# Appendix G
Ambient Noise Modeling Outputs

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# MEMORANDUM

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| To: | City of Vista Department of Community Development |
| From: | Cole Martin, INCE (Dudek); Mark Storm, INCE Bd. Cert. (Dudek) |
| Subject: | The City of Vista General Plan Update Existing Noise Conditions |
| Date: | February 9, 2026 |
| cc: | Jennifer Sucha, Project Manager (Dudek) |
| Attachment(s): | Figure 1 – Noise Measurement Locations<br>Figure 2 – Existing Traffic and Rail Noise Contours<br>Attachment A – Field Noise Measurement Data Sheets<br>Attachment B – Traffic Noise Model Calculations<br>Attachment C – Railway Noise Modeling Worksheets |

The City of Vista (City) is updating its General Plan (GP), which is intended to streamline implementation of the GP Update and facilitate environmental reviewing tiering for future private development applications and capital projects. This memorandum serves to establish existing ambient noise and vibration conditions using measurements and traffic noise modeling.

The contents and organization of this memorandum are as follows: Environmental Setting, Regulatory Setting, Existing Noise Condition, and References Cited.

# 1 Environmental Setting

## 1.1 Noise and Vibration Characteristics

### 1.1.1 Noise

Sound may be described in terms of level or amplitude (measured in decibels (dB)), frequency or pitch (measured in hertz (Hz) or cycles per second), and duration (measured in seconds or minutes). The standard unit of measurement of the amplitude of sound is the decibel. Because the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale is used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against low and very high frequencies in a manner approximating the sensitivity of the human ear. Several descriptors of noise (noise metrics) exist to help predict average community reactions to the adverse effects of environmental noise, including traffic-generated noise, on a community. These descriptors include the equivalent noise level over a given period ($L_{eq}$), the statistical sound level ($L_n$), the day–night average noise level ($L_{dn}$), and the community noise equivalent level (CNEL). Each of these descriptors uses units of dBA. Table 1 provides examples of A-weighted noise levels from common sounds. In general, human sound perception is such that a change in sound level of 3 dB is barely noticeable; a change of 5 dB is clearly noticeable; and a change of 10 dB is perceived as doubling or halving of the sound level.

### Table 1. Typical Sound Levels in the Environment and Industry

| Common Outdoor Activities | Noise Level (dBA) | Common Indoor Activities |
|---|---|---|
| — | 110 | Rock band |
| Jet flyover at 300 meters (1,000 feet) | 100 | — |
| Gas lawn mower at 1 meter (3 feet) | 90 | — |
| Diesel truck at 15 meters (50 feet), at 80 kph (50 mph) | 80 | Food blender at 1 meter (3 feet)<br>Garbage disposal at 1 meter (3 feet) |
| Noisy urban area, daytime<br>gas lawn mower at 30 meters (100 feet) | 70 | Vacuum cleaner at 3 meters (10 feet) |
| Commercial area<br>Heavy traffic at 90 meters (300 feet) | 60 | Normal speech at 1 meter (3 feet) |
| Quiet urban daytime | 50 | Large business office<br>Dishwasher, next room |
| Quiet urban nighttime | 40 | Theater, large conference room (background) |
| Quiet suburban nighttime | 30 | Library |
| Quiet rural night time | 20 | Bedroom at night, concert hall (background) |
| — | 10 | Broadcast/recording studio |
| Lowest threshold of human hearing | 0 | Lowest threshold of human hearing |

**Notes:** dBA = A-weighted decibels; kph = kilometers per hour; mph = miles per hour
Source: Caltrans 2013

$L_{eq}$ is a sound energy level averaged over a specified period (typically no less than 15 minutes for environmental studies). $L_{eq}$ is a single numerical value that represents the amount of variable sound energy received by a receptor during a time interval. For example, a 1-hour $L_{eq}$ measurement would represent the average amount of energy contained in all the noise that occurred in that hour. $L_{eq}$ is an effective noise descriptor because of its ability to assess the total time-varying effects of noise on sensitive receptors. $L_{max}$ is the greatest sound level measured during a designated time interval or event.

Unlike the $L_{eq}$ metrics, $L_{dn}$ and CNEL metrics always represent 24-hour periods, usually on an annualized basis. $L_{dn}$ and CNEL also differ from $L_{eq}$ because they apply a time-weighted factor designed to emphasize noise events that occur during the evening and nighttime hours (when speech and sleep disturbance is of more concern). "Time weighted" refers to the fact that $L_{dn}$ and CNEL penalize noise that occurs during certain sensitive periods. In the case of CNEL, noise occurring during the daytime (7:00 a.m.–7:00 p.m.) receives no penalty. Noise during the evening (7:00 p.m.–10:00 p.m.) is penalized by adding 5 dB, while nighttime (10:00 p.m.–7:00 a.m.) noise is penalized by adding 10 dB. $L_{dn}$ differs from CNEL in that the daytime period is defined as 7:00 a.m.–10:00 p.m., thus eliminating the evening period. $L_{dn}$ and CNEL are the predominant criteria used to measure roadway noise affecting residential receptors. These two metrics generally differ from one another by no more than 0.5 dB to 1 dB, and as such are often treated as equivalent to one another.

### 1.1.2 Vibration

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. Vibration can be a serious concern, causing buildings to shake and rumbling sounds to be heard. In contrast to noise, vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of vibration are trains, buses on rough roads, and construction activities, such as blasting, pile driving, and heavy earthmoving equipment.

Several different methods are used to quantify vibration. Peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. PPV is most frequently used to describe vibration impacts to buildings and is usually measured in inches per second. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body and is defined as the average of the squared amplitude of the signal. Decibel notation (VdB) is commonly used to measure RMS. The decibel notation acts to compress the range of numbers required to describe vibration.

High levels of vibration may cause physical personal injury or damage to buildings. However, vibration levels rarely affect human health. Instead, most people consider vibration to be an annoyance that can affect concentration or disturb sleep. In addition, high levels of vibration can damage fragile buildings or interfere with equipment that is highly sensitive to vibration (e.g., electron microscopes). Most perceptible indoor vibration is caused by sources within buildings, such as operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If the roadway is smooth, the vibration from traffic is rarely perceptible.

## 1.2 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. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would be considered noise and vibration sensitive and may warrant unique measures for protection from intruding noise.

# 2 Regulatory Setting

## 2.1 Federal

### 2.1.1 Federal Aviation Administration

The Federal Aviation Administration (FAA), Title 14, Part 150 outlines the procedures, standards, and methodology governing the development, submission, and review of airport noise exposure maps and airport noise compatibility programs, including the process for evaluating and approving or disapproving those programs. Title 14 also identifies those land uses that are normally compatible with various levels of exposure to noise by individuals. It provides technical assistance to airport operations, in conjunction with other local, state, and federal authorities, to prepare and execute appropriate noise compatibility planning and implementation programs. The FAA establishes a 65 dBA CNEL as the noise standard associated with aircraft noise. This standard is also generally applied to railroad noise (Federal Aviation Regulations Part 150, Section 150.21).

### 2.1.2 Federal Noise Control Act of 1972 (Code of Federal Regulations, Title 40)

The Federal Noise Control Act of 1972 Section 204 regulates noise emissions from the operation of construction equipment and facilities. It establishes noise emissions standards for construction equipment and other categories of equipment, and provides standards for the testing, inspection, and monitoring of such equipment. The act also gives states and municipalities primary responsibility for noise control.

### 2.1.3 Environmental Protection Agency

In its Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety document (otherwise known as the "Levels" document), the U.S. Environmental Protection Agency recommends a noise threshold of 55 dBA $L_{dn}$ for outdoor land uses in residential areas and other noise-sensitive land uses where people spend varying amounts of time in which quiet is a basis for use. Although this guidance is not a regulation, it can serve as a quantified standard for stationary operational noise in the absence of such limits at the state and local jurisdictional levels.

### 2.1.4 U.S. Department of Housing and Urban Development

CFR Title 24, Section 51 establishes environmental noise criteria and standards for projects receiving HUD funding assistance, subsidy, or insurance. It establishes an interior noise level of 45 dBA $L_{dn}$.

### 2.1.5 Federal Highway Administration

CFR Title 23, Part 772 establishes procedures for the abatement of highway traffic noise and construction noise. The purpose of this regulation is to provide procedures for noise studies and noise abatement measures to help protect the public health and welfare, to supply noise abatement criteria, and to establish requirements for information to be given to local officials for use in the planning and design of highways. All highway projects which are developed in conformance with this regulation shall be deemed to be in conformance with the Department of Transportation (DOT) Federal Highway Administration (FHWA) guidelines. Part 772 establishes noise abatement criteria or federally funded highway projects for various land use types.

### 2.1.6 Federal Transit Administration and Federal Railroad Administration

Although the Federal Transit Administration (FTA) guidelines are intended for federally funded mass transit projects, the impact assessment procedures and criteria included in the FTA Transit Noise and Vibration Assessment Manual (September 2018) are routinely used for projects proposed by local jurisdictions. The FTA and the Federal Railroad Administration (FRA) have published guidelines for assessing the impacts of groundborne vibration associated with rail projects, which have been applied by other jurisdictions to other types of projects. The FTA measure of the threshold of architectural damage for conventional sensitive structures is 0.2 inches/second PPV.

## 2.2 State

### 2.2.1 California Noise Control Act of 1973

Sections 46000 through 46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973, declares that excessive noise is a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also identifies a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the State to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

### 2.2.2 California Government Code 65300

This state code establishes guidelines for developing noise elements for city and county general plans. The noise element of a general plan is used to identify and appraise any noise problems in the community. The noise element must recognize the guidelines established by the Office of Noise Control in the California Department of Public Health and must analyze and quantify, to the extent practicable (as determined by the legislative body), current and projected noise levels for all major sources of noise. The adopted noise element serves as a guideline for the compliance with the state's noise insulation standards.

### 2.2.3 Noise Insulations Standards for Multifamily Housing

Chapter 12, Section 1207.4 of CCR Title 24, part 2 of the California Building Code states that interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room, consistent with the noise element of the local general plan (which would be 45 dBA CNEL).

## 2.3 Regional

### 2.3.1 Land Use Compatibility Plans, McClellan-Palomar and Oceanside Municipal Airports

Intended to protect the safety of people, property, and aircraft on the ground and in the air, land use compatibility plans guide property owners and local jurisdictions in determining what types of proposed new land uses are appropriate in the vicinity of airports. The Airport Influence Area (AIA) is used as a guideline when developing land use compatibility plans. Plans include policies that address noise compatibility issues associated with airports and their respective AIA.

## 2.4 Local

### 2.4.1 The City of Vista Municipal Code

Operational noise impacts for projects are governed by the City of Vista Municipal Code, Section 8.32 (Noise Control). Section 8.32.040 (A) states that for the purpose of controlling noise, the San Diego County Code of Regulatory Ordinances Title 3, Division 6, Chapter 4 relating to the control of noise is adopted, with the exception of the table from Section 36.404 of the County Code and replacing it with the City's own exterior property line noise limits. Table 2 contains the City's exterior property line noise limits.

### Table 2. City of Vista Applicable Exterior Property Line Noise Levels

| Zone | Time | Applicable Limit One-hour Average Sound Level (Decibels) |
|---|---|---|
| A-1, E-1, O & OSR | 7:00 a.m. - 10:00 p.m. | 50 |
| R-1B, MHP | 10:00 p.m. - 7:00 a.m. | 45 |
| R-M | 7:00 a.m. - 10:00 p.m. | 55 |
| | 10:00 p.m. - 7:00 a.m. | 50 |
| C-1, C-2, O-3, C-T, OP, M-U and Downtown Specific Plan | 7:00 a.m. - 10:00 p.m. | 60 |
| | 10:00 p.m. - 7:00 a.m. | 55 |
| M-1, I-P, all areas of the Vista Business Park Specific Plan and Specific Plan 14 | Any time | 70 |

The County's Noise Ordinance establishes prohibitions for disturbing, excessive, or offensive noise as well as provisions such as sound level limits for the purpose of securing and promoting the public health, comfort, safety, peace, and quiet for its citizens. Planned compliance with sound level limits and other specific parts of the ordinance allows presumption that the noise is not disturbing, excessive, or offensive. Limits are specified depending on the zoning placed on a property (e.g., varying densities and intensities of residential, industrial, and commercial zones). Where two adjacent properties have different zones, the sound level limit at a location on a boundary between two properties is the arithmetic mean of the respective limits for the two zones, except for extractive industries. It is unlawful for any person to cause or allow the creation of any noise that exceeds the applicable limits of the Noise Ordinance at any point on or beyond the boundaries of the property on which the sound is produced. Due to the project's proximity to residential land uses, the applicable exterior noise level limit established by the City is 50 dBA between the hours of 7:00 am and 10:00 pm and 45 dBA between the hours of 10:00 pm and 7:00 am.

The County regulates noise from construction activities by regulating the hours during which construction is conducted. The County Code of Regulatory Ordinances Section 36.408 states that: "Except for emergency work, it shall be unlawful for any person to operate or cause to be operated, construction equipment A) between 7:00 pm and 7:00 am or B) on a Sunday or holiday." The County also places sounds level limitations on construction equipment. The County Code of Regulatory Ordinances Section 36.409 states: "Except for emergency work, it shall be unlawful for any person to operate construction equipment or cause construction equipment to be operated, that exceeds an average sound level of 75 decibels for an eight-hour period, between 7 a.m. and 7 p.m., when measured at the boundary line of the property where the noise source is located or on any occupied property where the noise is being received."

# 3 Existing Noise Conditions

## 3.1 Ambient Noise Measurements

Short and long-term measurements were conducted throughout the City on September 7, 2022, to characterize the existing noise levels. The short-term noise measurements were conducted using a Rion NL-52 sound level meter equipped with a 0.5-inch, pre-polarized condenser microphone with pre-amplifier. The sound level meter meets the current American National Standards Institute (ANSI) standard for a Type 1 (Precision Grade) sound level meter. Sixteen (16) short-term noise measurements (ST) were taken at locations throughout the City. These locations are depicted as receivers ST1–ST16 on Figure 1, Noise Measurement Locations. The measured energy-averaged ($L_{eq}$), maximum ($L_{max}$), minimum ($L_{min}$), 90$^{th}$ percentile ($L_{90}$), 50$^{th}$ percentile ($L_{50}$), and 10$^{th}$ percentile ($L_{10}$) noise levels are provided in Table 3. The primary noise sources at the sites identified in Table 3 consisted of traffic along adjacent roadways, birds, distant aircraft, rustling leaves, distant conversations and yelling, sprinklers, distant back—up alarms, crosswalk signals, distant power tools, and distant industrial noise. As shown in Table 3, the measured noise levels ranged from approximately 51.1 dBA $L_{eq}$ at ST7 to 70.7 dBA $L_{eq}$ at ST11.

The long-term measurements were conducted using a SoftDB Piccolo II sound level meter equipped with a 0.5-inch, pre-polarized condenser microphone with pre-amplifier. The sound level meter meets the current ANSI standard for a Type 2 (General Purpose) sound level meter. Four long-term noise measurement locations (LT) were taken throughout the City. These locations are depicted as receivers LT1- LT4 on Figure 1, Noise Measurement Locations. Table 4 through Table 7 contain the $L_{eq}$ for each measured hour, the 24-hour $L_{eq}$, the highest hourly $L_{eq}$, the lowest hourly $L_{eq}$, and the CNEL as measured at each respective long-term noise measurement location.

The accuracy of the sound level meters was verified using a field calibrator before and after the measurements, and the measurements were conducted with the microphone positioned approximately five feet above the ground. Attachment A contains the field noise measurement data sheets generated for the project, which include photographs and measured levels at each measurement location.

### Table 3. Measured Outdoor Short-Term Ambient Noise Levels

| Tag | Location | Measurement Start and End Times | $L_{eq}$ (dBA) | $L_{max}$ (dBA) | $L_{min}$ (dBA) | $L_{90}$ (dBA) | $L_{50}$ (dBA) | $L_{10}$ (dBA) |
|---|---|---|---|---|---|---|---|---|
| ST1 | Adjacent to the single-family residence at 923 Emerald Drive | 11:00 AM to 11:15 AM | 69.8 | 76.5 | 59.2 | 59.9 | 68.4 | 73.1 |
| ST2 | Adjacent to the single-family residence at 2158 Opal Ridge | 10:10 AM to 10:25 AM | 58.7 | 67.3 | 43.1 | 44.0 | 56.2 | 62.6 |
| ST3 | Adjacent to the commercial use at 1216 Liberty Way | 10:45 AM to 11:00 AM | 57.8 | 66.3 | 46.8 | 48.7 | 53.7 | 62.1 |
| ST4 | Adjacent to the multi-family residences at 820 Sycamore Avenue | 9:00 AM to 9:15 AM | 59.8 | 72.2 | 50.1 | 51.1 | 56.4 | 62.2 |
| ST5 | Adjacent to the multi-family residences at 2144 University Drive | 11:15 AM to 11:30 AM | 65.7 | 69.9 | 61.5 | 63.2 | 65.3 | 67.3 |
| ST6 | Adjacent to the multi-family residences at 213 Guajome Street | 11:40 AM to 11:55 AM | 59.2 | 67.3 | 48.6 | 51.3 | 56.4 | 62.9 |
| ST7 | Adjacent to the single-family residence at 1124 Cypress Drive | 8:00 AM to 8:15 AM | 51.1 | 56.4 | 46.7 | 47.4 | 50.8 | 53.0 |
| ST8 | Adjacent to the commercial building at 723 Olive Avenue | 10:30 AM to 10:45 AM | 66.1 | 77.5 | 56.1 | 56.7 | 61.5 | 68.9 |
| ST9 | Adjacent to the single-family residence at 2021 Columbus Way | 9:30 AM to 9:45 AM | 62.5 | 70.3 | 44.7 | 52.4 | 60.2 | 66.2 |
| ST10 | Adjacent to the single-family residence at 1198 Drifting Circle | 1:00 PM to 1:15 PM | 67.6 | 74.9 | 45.8 | 48.3 | 63.8 | 72.0 |
| ST11 | Adjacent to the single-family residence 1170 Hackamore Road | 11:45 AM to 12:00 PM | 70.7 | 75.0 | 66.4 | 65.0 | 70.9 | 73.8 |
| ST12 | Adjacent to the single-family residence at 1553 County Highway S14 | 9:50 AM to 10:05 AM | 70.4 | 82.8 | 56.7 | 59.0 | 68.2 | 75.1 |
| ST13 | Adjacent to the multi-family residences at 759 Nob Circle | 9:15 AM to 9:30 AM | 63.1 | 71.7 | 52.0 | 53.9 | 60.0 | 67.1 |
| ST14 | Next to the commercial building at 206 Main Street | 8:30 AM to 8:45 AM | 64.3 | 68.5 | 49.7 | 54.1 | 62.9 | 67.7 |
| ST15 | Located at Wildwood Park, 651 East Vista Way | 1:30 PM to 1:45 PM | 68.5 | 76.2 | 52.9 | 60.0 | 66.2 | 71.2 |
| ST16 | Adjacent to the senior center at 1400 Vale Terrace Drive | 1:00 PM to 1:15 PM | 58.3 | 66.8 | 49.6 | 51.9 | 55.7 | 61.3 |

**Notes:** $L_{eq}$ = equivalent continuous sound level (time-averaged sound level); $L_{max}$ = maximum sound level during the measurement interval; dBA = A-weighted decibels.

## Table 4. Measured Long-Term 1 (LT1) Ambient Noise Levels

| Hour Beginning | $L_{eq}$ (dBA) |
|---|---|
| 12:00:00 PM | 61.0 |
| 1:00:00 PM | 61.3 |
| 2:00:00 PM | 65.0 |
| 3:00:00 PM | 62.7 |
| 4:00:00 PM | 62.5 |
| 5:00:00 PM | 68.0 |
| 6:00:00 PM | 67.3 |
| 7:00:00 PM | 62.0 |
| 8:00:00 PM | 60.1 |
| 9:00:00 PM | 57.5 |
| 10:00:00 PM | 57.0 |
| 11:00:00 PM | 53.8 |
| 12:00:00 AM | 48.5 |
| 1:00:00 AM | 47.6 |
| 2:00:00 AM | 45.1 |
| 3:00:00 AM | 50.3 |
| 4:00:00 AM | 58.5 |
| 5:00:00 AM | 62.1 |
| 6:00:00 AM | 63.7 |
| 7:00:00 AM | 64.9 |
| 8:00:00 AM | 63.6 |
| 9:00:00 AM | 60.7 |
| 10:00:00 AM | 60.5 |
| Lowest Hourly Average Noise Level: 45.1 dBA $L_{eq}$ at 2:00 AM | |
| Highest Hourly Average Noise Level: 68.0 dBA $L_{eq}$ at 5:00 PM | |
| 23-Hour Average Noise Level: 62.1 dBA $L_{eq\ 24\text{-}Hr}$) | |
| 23-Hour Weighted-Average Noise Level: 66.2 dBA CNEL | |

**Notes:** $L_{eq}$ = equivalent continuous sound level (time-averaged sound level); CNEL = Community Noise Equivalent Level; the LT1 measurement was conducted for 23 hours

## Table 5. Measured Long-Term 2 (LT2) Ambient Noise Levels

| Hour Beginning | $L_{eq}$ (dBA) |
|---|---|
| 10:00:00 AM | 63.1 |
| 11:00:00 AM | 63.4 |
| 12:00:00 PM | 63.4 |
| 1:00:00 PM | 62.8 |
| 2:00:00 PM | 63.6 |
| 3:00:00 PM | 63.2 |

## Table 5. Measured Long-Term 2 (LT2) Ambient Noise Levels

| Hour Beginning | $L_{eq}$ (dBA) |
|---|---|
| 4:00:00 PM | 63.7 |
| 5:00:00 PM | 63.1 |
| 6:00:00 PM | 63.3 |
| 7:00:00 PM | 63.0 |
| 8:00:00 PM | 67.7 |
| 9:00:00 PM | 63.1 |
| 10:00:00 PM | 61.4 |
| 11:00:00 PM | 61.9 |
| 12:00:00 AM | 59.3 |
| 1:00:00 AM | 56.6 |
| 2:00:00 AM | 57.1 |
| 3:00:00 AM | 59.8 |
| 4:00:00 AM | 59.7 |
| 5:00:00 AM | 63.3 |
| 6:00:00 AM | 64.4 |
| 7:00:00 AM | 65.1 |
| 8:00:00 AM | 64.5 |
| 9:00:00 AM | 64.2 |
| Lowest Hourly Average Noise Level: 56.7 dBA $L_{eq}$ at 2:00 AM | |
| Highest Hourly Average Noise Level: 68.1 dBA $L_{eq}$ at 9:00 PM | |
| 24-Hour Average Noise Level: 63.1 dBA $L_{eq\ 24\text{-}Hr}$) | |
| 24-Hour Weighted-Average Noise Level: 69.2 dBA CNEL | |

**Notes:** $L_{eq}$ = equivalent continuous sound level (time-averaged sound level) ; CNEL = Community Noise Equivalent Level

## Table 6. Measured Long-Term 3 (LT3) Ambient Noise Levels

| Hour Beginning | $L_{eq}$ (dBA) |
|---|---|
| 9:00:00 AM | 64.0 |
| 10:00:00 AM | 68.0 |
| 11:00:00 AM | 50.1 |
| 12:00:00 PM | 46.6 |
| 1:00:00 PM | 59.7 |
| 2:00:00 PM | 47.8 |
| 3:00:00 PM | 45.6 |
| 4:00:00 PM | 45.1 |
| 5:00:00 PM | 45.0 |
| 6:00:00 PM | 55.6 |
| 7:00:00 PM | 43.1 |

## Table 6. Measured Long-Term 3 (LT3) Ambient Noise Levels

| Hour Beginning | $L_{eq}$ (dBA) |
|---|---|
| 8:00:00 PM | 45.8 |
| 9:00:00 PM | 41.7 |
| 10:00:00 PM | 43.2 |
| 11:00:00 PM | 37.9 |
| 12:00:00 AM | 33.4 |
| 1:00:00 AM | 34.1 |
| 2:00:00 AM | 33.9 |
| 3:00:00 AM | 35.9 |
| 4:00:00 AM | 37.7 |
| 5:00:00 AM | 41.4 |
| 6:00:00 AM | 44.8 |
| 7:00:00 AM | 48.7 |
| 8:00:00 AM | 50.5 |
| Lowest Hourly Average Noise Level: 33.4 dBA $L_{eq}$ at 12:00 AM | |
| Highest Hourly Average Noise Level: 68.0 dBA $L_{eq}$ at 10:00 AM | |
| 24-Hour Average Noise Level: 56.6 dBA $L_{eq\ 24\text{-}Hr}$) | |
| 24-Hour Weighted-Average Noise Level: 56.9 dBA CNEL | |

**Notes:** $L_{eq}$ = equivalent continuous sound level (time-averaged sound level); CNEL = Community Noise Equivalent Level

## Table 7. Measured Long-Term 4 (LT4) Ambient Noise Levels

| Hour Beginning | $L_{eq}$ (dBA) |
|---|---|
| 12:00:00 PM | 59.9 |
| 1:00:00 PM | 51.2 |
| 2:00:00 PM | 48.2 |
| 3:00:00 PM | 59.9 |
| 4:00:00 PM | 54.8 |
| 5:00:00 PM | 49.5 |
| 6:00:00 PM | 53.5 |
| 7:00:00 PM | 45.3 |
| 8:00:00 PM | 46.5 |
| 9:00:00 PM | 45.2 |
| 10:00:00 PM | 45.0 |
| 11:00:00 PM | 45.0 |
| 12:00:00 AM | 44.5 |
| 1:00:00 AM | 44.0 |
| 2:00:00 AM | 40.8 |
| 3:00:00 AM | 41.3 |

**Table 7. Measured Long-Term 4 (LT4) Ambient Noise Levels**

| Hour Beginning | $L_{eq}$ (dBA) |
|---|---|
| 4:00:00 AM | 39.5 |
| 5:00:00 AM | 45.2 |
| 6:00:00 AM | 52.5 |
| 7:00:00 AM | 53.6 |
| 8:00:00 AM | 49.8 |
| 9:00:00 AM | 49.8 |
| 10:00:00 AM | 50.8 |
| Lowest Hourly Average Noise Level: 39.5 dBA $L_{eq}$ at 4:00 AM | |
| Highest Hourly Average Noise Level: 59.9 dBA $L_{eq}$ at 12:00 PM | |
| 23-Hour Average Noise Level: 52.2 dBA $L_{eq\ 24\text{-}Hr}$) | |
| 23-Hour Weighted-Average Noise Level: 55.0 dBA CNEL | |

**Notes:** $L_{eq}$ = equivalent continuous sound level (time-averaged sound level); CNEL = Community Noise Equivalent Level; the LT4 measurement was conducted for 23 hours

## 3.2 Transportation Noise

### 3.2.1 Traffic Noise

Traffic noise is the dominant noise source within the City limits. High traffic volumes on CA-78 and major arterials are the loudest noise sources found within the City due to high traffic volumes. For example, Melrose Way and East Vista Way, both major arterials, carry up to an average of 42,000 vehicles per day (average daily traffic, or ADT) and up to 48,000 vehicles per day, respectively (CR Associates 2022). CA-78 carries up to 119,000 vehicles per day (Caltrans, 2020).

The FHWA's Highway Traffic Noise Prediction Model RD-77-108 was used to estimate the CNEL for existing conditions traffic volumes. Information used in the model included ADT, posted traffic speeds, a "soft" ground type, truck mix percentage (97% autos and 3% combined trucks for arterials, 95% autos and 5% combined trucks for CA-78), and day/evening/night mix percentage. Consistent with Caltrans guidance (Caltrans 2013), this analysis assumes 80% of the ADT occurs during daytime hours (7:00 a.m. to 7:00 p.m.), 5% during the evening (7:00 p.m. to 10:00 p.m.), and 15% during the nighttime (10:00 p.m. to 7:00 a.m.).

Table 8 shows the existing traffic noise level in CNEL for numerous roadway segments throughout the City. A distance of 75 feet from the centerline was utilized for consistency with the previous GP update. Figure 2 contains the existing traffic noise contours for the studied roadways. Attachment B contains the traffic noise model worksheets used to calculate the existing traffic noise levels.

## Table 8. Existing Traffic Noise Levels

| Roadway | Segment | | Existing (dBA CNEL) @ 75 feet from centerline |
|---|---|---|---|
| | From | To | |
| N. Santa Fe Ave. | Osborne St. | Museum Way | 68.0 |
| | Museum Way | Taylor St. | 68.0 |
| | Taylor St. | Bobier Dr. | 68.0 |
| | Bobier Dr. | California Ave. | 66.2 |
| | California Ave. | Vista Village Dr. | 66.4 |
| S. Santa Fe Ave. | Vista Village Dr. | Civic Center Dr. | 64.7 |
| | Civic Center Dr. | City Boundary | 65.9 |
| N. Melrose Dr. | City Boundary | North Ave. | 71.0 |
| | North Ave. | Olive Ave. | 71.0 |
| | Olive Ave. | Ascot Dr. | 71.4 |
| | Ascot Dr. | W. Vista Way | 70.0 |
| S. Melrose Dr. | W. Vista Way | SR-78 Off-Ramp | 70.2 |
| | SR-78 Off-Ramp | Hacienda Dr. | 70.2 |
| | Hacienda Dr. | Matagual Dr. | 69.4 |
| | Matagual Dr. | Sunset Dr. | 70.3 |
| | Sunset Dr. | Cannon Rd. | 70.9 |
| | Cannon Rd. | Longhorn Dr. / Live Oak Rd. | 71.0 |
| | Longhorn Dr./Live Oak Rd. | Shadowridge Dr. | 70.9 |
| | Shadowridge Dr. | Sycamore Ave. | 72.3 |
| | Sycamore Ave. | Faraday Ave. | 73.1 |
| | Faraday Ave. | City Boundary | 72.9 |
| E. Vista Way | Taylor St. | City Boundary | 68.5 |
| | Taylor St. | E. Bobier Dr./Foothill Dr. | 68.5 |
| | E. Bobier Dr./Foothill Dr. | Williamstown St. | 68.0 |
| | Williamstown St. | Anza Ave./Vale Terrace Dr. | 68.0 |
| | Anza Ave./Vale Terrace Dr. | Townsite Dr. | 69.2 |
| | Townsite Dr. | Hillside Terrace/Civic Center Dr. | 69.2 |
| Emerald Dr. | Olive Ave. | Date St. | 66.5 |
| | Date St. | West Dr. | 67.1 |
| | West Dr. | SR-78 WB Ramps | 67.4 |
| | SR-78 WB Ramps | SR-78 EB Ramps | 68.2 |
| | SR-78 EB Ramps | Hacienda Dr. | 68.2 |
| Civic Center Dr. | Vista Village Dr./E. Vista Way | Eucalyptus Ave. | 67.1 |
| | Eucalyptus Ave. | S. Santa Fe Ave. | 67.1 |
| | S. Santa Fe Ave. | SR-78 WB Ramps | 67.9 |
| | SR-78 WB Ramps | SR-78 EB Ramps | 65.9 |
| | SR-78 EB Ramps | Seaview Pl./Crestview Rd. | 61.3 |
| Sunset Dr. | Seaview Pl./Crestview Rd. | Crestview Rd. | 57.2 |

## Table 8. Existing Traffic Noise Levels

| Roadway | Segment | | Existing (dBA CNEL) @ 75 feet from centerline |
|---|---|---|---|
| | From | To | |
| Sycamore Ave. | SR-78 WB Ramps | City Boundary | 69.2 |
| | SR-78 WB Ramps | SR-78 EB Ramps | 70.6 |
| | SR-78 EB Ramps | Watson Way/Hibiscus Ave. | 71.5 |
| | Watson Way/Hibiscus Ave. | Green Oak Rd. | 70.5 |
| | Greek Oak Rd. | La Mirada Dr. | 70.5 |
| | La Mirada Dr. | S. Melrose Dr. | 69.4 |
| Business Park Dr. | Sycamore Ave. | Park Center Dr. | 65.8 |
| | Park Center Dr. | Poinsettia Ave. | 64.7 |
| | Poinsettia Ave. | Palomar Airport Rd. | 67.0 |
| Poinsetta Ave. | Business Park Dr. | La Mirada Dr. | 66.4 |
| W. Bobier Dr. | Melrose Dr. | N. Santa Fe Ave. | 67.5 |
| E. Bobier Dr. | N. Santa Fe Ave. | Anza Ave. (North) | 67.0 |
| | Anza Ave. (North) | E. Vista Way | 67.0 |
| North Ave. | Maryland Dr. | N. Melrose Dr. | 60.6 |
| Olive Ave. | Emerald Dr. | N. Melrose Dr. | 62.0 |
| W. Vista Way | Emerald Dr. | Brass Ln. | 66.3 |
| | Brass Ln. | SR-78 WB On-Ramp | 66.3 |
| | SR-78 WB On-Ramp | Melrose Dr. | 66.3 |
| | Melrose Dr. | Vista Village Dr. | 66.9 |
| Vista Village Dr. | Hacienda Dr. | SR-78 EB Ramps | 67.4 |
| | SR-78 EB Ramps | SR-78 WB Ramps | 68.7 |
| | SR-78 WB Ramps | N. Santa Fe Ave. | 70.0 |
| | N. Santa Fe Ave. | Hillside Terr./Civic Center Dr. | 68.1 |
| Hacienda Dr. | Emerald Dr. | Melrose Dr. | 65.5 |
| Mar Vista Dr. | SR-78 EB Ramps | SR-78 WB Ramps | 60.1 |
| Shadowridge Dr. | S. Melrose Dr. | Lupine Hills Dr. | 65.6 |
| | Lupine Hills Dr. (west) | Lupine Hills Dr. (east) | 65.0 |
| | Lupine Hills Dr. (east) | Sycamore Ave. | 64.1 |
| Faraday Ave. | City Boundary | S. Melrose Dr. | 69.1 |
| Park Center Dr. | S. Melrose Dr. | Oak Ridge Way | 61.6 |
| CA-78 | City Boundary | Emerald Dr. | 80.9 |
| | Emerald Dr. | N. Melrose Dr. | 80.9 |
| | N. Melrose Dr. | Sunset Dr. | 80.7 |
| | Sunset Dr. | Mar Vista Dr. | 80.9 |
| | Mar Vista Dr. | Sycamore Ave. | 80.8 |
| | Sycamore Ave. | City Boundary | 81.3 |

**Notes:** $L_{eq}$ = equivalent continuous sound level (time-averaged sound level); CNEL = Community Noise Equivalent Level

Table 8. Existing Traffic Noise Levels

| Roadway | Segment | | Existing (dBA CNEL) @ 75 feet from centerline |
|---|---|---|---|
| | From | To | |

## Table 8. Existing Traffic Noise Levels

| Roadway | Segment | | Existing (dBA CNEL) @ 75 feet from centerline |
|---|---|---|---|
| | From | To | |
| | Osborne St. | Museum Way | 68.0 |
| | Museum Way | Taylor St. | 68.0 |
| | Taylor St. | Bobier Dr. | 68.0 |
| | Bobier Dr. | California Ave. | 66.2 |
| N. Santa Fe Ave. | California Ave. | Vista Village Dr. | 66.4 |
| | Vista Village Dr. | Civic Center Dr. | 64.7 |
| S. Santa Fe Ave. | Civic Center Dr. | City Boundary | 65.9 |
| | City Boundary | North Ave. | 71.0 |
| | North Ave. | Olive Ave. | 71.0 |
| | Olive Ave. | Ascot Dr. | 71.4 |
| N. Melrose Dr. | Ascot Dr. | W. Vista Way | 70.0 |
| | W. Vista Way | SR-78 Off-Ramp | 70.2 |
| | SR-78 Off-Ramp | Hacienda Dr. | 70.2 |
| | Hacienda Dr. | Matagual Dr. | 69.4 |
| | Matagual Dr. | Sunset Dr. | 70.3 |
| | Sunset Dr. | Cannon Rd. | 70.9 |
| | Cannon Rd. | Longhorn Dr. / Live Oak Rd. | 71.0 |
| | Longhorn Dr./Live Oak Rd. | Shadowridge Dr. | 70.9 |
| | Shadowridge Dr. | Sycamore Ave. | 72.3 |
| | Sycamore Ave. | Faraday Ave. | 73.1 |
| S. Melrose Dr. | Faraday Ave. | City Boundary | 72.9 |
| | Taylor St. | City Boundary | 68.5 |
| | Taylor St. | E. Bobier Dr./Foothill Dr. | 68.5 |
| | E. Bobier Dr./Foothill Dr. | Williamstown St. | 68.0 |
| | Williamstown St. | Anza Ave./Vale Terrace Dr. | 68.0 |
| | Anza Ave./Vale Terrace Dr. | Townsite Dr. | 69.2 |
| E. Vista Way | Townsite Dr. | Hillside Terrace/Civic Center Dr. | 69.2 |
| | Olive Ave. | Date St. | 66.5 |
| | Date St. | West Dr. | 67.1 |
| | West Dr. | SR-78 WB Ramps | 67.4 |
| | SR-78 WB Ramps | SR-78 EB Ramps | 68.2 |
| Emerald Dr. | SR-78 EB Ramps | Hacienda Dr. | 68.2 |
| | Vista Village Dr./E. Vista Way | Eucalyptus Ave. | 67.1 |
| | Eucalyptus Ave. | S. Santa Fe Ave. | 67.1 |
| | S. Santa Fe Ave. | SR-78 WB Ramps | 67.9 |
| | SR-78 WB Ramps | SR-78 EB Ramps | 65.9 |
| Civic Center Dr. | SR-78 EB Ramps | Seaview Pl./Crestview Rd. | 61.3 |
| Sunset Dr. | Seaview Pl./Crestview Rd. | Crestview Rd. | 57.2 |

## Table 8. Existing Traffic Noise Levels

| Roadway | Segment | | Existing (dBA CNEL) @ 75 feet from centerline |
|---|---|---|---|
| | From | To | |
| Sycamore Ave. | SR-78 WB Ramps | City Boundary | 69.2 |
| | SR-78 WB Ramps | SR-78 EB Ramps | 70.6 |
| | SR-78 EB Ramps | Watson Way/Hibiscus Ave. | 71.5 |
| | Watson Way/Hibiscus Ave. | Green Oak Rd. | 70.5 |
| | Greek Oak Rd. | La Mirada Dr. | 70.5 |
| | La Mirada Dr. | S. Melrose Dr. | 69.4 |
| Business Park Dr. | Sycamore Ave. | Park Center Dr. | 65.8 |
| | Park Center Dr. | Poinsettia Ave. | 64.7 |
| | Poinsettia Ave. | Palomar Airport Rd. | 67.0 |
| Poinsetta Ave. | Business Park Dr. | La Mirada Dr. | 66.4 |
| W. Bobier Dr. | Melrose Dr. | N. Santa Fe Ave. | 67.5 |
| E. Bobier Dr. | N. Santa Fe Ave. | Anza Ave. (North) | 67.0 |
| | Anza Ave. (North) | E. Vista Way | 67.0 |
| North Ave. | Maryland Dr. | N. Melrose Dr. | 60.6 |
| Olive Ave. | Emerald Dr. | N. Melrose Dr. | 62.0 |
| W. Vista Way | Emerald Dr. | Brass Ln. | 66.3 |
| | Brass Ln. | SR-78 WB On-Ramp | 66.3 |
| | SR-78 WB On-Ramp | Melrose Dr. | 66.3 |
| | Melrose Dr. | Vista Village Dr. | 66.9 |
| Vista Village Dr. | Hacienda Dr. | SR-78 EB Ramps | 67.4 |
| | SR-78 EB Ramps | SR-78 WB Ramps | 68.7 |
| | SR-78 WB Ramps | N. Santa Fe Ave. | 70.0 |
| | N. Santa Fe Ave. | Hillside Terr./Civic Center Dr. | 68.1 |
| Hacienda Dr. | Emerald Dr. | Melrose Dr. | 65.5 |
| Mar Vista Dr. | SR-78 EB Ramps | SR-78 WB Ramps | 60.1 |
| Shadowridge Dr. | S. Melrose Dr. | Lupine Hills Dr. | 65.6 |
| | Lupine Hills Dr. (west) | Lupine Hills Dr. (east) | 65.0 |
| | Lupine Hills Dr. (east) | Sycamore Ave. | 64.1 |
| Faraday Ave. | City Boundary | S. Melrose Dr. | 69.1 |
| Park Center Dr. | S. Melrose Dr. | Oak Ridge Way | 61.6 |
| CA-78 | City Boundary | Emerald Dr. | 80.9 |
| | Emerald Dr. | N. Melrose Dr. | 80.9 |
| | N. Melrose Dr. | Sunset Dr. | 80.7 |
| | Sunset Dr. | Mar Vista Dr. | 80.9 |
| | Mar Vista Dr. | Sycamore Ave. | 80.8 |
| | Sycamore Ave. | City Boundary | 81.3 |

**Notes:** $L_{eq}$ = equivalent continuous sound level (time-averaged sound level); CNEL = Community Noise Equivalent Level

| Roadway | Segment | | Existing (dBA CNEL) @ 75 feet from centerline | Future (dBA CNEL) @ 75 | Δ |
|---|---|---|---|---|---|
| | From | To | | | |

## Table 8. Existing Traffic Noise Levels

| Roadway | Segment | | | Existing (dBA CNEL) @ 75 feet from centerline | |
|---|---|---|---|---|---|
| | From | To | | | |
| | | | | feet from centerline | |
| N. Santa Fe Ave. | Osborne St. | Museum Way | 68 | 67 | -0.7 |
| | Museum Way | Taylor St. | 68 | 67 | -0.7 |
| | Taylor St. | Bobier Dr. | 68 | 64 | -3.9 |
| | Bobier Dr. | California Ave. | 66 | 66 | -0.1 |
| | California Ave. | Vista Village Dr. | 66 | 67 | 0.5 |
| | Northern City Limits | Osborne St. | N/A | 68 | N/A |
| S. Santa Fe Ave. | Vista Village Dr. | Civic Center Dr. | 65 | 67 | 2.5 |
| | Civic Center Dr. | City Boundary | 66 | 66 | 0 |
| | Civic Center Dr. | Monte Vista Dr. | N/A | 68 | N/A |
| | Monte Vista Dr. | Mar Vista Dr. | N/A | 70 | N/A |
| | Mar Vista Dr. | City Boundary | N/A | 70 | N/A |
| N. Melrose Dr. | City Boundary | North Ave. | 71 | 73 | 1.5 |
| | North Ave. | Olive Ave. | 71 | 73 | 1.7 |
| | Olive Ave. | Ascot Dr. | 71 | 73 | 1.2 |
| | Ascot Dr. | W. Vista Way | 70 | 72 | 2.1 |
| S. Melrose Dr. | W. Vista Way | SR-78 Off-Ramp | 70 | 72 | 1.8 |
| | SR-78 Off-Ramp | Hacienda Dr. | 70 | 72 | 1.6 |
| | Hacienda Dr. | Matagual Dr. | 69 | 71 | 1.5 |
| | Matagual Dr. | Sunset Dr. | 70 | 72 | 1.3 |
| | Sunset Dr. | Cannon Rd. | 71 | 73 | 2.3 |
| | Cannon Rd. | Longhorn Dr. / Live Oak Rd. | 71 | 73 | 2.3 |
| | Longhorn Dr./Live Oak Rd. | Shadowridge Dr. | 71 | 73 | 2.4 |
| | Shadowridge Dr. | Sycamore Ave. | 72 | 74 | 1.3 |
| | Sycamore Ave. | Faraday Ave. | 73 | 74 | 1 |
| | Faraday Ave. | City Boundary | 73 | 74 | 1.1 |
| E. Vista Way | Taylor St. | City Boundary | 60 | 74 | 5.2 |
| | Taylor St. | E. Bobier Dr./Foothill Dr. | 69 | 71 | 2.4 |
| | E. Bobier Dr./Foothill Dr. | Williamstown St. | 68 | 70 | 1.9 |
| | Williamstown St. | Anza Ave./Vale Terrace Dr. | 68 | 70 | 1.8 |
| | Anza Ave./Vale Terrace Dr. | Townsite Dr. | 69 | 71 | 1.4 |
| | Townsite Dr. | Hillside Terrace/Civic Center Dr. | 69 | 71 | 1.6 |
| Emerald Dr. | Olive Ave. | Date St. | 67 | 67 | 0.2 |
| | Date St. | West Dr. | 67 | 67 | 0.1 |

## Table 8. Existing Traffic Noise Levels

| Roadway | Segment | | Existing (dBA CNEL) @ 75 feet from centerline | | |
|---|---|---|---|---|---|
| | From | To | | | |
| | West Dr. | SR-78 WB Ramps | 67 | 68 | 0.3 |
| | SR-78 WB Ramps | SR-78 EB Ramps | 68 | 69 | 0.5 |
| | SR-78 EB Ramps | Hacienda Dr. | 68 | 68 | 0.1 |
| Civic Center Dr. | Vista Village Dr./E. Vista Way | Eucalyptus Ave. | 67 | 68 | 0.6 |
| | Eucalyptus Ave. | S. Santa Fe Ave. | 67 | 68 | 1.3 |
| | S. Santa Fe Ave. | SR-78 WB Ramps | 68 | 69 | 1 |
| | SR-78 WB Ramps | SR-78 EB Ramps | 66 | 67 | -1.5 |
| | SR-78 EB Ramps | Seaview Pl./Crestview Rd. | 61 | 60 | 1.9 |
| Sunset Dr. | Seaview Pl./Crestview Rd. | Crestview Rd. | 57 | 59 | 0 |
| Sycamore Ave. | SR-78 WB Ramps | City Boundary | 69 | 71 | 2.2 |
| | SR-78 WB Ramps | SR-78 EB Ramps | 71 | 72 | 0.9 |
| | SR-78 EB Ramps | Watson Way/Hibiscus Ave. | 72 | 71 | -0.3 |
| | Watson Way/Hibiscus Ave. | Green Oak Rd. | 71 | 72 | 1.3 |
| | Greek Oak Rd. | La Mirada Dr. | 71 | 71 | 0.7 |
| | La Mirada Dr. | S. Melrose Dr. | 69 | 69 | -0.2 |
| Business Park Dr. | Sycamore Ave. | Park Center Dr. | 66 | 69 | 3.6 |
| | Park Center Dr. | Poinsettia Ave. | 65 | 66 | 1.4 |
| | Poinsettia Ave. | Palomar Airport Rd. | 67 | 69 | 2.3 |
| Poinsetta Ave. | Business Park Dr. | La Mirada Dr. | 66 | 69 | 2.9 |
| W. Bobier Dr. | Melrose Dr. | N. Santa Fe Ave. | 68 | 69 | 1.3 |
| E. Bobier Dr. | N. Santa Fe Ave. | Anza Ave. (North) | 67 | 68 | 1.1 |
| | Anza Ave. (North) | E. Vista Way | 67 | 68 | 1 |
| North Ave. | Maryland Dr. | N. Melrose Dr. | 61 | 65 | 4.4 |
| Olive Ave. | Emerald Dr. | N. Melrose Dr. | 62 | 65 | 3.4 |
| W. Vista Way | Emerald Dr. | Brass Ln. | 66 | 68 | 1.5 |
| | Brass Ln. | SR-78 WB On-Ramp | 66 | 68 | 1.8 |
| | SR-78 WB On-Ramp | Melrose Dr. | 66 | 66 | 0 |
| | Melrose Dr. | Vista Village Dr. | 67 | 69 | 1.9 |
| Vista Village Dr. | Hacienda Dr. | SR-78 EB Ramps | 67 | 71 | 3.5 |
| | SR-78 EB Ramps | SR-78 WB Ramps | 69 | 69 | 0.2 |
| | SR-78 WB Ramps | N. Santa Fe Ave. | 70 | 71 | 0.5 |
| | N. Santa Fe Ave. | Hillside Terr./Civic Center Dr. | 68 | 64 | -3.7 |
| Hacienda Dr. | Emerald Dr. | Melrose Dr. | 66 | 66 | 0.0 |
| Mar Vista Dr. | SR-78 EB Ramps | SR-78 WB Ramps | 60 | 61 | 0.5 |

## Table 8. Existing Traffic Noise Levels

| Roadway | Segment | | | Existing (dBA CNEL) @ 75 feet from centerline | |
|---|---|---|---|---|---|
| | From | To | | | |
| Shadowridge Dr. | S. Melrose Dr. | Lupine Hills Dr. | 66 | 67 | 1.4 |
| | Lupine Hills Dr. (west) | Lupine Hills Dr. (east) | 65 | 66 | 1.4 |
| | Lupine Hills Dr. (east) | Sycamore Ave. | 64 | 66 | 1.9 |
| Faraday Ave. | City Boundary | S. Melrose Dr. | 69 | 71 | 2.1 |
| Park Center Dr. | S. Melrose Dr. | Oak Ridge Way | 62 | 65 | 3.9 |
| CA-78 | City Boundary | Emerald Dr. | 80.9 | N/A | N/A |
| | Emerald Dr. | N. Melrose Dr. | 80.9 | N/A | N/A |
| | N. Melrose Dr. | Sunset Dr. | 80.7 | N/A | N/A |
| | Sunset Dr. | Mar Vista Dr. | 80.9 | N/A | N/A |
| | Mar Vista Dr. | Sycamore Ave. | 80.8 | N/A | N/A |
| | Sycamore Ave. | City Boundary | 81.3 | N/A | N/A |
| Warmlands Ave. | E Vista Way | Foothill Dr. | N/A | 60 | N/A |
| Anza Ave. | Bobier Dr. | E Vista Way | N/A | 57 | N/A |
| Emerald Dr. | City Boundary | Olive Ave. | N/A | 67 | N/A |
| | Hacienda Dr. | City Boundary | N/A | 66 | N/A |
| Sunset Dr. | Crestview Rd. | Melrose Dr. | N/A | 56 | N/A |
| Buena Vista Dr. | Sunset Dr. | Melrose Dr. | N/A | 59 | N/A |
| Thibodo Rd. | Mar Vista Dr. | Sycamore Ave. | N/A | 64 | N/A |
| Sycamore Ave. | Business Park Dr. | S. Melrose Dr. | N/A | 71 | N/A |
| Poinsettia Ave. | La Mirada Dr. | City Boundary | N/A | 70 | N/A |
| W. Bobier Dr. | W. Knapp Dr. | N. Santa Fe Avenue | N/A | 69 | N/A |
| Foothill Dr. | E. Vista Way | Oak Dr. | N/A | 64 | N/A |
| | Oak Dr. | Warmlands Ave. | N/A | 62 | N/A |
| | Warmlands Ave. | Vale Terrace Dr. | N/A | 67 | N/A |
| | Vale Terrace Dr. | San Clemente Ave. | N/A | 65 | N/A |
| | San Clemente Ave. | City Boundary | N/A | 65 | N/A |
| North Dr. | Melrose Dr. | California Ave. | N/A | 61 | N/A |
| Los Angeles Dr. | Melrose Dr. | California Ave. | N/A | 58 | N/A |
| Townsite Dr. | N Santa Fe Ave. | E Vista Way | N/A | 58 | N/A |
| Vale Terrace Dr. | E. Vista Way | Williamston St. | N/A | 64 | N/A |
| | Williamston ST. | Alta Vista Dr. | N/A | 61 | N/A |
| | Alta Vista Dr. | Foothill Dr. | N/A | 58 | N/A |
| North Dr. | Melrose Dr. | California Ave. | N/A | 61 | N/A |

## Table 8. Existing Traffic Noise Levels

| Roadway | Segment | | | Existing (dBA CNEL) @ 75 feet from centerline | |
|---|---|---|---|---|---|
| | From | To | | | |
| Los Angeles Dr. | Melrose Dr. | California Ave. | N/A | 58 | N/A |
| Townsite Dr. | N Santa Fe Ave. | E Vista Way | N/A | 58 | N/A |
| W California Ave. | W. Los Angeles Dr. | N. Santa Fe Ave. | N/A | 57 | N/A |
| Olive Ave. | Burke Rd. | Maryland Dr. | N/A | 66 | N/A |
| | Maryland Dr. | Melrose Dr. | N/A | 65 | N/A |
| | N. Melrose Dr. | Plymouth Dr. | N/A | 63 | N/A |
| | Plymouth Dr. | Vista Village Dr. | N/A | 67 | N/A |
| Orange Ave. | Redlands St. | N. Santa Fe Ave. | N/A | 55 | N/A |
| Alta Vista Dr. | Civic Center Dr. | Vale Terrace Dr. | N/A | 55 | N/A |
| W. Vista Way | Western City Limit | Emerald Dr. | N/A | 66 | N/A |
| Eucalyptus Ave. | S Santa Fe Ave. | Civic Center Dr. | N/A | 59 | N/A |
| | Civic Center Dr. | Marlin Dr. | N/A | 59 | N/A |
| | Marlin Dr. | Cypress Dr. | N/A | 55 | N/A |
| Lado De Loma Dr. | Vista Village Dr. | Guajome St. | N/A | 58 | N/A |
| Hacienda Dr. | Western City Limit | Emerald Dr. | N/A | 67 | N/A |
| | Melrose Dr. | Vista Village Dr. | N/A | 70 | N/A |
| | Vista Village Dr. | Civic Center Dr. | N/A | 52 | N/A |
| Monte Vista Dr. | S. Santa Fe Ave. | Cypress Dr. | N/A | 67 | N/A |
| | Cypress Dr. | York Dr. | N/A | 66 | N/A |
| | York Dr. | Western Terminus | N/A | 66 | N/A |
| Melrose Way | City Boundary | Melrose Dr. | N/A | 58 | N/A |
| Branding Iron Dr. | Melrose Dr. | Crestview Rd. | N/A | 64 | N/A |
| Mar Vista Dr. | Buena Vista Dr. | SR-78 EB Ramps | N/A | 60 | N/A |
| | SR-78 EB Ramps | SR-78 WB Ramps | N/A | 65 | N/A |
| Longhorn Dr. | Shadowridge Dr. | Melrose Dr. | N/A | 60 | N/A |
| Live Oak Rd. | Melrose Dr. | Shadowridge Dr. | N/A | 55 | N/A |
| Shadowridge Dr. | City Boundary | Longhorn Dr. | N/A | 62 | N/A |
| | Longhorn Dr. | Melrose Dr. | N/A | 59 | N/A |
| University Dr. | School Driveway | Sycamore Ave. | N/A | 66 | N/A |
| Hibiscus Ave. | Sycamore Ave. | City Boundary | N/A | 63 | N/A |
| La Mirada Dr. | Sycamore Ave. | Poinsetta Ave. | N/A | 66 | N/A |
| Park Center Dr. | Oak Ride Way | Business Park Dr. | N/A | 66 | N/A |

**Notes:** $L_{eq}$ = equivalent continuous sound level (time-averaged sound level); CNEL = Community Noise Equivalent Level

### 3.2.2 Aviation Noise

Located approximately two miles southwest of Vista, the McClellan-Palomar Airport is the nearest public airport. The Oceanside Municipal Airport is located approximately 6.5 miles west of the city. San Diego International Airport is approximately 33 miles south of the city and is the nearest major commercial airport. Munn Field at Camp Pendleton lies approximately 10 miles northwest of the city and is the source of military aircraft overflights. The McClellan-Palomar and Oceanside Municipal Airport land use plans show that the City is located outside of the 60 dBA CNEL airport noise contours.

### 3.2.3 Rail Noise

The North County Transit District (NCTD) SPRINTER rail line uses the existing rail line to traverse the City. There are two SPRINTER stations within the City boundaries:

- Vista Transit Center, located at 240 N. Santa Fe Avenue, and
- Civic Center Drive, located at 810 Phillips Street.

Land uses within the vicinity of the Vista Transit Center include residential to the north, east, and west, and commercial to the south. Land uses within the vicinity of the Civic Center Drive station include residential to the north, west, and south, and commercial to the east of the station.

The SPRINTER operates approximately 34 weekday trips and 25 weekend trips in each direction and operates between the 4:00 AM and 9:00 PM hours. The existing rail alignment also serves freight traffic through the City during nighttime hours.

The train schedule from the SPRINTER website was used to calculate CNEL noise contour distances. For the purposes of this analysis, freight trips were assumed to be 0 trains per hour during daytime hours (7:00 AM to 10:00 PM) and 0.667 trains per hour during nighttime hours (10:00 PM to 7:00 AM). Horizontal distances from the railway centerline to the 70 dBA CNEL, 65 dBA CNEL, and 60 dBA CNEL contours are 115 feet, 230 feet, and 500 feet respectively, and include other assumed inputs using the FTA-based “CREATE” model:

- SPRINTER trains include two commuter diesel locomotives and four passenger cars each, at an average speed of 25 miles per hour (mph); and
- Freight trains include up to four locomotives and up to a 4,000-foot length of cars traveling at an average speed of 40 mph.

Rail operation noise prediction worksheets appear in Attachment C, Railway Noise Modeling Worksheets.

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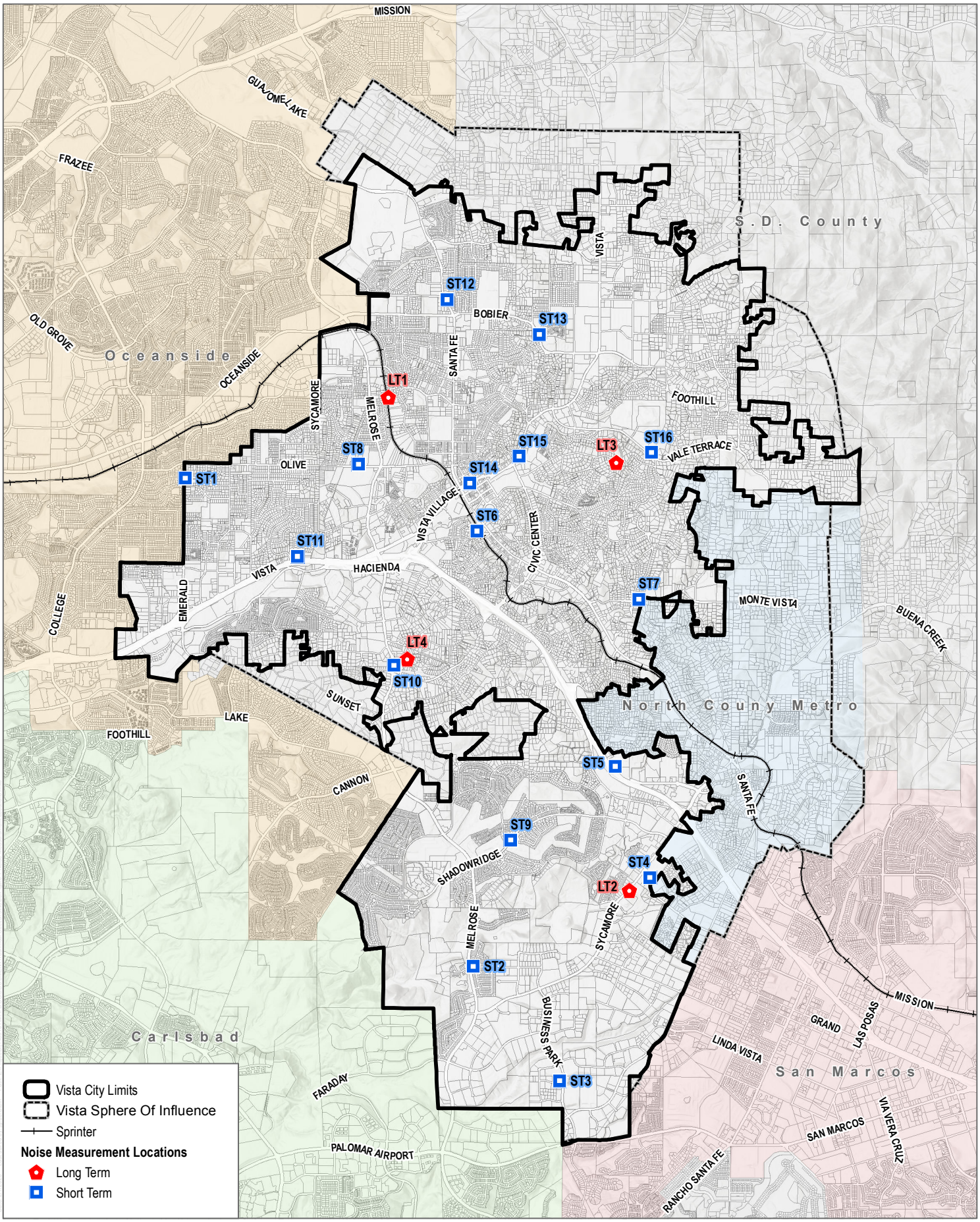
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SOURCE: Esri 2022; SanGIS 2022

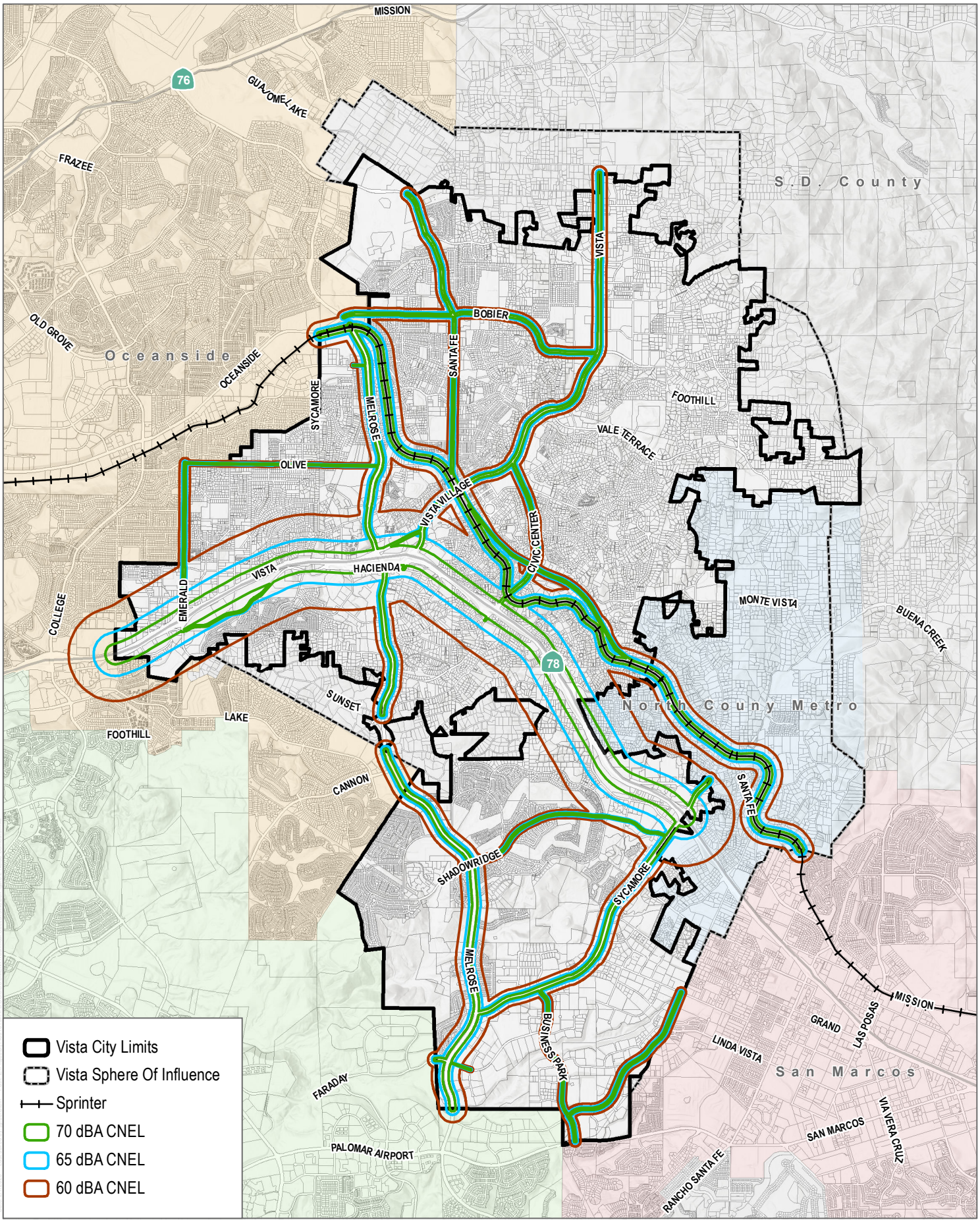
DUDEK

0 2,500 5,000 Feet

**FIGURE 1**

Noise Measurement Locations

Vista General Plan Update




SOURCE: Esri 2022; SanGIS 2022

DUDEK

0 2,500 5,000 Feet

**FIGURE** 2
Noise Contours
Vista General Plan Update

# Attachment A

## Field Noise Measurement Data Sheets

FORMS DUDEK FIELD DATA REPORT

# Field Noise Measurement Data

| Record: 1513 | |
|---|---|
| **Project Name** | *Vista GPU* |
| **Observer(s)** | *Connor Burke* |
| **Date** | *2022-09-07* |

| Meteorological Conditions | |
|---|---|
| **Temp (F)** | *87* |
| **Humidity % (R.H.)** | *63* |
| **Wind** | *Calm* |
| **Wind Speed (MPH)** | *2* |
| **Wind Direction** | *East* |
| **Sky** | *Sunny* |

| Instrument and Calibrator Information | |
|---|---|
| **Instrument Name List** | *(ENC) Rion NL-52* |
| **Instrument Name** | *(ENC) Rion NL-52* |
| **Instrument Name Lookup Key** | *(ENC) Rion NL-52* |
| **Manufacturer** | *Rion* |
| **Model** | *NL-52* |
| **Serial Number** | *553896* |
| **Calibrator Name** | *(ENC) LD CAL150* |
| **Calibrator Name** | *(ENC) LD CAL150* |
| **Calibrator Name Lookup Key** | *(ENC) LD CAL150* |
| **Calibrator Manufacturer** | *Larson Davis* |
| **Calibrator Model** | *LD CAL150* |
| **Calibrator Serial #** | *5152* |
| **Pre-Test (dBA SPL)** | *94* |
| **Post-Test (dBA SPL)** | *94* |
| **Windscreen** | *Yes* |
| **Weighting?** | *A-WTD* |
| **Slow/Fast?** | *Slow* |
| **ANSI?** | *Yes* |

| Monitoring | |
|---|---|
| **Record #** | *1* |
| **Site ID** | *ST4* |
| **Site Location Lat/Long** | *33.160187, -117.218858* |
| **Begin (Time)** | *09:00:00* |
| **End (Time)** | *09:15:00* |
| **Leq** | *59.8* |
| **Lmax** | *72.2* |
| **Lmin** | *50.1* |
| **Other Lx?** | *L90, L50, L10* |
| **L90** | *51.1* |
| **L50** | *56.4* |
| **L10** | *62.2* |
| **Other Lx (Specify Metric)** | *L* |
| **Primary Noise Source** | *Traffic* |
| **Other Noise Sources (Background)** | *Distant Aircraft, Distant Traffic* |
| **Other Noise Sources Additional Description** | |
| **Is the same instrument and calibrator being used as previously noted?** | *Yes* |
| **Are the meteorological conditions the same as previously noted?** | *Yes* |

## Description / Photos

## Site Photos

| | |
|---|---|
| **Photo** |  |
| **Comments / Description** | *Facing northwestern* |

## Monitoring

| | |
|---|---|
| **Record #** | *2* |
| **Site ID** | *ST9* |
| **Site Location Lat/Long** | *33.164085, -117.236963* |
| **Begin (Time)** | *09:30:00* |
| **End (Time)** | *09:45:00* |
| **Leq** | *62.5* |
| **Lmax** | *70.3* |
| **Lmin** | *44.7* |
| **Other Lx?** | *L90, L50, L10* |
| **L90** | *52.4* |
| **L50** | *60.2* |
| **L10** | *66.2* |
| **Other Lx (Specify Metric)** | *L* |
| **Primary Noise Source** | *Traffic* |
| **Other Noise Sources (Background)** | *Distant Conversations / Yelling, Distant Traffic* |
| **Other Noise Sources Additional Description** | *Distant saw/grinder in residential backyard.* |
| **Is the same instrument and calibrator being used as previously noted?** | *Yes* |
| **Are the meteorological conditions the same as previously noted?** | *Yes* |

## Description / Photos

### Site Photos

| | |
|---|---|
| **Photo** |  |
| **Comments / Description** | |

### Monitoring

| | |
|---|---|
| **Record #** | *3* |
| **Site ID** | *ST2* |
| **Site Location Lat/Long** | *33.150332, -117.241595* |
| **Begin (Time)** | *10:10:00* |
| **End (Time)** | *10:25:00* |
| **Leq** | *58.7* |
| **Lmax** | *67.3* |
| **Lmin** | *43.1* |
| **Other Lx?** | *L90, L50, L10* |
| **L90** | *44* |
| **L50** | *56.2* |
| **L10** | *62.6* |
| **Other Lx (Specify Metric)** | *L* |
| **Primary Noise Source** | *Traffic* |
| **Other Noise Sources (Background)** | *Birds, Distant Conversations / Yelling, Distant Traffic* |
| **Is the same instrument and calibrator being used as previously noted?** | *Yes* |
| **Are the meteorological conditions the same as previously noted?** | *Yes* |

## Description / Photos

### Site Photos

| | |
|---|---|
| **Photo** |  |
| **Comments / Description** | *Facing Melrose drive* |

### Monitoring

| | |
|---|---|
| **Record #** | *4* |
| **Site ID** | *ST3* |
| **Site Location Lat/Long** | *33.138088, -117.230445* |
| **Begin (Time)** | *10:45:00* |
| **End (Time)** | *11:00:00* |
| **Leq** | *57.8* |
| **Lmax** | *66.3* |
| **Lmin** | *46.8* |
| **Other Lx?** | *L90, L50, L10* |
| **L90** | *48.7* |
| **L50** | *53.7* |
| **L10** | *62.1* |
| **Other Lx (Specify Metric)** | *L* |
| **Primary Noise Source** | *Traffic* |
| **Other Noise Sources (Background)** | *Distant Aircraft, Distant Traffic* |
| **Other Noise Sources Additional Description** | *Distant Back up alarms. Crosswalk signal.* |
| **Is the same instrument and calibrator being used as previously noted?** | *Yes* |
| **Are the meteorological conditions the same as previously noted?** | *Yes* |

## Description / Photos

### Site Photos

| Photo | |
|---|---|
| |  |

### Monitoring

| | |
|---|---|
| **Record #** | *5* |
| **Site ID** | *ST5* |
| **Site Location Lat/Long** | *33.171944, -117.223311* |
| **Begin (Time)** | *11:15:00* |
| **End (Time)** | *11:30:00* |
| **Leq** | *65.7* |
| **Lmax** | *69.9* |
| **Lmin** | *61.5* |
| **Other Lx?** | *L90, L50, L10* |
| **L90** | *63.2* |
| **L50** | *65.3* |
| **L10** | *67.3* |
| **Other Lx (Specify Metric)** | *L* |
| **Primary Noise Source** | *Traffic* |
| **Is the same instrument and calibrator being used as previously noted?** | *Yes* |
| **Are the meteorological conditions the same as previously noted?** | *Yes* |

## Description / Photos

### Site Photos

| | |
|---|---|
| **Photo** |  |
| **Comments / Description** | *Facing 76* |

### Monitoring

| | |
|---|---|
| **Record #** | *6* |
| **Site ID** | *ST6* |
| **Site Location Lat/Long** | *33.190461, -117.220689* |
| **Begin (Time)** | *11:40:00* |
| **End (Time)** | *11:55:00* |
| **Leq** | *59.2* |
| **Lmax** | *67.3* |
| **Lmin** | *48.6* |
| **Other Lx?** | *L90, L50, L10* |
| **L90** | *51.3* |
| **L50** | *56.4* |
| **L10** | *62.9* |
| **Other Lx (Specify Metric)** | *L* |
| **Primary Noise Source** | *Traffic* |
| **Is the same instrument and calibrator being used as previously noted?** | *Yes* |
| **Are the meteorological conditions the same as previously noted?** | *Yes* |

## Description / Photos

### Site Photos

| Photo | |
|---|---|
| |  |

### Monitoring

| | |
|---|---|
| **Record #** | *7* |
| **Site ID** | *ST16* |
| **Site Location Lat/Long** | *33.206423, -117.219210* |
| **Begin (Time)** | *13:00:00* |
| **End (Time)** | *13:15:00* |
| **Leq** | *58.3* |
| **Lmax** | *66.8* |
| **Lmin** | *49.6* |
| **Other Lx?** | *L90, L50, L10* |
| **L90** | *51.9* |
| **L50** | *55.7* |
| **L10** | *61.3* |
| **Other Lx (Specify Metric)** | *L* |
| **Primary Noise Source** | *Traffic* |
| **Is the same instrument and calibrator being used as previously noted?** | *Yes* |
| **Are the meteorological conditions the same as previously noted?** | *Yes* |

## Description / Photos

### Site Photos

| Photo | |
|---|---|
| |  |

### Monitoring

| | |
|---|---|
| **Record #** | *8* |
| **Site ID** | *ST15* |
| **Site Location Lat/Long** | *33.206144, -117.236334* |
| **Begin (Time)** | *13:30:00* |
| **End (Time)** | *13:45:00* |
| **Leq** | *68.5* |
| **Lmax** | *76.2* |
| **Lmin** | *52.9* |
| **Other Lx?** | *L90, L50, L10* |
| **L90** | *60* |
| **L50** | *66.2* |
| **L10** | *71.2* |
| **Other Lx (Specify Metric)** | *L* |
| **Primary Noise Source** | *Traffic* |
| **Is the same instrument and calibrator being used as previously noted?** | *Yes* |
| **Are the meteorological conditions the same as previously noted?** | *Yes* |

## Description / Photos

### Site Photos

| Photo | |
|---|---|
| |  |

### Monitoring

| | |
|---|---|
| **Record #** | *9* |
| **Site ID** | *ST7* |
| **Site Location Lat/Long** | *33.197680, -117.241643* |
| **Begin (Time)** | *08:00:00* |
| **End (Time)** | *08:15:00* |
| **Leq** | *51.1* |
| **Lmax** | *56.4* |
| **Lmin** | *46.7* |
| **Other Lx?** | *L90, L50, L10* |
| **L90** | *47.4* |
| **L50** | *50.8* |
| **L10** | *53* |
| **Other Lx (Specify Metric)** | *L* |
| **Primary Noise Source** | *Traffic* |
| **Other Noise Sources (Background)** | *Distant Aircraft, Distant Industrial* |
| **Is the same instrument and calibrator being used as previously noted?** | *Yes* |
| **Are the meteorological conditions the same as previously noted?** | *Yes* |

## Description / Photos

### Site Photos

| Photo | |
|---|---|
| |  |

### Monitoring

| | |
|---|---|
| **Record #** | *10* |
| **Site ID** | *ST14* |
| **Site Location Lat/Long** | *33.202925, -117.242746* |
| **Begin (Time)** | *08:30:00* |
| **End (Time)** | *08:45:00* |
| **Leq** | *64.3* |
| **Lmax** | *68.5* |
| **Lmin** | *49.7* |
| **Other Lx?** | *L90, L50, L10* |
| **L90** | *54.1* |
| **L50** | *62.9* |
| **L10** | *67.7* |
| **Other Lx (Specify Metric)** | *L* |
| **Primary Noise Source** | *Traffic* |
| **Is the same instrument and calibrator being used as previously noted?** | *Yes* |
| **Are the meteorological conditions the same as previously noted?** | *Yes* |

## Description / Photos

### Site Photos

| | |
|---|---|
| **Photo** |  |
| **Comments / Description** | *Facing vista village* |

### Monitoring

| | |
|---|---|
| **Record #** | *11* |
| **Site ID** | *ST13* |
| **Site Location Lat/Long** | *33.219190, -117.233786* |
| **Begin (Time)** | *09:15:00* |
| **End (Time)** | *09:30:00* |
| **Leq** | *63.1* |
| **Lmax** | *71.7* |
| **Lmin** | *52* |
| **Other Lx?** | *L90, L50, L10* |
| **L90** | *53.9* |
| **L50** | *60* |
| **L10** | *67.1* |
| **Other Lx (Specify Metric)** | *L* |
| **Primary Noise Source** | *Traffic* |
| **Other Noise Sources (Background)** | *Birds, Distant Aircraft, Distant Traffic, Rustling Leaves* |
| **Other Noise Sources Additional Description** | *Sprinklers* |
| **Is the same instrument and calibrator being used as previously noted?** | *Yes* |
| **Are the meteorological conditions the same as previously noted?** | *Yes* |

## Description / Photos

### Site Photos

| Photo | |
|---|---|
| |  |
| **Comments / Description** | *Facing E Bobier Dr* |

### Monitoring

| | |
|---|---|
| **Record #** | *12* |
| **Site ID** | *ST12* |
| **Site Location Lat/Long** | *33.223606, -117.246248* |
| **Begin (Time)** | *09:50:00* |
| **End (Time)** | *10:05:00* |
| **Leq** | *70.4* |
| **Lmax** | *82.8* |
| **Lmin** | *56.7* |
| **Other Lx?** | *L90, L50, L10* |
| **L90** | *59* |
| **L50** | *68.2* |
| **L10** | *75.1* |
| **Other Lx (Specify Metric)** | *L* |
| **Primary Noise Source** | *Traffic* |
| **Is the same instrument and calibrator being used as previously noted?** | *Yes* |
| **Are the meteorological conditions the same as previously noted?** | *Yes* |

## Description / Photos

### Site Photos

| | |
|---|---|
| **Photo** |  |
| **Comments / Description** | *Facing Santa Fe* |

### Monitoring

| | |
|---|---|
| **Record #** | *13* |
| **Site ID** | *ST8* |
| **Site Location Lat/Long** | *33.204847, -117.257169* |
| **Begin (Time)** | *10:30:00* |
| **End (Time)** | *10:45:00* |
| **Leq** | *66.1* |
| **Lmax** | *77.5* |
| **Lmin** | *56.1* |
| **Other Lx?** | *L90, L50, L10* |
| **L90** | *56.7* |
| **L50** | *61.5* |
| **L10** | *68.9* |
| **Other Lx (Specify Metric)** | *L* |
| **Primary Noise Source** | *Traffic* |
| **Is the same instrument and calibrator being used as previously noted?** | *Yes* |
| **Are the meteorological conditions the same as previously noted?** | *Yes* |

## Description / Photos

### Site Photos

| Photo | |
|---|---|
| |  |

### Monitoring

| | |
|---|---|
| **Record #** | *14* |
| **Site ID** | *ST1* |
| **Site Location Lat/Long** | *33.202875, -117.279505* |
| **Begin (Time)** | *11:00:00* |
| **End (Time)** | *11:15:00* |
| **Leq** | *69.8* |
| **Lmax** | *76.5* |
| **Lmin** | *59.2* |
| **Other Lx?** | *L90, L50, L10* |
| **L90** | *59.9* |
| **L50** | *68.4* |
| **L10** | *73.1* |
| **Other Lx (Specify Metric)** | *L* |
| **Primary Noise Source** | *Traffic* |
| **Is the same instrument and calibrator being used as previously noted?** | *Yes* |
| **Are the meteorological conditions the same as previously noted?** | *Yes* |

## Description / Photos

### Site Photos

| Photo | |
|---|---|
| |  |

### Monitoring

| | |
|---|---|
| **Record #** | *15* |
| **Site ID** | *ST11* |
| **Site Location Lat/Long** | *33.194745, -117.265909* |
| **Begin (Time)** | *11:45:00* |
| **End (Time)** | *12:00:00* |
| **Leq** | *70.7* |
| **Lmax** | *75* |
| **Lmin** | *66.4* |
| **Other Lx?** | *L90, L50, L10* |
| **L90** | *65* |
| **L50** | *70.9* |
| **L10** | *73.80* |
| **Other Lx (Specify Metric)** | *L* |
| **Primary Noise Source** | *Traffic* |
| **Is the same instrument and calibrator being used as previously noted?** | *Yes* |
| **Are the meteorological conditions the same as previously noted?** | *Yes* |

## Description / Photos

### Site Photos

| Photo | |
|---|---|
| |  |

### Monitoring

| | |
|---|---|
| **Record #** | *16* |
| **Site ID** | *ST10* |
| **Site Location Lat/Long** | *33.183118, -117.252241* |
| **Begin (Time)** | *13:00:00* |
| **End (Time)** | *13:15:00* |
| **Leq** | *67.6* |
| **Lmax** | *74.9* |
| **Lmin** | *45.8* |
| **Other Lx?** | *L90, L50, L10* |
| **L90** | *48.3* |
| **L50** | *63.8* |
| **L10** | *72.* |
| **Other Lx (Specify Metric)** | *L* |
| **Primary Noise Source** | |
| **Is the same instrument and calibrator being used as previously noted?** | *Yes* |
| **Are the meteorological conditions the same as previously noted?** | *Yes* |

## Description / Photos

### Site Photos

**Photo**



# Attachment B

## Traffic Noise Model Calculations

## Attachment B

### Traffic Noise Model Calculations

Project: Dudek Project #14501 - City of Vista General Plan Update - Existing

**Noise Level Descriptor:** CNEL
**Site Conditions:** Soft
**Traffic Input:** ADT
**Traffic K-Factor:** 10

| | | | | Input | | | | | | | | | | Output | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Segment Description and Location | | | | | Distance to Directional Centerline, (feet)[4] | | Traffic Distribution Characteristics | | | | | | | Distance to Contour, (feet)[3] | | | |
| Number | Name | From | To | ADT | Speed (mph) | Near | Far | % Auto | % Med | % Hvy | % Day | % Eve | % Night | CNEL, (dBA)[5,6,7] | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
| **Existing Conditions** | | | | | | | | | | | | | | | | | | |
| 1 | N. Santa Fe Ave. | Osborne St. | Museum Way | 17,934 | 45 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 68.0 | 55 | 118 | 255 | 549 |
| 2 | N. Santa Fe Ave. | Museum Way | Taylor St. | 17,934 | 45 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 68.0 | 55 | 118 | 255 | 549 |
| 3 | N. Santa Fe Ave. | Taylor St. | Bobier Dr. | 17,934 | 45 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 68.0 | 55 | 118 | 255 | 549 |
| 4 | N. Santa Fe Ave. | Bobier Dr. | California Ave. | 23,560 | 35 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 66.2 | 42 | 90 | 193 | 417 |
| 5 | N. Santa Fe Ave. | California Ave. | Vista Village Dr. | 24,739 | 35 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 66.4 | 43 | 93 | 200 | 430 |
| 6 | S. Santa Fe Ave. | Vista Village Dr. | Civic Center Dr. | 16,874 | 35 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 64.7 | 33 | 72 | 155 | 334 |
| 7 | S. Santa Fe Ave. | Civic Center Dr. | City Boundary | 22,362 | 35 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 65.9 | 40 | 87 | 187 | 402 |
| 8 | N. Melrose Dr. | City Boundary | North Ave. | 35,988 | 45 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 71.0 | 87 | 188 | 406 | 874 |
| 9 | N. Melrose Dr. | North Ave. | Olive Ave. | 35,988 | 45 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 71.0 | 87 | 188 | 406 | 874 |
| 10 | N. Melrose Dr. | Olive Ave. | Ascot Dr. | 39,919 | 45 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 71.4 | 94 | 202 | 435 | 936 |
| 11 | N. Melrose Dr. | Ascot Dr. | W. Vista Way | 39,919 | 40 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 70.0 | 75 | 162 | 348 | 751 |
| 12 | S. Melrose Dr. | W. Vista Way | SR-78 Off-Ramp | 42,048 | 40 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 70.2 | 78 | 167 | 361 | 777 |
| 13 | S. Melrose Dr. | SR-78 Off-Ramp | Hacienda Dr. | 42,048 | 40 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 70.2 | 78 | 167 | 361 | 777 |
| 14 | S. Melrose Dr. | Hacienda Dr. | Matagual Dr. | 34,433 | 40 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 69.4 | 68 | 147 | 316 | 680 |
| 15 | S. Melrose Dr. | Matagual Dr. | Sunset Dr. | 30,528 | 45 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 70.3 | 78 | 169 | 363 | 783 |
| 16 | S. Melrose Dr. | Sunset Dr. | Cannon Rd. | 35,285 | 45 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 70.9 | 86 | 186 | 400 | 862 |
| 17 | S. Melrose Dr. | Cannon Rd. | Longhorn Dr. / Live Oak Rd. | 35,950 | 45 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 71.0 | 87 | 188 | 405 | 873 |

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

## Attachment B

### Traffic Noise Model Calculations

Project: Dudek Project #14501 - City of Vista General Plan Update - Existing

**Noise Level Descriptor:** CNEL
**Site Conditions:** Soft
**Traffic Input:** ADT
**Traffic K-Factor:** 10

| | Segment Description and Location | | | Input | | | | | | | | | | Output | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Distance to Directional Centerline, (feet)[4] | | Traffic Distribution Characteristics | | | | | | | Distance to Contour, (feet)[3] | | | |
| Number | Name | From | To | ADT | Speed (mph) | Near | Far | % Auto | % Med | % Hvy | % Day | % Eve | % Night | CNEL, (dBA)[5,6,7] | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
| **Existing Conditions** | | | | | | | | | | | | | | | | | | |
| 1 | S. Melrose Ave. | Longhorn Dr./Live Oak Rd. | Shadowridge Dr. | 35,345 | 45 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 70.9 | 86 | 186 | 401 | 863 |
| 2 | S. Melrose Ave. | Shadowridge Dr. | Sycamore Ave. | 35,612 | 50 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 72.3 | 106 | 229 | 494 | 1064 |
| 3 | S. Melrose Ave. | Sycamore Ave. | Faraday Ave. | 42,881 | 50 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 73.1 | 120 | 259 | 559 | 1204 |
| 4 | S. Melrose Ave. | Faraday Ave. | City Boundary | 41,215 | 50 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 72.9 | 117 | 253 | 544 | 1173 |
| 5 | E. Vista Way | Taylor St. | City Boundary | 28,524 | 40 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 68.5 | 60 | 129 | 278 | 600 |
| 6 | E. Vista Way | Taylor St. | E. Bobier Dr./Foothill Dr. | 28,524 | 40 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 68.5 | 60 | 129 | 278 | 600 |
| 7 | E. Vista Way | E. Bobier Dr./Foothill Dr. | Williamstown St. | 35,605 | 35 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 68.0 | 55 | 118 | 255 | 549 |
| 8 | E. Vista Way | Williamstown St. | Anza Ave./Vale Terrace Dr. | 35,605 | 35 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 68.0 | 55 | 118 | 255 | 549 |
| 9 | E. Vista Way | Anza Ave./Vale Terrace Dr. | Townsite Dr. | 47,726 | 35 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 69.2 | 67 | 144 | 310 | 667 |
| 10 | E. Vista Way | Townsite Dr. | Hillside Terrace/Civic Center D | 47,726 | 35 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 69.2 | 67 | 144 | 310 | 667 |
| 11 | Emerald Dr. | Olive Ave. | Date St. | 25,323 | 35 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 66.5 | 44 | 94 | 203 | 437 |
| 12 | Emerald Dr. | Date St. | West Dr. | 28,978 | 35 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 67.1 | 48 | 103 | 222 | 478 |
| 13 | Emerald Dr. | West Dr. | SR-78 WB Ramps | 31,197 | 35 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 67.4 | 50 | 108 | 233 | 502 |
| 14 | Emerald Dr. | SR-78 WB Ramps | SR-78 EB Ramps | 37,177 | 35 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 68.2 | 56 | 122 | 262 | 565 |
| 15 | Emerald Dr. | SR-78 EB Ramps | Hacienda Dr. | 37,177 | 35 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 68.2 | 56 | 122 | 262 | 565 |
| 16 | Civic Center Dr. | Vista Village Dr./E. Vista Way | Eucalyptus Ave. | 28,962 | 35 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 67.1 | 48 | 103 | 222 | 478 |
| 17 | Civic Center Dr. | Eucalyptus Ave. | S. Santa Fe Ave. | 28,962 | 35 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 67.1 | 48 | 103 | 222 | 478 |

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

## Attachment B

### Traffic Noise Model Calculations

Project: Dudek Project #14501 - City of Vista General Plan Update - Existing

**Noise Level Descriptor:** CNEL
**Site Conditions:** Soft
**Traffic Input:** ADT
**Traffic K-Factor:** 10

| | | Segment Description and Location | | Input | | | | | | | | | | Output | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Distance to Directional Centerline, (feet)[4] | | Traffic Distribution Characteristics | | | | | | | Distance to Contour, (feet)[3] | | | |
| Number | Name | From | To | ADT | Speed (mph) | Near | Far | % Auto | % Med | % Hvy | % Day | % Eve | % Night | CNEL, (dBA)[5,6,7] | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
| **Existing Conditions** | | | | | | | | | | | | | | | | | | |
| 1 | Civic Center Dr. | S. Santa Fe Ave. | SR-78 WB Ramps | 34,679 | 35 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 67.9 | 54 | 116 | 250 | 539 |
| 2 | Civic Center Dr. | SR-78 WB Ramps | SR-78 EB Ramps | 22,200 | 35 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 65.9 | 40 | 86 | 186 | 401 |
| 3 | Civic Center Dr. | SR-78 EB Ramps | Seaview Pl./Crestview Rd. | 7,751 | 35 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 61.3 | 20 | 43 | 92 | 199 |
| 4 | Sunset Dr. | Seaview Pl./Crestview Rd. | Crestview Rd. | 6,239 | 25 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 57.2 | 11 | 23 | 49 | 106 |
| 5 | Sycamore Ave. | SR-78 WB Ramps | City Boundary | 33,195 | 40 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 69.2 | 66 | 143 | 308 | 664 |
| 6 | Sycamore Ave. | SR-78 WB Ramps | SR-78 EB Ramps | 45,564 | 40 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 70.6 | 82 | 177 | 381 | 820 |
| 7 | Sycamore Ave. | SR-78 EB Ramps | Watson Way/Hibiscus Ave. | 40,771 | 45 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 71.5 | 95 | 205 | 441 | 950 |
| 8 | Sycamore Ave. | Watson Way/Hibiscus Ave. | Green Oak Rd. | 31,802 | 45 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 70.5 | 80 | 173 | 373 | 805 |
| 9 | Sycamore Ave. | Greek Oak Rd. | La Mirada Dr. | 31,802 | 45 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 70.5 | 80 | 173 | 373 | 805 |
| 10 | Sycamore Ave. | La Mirada Dr. | S. Melrose Dr. | 24,766 | 45 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 69.4 | 68 | 147 | 316 | 681 |
| 11 | Business Park Dr. | Sycamore Ave. | Park Center Dr. | 10,998 | 45 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 65.8 | 40 | 85 | 184 | 396 |
| 12 | Business Park Dr. | Park Center Dr. | Poinsettia Ave. | 8,498 | 45 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 64.7 | 33 | 72 | 155 | 334 |
| 13 | Business Park Dr. | Poinsettia Ave. | Palomar Airport Rd. | 14,189 | 45 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 67.0 | 47 | 101 | 218 | 470 |
| 14 | Poinsettia Ave. | Business Park Dr. | La Mirada Dr. | 12,633 | 45 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 66.4 | 43 | 94 | 202 | 435 |
| 15 | W. Bobier Dr. | Melrose Dr. | N. Santa Fe Ave. | 22,336 | 40 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 67.5 | 51 | 110 | 237 | 510 |
| 16 | E. Bobier Dr. | N. Santa Fe Ave. | Anza Ave. (North) | 19,906 | 40 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 67.0 | 47 | 102 | 219 | 472 |
| 17 | E. Bobier Dr. | Anza Ave. (North) | E. Vista Way | 19,906 | 40 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 67.0 | 47 | 102 | 219 | 472 |

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

## Attachment B

### Traffic Noise Model Calculations

Project: Dudek Project #14501 - City of Vista General Plan Update - Existing

**Noise Level Descriptor:** CNEL
**Site Conditions:** Soft
**Traffic Input:** ADT
**Traffic K-Factor:** 10

| | Segment Description and Location | | | Input | | | | | | | | | | Output | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Distance to Directional Centerline, (feet)[4] | | Traffic Distribution Characteristics | | | | | | | Distance to Contour, (feet)[3] | | | |
| Number | Name | From | To | ADT | Speed (mph) | Near | Far | % Auto | % Med | % Hvy | % Day | % Eve | % Night | CNEL, (dBA)[5,6,7] | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
| **Existing Conditions** | | | | | | | | | | | | | | | | | | |
| 1 | North Ave. | Maryland Dr. | N. Melrose Dr. | 9,479 | 30 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 60.6 | 18 | 38 | 82 | 177 |
| 2 | Olive Ave. | Emerald Dr. | N. Melrose Dr. | 9,047 | 35 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 62.0 | 22 | 47 | 102 | 220 |
| 3 | W. Vista Way | Emerald Dr. | Brass Ln. | 12,125 | 45 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 66.3 | 42 | 91 | 196 | 423 |
| 4 | W. Vista Way | Brass Ln. | SR-78 WB On-Ramp | 12,125 | 45 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 66.3 | 42 | 91 | 196 | 423 |
| 5 | W. Vista Way | SR-78 WB On-Ramp | Melrose Dr. | 12,125 | 45 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 66.3 | 42 | 91 | 196 | 423 |
| 6 | W. Vista Way | Melrose Dr. | Vista Village Dr. | 19,561 | 40 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 66.9 | 47 | 101 | 217 | 467 |
| 7 | Vista Village Dr. | Hacienda Dr. | SR-78 EB Ramps | 21,913 | 40 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 67.4 | 50 | 108 | 234 | 503 |
| 8 | Vista Village Dr. | SR-78 EB Ramps | SR-78 WB Ramps | 29,582 | 40 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 68.7 | 61 | 132 | 285 | 615 |
| 9 | Vista Village Dr. | SR-78 WB Ramps | N. Santa Fe Ave. | 39,570 | 40 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 70.0 | 75 | 161 | 346 | 746 |
| 10 | Vista Village Dr. | N. Santa Fe Ave. | Hillside Terr./Civic Center Dr. | 25,474 | 40 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 68.1 | 56 | 120 | 258 | 556 |
| 11 | Hacienda Dr. | Emerald Dr. | Melrose Dr. | 14,209 | 40 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 65.5 | 38 | 81 | 175 | 377 |
| 12 | Mar Vista Dr. | SR-78 EB Ramps | SR-78 WB Ramps | 12,100 | 25 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 60.1 | 16 | 35 | 76 | 165 |
| 13 | Shadowridge Dr. | S. Melrose Dr. | Lupine Hills Dr. | 14,415 | 40 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 65.6 | 38 | 82 | 177 | 381 |
| 14 | Shadowridge Dr. | Lupine Hills Dr. (west) | Lupine Hills Dr. (east) | 12,709 | 40 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 65.0 | 35 | 75 | 162 | 350 |
| 15 | Shadowridge Dr. | Lupine Hills Dr. (east) | Sycamore Ave. | 14,458 | 35 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 64.1 | 30 | 65 | 140 | 301 |
| 16 | Faraday Ave. | City Boundary | S. Melrose Dr. | 17,279 | 50 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 69.1 | 66 | 142 | 305 | 657 |
| 17 | Park Center Dr. | S. Melrose Dr. | Oak Ridge Way | 5,735 | 40 | 75 | 75 | 97.0% | 1.5% | 1.5% | 80.0% | 5.0% | 15.0% | 61.6 | 21 | 44 | 96 | 206 |

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

## Attachment B

### Traffic Noise Model Calculations

Project: Dudek Project #14501 - City of Vista General Plan Update - Existing

**Noise Level Descriptor:** CNEL
**Site Conditions:** Soft
**Traffic Input:** ADT
**Traffic K-Factor:** 10

| | Segment Description and Location | | | Input | | | | | | | | | | Output | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Distance to Directional Centerline, (feet)[4] | | Traffic Distribution Characteristics | | | | | | CNEL, | Distance to Contour, (feet)[3] | | | |
| Number | Name | From | To | ADT | Speed (mph) | Near | Far | % Auto | % Med | % Hvy | % Day | % Eve | % Night | (dBA)[5,6,7] | 70 dBA | 65 dBA | 60 dBA | 55 dBA |
| **Existing Conditions** | | | | | | | | | | | | | | | | | | |
| 1 | CA-78 | City Boundary | Emerald Dr. | 108,000 | 65 | 75 | 75 | 95.0% | 2.5% | 2.5% | 80.0% | 5.0% | 15.0% | 80.9 | 398 | 858 | 1849 | 3984 |
| 2 | CA-78 | Emerald Dr. | N. Melrose Dr. | 108,000 | 65 | 75 | 75 | 95.0% | 2.5% | 2.5% | 80.0% | 5.0% | 15.0% | 80.9 | 398 | 858 | 1849 | 3984 |
| 3 | CA-78 | N. Melrose Dr. | Sunset Dr. | 104,000 | 65 | 75 | 75 | 95.0% | 2.5% | 2.5% | 80.0% | 5.0% | 15.0% | 80.7 | 388 | 837 | 1803 | 3885 |
| 4 | CA-78 | Sunset Dr. | Mar Vista Dr. | 108,000 | 65 | 75 | 75 | 95.0% | 2.5% | 2.5% | 80.0% | 5.0% | 15.0% | 80.9 | 398 | 858 | 1849 | 3984 |
| 5 | CA-78 | Mar Vista Dr. | Sycamore Ave. | 106,000 | 65 | 75 | 75 | 95.0% | 2.5% | 2.5% | 80.0% | 5.0% | 15.0% | 80.8 | 393 | 848 | 1826 | 3934 |
| 6 | CA-78 | Sycamore Ave. | City Boundary | 119,000 | 65 | 75 | 75 | 95.0% | 2.5% | 2.5% | 80.0% | 5.0% | 15.0% | 81.3 | 425 | 916 | 1973 | 4250 |

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

# Attachment C

## Railway Noise Modeling Worksheets

**Noise Model Based on Federal Transit Adminstration General Transit Noise Assessment**
**Developed for Chicago Create Project**
**Copyright 2006, HMMH Inc.**
**Case:** Vista GPU EIR

| RESULTS | | | |
|---|---|---|---|
| **Noise Source** | **Ldn (dB)** | **Leq - daytime (dB)** | **Leq - nighttime (dB)** |
| **All Sources** | 70 | 60 | 64 |
| Source 1 | 63 | 60 | 55 |
| Source 2 | 48 | 45 | 40 |
| Source 3 | 66 | 33 | 60 |
| Source 4 | 66 | 16 | 60 |
| Source 5 | 0 | 0 | 0 |
| Source 6 | 0 | 0 | 0 |
| Source 7 | 0 | 0 | 0 |
| Source 8 | 0 | 0 | 0 |

***Enter noise receiver land use category below.***

| LAND USE CATEGORY | |
|---|---|
| Noise receiver land use category (1, 2 or 3) | 2 |

***Enter data for up to 8 noise sources below - see reference list for source numbers.***

| NOISE SOURCE PARAMETERS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Source 1** | | **Source 2** | | **Source 3** | | **Source 4** | |
| **Source Num.** | Commuter Diesel Locomotive | 2 | Commuter Rail Cars | 3 | Freight Locomotive | 9 | Freight Cars | 10 |
| **Distance (source to receiver)** | distance (ft) | 115 | distance (ft) | 115 | distance (ft) | 115 | distance (ft) | 115 |
| **Daytime Hours** | speed (mph) | 25 | speed (mph) | 25 | speed (mph) | | speed (mph) | |
| **(7 AM - 10 PM)** | trains/hour | 1.867 | trains/hour | 1.867 | trains/hour | | trains/hour | |
| | locos/train | 2 | cars/train | 5 | locos/train | | length of cars (ft) / train | |
| **Nighttime Hours** | speed (mph) | 25 | speed (mph) | 25 | speed (mph) | 40 | speed (mph) | 40 |
| **(10 PM - 7 AM)** | trains/hour | 0.667 | trains/hour | 0.667 | trains/hour | 0.667 | trains/hour | 0.667 |
| | locos/train | 2 | cars/train | 5 | locos/train | 4 | length of cars (ft) / train | 4000 |
| **Wheel Flats?** | | 0.00% | % of cars w/ wheel flats | 0.00% | | 0.00% | % of cars w/ wheel flats | 0.00% |
| **Jointed Track?** | Y/N | N | Y/N | N | Y/N | N | Y/N | N |
| **Embedded Track?** | Y/N | N | Y/N | N | Y/N | N | Y/N | N |
| **Aerial Structure?** | Y/N | N | Y/N | N | Y/N | N | Y/N | N |
| **Barrier Present?** | Y/N | N | Y/N | N | Y/N | N | Y/N | N |
| **Intervening Rows of of Buildings** | number of rows | 0 | number of rows | 0 | number of rows | 0 | number of rows | 0 |

| SOURCE REFERENCE LIST | |
|---|---|
| **Source** | **Number** |
| Commuter Electric Locomotive | 1 |
| Commuter Diesel Locomotive | 2 |
| Commuter Rail Cars | 3 |
| RRT/LRT | 4 |
| AGT, Steel Wheel | 5 |
| AGT, Rubber Tire | 6 |
| Monorail | 7 |
| Maglev | 8 |
| Freight Locomotive | 9 |
| Freight Cars | 10 |
| Hopper Cars (empty) | 11 |
| Hopper Cars (full) | 12 |
| Crossover | 13 |
| Automobiles | 14 |
| City Buses | 15 |
| Commuter Buses | 16 |
| Rail Yard or Shop | 17 |
| Layover Tracks | 18 |
| Bus Storage Yard | 19 |
| Bus Op. Facility | 20 |
| Bus Transit Center | 21 |
| Parking Garage | 22 |
| Park & Ride Lot | 23 |

**Noise Model Based on Federal Transit Adminstration General Transit Noise Assessment**
**Developed for Chicago Create Project**
**Copyright 2006, HMMH Inc.**
**Case:** Vista GPU EIR

| RESULTS | | | |
|---|---|---|---|
| **Noise Source** | **Ldn (dB)** | **Leq - daytime (dB)** | **Leq - nighttime (dB)** |
| **All Sources** | 65 | 55 | 59 |
| Source 1 | 58 | 55 | 51 |
| Source 2 | 43 | 40 | 36 |
| Source 3 | 61 | 28 | 56 |
| Source 4 | 61 | 11 | 56 |
| Source 5 | 0 | 0 | 0 |
| Source 6 | 0 | 0 | 0 |
| Source 7 | 0 | 0 | 0 |
| Source 8 | 0 | 0 | 0 |

***Enter noise receiver land use category below.***

| LAND USE CATEGORY | |
|---|---|
| Noise receiver land use category (1, 2 or 3) | 2 |

***Enter data for up to 8 noise sources below - see reference list for source numbers.***

| NOISE SOURCE PARAMETERS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Source 1** | | **Source 2** | | **Source 3** | | **Source 4** | |
| **Source Num.** | Commuter Diesel Locomotive | 2 | Commuter Rail Cars | 3 | Freight Locomotive | 9 | Freight Cars | 10 |
| **Distance (source to receiver)** | distance (ft) | 230 | distance (ft) | 230 | distance (ft) | 230 | distance (ft) | 230 |
| **Daytime Hours** | speed (mph) | 25 | speed (mph) | 25 | speed (mph) | | speed (mph) | |
| **(7 AM - 10 PM)** | trains/hour | 1.867 | trains/hour | 1.867 | trains/hour | | trains/hour | |
| | locos/train | 2 | cars/train | 5 | locos/train | | length of cars (ft) / train | |
| **Nighttime Hours** | speed (mph) | 25 | speed (mph) | 25 | speed (mph) | 40 | speed (mph) | 40 |
| **(10 PM - 7 AM)** | trains/hour | 0.667 | trains/hour | 0.667 | trains/hour | 0.667 | trains/hour | 0.667 |
| | locos/train | 2 | cars/train | 5 | locos/train | 4 | length of cars (ft) / train | 4000 |
| **Wheel Flats?** | | 0.00% | % of cars w/ wheel flats | 0.00% | | 0.00% | % of cars w/ wheel flats | 0.00% |
| **Jointed Track?** | Y/N | N | Y/N | N | Y/N | N | Y/N | N |
| **Embedded Track?** | Y/N | N | Y/N | N | Y/N | N | Y/N | N |
| **Aerial Structure?** | Y/N | N | Y/N | N | Y/N | N | Y/N | N |
| **Barrier Present?** | Y/N | N | Y/N | N | Y/N | N | Y/N | N |
| **Intervening Rows of of Buildings** | number of rows | 0 | number of rows | 0 | number of rows | 0 | number of rows | 0 |

| SOURCE REFERENCE LIST | |
|---|---|
| **Source** | **Number** |
| Commuter Electric Locomotive | 1 |
| Commuter Diesel Locomotive | 2 |
| Commuter Rail Cars | 3 |
| RRT/LRT | 4 |
| AGT, Steel Wheel | 5 |
| AGT, Rubber Tire | 6 |
| Monorail | 7 |
| Maglev | 8 |
| Freight Locomotive | 9 |
| Freight Cars | 10 |
| Hopper Cars (empty) | 11 |
| Hopper Cars (full) | 12 |
| Crossover | 13 |
| Automobiles | 14 |
| City Buses | 15 |
| Commuter Buses | 16 |
| Rail Yard or Shop | 17 |
| Layover Tracks | 18 |
| Bus Storage Yard | 19 |
| Bus Op. Facility | 20 |
| Bus Transit Center | 21 |
| Parking Garage | 22 |
| Park & Ride Lot | 23 |

**Noise Model Based on Federal Transit Adminstration General Transit Noise Assessment**
**Developed for Chicago Create Project**
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**Case:** Vista GPU EIR

| RESULTS | | | |
|---|---|---|---|
| **Noise Source** | **Ldn (dB)** | **Leq - daytime (dB)** | **Leq - nighttime (dB)** |
| **All Sources** | 60 | 50 | 54 |
| Source 1 | 53 | 50 | 46 |
| Source 2 | 38 | 35 | 31 |
| Source 3 | 56 | 23 | 51 |
| Source 4 | 56 | 6 | 51 |
| Source 5 | 0 | 0 | 0 |
| Source 6 | 0 | 0 | 0 |
| Source 7 | 0 | 0 | 0 |
| Source 8 | 0 | 0 | 0 |

***Enter noise receiver land use category below.***

| LAND USE CATEGORY | |
|---|---|
| Noise receiver land use category (1, 2 or 3) | 2 |

***Enter data for up to 8 noise sources below - see reference list for source numbers.***

| NOISE SOURCE PARAMETERS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Source 1** | | **Source 2** | | **Source 3** | | **Source 4** | |
| **Source Num.** | Commuter Diesel Locomotive | 2 | Commuter Rail Cars | 3 | Freight Locomotive | 9 | Freight Cars | 10 |
| **Distance (source to receiver)** | distance (ft) | 500 | distance (ft) | 500 | distance (ft) | 500 | distance (ft) | 500 |
| **Daytime Hours** | speed (mph) | 25 | speed (mph) | 25 | speed (mph) | | speed (mph) | |
| **(7 AM - 10 PM)** | trains/hour | 1.867 | trains/hour | 1.867 | trains/hour | | trains/hour | |
| | locos/train | 2 | cars/train | 5 | locos/train | | length of cars (ft) / train | |
| **Nighttime Hours** | speed (mph) | 25 | speed (mph) | 25 | speed (mph) | 40 | speed (mph) | 40 |
| **(10 PM - 7 AM)** | trains/hour | 0.667 | trains/hour | 0.667 | trains/hour | 0.667 | trains/hour | 0.667 |
| | locos/train | 2 | cars/train | 5 | locos/train | 4 | length of cars (ft) / train | 4000 |
| **Wheel Flats?** | | 0.00% | % of cars w/ wheel flats | 0.00% | | 0.00% | % of cars w/ wheel flats | 0.00% |
| **Jointed Track?** | Y/N | N | Y/N | N | Y/N | N | Y/N | N |
| **Embedded Track?** | Y/N | N | Y/N | N | Y/N | N | Y/N | N |
| **Aerial Structure?** | Y/N | N | Y/N | N | Y/N | N | Y/N | N |
| **Barrier Present?** | Y/N | N | Y/N | N | Y/N | N | Y/N | N |
| **Intervening Rows of of Buildings** | number of rows | 0 | number of rows | 0 | number of rows | 0 | number of rows | 0 |

| SOURCE REFERENCE LIST | |
|---|---|
| **Source** | **Number** |
| Commuter Electric Locomotive | 1 |
| Commuter Diesel Locomotive | 2 |
| Commuter Rail Cars | 3 |
| RRT/LRT | 4 |
| AGT, Steel Wheel | 5 |
| AGT, Rubber Tire | 6 |
| Monorail | 7 |
| Maglev | 8 |
| Freight Locomotive | 9 |
| Freight Cars | 10 |
| Hopper Cars (empty) | 11 |
| Hopper Cars (full) | 12 |
| Crossover | 13 |
| Automobiles | 14 |
| City Buses | 15 |
| Commuter Buses | 16 |
| Rail Yard or Shop | 17 |
| Layover Tracks | 18 |
| Bus Storage Yard | 19 |
| Bus Op. Facility | 20 |
| Bus Transit Center | 21 |
| Parking Garage | 22 |
| Park & Ride Lot | 23 |