

APPENDIX I

Noise Impact Analysis

NOISE IMPACT ANALYSIS

**TENTATIVE TRACT MAP NO. 72798 RESIDENTIAL
PROJECT**

CITY OF WALNUT

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ACRONYMS AND ABBREVIATIONS

ANSI	American National Standards Institute
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
City	City of Walnut
CNEL	Community Noise Equivalent Level
dB	Decibel
dBA	A-weighted decibels
DOT	Department of Transportation
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
EPA	Environmental Protection Agency
Hz	Hertz
Ldn	Day-night average noise level
Leq	Equivalent sound level
Lmax	Maximum noise level
OSHA	Occupational Safety and Health Administration
PPV	Peak particle velocity
RMS	Root mean square
SEL	Single Event Level or Sound Exposure Level
STC	Sound Transmission Class
TTM	Tentative Tract Map
VdB	Vibration velocity level in decibels

1.0 INTRODUCTION

1.1 Purpose of Analysis and Study Objectives

This Noise Impact Analysis has been prepared to determine the noise impacts associated with the proposed Tentative Tract Map (TTM) No. 72798 Residential project (proposed project). The following is provided in this report:

- A description of the study area and the proposed project;
- Information regarding the fundamentals of noise;
- Information regarding the fundamentals of vibration;
- A description of the local noise guidelines and standards;
- An evaluation of the current noise environment;
- An analysis of the potential short-term construction-related noise impacts from the proposed project; and
- An analysis of long-term operations-related noise impacts from the proposed project.

1.2 Site Location and Study Area

The project site is located in the southern portion of the City of Walnut (City). The approximately 25.84 acre project site contains a vacant equestrian facility that was permanently closed in 2014 and is bounded by Meadow Pass Road and a church to the north, San Vicente Road and single-family homes to the east, La Puente Road and a shopping center to the south, and a fire station, Lemon Avenue and an open space hillside to the west. The project study area is shown in Figure 1.

Sensitive Receptors in Project Vicinity

The nearest sensitive receptors to the project site are residents at the single-family homes on the east side of the project site, where the nearest home is 30 feet east of the project site. There is also a fire station located as near as 60 feet west of the project site and a church located as near as 100 feet north of the project site. The nearest K-12 school is Vejar Elementary School that is located as near as 0.3 mile south of the project site.

1.3 Proposed Project Description

The proposed project would consist of demolition of the existing structures on the project site that were associated with the prior use as an equestrian facility and development of 27 single-family homes that would include six open space lots that total 2.67 acres and an onsite public street system on 3.22 acres. The proposed project would disturb up to 17.1 acres of the 25.84-acre project site. The proposed site plan is shown in Figure 2.

1.4 Executive Summary

Standard Noise Regulatory Conditions

The proposed project will be required to comply with the following regulatory conditions from the City and State of California (State).

City of Walnut Noise Regulations

The following lists the noise regulations from the Municipal Code that are applicable, but not limited to the proposed project.

- Section 3.40.030(A) Construction time limitations
- Section 3.40.050 Exterior noise standards

State of California Noise Regulations

The following lists the State of California noise regulations that are applicable, but not limited to the proposed project.

- California Vehicle Code Section 27200-27207 – On Road Vehicle Noise Limits
- California Vehicle Code Section 38365-38350 – Off-Road Vehicle Noise Limits

Summary of Analysis Results

The following is a summary of the proposed project's impacts with regard to the State CEQA Guidelines noise checklist questions.

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.

Generation of excessive groundborne vibration or groundborne noise levels?

Less than significant impact.

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?

Less than significant impact.

1.5 Mitigation Measures for the Proposed Project

This analysis found that through adherence to the noise and vibration regulations detailed in Section 1.4 above were adequate to limit all noise and vibration impacts to less than significant levels. No mitigation measures are required for the proposed project with respect to noise and vibration impacts.



SOURCE: LA County Planning GIS-NET Public.

Figure 1
Project Location Map



SOURCE: Placeworks.

2.0 NOISE FUNDAMENTALS

Noise is defined as unwanted sound. Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Sound is produced by the vibration of sound pressure waves in the air. Sound pressure levels are used to measure the intensity of sound and are described in terms of decibels. The decibel (dB) is a logarithmic unit which expresses the ratio of the sound pressure level being measured to a standard reference level. A-weighted decibels (dBA) approximate the subjective response of the human ear to a broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear.

2.1 Noise Descriptors

Noise Equivalent sound levels are not measured directly, but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (Leq) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. The worst-hour traffic Leq is the noise metric used by California Department of Transportation (Caltrans) for all traffic noise impact analyses.

The Day-Night Average Level (Ldn) is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time of day corrections require the addition of ten decibels to sound levels at night between 10 p.m. and 7 a.m. While the Community Noise Equivalent Level (CNEL) is similar to the Ldn, except that it has another addition of 4.77 decibels to sound levels during the evening hours between 7 p.m. and 10 p.m. These additions are made to the sound levels at these time periods because during the evening and nighttime hours, when compared to daytime hours, there is a decrease in the ambient noise levels, which creates an increased sensitivity to sounds. For this reason the sound appears louder in the evening and nighttime hours and is weighted accordingly. The City of Walnut relies on the CNEL noise standard to assess transportation-related impacts on noise sensitive land uses.

2.2 Tone Noise

A pure tone noise is a noise produced at a single frequency and laboratory tests have shown that humans are more perceptible to changes in noise levels of a pure tone. For a noise source to contain a “pure tone,” there must be a significantly higher A-weighted sound energy in a given frequency band than in the neighboring bands, thereby causing the noise source to “stand out” against other noise sources. A pure tone occurs if the sound pressure level in the one-third octave band with the tone exceeds the average of the sound pressure levels of the two contiguous one-third octave bands by:

- 5 dB for center frequencies of 500 hertz (Hz) and above
- 8 dB for center frequencies between 160 and 400 Hz
- 15 dB for center frequencies of 125 Hz or less

2.3 Noise Propagation

From the noise source to the receiver, noise changes both in level and frequency spectrum. The most obvious is the decrease in level of noise as the distance from the source increases. The manner in which the noise level reduces with distance depends on whether the source is a point or line source as well as ground absorption, atmospheric effects and refraction, and shielding by natural and manmade features. Sound from point sources, such as air conditioning condensers, radiate uniformly outward as it travels

away from the source in a spherical pattern. The noise drop-off rate associated with this geometric spreading is 6 dBA per each doubling of the distance (dBA/DD) between source and receiver. Transportation noise sources such as roadways are typically analyzed as line sources, since at any given moment the receiver may be impacted by noise from multiple vehicles at various locations along the roadway. Because of the geometry of a line source, the noise drop-off rate associated with the geometric spreading of a line source is 3 dBA/DD.

2.4 Ground Absorption

The sound drop-off rate is highly dependent on the conditions of the land between the noise source and receiver. To account for this ground-effect attenuation (absorption), two types of site conditions are commonly used in traffic noise models, soft-site and hard-site conditions. Soft-site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. For point sources, a drop-off rate of 7.5 dBA/DD is typically observed over soft ground with landscaping, as compared with a 6.0 dBA/DD drop-off rate over hard ground such as asphalt, concrete, stone and very hard packed earth. For line sources a 4.5 dBA/DD is typically observed for soft-site conditions compared to the 3.0 dBA/DD drop-off rate for hard-site conditions. Caltrans research has shown that the use of soft-site conditions is more appropriate for the application of the Federal Highway Administration (FHWA) traffic noise prediction model used in this analysis.

3.0 GROUND-BORNE VIBRATION FUNDAMENTALS

Ground-borne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of ground-borne vibrations typically only cause a nuisance to people, but at extreme vibration levels damage to buildings may occur. Although ground-borne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Ground-borne noise is an effect of ground-borne vibration and only exists indoors, since it is produced from noise radiated from the motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

3.1 *Vibration Descriptors*

There are several different methods that are used to quantify vibration amplitude such as the maximum instantaneous peak in the vibrations velocity, which is known as the peak particle velocity (PPV) or the root mean square (rms) amplitude of the vibration velocity. Due to the typically small amplitudes of vibrations, vibration velocity is often expressed in decibels and is denoted as (L_v) and is based on the rms velocity amplitude. A commonly used abbreviation is “VdB”, which in this text, is when L_v is based on the reference quantity of 1 micro inch per second.

3.2 *Vibration Perception*

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans whose threshold of perception is around 65 VdB. Off-site sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible ground-borne noise or vibration.

3.3 *Vibration Propagation*

The propagation of ground-borne vibration is not as simple to model as airborne noise. This is due to the fact that noise in the air travels through a relatively uniform medium, while ground-borne vibrations travel through the earth which may contain significant geological differences. There are three main types of vibration propagation; surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground’s surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a “push-pull” fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse or “side-to-side and perpendicular to the direction of propagation.”

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil but has been shown to be effective enough for screening purposes, in order to identify potential vibration impacts that may need to be studied through actual field tests.

4.0 REGULATORY SETTING

The project site is located in the City of Walnut. Noise and vibration regulations are addressed through the efforts of various federal, state, and local government agencies. The agencies responsible for regulating noise and vibration are discussed below.

4.1 Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Promulgating noise emission standards for interstate commerce
- Assisting state and local abatement efforts
- Promoting noise education and research

The Federal Office of Noise Abatement and Control (ONAC) was initially tasked with implementing the Noise Control Act. However, the ONAC has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and interagency committees. For example, the Occupational Safety and Health Administration (OSHA) agency prohibits exposure of workers to excessive sound levels. The Department of Transportation (DOT) assumed a significant role in noise control through its various operating agencies. The Federal Aviation Administration (FAA) regulates noise of aircraft and airports. Surface transportation system noise is regulated by a host of agencies, including the Federal Transit Administration (FTA), which regulates transit noise, while freeways that are part of the interstate highway system are regulated by the Federal Highway Administration (FHWA). Finally, the federal government actively advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that “noise sensitive” uses are either prohibited from being sited adjacent to a highway or, alternately that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Although the proposed project is not under the jurisdiction of the FTA, the *Transit Noise and Vibration Impact Assessment Manual* (FTA Manual), prepared by the FTA, September 2018, is the only guidance document from a government agency that has defined what constitutes a significant noise impact from implementing a project. The FTA standards are based on extensive studies by the FTA and other governmental agencies on the human effects and reaction to noise and a summary of the FTA findings are provided below in Table A.

Table A – FTA Project Effects on Cumulative Noise Exposure

Existing Noise Exposure (dBA Leq or Ldn)	Allowable Noise Impact Exposure dBA Leq or Ldn		
	Project Only	Combined	Noise Exposure Increase
45	51	52	+7
50	53	55	+5
55	55	58	+3
60	57	62	+2
65	60	66	+1
70	64	71	+1
75	65	75	0

Source: Federal Transit Administration, 2018.

As shown in Table A, the allowable cumulative noise level increase created from a project would range from 0 to 7 dBA, which is based on the existing (ambient) noise levels in the project vicinity. The justification for the sliding scale, is that people already exposed to high levels of noise should be expected to tolerate only a small increase in the amount of noise in their community. In contrast, if the existing noise levels are quite low, it is reasonable to allow a greater change in the community noise for the equivalent difference in annoyance.

The FTA Manual also provides specific guidance for construction noise. The FTA recommends developing construction noise criteria on a project-specific basis that utilizes local noise ordinances if possible. However, local noise ordinances usually relates to nuisance and hours of allowed activity and sometimes specify limits in terms of maximum levels, but are generally not practical for assessing the noise impacts of a construction project. Project construction noise criteria should take into account the existing noise environment, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land uses. The FTA standards are based on extensive studies by the FTA and other governmental agencies on the human effects and reaction to noise and a summary of the FTA findings for a Detailed Analysis of construction noise are provided below in Table B. It should be noted that even though the project has been analyzed based on the General Assessment methodology, the more stringent Detailed Analysis construction noise thresholds have been utilized in this analysis.

Table B – FTA Construction Noise Criteria

Land Use	Day (dBA Leq(8-hour))	Night (dBA Leq(8-hour))	30-day Average (dBA Ldn)
Residential	80	70	75
Commercial	85	85	80*
Industrial	90	90	85*

Notes:

* 24-hour Leq not Ldn.

Source: Federal Transit Administration, 2018.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by transportation sources, the City is restricted to regulating noise generated by the transportation system through nuisance abatement ordinances and land use planning.

4.2 State Regulations

Noise Standards

California Department of Health Services Office of Noise Control

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regulatory tools to control and abate noise for use by local agencies. One significant model is the “Land Use Compatibility for Community Noise Environments Matrix,” which allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise. The Land Use Compatibility Matrix that was adopted by the City is shown in Figure 3.

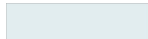
California Noise Insulation Standards

Title 24, Chapter 1, Article 4 of the California Administrative Code (California Noise Insulation Standards) requires noise insulation in new hotels, motels, apartment houses, and dwellings (other than single-family

Table N-4: Land Use Compatibility for Community Noise Environments

Land Use Category	Community Noise Equivalent (CNEL), dB						
	55	60	65	70	75	80	85
Very Low-and Low-Density Residential							
Low Medium-Density Residential							
Medium-Density Residential							
Mixed Use							
Commercial							
Industrial							
Schools and Public Institutional							
Parks and Open Space							

Key



Normally Acceptable



Conditionally Acceptable



Normally Unacceptable



Clearly Unacceptable

Specified land use is satisfactory, assuming buildings are of conventional construction

New development should be undertaken only after detailed analysis of noise reduction requirements are made.

New development should be generally discouraged, if not, a detailed analysis of noise reduction requirements must be made.

New development should generally not be undertaken

Source: Governor's Office of Planning and Research. 2017. *State of California General Plan Guidelines*. Appendix D, Noise Element Guidelines, Figure 2. Sacramento, CA.

SOURCE: City of Walnut General Plan. Adopted May 9, 2018.

detached housing) that provides an annual average noise level of no more than 45 dBA CNEL. When such structures are located within a 60-dBA CNEL (or greater) noise contour, an acoustical analysis is required to ensure that interior levels do not exceed the 45-dBA CNEL annual threshold. In addition, Title 21, Chapter 6, Article 1 of the California Administrative Code requires that all habitable rooms, hospitals, convalescent homes, and places of worship shall have an interior CNEL of 45 dB or less due to aircraft noise.

Government Code Section 65302

Government Code Section 65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable.

California Vehicle Code Section 27200-27207 – On-Road Vehicle Noise

California Vehicle Code Section 27200-27207 provides noise limits for vehicles operated in California. For vehicles over 10,000 pounds noise is limited to 88 dB for vehicles manufactured before 1973, 86 dB for vehicles manufactured before 1975, 83 dB for vehicles manufactured before 1988, and 80 dB for vehicles manufactured after 1987. All measurements are based at 50 feet from the vehicle.

California Vehicle Section 38365-38380 – Off-Road Vehicle Noise

California Vehicle Code Section 38365-38380 provides noise limits for off-highway motor vehicles operated in California. 92 dBA for vehicles manufactured before 1973, 88 dBA for vehicles manufactured before 1975, 86 dBA for vehicles manufactured before 1986, and 82 dBA for vehicles manufactured after December 31, 1985. All measurements are based at 50 feet from the vehicle.

Vibration Standards

Title 14 of the California Administrative Code Section 15000 requires that all state and local agencies implement the California Environmental Quality Act (CEQA) Guidelines, which requires the analysis of exposure of persons to excessive groundborne vibration. However, no statute has been adopted by the state that quantifies the level at which excessive groundborne vibration occurs.

The *Transportation- and Construction Vibration Guidance Manual*, prepared by Caltrans, April 2020, provides practical guidance to Caltrans engineers, planners, and consultants who must address vibration issues associated with the construction, operation, and maintenance of Caltrans projects. However, this manual is also used as a reference point by many lead agencies and CEQA practitioners throughout California, as it provides numeric thresholds for vibration impacts. Thresholds are established for continuous (construction-related) and transient (transportation-related) sources of vibration, which found that the human response becomes distinctly perceptible at 0.25 inch per second PPV for transient sources and 0.04 inch per second PPV for continuous sources.

4.3 Local Regulations

The City of Walnut General Plan and Municipal Code establishes the following applicable goals and policies related to noise and vibration.

City of Walnut General Plan Goals and Policies

Goal N-1: Quiet Neighborhoods. Coordinate the City’s land use policies promoting a small-town ambience with the appropriate measures to control, and to measure noise impacts.

Policies

N-1.1: **Land Use/Project Evaluation.** Use the Land Use Compatibility for Community Noise Environments scale (Figure N-4), the Future Noise Contour Map (Figure N-5,) and the WMC to evaluate land use decisions to mitigate unnecessary noise impacts or discourage further unmitigated noise-inducing developments.

N-1.3: **Minimize Noise Impacts.** Minimize noise impacts in the community to ensure that noise does not detract from Walnut’s quality of life.

N-1.6: **Stationary Noise Sources.** Minimize stationary noise impacts on sensitive receptors, and require control of noise from construction activities, private developments/residences, landscaping activities, and special events.

N-1.7: **Noise Mitigation.** Require development projects to implement mitigation measures, where necessary, to reduce noise levels to meet adopted standards and criteria. Such measures may include, but are not limited to, berms, walls, and sound-attenuating architectural design and construction methods.

Goal N-2: Minimize Transportation Noise and Vibration. Monitor and regulate impact of transportation-related sources of noise located within and adjacent to the City’s boundaries.

Policies

N-2.2: **Traffic-Calming Solutions to Street Noise.** Evaluate solutions to discourage through traffic in neighborhoods through noise-attenuating roadway materials and modifications to street design.

N-2.3: **Trucks.** Designate a system of truck routes on specified arterial streets to minimize the negative impacts of trucking through the City.

City of Walnut Municipal Code

The City of Walnut Municipal Code establishes the following applicable standards related to noise.

Chapter 3.40 Noise

3.40.010 Purpose and Intent

Generation of excessive noise on a continuing basis plus false alarms can create conditions causing both danger and annoyance to the general public. It is an unnecessary waste of taxpayers’ dollars for response created by false alarms and ongoing noise complaints, which must be eliminated. The tying up of emergency personnel through emergency response created by false alarms is unnecessary and potentially hazardous to both the citizens and emergency personnel. Therefore, no person shall make, or cause or suffer, or permit to be made upon any premises owned, occupied or controlled by such person, any unnecessary noises, sounds or vibrations which are physically annoying to persons of ordinary sensitiveness or which are so harsh or so prolonged or unnatural or unusual in their use, time or place as to occasion unnecessary discomfort to any person or persons within any neighborhood. Such action is determined to create a public nuisance.

3.40.030 Certain Noise Prohibited

Notwithstanding any other provisions of this chapter, the following acts and the causing or permitting thereof are declared to be a public nuisance in violation of this chapter:

- A. Construction. Operating or causing the operation of any tools, equipment, impact devices, derricks or hoists used in construction, drilling, repair, alteration, demolition or earthwork, between the weekday hours of 8:00 p.m. and 7:00 a.m. the following day, or at any time on Saturdays, Sundays or holidays; except as provided in Section 3.40.040.

3.40.040 Exceptions

The following activities shall be exempt from Section 3.40.030:

- A. Construction by Approval. Any person who performs the construction, repair, excavation or earthmoving work involved pursuant to the express written permission by a City Manager to perform such work. A request for an exemption shall be made in writing stating the reasons for the request and the facts upon which such reasons are based. Permission may be granted if any of the following conditions exist:
 - 1. The work proposed to be done is in the public interest.
 - 2. Hardship, including, but not limited to, unreasonable delay due to weather, acts of God or labor strikes, would result in the interruption thereof during the hours and days specified.
 - 3. The building or structure involved is devoted or intended to be devoted to a use immediately incident to public defense.

3.40.050 Exterior Noise Standards

Citations for violations are hereby authorized when:

- A. Exterior noise levels shall apply to all receptor properties as follows, unless otherwise noted:

Receptor-Land Use	Time Interval	Noise Level
Residential Properties	22:00 – 7:00	45 dB
	7:00 – 22:00	50 dB
Commercial Properties	22:00 – 7:00	55 dB
	7:00 – 22:00	60 dB
Industrial Properties	Anytime	70 dB

- B. If the measurement location is on a boundary property between two different zones, exterior noise level utilized in subsection A or this section to determine the exterior standard shall be the daytime exterior noise level of the subject receptor property.

5.0 EXISTING NOISE CONDITIONS

To determine the existing noise levels, noise measurements have been taken in the vicinity of the project site. The field survey noted that noise within the proposed project area is generally characterized by vehicle traffic on the nearby roadways. The following describes the measurement procedures, measurement locations, noise measurement results, and the modeling of the existing noise environment.

5.1 Noise Measurement Equipment

The noise measurements were taken using three Larson Davis Model LXT1 Class 1 sound level meters programmed in “slow” mode to record the sound pressure level at 1-second intervals for 24 hours in “A” weighted form. In addition, the L_{eq} averaged over the entire measuring time and L_{max} were recorded with the three sound level meters. The sound level meters and microphones were mounted on fences and trees, were placed approximately four to six feet above the ground and were equipped with windscreens during all measurements. The noise meters were calibrated before and after the monitoring using a Larson Davis Cal200 calibrator. All noise level measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (ANSI S1.4-2014 standard).

Noise Measurement Locations

The noise monitoring locations were selected in order to obtain noise levels in the vicinity of the project site. Descriptions of the noise monitoring sites are provided below in Table C and are shown in Figure 4. Appendix A includes a photo index of the study area and noise level measurement locations.

Noise Measurement Timing and Climate

The noise measurements were recorded between 11:24 a.m. on Monday, October 16, 2023 and 11:37 a.m. on Tuesday, October 17, 2023. At the start of the noise measurements, the sky was clear (no clouds), the temperature was 82 degrees Fahrenheit, the humidity was 43 percent, barometric pressure was 29.33 inches of mercury, and there was no wind. Overnight, the temperature dropped to 57 degrees Fahrenheit and the humidity peaked at 86 percent. At the conclusion of the noise measurements, the sky was clear, the temperature was 81 degrees Fahrenheit, the humidity was 49 percent, barometric pressure was 29.24 inches of mercury, and there was no wind.

5.2 Noise Measurement Results

The results of the noise level measurements are presented in Table C. The measured sound pressure levels in dBA have been used to calculate the minimum and maximum L_{eq} averaged over 1-hour intervals. Table C also shows the L_{eq} , L_{max} , and CNEL, based on the entire measurement time. The CNEL was calculated through use of the hourly L_{eq} that was entered into Equation 2-23 from *Technical Noise Supplement to the Traffic Noise Analysis Protocol (TeNS)*, prepared by Caltrans, September 2013. The noise monitoring data printouts are included in Appendix B. Figure 5 shows a graph of the 24-hour noise measurements.

Table C – Existing (Ambient) Noise Level Measurements

Site No.	Site Description	Average (dBA L _{eq})		1-hr Average (dBA L _{eq} /Time)		24-hour dBA CNEL
		Daytime ¹	Nighttime ²	Minimum	Maximum	
1	Located on a fence near the southeast corner of the project site, approximately 25 feet west of San Vicente Road centerline and 105 feet north of La Puente Road centerline.	61.0	53.6	46.1 1:24 a.m.	63.9 7:54 a.m.	62.7
2	Located on a tree on north side of the project site, approximately 40 feet south of Meadow Pass Road centerline and 25 feet east of St. Lorenzo Ruiz Catholic Church west driveway centerline.	63.5	54.2	45.0 1:48 a.m.	66.7 7:55 a.m.	64.2
3	Located on a tree near the middle of the project site, approximately 150 feet east of Lemon Avenue centerline.	55.0	48.1	41.9 1:05 a.m.	59.3 9:31 a.m.	56.8

Notes:

¹ Daytime defined as 7:00 a.m. to 10:00 p.m. (Section 3.40.050 of the Municipal Code)

² Nighttime define as 10:00 p.m. to 7:00 a.m. (Section 3.40.050 of the Municipal Code)

Source: Noise measurements taken between Monday, October 16, 2023 and Tuesday, October 17, 2023.

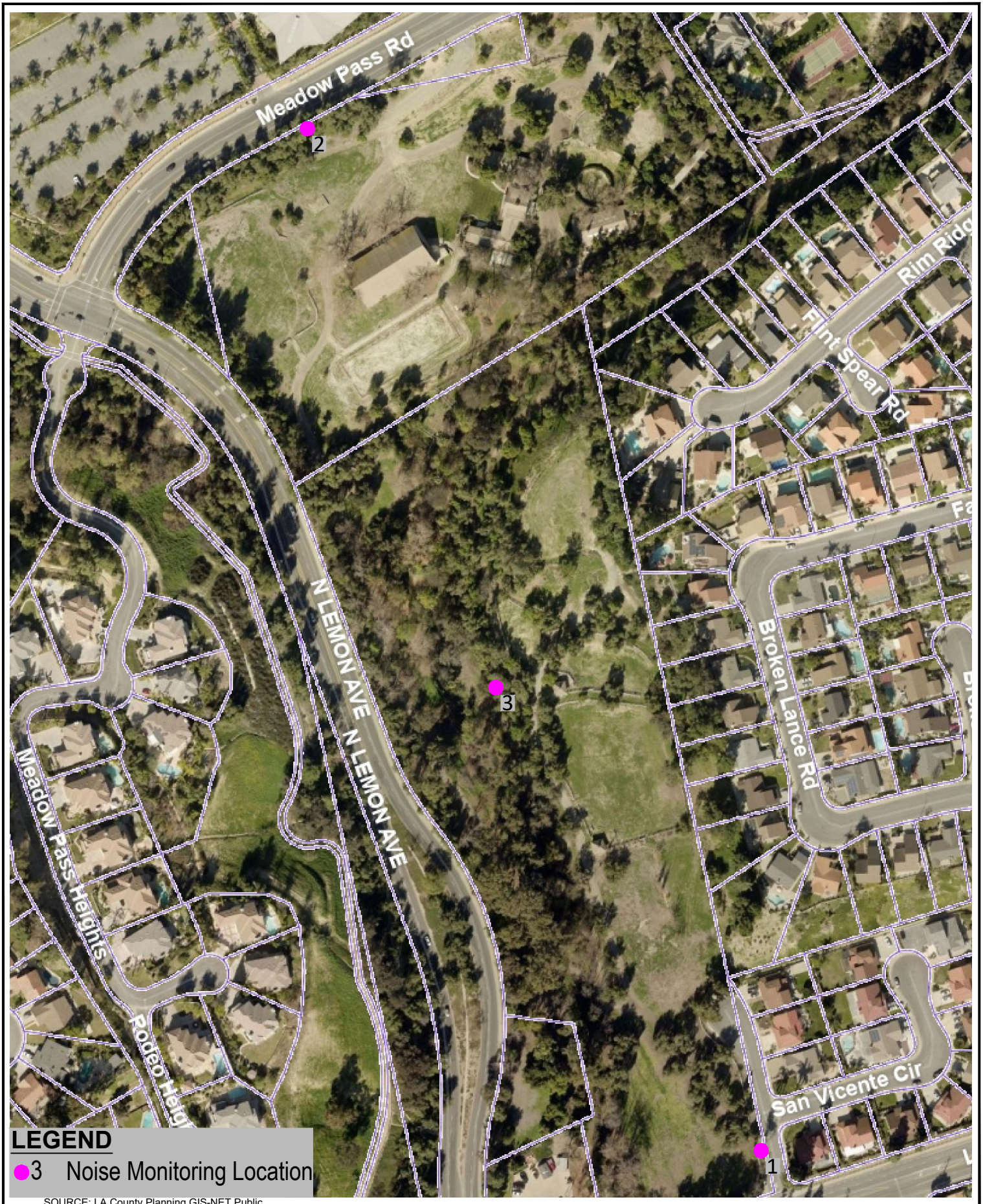
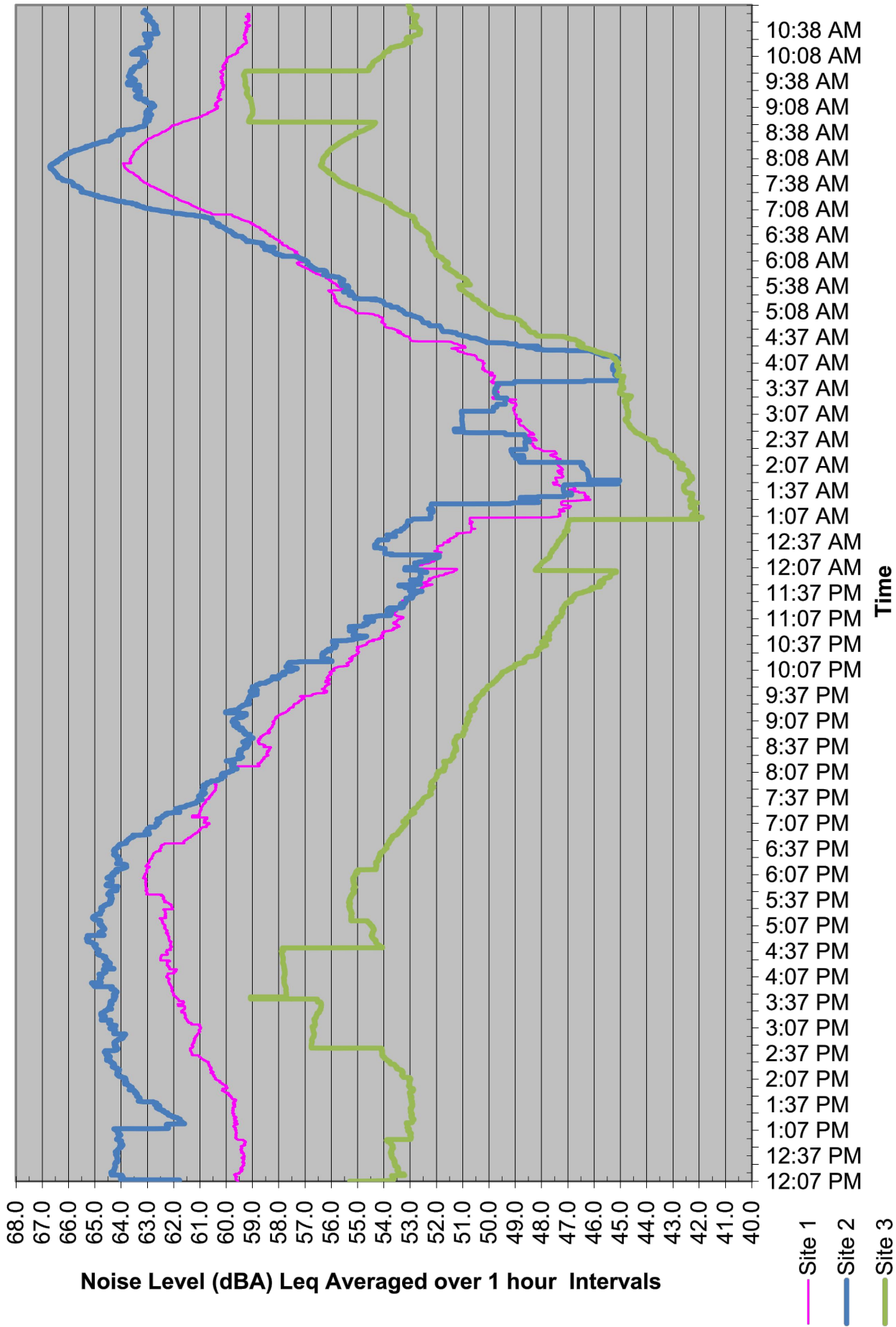


Figure 4
Field Noise Monitoring Locations



SOURCE: Three Larson Davis Model LXT1 Type 1 Sound Level Meters.

Figure 5
Field Noise Measurements Graph

6.0 MODELING PARAMETERS AND ASSUMPTIONS

6.1 Construction Noise

The noise impacts from construction of the proposed project have been analyzed through use of the FHWA's Roadway Construction Noise Model (RCNM). The FHWA compiled noise measurement data regarding the noise generating characteristics of several different types of construction equipment used during the Central Artery/Tunnel project in Boston. Table D below provides a list of the construction equipment anticipated to be used for each phase of construction that was obtained from the *Air Quality, Energy, and Greenhouse Gas Emissions and Health Risk Assessment Impact Analysis Tentative Tract Map No. 72798 Residential Project* (Air Quality Analysis), prepared by Vista Environmental, April 17, 2024.

Table D – Construction Equipment Noise Emissions and Usage Factors

Equipment Description	Number of Equipment	Acoustical Use Factor ¹ (percent)	Spec 721.560 Lmax at 50 feet ² (dBA, slow ³)	Actual Measured Lmax at 50 feet ⁴ (dBA, slow ³)
Demolition				
Concrete/Industrial Saw	1	40	85	83
Excavators	3	40	85	81
Rubber Tired Dozers	2	40	85	83
Site Preparation				
Rubber Tired Dozer	3	40	85	83
Tractors	2	40	84	N/A
Front End Loader	1	40	80	79
Backhoe	1	40	80	78
Grading				
Excavator	2	40	85	81
Grader	1	40	85	83
Rubber Tired Dozer	1	40	85	82
Scrapers	2	40	85	84
Tractor	1	40	84	N/A
Front End Loader	1	40	80	79
Building Construction				
Crane	1	16	85	81
Forklift (Gradall)	3	40	85	83
Generator	1	50	82	81
Tractor	1	40	84	N/A
Front End Loader	1	40	80	79
Backhoe	1	40	80	78
Welder	1	40	73	74
Paving				
Paver	2	50	85	77
Paving Equipment	2	50	85	77
Rollers	2	20	85	80
Architectural Coating				
Air Compressor	1	40	80	78

Notes:

¹ Acoustical use factor is the percentage of time each piece of equipment is operational during a typical workday.

² Spec 721.560 is the equipment noise level utilized by the RCNM program.

³ The "slow" response averages sound levels over 1-second increments. A "fast" response averages sound levels over 0.125-second increments.

⁴ Actual Measured is the average noise level measured of each piece of equipment during the Central Artery/Tunnel project in Boston, Massachusetts primarily during the 1990s.

Source: Federal Highway Administration, 2006 and CalEEMod default equipment mix.

Table D shows the associated measured noise emissions for each piece of equipment from the RCNM model and measured percentage of typical equipment use per day. Construction noise impacts to the nearby sensitive receptors have been calculated according to the equipment noise levels and usage factors listed in Table D and through use of the RCNM.

The FTA Manual provides for two different levels of assessment of construction noise and the current state of the proposed project meets the definition of a General Assessment, which is defined as "projects in an early assessment stage when the equipment roster and schedule are undefined and only a rough estimate of construction noise levels is practical." As such, construction noise has been analyzed based on the methodology for a General Assessment. However, in order to provide a more conservative analysis, for each phase of construction, all construction equipment was analyzed based on being placed in the middle of the project site, instead of just the two noisiest pieces of equipment as detailed in the FTA Manual for a General Assessment and the more stringent noise thresholds for a Detailed Analysis were utilized (see Table B). The RCNM model printouts are provided in Appendix C.

6.2 Operations-Related Noise

FHWA Model Methodology

The proposed project would result in increases in traffic noise to the nearby roadways as well as introduce new sensitive receptors to the project site. The project impacts to the offsite roadways were analyzed through use of the FHWA Traffic Noise Prediction Model - FHWA-RD-77-108 (FHWA Model) as detailed in the *Technical Noise Supplement to the Traffic Noise Analysis Protocol*, prepared by Caltrans, September 2013. The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). Adjustments are then made to the reference energy mean emission level to account for:

- The roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway);
- The total average daily traffic (ADT) and the percentage of ADT which flows during the day, evening and night, the travel speed, the vehicle mix on the roadway, which is a percentage of the volume of automobiles, medium trucks and heavy trucks, the roadway grade, the angle of view of the observer exposed to the roadway; and
- Site conditions ("hard" or "soft" relates to the absorption of the ground, pavement or landscaping).

The following section provides a discussion of the software and modeling input parameters used in this analysis and a discussion of the resultant existing noise model.

FHWA Model Traffic Noise Prediction Model Inputs

The roadway parameters used for this study are presented in Table E. The roadway classifications are based on the City's General Plan Circulation Element. The roadway speeds are based on the posted speed limits. The distance to the nearest sensitive receptor was determined by measuring the distance from the roadway centerline to the nearest residence. Since the study area is located in a suburban environment and landscaping or natural vegetation exists along the sides of the analyzed roads, soft site conditions were modeled.

Table E – FHWA Model Roadway Parameters

Roadway	Segment	General Plan Classification	Vehicle Speed (MPH)	Distance to Nearest Receptor¹ (feet)
Amar Road	West of Lemon Avenue	Minor Arterial	50	100
Amar Road	East of Lemon Avenue	Minor Arterial	50	95
Meadow Pass Rd	West of Colt Lane	Important Local	35	100
Meadow Pass Rd	East of Colt Lane	Important Local	35	60
La Puente Road	West of Lemon Avenue	Secondary	45	55
La Puente Road	East of Lemon Avenue	Secondary	40	50
Valley Boulevard	West of Lemon Avenue	Major Arterial	50	110
Lemon Avenue	North of Meadow Pass Road	Minor Arterial	40	85
Lemon Avenue	South of Meadow Pass Road	Minor Arterial	40	215
Lemon Avenue	South of La Puente Road	Minor Arterial	40	80

Notes:

¹ Distance measured from nearest offsite residential structure to centerline of roadway.

Source: City of Walnut, 2018.

The average daily traffic (ADT) volumes were obtained from the *Transportation Impact Study The Brookside (TTM 72798) Project* (Traffic Study), prepared by Linscott Law & Greenspan, January 24, 2024. The ADT volumes used in this analysis are shown in Table F and were calculated by multiplying the PM peak hour intersection volumes by 12. The Traffic Study analyzed two potential scenarios that includes the proposed project, which restricts through traffic on San Vicente Road onto the proposed project's public streets and an alternative project that allows a vehicle to travel from La Puente Road via San Vicente Road and through the project site to Meadow Pass Road. The Traffic Study found that only three of the analyzed road segments would result in a change in trips between the proposed project and alternative project, which are shown in Table F.

Table F – Average Daily Traffic Volumes

Roadway	Segment	Average Daily Traffic Volumes			
		Existing	Existing + Project	Year 2027 Cumulative	Year 2027 Cumulative + Project
Proposed Project					
Amar Road	West of Lemon Avenue	26,160	26,200	27,350	27,380
Amar Road	East of Lemon Avenue	23,220	23,260	24,300	24,340
Meadow Pass Rd	West of Colt Lane	4,200	4,440	4,400	4,640
Meadow Pass Rd	East of Colt Lane	4,160	4,200	4,370	4,400
La Puente Road	West of Lemon Avenue	15,620	15,650	16,260	16,280
La Puente Road	East of Lemon Avenue	13,690	13,730	14,260	14,290
Valley Boulevard	West of Lemon Avenue	24,100	24,160	25,390	25,450
Lemon Avenue	North of Meadow Pass Road	12,170	12,240	12,920	13,000
Lemon Avenue	South of Meadow Pass Road	15,010	15,180	15,910	16,080
Lemon Avenue	South of La Puente Road	16,980	16,980	17,960	18,110
Alternative Project					
Meadow Pass Rd	West of Colt Lane	4,200	4,310	4,400	4,510
La Puente Road	East of Lemon Avenue	13,690	13,840	14,260	14,400
Lemon Avenue	South of Meadow Pass Road	15,010	15,050	15,910	15,950

Source: City of Walnut, 2018; Linscott Law & Greenspan, 2024.

The vehicle mixes used in the FHWA-RD-77-108 Model are shown in Table G and are based on typical vehicle mixes observed in Southern California. The vehicle mixes provides the hourly distribution percentages of automobiles, medium trucks, and heavy trucks for input into the FHWA model.

Table G – Roadway Vehicle Mixes

Vehicle Type	Traffic Flow Distributions			Overall
	Day (7 a.m. to 7 p.m.)	Evening (7 p.m. to 10 p.m.)	Night (10 p.m. to 7 a.m.)	
Secondary and Local				
Automobiles	73.60%	13.60%	10.22%	97.42%
Medium Trucks	0.90%	0.04%	0.9%	1.84%
Heavy Trucks	0.35%	0.04%	0.35%	0.74%
Major and Arterial				
Automobiles	69.50%	12.90%	9.60%	92.00%
Medium Trucks	1.44%	0.06%	1.50%	3.00%
Heavy Trucks	2.40%	0.10%	2.50%	5.00%

Source: Vista Environmental.

FHWA Model Source Assumptions

To assess the roadway noise generation in a uniform manner, all vehicles are analyzed at the single lane equivalent acoustic center of the roadway being analyzed. In order to determine the height above the road grade where the noise is being emitted from, each type of vehicle has been analyzed independently with autos at road grade, medium trucks at 2.3 feet above road grade, and heavy trucks at 8 feet above road grade. These elevations were determined through a noise-weighted average of the elevation of the exhaust pipe, tires and mechanical parts in the engine, which are the primary noise emitters from a vehicle.

6.3 Vibration

Construction activity can result in varying degrees of ground vibration, depending on the equipment used on the site. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings in the vicinity of the construction site respond to these vibrations with varying results ranging from no perceptible effects at the low levels to damage at the highest levels. Table H gives approximate vibration levels for particular construction activities. The data in Table H provides a reasonable estimate for a wide range of soil conditions.

Table H – Vibration Source Levels for Construction Equipment

Equipment		Peak Particle Velocity (inches/second)	Approximate Vibration Level (L _v) at 25 feet
Pile driver (impact)	Upper range	1.518	112
	typical	0.644	104
Pile driver (sonic)	Upper range	0.734	105
	typical	0.170	93
Clam shovel drop (slurry wall)		0.202	94
Vibratory Roller		0.210	94
Hoe Ram		0.089	87
Large bulldozer		0.089	87
Caisson drill		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79
Small bulldozer		0.003	58

Source: Federal Transit Administration, 2018.

The construction-related vibration impacts have been calculated through the vibration levels shown above in Table H and through typical vibration propagation rates. The equipment assumptions were based on the equipment lists provided above in Table D.

7.0 IMPACT ANALYSIS

7.1 CEQA Thresholds of Significance

Consistent with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, a significant impact related to noise would occur if a proposed project is determined to result in:

- 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;
- Generation of excessive groundborne vibration or groundborne noise levels; 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.

7.2 Generation of Noise Levels in Excess of Standards

The proposed project would not generate 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. The following section calculates the potential noise emissions associated with the temporary construction activities and long-term operations of the proposed project and compares the noise levels to the City standards.

Construction-Related Noise

The construction activities for the proposed project are anticipated to include demolition of the existing structures on the project site, site preparation and grading of the approximately 17.1 acres that will be disturbed, building construction of the 27 single-family homes, paving of the onsite public street system and driveways, and application of architectural coatings. Noise impacts from construction activities associated with the proposed project would be a function of the noise generated by construction equipment, equipment location, sensitivity of nearby land uses, and the timing and duration of the construction activities. The nearest sensitive receptors to the project site are residents at the single-family homes on the east side of the project site, where the nearest home is 30 feet east of the project site. There is also a fire station located as near as 60 feet west of the project site and a church located as near as 100 feet north of the project site.

Section 3.40.030(A) of the City's Municipal Code restricts the operation of any tools or other construction equipment between the weekday hours of 8:00 p.m. and 7:00 a.m., or any time on Saturdays, Sundays or holidays. However, the City construction noise standards do not provide any limits to the noise levels that may be created from construction activities that occur during the allowable hours of construction and even with adherence to the City standards, the resultant construction noise levels may result in a significant substantial temporary noise increase to the nearby residents.

In order to determine if the proposed construction activities would create a significant substantial temporary noise increase, the FTA construction noise criteria thresholds detailed above in Section 4.1 have been utilized, which shows that a significant construction noise impact would occur if construction noise exceeds 80 dBA during the daytime at any of the nearby sensitive receptors.

Construction noise levels to the nearby sensitive receptors have been calculated through use of the RCNM and the parameters and assumptions detailed in Section 6.1 of this report including Table D – Construction Equipment Noise Emissions and Usage Factors. The results are shown below in Table I and the RCNM printouts are provided in Appendix C.

Table I – Construction Noise Levels at the Nearby Sensitive Receptors

Construction Phase	Construction Noise Level (dBA Leq) at:		
	Church to North ¹	Homes to East ²	Fire Station to Southwest ³
Demolition	60	72	60
Site Preparation	60	72	60
Grading	61	73	61
Building Construction	60	72	61
Paving	55	72	60
Painting	47	59	47
FTA Construction Noise Threshold⁴	80	80	80
Exceed Thresholds?	No	No	No

¹ The church to the north of the project site is located as near as 1,100 feet from the center of project site.

² The homes to the east of the project site are located as near as 275 feet from the center of the project site.

³ The fire station to the southwest of the project site is located as near as 1,060 feet from the center of the project site.

⁴ The FTA Construction noise thresholds are detailed above in Table B.

Source: RCNM, Federal Highway Administration, 2006

Table I shows that the greatest noise impacts would occur during the grading phase, with noise levels as high as 73 dBA Leq at the nearest homes to the east of the project site. All calculated construction noise levels shown in Table I are within the FTA daytime construction noise standard of 80 dBA averaged over eight hours. Therefore, through adherence to the allowable construction times detailed in Section 3.40.030(A) of the Municipal Code, the construction activities for the proposed project would not create a substantial temporary increase in ambient noise levels that are in excess of applicable noise standards. Impacts would be less than significant.

Operational-Related Noise

The proposed project would consist of the development of a residential community with 27 single-family homes. Potential noise impacts associated with the operations of the proposed project would be from project-generated vehicular traffic on the nearby roadways. The proposed project is bordered by single-family homes to the east, a fire station to the southwest and roadways on the north, south, and west. The onsite operations of the proposed project would not introduce any new noise sources (i.e., air conditioning equipment, landscape maintenance activities, trash trucks, etc.) that do not already exist in the vicinity of the project site. As such, less than significant onsite noise impacts are anticipated to occur from operation of the proposed project.

Roadway Vehicular Noise Impacts to Nearby Homes

Vehicle noise is a combination of the noise produced by the engine, exhaust and tires. The level of traffic noise depends on three primary factors (1) the volume of traffic, (2) the speed of traffic, and (3) the number of trucks in the flow of traffic. The proposed project does not propose any uses that would require a substantial number of truck trips and the proposed project would not alter the speed limit on any existing roadway so the proposed project's potential offsite noise impacts have been focused on the noise

impacts associated with the change of volume of traffic that would occur with development of the proposed project.

Neither the General Plan nor the Municipal Code defines what constitutes a “substantial permanent increase to ambient noise levels”. As such, this impact analysis has utilized guidance from the Federal Transit Administration for a moderate impact that has been detailed above in Table A that shows that the project contribution to the noise environment can range between 0 and 7 dB, which is dependent on the existing roadway noise levels.

The potential offsite traffic noise impacts created by the on-going operations of the proposed project have been analyzed through utilization of the FHWA model and parameters described above in Section 6.2 and the FHWA model traffic noise calculation spreadsheets are provided in Appendix D. The proposed project’s potential offsite traffic noise impacts have been analyzed for the existing year and future year 2027 cumulative projects scenarios that are discussed separately below.

Existing Year Conditions

The proposed project’s potential offsite traffic noise impacts have been calculated through a comparison of the Existing scenario to the Existing With Project scenario. The results of this comparison are shown in Table J.

Table J – Existing Year Project Traffic Noise Contributions

		dBA CNEL at Nearest Receptor ¹			Increase Threshold ²
		Existing	Existing Plus Project	Project Contribution	
Roadway	Segment				
Proposed Project					
Amar Road	West of Lemon Avenue	67.0	67.0	+0.0	+1 dBA
Amar Road	East of Lemon Avenue	66.8	66.8	+0.0	+1 dBA
Meadow Pass Rd	West of Colt Lane	54.3	54.6	+0.3	+5 dBA
Meadow Pass Rd	East of Colt Lane	57.7	57.8	+0.1	+3 dBA
La Puente Road	West of Lemon Avenue	67.7	67.7	+0.0	+1 dBA
La Puente Road	East of Lemon Avenue	66.5	66.5	+0.0	+1 dBA
Valley Boulevard	West of Lemon Avenue	66.0	66.0	+0.0	+1 dBA
Lemon Avenue	North of Meadow Pass Road	62.3	62.3	+0.0	+2 dBA
Lemon Avenue	South of Meadow Pass Road	56.8	56.9	+0.1	+3 dBA
Lemon Avenue	South of La Puente Road	64.2	64.2	+0.0	+2 dBA
Alternative Project					
Meadow Pass Rd (Alt)	West of Colt Lane	54.3	54.5	+0.2	+5 dBA
La Puente Road (Alt)	East of Lemon Avenue	66.5	66.5	+0.0	+1 dBA
Lemon Avenue (Alt)	South of Meadow Pass Road	56.8	56.8	+0.0	+3 dBA

Notes:

¹ Distance to nearest sensitive receptors shown in Table E, does not take into account existing noise barriers.

² Increase Threshold obtained from the FTA’s allowable noise impact exposures detailed above in Table A.

Source: FHWA Traffic Noise Prediction Model FHWA-RD-77-108.

Table J shows that the proposed project’s permanent noise increases to the nearby homes from the generation of additional vehicular traffic would not exceed the FTA’s allowable traffic noise increase

thresholds detailed above. Therefore, the proposed project would not result in a substantial permanent increase in ambient noise levels for the existing conditions. Impacts would be less than significant.

Future Year 2027 Cumulative Conditions

The proposed project's potential offsite traffic noise impacts have been calculated through a comparison of the future year 2027 cumulative without project scenario to the future year 2027 cumulative with project scenario. The results of this comparison are shown in Table K.

Table K – Future Year 2027 Project Traffic Noise Contributions

		dBA CNEL at Nearest Receptor ¹			Increase Threshold ²
		Year 2027 Without Project	Year 2027 Plus Project	Project Contribution	
Roadway	Segment				
Proposed Project					
Amar Road	West of Lemon Avenue	67.1	67.2	+0.1	+1 dBA
Amar Road	East of Lemon Avenue	67.0	67.0	+0.0	+1 dBA
Meadow Pass Rd	West of Colt Lane	54.5	54.8	+0.3	+3 dBA
Meadow Pass Rd	East of Colt Lane	57.9	58.0	+0.1	+3 dBA
La Puente Road	West of Lemon Avenue	67.9	67.9	+0.0	+1 dBA
La Puente Road	East of Lemon Avenue	66.6	66.6	+0.0	+1 dBA
Valley Boulevard	West of Lemon Avenue	66.3	66.3	+0.0	+1 dBA
Lemon Avenue	North of Meadow Pass Road	62.5	62.5	+0.0	+2 dBA
Lemon Avenue	South of Meadow Pass Road	57.1	57.1	+0.0	+3 dBA
Lemon Avenue	South of La Puente Road	64.4	64.4	+0.0	+2 dBA
Alternative Project					
Meadow Pass Rd (Alt)	West of Colt Lane	54.5	54.7	+0.2	+3 dBA
La Puente Road (Alt)	East of Lemon Avenue	66.6	66.7	+0.1	+1 dBA
Lemon Avenue (Alt)	South of Meadow Pass Road	57.1	57.1	+0.0	+3 dBA

Notes:

¹ Distance to nearest sensitive receptors shown in Table E, does not take into account existing noise barriers.

² Increase Threshold obtained from the FTA's allowable noise impact exposures detailed above in Table A.

Source: FHWA Traffic Noise Prediction Model FHWA-RD-77-108.

Table K shows that the proposed project's permanent noise increases to the nearby homes from the generation of additional vehicular traffic would not exceed the FTA's allowable traffic noise increase thresholds detailed above. Therefore, the proposed project would not result in a substantial permanent increase in ambient noise levels for the future year 2027 cumulative conditions. Impacts would be less than significant.

Level of Significance

Less than significant impact.

7.3 Generation of Excessive Groundborne Vibration

The proposed project would not expose persons to or generation of excessive groundborne vibration or groundborne noise levels. The following section analyzes the potential vibration impacts associated with the construction and operations of the proposed project.

Construction-Related Vibration Impacts

The construction activities for the proposed project are anticipated to include demolition of the existing structures on the project site, site preparation and grading of the approximately 17.1 acres that will be disturbed, building construction of the 27 single-family homes, paving of the onsite public street system and driveways, and application of architectural coatings. Vibration impacts from construction activities associated with the proposed project would typically be created from the operation of heavy off-road equipment. The nearest sensitive receptors to the project site are residents at the single-family homes on the east side of the project site, where the nearest home is 30 feet east of the project site.

Since neither the Municipal Code nor the General Plan provide a quantifiable vibration threshold for temporary construction activities, guidance from the *Transportation and Construction Vibration Guidance Manual*, prepared by Caltrans, April 2020, has been utilized, which defines the threshold of perception from transient sources such as off-road construction equipment at 0.25 inch per second peak particle velocity (PPV).

The primary source of vibration during construction would be from the operation of a bulldozer. The large bulldozer is considered a transient vibration noise source as it would not remain at one particular location within the Project site. From Table H above a large bulldozer would create a vibration level of 0.089 inch per second PPV at 25 feet. Based on typical propagation rates, the vibration level at the nearest homes to construction activities (30 feet away) would be 0.073 inch per second PPV. The vibration level at the nearest homes would be below the 0.25 inch per second PPV threshold detailed above. Impacts would be less than significant.

Operations-Related Vibration Impacts

The proposed project would consist of the development of a residential community with 27 single-family homes. The on-going operation of the proposed project would not include the operation of any known vibration sources other than typical onsite vehicle operations for a residential development. Therefore, a less than significant vibration impact is anticipated from operation of the proposed project.

Level of Significance

Less than significant impact.

7.4 Aircraft Noise

The proposed project may expose people residing in the project area to excessive noise levels from aircraft. The nearest airport is San Gabriel Valley Airport that is located as near as 10.5 miles northwest of the project site. The project site is located outside of the 60 dBA CNEL noise contours of this Airport. Therefore, the proposed homes would not be exposed to excessive aircraft noise. Impacts would be less than significant.

Level of Significance

Less than significant impact.

8.0 REFERENCES

California Department of Transportation (Caltrans), *Technical Noise Supplement to the Traffic Noise Analytics Protocol*, September 2013.

California Department of Transportation, *Transportation- and Construction Vibration Guidance Manual*, April 2020.

City of Walnut, *Walnut, California Municipal Code*, October, 2023.

City of Walnut, *City of Walnut General Plan*, adopted May 9, 2018.

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

Linscott Law & Greenspan, *Transportation Impact Study The Brookside (TTM 72798) Project*, January 26, 2024.

U.S. Department of Transportation, *FHWA Roadway Construction Noise Model User's Guide*, January, 2006.

U.S. Department of Transportation, *Highway Traffic Noise: Analysis and Abatement Guidance*, December, 2011.

Vista Environmental, *Air Quality, Energy, and Greenhouse Gas Emissions and Health Risk Assessment Impact Analysis Tentative Tract Map No. 72798 Residential Project*, April 17, 2024.

APPENDIX A

Field Noise Measurements Photo Index



Noise Measurement Site 1 - looking north



Noise Measurement Site 1 - looking northeast



Noise Measurement Site 1 - looking east



Noise Measurement Site 1 - looking southeast



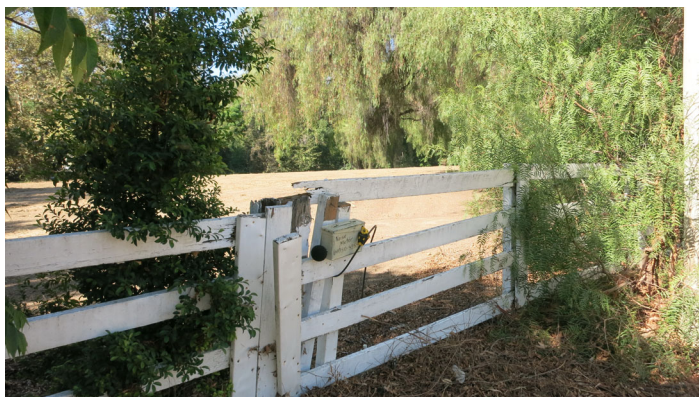
Noise Measurement Site 1 - looking south



Noise Measurement Site 1 - looking southwest



Noise Measurement Site 1 - looking west



Noise Measurement Site 1 - looking northwest



Noise Measurement Site 2 - looking north



Noise Measurement Site 2 - looking northeast



Noise Measurement Site 2 - looking east



Noise Measurement Site 2 - looking southeast



Noise Measurement Site 2 - looking south



Noise Measurement Site 2 - looking southwest



Noise Measurement Site 2 - looking west



Noise Measurement Site 2 - looking northwest



Noise Measurement Site 3 - looking north



Noise Measurement Site 3 - looking northeast



Noise Measurement Site 3 - looking east



Noise Measurement Site 3 - looking southeast



Noise Measurement Site 3 - looking south



Noise Measurement Site 3 - looking southwest



Noise Measurement Site 3 - looking west



Noise Measurement Site 3 - looking northwest

APPENDIX B

Field Noise Measurements Printouts

Site 1 - On Fence Near Southeast Corner of Project Site				Site 2 - On Tree on North Side Project Site				Site 3 - On Tree Near Middle of Project Site			
October 16, 2023		11:24:59 AM		October 16, 2023		11:31:08 AM		October 16, 2023		11:37:26 AM	
Leq Daytime = 61.0		Leq Nighttime = 53.6		Leq Daytime = 63.5		Leq Nighttime = 54.2		Leq Daytime = 55.0		Leq Nighttime = 48.1	
Sampling Time = 1 sec		Freq Weighting=A		Sampling Time = 1 sec		Freq Weighting=A		Sampling Time = 1 sec		Freq Weighting=A	
Record Num = 86403		CNEL(24hr)= 62.7		Record Num = 86403		CNEL(24hr)= 64.2		Record Num = 86402		CNEL(24hr)= 56.8	
Leq = 59.4		Ldn(24hr)= 62.2		Leq = 61.8		Ldn(24hr)= 63.8		Leq = 53.5		Ldn(24hr)= 56.4	
Min = 38.4		Min Leq hr at 1:24 AM 46.1		Min = 35.2		Min Leq hr at 1:48 AM 45.0		Min = 36.6		Min Leq hr at 1:05 AM 41.9	
Max = 83.9		Max Leq hr at 7:54 AM 63.9		Max = 90.6		Max Leq hr at 7:55 AM 66.7		Max = 85.5		Max Leq hr at 9:31 AM 59.3	
Site 1 - On Fence Near Southeast Corner of Project Site				Site 2 - On Tree on North Side Project Site				Site 3 - On Tree Near Middle of Project Site			
SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn CNEL
57.0	11:24:59		57.0 57.0	59.3	11:31:08		59.3 59.3	57.9	11:37:26		57.9 57.9
72.5	11:25:00		72.5 72.5	62.5	11:31:09		62.5 62.5	55.2	11:37:27		55.2 55.2
77.1	11:25:01		77.1 77.1	69.1	11:31:10		69.1 69.1	53.4	11:37:28		53.4 53.4
73.1	11:25:02		73.1 73.1	66.2	11:31:11		66.2 66.2	53.1	11:37:29		53.1 53.1
69.1	11:25:03		69.1 69.1	66.5	11:31:12		66.5 66.5	54.0	11:37:30		54.0 54.0
77.6	11:25:04		77.6 77.6	64.1	11:31:13		64.1 64.1	67.3	11:37:31		67.3 67.3
78.1	11:25:05		78.1 78.1	70.7	11:31:14		70.7 70.7	74.0	11:37:32		74.0 74.0
74.8	11:25:06		74.8 74.8	73.3	11:31:15		73.3 73.3	70.2	11:37:33		70.2 70.2
72.2	11:25:07		72.2 72.2	69.8	11:31:16		69.8 69.8	66.3	11:37:34		66.3 66.3
68.4	11:25:08		68.4 68.4	65.7	11:31:17		65.7 65.7	62.4	11:37:35		62.4 62.4
66.6	11:25:09		66.6 66.6	61.7	11:31:18		61.7 61.7	59.3	11:37:36		59.3 59.3
65.5	11:25:10		65.5 65.5	64.4	11:31:19		64.4 64.4	73.4	11:37:37		73.4 73.4
63.9	11:25:11		63.9 63.9	62.5	11:31:20		62.5 62.5	74.9	11:37:38		74.9 74.9
64.3	11:25:12		64.3 64.3	58.4	11:31:21		58.4 58.4	75.7	11:37:39		75.7 75.7
64.9	11:25:13		64.9 64.9	54.4	11:31:22		54.4 54.4	75.7	11:37:40		75.7 75.7
62.9	11:25:14		62.9 62.9	53.2	11:31:23		53.2 53.2	74.2	11:37:41		74.2 74.2
64.1	11:25:15		64.1 64.1	51.4	11:31:24		51.4 51.4	70.9	11:37:42		70.9 70.9
62.5	11:25:16		62.5 62.5	55.3	11:31:25		55.3 55.3	69.9	11:37:43		69.9 69.9
62.3	11:25:17		62.3 62.3	60.1	11:31:26		60.1 60.1	67.6	11:37:44		67.6 67.6
62.7	11:25:18		62.7 62.7	61.6	11:31:27		61.6 61.6	65.2	11:37:45		65.2 65.2
66.1	11:25:19		66.1 66.1	65.4	11:31:28		65.4 65.4	64.4	11:37:46		64.4 64.4
67.6	11:25:20		67.6 67.6	64.9	11:31:29		64.9 64.9	62.4	11:37:47		62.4 62.4
68.3	11:25:21		68.3 68.3	63.6	11:31:30		63.6 63.6	62.1	11:37:48		62.1 62.1
70.3	11:25:22		70.3 70.3	62.8	11:31:31		62.8 62.8	62.8	11:37:49		62.8 62.8
67.9	11:25:23		67.9 67.9	63.4	11:31:32		63.4 63.4	63.6	11:37:50		63.6 63.6
64.3	11:25:24		64.3 64.3	61.7	11:31:33		61.7 61.7	62.6	11:37:51		62.6 62.6
61.3	11:25:25		61.3 61.3	60.2	11:31:34		60.2 60.2	61.6	11:37:52		61.6 61.6
61.8	11:25:26		61.8 61.8	59.7	11:31:35		59.7 59.7	60.9	11:37:53		60.9 60.9
59.6	11:25:27		59.6 59.6	60.0	11:31:36		60.0 60.0	59.5	11:37:54		59.5 59.5
58.4	11:25:28		58.4 58.4	66.5	11:31:37		66.5 66.5	63.1	11:37:55		63.1 63.1
64.8	11:25:29		64.8 64.8	74.9	11:31:38		74.9 74.9	64.9	11:37:56		64.9 64.9
69.2	11:25:30		69.2 69.2	70.8	11:31:39		70.8 70.8	66.4	11:37:57		66.4 66.4
68.8	11:25:31		68.8 68.8	66.7	11:31:40		66.7 66.7	72.8	11:37:58		72.8 72.8
73.7	11:25:32		73.7 73.7	63.1	11:31:41		63.1 63.1	72.9	11:37:59		72.9 72.9
70.2	11:25:33		70.2 70.2	60.0	11:31:42		60.0 60.0	69.0	11:38:00		69.0 69.0
66.1	11:25:34		66.1 66.1	58.0	11:31:43		58.0 58.0	65.7	11:38:01		65.7 65.7
63.1	11:25:35		63.1 63.1	59.0	11:31:44		59.0 59.0	63.7	11:38:02		63.7 63.7
60.0	11:25:36		60.0 60.0	56.0	11:31:45		56.0 56.0	64.2	11:38:03		64.2 64.2
57.2	11:25:37		57.2 57.2	67.8	11:31:46		67.8 67.8	62.2	11:38:04		62.2 62.2
65.1	11:25:38		65.1 65.1	68.8	11:31:47		68.8 68.8	70.0	11:38:05		70.0 70.0
70.6	11:25:39		70.6 70.6	65.4	11:31:48		65.4 65.4	69.1	11:38:06		69.1 69.1
69.1	11:25:40		69.1 69.1	62.2	11:31:49		62.2 62.2	66.1	11:38:07		66.1 66.1
67.0	11:25:41		67.0 67.0	58.6	11:31:50		58.6 58.6	67.4	11:38:08		67.4 67.4
67.5	11:25:42		67.5 67.5	58.2	11:31:51		58.2 58.2	63.6	11:38:09		63.6 63.6
65.4	11:25:43		65.4 65.4	73.9	11:31:52		73.9 73.9	60.0	11:38:10		60.0 60.0
62.3	11:25:44		62.3 62.3	61.3	11:31:53		61.3 61.3	57.3	11:38:11		57.3 57.3
60.1	11:25:45		60.1 60.1	77.4	11:31:54		77.4 77.4	56.6	11:38:12		56.6 56.6
58.8	11:25:46		58.8 58.8	73.3	11:31:55		73.3 73.3	56.7	11:38:13		56.7 56.7
58.6	11:25:47		58.6 58.6	70.5	11:31:56		70.5 70.5	56.8	11:38:14		56.8 56.8
59.0	11:25:48		59.0 59.0	68.9	11:31:57		68.9 68.9	58.2	11:38:15		58.2 58.2
57.6	11:25:49		57.6 57.6	71.4	11:31:58		71.4 71.4	58.2	11:38:16		58.2 58.2
57.1	11:25:50		57.1 57.1	70.2	11:31:59		70.2 70.2	60.1	11:38:17		60.1 60.1
59.6	11:25:51		59.6 59.6	70.9	11:32:00		70.9 70.9	65.2	11:38:18		65.2 65.2
62.2	11:25:52		62.2 62.2	68.0	11:32:01		68.0 68.0	71.3	11:38:19		71.3 71.3
65.2	11:25:53		65.2 65.2	65.6	11:32:02		65.6 65.6	67.8	11:38:20		67.8 67.8
63.3	11:25:54		63.3 63.3	66.9	11:32:03		66.9 66.9	64.3	11:38:21		64.3 64.3
60.9	11:25:55		60.9 60.9	63.5	11:32:04		63.5 63.5	62.9	11:38:22		62.9 62.9
59.0	11:25:56		59.0 59.0	59.7	11:32:05		59.7 59.7	66.3	11:38:23		66.3 66.3
57.4	11:25:57		57.4 57.4	59.6	11:32:06		59.6 59.6	63.4	11:38:24		63.4 63.4
57.2	11:25:58		57.2 57.2	59.6	11:32:07		59.6 59.6	61.0	11:38:25		61.0 61.0
57.2	11:25:59		57.2 57.2	59.6	11:32:08		59.6 59.6	61.1	11:38:26		61.1 61.1
57.3	11:26:00		57.3 57.3	60.1	11:32:09		60.1 60.1	60.9	11:38:27		60.9 60.9
58.0	11:26:01		58.0 58.0	62.0	11:32:10		62.0 62.0	60.1	11:38:28		60.1 60.1
59.0	11:26:02		59.0 59.0	70.1	11:32:11		70.1 70.1	56.9	11:38:29		56.9 56.9
59.6	11:26:03		59.6 59.6	73.7	11:32:12		73.7 73.7	56.1	11:38:30		56.1 56.1
62.6	11:26:04		62.6 62.6	73.0	11:32:13		73.0 73.0	65.5	11:38:31		65.5 65.5
64.5	11:26:05		64.5 64.5	73.6	11:32:14		73.6 73.6	66.5	11:38:32		66.5 66.5
63.7	11:26:06		63.7 63.7	74.4	11:32:15		74.4 74.4	65.0	11:38:33		65.0 65.0
62.7	11:26:07		62.7 62.7	73.7	11:32:16		73.7 73.7	61.5	11:38:34		61.5 61.5
61.8	11:26:08		61.8 61.8	72.2	11:32:17		72.2 72.2	58.1	11:38:35		58.1 58.1
60.7	11:26:09		60.7 60.7	72.0	11:32:18		72.0 72.0	56.0	11:38:36		56.0 56.0
60.3	11:26:10		60.3 60.3	72.6	11:32:19		72.6 72.6	55.4	11:38:37		55.4 55.4
62.4	11:26:11		62.4 62.4	70.0	11:32:20		70				

APPENDIX C

RCNM Model Construction Noise Calculation Printouts

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 2/27/2024
Case Description: Walnut TTM NO. 72798 - Demolition

		Baselines (dBA)			---- Receptor #1 ----		
Description	Land Use	Daytime	Evening	Night			
Church to North	Commercial	63.5	54.2	54.2			
				Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Description	Impact Device	Usage(%)					
Concrete Saw	No	20			89.6	1100	0
Excavator	No	40			80.7	1100	0
Excavator	No	40			80.7	1100	0
Excavator	No	40			80.7	1100	0
Dozer	No	40			81.7	1100	0
Dozer	No	40			81.7	1100	0
				Results			
		Calculated (dBA)		Noise Limits (dBA)			
				Day	Evening		
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw		62.7	55.7	N/A	N/A	N/A	N/A
Excavator		53.9	49.9	N/A	N/A	N/A	N/A
Excavator		53.9	49.9	N/A	N/A	N/A	N/A
Excavator		53.9	49.9	N/A	N/A	N/A	N/A
Dozer		54.8	50.8	N/A	N/A	N/A	N/A
Dozer		54.8	50.8	N/A	N/A	N/A	N/A
Total		63	60	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 2/27/2024
Case Description: Walnut TTM NO. 72798 - Demolition

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)			Equipment Spec Lmax	Actual Lmax	Receptor Distance (feet)	Estimated Shielding (dBA)
		Daytime	Evening	Night				
Homes to East	Residential	55.0	48.1	48.1				
Description	Device	Impact	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)	
Concrete Saw	No		20		89.6	275	0	
Excavator	No		40		80.7	275	0	
Excavator	No		40		80.7	275	0	
Excavator	No		40		80.7	275	0	
Dozer	No		40		81.7	275	0	
Dozer	No		40		81.7	275	0	

Equipment	Calculated (dBA)		Results			
			Noise Limits (dBA)			
	*Lmax	Leq	Day		Evening	
			Lmax	Leq	Lmax	Leq
Concrete Saw	74.8	68	N/A	N/A	N/A	N/A
Excavator	65.9	61.9	N/A	N/A	N/A	N/A
Excavator	65.9	61.9	N/A	N/A	N/A	N/A
Excavator	65.9	61.9	N/A	N/A	N/A	N/A
Dozer	66.9	62.9	N/A	N/A	N/A	N/A
Dozer	66.9	62.9	N/A	N/A	N/A	N/A
Total	75	72	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 2/27/2024
Case Description: Walnut TTM NO. 72798 - Demolition

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		Night			
		Daytime	Evening				
Fire Station to Southwest	Commercial	63.5	54.2	54.2			
Description		Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
				Spec Lmax (dBA)	Actual Lmax (dBA)		
Concrete Saw		No	20		89.6	1060	0
Excavator		No	40		80.7	1060	0
Excavator		No	40		80.7	1060	0
Excavator		No	40		80.7	1060	0
Dozer		No	40		81.7	1060	0
Dozer		No	40		81.7	1060	0

	Calculated (dBA)		Results		Noise Limits (dBA)	
	*Lmax	Leq	Day		Evening	
Equipment			Lmax	Leq	Lmax	Leq
Concrete Saw	63.1	56.1	N/A	N/A	N/A	N/A
Excavator	54.2	50.2	N/A	N/A	N/A	N/A
Excavator	54.2	50.2	N/A	N/A	N/A	N/A
Excavator	54.2	50.2	N/A	N/A	N/A	N/A
Dozer	55.1	51.2	N/A	N/A	N/A	N/A
Dozer	55.1	51.2	N/A	N/A	N/A	N/A
Total	63	60	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 2/27/2024
Case Description: Walnut TTM NO. 72798 - Site Preparation

		Baselines (dBA)			---- Receptor #1 ----		
Description	Land Use	Daytime	Evening	Night			
Church to North	Commercial	63.5	54.2	54.2			
				Equipment	Spec	Actual	Receptor
		Impact		Lmax	Lmax	Lmax	Distance
Description	Device	Usage(%)	(dBA)	(dBA)	(dBA)	(feet)	Estimated Shielding (dBA)
Dozer	No	40			81.7	1100	0
Dozer	No	40			81.7	1100	0
Dozer	No	40			81.7	1100	0
Tractor	No	40	84			1100	0
Front End Loader	No	40			79.1	1100	0
Backhoe	No	40			77.6	1100	0
Tractor	No	40	84			1100	0
				Results			
		Calculated (dBA)		Noise Limits (dBA)			
				Day	Evening		
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	
Dozer	54.8	50.8	N/A	N/A	N/A	N/A	N/A
Dozer	54.8	50.8	N/A	N/A	N/A	N/A	N/A
Dozer	54.8	50.8	N/A	N/A	N/A	N/A	N/A
Tractor	57.2	53.2	N/A	N/A	N/A	N/A	N/A
Front End Loader	52.3	48.3	N/A	N/A	N/A	N/A	N/A
Backhoe	50.7	46.7	N/A	N/A	N/A	N/A	N/A
Tractor	57.2	53.2	N/A	N/A	N/A	N/A	N/A
Total	57	60	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 2/27/2024
Case Description: Walnut TTM NO. 72798 - Site Preparation

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Homes to East	Residential	55.0	48.1	48.1

Description	Impact Device	Usage(%)	Equipment Spec	Actual	Receptor Distance	Estimated Shielding
			Lmax (dBA)	Lmax (dBA)	(feet)	(dBA)
Dozer	No	40		81.7	275	0
Dozer	No	40		81.7	275	0
Dozer	No	40		81.7	275	0
Tractor	No	40	84		275	0
Front End Loader	No	40		79.1	275	0
Backhoe	No	40		77.6	275	0
Tractor	No	40	84		275	0

Equipment	Calculated (dBA)		Results			
			Noise Limits (dBA)			
	*Lmax	Leq	Day		Evening	
			Lmax	Leq	Lmax	Leq
Dozer	66.9	63	N/A	N/A	N/A	N/A
Dozer	66.9	62.9	N/A	N/A	N/A	N/A
Dozer	66.9	62.9	N/A	N/A	N/A	N/A
Tractor	69.2	65.2	N/A	N/A	N/A	N/A
Front End Loader	64.3	60.3	N/A	N/A	N/A	N/A
Backhoe	62.8	58.8	N/A	N/A	N/A	N/A
Tractor	69.2	65.2	N/A	N/A	N/A	N/A
Total	69	72	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 2/27/2024
Case Description: Walnut TTM NO. 72798 - Site Preparation

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)			Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
		Daytime	Evening	Night				
Fire Station to Southwest	Commercial	63.5	54.2	54.2				
Description		Impact		Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
		Device						
Dozer		No		40		81.7	1060	0
Dozer		No		40		81.7	1060	0
Dozer		No		40		81.7	1060	0
Tractor		No		40	84		1060	0
Front End Loader		No		40		79.1	1060	0
Backhoe		No		40		77.6	1060	0
Tractor		No		40	84		1060	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)			
	*Lmax	Leq	Day		Evening	
			Lmax	Leq	Lmax	Leq
Dozer	55	51	N/A	N/A	N/A	N/A
Dozer	55	51	N/A	N/A	N/A	N/A
Dozer	55	51	N/A	N/A	N/A	N/A
Tractor	58	54	N/A	N/A	N/A	N/A
Front End Loader	53	49	N/A	N/A	N/A	N/A
Backhoe	51	47	N/A	N/A	N/A	N/A
Tractor	58	54	N/A	N/A	N/A	N/A
Total	58	60	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 2/27/2024
Case Description: Walnut TTM NO. 72798 - Grading

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Church to North	Commercial	63.5	54.2	54.2

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	1100	0
Excavator	No	40		80.7	1100	0
Grader	No	40	85		1100	0
Dozer	No	40		81.7	1100	0
Scraper	No	40		83.6	1100	0
Scraper	No	40		83.6	1100	0
Tractor	No	40	84		1100	0
Front End Loader	No	40		79.1	1100	0

Equipment	Calculated (dBA)		Results			
	*Lmax	Leq	Day Lmax	Leq	Noise Limits (dBA)	
					Evening Lmax	Leq
Excavator	53.9	49.9	N/A	N/A	N/A	N/A
Excavator	53.9	49.9	N/A	N/A	N/A	N/A
Grader	58.2	54.2	N/A	N/A	N/A	N/A
Dozer	54.8	50.8	N/A	N/A	N/A	N/A
Scraper	56.7	52.8	N/A	N/A	N/A	N/A
Scraper	56.7	52.8	N/A	N/A	N/A	N/A
Tractor	57.2	53.2	N/A	N/A	N/A	N/A
Front End Loader	52.3	48.3	N/A	N/A	N/A	N/A
Total	58	61	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 2/27/2024
Case Description: Walnut TTM NO. 72798 - Grading

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)			Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
		Daytime	Evening	Night				
Homes to East	Residential	55.0	48.1	48.1				
Description	Impact Device	Usage(%)	Equipment		Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40				80.7	275	0
Excavator	No	40				80.7	275	0
Grader	No	40		85			275	0
Dozer	No	40				81.7	275	0
Scraper	No	40				83.6	275	0
Scraper	No	40				83.6	275	0
Tractor	No	40		84			275	0
Front End Loader	No	40				79.1	275	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)			
	*Lmax	Leq	Day		Evening	
			Lmax	Leq	Lmax	Leq
Excavator	65.9	61.9	N/A	N/A	N/A	N/A
Excavator	65.9	61.9	N/A	N/A	N/A	N/A
Grader	70.2	66.2	N/A	N/A	N/A	N/A
Dozer	66.9	62.9	N/A	N/A	N/A	N/A
Scraper	68.8	64.8	N/A	N/A	N/A	N/A
Scraper	68.8	64.8	N/A	N/A	N/A	N/A
Tractor	69.2	65.2	N/A	N/A	N/A	N/A
Front End Loader	64.3	60.3	N/A	N/A	N/A	N/A
Total	70	73	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 2/27/2024
Case Description: Walnut TTM NO. 72798 - Grading

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)			Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
		Daytime	Evening	Night				
Fire Station to Southwest	Commercial	63.5	54.2	54.2				
				Equipment				
				Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)	
Description	Impact Device	Usage(%)						
Excavator	No	40			80.7	1060	0	
Excavator	No	40			80.7	1060	0	
Grader	No	40	85			1060	0	
Dozer	No	40			81.7	1060	0	
Scraper	No	40			83.6	1060	0	
Scraper	No	40			83.6	1060	0	
Tractor	No	40	84			1060	0	
Front End Loader	No	40			79.1	1060	0	

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)			
	*Lmax	Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq
Excavator	54.2	50.2	N/A	N/A	N/A	N/A
Excavator	54.2	50.2	N/A	N/A	N/A	N/A
Grader	58.5	54.5	N/A	N/A	N/A	N/A
Dozer	55.1	51.2	N/A	N/A	N/A	N/A
Scraper	57.1	53.1	N/A	N/A	N/A	N/A
Scraper	57.1	53.1	N/A	N/A	N/A	N/A
Tractor	57.5	53.5	N/A	N/A	N/A	N/A
Front End Loader	52.6	48.6	N/A	N/A	N/A	N/A
Total	59	61	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 2/27/2024
Case Description: Walnut TTM NO. 72798 - Building Construction

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Church to North	Commercial	63.5	54.2	54.2

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Crane	No	16		80.6	1100	0
Gradall	No	40		83.4	1100	0
Gradall	No	40		83.4	1100	0
Gradall	No	40		83.4	1100	0
Generator	No	50		80.6	1100	0
Backhoe	No	40		77.6	1100	0
Front End Loader	No	40		79.1	1100	0
Tractor	No	40	84		1100	0
Welder / Torch	No	40		74	1100	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)			
	*Lmax	Leq	Day		Evening	
			Lmax	Leq	Lmax	Leq
Crane	53.7	45.7	N/A	N/A	N/A	N/A
Gradall	56.6	52.6	N/A	N/A	N/A	N/A
Gradall	56.6	52.6	N/A	N/A	N/A	N/A
Gradall	56.6	52.6	N/A	N/A	N/A	N/A
Generator	53.8	50.8	N/A	N/A	N/A	N/A
Backhoe	50.7	46.7	N/A	N/A	N/A	N/A
Front End Loader	52.3	48.3	N/A	N/A	N/A	N/A
Tractor	57.2	53.2	N/A	N/A	N/A	N/A
Welder / Torch	47.2	43.2	N/A	N/A	N/A	N/A
Total	57	60	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 2/27/2024
Case Description: Walnut TTM NO. 72798 - Building Construction

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Homes to East	Residential	55.0	48.1	48.1

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Crane	No	16		80.6	275	0
Gradall	No	40		83.4	275	0
Gradall	No	40		83.4	275	0
Gradall	No	40		83.4	275	0
Generator	No	50		80.6	275	0
Backhoe	No	40		77.6	275	0
Front End Loader	No	40		79.1	275	0
Tractor	No	40	84		275	0
Welder / Torch	No	40		74	275	0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	65.7	57.8	N/A	N/A	N/A	N/A
Gradall	68.6	64.6	N/A	N/A	N/A	N/A
Gradall	68.6	64.6	N/A	N/A	N/A	N/A
Gradall	68.6	64.6	N/A	N/A	N/A	N/A
Generator	65.8	62.8	N/A	N/A	N/A	N/A
Backhoe	62.8	58.8	N/A	N/A	N/A	N/A
Front End Loader	64.3	60.3	N/A	N/A	N/A	N/A
Tractor	69.2	65.2	N/A	N/A	N/A	N/A
Welder / Torch	59.2	55.2	N/A	N/A	N/A	N/A
Total	69	72	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 2/27/2024
Case Description: Walnut TTM NO. 72798 - Building Construction

---- Receptor #3 ----

		Baselines (dBA)						
Description	Land Use	Daytime	Evening	Night				
Fire Station to Southwest	Commercial	63.5	54.2	54.2				
					Equipment			
		Impact		Spec	Actual	Receptor	Estimated	
Description		Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)	
Crane		No	16		80.6	1060	0	
Gradall		No	40		83.4	1060	0	
Gradall		No	40		83.4	1060	0	
Gradall		No	40		83.4	1060	0	
Generator		No	50		80.6	1060	0	
Backhoe		No	40		77.6	1060	0	
Front End Loader		No	40		79.1	1060	0	
Tractor		No	40	84		1060	0	
Welder / Torch		No	40		74	1060	0	

Results

Equipment	Calculated (dBA)		Noise Limits (dBA)			
	*Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq
Crane	54.0	46.1	N/A	N/A	N/A	N/A
Gradall	56.9	52.9	N/A	N/A	N/A	N/A
Gradall	56.9	52.9	N/A	N/A	N/A	N/A
Gradall	56.9	52.9	N/A	N/A	N/A	N/A
Generator	54.1	51.1	N/A	N/A	N/A	N/A
Backhoe	51.0	47.1	N/A	N/A	N/A	N/A
Front End Loader	52.6	48.6	N/A	N/A	N/A	N/A
Tractor	57.5	53.5	N/A	N/A	N/A	N/A
Welder / Torch	47.5	43.5	N/A	N/A	N/A	N/A
Total	58	61	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 2/29/2024
Case Description: Walnut TTM NO. 72798 - Paving

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		Night			
		Daytime	Evening				
Church to North	Commercial	63.5	54.2	54.2			
Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)	
			Spec Lmax (dBA)	Actual Lmax (dBA)			
Paver	No	50		77.2	1100	0	
Paver	No	50		77.2	1100	0	
Paver	No	50		77.2	1100	0	
Paver	No	50		77.2	1100	0	
Roller	No	20		80	1100	0	
Roller	No	20		80	1100	0	

Equipment	Calculated (dBA)		Results			
	*Lmax	Leq	Day		Noise Limits (dBA) Evening	
			Lmax	Leq	Lmax	Leq
Paver	50.4	47.4	N/A	N/A	N/A	N/A
Paver	50.4	47.4	N/A	N/A	N/A	N/A
Paver	50.4	47.4	N/A	N/A	N/A	N/A
Paver	50.4	47.4	N/A	N/A	N/A	N/A
Roller	53.2	46.2	N/A	N/A	N/A	N/A
Roller	53.2	46.2	N/A	N/A	N/A	N/A
Total	53	55	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 2/29/2024
Case Description: Walnut TTM NO. 72798 - Paving

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)			Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
		Daytime	Evening	Night				
Homes to East	Residential	55.0	48.1	48.1				
Description	Device	Impact		Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No			50		77.2	275	0
Paver	No			50		77.2	275	0
Paver	No			50		77.2	275	0
Paver	No			50		77.2	275	0
Roller	No			20		80	275	0
Roller	No			20		80	275	0

Equipment	Calculated (dBA)		Results			
			Noise Limits (dBA)			
	*Lmax	Leq	Day		Evening	
			Lmax	Leq	Lmax	Leq
Paver	74.8	68	N/A	N/A	N/A	N/A
Paver	65.9	61.9	N/A	N/A	N/A	N/A
Paver	65.9	61.9	N/A	N/A	N/A	N/A
Paver	65.9	61.9	N/A	N/A	N/A	N/A
Roller	66.9	62.9	N/A	N/A	N/A	N/A
Roller	66.9	62.9	N/A	N/A	N/A	N/A
Total	75	72	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 2/29/2024
Case Description: Walnut TTM NO. 72798 - Paving

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Fire Station to Southwest	Commercial	63.5	54.2	54.2

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	1060	0
Paver	No	50		77.2	1060	0
Paver	No	50		77.2	1060	0
Paver	No	50		77.2	1060	0
Roller	No	20		80	1060	0
Roller	No	20		80	1060	0

Equipment	Calculated (dBA)		Results			
	*Lmax	Leq	Day		Noise Limits (dBA) Evening	
Paver	63.1	56.1	Lmax	Leq	Lmax	Leq
Paver	54.2	50.2	N/A	N/A	N/A	N/A
Paver	54.2	50.2	N/A	N/A	N/A	N/A
Paver	54.2	50.2	N/A	N/A	N/A	N/A
Roller	55.1	51.2	N/A	N/A	N/A	N/A
Roller	55.1	51.2	N/A	N/A	N/A	N/A
Total	63	60	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 2/27/2024
Case Description: Walnut TTM NO. 72798 - Painting

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)					
		Daytime	Evening	Night			
Church to North	Commercial	63.5	54.2	54.2			
Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated	
			Spec Lmax (dBA)	Actual Lmax (dBA)		Shielding (dBA)	
Compressor (air)	No	40		77.7	1100		0
Results							
Calculated (dBA)			Noise Limits (dBA)				
			Day		Evening		
			Lmax	Leq	Lmax	Leq	
Equipment	*Lmax	Leq					
Compressor (air)	50.8	46.8	N/A	N/A	N/A	N/A	N/A
Total	51	47	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)					
		Daytime	Evening	Night			
Homes to East	Residential	55.0	48.1	48.1			
Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated	
			Spec Lmax (dBA)	Actual Lmax (dBA)		Shielding (dBA)	
Compressor (air)	No	40		77.7	275		0
Results							
Calculated (dBA)			Noise Limits (dBA)				
			Day		Evening		
			Lmax	Leq	Lmax	Leq	
Equipment	*Lmax	Leq					
Compressor (air)	62.9	58.9	N/A	N/A	N/A	N/A	N/A
Total	63	59	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 2/27/2024
Case Description: Walnut TTM NO. 72798 - Painting

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Fire Station to Southwest	Commercial	63.5	54.2	54.2

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Compressor (air)	No	40		77.7	1060	0

Equipment		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Compressor (air)		*Lmax	Leq	Lmax	Leq	Lmax	Leq
		51.1	47.2	N/A	N/A	N/A	N/A
	Total	51	47	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

APPENDIX D

FHWA Model Traffic Noise Calculation Printouts

Project: TTM No. 72798

Project: TT
Site Conditions: Soft

Vehicle Type	Vehicle Mix 1 (Local)				Vehicle Mix 2 (Arterial)				Vehicle Mix 3 (I-215)			
	Day	Evening	Night	Daily	Day	Evening	Night	Daily	Day	Evening	Night	Daily
Automobiles	73.60%	13.60%	10.22%	97.42%	69.50%	12.90%	9.60%	92.00%	64.20%	13.16%	15.39%	92.75%
Medium Trucks	0.90%	0.90%	0.04%	1.84%	1.44%	0.06%	1.50%	3.00%	2.06%	0.37%	1.04%	3.48%
Heavy Trucks	0.35%	0.04%	0.35%	0.74%	2.40%	0.10%	2.50%	5.00%	2.06%	0.20%	1.51%	3.77%

Road Name: Amar Road

Segment: West of Lemon Avenue

Average Daily Traffic: 26160 Vehicles	Vehicle Speed: 50 MPH	Vehicle Mix: 2	Roadway Classification: Minor Arterial
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Vehicle Type	NOISE PARAMETERS AT 100 FEET FROM CENTERLINE (Equiv. Lane Dist: 96 ft)										Centerline Distance to Noise Contour (in feet)		
	Noise Adjustments				Unmitigated Noise Levels						Ldn	CNEL	
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.		Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles	71.12	1.52	-4.35	-1.20	67.09	64.71	63.42	57.37	65.80	66.43	70 dBA:	58	63
Medium Trucks	78.79	-13.35	-4.35	-1.20	59.89	40.69	32.90	42.11	48.27	48.30	65 dBA:	124	135
Heavy Trucks	83.02	-11.13	-4.35	-1.20	66.34	49.35	41.57	50.78	56.93	56.96	60 dBA:	267	291
	Total:				70.17	64.86	63.45	58.33	66.40	66.95	55 dBA:	575	627

Road Name: Amar Road

Segment: East of Lemon Avenue

Average Daily Traffic: 23220 Vehicles	Vehicle Speed: 50 MPH	Vehicle Mix: 2	Roadway Classification: Minor Arterial
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Vehicle Type	NOISE PARAMETERS AT 95 FEET FROM CENTERLINE (Equiv. Lane Dist: 90.78 ft)										Centerline Distance to Noise Contour (in feet)		
	Noise Adjustments				Unmitigated Noise Levels						Ldn	CNEL	
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.		Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles	71.12	1.00	-3.99	-1.20	66.93	64.56	63.27	57.21	65.64	66.28	70 dBA:	53	58
Medium Trucks	78.79	-13.87	-3.99	-1.20	59.74	40.53	32.75	41.96	48.11	48.15	65 dBA:	115	125
Heavy Trucks	83.02	-11.65	-3.99	-1.20	66.18	49.20	41.41	50.62	56.78	56.81	60 dBA:	248	270
	Total:				70.01	64.70	63.30	58.18	66.24	66.80	55 dBA:	534	581

Road Name: Meadow Pass Rd

Segment: West of Colt Lane

Roadway Classification: Important Local	
Average Daily Traffic: 4200 Vehicles	Vehicle Mix: 1
Vehicle Speed: 35 MPH	

Vehicle Type	NOISE PARAMETERS AT 100 FEET FROM CENTERLINE (Equiv. Lane Dist: 99.28 ft)										Centerline Distance to Noise Contour (in feet)		
	Noise Adjustments				Unmitigated Noise Levels						Ldn	CNEL	
	REMEL Traffic Adj.		Dist Adj.		Finite Adj.		Leq Peak	Leq Day	Leq Eve.	Leq Night			
Automobiles	65.11	-4.63	-4.57	-1.20	54.71	52.59	51.28	45.26	53.68	54.31	70 dBA:	8	9
Medium Trucks	74.83	-21.87	-4.57	-1.20	47.19	25.94	31.96	13.67	26.81	29.57	65 dBA:	18	19
Heavy Trucks	80.05	-25.82	-4.57	-1.20	48.45	23.10	19.70	24.35	30.55	30.65	60 dBA:	38	42
	Total:				56.21	52.60	51.33	45.30	53.71	54.34	55 dBA:	82	90

Project: TTM No. 72798
Site Conditions: Soft

Road Name:	Meadow Pass Rd	Segment:	East of Colt Lane	Roadway Classification: Important Local								
Average Daily Traffic:	4160 Vehicles	Vehicle Speed:	35 MPH	Vehicle Mix:	1							
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE		(Equiv. Lane Dist: 58.79 ft)										
Noise Adjustments		Unmitigated Noise Levels								Centerline Distance to Noise Contour (in feet)		
Vehicle Type	REMELE Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Ldn	CNEL	
Automobiles	65.11	-4.67	-1.16	-1.20	58.08	55.96	54.65	48.64	57.05	57.68	70 dBA: 8 9	
Medium Trucks	74.83	-21.91	-1.16	-1.20	50.56	29.31	35.33	17.04	30.19	32.94	65 dBA: 18 20	
Heavy Trucks	80.05	-25.86	-1.16	-1.20	51.83	26.47	23.07	27.72	33.92	34.02	60 dBA: 38 42	
Total:				59.59	55.97	54.70	48.67	57.08	57.71	55 dBA: 83 91		

Road Name: La Puente Road		Segment: West of Lemon Avenue									
Average Daily Traffic: 15620 Vehicles	Vehicle Speed: 45 MPH	Vehicle Mix: 1	Roadway Classification: Secondary								
NOISE PARAMETERS AT 55 FEET FROM CENTERLINE		(Equiv. Lane Dist: 49.49 ft)									
Noise Adjustments		Unmitigated Noise Levels									
Vehicle Type	REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL	Centerline Distance to Noise Contour (in feet)	
Automobiles	69.34	-0.01	-0.04	-1.20	68.09	65.97	64.66	58.65	67.07	67.69	70 dBA: 35
Medium Trucks	77.62	-17.25	-0.04	-1.20	59.13	37.88	43.90	25.61	38.76	41.51	65 dBA: 76
Heavy Trucks	82.14	-21.21	-0.04	-1.20	59.70	34.35	30.95	35.60	41.79	41.89	60 dBA: 163
Total:					69.14	65.98	64.70	58.67	67.09	67.71	55 dBA: 352

Road Name: La Puente Road		Segment: East of Lemon Avenue	
Average Daily Traffic: 13690 Vehicles		Vehicle Speed: 40 MPH	
		Vehicle Mix: 1	
		Roadway Classification: Secondary	

Road Name: Valley Boulevard		Segment: West of Lemon Avenue				Roadway Classification: Major Arterial							
Average Daily Traffic: 24100 Vehicles		Vehicle Speed: 50 MPH		Vehicle Mix: 2									
NOISE PARAMETERS AT 110 FEET FROM CENTERLINE		(Equiv. Lane Dist: 104.61 ft)				Centerline Distance to Noise Contour (in feet)							
		Unmitigated Noise Levels											
Vehicle Type	REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL				
Automobiles	71.12	1.16	-4.91	-1.20	66.17	63.80	62.51	56.45	64.88	65.51	70 dBA:	55	60
Medium Trucks	78.79	-13.70	-4.91	-1.20	58.98	39.77	31.99	41.20	47.35	47.38	65 dBA:	118	129
Heavy Trucks	83.02	-11.49	-4.91	-1.20	65.42	48.43	40.65	49.86	56.01	56.05	60 dBA:	255	278
		Total:		69.25	63.94	62.54	57.42	65.48	66.04	66.04	55 dBA:	550	599

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING CONDITIONS

Project: TTM No. 72798
Site Conditions: Soft

Road Name: Lemon Avenue		Segment: North of Meadow Pass Road		Roadway Classification: Minor Arterial								
Average Daily Traffic: 12170 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2								
NOISE PARAMETERS AT 85 FEET FROM CENTERLINE				(Equiv. Lane Dist: 80.26 ft)		Centerline Distance to Noise Contour (in feet)						
Noise Adjustments				Unmitigated Noise Levels								
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles	67.36	-0.84	-3.19	-1.20	62.14	59.77	58.47	52.42	60.85	61.48	24	26
Medium Trucks	76.31	-15.70	-3.19	-1.20	56.22	37.02	29.24	38.44	44.60	44.63	51	56
Heavy Trucks	81.16	-13.48	-3.19	-1.20	63.29	46.30	38.52	47.73	53.88	53.92	111	120
Total:				66.22	59.98	58.52	53.82	61.73	62.26	55 dBA:	239	259

Road Name: Lemon Avenue		Segment: South of Meadow Pass Road		Roadway Classification: Minor Arterial								
Average Daily Traffic: 15010 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2								
NOISE PARAMETERS AT 215 FEET FROM CENTERLINE		(Equiv. Lane Dist: 213.17 ft)		Centerline Distance to Noise Contour (in feet)								
Noise Adjustments		Unmitigated Noise Levels										
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles	67.36	0.08	-9.55	-1.20	56.69	54.31	53.02	46.97	55.40	56.03	26	28
Medium Trucks	76.31	-14.79	-9.55	-1.20	50.77	31.56	23.78	32.99	39.14	39.18	56	61
Heavy Trucks	81.16	-12.57	-9.55	-1.20	57.84	40.85	33.07	42.27	48.43	48.46	121	132
Total:				60.77	54.53	53.07	48.36	56.28	56.81	55 dBA:	262	284

Road Name: Lemon Avenue		Segment: South of La Puente Road		Roadway Classification: Minor Arterial									
Average Daily Traffic: 16980 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2									
NOISE PARAMETERS AT 80 FEET FROM CENTERLINE				(Equiv. Lane Dist: 74.94 ft)		Centerline Distance to Noise Contour (in feet)							
Noise Adjustments				Unmitigated Noise Levels									
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL				
Automobiles	67.36	0.61	-2.74	-1.20	64.03	61.66	60.37	54.31	62.74	63.37	70 dBA:	30	33
Medium Trucks	76.31	-14.26	-2.74	-1.20	58.12	38.91	31.13	40.34	46.49	46.52	65 dBA:	65	70
Heavy Trucks	81.16	-12.04	-2.74	-1.20	65.18	48.19	40.41	49.62	55.77	55.81	60 dBA:	140	151
Total:				68.11	61.87	60.42	55.71	63.62	64.15	55 dBA:	301	326	

Road Name: Meadow Pass Rd (Alt)		Segment: West of Colt Lane		Roadway Classification: Important Local									
Average Daily Traffic: 4200 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1									
NOISE PARAMETERS AT 100 FEET FROM CENTERLINE				(Equiv. Lane Dist: 99.28 ft)									
Noise Adjustments				Unmitigated Noise Levels									
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL				
Automobiles	65.11	-4.63	-4.57	-1.20	54.71	52.59	51.28	45.26	53.68	54.31	70 dBA:	8	9
Medium Trucks	74.83	-21.87	-4.57	-1.20	47.19	25.94	31.96	13.67	26.81	29.57	65 dBA:	18	19
Heavy Trucks	80.05	-25.82	-4.57	-1.20	48.45	23.10	19.70	24.35	30.55	30.65	60 dBA:	38	42
Total:				56.21	52.60	51.33	45.30	53.71	54.34	55 dBA:	82	90	

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING CONDITIONS

Project: TTM No. 72798
Site Conditions: Soft

Road Name: La Puente Road (Alt)		Segment: East of Lemon Avenue		Roadway Classification: Secondary								
Average Daily Traffic: 13690 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1								
NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 43.86 ft)												
Noise Adjustments		Unmitigated Noise Levels				Centerline Distance to Noise Contour (in feet)						
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles	67.36	-0.08	0.75	-1.20	66.83	64.71	63.40	57.39	65.81	66.43	70 dBA: 26	29
Medium Trucks	76.31	-17.31	0.75	-1.20	58.55	37.30	43.32	25.03	38.17	40.92	65 dBA: 57	63
Heavy Trucks	81.16	-21.27	0.75	-1.20	59.44	34.09	30.69	35.34	41.54	41.63	60 dBA: 122	135
Total:				68.07	64.72	63.44	57.42	65.83	66.46	55 dBA: 264	290	

Road Name: Lemon Avenue (Alt)		Segment: South of Meadow Pass Road		Roadway Classification: Minor Arterial								
Average Daily Traffic: 15010 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2								
NOISE PARAMETERS AT 215 FEET FROM CENTERLINE (Equiv. Lane Dist: 213.17 ft)												
		Noise Adjustments		Unmitigated Noise Levels		Centerline Distance to Noise Contour (in feet)						
Vehicle Type	REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles	67.36	0.08	-9.55	-1.20	56.69	54.31	53.02	46.97	55.40	56.03	70 dBA: 26	28
Medium Trucks	76.31	-14.79	-9.55	-1.20	50.77	31.56	23.78	32.99	39.14	39.18	65 dBA: 56	61
Heavy Trucks	81.16	-12.57	-9.55	-1.20	57.84	40.85	33.07	42.27	48.43	48.46	60 dBA: 121	132
Total:				60.77	54.53	53.07	48.36	56.28	56.81	55 dBA: 262	284	

Project: TTM No. 72798

Project: TT
Site Conditions: Soft

Vehicle Type	Vehicle Mix 1 (Local)				Vehicle Mix 2 (Arterial)				Vehicle Mix 3 (I-215)			
	Day	Evening	Night	Daily	Day	Evening	Night	Daily	Day	Evening	Night	Daily
Automobiles	73.60%	13.60%	10.22%	97.42%	69.50%	12.90%	9.60%	92.00%	64.20%	13.16%	15.39%	92.75%
Medium Trucks	0.90%	0.90%	0.04%	1.84%	1.44%	0.06%	1.50%	3.00%	2.06%	0.37%	1.04%	3.48%
Heavy Trucks	0.35%	0.04%	0.35%	0.74%	2.40%	0.10%	2.50%	5.00%	2.06%	0.20%	1.51%	3.77%

Road Name: Amar Road

Segment: West of Lemon Avenue

Average Daily Traffic: 26200 Vehicles	Vehicle Speed: 50 MPH	Vehicle Mix: 2	Roadway Classification: Minor Arterial
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Vehicle Type	NOISE PARAMETERS AT 100 FEET FROM CENTERLINE (Equiv. Lane Dist: 96 ft)										Centerline Distance to Noise Contour (in feet)		
	Noise Adjustments					Unmitigated Noise Levels					Ldn	CNEL	
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL				
Automobiles	71.12	1.53	-4.35	-1.20	67.09	64.72	63.43	57.37	65.80	66.44	70 dBA:	58	63
Medium Trucks	78.79	-13.34	-4.35	-1.20	59.90	40.69	32.91	42.12	48.27	48.31	65 dBA:	124	135
Heavy Trucks	83.02	-11.12	-4.35	-1.20	66.34	49.36	41.57	50.78	56.94	56.97	60 dBA:	267	291
	Total:				70.17	64.86	63.46	58.34	66.40	66.96	55 dBA:	576	627

Road Name: Amar Road

Segment: East of Lemon Avenue

Average Daily Traffic: 23260 Vehicles
Vehicle Speed: 50 MPH
Vehicle Mix: 2
Roadway Classification: Minor Arterial

Vehicle Type	NOISE PARAMETERS AT 95 FEET FROM CENTERLINE (Equiv. Lane Dist: 90.78 ft)										Centerline Distance to Noise Contour (in feet)	
	Noise Adjustments					Unmitigated Noise Levels					Ldn	CNEL
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles	71.12	1.01	-3.99	-1.20	66.94	64.57	63.27	57.22	65.65	66.28	53	58
Medium Trucks	78.79	-13.86	-3.99	-1.20	59.75	40.54	32.76	41.97	48.12	48.15	115	125
Heavy Trucks	83.02	-11.64	-3.99	-1.20	66.19	49.20	41.42	50.63	56.78	56.82	248	270
	Total:					70.02	64.71	63.31	58.19	66.25	534	582

Road Name: Meadow Pass Rd

Segment: West of Colt Lane

Location	Vehicle Speed	Average Daily Traffic	Vehicle Mix	Roadway Classification
Important Local	35 MPH	4440 Vehicles	1	

Vehicle Type	NOISE PARAMETERS AT 100 FEET FROM CENTERLINE (Equiv. Lane Dist: 99.28 ft)										Centerline Distance to Noise Contour (in feet)	
	Noise Adjustments				Unmitigated Noise Levels						Ldn	CNEL
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.		Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		
Automobiles	65.11	-4.39	-4.57	-1.20	54.95	52.83	51.52	45.50	53.92	54.55	9	9
Medium Trucks	74.83	-21.62	-4.57	-1.20	47.43	26.18	32.20	13.91	27.05	29.81	18	20
Heavy Trucks	80.05	-25.58	-4.57	-1.20	48.69	23.34	19.94	24.59	30.79	30.89	40	44
	Total:				56.46	52.84	51.57	45.54	53.95	54.58	85	94

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING WITH PROJECT CONDITIONS

Project: TTM No. 72798
Site Conditions: Soft

Road Name: Meadow Pass Rd		Segment: East of Colt Lane		Vehicle Speed: 35 MPH		Vehicle Mix: 1		Roadway Classification: Important Local					
Average Daily Traffic: 4200 Vehicles		NOISE PARAMETERS AT 60 FEET FROM CENTERLINE		(Equiv. Lane Dist: 58.79 ft)		Centerline Distance to Noise Contour (in feet)							
		Noise Adjustments		Unmitigated Noise Levels									
Vehicle Type		REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles		65.11	-4.63	-1.16	-1.20	58.12	56.00	54.69	48.68	57.10	57.72	70 dBA: 8	9
Medium Trucks		74.83	-21.87	-1.16	-1.20	50.60	29.36	35.38	17.08	30.23	32.98	65 dBA: 18	20
Heavy Trucks		80.05	-25.82	-1.16	-1.20	51.87	26.52	23.12	27.76	33.96	34.06	60 dBA: 39	43
Total:						59.63	56.02	54.74	48.71	57.13	57.76	55 dBA: 83	92

Road Name: La Puente Road		Segment: West of Lemon Avenue		Vehicle Speed: 45 MPH		Vehicle Mix: 1		Roadway Classification: Secondary					
Average Daily Traffic: 15650 Vehicles		NOISE PARAMETERS AT 55 FEET FROM CENTERLINE		(Equiv. Lane Dist: 49.49 ft)		Centerline Distance to Noise Contour (in feet)							
		Noise Adjustments		Unmitigated Noise Levels									
Vehicle Type		REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles		69.34	-0.01	-0.04	-1.20	68.10	65.98	64.67	58.65	67.07	67.70	70 dBA: 35	39
Medium Trucks		77.62	-17.24	-0.04	-1.20	59.14	37.89	43.91	25.62	38.76	41.52	65 dBA: 76	84
Heavy Trucks		82.14	-21.20	-0.04	-1.20	59.71	34.35	30.95	35.60	41.80	41.90	60 dBA: 163	180
Total:						69.15	65.99	64.70	58.68	67.09	67.72	55 dBA: 352	388

Road Name: La Puente Road		Segment: East of Lemon Avenue		Vehicle Speed: 40 MPH		Vehicle Mix: 1		Roadway Classification: Secondary				
Average Daily Traffic: 13730 Vehicles		NOISE PARAMETERS AT 50 FEET FROM CENTERLINE				(Equiv. Lane Dist: 43.86 ft)						
		Noise Adjustments		Unmitigated Noise Levels								
		REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		
Automobiles	67.36	-0.06	0.75	-1.20	66.85	64.72	63.41	57.40	65.82	66.45	70 dBA: 26	29
Medium Trucks	76.31	-17.30	0.75	-1.20	58.56	37.31	43.33	25.04	38.18	40.94	65 dBA: 57	63
Heavy Trucks	81.16	-21.26	0.75	-1.20	59.45	34.10	30.70	35.35	41.55	41.65	60 dBA: 123	135
Total:					68.09	64.74	63.46	57.43	65.84	66.47	55 dBA: 264	291

Road Name: Valley Boulevard		Segment: West of Lemon Avenue		Roadway Classification: Major Arterial								
Average Daily Traffic: 24160 Vehicles		Vehicle Speed: 50 MPH		Vehicle Mix: 2								
NOISE PARAMETERS AT 110 FEET FROM CENTERLINE		(Equiv. Lane Dist: 104.61 ft)		Centerline Distance to Noise Contour (in feet)								
Noise Adjustments		Unmitigated Noise Levels										
Vehicle Type	REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles	71.12	1.17	-4.91	-1.20	66.18	63.81	62.52	56.46	64.89	65.52	70 dBA: 55	60
Medium Trucks	78.79	-13.69	-4.91	-1.20	58.99	39.78	32.00	41.21	47.36	47.39	65 dBA: 119	129
Heavy Trucks	83.02	-11.47	-4.91	-1.20	65.43	48.44	40.66	49.87	56.02	56.06	60 dBA: 256	278
Total:				69.26		63.95	62.55	57.43	65.49	66.05	55 dBA: 550	600

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING WITH PROJECT CONDITIONS

Project: TTM No. 72798

Site Conditions: Soft

Road Name: Lemon Avenue		Segment: North of Meadow Pass Road		Vehicle Speed: 40 MPH		Vehicle Mix: 2		Roadway Classification: Minor Arterial	
Average Daily Traffic: 12240 Vehicles		NOISE PARAMETERS AT 85 FEET FROM CENTERLINE		(Equiv. Lane Dist: 80.26 ft)		Centerline Distance to Noise Contour (in feet)			
		Noise Adjustments		Unmitigated Noise Levels					
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL
Automobiles	67.36	-0.81	-1.20	62.16	59.79	58.50	52.44	60.88	61.51
Medium Trucks	76.31	-15.68	-1.20	56.25	37.04	29.26	38.47	44.62	44.66
Heavy Trucks	81.16	-13.46	-1.20	63.32	46.33	38.54	47.75	53.91	53.94
Total:				66.25	60.00	58.55	53.84	61.76	62.28

Road Name: Lemon Avenue		Segment: South of Meadow Pass Road		Vehicle Speed: 40 MPH		Vehicle Mix: 2		Roadway Classification: Minor Arterial	
Average Daily Traffic: 15180 Vehicles		NOISE PARAMETERS AT 215 FEET FROM CENTERLINE		(Equiv. Lane Dist: 213.17 ft)		Centerline Distance to Noise Contour (in feet)			
		Noise Adjustments		Unmitigated Noise Levels					
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL
Automobiles	67.36	0.12	-9.55	56.73	54.36	53.07	47.02	55.45	56.08
Medium Trucks	76.31	-14.74	-9.55	50.82	31.61	23.83	33.04	39.19	39.23
Heavy Trucks	81.16	-12.52	-9.55	57.89	40.90	33.12	42.32	48.48	48.51
Total:				60.82	54.58	53.12	48.41	56.33	56.85

Road Name: Lemon Avenue		Segment: South of La Puente Road		Vehicle Speed: 40 MPH		Vehicle Mix: 2		Roadway Classification: Minor Arterial	
Average Daily Traffic: 16980 Vehicles		NOISE PARAMETERS AT 80 FEET FROM CENTERLINE		(Equiv. Lane Dist: 74.94 ft)		Centerline Distance to Noise Contour (in feet)			
		Noise Adjustments		Unmitigated Noise Levels					
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL
Automobiles	67.36	0.61	-2.74	64.03	61.66	60.37	54.31	62.74	63.37
Medium Trucks	76.31	-14.26	-2.74	58.12	38.91	31.13	40.34	46.49	46.52
Heavy Trucks	81.16	-12.04	-2.74	65.18	48.19	40.41	49.62	55.77	55.81
Total:				68.11	61.87	60.42	55.71	63.62	64.15

Road Name: Meadow Pass Rd (Alt)		Segment: West of Colt Lane		Vehicle Speed: 35 MPH		Vehicle Mix: 1		Roadway Classification: Important Local	
Average Daily Traffic: 4310 Vehicles		NOISE PARAMETERS AT 100 FEET FROM CENTERLINE		(Equiv. Lane Dist: 99.28 ft)		Centerline Distance to Noise Contour (in feet)			
		Noise Adjustments		Unmitigated Noise Levels					
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL
Automobiles	65.11	-4.51	-4.57	54.82	52.70	51.39	45.38	53.80	54.42
Medium Trucks	74.83	-21.75	-4.57	47.30	26.05	32.07	13.78	26.93	29.68
Heavy Trucks	80.05	-25.71	-4.57	48.57	23.21	19.81	24.46	30.66	30.76
Total:				56.33	52.71	51.44	45.41	53.83	54.46

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: EXISTING WITH PROJECT CONDITIONS

Project: TTM No. 72798
Site Conditions: Soft

Road Name: La Puente Road (Alt)		Segment: East of Lemon Avenue		Roadway Classification: Secondary							
Average Daily Traffic: 13840 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1							
NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 43.86 ft)											
Vehicle Type	Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to Noise Contour (in feet)				
	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL		
	67.36	-0.03	0.75	-1.20	66.88	64.76	63.45	57.43	65.85	66.48	
	76.31	-17.27	0.75	-1.20	58.60	37.35	43.37	25.07	38.22	40.97	
	81.16	-21.22	0.75	-1.20	59.49	34.14	30.74	35.39	41.58	41.68	
Total:				68.12	64.77	63.49	57.46	65.88	66.51		
Automobiles										70 dBA: 27	29
Medium Trucks										65 dBA: 57	63
Heavy Trucks										60 dBA: 123	136
										55 dBA: 266	292

Road Name: Lemon Avenue (Alt)		Segment: South of Meadow Pass Road		Roadway Classification: Minor Arterial								
Average Daily Traffic: 15050 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2								
NOISE PARAMETERS AT 215 FEET FROM CENTERLINE (Equiv. Lane Dist: 213.17 ft)												
		Unmitigated Noise Levels				Centerline Distance to Noise Contour (in feet)						
		Noise Adjustments										
Vehicle Type	RECEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles	67.36	0.09	-9.55	-1.20	56.70	54.33	53.03	46.98	55.41	56.04	70 dBA: 26	28
Medium Trucks	76.31	-14.78	-9.55	-1.20	50.78	31.58	23.79	33.00	39.16	39.19	65 dBA: 56	61
Heavy Trucks	81.16	-12.56	-9.55	-1.20	57.85	40.86	33.08	42.29	48.44	48.47	60 dBA: 122	132
Total:				60.78	54.54	53.08	48.38	56.29	56.82	55 dBA: 262	284	

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: FUTURE YEAR 2027 WITHOUT PROJECT CONDITIONS

Project: TTM No. 72798

Site Conditions: Soft

Vehicle Type	Vehicle Mix 1 (Local)			Vehicle Mix 2 (Arterial)			Vehicle Mix 3 (I-215)		
	Day	Evening	Night	Day	Evening	Night	Day	Evening	Night
Automobiles	73.60%	13.60%	10.22%	69.50%	12.90%	9.60%	64.20%	13.16%	15.39%
Medium Trucks	0.90%	0.90%	0.04%	1.44%	0.06%	1.50%	2.06%	0.37%	1.04%
Heavy Trucks	0.35%	0.04%	0.35%	2.40%	0.10%	2.50%	2.06%	0.20%	1.51%
			0.74%			5.00%			3.77%

Road Name: Amar Road		Segment: West of Lemon Avenue				Roadway Classification: Minor Arterial						
Average Daily Traffic: 27350 Vehicles		Vehicle Speed: 50 MPH		Vehicle Mix: 2								
		NOISE PARAMETERS AT 100 FEET FROM CENTERLINE (Equiv. Lane Dist: 96 ft)				Centerline Distance to Noise Contour (in feet)						
		Noise Adjustments		Unmitigated Noise Levels								
Vehicle Type	REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles	71.12	1.71	-4.35	-1.20	67.28	64.91	63.61	57.56	65.99	66.62	70 dBA: 59	65
Medium Trucks	78.79	-13.15	-4.35	-1.20	60.09	40.88	33.10	42.30	48.46	48.49	65 dBA: 128	139
Heavy Trucks	83.02	-10.94	-4.35	-1.20	66.53	49.54	41.76	50.97	57.12	57.16	60 dBA: 275	300
	Total:				70.36	65.05	63.65	58.53	66.59	67.15	55 dBA: 592	645

Road Name: Amar Road		Segment: East of Lemon Avenue				Roadway Classification: Minor Arterial						
Average Daily Traffic: 24300 Vehicles		Vehicle Speed: 50 MPH		Vehicle Mix: 2								
NOISE PARAMETERS AT 95 FEET FROM CENTERLINE		(Equiv. Lane Dist: 90.78 ft)				Centerline Distance to Noise Contour (in feet)						
Noise Adjustments		Unmitigated Noise Levels										
Vehicle Type	REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles	71.12	1.20	-3.99	-1.20	67.13	64.76	63.46	57.41	65.84	66.47	70 dBA: 55	60
Medium Trucks	78.79	-13.67	-3.99	-1.20	59.94	40.73	32.95	42.16	48.31	48.34	65 dBA: 118	129
Heavy Trucks	83.02	-11.45	-3.99	-1.20	66.38	49.39	41.61	50.82	56.97	57.01	60 dBA: 255	278
Total:					70.21	64.90	63.50	58.38	66.44	67.00	55 dBA: 550	599

Road Name: Meadow Pass Rd		Segment: West of Colt Lane				Roadway Classification: Important Local							
Average Daily Traffic: 4400 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1									
NOISE PARAMETERS AT 100 FEET FROM CENTERLINE		(Equiv. Lane Dist: 99.28 ft)				Centerline Distance to Noise Contour (in feet)							
Noise Adjustments		Unmitigated Noise Levels											
Vehicle Type	REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL				
Automobiles	65.11	-4.43	-4.57	-1.20	54.91	52.79	51.48	45.47	53.88	54.51	70 dBA:	8	9
Medium Trucks	74.83	-21.66	-4.57	-1.20	47.39	26.14	32.16	13.87	27.02	29.77	65 dBA:	18	20
Heavy Trucks	80.05	-25.62	-4.57	-1.20	48.66	23.30	19.90	24.55	30.75	30.85	60 dBA:	39	43
Total:					56.42	52.80	51.53	45.50	53.91	54.54	55 dBA:	85	93

FWHA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: FUTURE YEAR 2027 WITHOUT PROJECT CONDITIONS

Project: TTM No. 72798

Site Conditions: Soft

Road Name: Meadow Pass Rd		Segment:		East of Colt Lane		Roadway Classification: Important Local			
Average Daily Traffic: 4370 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1					
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE				(Equiv. Lane Dist: 58.79 ft)					
Noise Adjustments				Unmitigated Noise Levels					
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL
Automobiles	65.11	-4.45	-1.16	58.30	56.17	54.86	48.85	57.27	57.90
Medium Trucks	74.83	-21.69	-1.16	50.78	29.53	35.55	17.26	30.40	33.15
Heavy Trucks	80.05	-25.65	-1.16	52.04	26.69	23.29	27.94	34.14	34.23
Total:				59.80	56.19	54.91	48.89	57.30	57.93
								70 dBA:	9
								65 dBA:	18
								60 dBA:	40
								55 dBA:	85

Road Name: La Puente Road		Segment: West of Lemon Avenue		Roadway Classification: Secondary									
Average Daily Traffic: 16260 Vehicles		Vehicle Speed: 45 MPH		Vehicle Mix: 1									
NOISE PARAMETERS AT 55 FEET FROM CENTERLINE				(Equiv. Lane Dist: 49.49 ft)									
Noise Adjustments				Unmitigated Noise Levels									
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL				
Automobiles	69.34	0.16	-0.04	-1.20	68.27	66.15	64.83	58.82	67.24	67.87	70 dBA:	36	40
Medium Trucks	77.62	-17.08	-0.04	-1.20	59.31	38.06	44.08	25.79	38.93	41.68	65 dBA:	78	86
Heavy Trucks	82.14	-21.03	-0.04	-1.20	59.87	34.52	31.12	35.77	41.97	42.06	60 dBA:	168	185
Total:					69.31	66.16	64.87	58.84	67.26	67.89	55 dBA:	361	398

Road Name: La Puente Road		Segment: East of Lemon Avenue		Roadway Classification: Secondary									
Average Daily Traffic: 14260 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1									
NOISE PARAMETERS AT 50 FEET FROM CENTERLINE				(Equiv. Lane Dist: 43.86 ft)									
Noise Adjustments				Unmitigated Noise Levels									
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL				
Automobiles	67.36	0.10	0.75	-1.20	67.01	64.89	63.58	57.56	65.98	66.61	70 dBA:	27	30
Medium Trucks	76.31	-17.14	0.75	-1.20	58.73	37.48	43.50	25.20	38.35	41.10	65 dBA:	58	64
Heavy Trucks	81.16	-21.09	0.75	-1.20	59.62	34.27	30.87	35.51	41.71	41.81	60 dBA:	126	138
Total:					68.25	64.90	63.62	57.59	66.01	66.64	55 dBA:	271	298

Road Name: Valley Boulevard		Segment: West of Lemon Avenue		Roadway Classification: Major Arterial									
Average Daily Traffic: 25390 Vehicles		Vehicle Speed: 50 MPH		Vehicle Mix: 2									
NOISE PARAMETERS AT 110 FEET FROM CENTERLINE				(Equiv. Lane Dist: 104.61 ft)									
Noise Adjustments				Unmitigated Noise Levels									
Vehicle Type	REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL				
Automobiles	71.12	1.39	-4.91	-1.20	66.40	64.02	62.73	56.68	65.11	65.74	70 dBA:	57	62
Medium Trucks	78.79	-13.48	-4.91	-1.20	59.20	40.00	32.21	41.42	47.58	47.61	65 dBA:	123	134
Heavy Trucks	83.02	-11.26	-4.91	-1.20	65.65	48.66	40.88	50.09	56.24	56.27	60 dBA:	264	288
Total:					69.48	64.17	62.76	57.64	65.71	66.26	55 dBA:	569	620

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: FUTURE YEAR 2027 WITHOUT PROJECT CONDITIONS

Project: TTM No. 72798

Site Conditions: Soft

Road Name: Lemon Avenue		Segment: North of Meadow Pass Road		Vehicle Speed: 40 MPH		Vehicle Mix: 2		Roadway Classification: Minor Arterial	
Average Daily Traffic: 12920 Vehicles		NOISE PARAMETERS AT 85 FEET FROM CENTERLINE		(Equiv. Lane Dist: 80.26 ft)		Centerline Distance to Noise Contour (in feet)			
		Noise Adjustments		Unmitigated Noise Levels					
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL
Automobiles	67.36	-0.58	-3.19	-1.20	62.40	60.03	58.73	52.68	61.11
Medium Trucks	76.31	-15.44	-3.19	-1.20	56.48	37.28	29.49	38.70	44.86
Heavy Trucks	81.16	-13.22	-3.19	-1.20	63.55	46.56	38.78	47.99	54.14
Total:				66.48		60.24		58.78	
								61.99	
								62.52	
								70 dBA:	
								25	
								65 dBA:	
								54	
								60 dBA:	
								115	
								55 dBA:	
								249	
								270	

Road Name: Lemon Avenue		Segment: South of Meadow Pass Road		Vehicle Speed: 40 MPH		Vehicle Mix: 2		Roadway Classification: Minor Arterial	
Average Daily Traffic: 15910 Vehicles		NOISE PARAMETERS AT 215 FEET FROM CENTERLINE		(Equiv. Lane Dist: 213.17 ft)		Centerline Distance to Noise Contour (in feet)			
		Noise Adjustments		Unmitigated Noise Levels					
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL
Automobiles	67.36	0.33	-9.55	-1.20	56.94	54.57	53.27	47.22	55.65
Medium Trucks	76.31	-14.54	-9.55	-1.20	51.02	31.82	24.04	33.24	39.40
Heavy Trucks	81.16	-12.32	-9.55	-1.20	58.09	41.10	33.32	42.53	48.68
Total:				61.02		54.78		53.32	
								48.62	
								56.53	
								57.06	
								70 dBA:	
								27	
								65 dBA:	
								59	
								60 dBA:	
								126	
								137	
								272	
								295	

Road Name: Lemon Avenue		Segment: South of La Puente Road		Vehicle Speed: 40 MPH		Vehicle Mix: 2		Roadway Classification: Minor Arterial	
Average Daily Traffic: 17960 Vehicles		NOISE PARAMETERS AT 80 FEET FROM CENTERLINE		(Equiv. Lane Dist: 74.94 ft)		Centerline Distance to Noise Contour (in feet)			
		Noise Adjustments		Unmitigated Noise Levels					
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL
Automobiles	67.36	0.85	-2.74	-1.20	64.28	61.90	60.61	54.56	62.99
Medium Trucks	76.31	-14.01	-2.74	-1.20	58.36	39.15	31.37	40.58	46.73
Heavy Trucks	81.16	-11.79	-2.74	-1.20	65.43	48.44	40.66	49.86	56.02
Total:				68.36		62.12		60.66	
								55.95	
								63.87	
								64.39	
								70 dBA:	
								31	
								65 dBA:	
								67	
								60 dBA:	
								145	
								157	
								312	
								338	

Road Name: Meadow Pass Rd (Alt)		Segment: West of Colt Lane		Vehicle Speed: 35 MPH		Vehicle Mix: 1		Roadway Classification: Important Local	
Average Daily Traffic: 4400 Vehicles		NOISE PARAMETERS AT 100 FEET FROM CENTERLINE		(Equiv. Lane Dist: 99.28 ft)		Centerline Distance to Noise Contour (in feet)			
		Noise Adjustments		Unmitigated Noise Levels					
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL
Automobiles	65.11	-4.43	-4.57	-1.20	54.91	52.79	51.48	45.47	53.88
Medium Trucks	74.83	-21.66	-4.57	-1.20	47.39	26.14	32.16	13.87	27.02
Heavy Trucks	80.05	-25.62	-4.57	-1.20	48.66	23.30	19.90	24.55	30.75
Total:				56.42		52.80		51.53	
								45.50	
								53.91	
								54.54	
								70 dBA:	
								8	
								65 dBA:	
								18	
								60 dBA:	
								39	
								43	
								85	
								93	

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: FUTURE YEAR 2027 WITHOUT PROJECT CONDITIONS

Project: TTM No. 72798
Site Conditions: Soft

Road Name: La Puente Road (Alt)		Segment: East of Lemon Avenue		Roadway Classification: Secondary									
Average Daily Traffic: 14260 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1									
NOISE PARAMETERS AT 50 FEET FROM CENTERLINE		(Equiv. Lane Dist: 43.86 ft)		Centerline Distance to Noise Contour (in feet)									
Noise Adjustments		Unmitigated Noise Levels											
Vehicle Type	REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL				
Automobiles	67.36	0.10	0.75	-1.20	67.01	64.89	63.58	57.56	65.98	66.61	70 dBA:	27	30
Medium Trucks	76.31	-17.14	0.75	-1.20	58.73	37.48	43.50	25.20	38.35	41.10	65 dBA:	58	64
Heavy Trucks	81.16	-21.09	0.75	-1.20	59.62	34.27	30.87	35.51	41.71	41.81	60 dBA:	126	138
Total:				68.25	64.90	63.62	57.59	66.01	66.64	55 dBA:	271	298	

Road Name: Lemon Avenue (Alt)		Segment: South of Meadow Pass Road		Roadway Classification: Minor Arterial									
Average Daily Traffic: 15910 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2									
NOISE PARAMETERS AT 215 FEET FROM CENTERLINE		(Equiv. Lane Dist: 213.17 ft)		Centerline Distance to Noise Contour (in feet)									
Noise Adjustments		Unmitigated Noise Levels											
Vehicle Type	REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL				
Automobiles	67.36	0.33	-9.55	-1.20	56.94	54.57	53.27	47.22	55.65	56.28	70 dBA:	27	29
Medium Trucks	76.31	-14.54	-9.55	-1.20	51.02	31.82	24.04	33.24	39.40	39.43	65 dBA:	59	64
Heavy Trucks	81.16	-12.32	-9.55	-1.20	58.09	41.10	33.32	42.53	48.68	48.72	60 dBA:	126	137
Total:				61.02	54.78	53.32	48.62	56.53	57.06	55 dBA:	272	295	

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: FUTURE YEAR 2027 WITH PROJECT CONDITIONS

Project: TTM No. 72798

Site Conditions: Soft

Vehicle Type	Vehicle Mix 1 (Local)				Vehicle Mix 2 (Arterial)				Vehicle Mix 3 (I-215)			
	Day	Evening	Night	Daily	Day	Evening	Night	Daily	Day	Evening	Night	Daily
Automobiles	73.60%	13.60%	10.22%	97.42%	69.50%	12.90%	9.60%	92.00%	64.20%	13.16%	15.39%	92.75%
Medium Trucks	0.90%	0.90%	0.04%	1.84%	1.44%	0.06%	1.50%	3.00%	2.06%	0.37%	1.04%	3.48%
Heavy Trucks	0.35%	0.04%	0.35%	0.74%	2.40%	0.10%	2.50%	5.00%	2.06%	0.20%	1.51%	3.77%

Road Name: Amar Road

Segment: West of Lemon Avenue

Average Daily Traffic: 27380 Vehicles		Vehicle Speed: 50 MPH		Vehicle Mix: 2		Roadway Classification: Minor Arterial						
NOISE PARAMETERS AT 100 FEET FROM CENTERLINE		(Equiv. Lane Dist: 96 ft)				Centerline Distance to Noise Contour (in feet)						
Noise Adjustments		Unmitigated Noise Levels										
Vehicle Type	REMERL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles	71.12	1.72	-4.35	-1.20	67.28	64.91	63.62	57.56	66.00	66.63	70 dBA: 59	65
Medium Trucks	78.79	-13.15	-4.35	-1.20	60.09	40.88	33.10	42.31	48.46	48.50	65 dBA: 128	139
Heavy Trucks	83.02	-10.93	-4.35	-1.20	66.54	49.55	41.77	50.97	57.13	57.16	60 dBA: 275	300
Total:					70.36	65.05	63.65	58.53	66.59	67.15	55 dBA: 593	646

Road Name: Amar Road

Segment: East of Lemon Avenue

Average Daily Traffic: 24340 Vehicles		Vehicle Speed: 50 MPH		Vehicle Mix: 2				Roadway Classification: Minor Arterial				
NOISE PARAMETERS AT 95 FEET FROM CENTERLINE		(Equiv. Lane Dist: 90.78 ft)				Centerline Distance to Noise Contour (in feet)						
Noise Adjustments		Unmitigated Noise Levels										
Vehicle Type	REMERL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles	71.12	1.21	-3.99	-1.20	67.14	64.77	63.47	57.42	65.85	66.48	70 dBA: 55	60
Medium Trucks	78.79	-13.66	-3.99	-1.20	59.94	40.74	32.95	42.16	48.32	48.35	65 dBA: 119	129
Heavy Trucks	83.02	-11.44	-3.99	-1.20	66.39	49.40	41.62	50.83	56.98	57.01	60 dBA: 256	278
Total:					70.22	64.91	63.50	58.38	66.45	67.01	55 dBA: 551	600

Road Name: Meadow Pass Rd

Segment: West of Colt Lane

Average Daily Traffic: 4640 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1		Roadway Classification: Important Local						
		NOISE PARAMETERS AT 100 FEET FROM CENTERLINE (Equiv. Lane Dist: 99.28 ft)				Centerline Distance to Noise Contour (in feet)						
		Noise Adjustments		Unmitigated Noise Levels								
Vehicle Type	REMER Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles	65.11	-4.19	-4.57	-1.20	55.14	53.02	51.71	45.70	54.12	54.74	70 dBA: 9	10
Medium Trucks	74.83	-21.43	-4.57	-1.20	47.62	26.37	32.40	14.10	27.25	30.00	65 dBA: 19	21
Heavy Trucks	80.05	-25.39	-4.57	-1.20	48.89	23.53	20.14	24.78	30.98	31.08	60 dBA: 41	45
		Total:			56.65	53.04	51.76	45.73	54.15	54.78	55 dBA: 88	97

FWHA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: FUTURE YEAR 2027 WITH PROJECT CONDITIONS

Project: TTM No. 72798

Site Conditions: Soft

Road Name: Meadow Pass Rd		Segment:		East of Colt Lane		Roadway Classification: Important Local			
Average Daily Traffic: 4400 Vehicles		Vehicle Speed: 35 MPH		Vehicle Mix: 1					
NOISE PARAMETERS AT 60 FEET FROM CENTERLINE				(Equiv. Lane Dist: 58.79 ft)					
Noise Adjustments				Unmitigated Noise Levels					
Vehicle Type	REME L Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL
Automobiles	65.11	-4.43	-1.16	58.33	56.20	54.89	48.88	57.30	57.93
Medium Trucks	74.83	-21.66	-1.16	50.81	29.56	35.58	17.28	30.43	33.18
Heavy Trucks	80.05	-25.62	-1.16	52.07	26.72	23.32	27.97	34.17	34.26
Total:				59.83	56.22	54.94	48.92	57.33	57.96
								Ldn	CNEL
								70 dBA:	9
								65 dBA:	18
								60 dBA:	40
								55 dBA:	94

Road Name: La Puente Road		Segment: West of Lemon Avenue		Roadway Classification: Secondary					
Average Daily Traffic: 16280 Vehicles		Vehicle Speed: 45 MPH		Vehicle Mix: 1					
NOISE PARAMETERS AT 55 FEET FROM CENTERLINE				(Equiv. Lane Dist: 49.49 ft)					
Noise Adjustments				Unmitigated Noise Levels					
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL
Automobiles	69.34	0.17	-0.04	68.27	66.15	64.84	58.83	67.25	67.87
Medium Trucks	77.62	-17.07	-0.04	59.31	38.06	44.08	25.79	38.94	41.69
Heavy Trucks	82.14	-21.03	-0.04	59.88	34.53	31.13	35.78	41.97	42.07
Total:				69.32	66.16	64.88	58.85	67.26	67.89
								Ldn	CNEL
								70 dBA:	36
								65 dBA:	78
								60 dBA:	168
								55 dBA:	361

Road Name: La Puente Road		Segment: East of Lemon Avenue		Roadway Classification: Secondary								
Average Daily Traffic: 14290 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1								
NOISE PARAMETERS AT 50 FEET FROM CENTERLINE				(Equiv. Lane Dist: 43.86 ft)								
		Noise Adjustments		Unmitigated Noise Levels								
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles	67.36	0.11	0.75	-1.20	67.02	64.90	63.58	57.57	66.62	70 dBA: 27	30	
Medium Trucks	76.31	-17.13	0.75	-1.20	58.73	37.49	43.51	25.21	38.36	41.11	65 dBA: 58	64
Heavy Trucks	81.16	-21.08	0.75	-1.20	59.63	34.27	30.88	35.52	41.72	41.82	60 dBA: 126	139
Total:				68.26	64.91	63.63	57.60	66.02	66.65	55 dBA: 271	299	

Road Name: Valley Boulevard		Segment: West of Lemon Avenue		Roadway Classification: Major Arterial									
Average Daily Traffic: 25450 Vehicles		Vehicle Speed: 50 MPH		Vehicle Mix: 2									
NOISE PARAMETERS AT 110 FEET FROM CENTERLINE				(Equiv. Lane Dist: 104.61 ft)									
		Noise Adjustments		Unmitigated Noise Levels									
Vehicle Type	REMEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL				
Automobiles	71.12	1.40	-4.91	-1.20	66.41	64.04	62.74	56.69	65.12	65.75	70 dBA:	57	62
Medium Trucks	78.79	-13.47	-4.91	-1.20	59.21	40.01	32.22	41.43	47.59	47.62	65 dBA:	123	134
Heavy Trucks	83.02	-11.25	-4.91	-1.20	65.66	48.67	40.89	50.10	56.25	56.28	60 dBA:	265	288
Total:					69.49	64.18	62.77	57.65	65.72	66.27	55 dBA:	570	621

Scenario: FUTURE YEAR 2027 WITH PROJECT CONDITIONS

Road Name: Lemon Avenue		Segment: South of Meadow Pass Road		Roadway Classification: Minor Arterial									
Average Daily Traffic: 16080 Vehicles	Vehicle Speed: 40 MPH	Vehicle Mix: 2	Vehicle Dist: 213.17 ft										
NOISE PARAMETERS AT 215 FEET FROM CENTERLINE			(Equiv. Lane Dist: 213.17 ft)										
Noise Adjustments			Unmitigated Noise Levels										
Vehicle Type	REML Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL				
Automobiles	67.36	0.37	-9.55	-1.20	56.98	54.61	53.32	47.27	55.70	56.33	70 dBA:	27	30
Medium Trucks	76.31	-14.49	-9.55	-1.20	51.07	31.86	24.08	33.29	39.44	39.48	65 dBA:	59	64
Heavy Trucks	81.16	-12.27	-9.55	-1.20	58.14	41.15	33.37	42.57	48.73	48.76	60 dBA:	127	138
Total:					61.07	54.83	53.37	48.66	56.58	57.10	55 dBA:	274	297

Road Name: Meadow Pass Rd (Alt)		Segment:			West of Colt Lane			Roadway Classification: Important Local						
Average Daily Traffic: 4510 Vehicles		Vehicle Speed: 35 MPH			Vehicle Mix: 1									
		NOISE PARAMETERS AT 100 FEET FROM CENTERLINE (Equiv. Lane Dist: 99.28 ft)												
		Noise Adjustments			Unmitigated Noise Levels			Centerline Distance to Noise Contour (in feet)						
Vehicle Type		REMEL Traffic Adj.	Dist Adj.	Finite Adj	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL				
Automobiles		65.11	-4.32	-4.57	-1.20	55.02	52.90	51.58	45.57	53.99	54.62	70 dBA:	9	9
Medium Trucks		74.83	-21.56	-4.57	-1.20	47.50	26.25	32.27	13.98	27.12	29.87	65 dBA:	19	20
Heavy Trucks		80.05	-25.51	-4.57	-1.20	48.76	23.41	20.01	24.66	30.86	30.96	60 dBA:	40	44
		Total:			56.52	52.91	51.64	45.61	54.02	54.65	55 dBA:	86	95	

FHWA-RD-77-108 HIGHWAY TRAFFIC NOISE PREDICTION MODEL

Scenario: FUTURE YEAR 2027 WITH PROJECT CONDITIONS

Project: TTM No. 72798
Site Conditions: Soft

Road Name: La Puente Road (Alt)		Segment: East of Lemon Avenue		Roadway Classification: Secondary								
Average Daily Traffic: 14400 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 1								
NOISE PARAMETERS AT 50 FEET FROM CENTERLINE (Equiv. Lane Dist: 43.86 ft)												
Noise Adjustments		Unmitigated Noise Levels				Centerline Distance to Noise Contour (in feet)						
Vehicle Type	RECEL Traffic Adj.	Dist Adj.	Finite Adj.	Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL			
Automobiles	67.36	0.14	0.75	-1.20	67.05	64.93	63.62	57.61	66.03	66.65	70 dBA: 27	30
Medium Trucks	76.31	-17.09	0.75	-1.20	58.77	37.52	43.54	25.25	38.39	41.14	65 dBA: 59	65
Heavy Trucks	81.16	-21.05	0.75	-1.20	59.66	34.31	30.91	35.56	41.76	41.85	60 dBA: 127	139
Total:					68.29	64.94	63.66	57.64	66.05	66.68	55 dBA: 273	300

Road Name: Lemon Avenue (Alt)		Segment: South of Meadow Pass Road		Roadway Classification: Minor Arterial											
Average Daily Traffic: 15950 Vehicles		Vehicle Speed: 40 MPH		Vehicle Mix: 2											
NOISE PARAMETERS AT 215 FEET FROM CENTERLINE (Equiv. Lane Dist: 213.17 ft)															
		Unmitigated Noise Levels				Centerline Distance to Noise Contour (in feet)									
Vehicle Type	Noise Adjustments		Leq Peak	Leq Day	Leq Eve.	Leq Night	Ldn	CNEL							
Automobiles	RECEL Traffic Adj.	Dist Adj.	Finite Adj.	67.36	0.34	-9.55	-1.20	56.95	54.58	53.28	47.23	55.66	56.29	70 dBA: 27	30
Medium Trucks	76.31	-14.53	-9.55	-1.20	51.04	31.83	24.05	33.25	39.41	39.44	65 dBA: 59	64			
Heavy Trucks	81.16	-12.31	-9.55	-1.20	58.10	41.11	33.33	42.54	48.69	48.73	60 dBA: 126	137			
Total:			61.03	54.79	53.33	48.63	56.54	57.07	55 dBA: 272	295					