA, CNEL)	New Ambient Noise Level (dBA, CNEL)	Noise Level Increase (dBA, CNEL)
STANDARD OPERATION						
1	50.7	41.1	41.8	44.5	51.6	0.9
2	59.9	43.8	44.8	47.3	60.1	0.2
3	58.0	43.0	39.2	44.5	58.2	0.2
4	56.0	44.4	40.4	45.9	56.4	0.4
5	56.0	44.4	39.5	45.6	56.4	0.4
6	56.0	52.5	38.4	52.7	57.7	1.7
7	65.1	54.5	44.0	54.8	58.5	2.5
8	59.9	45.2	50.4	51.6	60.5	0.6
9	59.9	53.5	50.5	55.2	61.2	1.3
10	59.9	48.6	51.7	53.4	60.8	0.9
11	57.6	52.5	46.4	53.5	59.0	1.4
12	57.6	45.0	43.6	47.4	58.0	0.4
13	57.6	46.7	41.8	47.9	58.0	0.4
14	57.6	48.7	40.9	49.4	58.2	0.6
15	59.9	48.8	54.0	55.1	61.2	1.3
16	59.9	46.1	49.5	51.1	60.4	0.5
17	57.6	45.5	46.0	48.7	58.1	0.5
18	57.6	42.7	43.6	46.2	57.9	0.3
SPECIAL EVENT USE						
1	50.7	47.0	41.8	48.2	52.6	1.9
2	59.9	47.9	44.8	49.6	60.3	0.4
3	58.0	46.4	39.2	47.2	58.3	0.3
4	56.0	47.1	40.4	47.9	56.6	0.6
5	56.0	47.2	39.5	47.9	56.6	0.6
6	56.0	53.1	38.4	53.3	57.9	1.9
7	65.1	60.6	44.0	60.7	62.0	6.0
8	59.9	50.9	50.4	53.7	60.8	0.9
9	59.9	58.7	50.5	59.3	62.6	2.7
10	59.9	63.7	51.7	63.9	65.4	5.5
11	57.6	58.7	46.4	59.0	61.3	3.7
12	57.6	53.0	43.6	53.4	59.0	1.4

TABLE 3-21: COMPOSITE ON-SITE AND OFF-SITE OPERATIONAL NOISE LEVELS AT SENSITIVE RECEPTORS

Sensitive Receptor (Figure 3-3)	Existing Ambient Noise Level (dBA, CNEL)	Composite On-Site Noise Level (dBA, CNEL)	Off-Site Mobile Noise Level (dBA, CNEL)	Composite Operational Noise Level (dBA, CNEL)	New Ambient Noise Level (dBA, CNEL)	Noise Level Increase (dBA, CNEL)
13	57.6	55.2	41.8	55.4	59.6	2.0
14	57.6	57.3	40.9	57.4	60.5	2.9
15	59.9	65.7	54.0	66.0	66.9	7.0
16	59.9	56.8	49.5	57.5	61.9	2.0
17	57.6	61.7	46.0	61.8	63.2	5.6
18	57.6	57.0	43.6	57.2	60.4	2.8

SOURCE: TAHA, 2025.

Level of Significance After Mitigation

Construction. Impacts related to off-site construction noise would be less than significant. Implementation of Mitigation Measures **N-1** through **N-3** would reduce noise levels associated with individual pieces of equipment and combined construction noise levels. For example, Mitigation Measure **N-1** would reduce heavy-duty equipment noise levels by at least 5 dBA. Mitigation Measure **N-2** would reduce construction noise by 10 or greater dBA for multi-family residences adjacent to the north of the project site. Although difficult to quantify, Mitigation Measure **N-3** would also help control noise levels. **Table 3-22***, Construction Noise Levels (Maximum and Intermittent) – Mitigated,* shows mitigated noise levels associated with construction activities. Noise levels in this table were estimated for the demolition phase of construction.

Mitigation Measures **N-1** through **N-3** would reduce noise levels to less than 80 dBA, $L_{eq(8\text{-}hour)}$) at nearby sensitive receptors. Therefore, the proposed project would result in a less-than-significant impact related to construction noise with mitigation incorporated.

Operations. Impacts related to operational noise would be potentially significant as a result of amplified sound after 10:00 pm and special event noise after 12:00 am. Implementation of Mitigation Measure **N-4** would require the applicant to prepare an acoustical study to determine the potential for noise impacts after speaker equipment and gathering space operations have been determined. The acoustical study would predict operational noise levels and identify any necessary mitigation measures to ensure that the incremental increase in CNEL would remain less than 5 dBA. Implementation of Mitigation Measure **N-4** would ensure that operational noise levels would not exceed the 5 dBA CNEL threshold. Therefore, the proposed project would result in a less-than-significant impact related to operational noise with mitigation incorporated.

3.5.2 Would the result in the generation of excessive ground-borne vibration or ground-borne noise levels? (Less-Than-Significant Impact with Mitigation Incorporated during Construction and No Impact during Operations)

Impact Analysis

Construction. Construction activity can generate varying degrees of vibration, depending on the procedure and equipment. The construction phases that would typically generate higher vibration levels include demolition and clearing and excavation and grading due to the use of heavier pieces of construction equipment, that are similar to a large bulldozer. Equipment movements generate vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of a construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, and to slight damage at the highest levels. In most cases, the primary concern regarding construction vibration relates to damage.

Because construction activity is short-term and equipment moves around a Project site, the primary concern regarding construction vibration relates to building damage. Activities that can result in damage include demolition and site preparation in close proximity to sensitive structures. Typical vibration levels associated with relevant construction equipment are provided in **Table 3-23**, *Vibration Velocities for Construction Equipment*.

TABLE 3-22: CONSTRUCTION NOISE LEVELS (MAXIMUM AND INTERMITTENT) – MITIGATED

Sensitive Receptors	Mitigation Measure	Mitigation Noise Reduction /a/	Existing Ambient Noise Level (dBA, L_{eq})	Unmitigated Noise Level (dBA, $L_{eq(8\text{-}hour)}$)	Mitigated Noise Level (dBA, $L_{eq(8\text{-}hour)}$)	Exceed 80 dBA, $L_{eq(8\text{-}hor)}$ Threshold?
Multi-family residences adjacent to the north	N-1, N-2	15	53.0	88.3	73.3	No
Baldwin Hills Urgent Care	N-1, N-2	15	67.1	88.3	73.3	No
Residences adjacent to the south	N-1	5	71.8	81.9	76.9	No
Escuela Plus Elementary School	N-1	5	58.0	76.5	71.5	No
Residences to the south	N-1	5	57.0	76.7	71.7	No
Multi-family residences to the southwest	N-1	5	71.8	77.3	72.3	No
View Park Convalescent Center	N-1	5	58.0	74.7	69.7	No
Single- and Multi-family residences to the west	N-1	5	56.6	74.4	69.4	No
Multi-family residences to the north	N-1, N-2	15	48.0	70.2	55.2	No
Single-family residences to the south	N-1	5	57.6	74.2	69.2	No
Single-family residences to the southeast	N-1	5	57.0	73.8	68.8	No
Crenshaw Methodist Church	N-1	5	58.0	74.5	69.5	No
Single-family residences to the east	N-1	5	57.0	74.8	69.8	No
Single- and Multi-family residences to the west	N-1	5	52.7	70.5	65.5	No
Single-family residences to the south	N-1	5	52.6	67.3	62.3	No
Single-family residences to the southeast	N-1	5	52.6	67.3	62.3	No
Multi-family residences to the north	N-1, N-2	15	48.0	67.3	52.3	No

/a/ Includes a 5 dBA reduction for implementation of construction equipment mufflers (Mitigation Measure **N-1**) and a 10 dBA reduction for implementation of temporary construction noise barrier along northern property line (Mitigation Measure **N-2**).
SOURCE: TAHA, 2025.

TABLE 3-23: VIBRATION VELOCITIES FOR CONSTRUCTION EQUIPMENT				
	Vibration Levels			
	PPV (Inches per Second)			
Equipment	**25 Feet**	**50 Feet**	**75 Feet**	**100 Feet**
Large Bulldozer	0.089	0.031	0.017	0.011
Caisson Drilling	0.089	0.031	0.017	0.011
Loaded Trucks	0.076	0.027	0.015	0.010
Jackhammer	0.035	0.012	0.007	0.004
Small Bulldozer	0.003	0.001	0.001	0.000
SOURCE: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, September 2018; TAHA, 2024.				

Table 3-24*, Construction Vibration Levels – Damage,* shows vibration levels and the applicable standard at the nearest off-site structures. The vibration levels are a conservative estimate based on a large bulldozer operating at property boundary. Equipment activity at the property edge would be limited by space and the need for maneuvering. Vibration levels generated on-site would not exceed the vibration damage threshold at off-site structures. Historic structures are more sensitive to vibration than structures built with modern construction methods and materials. One off-site historic use has been identified that could be potentially exposed to excessive vibration. However, the historic designation only applies to the adobe buildings and not additions added in the 1920s. The City of Los Angeles has established a vibration damage threshold of 0.25 inches per second PPV for historic buildings and 0.1 inches per second PPV for fragile buildings. As the adobe building dates from approximately the 1790s, the fragile buildings threshold has been applied. Vibration levels were analyzed for typical construction equipment such as a large bulldozer and drilling which may be required for building foundations. As shown in **Table 3-23**, Sanchez Ranch Adobe, which is adjacent to the north of the Project site, would be potentially exposed to vibration levels that would exceed 0.1 inches per second threshold during typical construction in instances heavy construction equipment would be operating frequently along the northern property line of the Project site. Therefore, without mitigation, the Project would result in a potentially significant impact related to historic structure damage from construction vibration.

TABLE 3-24: CONSTRUCTION VIBRATION LEVELS – DAMAGE				
Sensitive Receptors	**Distance (Feet)**	**PPV (In/Sec)**	**Damage Threshold (In/Sec)**	**Exceed Damage Threshold?**
NON-HISTORIC STRUCTURES				
Multi-family Residences adjacent to the north	15	0.191	0.5	No
Crenshaw Methodist Church	50	0.031	0.3	No
Residences to the south	60	0.024	0.3	No
Escuela Plus Elementary School	60	0.024	0.3	No
HISTORIC STRUCTURES				
Sanchez Ranch Adobe	12	0.268	0.1	Yes
SOURCE: TAHA, 2025.				

Vibration annoyance is another concern related to construction activity. However, perceptible vibration is not typically a concern for human health and is a common occurrence within the urban environment. Vibration annoyance can result in impacts if construction activity occurs during nighttime hours when people are more sensitive to vibration. Construction activity would occur within the permissible hours of construction during daytime hours as set by LAMC Section 41.40. Therefore, the proposed project would result in a less-than-significant impact related to vibration annoyance.

In addition to on-site construction activities, construction trucks on the roadway network have the potential to generate vibration. However, rubber-tired vehicles, including trucks, rarely generate perceptible vibration.[44] It is not anticipated that project-related trucks would generate perceptible vibration adjacent to the roadway network. Therefore, the Project would result in a less-than-significant impact related to off-site construction truck vibration.

Operations. The Project would not include a significant source of permanent vibration. Project-related vehicle trips could generate vibration, although similar to the existing condition, roadway vibration from passenger vehicles and trucks would not be perceptible outside of the roadway right-of-way. Therefore, no impact would occur related to operational vibration.

Mitigation Measures

N-5 Prior to commencement of construction activity, a qualified structural engineer licensed in California shall survey the existing foundation and other structural aspects of the Sanchez Ranch Adobe. The survey shall provide a shoring design to protect the identified land uses from potential damage. The qualified structural engineer shall submit a pre-construction survey letter establishing baseline conditions at the historic buildings. These baseline conditions shall be forwarded to the lead agency and to the mitigation monitor prior to issuance of any foundation only or building permit. At the conclusion of vibration causing activities, the qualified structural engineer shall issue a follow-on letter describing damage, if any, to the historic buildings. The letter shall include recommendations for any repair, as may be necessary, in conformance with the Secretary of the Interior Standards. Repairs to shall be undertaken and completed in conformance with all applicable codes including the California Historical Building Code (Part 8 of Title 24) prior to issuance of any temporary or permanent certificate of occupancy for the new building.

Level of Significance After Mitigation

Mitigation Measure **N-5** would ensure vibration damage to the historic Sanchez Ranch Adobe buildings, should it occur, would be minimized by implementing building shoring. The pre- and post-construction survey would document baseline conditions and allow for any repairs to be made due to damage potentially caused by operation of heavy construction equipment in its vicinity. Therefore, impacts related to construction vibration damage would be less than significant with mitigation.

3.5.3 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 airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? (No Impact)

Impact Analysis

The development site is not located within an airport land use plan nor is it located within two miles of a private airstrip or public airport. There is no potential for the Project to expose people working or residing in the area to excessive aircraft noise. Therefore, no impact would occur. No further analysis is required.

Mitigation Measures

No mitigation measures are required.

[44]Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, September 2018.

4.0 REFERENCES

California Department of Transportation, Technical *Noise Supplement to the Traffic Noise Analysis Protocol*, September 2013.

California Department of Transportation, *Technical Noise Supplement to the Traffic Noise Analysis Protocol, Figure 4-1 A-Weighted Baseline FHWA (Federal Highway Administration) TNM (Traffic Noise Model) REMEL (Reference Energy Mean Emission Level) Curves*, September 2013.

California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, 2013.

City of Los Angeles, *General Plan Noise Element*, February 3, 1999.

City of Los Angeles, *L.A CEQA Thresholds Guide,* 2006.

City of Los Angeles, *Construction Noise and Vibration Thresholds and Methodology*, August 2024.

Cowan, James P., *Handbook of Environmental Acoustics*, 1994.

Federal Highway Administration, *Roadway Construction Noise Model*, Version 1.1, August 2008.

Federal Highway Administration, *Traffic Noise Model Version 3.1*, 2021.

Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, September 2018.

Los Angeles Department of Transportation, *Transportation Assessment Memorandum of Understanding: Stocker Street Creative Project*, March 2021.

Los Angeles Municipal Code, *Section 111.03*, *Minimum Ambient Noise Level*.

Los Angeles Municipal Code, *Section 112.01*, *Radios, Television Sets, And Similar Devices*.

Los Angeles Municipal Code, *Section 112.02*, *Air Condition, Refrigeration, Heating, Pumping, Filtering Equipment*.

Los Angeles Municipal Code, *Section 112.04*, *Powered Equipment Intended for Repetitive Use in Residential Areas and Other Machinery, Equipment, and Devices*.

Los Angeles Municipal Code, *Section 112.05*, *Maximum Noise Level of Powered Equipment or Powered Hand Tools*.

Los Angeles Municipal Code, *Section 112.06*, *Places of Public Entertainment*.

Los Angeles Municipal Code, *Section 113.01*, *Rubbish and Garbage Collection and Disposal*.

Los Angeles Municipal Code, *Section 114.03*, *Vehicles – Loading and Unloading*.

Los Angeles Municipal Code, *Section 41.40*, *Noise Due to Construction, Excavation Work – When Prohibited*.

Los Angeles Municipal Code, *Section 91.1207.14.2*, *Interior Noise Levels*.

SoundPLAN, *Version 4.1*.

State of California, Governor's Office of Planning and Research, *General Plan 2017 Guidelines*, *page 377*. http://opr.ca.gov/docs/OPR_COMPLETE_7.31.17.pdf.

U.S. Environmental Protection Agency, *EPA Identifies Noise Levels Affecting Health and Welfare*, April 1974. https://archive.epa.gov/epa/aboutepa/epa-identifies-noise-levels-affecting-health-and-welfare.html.

U.S. Environmental Protection Agency, *Noise from Construction Equipment and Operations, Building Equipment and Home Appliances, PB 206717*, 1971.

U.S. Environmental Protection Agency, *U.S. EPA Identifies Noise Levels Affecting Health and Welfare*, April 1974. https://archive.epa.gov/epa/aboutepa/epa-identifies-noise-levels-affecting-health-and-welfare.html.

United States Department of Labor, *OSH Act of 1970.* https://www.osha.gov/laws-regs/oshact/completeoshact.

World Health Organization Team, edited by Berglund, Birgitta; Lindvall, Thomas; Schwela, Dietrich H, *Guidelines for Community Noise*, 1999.

APPENDIX A

Noise and Vibration Calculations

Noise Formulas

Noise Distance Attenuation

Hard Site

Ni = No - 20 * LOG(Di/Do)

Ni = attenuated noise level of interest
No = reference noise level
Di = distance to receptor (Di>Do)
Do = reference distance

Source: (Bolt, Beranek, and Newman, 1971)

Summation of Noise Levels

Equation: Ns=10 x LOG10((10^(N1/10))+(10^(N2/10))+(10^(N3/10))+(10^(N4/10)))

Ns = Noise Level Sum

N1 = Noise Level 1

N2 = Noise Level 2

N3 = Noise Level 3

N4 = Noise Level 4

Source: California Department of Transportation, Technical Noise Supplement, 2013

Construction Noise Analysis

CONSTRUCTION NOISE LEVEL BY PHASE			
Noise Source	**Number of Pieces of Equipment**	**Noise Level (dBA) L_{eq} at 50 Feet /a/**	
DEMOLITION AND CLEARING			
Backhoe	4	79.6	
Compressor (air)	2	76.7	
Concrete Saw	2	85.6	
Dozer	2	80.7	
Excavator	2	79.7	
Gradall (forklift)	2	82.4	
Generator	2	80.6	
Demolition and Clearing Combined Noise Level		**90.0**	
SITE PREPARATION			
Auger Drill Rig	1	77.4	
Excavator	2	79.7	
Backhoe	2	76.6	
Compressor (air)	2	76.7	
Generator	2	80.6	
Dozer	1	77.7	
Excavation and Shoring Combined Noise Level		**86.2**	
GRADING			
Backhoe	4	79.6	
Roller	1	73.0	
Dozer	2	80.7	
Compactor	1	76.2	
Generator	2	80.6	
Compressor (air)	2	76.7	
Grading and Combined Noise Level		**86.4**	
BUILDING CONSTRUCTION			
Auger Drill Rig	1	77.4	
Backhoe	4	79.6	
Crane	3	77.4	
Excavator	2	79.7	
Gradall (forklift)	4	84.2	One forklift removed from calculation and then assumed to be at property line and added back in to total noise level.
Cement and Mortar Mixers	3	79.6	
Compactor	1	76.2	
Generator	5	84.6	
Compressor (air)	5	84.6	
Welders	10	80.0	
Building Construction Combined Noise Level		**91.4**	
ARCHITECTURAL COATING			
Compressor (air)	2	76.7	
Generator	2	80.6	

Aerial Lift	2	70.7
Architectural Coating Combined Noise Level		**82.4**
PAVING		
Excavator	1	76.7
Backhoe	4	79.6
Gradall (forklift)	2	82.4
Paver	1	74.2
Cement and Mortar Mixers	2	77.0
Roller	1	73.0
Compactor	1	76.2
Generator	2	80.6
Compressor (air)	2	76.7
Paving Combined Noise Level		**87.9**

/a/ Logarithmic sum of multiple pieces of equipment.

Source: FHWA, *Roadway Construction Noise Model (RCNM) Version 1.1* .

Source: AECOM, *Construction Noise and Vibration - North Harbour 2 Watermain and Northern Interceptor Shared Corridor* , 29 April 2016.

Source: Federal Highway Administration, *Roadway Construction Noise Model* , 2008

Source: *Noise Levels of Lift Trucks* , 25 May 2001, rigolett.home.xs4all.nl/ENGELS/equipment/liftfr.htm.

Source: Washington State Department of Transportation, *Airborne Noise Measurements (A-weighted and un-weighted) during VibratoryPile Installation - Technical Memorandum* , 21 June 2010.

UNMITIGATED CONSTRUCTION NOISE LEVELS AT SENSITIVE RECEPTORS

Sensitive Receptors	Distance (feet) from Center of Nearest Construction Zone	Distance (feet) from Loudest Equipnment Near Project Site Perimeter	40 Foot Noise Barrier on Northern Property Line	Intervening Building /a/	Reference Phase Noise Level (dBA)	Existing Ambient (dBA, Leq)	Max Construction Noise (dBA, Leq)	Exceed 80 dBA 8-hour Leq Threshold?
Multi-family residences adjacent to the north	160	20	0	0	91.4	53.0	88.3	Yes
Baldwin Hills Urgent Care	160	20	0	0	91.4	67.1	88.3	Yes
Residences adjacent to the south	160	100	0	0	91.4	71.8	81.9	Yes
Escuela Plus Elementary School	300	190	0	0	91.4	58.0	76.5	No
Residences to the south	290	200	0	0	91.4	57.0	76.7	No
Multi-family residences to the southwest	270	190	0	0	91.4	71.8	77.3	No
View Park Convalescent Center	360	280	0	0	91.4	58.0	74.7	No
Single- and Multi-Family residences to the west	370	290	0	0	91.4	56.6	74.4	No
Multi-family residences to the north	360	280	0	4.5	91.4	48.0	70.2	No
Single-family residences to the south	380	290	0	0	91.4	57.6	74.2	No
Single-family residences to the southeast	400	310	0	0	91.4	57.0	73.8	No
Crenshaw Methodist Church	370	270	0	0	91.4	58.0	74.5	No
Single-family residences to the east	350	340	0	0	91.4	57.0	74.8	No
Single- and Multi-Family residences to the west	580	500	0	0	91.4	52.7	70.5	No
Single-family residences to the south	500	430	0	4.5	91.4	52.6	67.3	No
Single-family residences to the southeast	500	420	0	4.5	91.4	52.6	67.3	No
Multi-family residences to the north	500	420	0	4.5	91.4	48.0	67.3	No

/a/ -4.5 dB for on intervening row of buildings and -1.5 dB for each subsequent row

MITIGATED CONSTRUCTION NOISE

Sensitive Receptors	Mitigation Measure	Mitigation /b/	Existing Ambient (dBA, Leq)	Unmitigated Construction Noise Level (dBA, 8-hour Leq)	Mitigated Max Construction Noise (dBA, 8-hour Leq)	Exceed 80 dBA 8-hour Leq Threshold?
Multi-family residences adjacent to the north	N1, N2	15	53.0	88.3	73.3	No
Baldwin Hills Urgent Care	N1, N2	15	67.1	88.3	73.3	No
Residences adjacent to the south	N1	5	71.8	81.9	76.9	No
Escuela Plus Elementary School	N1	5	58.0	76.5	71.5	No
Residences to the south	N1	5	57.0	76.7	71.7	No
Multi-family residences to the southwest	N1	5	71.8	77.3	72.3	No
View Park Convalescent Center	N1	5	58.0	74.7	69.7	No

Single- and Multi-Family residences to the west	N1	5	56.6	74.4	69.4	No
Multi-family residences to the north	N1, N2	15	48.0	70.2	55.2	No
Single-family residences to the south	N1	5	57.6	74.2	69.2	No
Single-family residences to the southeast	N1	5	57.0	73.8	68.8	No
Crenshaw Methodist Church	N1	5	58.0	74.5	69.5	No
Single-family residences to the east	N1	5	57.0	74.8	69.8	No
Single- and Multi-Family residences to the west	N1	5	#REF!	70.5	65.5	No
Single-family residences to the south	N1	5	56.6	67.3	62.3	No
Single-family residences to the southeast	N1	5	57.6	67.3	62.3	No
Multi-family residences to the north	N1, N2	15	57.0	67.3	52.3	No

/a/ -4.5 dB for on intervening row of buildings and -1.5 dB for each subsequent row

/b/ Mitigation Measure N1 includes a 5 dB reduction for equipment mufflers, Mitigation Measure N2 includes a 10 dB reduction for a temporary noise barrier.

HVAC NOISE ANALYSIS								
Sensitive Receptor	**Existing Nighttime Ambient Noise Level (dBA, Leq)**	**HVAC Noise Level (dBA, Leq)**	**New Ambient Noise Level (dBA, Leq)**	**Noise Level Increase (dBA, Leq)**	**Existing Ambient Noise Level (dBA, CNEL)**	**HVAC Noise Level (dBA, CNEL)**	**New Ambient Noise Level (dBA, CNEL)**	**Noise Level Increase (dBA, CNEL)**
1	52.0	36.4	52.1	0.1	50.7	40.5	51.1	0.4
2	52.0	39.3	52.2	0.2	59.9	43.4	60.0	0.1
3	52.0	38.6	52.2	0.2	58.0	42.7	58.1	0.1
4	52.0	40.1	52.3	0.3	56.0	44.2	56.3	0.3
5	52.0	40	52.3	0.3	56.0	44.1	56.3	0.3
6	52.0	43.8	52.6	0.6	56.0	47.9	56.6	0.6
7	52.0	42.7	52.5	0.5	56.0	46.8	56.5	0.5
8	52.0	40.8	52.3	0.3	59.9	44.9	60.0	0.1
9	52.0	42	52.4	0.4	59.9	46.1	60.1	0.2
10	52.0	42.1	52.4	0.4	59.9	46.2	60.1	0.2
11	52.0	41.3	52.4	0.4	57.6	45.4	57.9	0.3
12	52.0	36.6	52.1	0.1	57.6	40.7	57.7	0.1
13	52.0	37.7	52.2	0.2	57.6	41.8	57.7	0.1
14	52.0	39.1	52.2	0.2	57.6	43.2	57.8	0.2
15	52.0	42.7	52.5	0.5	59.9	46.8	60.1	0.2
16	52.0	40.8	52.3	0.3	59.9	44.9	60.0	0.1
17	52.0	40.1	52.3	0.3	57.6	44.2	57.8	0.2
18	52.0	37.6	52.2	0.2	57.6	41.7	57.7	0.1

Source: SoundPLAN Version 4.1; TAHA, 2023.

OUTDOOR GATHERING SPACE NOISE ANALYSIS								
Sensitive Receptor (Figure XX)	**Existing Nighttime Ambient Noise Level (dBA, Leq)**	**Outdoor Gathering Space Noise Level (dBA, Leq) /a/**	**New Ambient Noise Level (dBA, Leq)**	**Noise Level Increase (dBA, Leq)**	**Existing Ambient Noise Level (dBA, CNEL)**	**Outdoor Gathering Space Noise Level (dBA, CNEL) /a/**	**New Ambient Noise Level (dBA, CNEL)**	**Noise Level Increase (dBA, CNEL)**
STANDARD OPERATION								
1	52.0	19.1	52.0	0.0	50.7	23.1	50.7	0.0
2	52.0	20.0	52.0	0.0	59.9	24.0	59.9	0.0
3	52.0	17.5	52.0	0.0	58.0	21.5	58.0	0.0
4	52.0	16.9	52.0	0.0	56.0	21.0	56.0	0.0
5	52.0	17.3	52.0	0.0	56.0	21.3	56.0	0.0
6	52.0	16.3	52.0	0.0	56.0	20.4	56.0	0.0
7	52.0	31.8	52.0	0.0	56.0	35.8	56.0	0.0
8	52.0	26.2	52.0	0.0	59.9	30.2	59.9	0.0
9	52.0	32.5	52.0	0.0	59.9	36.5	59.9	0.0
10	52.0	36.4	52.1	0.1	59.9	40.4	59.9	0.0
11	52.0	34.5	52.1	0.1	57.6	37.3	57.6	0.0
12	52.0	26.9	52.0	0.0	57.6	30.9	57.6	0.0
13	52.0	29.2	52.0	0.0	57.6	33.2	57.6	0.0
14	52.0	31.9	52.0	0.0	57.6	35.9	57.6	0.0
15	52.0	39.8	52.3	0.3	59.9	43.8	60.0	0.1

16	52.0	34.2	52.1	0.1	59.9	38.2	59.9	0.0
17	52.0	34.9	52.1	0.1	57.6	38.9	57.7	0.1
18	52.0	30.7	52.0	0.0	57.6	34.7	57.6	0.0
SPECIAL EVENT								
1	52.0	42.3	52.4	0.4	50.7	45.7	51.9	1.2
2	52.0	42.4	52.5	0.5	59.9	45.8	60.1	0.2
3	52.0	40.4	52.3	0.3	58.0	43.8	58.2	0.2
4	52.0	40.3	52.3	0.3	56.0	43.7	56.3	0.3
5	52.0	40.6	52.3	0.3	56.0	44.0	56.3	0.3
6	52.0	41.1	52.3	0.3	56.0	44.5	56.3	0.3
7	52.0	56.0	57.5	5.5	56.0	59.4	61.1	5.1
8	52.0	46.1	53.0	1.0	59.9	49.5	60.3	0.4
9	52.0	53.7	55.9	3.9	59.9	57.1	61.7	1.8
10	52.0	60.1	60.7	8.7	59.9	63.5	65.1	5.2
11	52.0	54.1	56.2	4.2	57.6	57.5	60.6	3.0
12	52.0	48.8	53.7	1.7	57.6	52.2	58.7	1.1
13	52.0	51.1	54.6	2.6	57.6	54.5	59.3	1.7
14	52.0	53.2	55.7	3.7	57.6	56.6	60.2	2.6
15	52.0	62.2	62.6	10.6	59.9	65.6	66.7	6.8
16	52.0	53.0	55.5	3.5	59.9	56.4	61.5	1.6
17	52.0	58.2	59.1	7.1	57.6	61.6	63.1	5.5
18	52.0	53.4	55.8	3.8	57.6	56.8	60.2	2.6

/a/ Noise levels were modeled for multi-story buildings where present. The noise levels presented are the loudest modeled noise level for each receptor.

Source: TAHA, 2024.

SERVICE PLAZA NOISE ANALYSIS								
Sensitive Receptor	**Existing Daytime Ambient Noise Level (dBA, Leq)**	**Service Plaza Noise Level (dBA, Leq) /a/**	**New Ambient Noise Level (dBA, Leq)**	**Noise Level Increase (dBA, Leq)**	**Existing Ambient Noise Level (dBA, CNEL)**	**Service Plaza Noise Level (dBA, CNEL) /a/**	**New Ambient Noise Level (dBA, CNEL)**	**Noise Level Increase (dBA, CNEL)**
1	52.7	31.4	52.7	0.0	50.7	30.8	50.7	0.0
2	56.6	31.4	56.6	0.0	59.9	30.8	59.9	0.0
3	58.0	26.1	58.0	0.0	58.0	25.6	58.0	0.0
4	58.0	27.0	58.0	0.0	56.0	26.5	56.0	0.0
5	58.0	28.2	58.0	0.0	56.0	27.6	56.0	0.0
6	53.0	36.3	53.1	0.1	56.0	35.7	56.0	0.0
7	53.0	42.7	53.4	0.4	56.0	42.1	56.2	0.2
8	71.8	30.0	71.8	0.0	59.9	29.4	59.9	0.0
9	71.8	52.9	71.9	0.1	59.9	52.3	60.6	0.7
10	71.8	41.9	71.8	0.0	59.9	41.3	60.0	0.1
11	57.0	52.0	58.2	1.2	57.6	51.4	58.5	0.9
12	52.6	43.1	53.1	0.5	57.6	42.5	57.7	0.1
13	52.6	45.2	53.3	0.7	57.6	44.6	57.8	0.2
14	52.6	47.5	53.8	1.2	57.6	46.9	58.0	0.4
15	71.8	34.9	71.8	0.0	59.9	34.3	59.9	0.0
16	71.8	30.4	71.8	0.0	59.9	29.8	59.9	0.0
17	57.0	29.5	57.0	0.0	57.6	16.7	57.6	0.0
18	57.0	25.3	57.0	0.0	57.6	24.8	57.6	0.0

/a/ Noise levels were modeled for multi-story buildings where present. The noise levels presented are the loudest modeled noise level for each receptor.

Parking Reference Noise Level (PM Peak Hour 322 Trips)	51.5
Parking Reference Noise Level (AM Peak Hour 244 Trips)	50.3
Parking Reference Noise Level (OffPeak Trips 5% of total 144 trips)	48.0
CNEL from trips between 8:00 a.m. to 11:00 p.m.	52.1

PARKING ACTIVITY NOISE ANALYSIS									
Sensitive Receptor	**Distance from Center of Parking Garage (Ft)**	**Existing Daytime Ambient Noise Level (dBA, Leq)**	**Parking Activity Noise Level (dBA, Leq) /a/**	**New Ambient Noise Level (dBA, Leq)**	**Noise Level Increase (dBA, Leq)**	**Existing Ambient Noise Level (dBA, CNEL)**	**Parking Activity Noise Level (dBA, CNEL) /a/**	**New Ambient Noise Level (dBA, CNEL)**	**Noise Level Increase (dBA, CNEL)**
1	980	52.7	25.7	52.7	0.0	50.7	26.3	50.7	0.0
2	750	56.6	28.0	56.6	0.0	59.9	28.6	59.9	0.0
3	690	58.0	28.7	58.0	0.0	58	29.3	58.0	0.0
4	650	58.0	29.2	58.0	0.0	56	29.8	56.0	0.0
5	500	58.0	31.5	58.0	0.0	56	32.1	56.0	0.0
6	100	53.0	45.5	53.7	0.7	56	46.1	56.4	0.4
7	90	53.0	46.4	53.9	0.9	56	47.0	56.5	0.5
8	710	71.8	28.5	71.8	0.0	59.9	29.1	59.9	0.0
9	500	71.8	31.5	71.8	0.0	59.9	32.1	59.9	0.0
10	400	71.8	33.4	71.8	0.0	59.9	34.0	59.9	0.0
11	570	57.0	30.4	57.0	0.0	57.6	31.0	57.6	0.0
12	715	52.6	28.4	52.6	0.0	57.6	29.0	57.6	0.0
13	840	52.6	27.0	52.6	0.0	57.6	27.6	57.6	0.0
14	945	52.6	26.0	52.6	0.0	57.6	26.6	57.6	0.0
15	390	71.8	33.7	71.8	0.0	59.9	34.3	59.9	0.0
16	430	71.8	32.8	71.8	0.0	59.9	33.4	59.9	0.0
17	540	57.0	30.8	57.0	0.0	57.6	31.4	57.6	0.0
18	700	57.0	28.6	57.0	0.0	57.6	29.2	57.6	0.0

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, September 2018.

ON-SITE VEHICLE MOVEMENT NOISE ANALYSIS								
Sensitive Receptor (Figure XX)	**Existing Daytime Ambient Noise Level (dBA, Leq)**	**On-Site Vehicle Noise Level (dBA, Leq) /a/**	**New Ambient Noise Level (dBA, Leq)**	**Noise Level Increase (dBA, Leq)**	**Existing Ambient Noise Level (dBA, CNEL)**	**On-Site Vehicle Noise Level (dBA, CNEL) /a/**	**New Ambient Noise Level (dBA, CNEL)**	**Noise Level Increase (dBA, CNEL)**
6	53.0	62.1	62.6	9.6	56	48.6	56.7	0.7
7	53.0	62.7	63.1	10.1	56	52.1	57.5	1.5
9	71.8	50.5	71.8	0.0	59.9	37	59.9	0.0
10	71.8	49.4	71.8	0.0	59.9	36.3	59.9	0.0

Source: Federal Highway Administration, *Traffic Noise Model Version 3.1.*

MOBILE NOISE ANALYSIS	
Sensitive Receptor	**Future Plus Project Noise Level (dBA, CNEL)**
1	56.0
2	59.1
3	54.5
4	55.4
5	53.5
6	49.7
7	53.9
8	64.6
9	64.2
10	65.1
11	60.1
12	57.1
13	55.4
14	54.6
15	64.2
16	61.2
17	57.8
18	55.6

COMPOSITE NOISE ANALYSIS						
Sensitive Receptor	**Existing Ambient Noise Level (dBA, CNEL)**	**Composite On-Site Noise Level (dBA, CNEL) /a/**	**Off-Site Sources Noise Levels (dBA, CNEL)**	**Composite Operational Noise Level**	**New Ambient Noise Level (dBA, CNEL)**	**Noise Level Increase (dBA, CNEL)**
STANDARD OPERATION						
1	50.7	41.1	41.8	44.5	51.6	0.9
2	59.9	43.8	44.8	47.3	60.1	0.2
3	58.0	43.0	39.2	44.5	58.2	0.2
4	56.0	44.4	40.4	45.9	56.4	0.4
5	56.0	44.4	39.5	45.6	56.4	0.4
6	56.0	52.5	38.4	52.7	57.7	1.7
7	56.0	54.5	44.0	54.8	58.5	2.5
8	59.9	45.2	50.4	51.6	60.5	0.6
9	59.9	53.5	50.5	55.2	61.2	1.3
10	59.9	48.6	51.7	53.4	60.8	0.9
11	57.6	52.5	46.4	53.5	59.0	1.4
12	57.6	45.0	43.6	47.4	58.0	0.4
13	57.6	46.7	41.8	47.9	58.0	0.4
14	57.6	48.7	40.9	49.4	58.2	0.6
15	59.9	48.8	54.0	55.1	61.2	1.3
16	59.9	46.1	49.5	51.1	60.4	0.5
17	57.6	45.5	46.0	48.7	58.1	0.5
18	57.6	42.7	43.6	46.2	57.9	0.3
SPECIAL EVENT						
1	50.7	47.0	41.8	48.2	52.6	1.9
2	59.9	47.9	44.8	49.6	60.3	0.4
3	58.0	46.4	39.2	47.2	58.3	0.3
4	56.0	47.1	40.4	47.9	56.6	0.6
5	56.0	47.2	39.5	47.9	56.6	0.6
6	56.0	53.1	38.4	53.3	57.9	1.9
7	56.0	60.6	44.0	60.7	62.0	6.0
8	59.9	50.9	50.4	53.7	60.8	0.9
9	59.9	58.7	50.5	59.3	62.6	2.7
10	59.9	63.7	51.7	63.9	65.4	5.5
11	57.6	58.7	46.4	59.0	61.3	3.7
12	57.6	53.0	43.6	53.4	59.0	1.4
13	57.6	55.2	41.8	55.4	59.6	2.0
14	57.6	57.3	40.9	57.4	60.5	2.9
15	59.9	65.7	54.0	66.0	66.9	7.0
16	59.9	56.8	49.5	57.5	61.9	2.0
17	57.6	61.7	46.0	61.8	63.2	5.6
18	57.6	57.0	43.6	57.2	60.4	2.8

/a/ Noise levels were modeled for multi-story buildings where present. The noise levels presented are the loudest modeled noise level for each receptor.

Source: TAHA, 2024.

Vibration Velocities for Construction Equipment				
Equipment	**PPV at 25 Feet (Inches/Second)**	**PPV at 50 Feet (Inches/Second)**	**VdB at 25 feet (Micro-Inches/Second)**	**VdB at 50 feet (Micro-Inches/Second)**
Caisson Drill	0.089	0.031	87	78
Excavator	0.040	0.014	80	71
Large Bulldozer	0.089	0.031	87	78
Small Bulldozer	0.003	0.001	58	49

Source: FTA, Transit Noise and Vibration Impact Assessment, September 2018; New Hampshire Department of Transportation, Ground Vibrations Emanating from Construction Equipment, September 8, 2012

Construction Vibration Damage Potential Analysis						
Structure	Distance from Construction Activity (feet) /a/	Reference Equipment	Reference Vibration Level	Damage Threshold	PPV at Structure (Inches/Second)	Exceed Threshold?
Multifamily residences adjacent to the north	15	Large Bulldozer	0.089	0.5	0.191	No
Crenshaw Methodist Church	50	Large Bulldozer	0.089	0.3	0.031	No
Residences to the south	60	Large Bulldozer	0.089	0.3	0.024	No
Escuela Plus Elementary School	60	Large Bulldozer	0.089	0.3	0.024	No

/a/ Distance conservatively measured from project site property line.

Source: FTA, Transit Noise and Vibration Impact Assessment, September 2018.

Historic Use Safe Distance for Equipment	PPV at 25 Feet (Inches/Second)	Safe Distance to Not Exceed 0.1 Inches/Second Historic Structure Threshold (Feet)	Vibration Level
Caisson Drill	0.089	25	0.09
Excavator	0.040	15	0.09
Impact Pile Driver	1.158	140	0.09
Pile Driver (Sonic)	0.734	100	0.09
Small Bulldozer	0.003	5	0.03

Historic Uses Vibration Analysis (Typical)					
Historic Uses	Distance from Construction Activity (feet) /a/	Reference Equipment	Reference Vibration Level	PPV at Historic Use (Inches/Second)	Exceed Threshold?
Sanchez Ranch	12	Large Bulldozer	0.089	0.268	Yes

/a/ Distance conservatively measured from project site property line.

Source: FTA, Transit Noise and Vibration Impact Assessment, September 2018.

NO AMP SPECIAL EVENTS COMPOSITE NOISE ANALYSIS				
Sensitive Receptor	Existing Ambient Noise Level (dBA, CNEL)	Composite Noise Level (dBA, CNEL) /a/	New Ambient Noise Level (dBA, CNEL)	Noise Level Increase (dBA, CNEL)
STANDARD OPERATION				
1	50.7	41.1	51.2	0.5
2	59.9	43.8	60.0	0.1
3	58.0	43.0	58.1	0.1
4	56.0	44.4	56.3	0.3
5	56.0	44.4	56.3	0.3
6	56.0	52.5	57.6	1.6
7	56.0	54.5	58.3	2.3
8	59.9	45.2	60.0	0.1
9	59.9	53.5	60.8	0.9
10	59.9	48.6	60.2	0.3
11	57.6	52.5	58.8	1.2
12	57.6	45.0	57.8	0.2
13	57.6	46.7	57.9	0.3
14	57.6	48.7	58.1	0.5
15	59.9	48.8	60.2	0.3
16	59.9	46.1	60.1	0.2
17	57.6	45.5	57.9	0.3
18	57.6	42.7	57.7	0.1
SPECIAL EVENT				
1	50.7	41.0	51.1	0.4
2	59.9	43.7	60.0	0.1
3	58.0	42.9	58.1	0.1
4	56.0	44.4	56.3	0.3
5	56.0	44.4	56.3	0.3

6	56.0	52.5	57.6	1.6
7	56.0	54.4	58.3	2.3
8	59.9	45.1	60.0	0.1
9	59.9	53.4	60.8	0.9
10	59.9	47.9	60.2	0.3
11	57.6	52.4	58.7	1.1
12	57.6	44.8	57.8	0.2
13	57.6	46.5	57.9	0.3
14	57.6	48.5	58.1	0.5
15	59.9	47.2	60.1	0.2
16	59.9	45.3	60.0	0.1
17	57.6	44.4	57.8	0.2
18	57.6	42.0	57.7	0.1

COMPOSITE ON-SITE AND OFF-SITE NOISE LEVELS NO AMP

Sensitive Receptor	Existing Ambient Noise Level (dBA, CNEL)	Composite On-Site Noise Level (dBA, CNEL) /a/	Off-Site Sources Noise Levels (dBA, CNEL)	Composite Operational Noise Level (dBA, CNEL)	New Ambient Noise Level (dBA, CNEL)	Noise Level Increase (dBA, CNEL)
STANDARD OPERATION						
1	50.7	41.1	41.8	44.5	51.6	0.9
2	59.9	43.8	44.8	47.3	60.1	0.2
3	58.0	43.0	39.2	44.5	58.2	0.2
4	56.0	44.4	40.4	45.9	56.4	0.4
5	56.0	44.4	39.5	45.6	56.4	0.4
6	56.0	52.5	38.4	52.7	57.7	1.7
7	56.0	54.5	44.0	54.8	58.5	2.5
8	59.9	45.2	50.4	51.6	60.5	0.6
9	59.9	53.5	50.5	55.2	61.2	1.3
10	59.9	48.6	51.7	53.4	60.8	0.9
11	57.6	52.5	46.4	53.5	59.0	1.4
12	57.6	45.0	43.6	47.4	58.0	0.4
13	57.6	46.7	41.8	47.9	58.0	0.4
14	57.6	48.7	40.9	49.4	58.2	0.6
15	59.9	48.8	54.0	55.1	61.2	1.3
16	59.9	46.1	49.5	51.1	60.4	0.5
17	57.6	45.5	46.0	48.7	58.1	0.5
18	57.6	42.7	43.6	46.2	57.9	0.3
SPECIAL EVENT						
1	50.7	41.0	41.8	44.5	51.6	0.9
2	59.9	43.7	44.8	47.3	60.1	0.2
3	58.0	42.9	39.2	44.5	58.2	0.2
4	56.0	44.4	40.4	45.8	56.4	0.4
5	56.0	44.4	39.5	45.6	56.4	0.4
6	56.0	52.5	38.4	52.7	57.7	1.7
7	56.0	54.4	44.0	54.8	58.4	2.4
8	59.9	45.1	50.4	51.5	60.5	0.6
9	59.9	53.4	50.5	55.2	61.2	1.3
10	59.9	47.9	51.7	53.2	60.7	0.8
11	57.6	52.4	46.4	53.4	59.0	1.4
12	57.6	44.8	43.6	47.3	58.0	0.4
13	57.6	46.5	41.8	47.8	58.0	0.4
14	57.6	48.5	40.9	49.2	58.2	0.6
15	59.9	47.2	54.0	54.8	61.1	1.2
16	59.9	45.3	49.5	50.9	60.4	0.5
17	57.6	44.4	46.0	48.3	58.1	0.5
18	57.6	42.0	43.6	45.9	57.9	0.3

/a/ Noise levels were modeled for multi-story buildings where present. The noise levels presented are the loudest modeled noise level for each receptor.

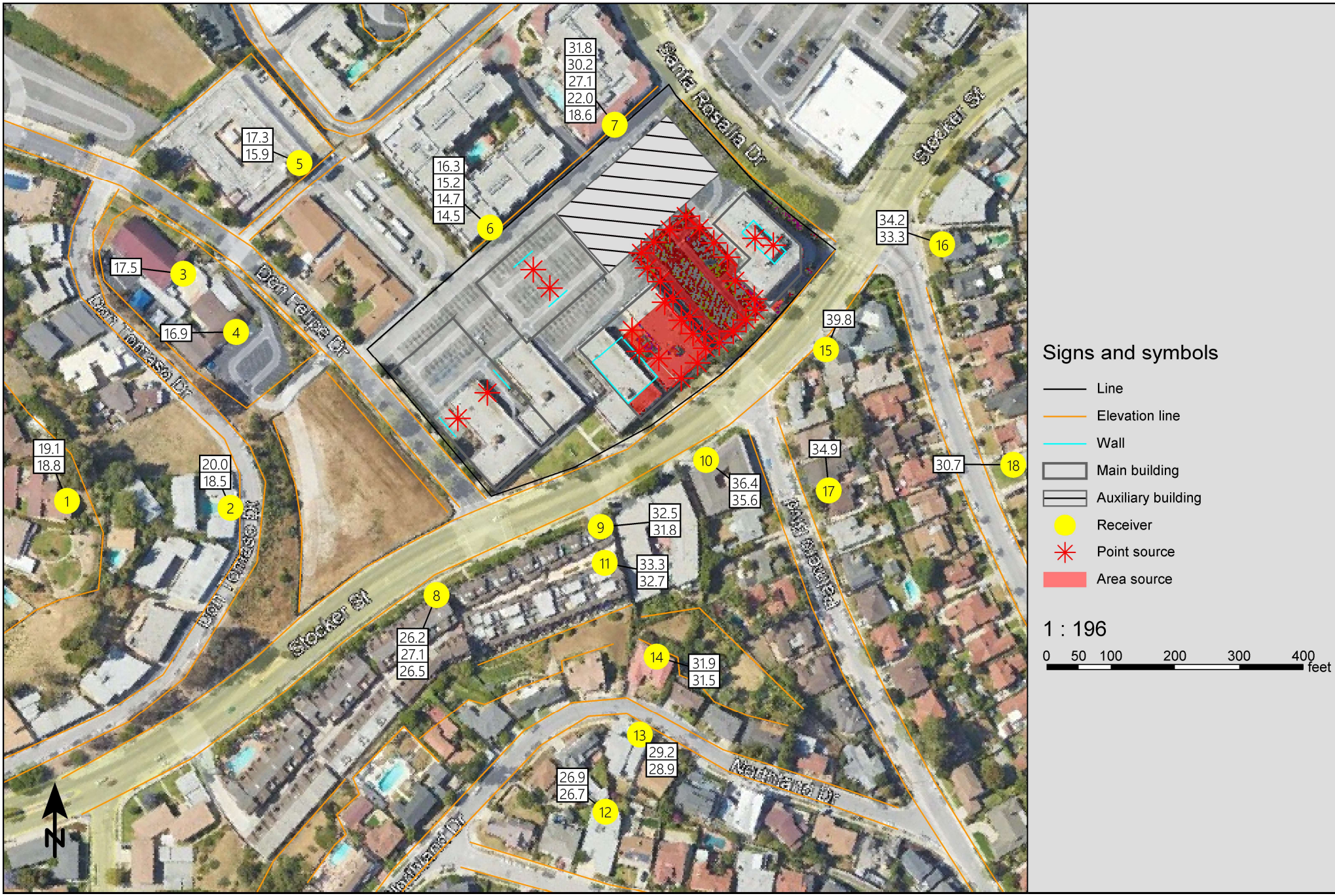
APPENDIX B

SoundPLAN Results

Standard Operation

Receiver List

No.	Receiver name	Building side	Floor	Limit Leq1 dB(A)	Level Leq1 dB(A)	Conflict Leq1 dB(A)
1	1		GF	-	18.8	-
			1.Fl	-	19.1	-
2	2		GF	-	18.5	-
			1.Fl	-	20.0	-
3	3		GF	-	17.5	-
4	4		GF	-	16.9	-
5	5		GF	-	15.9	-
			1.Fl	-	17.3	-
6	6		GF	-	14.5	-
			1.Fl	-	14.7	-
			2.Fl	-	15.2	-
			3.Fl	-	16.3	-
7	7		GF	-	18.6	-
			1.Fl	-	22.0	-
			2.Fl	-	27.1	-
			3.Fl	-	30.2	-
			4.Fl	-	31.8	-
8	8		GF	-	26.5	-
			1.Fl	-	27.1	-
			2.Fl	-	26.2	-
9	9		GF	-	31.8	-
			1.Fl	-	32.5	-
10	10		GF	-	35.6	-
			1.Fl	-	36.4	-
11	11		GF	-	32.7	-
			1.Fl	-	33.3	-
12	12		GF	-	26.7	-
			1.Fl	-	26.9	-
13	13		GF	-	28.9	-
			1.Fl	-	29.2	-
14	14		GF	-	31.5	-
			1.Fl	-	31.9	-
15	15		GF	-	39.8	-
16	16		GF	-	33.3	-
			1.Fl	-	34.2	-
17	17		GF	-	34.9	-
18	18		GF	-	30.7	-

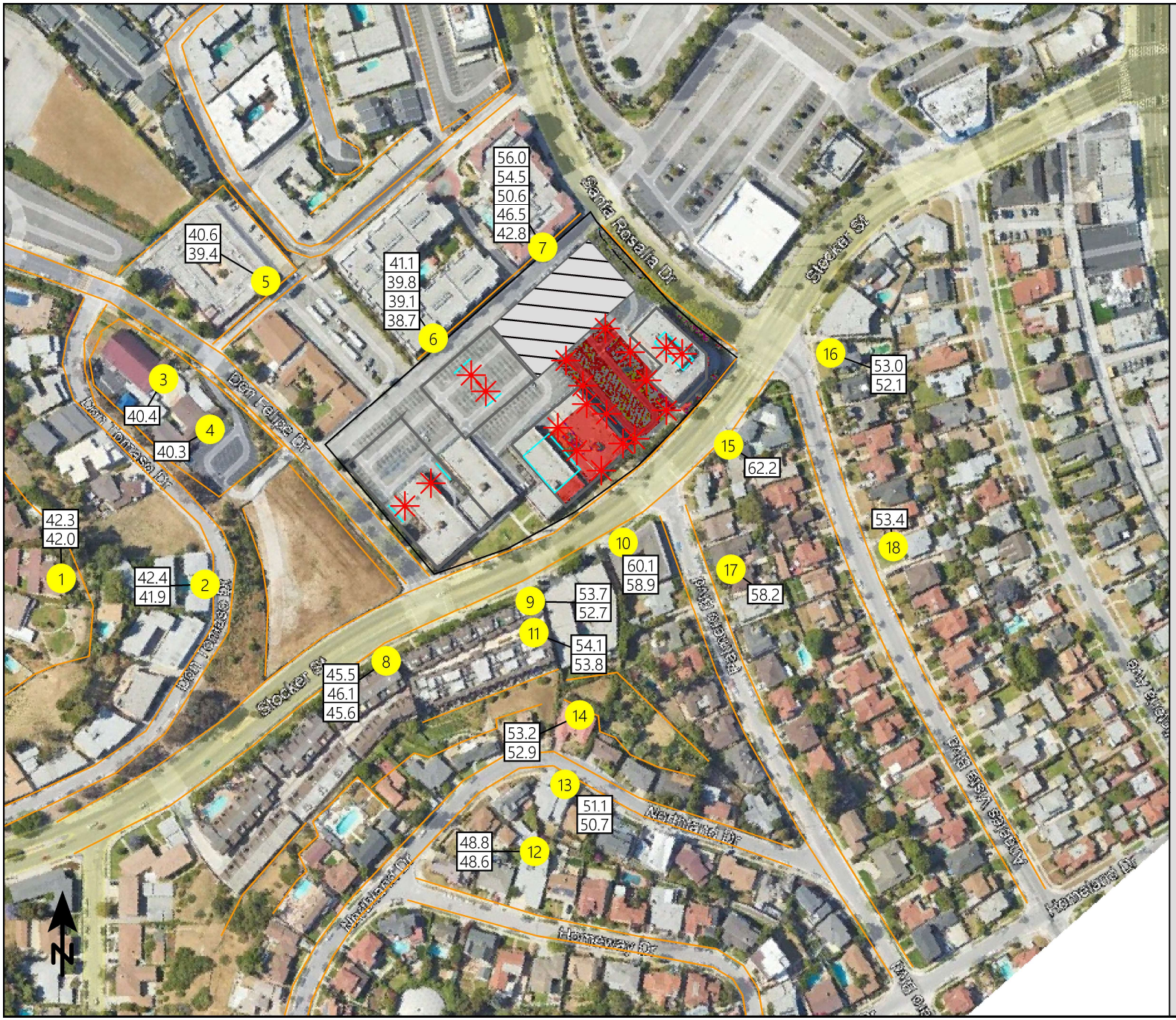

Santa Rosalia Dr
Stocker St
Don Felipe Dr
Don Tomas Dr
Don Gaspar Dr
Ridgecrest Dr
Northland Dr
31.8
30.2
27.1
22.0
18.6
7
17.3
15.9
5
16.3
15.2
14.7
14.5
6
34.2
33.3
16
17.5
3
16.9
4
39.8
15
19.1
18.8
1
20.0
18.5
2
34.9
17
30.7
18
10
36.4
35.6
32.5
31.8
9
11
33.3
32.7
8
26.2
27.1
26.5
14
31.9
31.5
13
29.2
28.9
26.9
26.7
12
N
Signs and symbols
Line
Elevation line
Wall
Main building
Auxiliary building
Receiver
Point source
Area source
1 : 196
0 50 100 200 300 400
feet


Signs and symbols
Line
Elevation line
Wall
Main building
Auxiliary building
Point source
Area source
Levels in dB(A)
<= 40
40 - 45
45 - 50
50 - 55
55 - 60
60 - 65
65 - 70
70 - 75
75 - 80
80 - 85
85 - 90
90 - 95
95 - 100
> 100
1 : 196
0 50 100 200 300 400 feet
N

Special Event

Receiver List

No.	Receiver name	Building side	Floor	Limit Leq1 dB(A)	Level Leq1 dB(A)	Conflict Leq1 dB(A)
1	1		GF	-	42.0	-
			1.Fl	-	42.3	-
2	2		GF	-	41.9	-
			1.Fl	-	42.4	-
3	3		GF	-	40.4	-
4	4		GF	-	40.3	-
5	5		GF	-	39.4	-
			1.Fl	-	40.6	-
6	6		GF	-	38.7	-
			1.Fl	-	39.1	-
			2.Fl	-	39.8	-
			3.Fl	-	41.1	-
7	7		GF	-	42.8	-
			1.Fl	-	46.5	-
			2.Fl	-	50.6	-
			3.Fl	-	54.5	-
			4.Fl	-	56.0	-
8	8		GF	-	45.6	-
			1.Fl	-	46.1	-
			2.Fl	-	45.5	-
9	9		GF	-	52.7	-
			1.Fl	-	53.7	-
10	10		GF	-	58.9	-
			1.Fl	-	60.1	-
11	11		GF	-	53.8	-
			1.Fl	-	54.1	-
12	12		GF	-	48.6	-
			1.Fl	-	48.8	-
13	13		GF	-	50.7	-
			1.Fl	-	51.1	-
14	14		GF	-	52.9	-
			1.Fl	-	53.2	-
15	15		GF	-	62.2	-
16	16		GF	-	52.1	-
			1.Fl	-	53.0	-
17	17		GF	-	58.2	-
18	18		GF	-	53.4	-



Signs and symbols

- Line
- Elevation line
- Wall
- Main building
- Auxiliary building
- Receiver
- Point source
- Area source

1 : 254

0 50 100 200 300 400 feet



Signs and symbols

- Line
- Elevation line
- Wall
- Main building
- Auxiliary building
- Point source
- Area source

Levels in dB(A)

<= 40
40 - 45
45 - 50
50 - 55
55 - 60
60 - 65
65 - 70
70 - 75
75 - 80
80 - 85
85 - 90
90 - 95
95 - 100
> 100

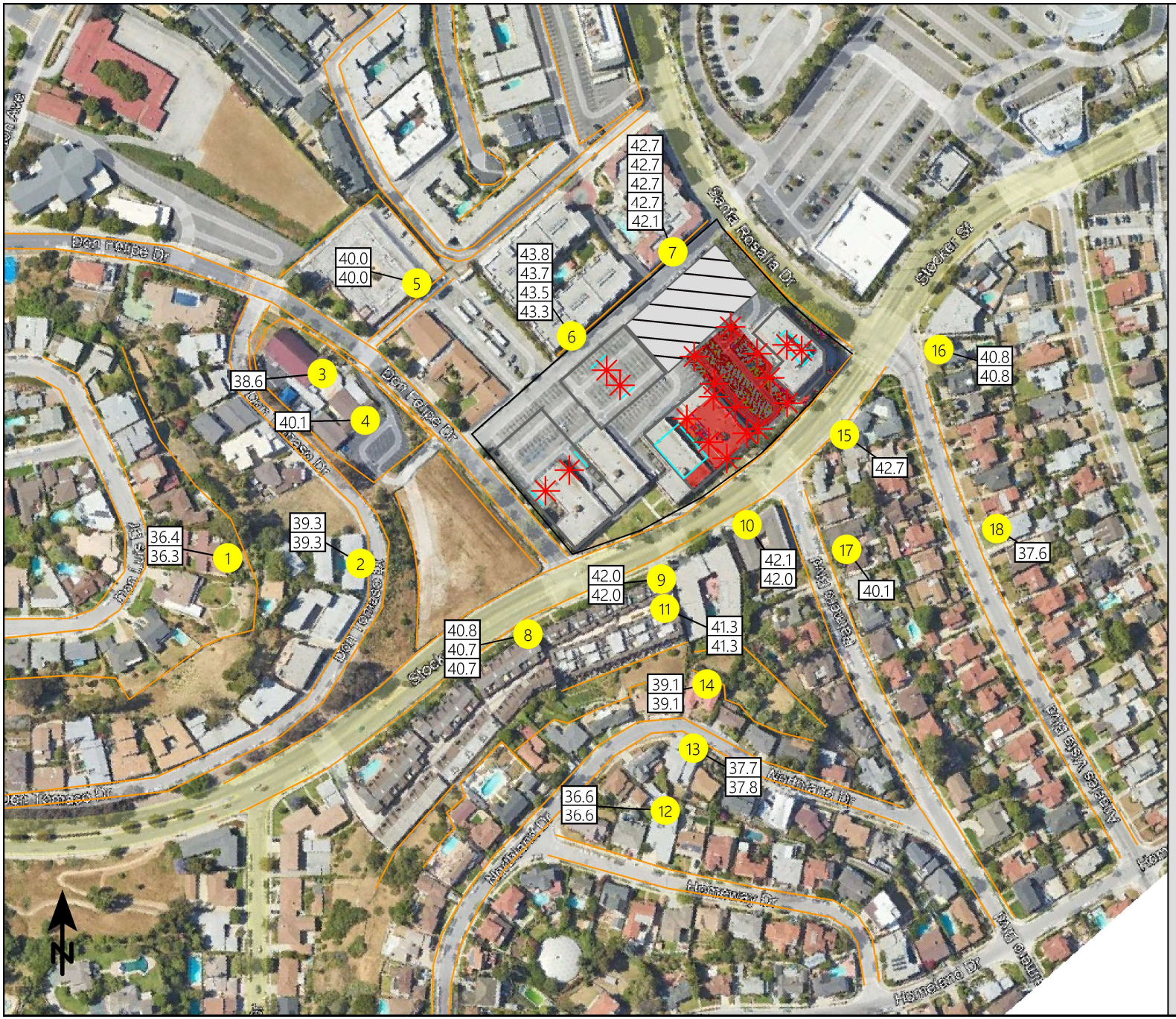
1 : 254

0 50 100 200 300 400 feet

HVAC Only

Receiver List

No.	Receiver name	Building side	Floor	Limit Leq1 dB(A)	Level Leq1 dB(A)	Conflict Leq1 dB(A)
1	1		GF	-	36.3	-
			1.Fl	-	36.4	-
2	2		GF	-	39.3	-
			1.Fl	-	39.3	-
3	3		GF	-	38.6	-
4	4		GF	-	40.1	-
5	5		GF	-	40.0	-
			1.Fl	-	40.0	-
6	6		GF	-	43.3	-
			1.Fl	-	43.5	-
			2.Fl	-	43.7	-
			3.Fl	-	43.8	-
7	7		GF	-	42.1	-
			1.Fl	-	42.7	-
			2.Fl	-	42.7	-
			3.Fl	-	42.7	-
			4.Fl	-	42.7	-
8	8		GF	-	40.7	-
			1.Fl	-	40.7	-
			2.Fl	-	40.8	-
9	9		GF	-	42.0	-
			1.Fl	-	42.0	-
10	10		GF	-	42.0	-
			1.Fl	-	42.1	-
11	11		GF	-	41.3	-
			1.Fl	-	41.3	-
12	12		GF	-	36.6	-
			1.Fl	-	36.6	-
13	13		GF	-	37.8	-
			1.Fl	-	37.7	-
14	14		GF	-	39.1	-
			1.Fl	-	39.1	-
15	15		GF	-	42.7	-
16	16		GF	-	40.8	-
			1.Fl	-	40.8	-
17	17		GF	-	40.1	-
18	18		GF	-	37.6	-

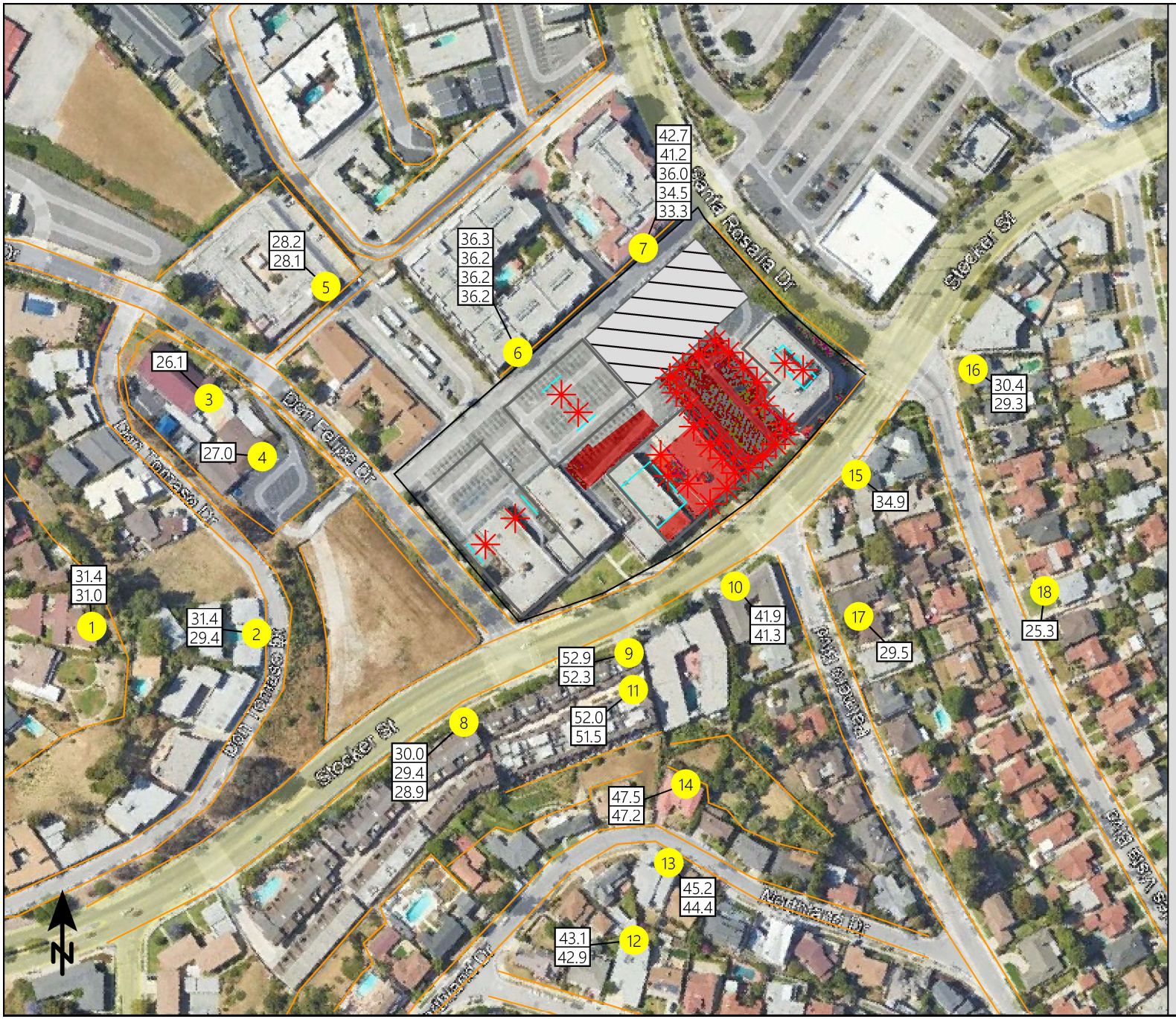

Don Felipe Dr
Don Terrace Dr
Stocker St
Santa Rosella Dr
Homeland Dr
Northland Dr
Hemaway Dr
East Gate Way
Ramona Way
N
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
36.4
36.3
39.3
39.3
38.6
40.1
40.0
40.0
43.8
43.7
43.5
43.3
42.7
42.7
42.7
42.7
42.1
40.8
40.7
40.7
42.0
42.0
41.3
41.3
42.1
42.0
40.1
42.7
40.8
40.8
37.6
39.1
39.1
37.7
37.8
36.6
36.6
Signs and symbols
Line
Elevation line
Wall
Main building
Auxiliary building
Receiver
Point source
Area source
1 : 274
0 50 100 200 300 400
feet

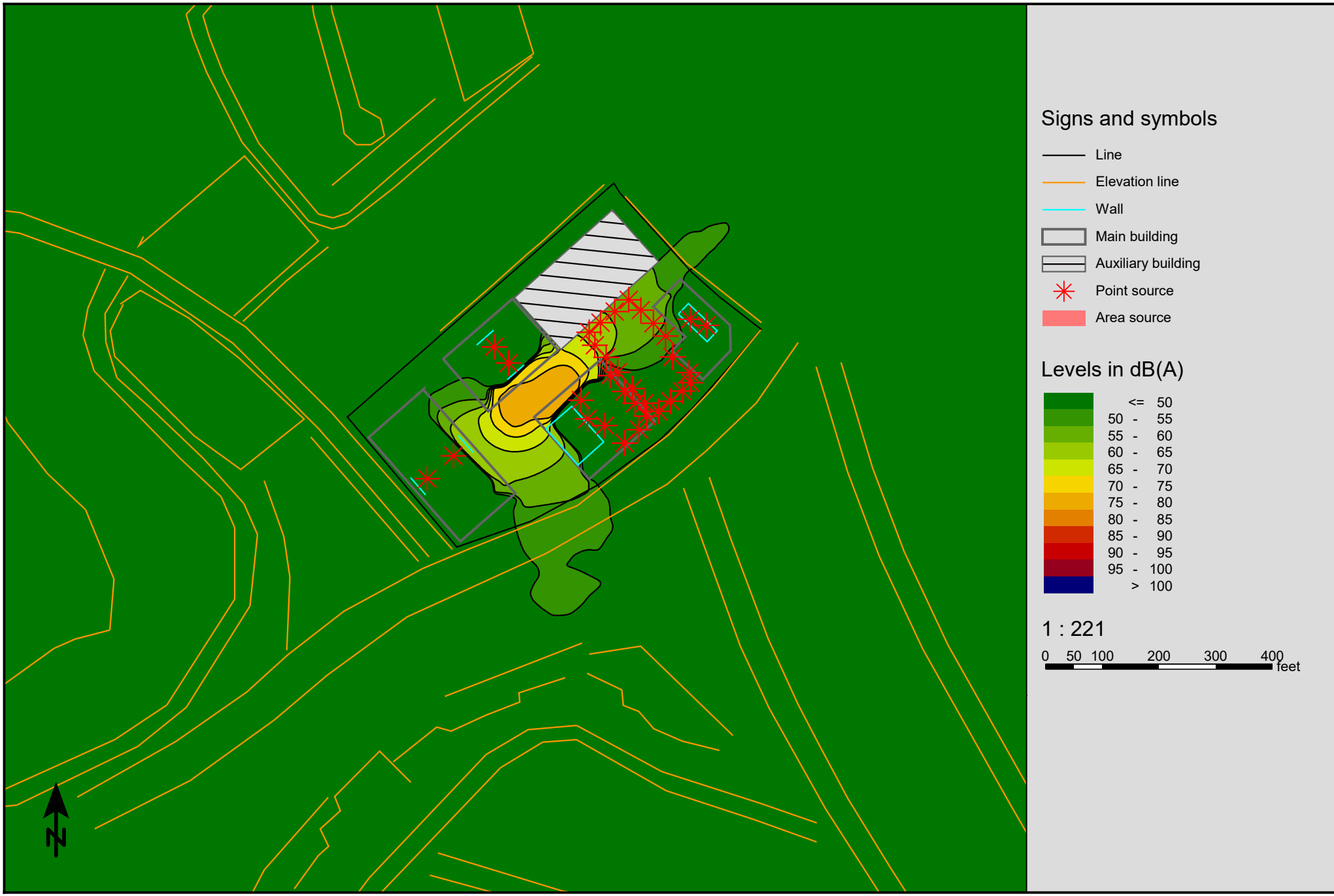

Signs and symbols
Line
Elevation line
Wall
Main building
Auxiliary building
Point source
Area source
Levels in dB(A)
<= 40
40 - 45
45 - 50
50 - 55
55 - 60
60 - 65
65 - 70
70 - 75
75 - 80
80 - 85
85 - 90
90 - 95
95 - 100
> 100
1 : 274
0 50 100 200 300 400
feet
N

Service Plaza

Receiver List

No.	Receiver name	Building side	Floor	Limit Leq1 dB(A)	Level Leq1 dB(A)	Conflict Leq1 dB(A)
1	1		GF	-	31.0	-
			1.Fl	-	31.4	-
2	2		GF	-	29.4	-
			1.Fl	-	31.4	-
3	3		GF	-	26.1	-
4	4		GF	-	27.0	-
5	5		GF	-	28.1	-
			1.Fl	-	28.2	-
6	6		GF	-	36.2	-
			1.Fl	-	36.2	-
			2.Fl	-	36.2	-
			3.Fl	-	36.3	-
7	7		GF	-	33.3	-
			1.Fl	-	34.5	-
			2.Fl	-	36.0	-
			3.Fl	-	41.2	-
			4.Fl	-	42.7	-
8	8		GF	-	28.9	-
			1.Fl	-	29.4	-
			2.Fl	-	30.0	-
9	9		GF	-	52.3	-
			1.Fl	-	52.9	-
10	10		GF	-	41.3	-
			1.Fl	-	41.9	-
11	11		GF	-	51.5	-
			1.Fl	-	52.0	-
12	12		GF	-	42.9	-
			1.Fl	-	43.1	-
13	13		GF	-	44.4	-
			1.Fl	-	45.2	-
14	14		GF	-	47.2	-
			1.Fl	-	47.5	-
15	15		GF	-	34.9	-
16	16		GF	-	29.3	-
			1.Fl	-	30.4	-
17	17		GF	-	29.5	-
18	18		GF	-	25.3	-


42.7
41.2
36.0
34.5
33.3
7
Santa Rosalia Dr
Stocker St
28.2
28.1
5
36.3
36.2
36.2
36.2
6
26.1
3
27.0
4
Don Felipe Dr
Don Fernando Dr
16
30.4
29.3
15
34.9
31.4
31.0
1
31.4
29.4
2
10
41.9
41.3
17
29.5
18
25.3
52.9
52.3
9
11
52.0
51.5
30.0
29.4
28.9
8
Stocker St
47.5
47.2
14
13
45.2
44.4
Nantucket Dr
43.1
42.9
12
N
Signs and symbols
Line
Elevation line
Wall
Main building
Auxiliary building
Receiver
Point source
Area source
1 : 221
0 50 100 200 300 400
feet


Signs and symbols
Line
Elevation line
Wall
Main building
Auxiliary building
Point source
Area source
Levels in dB(A)
<= 50
50 - 55
55 - 60
60 - 65
65 - 70
70 - 75
75 - 80
80 - 85
85 - 90
90 - 95
95 - 100
> 100
1 : 221
0 50 100 200 300 400
feet
N

APPENDIX C

Traffic Noise Model Runs

REPORT:	**Results: Sound Levels - Input Heights**		
TNM VERSION:	3.1.7970.37608	REPORT DATE:	16 April 2024
CALCULATED WITH:	3.1.7970.37608	CALCULATION DATE:	4/2/2024 12:56:23 PM
CASE:	Stocker Street_Existing_AM	ORGANIZATION:	Terry A. Hayes Associates Inc.
ANALYSIS BY:	kbartholow	PROJECT/CONTRACT:	
DEFAULT GROUND TYPE:	Pavement		
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state highway agency	
PAVEMENT TYPE(S) USED:	Average	substantiates the use of a different type with approval of FHWA.	

			Noise Reduction			Barrier Cost			
			Min	Avg	Max	Area / Volume	Lineal	Total	Total/DUs
Results for:		DUs	dB	dB	dB	$	$	$	$
Receivers in the Barrier Design:	All	0	0.0	0.0	0.0	0	0	0	NaN
	All Impacted	0	---	---	---	0	0	0	---
Meeting Noise Reduction Goal:	All	0	---	---	---	0	0	0	---
	All Impacted	0	---	---	---	0	0	0	---

Receiver				Modeled Traffic Noise Levels								
				All Abatement Barriers at Zero Height					With Abatement Barriers			
				LAeq		Increase over Existing				Noise Reduction		Calc.
Name	No.	DUs	Existing LAeq	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact	Calc. LAeq	Calc.	Goal	Minus Goal
			dBA	dBA	dBA	dBA	dBA		dBA	dBA	dBA	dBA
Stocker Street	0	0	---	71.3	0.0	---	---	Sound Level	71.3	0.0	8.0	-8.0
Santa Rosalia Drive	0	0	---	64.4	0.0	---	---	Sound Level	64.4	0.0	8.0	-8.0

REPORT:	**INPUT TRAFFIC FOR TNM VEHICLES (LAeq)**		
TNM VERSION:	3.1.7970.37608	REPORT DATE:	16 April 2024
CALCULATED WITH:	3.1.7970.37608	CALCULATION DATE:	4/2/2024 12:56:23 PM
CASE:	Stocker Street_Existing_AM	ORGANIZATION:	Terry A. Hayes Associates Inc.
ANALYSIS BY:	kbartholow	PROJECT/CONTRACT:	

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]
Stocker St. EB west of Don Felipe Dr.	Point-100	68	848	45	18	45	9	45	0	0	0	0
	Point-101	69	848	45	18	45	9	45	0	0	0	0
	Point-103	70	848	45	18	45	9	45	0	0	0	0
	Point-105	71	848	45	18	45	9	45	0	0	0	0
	Point-107	72	848	45	18	45	9	45	0	0	0	0
	Point-109	73	848	45	18	45	9	45	0	0	0	0
	Point-111	74	848	45	18	45	9	45	0	0	0	0
	Point-113	75	848	45	18	45	9	45	0	0	0	0
	Point-115	76	848	45	18	45	9	45	0	0	0	0
Stocker St. WB west of Don Felipe Dr.	Point-116	77	848	45	18	45	9	45	0	0	0	0
	Point-117	78	848	45	18	45	9	45	0	0	0	0
	Point-119	79	848	45	18	45	9	45	0	0	0	0
	Point-121	80	848	45	18	45	9	45	0	0	0	0
	Point-123	81	848	45	18	45	9	45	0	0	0	0
	Point-125	82	848	45	18	45	9	45	0	0	0	0

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
Stocker St. WB west of Don Felipe Dr.	Point-127	83	848	45	18	45	9	45	0	0	0	0
	Point-129	84	848	45	18	45	9	45	0	0	0	0
	Point-131	85	848	45	18	45	9	45	0	0	0	0
Don Felipe Dr. Between Stocker St. and Project Dwy.	Point-132	0	0	0	0	0	0	0	0	0	0	0
	Point-133	1	0	0	0	0	0	0	0	0	0	0
	Point-138	2	0	0	0	0	0	0	0	0	0	0
Stocker St. EB between Project Dwy. and Palmero Blvd.	Point-139	92	1022	45	21	45	11	45	0	0	0	0
	Point-140	93	1022	45	21	45	11	45	0	0	0	0
	Point-142	94	1022	45	21	45	11	45	0	0	0	0
	Point-144	95	1022	45	21	45	11	45	0	0	0	0
Stocker St. WB between Project Dwy. and Palmero Blvd.	Point-145	96	1022	45	21	45	11	45	0	0	0	0
	Point-146	97	1022	45	21	45	11	45	0	0	0	0
	Point-149	99	1022	45	21	45	11	45	0	0	0	0
	Point-148	3	1022	45	21	45	11	45	0	0	0	0
Stocker St. EB between Project Dwy. and Santa Rosalia Dr.	Point-150	100	822	35	17	35	9	35	0	0	0	0
	Point-151	101	822	35	17	35	9	35	0	0	0	0

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
Stocker St. EB between Project Dwy. and Santa Rosalia Dr.	Point-153	102	822	35	17	35	9	35	0	0	0	0
	Point-155	103	822	35	17	35	9	35	0	0	0	0
Stocker St. WB between Project Dwy. and Santa Rosalia Dr.	Point-156	104	822	35	17	35	9	35	0	0	0	0
	Point-157	105	822	35	17	35	9	35	0	0	0	0
	Point-160	107	822	35	17	35	9	35	0	0	0	0
	Point-159	4	822	35	17	35	9	35	0	0	0	0
Santa Rosalia Dr. south of Stocker Street.	Point-161	108	0	25	0	25	0	0	0	0	0	0
	Point-162	109	0	25	0	25	0	0	0	0	0	0
	Point-164	110	0	25	0	25	0	0	0	0	0	0
	Point-166	111	0	25	0	25	0	0	0	0	0	0
	Point-168	112	0	25	0	25	0	0	0	0	0	0
	Point-170	113	0	25	0	25	0	0	0	0	0	0
	Point-172	114	0	25	0	25	0	0	0	0	0	0
Santa Rosalia Dr. north of Project Dwy.	Point-173	115	898	35	14	35	5	35	0	0	0	0
	Point-174	116	898	35	14	35	5	35	0	0	0	0
	Point-176	117	898	35	14	35	5	35	0	0	0	0
	Point-178	118	898	35	14	35	5	35	0	0	0	0
	Point-180	119	898	35	14	35	5	35	0	0	0	0
	Point-182	120	898	35	14	35	5	35	0	0	0	0

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
Santa Rosalia Dr. between Project Dwy. and Stocker St.	Point-183	121	906	25	14	25	5	25	0	0	0	0
	Point-184	122	906	25	14	25	5	25	0	0	0	0
	Point-186	123	906	25	14	25	5	25	0	0	0	0
	Point-188	124	906	25	14	25	5	25	0	0	0	0
Stocker St. east of Santa Rosalia Dr.	Point-189	125	0	35	0	35	0	35	0	0	0	0
	Point-190	126	0	35	0	35	0	35	0	0	0	0
	Point-192	127	0	35	0	35	0	35	0	0	0	0
	Point-194	128	0	35	0	35	0	35	0	0	0	0
Don Felipe Dr. North of Project Dwy.	Point-138	5	0	0	0	0	0	0	0	0	0	0
	Point-136	6	0	0	0	0	0	0	0	0	0	0
	Point-137	7	0	0	0	0	0	0	0	0	0	0
	Point-135	8	0	0	0	0	0	0	0	0	0	0
Palmero Blvd. S of Stocker St.	Point-195	129	0	0	0	0	0	0	0	0	0	0
	Point-196	130	0	0	0	0	0	0	0	0	0	0
	Point-198	131	0	0	0	0	0	0	0	0	0	0
	Point-200	132	0	0	0	0	0	0	0	0	0	0
	Point-202	133	0	0	0	0	0	0	0	0	0	0

REPORT:	**Results: Sound Levels - Input Heights**		
TNM VERSION:	3.1.7970.37608	REPORT DATE:	16 April 2024
CALCULATED WITH:	3.1.7970.37608	CALCULATION DATE:	4/2/2024 12:56:28 PM
CASE:	Stocker Street_Existing_AM_Haul Truck	ORGANIZATION:	Terry A. Hayes Associates Inc.
ANALYSIS BY:	kbartholow	PROJECT/CONTRACT:	
DEFAULT GROUND TYPE:	Pavement		
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state highway agency	
PAVEMENT TYPE(S) USED:	Average	substantiates the use of a different type with approval of FHWA.	

			Noise Reduction			Barrier Cost			
			Min	Avg	Max	Area / Volume	Lineal	Total	Total/DUs
Results for:		DUs	dB	dB	dB	$	$	$	$
Receivers in the Barrier Design:	All	0	0.0	0.0	0.0	0	0	0	NaN
	All Impacted	0	---	---	---	0	0	0	---
Meeting Noise Reduction Goal:	All	0	---	---	---	0	0	0	---
	All Impacted	0	---	---	---	0	0	0	---

Receiver				Modeled Traffic Noise Levels								
				All Abatement Barriers at Zero Height					With Abatement Barriers			
				LAeq		Increase over Existing				Noise Reduction		Calc.
Name	No.	DUs	Existing LAeq	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact	Calc. LAeq	Calc.	Goal	Minus Goal
			dBA	dBA	dBA	dBA	dBA		dBA	dBA	dBA	dBA
Stocker Street	0	0	---	71.8	0.0	---	---	Sound Level	71.8	0.0	8.0	-8.0
Santa Rosalia Drive	0	0	---	65.9	0.0	---	---	Sound Level	65.9	0.0	8.0	-8.0

REPORT:	**INPUT TRAFFIC FOR TNM VEHICLES (LAeq)**		
TNM VERSION:	3.1.7970.37608	REPORT DATE:	16 April 2024
CALCULATED WITH:	3.1.7970.37608	CALCULATION DATE:	4/2/2024 12:56:28 PM
CASE:	Stocker Street_Existing_AM_Haul Truck	ORGANIZATION:	Terry A. Hayes Associates Inc.
ANALYSIS BY:	kbartholow	PROJECT/CONTRACT:	

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]
Stocker St. EB west of Don Felipe Dr.	Point-100	68	848	45	18	45	21	45	0	0	0	0
	Point-101	69	848	45	18	45	21	45	0	0	0	0
	Point-103	70	848	45	18	45	21	45	0	0	0	0
	Point-105	71	848	45	18	45	21	45	0	0	0	0
	Point-107	72	848	45	18	45	21	45	0	0	0	0
	Point-109	73	848	45	18	45	21	45	0	0	0	0
	Point-111	74	848	45	18	45	21	45	0	0	0	0
	Point-113	75	848	45	18	45	21	45	0	0	0	0
	Point-115	76	848	45	18	45	21	45	0	0	0	0
Stocker St. WB west of Don Felipe Dr.	Point-116	77	848	45	18	45	21	45	0	0	0	0
	Point-117	78	848	45	18	45	21	45	0	0	0	0
	Point-119	79	848	45	18	45	21	45	0	0	0	0
	Point-121	80	848	45	18	45	21	45	0	0	0	0
	Point-123	81	848	45	18	45	21	45	0	0	0	0
	Point-125	82	848	45	18	45	21	45	0	0	0	0

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
Stocker St. WB west of Don Felipe Dr.	Point-127	83	848	45	18	45	21	45	0	0	0	0
	Point-129	84	848	45	18	45	21	45	0	0	0	0
	Point-131	85	848	45	18	45	21	45	0	0	0	0
Don Felipe Dr. Between Stocker St. and Project Dwy.	Point-132	0	0	0	0	0	0	0	0	0	0	0
	Point-133	1	0	0	0	0	0	0	0	0	0	0
	Point-138	2	0	0	0	0	0	0	0	0	0	0
Stocker St. EB between Project Dwy. and Palmero Blvd.	Point-139	92	1022	45	21	45	23	45	0	0	0	0
	Point-140	93	1022	45	21	45	23	45	0	0	0	0
	Point-142	94	1022	45	21	45	23	45	0	0	0	0
	Point-144	95	1022	45	21	45	23	45	0	0	0	0
Stocker St. WB between Project Dwy. and Palmero Blvd.	Point-145	96	1022	45	21	45	23	45	0	0	0	0
	Point-146	97	1022	45	21	45	23	45	0	0	0	0
	Point-149	99	1022	45	21	45	23	45	0	0	0	0
	Point-148	3	1022	45	21	45	23	45	0	0	0	0
Stocker St. EB between Project Dwy. and Santa Rosalia Dr.	Point-150	100	822	35	17	35	21	35	0	0	0	0
	Point-151	101	822	35	17	35	21	35	0	0	0	0

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
Stocker St. EB between Project Dwy. and Santa Rosalia Dr.	Point-153	102	822	35	17	35	21	35	0	0	0	0
	Point-155	103	822	35	17	35	21	35	0	0	0	0
Stocker St. WB between Project Dwy. and Santa Rosalia Dr.	Point-156	104	822	35	17	35	21	35	0	0	0	0
	Point-157	105	822	35	17	35	21	35	0	0	0	0
	Point-160	107	822	35	17	35	21	35	0	0	0	0
	Point-159	4	822	35	17	35	21	35	0	0	0	0
Santa Rosalia Dr. south of Stocker Street.	Point-161	108	0	25	0	25	0	0	0	0	0	0
	Point-162	109	0	25	0	25	0	0	0	0	0	0
	Point-164	110	0	25	0	25	0	0	0	0	0	0
	Point-166	111	0	25	0	25	0	0	0	0	0	0
	Point-168	112	0	25	0	25	0	0	0	0	0	0
	Point-170	113	0	25	0	25	0	0	0	0	0	0
	Point-172	114	0	25	0	25	0	0	0	0	0	0
Santa Rosalia Dr. north of Project Dwy.	Point-173	115	898	35	14	35	29	35	0	0	0	0
	Point-174	116	898	35	14	35	29	35	0	0	0	0
	Point-176	117	898	35	14	35	29	35	0	0	0	0
	Point-178	118	898	35	14	35	29	35	0	0	0	0
	Point-180	119	898	35	14	35	29	35	0	0	0	0
	Point-182	120	898	35	14	35	29	35	0	0	0	0

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
Santa Rosalia Dr. between Project Dwy. and Stocker St.	Point-183	121	906	25	14	25	29	25	0	0	0	0
	Point-184	122	906	25	14	25	29	25	0	0	0	0
	Point-186	123	906	25	14	25	29	25	0	0	0	0
	Point-188	124	906	25	14	25	29	25	0	0	0	0
Stocker St. east of Santa Rosalia Dr.	Point-189	125	0	35	0	35	0	35	0	0	0	0
	Point-190	126	0	35	0	35	0	35	0	0	0	0
	Point-192	127	0	35	0	35	0	35	0	0	0	0
	Point-194	128	0	35	0	35	0	35	0	0	0	0
Don Felipe Dr. North of Project Dwy.	Point-138	5	0	0	0	0	0	0	0	0	0	0
	Point-136	6	0	0	0	0	0	0	0	0	0	0
	Point-137	7	0	0	0	0	0	0	0	0	0	0
	Point-135	8	0	0	0	0	0	0	0	0	0	0
Palmero Blvd. S of Stocker St.	Point-195	129	0	0	0	0	0	0	0	0	0	0
	Point-196	130	0	0	0	0	0	0	0	0	0	0
	Point-198	131	0	0	0	0	0	0	0	0	0	0
	Point-200	132	0	0	0	0	0	0	0	0	0	0
	Point-202	133	0	0	0	0	0	0	0	0	0	0

REPORT:	**Results: Sound Levels - Input Heights**		
TNM VERSION:	3.1.7970.37608	REPORT DATE:	17 April 2024
CALCULATED WITH:	3.1.7970.37608	CALCULATION DATE:	4/1/2024 3:54:10 PM
CASE:	Stocker Street_Existing_PM	ORGANIZATION:	Terry A. Hayes Associates Inc.
ANALYSIS BY:	kbartholow	PROJECT/CONTRACT:	
DEFAULT GROUND TYPE:	Pavement		
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state highway agency	
PAVEMENT TYPE(S) USED:	Average	substantiates the use of a different type with approval of FHWA.	

			Noise Reduction			Barrier Cost			
			Min	Avg	Max	Area / Volume	Lineal	Total	Total/DUs
Results for:		DUs	dB	dB	dB	$	$	$	$
Receivers in the Barrier Design:	All	0	0.0	0.0	0.0	0	0	0	NaN
	All Impacted	0	---	---	---	0	0	0	---
Meeting Noise Reduction Goal:	All	0	---	---	---	0	0	0	---
	All Impacted	0	---	---	---	0	0	0	---

Receiver				Modeled Traffic Noise Levels								
				All Abatement Barriers at Zero Height					With Abatement Barriers			
				LAeq		Increase over Existing				Noise Reduction		Calc.
Name	No.	DUs	Existing LAeq	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact	Calc. LAeq	Calc.	Goal	Minus Goal
			dBA	dBA	dBA	dBA	dBA		dBA	dBA	dBA	dBA
Receiver-1	0	0	---	59.6	0.0	---	---	Sound Level	59.6	0.0	8.0	-8.0
Receiver-2	0	0	---	62.5	0.0	---	---	Sound Level	62.5	0.0	8.0	-8.0
Receiver-3	0	0	---	58.1	0.0	---	---	Sound Level	58.1	0.0	8.0	-8.0
Receiver-4	0	0	---	58.9	0.0	---	---	Sound Level	58.9	0.0	8.0	-8.0
Receiver-5	0	0	---	57.1	0.0	---	---	Sound Level	57.1	0.0	8.0	-8.0
Receiver-6	0	0	---	57.0	0.0	---	---	Sound Level	57.0	0.0	8.0	-8.0
Receiver-7	0	0	---	59.4	0.0	---	---	Sound Level	59.4	0.0	8.0	-8.0
Receiver-8	0	0	---	68.0	0.0	---	---	Sound Level	68.0	0.0	8.0	-8.0
Receiver-9	0	0	---	67.6	0.0	---	---	Sound Level	67.6	0.0	8.0	-8.0
Receiver-10	0	0	---	68.4	0.0	---	---	Sound Level	68.4	0.0	8.0	-8.0
Receiver-11	0	0	---	63.5	0.0	---	---	Sound Level	63.5	0.0	8.0	-8.0
Receiver-12	0	0	---	60.6	0.0	---	---	Sound Level	60.6	0.0	8.0	-8.0
Receiver-13	0	0	---	58.9	0.0	---	---	Sound Level	58.9	0.0	8.0	-8.0
Receiver-14	0	0	---	58.0	0.0	---	---	Sound Level	58.0	0.0	8.0	-8.0
Receiver-15	0	0	---	67.0	0.0	---	---	Sound Level	67.0	0.0	8.0	-8.0

REPORT:	**Results: Sound Levels - Input Heights**		
TNM VERSION:	3.1.7970.37608	REPORT DATE:	17 April 2024
CALCULATED WITH:	3.1.7970.37608	CALCULATION DATE:	4/1/2024 3:54:10 PM
CASE:	Stocker Street_Existing_PM	ORGANIZATION:	Terry A. Hayes Associates Inc.
ANALYSIS BY:	kbartholow	PROJECT/CONTRACT:	
DEFAULT GROUND TYPE:	Pavement		
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state highway agency	
PAVEMENT TYPE(S) USED:	Average	substantiates the use of a different type with approval of FHWA.	

			Noise Reduction			Barrier Cost			
			Min	Avg	Max	Area / Volume	Lineal	Total	Total/DUs
Results for:		DUs	dB	dB	dB	$	$	$	$
Receivers in the Barrier Design:	All	0	0.0	0.0	0.0	0	0	0	NaN
	All Impacted	0	---	---	---	0	0	0	---
Meeting Noise Reduction Goal:	All	0	---	---	---	0	0	0	---
	All Impacted	0	---	---	---	0	0	0	---

Receiver				Modeled Traffic Noise Levels								
				All Abatement Barriers at Zero Height					With Abatement Barriers			
				LAeq		Increase over Existing				Noise Reduction		Calc.
Name	No.	DUs	Existing LAeq	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact	Calc. LAeq	Calc.	Goal	Minus Goal
			dBA	dBA	dBA	dBA	dBA		dBA	dBA	dBA	dBA
Receiver-16	0	0	---	64.4	0.0	---	---	Sound Level	64.4	0.0	8.0	-8.0
Receiver-17	0	0	---	61.1	0.0	---	---	Sound Level	61.1	0.0	8.0	-8.0
Receiver-18	0	0	---	59.1	0.0	---	---	Sound Level	59.1	0.0	8.0	-8.0
Receiver-19	0	0	---	44.9	0.0	---	---	Sound Level	44.9	0.0	8.0	-8.0

REPORT:	**INPUT TRAFFIC FOR TNM VEHICLES (LAeq)**		
TNM VERSION:	3.1.7970.37608	REPORT DATE:	17 April 2024
CALCULATED WITH:	3.1.7970.37608	CALCULATION DATE:	4/1/2024 3:54:10 PM
CASE:	Stocker Street_Existing_PM	ORGANIZATION:	Terry A. Hayes Associates Inc.
ANALYSIS BY:	kbartholow	PROJECT/CONTRACT:	

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]
Stocker St. EB west of Don Felipe Dr.	Point-100	68	890	45	19	45	9	45	0	0	0	0
	Point-101	69	890	45	19	45	9	45	0	0	0	0
	Point-103	70	890	45	19	45	9	45	0	0	0	0
	Point-105	71	890	45	19	45	9	45	0	0	0	0
	Point-107	72	890	45	19	45	9	45	0	0	0	0
	Point-109	73	890	45	19	45	9	45	0	0	0	0
	Point-111	74	890	45	19	45	9	45	0	0	0	0
	Point-113	75	890	45	19	45	9	45	0	0	0	0
	Point-115	76	890	45	19	45	9	45	0	0	0	0
Stocker St. WB west of Don Felipe Dr.	Point-116	77	890	45	19	45	9	45	0	0	0	0
	Point-117	78	890	45	19	45	9	45	0	0	0	0
	Point-119	79	890	45	19	45	9	45	0	0	0	0
	Point-121	80	890	45	19	45	9	45	0	0	0	0
	Point-123	81	890	45	19	45	9	45	0	0	0	0
	Point-125	82	890	45	19	45	9	45	0	0	0	0

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
Stocker St. WB west of Don Felipe Dr.	Point-127	83	890	45	19	45	9	45	0	0	0	0
	Point-129	84	890	45	19	45	9	45	0	0	0	0
	Point-131	85	890	45	19	45	9	45	0	0	0	0
Don Felipe Dr. Between Stocker St. and Project Dwy.	Point-132	0	430	25	4	25	0	0	0	0	0	0
	Point-133	1	430	25	4	25	0	0	0	0	0	0
	Point-138	2	430	25	4	25	0	0	0	0	0	0
Stocker St. EB between Project Dwy. and Palmero Blvd.	Point-139	92	830	45	17	45	9	45	0	0	0	0
	Point-140	93	830	45	17	45	9	45	0	0	0	0
	Point-142	94	830	45	17	45	9	45	0	0	0	0
	Point-144	95	830	45	17	45	9	45	0	0	0	0
Stocker St. WB between Project Dwy. and Palmero Blvd.	Point-145	96	830	45	17	45	9	45	0	0	0	0
	Point-146	97	830	45	17	45	9	45	0	0	0	0
	Point-149	99	830	45	17	45	9	45	0	0	0	0
	Point-148	3	830	45	17	45	9	45	0	0	0	0
Stocker St. EB between Project Dwy. and Santa Rosalia Dr.	Point-150	100	901	35	19	35	10	35	0	0	0	0
	Point-151	101	901	35	19	35	10	35	0	0	0	0

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
Stocker St. EB between Project Dwy. and Santa Rosalia Dr.	Point-153	102	901	35	19	35	10	35	0	0	0	0
	Point-155	103	901	35	19	35	10	35	0	0	0	0
Stocker St. WB between Project Dwy. and Santa Rosalia Dr.	Point-156	104	901	35	19	35	10	35	0	0	0	0
	Point-157	105	901	35	19	35	10	35	0	0	0	0
	Point-160	107	901	35	19	35	10	35	0	0	0	0
	Point-159	4	901	35	19	35	10	35	0	0	0	0
Santa Rosalia Dr. south of Stocker Street.	Point-161	108	369	25	4	25	0	0	0	0	0	0
	Point-162	109	369	25	4	25	0	0	0	0	0	0
	Point-164	110	369	25	4	25	0	0	0	0	0	0
	Point-166	111	369	25	4	25	0	0	0	0	0	0
	Point-168	112	369	25	4	25	0	0	0	0	0	0
	Point-170	113	369	25	4	25	0	0	0	0	0	0
	Point-172	114	369	25	4	25	0	0	0	0	0	0
Santa Rosalia Dr. north of Project Dwy.	Point-173	115	941	35	14	35	5	35	0	0	0	0
	Point-174	116	941	35	14	35	5	35	0	0	0	0
	Point-176	117	941	35	14	35	5	35	0	0	0	0
	Point-178	118	941	35	14	35	5	35	0	0	0	0
	Point-180	119	941	35	14	35	5	35	0	0	0	0
	Point-182	120	941	35	14	35	5	35	0	0	0	0

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
Santa Rosalia Dr. between Project Dwy. and Stocker St.	Point-183	121	988	25	15	25	5	25	0	0	0	0
	Point-184	122	988	25	15	25	5	25	0	0	0	0
	Point-186	123	988	25	15	25	5	25	0	0	0	0
	Point-188	124	988	25	15	25	5	25	0	0	0	0
Stocker St. east of Santa Rosalia Dr.	Point-189	125	1802	35	37	35	19	35	0	0	0	0
	Point-190	126	1802	35	37	35	19	35	0	0	0	0
	Point-192	127	1802	35	37	35	19	35	0	0	0	0
	Point-194	128	1802	35	37	35	19	35	0	0	0	0
Don Felipe Dr. North of Project Dwy.	Point-138	5	430	25	4	25	0	0	0	0	0	0
	Point-136	6	430	25	4	25	0	0	0	0	0	0
	Point-137	7	430	25	4	25	0	0	0	0	0	0
	Point-135	8	430	25	4	25	0	0	0	0	0	0
Palmero Blvd. S of Stocker St.	Point-195	129	55	25	1	25	0	0	0	0	0	0
	Point-196	130	55	25	1	25	0	0	0	0	0	0
	Point-198	131	55	25	1	25	0	0	0	0	0	0
	Point-200	132	55	25	1	25	0	0	0	0	0	0
	Point-202	133	55	25	1	25	0	0	0	0	0	0

REPORT:	**Results: Sound Levels - Input Heights**		
TNM VERSION:	3.1.7970.37608	REPORT DATE:	17 April 2024
CALCULATED WITH:	3.1.7970.37608	CALCULATION DATE:	4/1/2024 5:57:39 PM
CASE:	Stocker Street_Future No Project_PM	ORGANIZATION:	Terry A. Hayes Associates Inc.
ANALYSIS BY:	kbartholow	PROJECT/CONTRACT:	
DEFAULT GROUND TYPE:	Pavement		
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state highway agency	
PAVEMENT TYPE(S) USED:	Average	substantiates the use of a different type with approval of FHWA.	

			Noise Reduction			Barrier Cost			
			Min	Avg	Max	Area / Volume	Lineal	Total	Total/DUs
Results for:		DUs	dB	dB	dB	$	$	$	$
Receivers in the Barrier Design:	All	0	0.0	0.0	0.0	0	0	0	NaN
	All Impacted	0	---	---	---	0	0	0	---
Meeting Noise Reduction Goal:	All	0	---	---	---	0	0	0	---
	All Impacted	0	---	---	---	0	0	0	---

Receiver				Modeled Traffic Noise Levels								
				All Abatement Barriers at Zero Height					With Abatement Barriers			
				LAeq		Increase over Existing				Noise Reduction		Calc.
Name	No.	DUs	Existing LAeq	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact	Calc. LAeq	Calc.	Goal	Minus Goal
			dBA	dBA	dBA	dBA	dBA		dBA	dBA	dBA	dBA
Receiver-1	0	0	---	60.2	0.0	---	---	Sound Level	60.2	0.0	8.0	-8.0
Receiver-2	0	0	---	63.2	0.0	---	---	Sound Level	63.2	0.0	8.0	-8.0
Receiver-3	0	0	---	58.8	0.0	---	---	Sound Level	58.8	0.0	8.0	-8.0
Receiver-4	0	0	---	59.6	0.0	---	---	Sound Level	59.6	0.0	8.0	-8.0
Receiver-5	0	0	---	57.7	0.0	---	---	Sound Level	57.7	0.0	8.0	-8.0
Receiver-6	0	0	---	57.6	0.0	---	---	Sound Level	57.6	0.0	8.0	-8.0
Receiver-7	0	0	---	60.0	0.0	---	---	Sound Level	60.0	0.0	8.0	-8.0
Receiver-8	0	0	---	68.7	0.0	---	---	Sound Level	68.7	0.0	8.0	-8.0
Receiver-9	0	0	---	68.3	0.0	---	---	Sound Level	68.3	0.0	8.0	-8.0
Receiver-10	0	0	---	69.1	0.0	---	---	Sound Level	69.1	0.0	8.0	-8.0
Receiver-11	0	0	---	64.1	0.0	---	---	Sound Level	64.1	0.0	8.0	-8.0
Receiver-12	0	0	---	61.2	0.0	---	---	Sound Level	61.2	0.0	8.0	-8.0
Receiver-13	0	0	---	59.5	0.0	---	---	Sound Level	59.5	0.0	8.0	-8.0
Receiver-14	0	0	---	58.7	0.0	---	---	Sound Level	58.7	0.0	8.0	-8.0

REPORT:	**Results: Sound Levels - Input Heights**		
TNM VERSION:	3.1.7970.37608	REPORT DATE:	17 April 2024
CALCULATED WITH:	3.1.7970.37608	CALCULATION DATE:	4/1/2024 5:57:39 PM
CASE:	Stocker Street_Future No Project_PM	ORGANIZATION:	Terry A. Hayes Associates Inc.
ANALYSIS BY:	kbartholow	PROJECT/CONTRACT:	
DEFAULT GROUND TYPE:	Pavement		
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state highway agency	
PAVEMENT TYPE(S) USED:	Average	substantiates the use of a different type with approval of FHWA.	

			Noise Reduction			Barrier Cost			
			Min	Avg	Max	Area / Volume	Lineal	Total	Total/DUs
Results for:		DUs	dB	dB	dB	$	$	$	$
Receivers in the Barrier Design:	All	0	0.0	0.0	0.0	0	0	0	NaN
	All Impacted	0	---	---	---	0	0	0	---
Meeting Noise Reduction Goal:	All	0	---	---	---	0	0	0	---
	All Impacted	0	---	---	---	0	0	0	---

Receiver				Modeled Traffic Noise Levels								
				All Abatement Barriers at Zero Height					With Abatement Barriers			
				LAeq		Increase over Existing				Noise Reduction		Calc.
Name	No.	DUs	Existing LAeq	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact	Calc. LAeq	Calc.	Goal	Minus Goal
			dBA	dBA	dBA	dBA	dBA		dBA	dBA	dBA	dBA
Receiver-15	0	0	---	67.6	0.0	---	---	Sound Level	67.6	0.0	8.0	-8.0
Receiver-16	0	0	---	65.0	0.0	---	---	Sound Level	65.0	0.0	8.0	-8.0
Receiver-17	0	0	---	61.7	0.0	---	---	Sound Level	61.7	0.0	8.0	-8.0
Receiver-18	0	0	---	59.6	0.0	---	---	Sound Level	59.6	0.0	8.0	-8.0

REPORT:	**INPUT TRAFFIC FOR TNM VEHICLES (LAeq)**		
TNM VERSION:	3.1.7970.37608	REPORT DATE:	17 April 2024
CALCULATED WITH:	3.1.7970.37608	CALCULATION DATE:	4/1/2024 5:57:39 PM
CASE:	Stocker Street_Future No Project_PM	ORGANIZATION:	Terry A. Hayes Associates Inc.
ANALYSIS BY:	kbartholow	PROJECT/CONTRACT:	

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]
Stocker St. EB west of Don Felipe Dr.	Point-100	68	1036	45	22	45	11	45	0	0	0	0
	Point-101	69	1036	45	22	45	11	45	0	0	0	0
	Point-103	70	1036	45	22	45	11	45	0	0	0	0
	Point-105	71	1036	45	22	45	11	45	0	0	0	0
	Point-107	72	1036	45	22	45	11	45	0	0	0	0
	Point-109	73	1036	45	22	45	11	45	0	0	0	0
	Point-111	74	1036	45	22	45	11	45	0	0	0	0
	Point-113	75	1036	45	22	45	11	45	0	0	0	0
	Point-115	76	1036	45	22	45	11	45	0	0	0	0
Stocker St. WB west of Don Felipe Dr.	Point-116	77	1036	45	22	45	11	45	0	0	0	0
	Point-117	78	1036	45	22	45	11	45	0	0	0	0
	Point-119	79	1036	45	22	45	11	45	0	0	0	0
	Point-121	80	1036	45	22	45	11	45	0	0	0	0
	Point-123	81	1036	45	22	45	11	45	0	0	0	0
	Point-125	82	1036	45	22	45	11	45	0	0	0	0

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
Stocker St. WB west of Don Felipe Dr.	Point-127	83	1036	45	22	45	11	45	0	0	0	0
	Point-129	84	1036	45	22	45	11	45	0	0	0	0
	Point-131	85	1036	45	22	45	11	45	0	0	0	0
Don Felipe Dr. Between Stocker St. and Project Dwy.	Point-132	0	488	25	5	25	0	0	0	0	0	0
	Point-133	1	488	25	5	25	0	0	0	0	0	0
	Point-138	2	488	25	5	25	0	0	0	0	0	0
Stocker St. EB between Project Dwy. and Palmero Blvd.	Point-139	92	976	45	20	45	10	45	0	0	0	0
	Point-140	93	976	45	20	45	10	45	0	0	0	0
	Point-142	94	976	45	20	45	10	45	0	0	0	0
	Point-144	95	976	45	20	45	10	45	0	0	0	0
Stocker St. WB between Project Dwy. and Palmero Blvd.	Point-145	96	976	45	20	45	10	45	0	0	0	0
	Point-146	97	976	45	20	45	10	45	0	0	0	0
	Point-149	99	976	45	20	45	10	45	0	0	0	0
	Point-148	3	976	45	20	45	10	45	0	0	0	0
Stocker St. EB between Project Dwy. and Santa Rosalia Dr.	Point-150	100	1063	35	22	35	11	35	0	0	0	0
	Point-151	101	1063	35	22	35	11	35	0	0	0	0

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
Stocker St. EB between Project Dwy. and Santa Rosalia Dr.	Point-153	102	1063	35	22	35	11	35	0	0	0	0
	Point-155	103	1063	35	22	35	11	35	0	0	0	0
Stocker St. WB between Project Dwy. and Santa Rosalia Dr.	Point-156	104	1063	35	20	35	11	35	0	0	0	0
	Point-157	105	1063	35	20	35	11	35	0	0	0	0
	Point-160	107	1063	35	20	35	11	35	0	0	0	0
	Point-159	4	1063	35	20	35	11	35	0	0	0	0
Santa Rosalia Dr. south of Stocker Street.	Point-161	108	388	25	4	25	0	0	0	0	0	0
	Point-162	109	388	25	4	25	0	0	0	0	0	0
	Point-164	110	388	25	4	25	0	0	0	0	0	0
	Point-166	111	388	25	4	25	0	0	0	0	0	0
	Point-168	112	388	25	4	25	0	0	0	0	0	0
	Point-170	113	388	25	4	25	0	0	0	0	0	0
	Point-172	114	388	25	4	25	0	0	0	0	0	0
Santa Rosalia Dr. north of Project Dwy.	Point-173	115	1025	35	16	35	5	35	0	0	0	0
	Point-174	116	1025	35	16	35	5	35	0	0	0	0
	Point-176	117	1025	35	16	35	5	35	0	0	0	0
	Point-178	118	1025	35	16	35	5	35	0	0	0	0
	Point-180	119	1025	35	16	35	5	35	0	0	0	0
	Point-182	120	1025	35	16	35	5	35	0	0	0	0

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
Santa Rosalia Dr. between Project Dwy. and Stocker St.	Point-183	121	1063	25	22	25	11	25	0	0	0	0
	Point-184	122	1063	25	22	25	11	25	0	0	0	0
	Point-186	123	1063	25	22	25	11	25	0	0	0	0
	Point-188	124	1063	25	22	25	11	25	0	0	0	0
Stocker St. east of Santa Rosalia Dr.	Point-189	125	2068	35	43	35	21	35	0	0	0	0
	Point-190	126	2068	35	43	35	21	35	0	0	0	0
	Point-192	127	2068	35	43	35	21	35	0	0	0	0
	Point-194	128	2068	35	43	35	21	35	0	0	0	0
Don Felipe Dr. North of Project Dwy.	Point-138	5	488	25	5	25	0	0	0	0	0	0
	Point-136	6	488	25	5	25	0	0	0	0	0	0
	Point-137	7	488	25	5	25	0	0	0	0	0	0
	Point-135	8	488	25	5	25	0	0	0	0	0	0
Palmero Blvd. S of Stocker St.	Point-195	129	58	25	1	25	0	0	0	0	0	0
	Point-196	130	58	25	1	25	0	0	0	0	0	0
	Point-198	131	58	25	1	25	0	0	0	0	0	0
	Point-200	132	58	25	1	25	0	0	0	0	0	0
	Point-202	133	58	25	1	25	0	0	0	0	0	0

REPORT:	**Results: Sound Levels - Input Heights**		
TNM VERSION:	3.1.7970.37608	REPORT DATE:	17 April 2024
CALCULATED WITH:	3.1.7970.37608	CALCULATION DATE:	4/1/2024 5:58:19 PM
CASE:	Stocker Street_Future Plus Project_PM	ORGANIZATION:	Terry A. Hayes Associates Inc.
ANALYSIS BY:	kbartholow	PROJECT/CONTRACT:	
DEFAULT GROUND TYPE:	Pavement		
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state highway agency	
PAVEMENT TYPE(S) USED:	Average	substantiates the use of a different type with approval of FHWA.	

			Noise Reduction			Barrier Cost			
			Min	Avg	Max	Area / Volume	Lineal	Total	Total/DUs
Results for:		DUs	dB	dB	dB	$	$	$	$
Receivers in the Barrier Design:	All	0	0.0	0.0	0.0	0	0	0	NaN
	All Impacted	0	---	---	---	0	0	0	---
Meeting Noise Reduction Goal:	All	0	---	---	---	0	0	0	---
	All Impacted	0	---	---	---	0	0	0	---

Receiver				Modeled Traffic Noise Levels								
				All Abatement Barriers at Zero Height					With Abatement Barriers			
				LAeq		Increase over Existing				Noise Reduction		Calc.
Name	No.	DUs	Existing LAeq	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact	Calc. LAeq	Calc.	Goal	Minus Goal
			dBA	dBA	dBA	dBA	dBA		dBA	dBA	dBA	dBA
Receiver-1	0	0	---	60.2	0.0	---	---	Sound Level	60.2	0.0	8.0	-8.0
Receiver-2	0	0	---	63.3	0.0	---	---	Sound Level	63.3	0.0	8.0	-8.0
Receiver-3	0	0	---	58.7	0.0	---	---	Sound Level	58.7	0.0	8.0	-8.0
Receiver-4	0	0	---	59.6	0.0	---	---	Sound Level	59.6	0.0	8.0	-8.0
Receiver-5	0	0	---	57.6	0.0	---	---	Sound Level	57.6	0.0	8.0	-8.0
Receiver-6	0	0	---	53.9	0.0	---	---	Sound Level	53.9	0.0	8.0	-8.0
Receiver-7	0	0	---	58.1	0.0	---	---	Sound Level	58.1	0.0	8.0	-8.0
Receiver-8	0	0	---	68.8	0.0	---	---	Sound Level	68.8	0.0	8.0	-8.0
Receiver-9	0	0	---	68.4	0.0	---	---	Sound Level	68.4	0.0	8.0	-8.0
Receiver-10	0	0	---	69.3	0.0	---	---	Sound Level	69.3	0.0	8.0	-8.0
Receiver-11	0	0	---	64.3	0.0	---	---	Sound Level	64.3	0.0	8.0	-8.0
Receiver-12	0	0	---	61.3	0.0	---	---	Sound Level	61.3	0.0	8.0	-8.0
Receiver-13	0	0	---	59.6	0.0	---	---	Sound Level	59.6	0.0	8.0	-8.0
Receiver-14	0	0	---	58.8	0.0	---	---	Sound Level	58.8	0.0	8.0	-8.0

REPORT:	**Results: Sound Levels - Input Heights**		
TNM VERSION:	3.1.7970.37608	REPORT DATE:	17 April 2024
CALCULATED WITH:	3.1.7970.37608	CALCULATION DATE:	4/1/2024 5:58:19 PM
CASE:	Stocker Street_Future Plus Project_PM	ORGANIZATION:	Terry A. Hayes Associates Inc.
ANALYSIS BY:	kbartholow	PROJECT/CONTRACT:	
DEFAULT GROUND TYPE:	Pavement		
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state highway agency	
PAVEMENT TYPE(S) USED:	Average	substantiates the use of a different type with approval of FHWA.	

			Noise Reduction			Barrier Cost			
			Min	Avg	Max	Area / Volume	Lineal	Total	Total/DUs
Results for:		DUs	dB	dB	dB	$	$	$	$
Receivers in the Barrier Design:	All	0	0.0	0.0	0.0	0	0	0	NaN
	All Impacted	0	---	---	---	0	0	0	---
Meeting Noise Reduction Goal:	All	0	---	---	---	0	0	0	---
	All Impacted	0	---	---	---	0	0	0	---

Receiver				Modeled Traffic Noise Levels								
				All Abatement Barriers at Zero Height					With Abatement Barriers			
				LAeq		Increase over Existing				Noise Reduction		Calc.
Name	No.	DUs	Existing LAeq	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact	Calc. LAeq	Calc.	Goal	Minus Goal
			dBA	dBA	dBA	dBA	dBA		dBA	dBA	dBA	dBA
Receiver-15	0	0	---	68.4	0.0	---	---	Sound Level	68.4	0.0	8.0	-8.0
Receiver-16	0	0	---	65.4	0.0	---	---	Sound Level	65.4	0.0	8.0	-8.0
Receiver-17	0	0	---	62.0	0.0	---	---	Sound Level	62.0	0.0	8.0	-8.0
Receiver-18	0	0	---	59.8	0.0	---	---	Sound Level	59.8	0.0	8.0	-8.0

REPORT:	**INPUT TRAFFIC FOR TNM VEHICLES (LAeq)**		
TNM VERSION:	3.1.7970.37608	REPORT DATE:	17 April 2024
CALCULATED WITH:	3.1.7970.37608	CALCULATION DATE:	4/1/2024 5:58:19 PM
CASE:	Stocker Street_Future Plus Project_PM	ORGANIZATION:	Terry A. Hayes Associates Inc.
ANALYSIS BY:	kbartholow	PROJECT/CONTRACT:	

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]
Stocker St. EB west of Don Felipe Dr.	Point-100	68	1066	45	22	45	11	45	0	0	0	0
	Point-101	69	1066	45	22	45	11	45	0	0	0	0
	Point-103	70	1066	45	22	45	11	45	0	0	0	0
	Point-105	71	1066	45	22	45	11	45	0	0	0	0
	Point-107	72	1066	45	22	45	11	45	0	0	0	0
	Point-109	73	1066	45	22	45	11	45	0	0	0	0
	Point-111	74	1066	45	22	45	11	45	0	0	0	0
	Point-113	75	1066	45	22	45	11	45	0	0	0	0
	Point-115	76	1066	45	22	45	11	45	0	0	0	0
Stocker St. WB west of Don Felipe Dr.	Point-116	77	1066	45	22	45	11	45	0	0	0	0
	Point-117	78	1066	45	22	45	11	45	0	0	0	0
	Point-119	79	1066	45	22	45	11	45	0	0	0	0
	Point-121	80	1066	45	22	45	11	45	0	0	0	0
	Point-123	81	1066	45	22	45	11	45	0	0	0	0
	Point-125	82	1066	45	22	45	11	45	0	0	0	0

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
Stocker St. WB west of Don Felipe Dr.	Point-127	83	1066	45	22	45	11	45	0	0	0	0
	Point-129	84	1066	45	22	45	11	45	0	0	0	0
	Point-131	85	1066	45	22	45	11	45	0	0	0	0
Don Felipe Dr. Between Stocker St. and Project Dwy.	Point-132	0	488	25	5	25	0	0	0	0	0	0
	Point-133	1	488	25	5	25	0	0	0	0	0	0
	Point-138	2	488	25	5	25	0	0	0	0	0	0
Stocker St. EB between Project Dwy. and Palmero Blvd.	Point-139	92	1008	45	21	45	11	45	0	0	0	0
	Point-140	93	1008	45	21	45	11	45	0	0	0	0
	Point-142	94	1008	45	21	45	11	45	0	0	0	0
	Point-144	95	1008	45	21	45	11	45	0	0	0	0
Stocker St. WB between Project Dwy. and Palmero Blvd.	Point-145	96	1008	45	21	45	11	45	0	0	0	0
	Point-146	97	1008	45	21	45	11	45	0	0	0	0
	Point-149	99	1008	45	21	45	11	45	0	0	0	0
	Point-148	3	1008	45	21	45	11	45	0	0	0	0
Stocker St. EB between Project Dwy. and Santa Rosalia Dr.	Point-150	100	1306	35	27	35	13	35	0	0	0	0
	Point-151	101	1306	35	27	35	13	35	0	0	0	0

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
Stocker St. EB between Project Dwy. and Santa Rosalia Dr.	Point-153	102	1306	35	27	35	13	35	0	0	0	0
	Point-155	103	1306	35	27	35	13	35	0	0	0	0
Stocker St. WB between Project Dwy. and Santa Rosalia Dr.	Point-156	104	1306	35	27	35	13	35	0	0	0	0
	Point-157	105	1306	35	27	35	13	35	0	0	0	0
	Point-160	107	1306	35	27	35	13	35	0	0	0	0
	Point-159	4	1306	35	27	35	13	35	0	0	0	0
Santa Rosalia Dr. south of Stocker Street.	Point-161	108	398	25	4	25	0	0	0	0	0	0
	Point-162	109	398	25	4	25	0	0	0	0	0	0
	Point-164	110	398	25	4	25	0	0	0	0	0	0
	Point-166	111	398	25	4	25	0	0	0	0	0	0
	Point-168	112	398	25	4	25	0	0	0	0	0	0
	Point-170	113	398	25	4	25	0	0	0	0	0	0
	Point-172	114	398	25	4	25	0	0	0	0	0	0
Santa Rosalia Dr. north of Project Dwy.	Point-173	115	1131	35	17	35	6	35	0	0	0	0
	Point-174	116	1131	35	17	35	6	35	0	0	0	0
	Point-176	117	1131	35	17	35	6	35	0	0	0	0
	Point-178	118	1131	35	17	35	6	35	0	0	0	0
	Point-180	119	1131	35	17	35	6	35	0	0	0	0
	Point-182	120	1131	35	17	35	6	35	0	0	0	0

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
Santa Rosalia Dr. between Project Dwy. and Stocker St.	Point-183	121	1173	25	18	25	6	25	0	0	0	0
	Point-184	122	1173	25	18	25	6	25	0	0	0	0
	Point-186	123	1173	25	18	25	6	25	0	0	0	0
	Point-188	124	1173	25	18	25	6	25	0	0	0	0
Stocker St. east of Santa Rosalia Dr.	Point-189	125	2206	35	45	35	23	35	0	0	0	0
	Point-190	126	2206	35	45	35	23	35	0	0	0	0
	Point-192	127	2206	35	45	35	23	35	0	0	0	0
	Point-194	128	2206	35	45	35	23	35	0	0	0	0
Don Felipe Dr. North of Project Dwy.	Point-138	5	488	25	5	25	0	0	0	0	0	0
	Point-136	6	488	25	5	25	0	0	0	0	0	0
	Point-137	7	488	25	5	25	0	0	0	0	0	0
	Point-135	8	488	25	5	25	0	0	0	0	0	0
Palmero Blvd. S of Stocker St.	Point-195	129	64	25	1	25	0	0	0	0	0	0
	Point-196	130	64	25	1	25	0	0	0	0	0	0
	Point-198	131	64	25	1	25	0	0	0	0	0	0
	Point-200	132	64	25	1	25	0	0	0	0	0	0
	Point-202	133	64	25	1	25	0	0	0	0	0	0

REPORT:	**Results: Sound Levels - Input Heights**		
TNM VERSION:	3.1.7970.37608	REPORT DATE:	17 April 2024
CALCULATED WITH:	3.1.7970.37608	CALCULATION DATE:	3/26/2024 3:14:38 PM
CASE:	Stocker Street_Internal Roadway Noise_CNEL	ORGANIZATION:	Terry A. Hayes Associates Inc.
ANALYSIS BY:	kbartholow	PROJECT/CONTRACT:	
DEFAULT GROUND TYPE:	Pavement		
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state highway agency	
PAVEMENT TYPE(S) USED:	Average	substantiates the use of a different type with approval of FHWA.	

			Noise Reduction			Barrier Cost			
			Min	Avg	Max	Area / Volume	Lineal	Total	Total/DUs
Results for:		DUs	dB	dB	dB	$	$	$	$
Receivers in the Barrier Design:	All	0	0.0	0.0	0.0	0	0	0	NaN
	All Impacted	0	---	---	---	0	0	0	---
Meeting Noise Reduction Goal:	All	0	---	---	---	0	0	0	---
	All Impacted	0	---	---	---	0	0	0	---

Receiver				Modeled Traffic Noise Levels								
				All Abatement Barriers at Zero Height					With Abatement Barriers			
				Lden		Increase over Existing				Noise Reduction		Calc.
Name	No.	DUs	Existing Lden	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact	Calc. Lden	Calc.	Goal	Minus Goal
			dBA	dBA	dBA	dBA	dBA		dBA	dBA	dBA	dBA
Receiver-6	0	0	---	48.6	0.0	---	---	Sound Level	48.6	0.0	8.0	-8.0
Receiver-7	0	0	---	52.1	0.0	---	---	Sound Level	52.1	0.0	8.0	-8.0
Receiver-9	0	0	---	37.0	0.0	---	---	Sound Level	37.0	0.0	8.0	-8.0
Receiver-10	0	0	---	36.3	0.0	---	---	Sound Level	36.3	0.0	8.0	-8.0

REPORT: **INPUT TRAFFIC FOR TNM VEHICLES (Lden)**

TNM VERSION: 3.1.7970.37608

CALCULATED WITH: 3.1.7970.37608

CASE: Stocker Street_Internal Roadway Noise_CNEL

PATH:

CALCULATION SEQUENCE NUMBER:

REPORT DATE: 17 April 2024

CALCULATION DATE: 3/26/2024 3:14:38 PM

ORGANIZATION: Terry A. Hayes Associates Inc.

ANALYSIS BY: kbartholow

TNM SERIAL NUMBER:

PROJECT/CONTRACT:

Roadway Name	Road Segment			Auto				Medium Truck				Heavy Truck				Bus				Motorcycle			
	Start Point		ADT	D	E	N	Speed	D	E	N	Speed	D	E	N	Speed	D	E	N	Speed	D	E	N	Speed
	Name	No.																					
			[Veh/24 hr]	[%]	[%]	[%]	[mph]	[%]	[%]	[%]	[mph]	[%]	[%]	[%]	[mph]	[%]	[%]	[%]	[mph]	[%]	[%]	[%]	[mph]
Parking Access	Point-0	0	2873	0	100	0	5	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
	Point-1	1	2873	0	100	0	5	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
Access Road	Point-2	4	6	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
	Point-3	5	6	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
Stocker Street Driveway	Point-4	6	6	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
	Point-5	7	6	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
	Point-7	8	6	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0
	Point-9	9	6	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0

REPORT:	**Results: Sound Levels - Input Heights**		
TNM VERSION:	3.1.7970.37608	REPORT DATE:	17 April 2024
CALCULATED WITH:	3.1.7970.37608	CALCULATION DATE:	3/26/2024 3:15:35 PM
CASE:	Stocker Street_Internal Roadway Noise_Leq	ORGANIZATION:	Terry A. Hayes Associates Inc.
ANALYSIS BY:	kbartholow	PROJECT/CONTRACT:	
DEFAULT GROUND TYPE:	Pavement		
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state highway agency	
PAVEMENT TYPE(S) USED:	Average	substantiates the use of a different type with approval of FHWA.	

			Noise Reduction			Barrier Cost			
			Min	Avg	Max	Area / Volume	Lineal	Total	Total/DUs
Results for:		DUs	dB	dB	dB	$	$	$	$
Receivers in the Barrier Design:	All	0	0.0	0.0	0.0	0	0	0	NaN
	All Impacted	0	---	---	---	0	0	0	---
Meeting Noise Reduction Goal:	All	0	---	---	---	0	0	0	---
	All Impacted	0	---	---	---	0	0	0	---

Receiver				Modeled Traffic Noise Levels								
				All Abatement Barriers at Zero Height					With Abatement Barriers			
				LAeq		Increase over Existing				Noise Reduction		Calc.
Name	No.	DUs	Existing LAeq	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact	Calc. LAeq	Calc.	Goal	Minus Goal
			dBA	dBA	dBA	dBA	dBA		dBA	dBA	dBA	dBA
Receiver-1	0	0	---	42.5	0.0	---	---	Sound Level	42.5	0.0	8.0	-8.0
Receiver-2	0	0	---	45.6	0.0	---	---	Sound Level	45.6	0.0	8.0	-8.0
Receiver-3	0	0	---	45.8	0.0	---	---	Sound Level	45.8	0.0	8.0	-8.0
Receiver-4	0	0	---	47.3	0.0	---	---	Sound Level	47.3	0.0	8.0	-8.0
Receiver-5	0	0	---	48.5	0.0	---	---	Sound Level	48.5	0.0	8.0	-8.0
Receiver-6	0	0	---	62.1	0.0	---	---	Sound Level	62.1	0.0	8.0	-8.0
Receiver-7	0	0	---	62.7	0.0	---	---	Sound Level	62.7	0.0	8.0	-8.0
Receiver-8	0	0	---	47.3	0.0	---	---	Sound Level	47.3	0.0	8.0	-8.0
Receiver-9	0	0	---	50.5	0.0	---	---	Sound Level	50.5	0.0	8.0	-8.0
Receiver-10	0	0	---	49.4	0.0	---	---	Sound Level	49.4	0.0	8.0	-8.0
Receiver-11	0	0	---	48.8	0.0	---	---	Sound Level	48.8	0.0	8.0	-8.0
Receiver-12	0	0	---	46.2	0.0	---	---	Sound Level	46.2	0.0	8.0	-8.0
Receiver-13	0	0	---	44.2	0.0	---	---	Sound Level	44.2	0.0	8.0	-8.0
Receiver-14	0	0	---	42.8	0.0	---	---	Sound Level	42.8	0.0	8.0	-8.0

REPORT:	**Results: Sound Levels - Input Heights**		
TNM VERSION:	3.1.7970.37608	REPORT DATE:	17 April 2024
CALCULATED WITH:	3.1.7970.37608	CALCULATION DATE:	3/26/2024 3:15:35 PM
CASE:	Stocker Street_Internal Roadway Noise_Leq	ORGANIZATION:	Terry A. Hayes Associates Inc.
ANALYSIS BY:	kbartholow	PROJECT/CONTRACT:	
DEFAULT GROUND TYPE:	Pavement		
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state highway agency	
PAVEMENT TYPE(S) USED:	Average	substantiates the use of a different type with approval of FHWA.	

			Noise Reduction			Barrier Cost			
			Min	Avg	Max	Area / Volume	Lineal	Total	Total/DUs
Results for:		DUs	dB	dB	dB	$	$	$	$
Receivers in the Barrier Design:	All	0	0.0	0.0	0.0	0	0	0	NaN
	All Impacted	0	---	---	---	0	0	0	---
Meeting Noise Reduction Goal:	All	0	---	---	---	0	0	0	---
	All Impacted	0	---	---	---	0	0	0	---

Receiver				Modeled Traffic Noise Levels								
				All Abatement Barriers at Zero Height					With Abatement Barriers			
				LAeq		Increase over Existing				Noise Reduction		Calc.
Name	No.	DUs	Existing LAeq	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact	Calc. LAeq	Calc.	Goal	Minus Goal
			dBA	dBA	dBA	dBA	dBA		dBA	dBA	dBA	dBA
Receiver-15	0	0	---	47.3	0.0	---	---	Sound Level	47.3	0.0	8.0	-8.0
Receiver-16	0	0	---	45.7	0.0	---	---	Sound Level	45.7	0.0	8.0	-8.0
Receiver-17	0	0	---	46.4	0.0	---	---	Sound Level	46.4	0.0	8.0	-8.0
Receiver-18	0	0	---	43.0	0.0	---	---	Sound Level	43.0	0.0	8.0	-8.0

REPORT:	**INPUT TRAFFIC FOR TNM VEHICLES (LAeq)**		
TNM VERSION:	3.1.7970.37608	REPORT DATE:	17 April 2024
CALCULATED WITH:	3.1.7970.37608	CALCULATION DATE:	3/26/2024 3:15:35 PM
CASE:	Stocker Street_Internal Roadway Noise_Leq	ORGANIZATION:	Terry A. Hayes Associates Inc.
ANALYSIS BY:	kbartholow	PROJECT/CONTRACT:	

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]
Parking Access	Point-0	0	355	5	0	0	6	5	0	0	0	0
	Point-1	1	355	5	0	0	6	5	0	0	0	0
Access Road	Point-2	4	0	0	0	0	6	5	0	0	0	0
	Point-3	5	0	0	0	0	6	5	0	0	0	0
Stocker Street Driveway	Point-4	6	0	0	0	0	6	5	0	0	0	0
	Point-5	7	0	0	0	0	6	5	0	0	0	0
	Point-7	8	0	0	0	0	6	5	0	0	0	0
	Point-9	9	0	0	0	0	6	5	0	0	0	0

REPORT:	**INPUT TRAFFIC FOR TNM VEHICLES (LAeq)**		
TNM VERSION:	3.2.8741.34338	REPORT DATE:	30 April 2025
CALCULATED WITH:	TNM v3.2.8741.34338	CALCULATION DATE:	4/30/2025 6:00:38 PM
CASE:	Stocker Street_Project Trips Only_PM	ORGANIZATION:	Terry A. Hayes Associates Inc.
ANALYSIS BY:	kbartholow	PROJECT/CONTRACT:	

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]	Volume [Veh/hr]	Speed [mph]
Stocker St. EB west of Don Felipe Dr.	Point-100	68	30	45	1	45	1	45	0	0	0	0
	Point-101	69	30	45	1	45	1	45	0	0	0	0
	Point-103	70	30	45	1	45	1	45	0	0	0	0
	Point-105	71	30	45	1	45	1	45	0	0	0	0
	Point-107	72	30	45	1	45	1	45	0	0	0	0
	Point-109	73	30	45	1	45	1	45	0	0	0	0
	Point-111	74	30	45	1	45	1	45	0	0	0	0
	Point-113	75	30	45	1	45	1	45	0	0	0	0
	Point-115	76	30	45	1	45	1	45	0	0	0	0
Stocker St. WB west of Don Felipe Dr.	Point-116	77	30	45	1	45	1	45	0	0	0	0
	Point-117	78	30	45	1	45	1	45	0	0	0	0
	Point-119	79	30	45	1	45	1	45	0	0	0	0
	Point-121	80	30	45	1	45	1	45	0	0	0	0
	Point-123	81	30	45	1	45	1	45	0	0	0	0
	Point-125	82	30	45	1	45	1	45	0	0	0	0

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
Stocker St. WB west of Don Felipe Dr.	Point-127	83	30	45	1	45	1	45	0	0	0	0
	Point-129	84	30	45	1	45	1	45	0	0	0	0
	Point-131	85	30	45	1	45	1	45	0	0	0	0
Don Felipe Dr. Between Stocker St. and Project Dwy.	Point-132	0	0	0	0	0	0	0	0	0	0	0
	Point-133	1	0	0	0	0	0	0	0	0	0	0
	Point-138	2	0	0	0	0	0	0	0	0	0	0
Stocker St. EB between Project Dwy. and Palmero Blvd.	Point-139	92	33	45	1	45	1	45	0	0	0	0
	Point-140	93	33	45	1	45	1	45	0	0	0	0
	Point-142	94	33	45	1	45	1	45	0	0	0	0
	Point-144	95	33	45	1	45	1	45	0	0	0	0
Stocker St. WB between Project Dwy. and Palmero Blvd.	Point-145	96	33	45	1	45	1	45	0	0	0	0
	Point-146	97	33	45	1	45	1	45	0	0	0	0
	Point-149	99	33	45	1	45	1	45	0	0	0	0
	Point-148	3	33	45	1	45	1	45	0	0	0	0
Stocker St. EB between Project Dwy. and Santa Rosalia Dr.	Point-150	100	122	35	3	35	2	35	0	0	0	0
	Point-151	101	122	35	3	35	2	35	0	0	0	0

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
Stocker St. EB between Project Dwy. and Santa Rosalia Dr.	Point-153	102	122	35	3	35	2	35	0	0	0	0
	Point-155	103	122	35	3	35	2	35	0	0	0	0
Stocker St. WB between Project Dwy. and Santa Rosalia Dr.	Point-156	104	122	35	3	35	2	35	0	0	0	0
	Point-157	105	122	35	3	35	2	35	0	0	0	0
	Point-160	107	122	35	3	35	2	35	0	0	0	0
	Point-159	4	122	35	3	35	2	35	0	0	0	0
Santa Rosalia Dr. south of Stocker Street.	Point-161	108	10	25	1	25	0	0	0	0	0	0
	Point-162	109	10	25	1	25	0	0	0	0	0	0
	Point-164	110	10	25	1	25	0	0	0	0	0	0
	Point-166	111	10	25	1	25	0	0	0	0	0	0
	Point-168	112	10	25	1	25	0	0	0	0	0	0
	Point-170	113	10	25	1	25	0	0	0	0	0	0
	Point-172	114	10	25	1	25	0	0	0	0	0	0
Santa Rosalia Dr. north of Project Dwy.	Point-173	115	106	35	2	35	1	35	0	0	0	0
	Point-174	116	106	35	2	35	1	35	0	0	0	0
	Point-176	117	106	35	2	35	1	35	0	0	0	0
	Point-178	118	106	35	2	35	1	35	0	0	0	0
	Point-180	119	106	35	2	35	1	35	0	0	0	0
	Point-182	120	106	35	2	35	1	35	0	0	0	0

Roadway Name	Road Segment Start Point		Auto		Medium Truck		Heavy Truck		Bus		Motorcycle	
	Name	No.	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed	Volume	Speed
			[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]	[Veh/hr]	[mph]
Santa Rosalia Dr. between Project Dwy. and Stocker St.	Point-183	121	97	25	1	25	1	25	0	0	0	0
	Point-184	122	97	25	1	25	1	25	0	0	0	0
	Point-186	123	97	25	1	25	1	25	0	0	0	0
	Point-188	124	97	25	1	25	1	25	0	0	0	0
Stocker St. east of Santa Rosalia Dr.	Point-189	125	138	35	3	35	1	35	0	0	0	0
	Point-190	126	138	35	3	35	1	35	0	0	0	0
	Point-192	127	138	35	3	35	1	35	0	0	0	0
	Point-194	128	138	35	3	35	1	35	0	0	0	0
Don Felipe Dr. North of Project Dwy.	Point-138	5	0	0	0	0	0	0	0	0	0	0
	Point-136	6	0	0	0	0	0	0	0	0	0	0
	Point-137	7	0	0	0	0	0	0	0	0	0	0
	Point-135	8	0	0	0	0	0	0	0	0	0	0
Palmero Blvd. S of Stocker St.	Point-195	129	6	25	1	25	0	0	0	0	0	0
	Point-196	130	6	25	1	25	0	0	0	0	0	0
	Point-198	131	6	25	1	25	0	0	0	0	0	0
	Point-200	132	6	25	1	25	0	0	0	0	0	0
	Point-202	133	6	25	1	25	0	0	0	0	0	0

REPORT:	**Results: Sound Levels - No Barrier Objects**		
TNM VERSION	3.2.8741.34338	REPORT DATE:	30 April 2025
CALCULATED WITH:	TNM v3.2.8741.34338	CALCULATION DATE:	4/30/2025 6:00:38 PM
CASE:	Stocker Street_Project Trips Only_PM	ORGANIZATION:	Terry A. Hayes Associates Inc.
UNITS:	English	ANALYSIS BY:	kbartholow
DEFAULT GROUND TYPE:	Pavement	PROJECT/CONTRACT	
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state highway agency substantiates the use of a different type with approval FHWA.	
PAVEMENT TYPE(S) USED:	Average		

Receiver				Modeled Traffic Noise Levels				
				LAeq		Increase over Existing		
Name	No.	Nb. R.R.	Existing LAeq	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact
			dBA	dBA	dBA	dBA	dBA	
Receiver-1	0	0	---	46.0	0.0	---	---	Sound Level
Receiver-2	0	0	---	49.0	0.0	---	---	Sound Level
Receiver-3	0	0	---	43.4	0.0	---	---	Sound Level
Receiver-4	0	0	---	44.6	0.0	---	---	Sound Level
Receiver-5	0	0	---	43.7	0.0	---	---	Sound Level
Receiver-6	0	0	---	42.6	0.0	---	---	Sound Level
Receiver-7	0	0	---	48.2	0.0	---	---	Sound Level
Receiver-8	0	0	---	54.6	0.0	---	---	Sound Level
Receiver-9	0	0	---	54.7	0.0	---	---	Sound Level
Receiver-10	0	0	---	55.9	0.0	---	---	Sound Level
Receiver-11	0	0	---	50.6	0.0	---	---	Sound Level
Receiver-12	0	0	---	47.8	0.0	---	---	Sound Level
Receiver-13	0	0	---	46.0	0.0	---	---	Sound Level
Receiver-14	0	0	---	45.1	0.0	---	---	Sound Level
Receiver-15	0	0	---	58.2	0.0	---	---	Sound Level

REPORT:	**Results: Sound Levels - No Barrier Objects**		
TNM VERSION	3.2.8741.34338	REPORT DATE:	30 April 2025
CALCULATED WITH:	TNM v3.2.8741.34338	CALCULATION DATE:	4/30/2025 6:00:38 PM
CASE:	Stocker Street_Project Trips Only_PM	ORGANIZATION:	Terry A. Hayes Associates Inc.
UNITS:	English	ANALYSIS BY:	kbartholow
DEFAULT GROUND TYPE:	Pavement	PROJECT/CONTRACT	
ATMOSPHERICS:	68°F, 50%	Average pavement type shall be used unless a state highway agency substantiates the use of a different type with approval FHWA.	
PAVEMENT TYPE(S) USED:	Average		

Receiver				Modeled Traffic Noise Levels				
				LAeq		Increase over Existing		
Name	No.	Nb. R.R.	Existing LAeq	Calc.	Absolute Criterion	Calc.	Relative Criterion	Type of Impact
			dBA	dBA	dBA	dBA	dBA	
Receiver-16	0	0	---	53.7	0.0	---	---	Sound Level
Receiver-17	0	0	---	50.2	0.0	---	---	Sound Level
Receiver-18	0	0	---	47.8	0.0	---	---	Sound Level

APPENDIX D

Noise Monitoring Reports

ST-1 Residence (4108 Don Luis Dr.)



Session Report

12/8/2023

Information Panel

Name	Stocker Street_ST-1
Start Time	10/31/2023 10:44:18 AM
Stop Time	10/31/2023 10:59:18 AM
Device Name	BGS100001
Model Type	SoundPro DL
Device Firmware Rev	R.13J
Comments	

Summary Data Panel

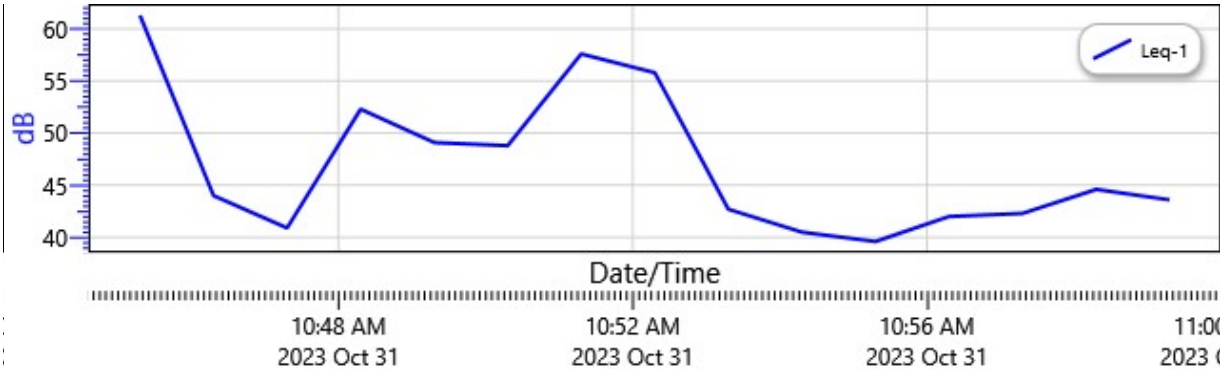
Description	Meter	Value	Description	Meter	Value
Leq	1	52.7 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

Logged Data Table

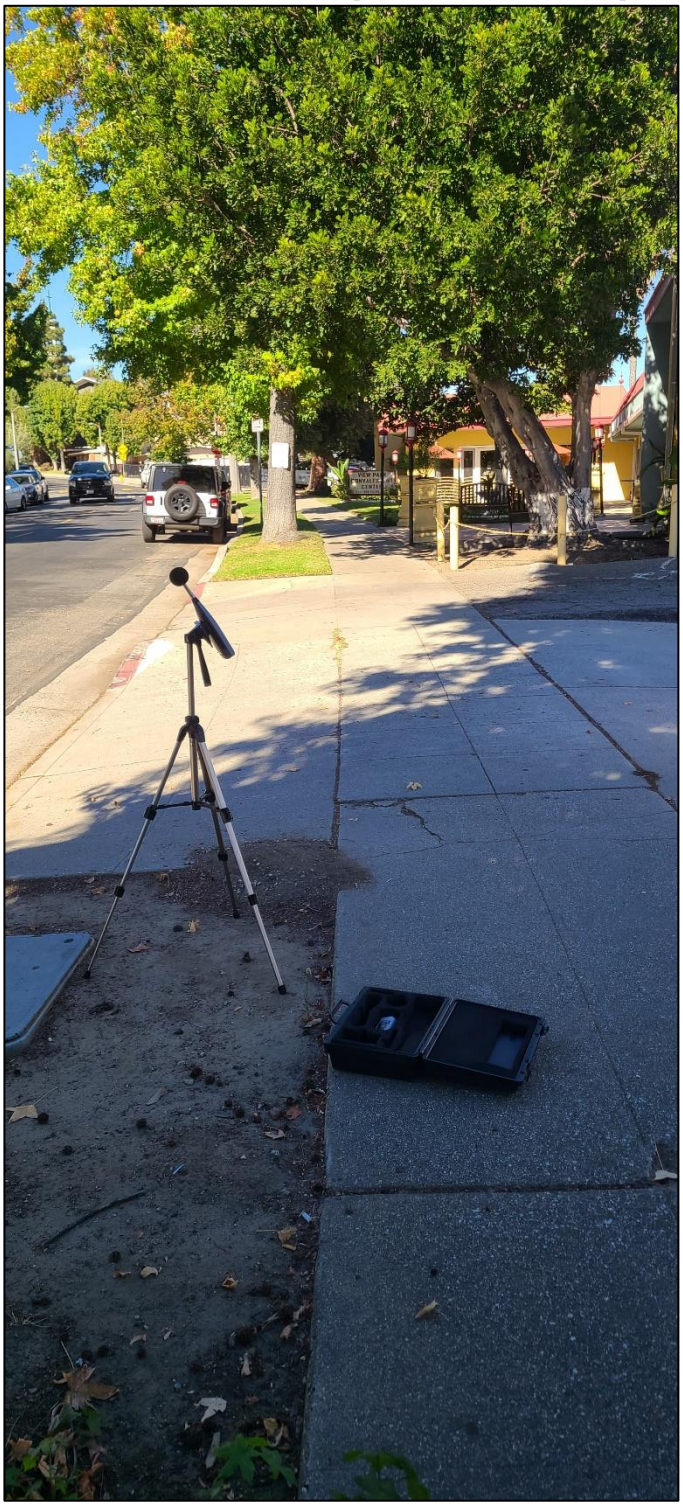
Date/Time	Leq-1
10/31/2023 10:45:18 AM	61.3
10:46:18 AM	44
10:47:18 AM	40.9
10:48:18 AM	52.3
10:49:18 AM	49.1
10:50:18 AM	48.8
10:51:18 AM	57.6
10:52:18 AM	55.8
10:53:18 AM	42.7
10:54:18 AM	40.5
10:55:18 AM	39.6
10:56:18 AM	42
10:57:18 AM	42.3
10:58:18 AM	44.6
10:59:18 AM	43.6

Logged Data Chart

Stocker Street_ST-1: Logged Data Chart



ST-2 Sanchez Ranch (3725 Don Felipe Dr.)



Session Report

12/8/2023

Information Panel

Name	Stocker Street_ST-2
Start Time	10/31/2023 11:09:25 AM
Stop Time	10/31/2023 11:24:25 AM
Device Name	BGS100001
Model Type	SoundPro DL
Device Firmware Rev	R.13J
Comments	

Summary Data Panel

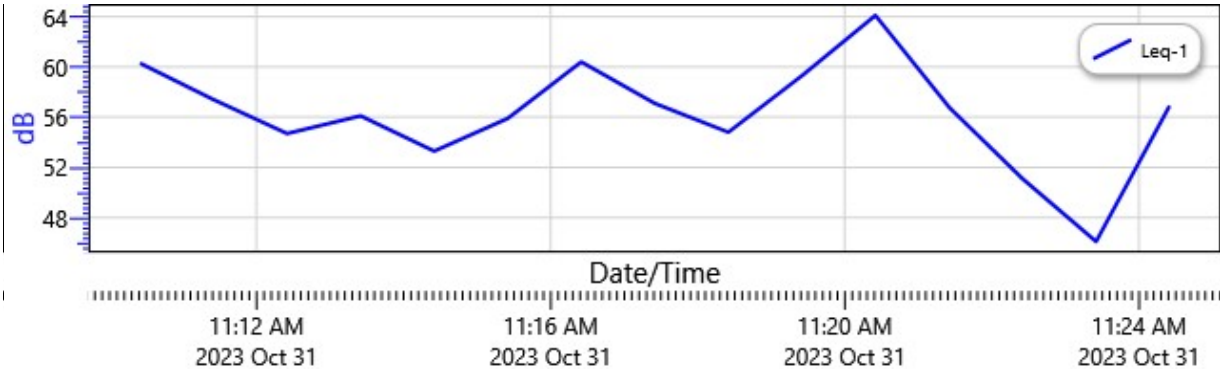
Description	Meter	Value	Description	Meter	Value
Leq	1	57.9 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

Logged Data Table

Date/Time	Leq-1
10/31/2023 11:10:25 AM	60.3
11:11:25 AM	57.4
11:12:25 AM	54.7
11:13:25 AM	56.1
11:14:25 AM	53.3
11:15:25 AM	55.9
11:16:25 AM	60.4
11:17:25 AM	57.1
11:18:25 AM	54.8
11:19:25 AM	59.3
11:20:25 AM	64.1
11:21:25 AM	56.8
11:22:25 AM	51.1
11:23:25 AM	46.1
11:24:25 AM	56.9

Logged Data Chart

Stocker Street_ST-2: Logged Data Chart



ST-3 Residences (Lockland Dr. Cul De Sac)



Session Report

12/8/2023

Information Panel

Name	Stocker Street_ST-3
Start Time	10/31/2023 11:58:17 AM
Stop Time	10/31/2023 12:13:17 PM
Device Name	BGS100001
Model Type	SoundPro DL
Device Firmware Rev	R.13J
Comments	

Summary Data Panel

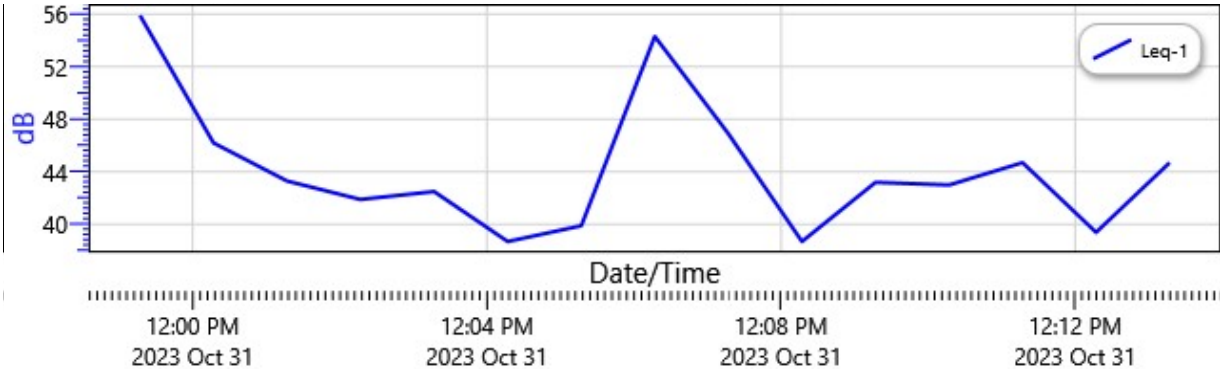
Description	Meter	Value	Description	Meter	Value
Leq	1	47.9 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

Logged Data Table

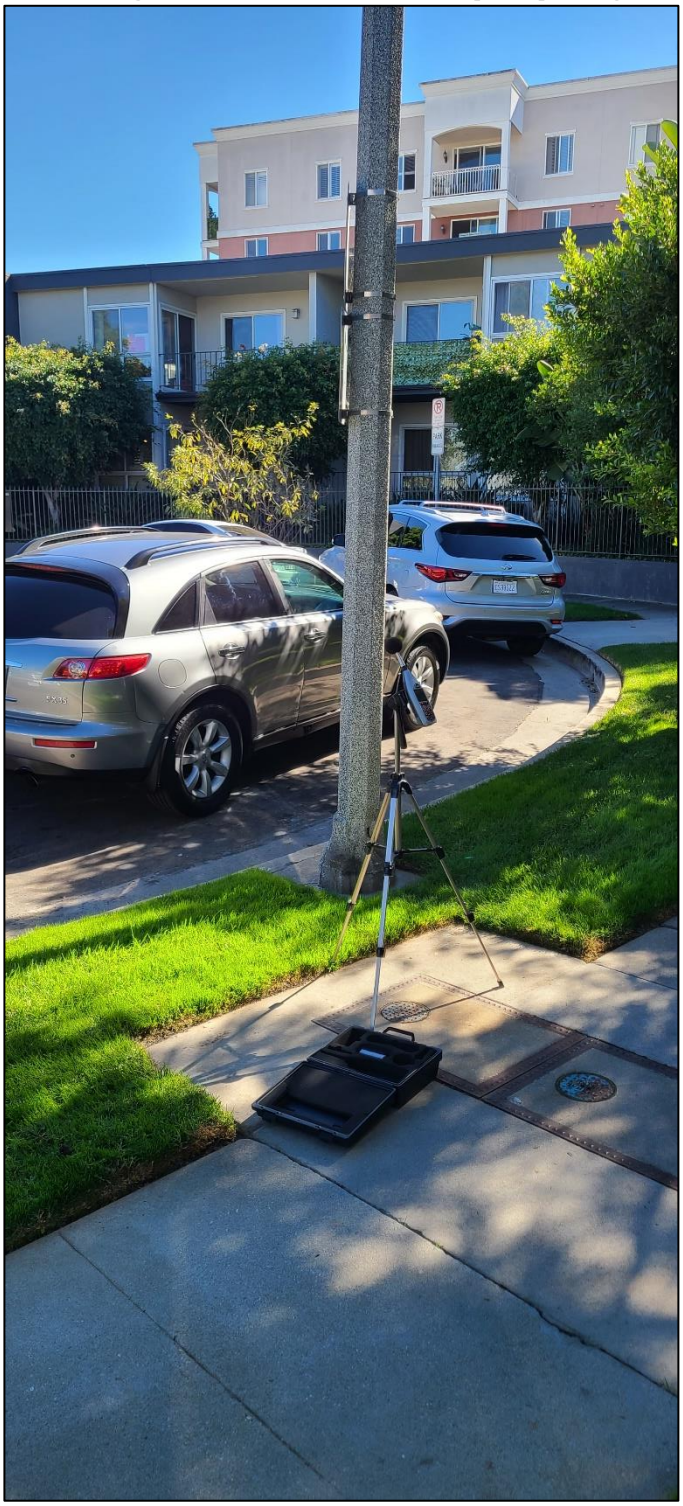
Date/Time	Leq-1
10/31/2023 11:59:17 AM	55.9
12:00:17 PM	46.2
12:01:17 PM	43.3
12:02:17 PM	41.9
12:03:17 PM	42.5
12:04:17 PM	38.7
12:05:17 PM	39.9
12:06:17 PM	54.3
12:07:17 PM	46.9
12:08:17 PM	38.7
12:09:17 PM	43.2
12:10:17 PM	43
12:11:17 PM	44.7
12:12:17 PM	39.4
12:13:17 PM	44.7

Logged Data Chart

Stocker Street_ST-3: Logged Data Chart



ST-4 Project site northern property line



Session Report

12/8/2023

Information Panel

Name	Stocker Street_ST-4
Start Time	10/31/2023 11:29:40 AM
Stop Time	10/31/2023 11:44:40 AM
Device Name	BGS100001
Model Type	SoundPro DL
Device Firmware Rev	R.13J
Comments	

Summary Data Panel

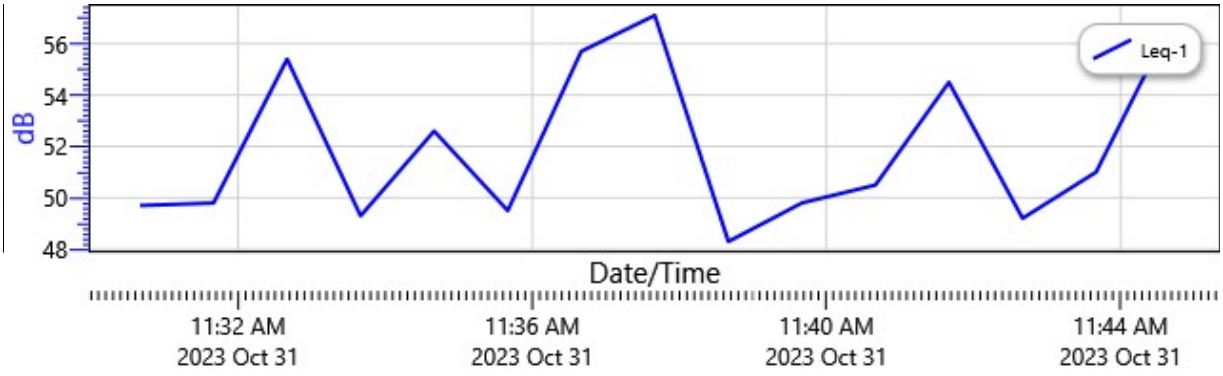
Description	Meter	Value	Description	Meter	Value
Leq	1	53 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

Logged Data Table

Date/Time	Leq-1
10/31/2023 11:30:40 AM	49.7
11:31:40 AM	49.8
11:32:40 AM	55.4
11:33:40 AM	49.3
11:34:40 AM	52.6
11:35:40 AM	49.5
11:36:40 AM	55.7
11:37:40 AM	57.1
11:38:40 AM	48.3
11:39:40 AM	49.8
11:40:40 AM	50.5
11:41:40 AM	54.5
11:42:40 AM	49.2
11:43:40 AM	51
11:44:40 AM	56.7

Logged Data Chart

Stocker Street_ST-4: Logged Data Chart



ST-5 Residence (4197 Angeles Vista Blvd.)



Session Report

12/8/2023

Information Panel

Name	Stocker Street_ST-5
Start Time	10/31/2023 12:23:45 PM
Stop Time	10/31/2023 12:38:45 PM
Device Name	BGS100001
Model Type	SoundPro DL
Device Firmware Rev	R.13J
Comments	

Summary Data Panel

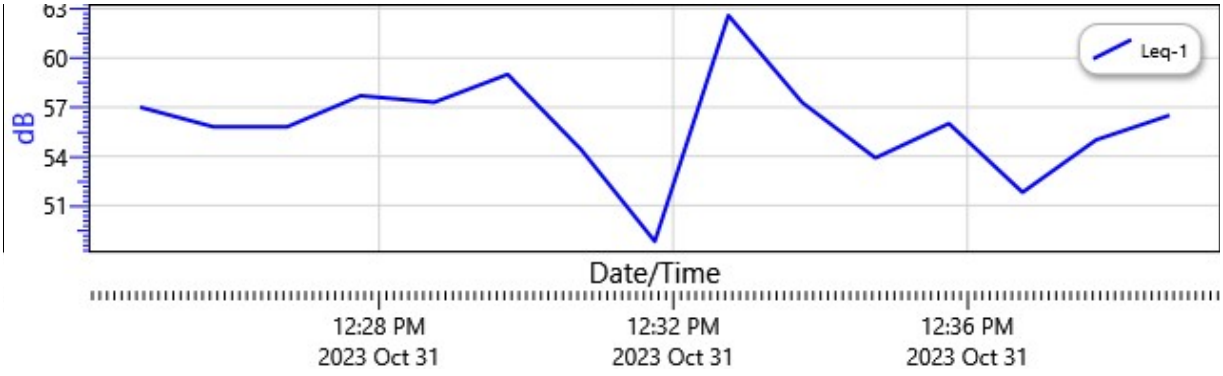
Description	Meter	Value	Description	Meter	Value
Leq	1	56.9 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

Logged Data Table

Date/Time	Leq-1
10/31/2023 12:24:45 PM	57
12:25:45 PM	55.8
12:26:45 PM	55.8
12:27:45 PM	57.7
12:28:45 PM	57.3
12:29:45 PM	59
12:30:45 PM	54.4
12:31:45 PM	48.8
12:32:45 PM	62.6
12:33:45 PM	57.3
12:34:45 PM	53.9
12:35:45 PM	56
12:36:45 PM	51.8
12:37:45 PM	55
12:38:45 PM	56.5

Logged Data Chart

Stocker Street_ST-5: Logged Data Chart



ST-6 Project site along Santa Rosalia Dr.



Session Report

12/8/2023

Information Panel

Name	Stocker Street_ST-6
Start Time	11/1/2023 12:48:31 PM
Stop Time	11/1/2023 1:03:31 PM
Device Name	BGS100001
Model Type	SoundPro DL
Device Firmware Rev	R.13J
Comments	

Summary Data Panel

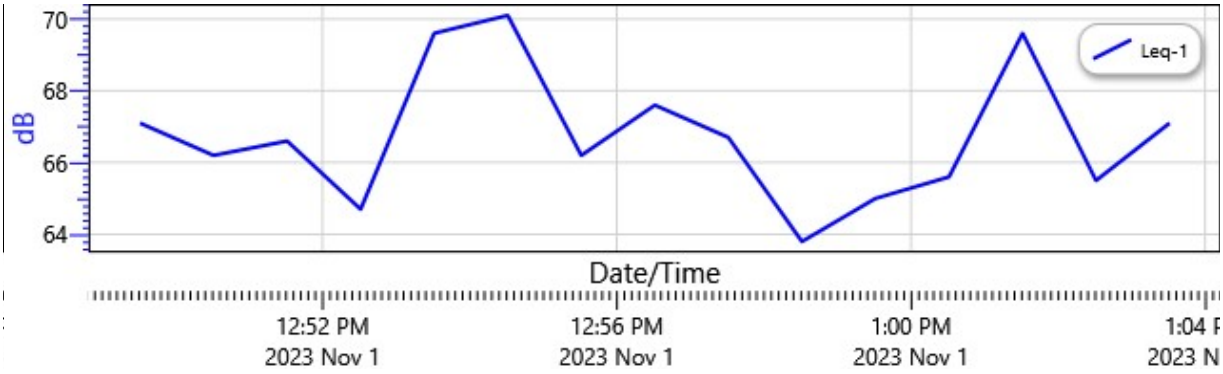
Description	Meter	Value	Description	Meter	Value
Leq	1	67.1 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

Logged Data Table

Date/Time	Leq-1
11/1/2023 12:49:31 PM	67.1
12:50:31 PM	66.2
12:51:31 PM	66.6
12:52:31 PM	64.7
12:53:31 PM	69.6
12:54:31 PM	70.1
12:55:31 PM	66.2
12:56:31 PM	67.6
12:57:31 PM	66.7
12:58:31 PM	63.8
12:59:31 PM	65
1:00:31 PM	65.6
1:01:31 PM	69.6
1:02:31 PM	65.5
1:03:31 PM	67.1

Logged Data Chart

Stocker Street_ST-6: Logged Data Chart



ST-7 Project site along Stocker St.



Session Report

12/8/2023

Information Panel

Name	Stocker Street_ST-7
Start Time	11/1/2023 1:08:43 PM
Stop Time	11/1/2023 1:23:43 PM
Device Name	BGS100001
Model Type	SoundPro DL
Device Firmware Rev	R.13J
Comments	

Summary Data Panel

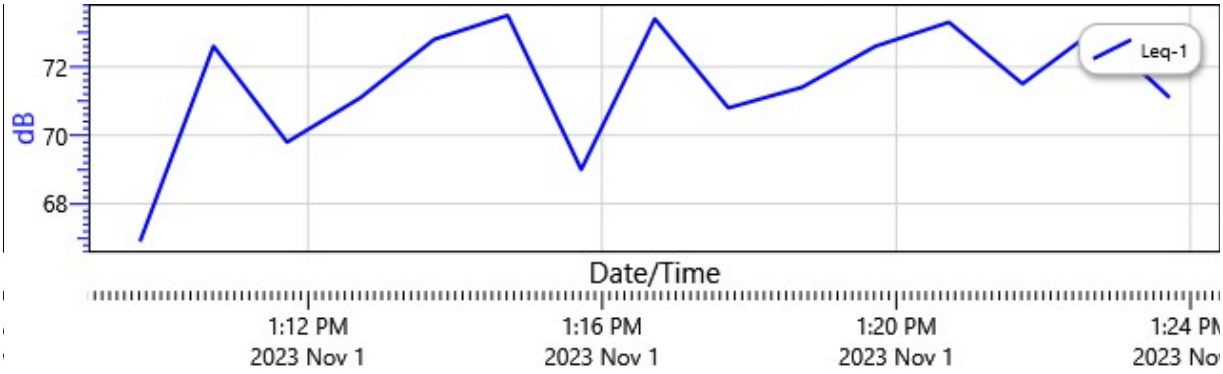
Description	Meter	Value	Description	Meter	Value
Leq	1	71.8 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

Logged Data Table

Date/Time	Leq-1
11/1/2023 1:09:43 PM	66.9
1:10:43 PM	72.6
1:11:43 PM	69.8
1:12:43 PM	71.1
1:13:43 PM	72.8
1:14:43 PM	73.5
1:15:43 PM	69
1:16:43 PM	73.4
1:17:43 PM	70.8
1:18:43 PM	71.4
1:19:43 PM	72.6
1:20:43 PM	73.3
1:21:43 PM	71.5
1:22:43 PM	73.1
1:23:43 PM	71.1

Logged Data Chart

Stocker Street_ST-7: Logged Data Chart



LT-1 Residence (3857 Don Tomaso Dr.)



Session Report

12/8/2023

Information Panel

Name	Stocker Street_LT-1
Start Time	11/1/2023 2:00:00 PM
Stop Time	11/2/2023 2:00:00 PM
Device Name	BGS100001
Model Type	SoundPro DL
Device Firmware Rev	R.13J
Comments	

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
CNEL	1	59.9 dB	Leq	1	56.6 dB
LDN	1	59.7 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

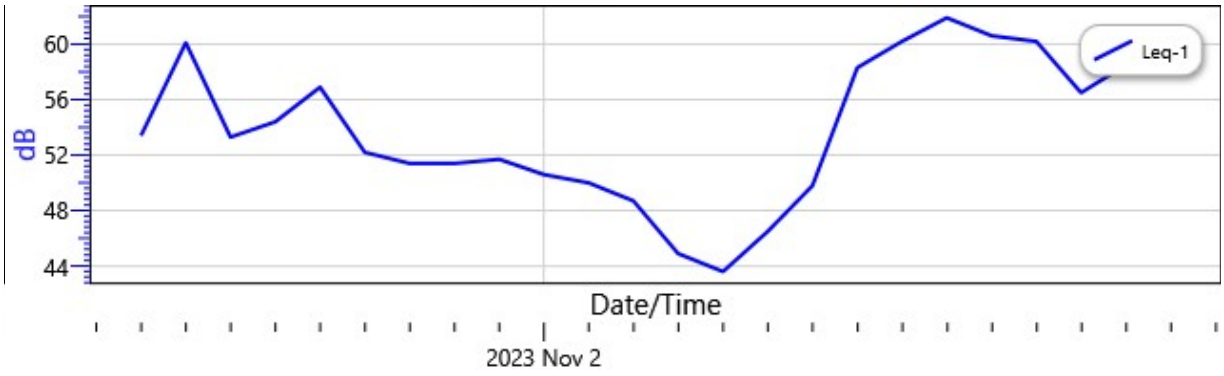
Logged Data Table

Date/Time	Leq-1
11/1/2023 3:00:00 PM	53.4
4:00:00 PM	60.1
5:00:00 PM	53.3
6:00:00 PM	54.4
7:00:00 PM	56.9
8:00:00 PM	52.2
9:00:00 PM	51.4
10:00:00 PM	51.4
11:00:00 PM	51.7
11/2/2023 12:00:00 AM	50.6
1:00:00 AM	50
2:00:00 AM	48.7
3:00:00 AM	44.9
4:00:00 AM	43.6

5:00:00 AM	46.5
6:00:00 AM	49.8
7:00:00 AM	58.3
8:00:00 AM	60.2
9:00:00 AM	61.9
10:00:00 AM	60.6
11:00:00 AM	60.2
12:00:00 PM	56.5
1:00:00 PM	58.5
2:00:00 PM	60.3

Logged Data Chart

Stocker Street_LT-1: Logged Data Chart



LT-2 Residence (3668 Northland Dr.)



Session Report

12/8/2023

Information Panel

Name	Stocker Street_LT-2
Start Time	11/7/2023 12:00:00 PM
Stop Time	11/8/2023 12:00:00 PM
Device Name	BGS100001
Model Type	SoundPro DL
Device Firmware Rev	R.13J
Comments	

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
CNEL	1	57.6 dB	LDN	1	57.3 dB
Leq	1	52.6 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF
Exchange Rate	2	3 dB	Weighting	2	A
Response	2	SLOW			

Logged Data Table

Date/Time	Leq-1
11/7/2023 1:00:00 PM	52.9
2:00:00 PM	57.3
3:00:00 PM	58.7
4:00:00 PM	50.1
5:00:00 PM	51.3
6:00:00 PM	49.1
7:00:00 PM	52.1
8:00:00 PM	52.6
9:00:00 PM	48.8
10:00:00 PM	51.5
11:00:00 PM	50.2
11/8/2023 12:00:00 AM	54.7
1:00:00 AM	46
2:00:00 AM	40

3:00:00 AM	49.7
4:00:00 AM	44.3
5:00:00 AM	45.6
6:00:00 AM	48.9
7:00:00 AM	54.4
8:00:00 AM	51.9
9:00:00 AM	50.6
10:00:00 AM	52.7
11:00:00 AM	57.8
12:00:00 PM	49.1

Logged Data Chart

Stocker Street_LT-2: Logged Data Chart

